HARVEST PARK MIDDLE SCHOOL BOILER REPLACEMENT

4900 VALLEY AVENUE, PLEASANTON, CA 94566

PLEASANTON UNIFIED SCHOOL DISTRICT

DSA FILE NUMBER 1-32
DSA APPLICATION NUMBER 01-119604
OPSC TRACKING NUMBER 75101-100

GENERAL NOTES

PRE-BID SITE VISIT

CONTRACTOR SHALL VISIT THE PROJECT AREA IN ORDER TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND THE REQUIREMENTS OF THE PROJECT. THE CONTRACTOR MAY CONTACT THE ARCHITECT DURING THE BIDDING PHASE REGARDING CLARIFICATIONS AND PROJECT REQUIREMENTS.

SAFETY

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

DAMAGE TO STRUCTURE OR SYSTEMS TO REMAIN

CONTRACTOR SHALL REIMBURSE THE OWNER FOR REPAIR AND REPLACEMENT, INCLUDING ARCHITECT'S FEES, FOR ANY DAMAGE CAUSED TO STRUCTURES, LANDSCAPE, SITE WORK, OR EXISTING SYSTEMS TO REMAIN, AS THE RESULT OF CONSTRUCTION OPERATIONS.

EXISTING CONDITIONS

ALL EXISTING CONDITIONS ARE SHOWN BASED ON THE BEST INFORMATION AVAILABLE AT THE TIME, BUT WITHOUT GUARANTEE OF ACCURACY. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND BUILDING DATA AT THE JOB SITE. ANY DISCREPANCIES REQUIRING MODIFICATION TO THE CONSTRUCTION DOCUMENTS SHALL BE REPORTED TO THE ARCHITECT IMMEDIATELY. NO MODIFICATIONS SHALL BE MADE BY THE CONTRACTOR WITHOUT PRIOR APPROVAL FROM THE ARCHITECT.

CONTRACTOR'S EQUIPMENT

COORDINATE WITH OWNER'S REPRESENTATIVE FOR APPROVED LOCATION OF JOB SITE ACCESS, PARKING, AND LOCATION OF CONTRACTOR'S EQUIPMENT AND MATERIAL STORAGE AREA. SEE SITE PLAN FOR ADDITIONAL NOTES.

UTILITY SHUT-DOWNS AND CONNECTIONS

ALL REQUIRED UTILITY SHUT DOWNS SHALL HAVE PRIOR APPROVAL FROM THE OWNER'S REPRESENTATIVE. REQUEST SHALL BE SUBMITTED WITH ADEQUATE ADVANCE NOTICE PER PROJECT REQUIREMENTS.

ASBESTOS AND ASBESTOS PRODUCTS

THE OWNER/OPERATOR AND CONTRACTOR SHALL BE AWARE THAT BUILDINGS CONSTRUCTED PRIOR TO 1978 (OR THERE ABOUT) POSSIBILITY CONTAIN ASBESTOS IN SOME EXISTING CONSTRUCTION MATERIALS, AND WILL LIKELY BE ENCOUNTERED DURING ALTERATIONS OR REMODELING.

UNDER CALIFORNIA TITLE 8, THE OWNER AND CONTRACTOR BOTH HAVE RESPONSIBILITIES TO DETERMINE THE EXISTENCE OF ASBESTOS CONTAINING MATERIALS IN AREAS TO BE ALTERED OR REMODELED PRIOR TO COMMENCEMENT OF WORK AND TO TAKE APPROPRIATE MEASURES TO PROTECT PERSONNEL. CAL-OSHA HAS JURISDICTION OVER ASBESTOS RELATED WORK. ASBESTOS RELATED WORK SHALL BE DONE IN ACCORDANCE WITH CALIFORNIA GENERAL INDUSTRIAL SAFETY ORDERS, TITLE 8, SECTION 341.6 THROUGH 341.14. ASBESTOS IN THE WORK ENVIRONMENT IS REGULATED BY TITLE 8, SECTION 5208.

THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT AND DISTRICT REGULATION 11-2-401.3 REQUIRES EVERY RENOVATION INVOLVING THE REMOVAL OF 100 SQ.FT., LN.FT, OR GREATER OF REGULATED ASBESTOS CONTAINING MATERIAL, AND FOR EVERY DEMOLITION (EVEN WHEN NO ASBESTOS IS PRESENT), A NOTIFICATION MUST BE SENT TO THE BAAQMD AT LEAST 10 WORKING DAYS PRIOR TO COMMENCEMENT OF DEMOLITION / RENOVATION.

ALL BUILDING MATERIALS MUST BE ASBESTOS FREE.

THESE DOCUMENTS DO NOT ADDRESS CONTAINMENT FOR EXISTING AREAS OF ASBESTOS WHICH MAY BE DISCOVERED DURING CONSTRUCTION. THE OWNER'S ABATEMENT SUBCONTRACTOR IS SOLELY RESPONSIBLE FOR THE DETECTION, REMOVAL, AND THE DISPOSAL OF ANY EXISTING ASBESTOS MATERIAL. ARCHITECTURAL AND ENGINEERING FEES FOR ADDITIONAL DESIGN EFFORT TO OBTAIN STATE APPROVALS, AS WELL AS THE COST OF ANY REPAIRS, FOR DAMAGE CAUSED OR REPLACEMENT OF EXISTING SYSTEMS TO REMAIN, DUE TO WORK PERFORMED BY THE ASBESTOS ABATEMENT SUBCONTRACTOR, SHALL BE THE RESPONSIBILITY OF SAID SUBCONTRACTOR.

CONSTRUCTION SCHEDULING

CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION OPERATIONS WITH OWNER'S REPRESENTATIVE PRIOR TO SCHEDULING AND START OF THE WORK. CONTRACTOR SHALL PROVIDE PROTECTION TO ALL EXISTING SPACES AND SYSTEMS WHICH ARE IN USE, ADJOINING THE PROJECT, AND NOT PART OF THE PROJECT.

INTERIOR FINISHES

INTERIOR FINISHES AND ALL WALL COVERING MATERIAL SHALL CONFORM TO CCR TITLE 24, PART 2, CHAPTER 8.

PIPES, DUCTS AND CONDUIT - SUPPORT AND BRACING

PIPES, DUCTS, AND CONDUITS SHALL BE SUPPORTED AND BRACED PER THE SMACNA "GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS", OPM 0052-13 SEISMIC BRACING AND SUPPORT SYSTEMS.

DRILLED-IN EXPANSION ANCHORS

WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWDER DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO EXISTING PRESTRESSED CONCRETE (PRE- OR POST-TENSIONED), LOCATE THE PRESTRESSED TENDONS BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.

TITLE 24 COMPLIANCE

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, CALIFORNIA CODE OF REGULATIONS (2019 CBC). SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK, SHALL BE SUBMITTED TO AND APPROVED BY THE DSA BEFORE PROCEEDING WITH THE WORK.

ADMINISTRATIVE REQUIREMENTS FROM PART 1, TITLE 24, C.C.R.

- CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGE DOCUMENT, AND APPROVED BY DSA, AS PER C.C.R. 4-338.
- A DSA CERTIFIED PROJECT INSPECTOR EMPLOYED BY THE DISTRICT AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF WORK, PER SECTION 4-342.
- A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT SHALL CONDUCT ALL REQUIRED TEST AND INSPECTIONS FOR THE PROJECT.
- SPECIAL INSPECTION PER SECTION 4-333 (C)
- CONTRACTOR SHALL SUBMIT VERIFIED REPORT OR SECTION 4-336 & 4-343 (C)
- ADMINISTRATION OR CONSTRUCTION PER PART 1, TITLE 24, C.C.R.
  - DUTIES OF ARCHITECT, STRUCTURAL ENGINEER, OR PROFESSIONAL ENGINEER PER SECTION 4-333 (A) AND 4-341
  - DUTIES OF CONTRACTOR PER SECTION 4-343
  - VERIFIED REPORTS PER SECTION 4-343 AND 4-336
- A COPY OF PARTS 1 TO 5 OF TITLE 24 SHALL BE KEPT AND AVAILABLE IN THE FIELD DURING CONSTRUCTION
- DSA SHALL BE NOTIFIED AT START OF CONSTRUCTION AND PRIOR TO PLACEMENT OF CONCRETE PER SECTION 4-331
- SUPERVISION BY DSA PER SECTION 4-334
- DSA IS NOT SUBJECT TO ARBITRATION

GENERAL NOTES, cont.

ADMINISTRATIVE REQUIREMENTS

- ADDENDA MUST BE SIGNED BY ARCHITECT AND APPROVED BY DSA
- NO CHANGES OR REVISIONS SHALL BE MADE FOLLOWING WRITTEN APPROVAL WHICH AFFECTS ACCESS COMPLIANCE ITEM UNLESS SUCH CHANGES TO REVISIONS ARE SUBMITTED TO DSA FOR APPROVAL.
- SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS SHALL BE SUBMITTED AS A CONSTRUCTION CHANGE DOCUMENT OR ADDENDA, AND SHALL BE APPROVED BY DSA PRIOR TO FABRICATION AND INSTALLATION
- CONSTRUCTION CHANGE DOCUMENTS MUST BE SIGNED BY THE FOLLOWING:
  - ARCHITECT OR ENGINEER OF RECORD
  - STRUCTURAL ENGINEER (WHEN APPLICABLE)
  - DELEGATED PROFESSIONAL ENGINEER
  - DSA
- MATERIALS AND THEIR INSTALLATIONS SHALL COMPLY WITH APPLICABLE CODES.
- PER CBC 11B-104.1 "ALL DIMENSIONS ARE SUBJECT TO CONVENTIONAL INDUSTRY TOLERANCES EXCEPT WHERE THE REQUIREMENT IS STATED AS A RANGE WITH SPECIFIC MINIMUM AND MAXIMUM END POINTS.

COMPLIANCE WITH LOCAL ORDINANCES

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

ABBREVIATIONS

(REFER TO CONSULTANT DRAWINGS FOR ADDITIONAL ABBREVIATIONS)

A.F.F.	ABOVE FINISHED FLOOR	LAM.	LAMINATE
A.P.	ACCESS PANEL	LAV.	LAVATORY
ACT	ACOUSTIC TILE	M.B.	MACHINE BOLT
ADJ.	ADJUSTABLE	M.S.	MACHINE SCREW
ALUM.	ALUMINUM	M.H.	MANHOLE
A.B.	ANCHOR BOLT	MFG.	MANUFACTURER
APPROX.	APPROXIMATELY	M.B.	MARKER BOARD
ARCH.	ARCHITECT	MATL.	MATERIAL
AC	ASPHALTIC CONCRETE	MAX.	MAXIMUM
@	AT	MECH.	MECHANICAL
B.M.	BENCH MARK	MTL.	METAL
BLKG.	BLOCKING	MIN.	MINIMUM
BD.	BOARD	MISC.	MISCELLANEOUS
B.W.	BOTH WAYS	MTD.	MOUNTED
BOT.	BOTTOM	(N)	NEW
BLDG.	BUILDING	NOM.	NOMINAL
B.U.R.	BUILT-UP ROOFING	N.I.C.	NOT IN CONTRACT
C.B.	CATCH BASIN	N.T.S.	NOT TO SCALE
CLG.	CEILING	NO. or #	NUMBER
CEM.	CEMENT	OCC.	OCCUPANT(CY)
C.C or O.C.	CENTER TO CENTER CENTERLINE	O.C.	ON CENTER
CER. TILE	CERAMIC TILE	OPNG.	OPENING
C.O.	CLEANOUT	OPP.	OPPOSITE
C.O.T.G.	CLEANOUT TO GRADE	O.H.	OPPOSITE HAND
CLR.	CLEAR	O.F.O.S.	OUTSIDE FACE OF STUD
C.A.H.R.	CLEAR ALL HEART REDWOOD	O.H.W.S.	OVAL HEAD WOOD SCREW
C.W.	COLD WATER	O.D.	OVERFLOW DRAIN and/or OUTSIDE DIAMETER
COL.	COLUMN	O.F.C.I.	OWNER FURNISHED and CONTRACTOR INSTALLED
COM.	COMMON	PR.	PAIR
CONC.	CONCRETE	PART.	PARTITION
CONST.	CONSTRUCTION	PL.	PLATE
C.H.	CONSTRUCTION HEART	d	PENNY (NAILS)
C.J.	CONSTRUCTION JOINT	PLAS.	PLASTER
CONT.	CONTINUOUS	PLYWD.	PLYWOOD
CONTR.	CONTRACTOR	P.V.C.	POLY VINYL CHLORIDE
CTR.	COUNTER	P.T.	PRESSURE TREATED
CTSK.	COUNTER SUNK	P.L.	PROPERTY LINE
DET.	DETAIL	R. or RAD.	RADIUS
DIA. or Ø	DIAMETER	R.W.L.	RAIN WATER LEADER
DIM.	DIMENSION	RWD./R.W.	REDWOOD
D.A.	DISABLED ACCESS	REINF.	REINFORCING
DR.	DOOR	REQ'D	REQUIRED
D.S.	DOWNSPOUT	R.A.G.	RETURN AIR GRILLE
DWG.	DRAWING	R.E.	RIM ELEVATION
D.F.	DRINKING FOUNTAIN and/or DOUGLAS FIR	R.D.	ROOF DRAIN
EA.	EACH	RM.	ROOM
E.W.	EACH WAY	R.O.	ROUGH OPENING
ELEC.	ELECTRIC or ELECTRICAL	RND.	ROUND
EL. or ELEV.	ELEVATION	R.H.M.S.	ROUND HEAD METAL SCREW
ENCL.	ENCLOSE and/or ENCLOSURE	R.H.W.S.	ROUND HEAD WOOD SCREW
EQ.	EQUAL	SSD.	SEE STRUCTURAL DRAWINGS
EQUIP.	EQUIPMENT	S.T.S.M.S.	SELF TAPPING SHEET METAL SCREW
(E)	EXISTING	SHEATH.	SHEATHING
EX.	EXPANSION	S.M.	SHEET METAL
E.J.	EXPANSION JOINT	S.M.S.	SHEET METAL SCREW
EXP.	EXPOSED	S.O.V.	SHUT OFF VALVE
EXT.	EXTERIOR	SIM.	SIMILAR
F.O.C.	FACE OF CONCRETE	S.C.	SOLID CORE
F.O.M.	FACE OF MASONRY	SPEC.	SPECIFICATION
F.O.S.	FACE OF STUD	SQ.	SQUARE
F.O.F.	FACE OF FINISH	S.F.	SQUARE FEET
FIN.	FINISH	STAG.	STAGGERED
F.F.	FINISHED FLOOR	STD.	STANDARD
F.S.	FINISH SLAB	S.S.	STAINLESS STEEL
F.E.	FIRE EXTINGUISHER	STL.	STEEL
F.E.C.	FIRE EXTINGUISHER CABINET	STOR.	STORAGE
F.H.	FIRE HYDRANT	STRUCT.	STRUCTURAL
F.H.M.S.	FLAT HEAD METAL SCREW	S.A.G.	SUPPLY AIR GRILLE
F.H.W.S.	FLAT HEAD WOOD SCREW	THRES.	THRESHOLD
FL. or FLR.	FLOOR	T&G	TONGUE & GROOVE
F.D.	FLOOR DRAIN	T.J.	TOOLED JOINT
FTG.	FOOTING	T.O.B.	TOP OF BEAM
FND.	FOUNDATION	T.O.C.	TOP OF CURB or CONCRETE
GALV.	GALVANIZED	T.O.S.	TOP OF STEEL or SHEATHING
G.I.	GALVANIZED IRON	T.O.W.	TOP OF WALK
GA.	GAUGE	TYP.	TYPICAL
GL.	GLASS	U.O.N.	UNLESS OTHERWISE NOTED
GLU-LAM	GLUE-LAMINATED	U.O.S.	UNLESS OTHERWISE SHOWN
GRD.	GRADE	V.T.R.	VENT THROUGH ROOF
GYP. BD.	GYPSUM BOARD	VERT.	VERTICAL
HDW.	HARDWARE	V.G.	VERTICAL GRAIN
HT.	HEIGHT	V.I.F.	VERIFY IN FIELD
H.C.	HOLLOW CORE	V.C.T.	VINYL COMPOSITION TILE
H.M.	HOLLOW METAL	V.W.C.	VINYL WALL COVERING
HORIZ.	HORIZONTAL	V.O.I.P.	VOICE OVER INTERNET PROTOCOL
H.B.	HOSE BIBB	W.C.	WATER CLOSET
I.D.	INSIDE DIAMETER	W.H.	WATER HEATER
INSUL.	INSULATION	WP.	WATERPROOF
INT.	INTERIOR	W.R.	WATER RESISTANT
INV.	INVERT	W.W.M.	WELDED WIRE MESH
JT	JOINT	W.D.	WINDOW DIMENSION
J.H.	JOIST HANGER	W/	WITH
K.D.	KILN DRIED	W/O	WITHOUT
		WD.	WOOD

BUILDING CODES AND STANDARDS:

2019	CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.	
2019	CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24, C.C.R. (2018 INTERNATIONAL BUILDING CODE, VOLUMES 1 AND 2, WITH 2019 CALIFORNIA AMENDMENTS.)	
2019	CALIFORNIA ELECTRIC CODE (CEC), PART 3, TITLE 24, C.C.R. (2018 NATIONAL ELECTRIC CODE WITH 2019 CALIFORNIA AMENDMENTS).	
2019	CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24, C.C.R. (2018 UNIFORM MECHANICAL CODE WITH 2019 CALIFORNIA AMENDMENTS).	
2019	CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24, C.C.R. (2018 UNIFORM PLUMBING CODE WITH 2019 CALIFORNIA AMENDMENTS).	
2019	CALIFORNIA ENERGY CODE (CENC), PART 6, TITLE 24, C.C.R.	
2019	CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24, C.C.R. (2018 INTERNATIONAL FIRE CODE WITH 2019 CALIFORNIA AMENDMENTS).	
2019	CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24, C.C.R.	
2019	CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24, C.C.R.	
2016	ASME A17.1 (W/A17.1a/CSA B44a-08 ADDENDA) SAFETY CODE FOR ELEVATORS AND ESCALATORS	
2010	ADA STANDARDS FOR ACCESSIBLE DESIGN (28 CFR PART 35 FOR TITLE II ENTITIES)	

CCR TITLE-19, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.

NFPA 13	INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDED)	2016 EDITION
NFPA 14	INSTALLATION OF STANDPIPE & HOSE SYSTEMS (CA AMENDED)	2016 EDITION
NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS	2017 EDITION
NFPA 17A	WET CHEMICAL EXTINGUISHING SYSTEM	2017 EDITION
NFPA 20	STATIONARY FIRE PUMPS TO FIRE PROTECTION	2016 EDITION
NFPA 22	WATER TANKS FOR PRIVATE FIRE PROTECTION	2013 EDITION
NFPA 24	PRIVATE FIRE SERVICE MAINS (CA AMENDED).	2016 EDITION
NFPA 25	INSPECTION, TESTING AND MAINTENANCE OF WATER BASED FIRE PROTECTION SYSTEMS	2013 CALIFORNIA EDITION
NFPA 72	NATIONAL FIRE ALARM CODE (CA AMENDED)	2016 EDITION
NFPA 80	FIRE DOORS AND OTHER OPENING PROTECTIVES	2016 EDITION
NFPA 92	STANDARD FOR SMOKE CONTROL SYSTEMS	2015 EDITION
NFPA 110	EMERGENCY AND STANDBY POWER SYSTEMS	2016 EDITION
NFPA 170	STANDARD FOR FIRE SAFETY AND EMERGENCY SYMBOLS	2018 EDITION
NFPA 253	CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS	2015 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2015 EDITION
ICC 300	STANDARDS FOR BLEACHERS, FOLDING AND TELESCOPIC SEATING, AND GRANDSTANDS	2017 EDITION
SFM 12-10-1	POWER OPERATED EXIT DOORS	
SFM 12-10-2	SINGLE POINT LATCHING OR LOCKING DEVICES	
SFM 12-10-3	EMERGENCY EXIT & PANIC HARDWARE	
UL 38	MANUAL OPERATING SIGNAL BOXES	1999/2005 EDITION
UL 268	SMOKE DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS	2009 EDITION
UL 268A	SMOKE DETECTORS DUCT APPLICATIONS	1998/2003 EDITION
UL 300	FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF COMMERCIAL COOKING EQUIPMENT	2005 (R2010)
UL 305	PANIC HARDWARE	2012 EDITION
UL 464	AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, AND ACCESSORIES	2003 EDITION
UL 521	HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS	1999 EDITION
UL 864	CONTROL UNITS FOR FIRE PROTECTIVE SIGNALING SYSTEMS (W/ REVISIONS THROUGH DEC. 2014)	2003 EDITION
UL 1971	SIGNALING DEVICES FOR THE HEARING IMPAIRED	2002 EDITION

COMPLIANCE WITH CFC CHAPTER 33, FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION AND CBC CHAPTER 33, SAFETY DURING CONSTRUCTION WILL BE ENFORCED.

SYMBOLS LEGEND

- SECTION / EXTERIOR ELEVATION — 1 / A8.1 — SECTION IDENTIFICATION; SHEET WHERE SECTION IS DRAWN
- DETAIL — 4 / A9.1 — DETAIL IDENTIFICATION; SHEET WHERE DETAIL IS DRAWN
- INTERIOR ELEVATION — 1 / A7.1 — INDICATES ELEVATION SHOWN; SHEET WHERE ELEVATION IS DRAWN
- ROOM IDENTIFICATION — CLASSROOM / 102 — ROOM NAME; ROOM NUMBER
- SPECIFIC NOTE — 3
- DOOR DESIGNATION — 102A
- WINDOW DESIGNATION — A
- ADDENDUM REVISION — 1 — CLOUD AROUND REVISION
- CCD REVISION — 1 / CCD — CLOUD AROUND REVISION
- FINISH NUMBER — 127 — SEE SPECS AND I.E. DWGS.
- EQUIPMENT LETTER — A — SEE EQUIPMENT SCHEDULE
- CEILING HEIGHT — +8'-0"
- WALL TYPE — 1
- MATCH LINE
- ELEV. HEIGHT — +8'-0"
- F.O.S., U.O.N.
- FACE OF FINISH

PROJECT SUMMARY

REPLACEMENT OF EXISTING BOILER SYSTEM AND HVAC SYSTEMS IN GYMNASIUM BUILDING. REMOVAL AND REPLACEMENT OF GYPBOARD CEILING AS NEEDED FOR HVAC RENOVATIONS.

THERE ARE NO DEFERRED SUBMITTALS FOR THIS PROJECT.

DESIGN TEAM

ARCHITECT
SUGIMURA FINNEY ARCHITECTS
2155 SOUTH BASCOM AVENUE SUITE 200
CAMPBELL, CALIFORNIA 95008
(408) 879-9600
(408) 377-6066 FAX

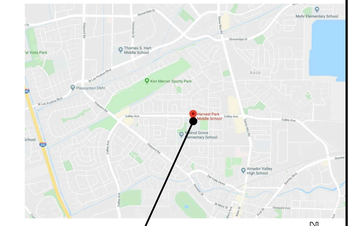
MECHANICAL AND PLUMBING ENGINEER
CYPRESS ENGINEERING GROUP
8 HARRIS COURT, SUITE A8
MONTEREY, CALIFORNIA 93940
(831) 218-1802

ELECTRICAL AND FIRE ALARM ENGINEER
AURUM CONSULTING ENGINEERS
1798 TECHNOLOGY DRIVE, SUITE 242
SAN JOSE, CA 95110
(408) 564-7925

DRAWING INDEX

SHEET TOTAL = 45

VICINITY MAP



PROJECT LOCATION

N

STATEMENT OF GENERAL CONFORMANCE

FOR ARCHITECTS / ENGINEERS WHO UTILIZE PLANS, INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS, PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND / OR OTHER CONSULTANTS

APPLICATION NO.: 01-119604 FILE NO.: 1-32

☒ * THE DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET
☐ THIS DRAWING, PAGE OF SPECIFICATIONS / CALCULATIONS

HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND / OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. IT HAS BEEN EXAMINED BY ME FOR:

1) DESIGN INTENT AND APPEARS TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME, AND

2) COORDINATION WITH MY PLANS AND SPECIFICATIONS AND IS ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT.

THE STATEMENT OF GENERAL CONFORMANCE "SHALL NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES, AND RESPONSIBILITIES UNDER SECTIONS 17302 AND 81138 OF THE EDUCATION CODE AND SECTIONS 4-336, 4-341 AND 4-344" OF TITLE 24, PART 1. *(TITLE 24, PART 1, SECTION 4-317(B))*

I FIND THAT:

☒ ALL DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET
☐ THIS DRAWING OR PAGE

☒ IS / ARE IN GENERAL CONFORMANCE WITH THE PROJECT DESIGN, AND
☒ HAS / HAVE BEEN COORDINATED WITH THE PROJECT PLANS AND SPECIFICATIONS.

MARK FINNEY — 10/04/2021
C-24673 — 9/30/2023
LICENSE NUMBER — EXPIRATION DATE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-119604 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/30/2021
(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 200
CAMPBELL, CA 95008
PHONE: 408-879-9600
FAX: 408-377-6066

REGISTERED PROFESSIONAL ENGINEER
MARK C. FINNEY
NO. C-24673
RENEWAL 9-30-23
STATE OF CALIFORNIA

TITLE SHEET

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4900 VALLEY AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

NO.	ITEM	DATE
1		

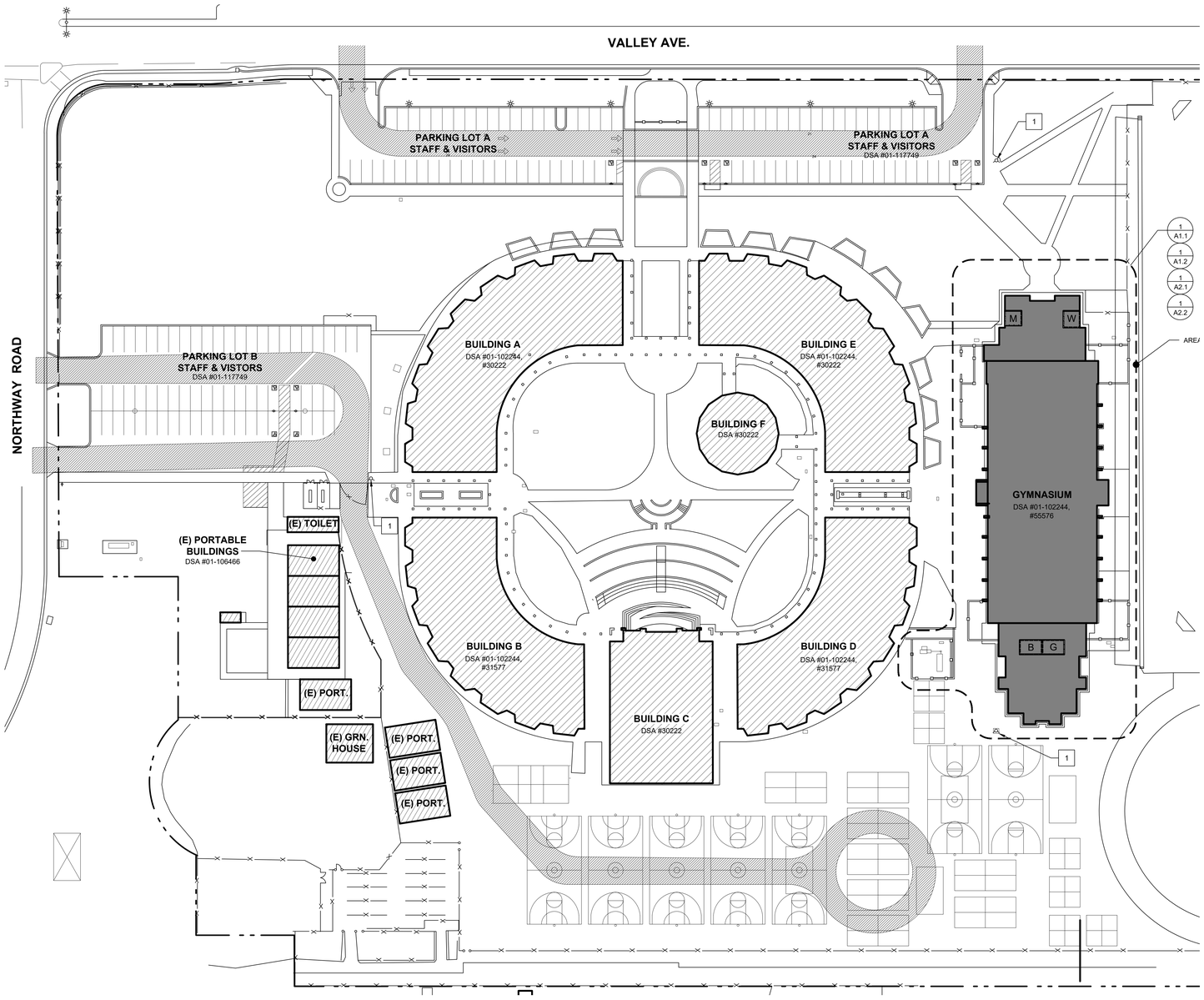
DRAWN BY: KNU
CHECKED BY: MB
SFA JOB NO: 20061
DATE: 10/04/2021

T1

BUILDING CODE ANALYSIS

BUILDING	CONSTRUCTION TYPE OCCUPANCY TYPE	AREA (SQ.FT.)	* ALLOWABLE (SQ.FT.)	# OF STORIES
BUILDING A	V-N / E	15,000	18,200	1
BUILDING B	V-N / E	13,738	13738 ≤ 13,650	1
BUILDING C	A2.1 / E1	9,819	15,700	1
BUILDING D	V-N / E	13,657	1,3657 ≤ 1,3195	1
BUILDING E	V-N / E	14,560	16,562	1
BUILDING F	V-N / E	3,150	9,100	1
GYMNASIUM	2 / A2.1-E1	13,500	40,500	1
PORTABLE CLUSTER	V-N / E1	8,160	18,200	1

* AREA INCREASE USED FOR ORIGINAL CONSTRUCTION.
NEW SCOPE OF WORK DOES NOT ENCROACH OPEN AREA.



1 SITE PLAN - FIRE LIFE SAFETY

1" = 40'-0"

0 10' 20' 40' 80' 120'

PROJECT SUMMARY

REPLACEMENT OF EXISTING BOILER SYSTEM AND HVAC SYSTEMS IN GYMNASIUM BUILDING.

GENERAL NOTES

A. **THIS SHEET IS FOR FIRE LIFE SAFETY CODE RELATED ITEMS. FOR SCOPE OF WORK SEE SHEETS A0.1 AND A0.2.**
B. REFER TO MECHANICAL, PLUMBING, ELECTRICAL, FIRE ALARM, AND FIRE PROTECTION DRAWINGS FOR EXTENT OF OTHER RELATED WORK.

SITE PLAN - FIRE LIFE SAFETY NOTES

1. EXISTING FIRE HYDRANT.

GRAPHIC KEY

- EXISTING PROPERTY LINE
- ACCESSIBLE PATH OF TRAVEL
- ROOF OVERHANG
- CHAIN LINK FENCE
- WOOD FENCE
- DECORATIVE FENCE
- EXISTING BUILDING
- BUILDING TO BE RENOVATED
- FIRE DEPARTMENT ACCESS. FIRE DEPARTMENT ACCESS IS 20'-0" WIDE AND RATED FOR 96,000 LBS.
- (E) FIRE HYDRANT
- (E) SIGN

IDENTIFICATION STAMP
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(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 200
CAMPBELL, CA 95008
PHONE: 408-879-0606
FAX: 408-377-6066

LICENSED ARCHITECT
MARK C. FINNEY
NO. C-24673
RENEWAL 9-30-21
STATE OF CALIFORNIA

SITE PLAN
FIRE LIFE SAFETY

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4900 VALLEY AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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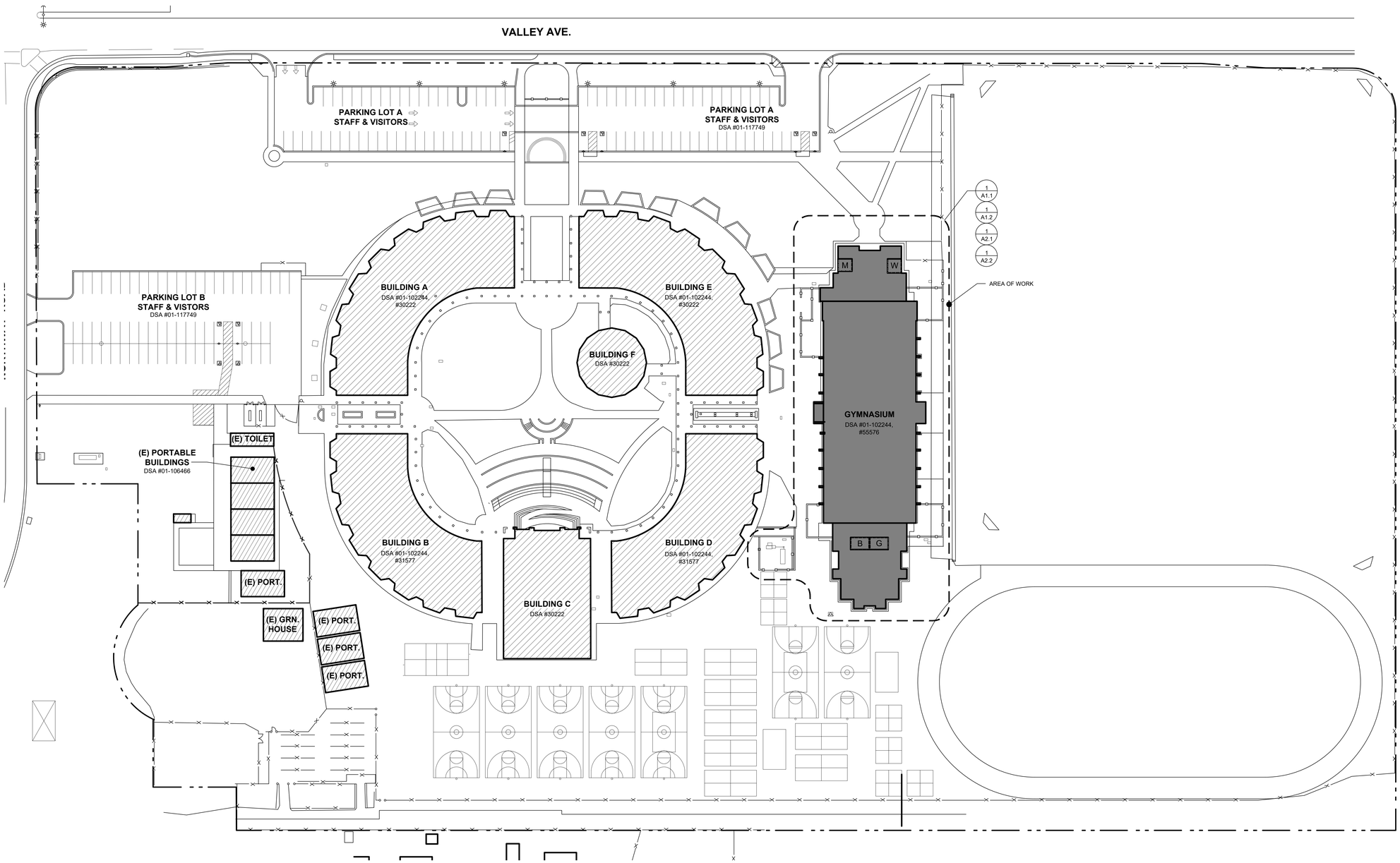

1 CAMPUS SITE PLAN

1" = 40'-0"

0 10' 20' 40' 80' 120'

GRAPHIC KEY

- EXISTING PROPERTY LINE
- ROOF OVERHANG
- CHAINLINK FENCE
- WOOD FENCE
- DECORATIVE FENCE
- EXISTING BUILDING
- BUILDING TO BE RENOVATED

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SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 200
CAMPBELL, CA 95008
PHONE: 408-879-0606
FAX: 408-377-6066

LICENSED ARCHITECT
MARK C. FINNEY
NO. C-24573
STATE OF CALIFORNIA
EXPIRES 9-30-21

CAMPUS SITE PLAN

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4900 VALLEY AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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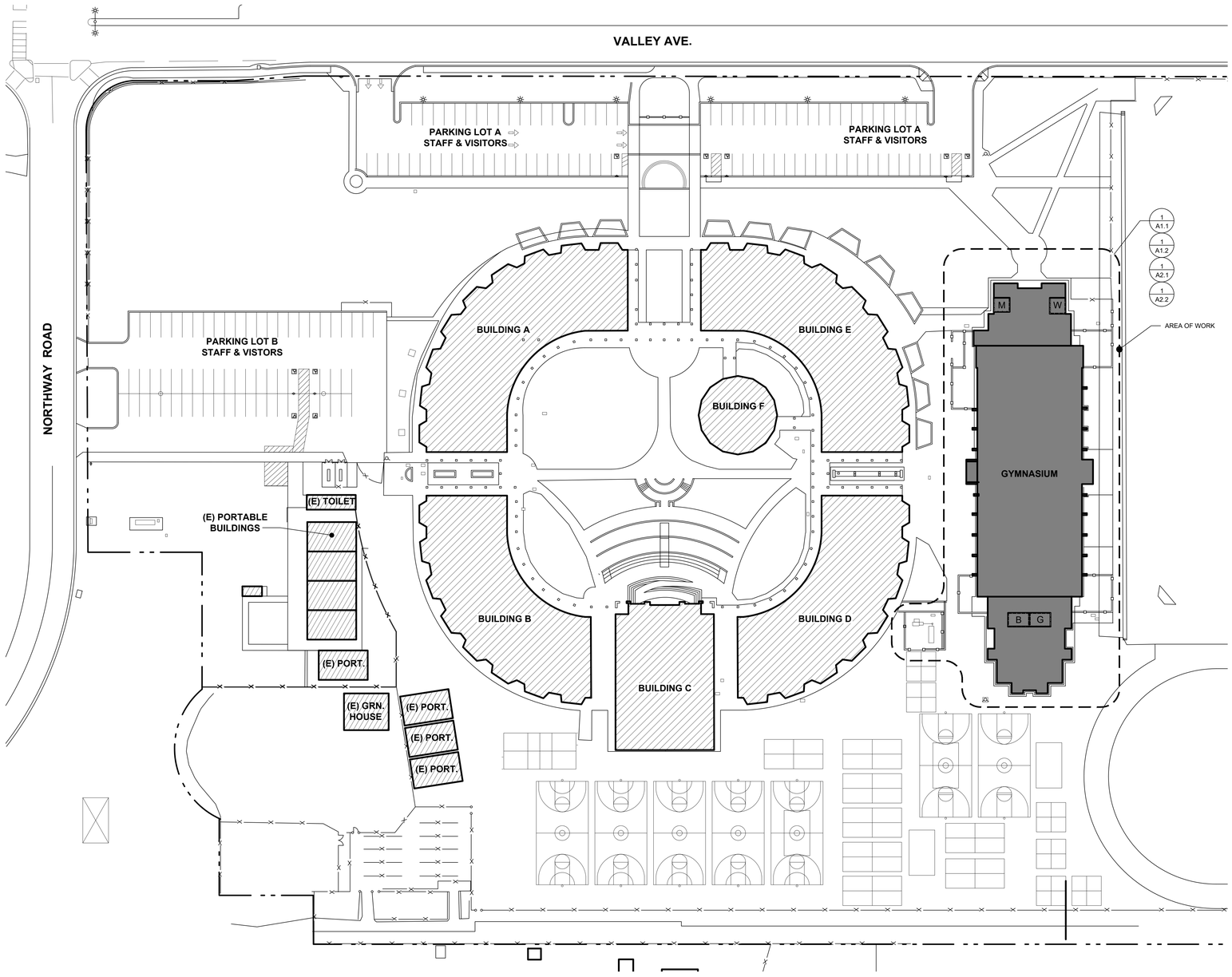
A0.1

GENERAL NOTES

A. REFER TO MECHANICAL, PLUMBING, ELECTRICAL AND FIRE ALARM FOR EXTENT OF OTHER RELATED WORK.

B. CONTRACTOR TO VERIFY ALL BARRIERS IN P.O.T. HAVE BEEN REMOVED.



1 PARTIAL SITE PLAN

1" = 40'-0"

0 10' 20' 40' 80' 120'

REF NORTH TRUE NORTH

GRAPHIC KEY

- EXISTING PROPERTY LINE
- ROOF OVERHANG
- CHAINLINK FENCE
- WOOD FENCE
- DECORATIVE FENCE
- EXISTING BUILDING
- BUILDING TO BE RENOVATED

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SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 200
CAMPBELL, CA 95008
PHONE: 408-879-0606
FAX: 408-377-6066

LICENSED ARCHITECT
MARK C. FINNEY
NO. C-24573
STATE OF CALIFORNIA
9-30-21
REN.

PARTIAL SITE PLAN

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4900 VALLEY AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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- CONCRETE

A. CONCRETE SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH ACI 318.

B. CONCRETE SHALL BE AS FOLLOWS:

CONCRETE USE	STRENGTH AT 28 DAYS U.O.N.	W/C RATIO	MAX. AGGREGATE SIZE	WEIGHT	SHRINKAGE
SLAB ON GRADE	3000 PSI	0.45 MAX.	3/4" TO 1" (LS)	145pcf	.045%
HOUSEKEEPING PAD	3000 PSI	0.45 MAX.	3/4" TO 1" (LS)	145pcf	.045%

C. STRENGTH: COMPRESSIVE STRENGTH IN PSI WHEN TESTED IN ACCORDANCE WITH ASTM C39

D. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE II.

E. AGGREGATE FOR STONE CONCRETE SHALL CONFORM TO ASTM C-33. FOR LOW SHRINKAGE AGGREGATE, USE LIMESTONE OR GRANITE. AGGREGATE FOR LIGHTWEIGHT CONCRETE SHALL CONFORM TO ASTM C-330.

F. FLY ASH: ASTM C 618, CLASS F OR CLASS C. MINIMUM RECOMMENDED FLY ASH F. CONTENT BY MASS OF CEMENTITIOUS MATERIAL IS 20%, MAXIMUM RECOMMENDATION IS 25%. (DSA PROJECTS FLY ASH: ASTM C 618, ASTM C 311 CLASS N OR F AND DSA IR 14-3 CLASS F. RECOMMENDED FLY ASH CONTENT BY MASS OF CEMENTITIOUS MATERIAL IS 15%.)

G. ADMIXTURES: MIX SHALL CONTAIN POLYMER BASED, WATER REDUCING ADMIXTURE. THE FOLLOWING TYPES OF ADMIXTURES ARE ALLOWED AS PLASTICIZERS AND/ OR SET ACCELERATORS TO IMPROVE WORKABILITY. 1. ASTM C494, TYPES A, C, E, G. HIGH RANGE WATER REDUCERS SHALL ALSO MEET REQUIREMENTS OF ASTM C 1017. 2. THE INITIAL SLUMP OF THE CONCRETE BEFORE INTRODUCING ADMIXTURES SHOULD BE MINIMUM 2" INCHES

H. SHRINKAGE - CONTRACTOR TO PROVIDE CONCRETE MIX HISTORY DATA OR PROVIDE TESTING REPORT.

I. MINIMUM REINF. COVER FOR CAST-IN-PLACE CONCRETE:
1. CONC. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH. . . . . 3"
2. CONC. FORMED BELOW GRADE OR EXPOSED TO WEATHER:
NO. 6 AND GREATER . . . . . 2"
NO. 5 AND SMALLER . . . . . 1 1/2"
3. CONC. NOT EXPOSED TO WEATHER NOR IN CONTACT WITH GROUND:
SLABS, WALLS, AND JOISTS: NO. 11 AND SMALLER . . . . . 1"
BEAMS AND COL. PRIMARY REINF., TIES, STIRRUPS, SPIRALS . . . . . 1 1/2"

J. PLACEMENT
1. ALL REINFORCING BARS, ANCHOR BOLTS, AND ALL OTHER CONC. INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
2. CHAMFER ALL CORNERS OF CONCRETE TO PREVENT DAMAGE.
3. CONSTRUCTION TOLERANCE SHALL COMPLY TO ACI 117.
4. CONCRETE SHALL BE PLACED IN A CONTINUOUS OPERATION BETWEEN PREDETERMINED CONSTRUCTION JOINTS.
5. USE VIBRATORS TO CONSOLIDATE CONCRETE. DO NOT USE VIBRATORS TO MOVE CONCRETE.
6. CONCRETE SHALL BE CONTINUOUSLY CURED FOR 7 DAYS AFTER PLACEMENT IN ANY APPROVED MANNER. FOOTINGS ARE EXEMPTED FROM THIS REQUIREMENT.
7. PATCHING OF CONCRETE: ALL INSERT HOLES AND OTHER IMPERFECTIONS ON THE SURFACES OF THE CONCRETE SHALL BE FILLED WITH GROUT, BRUSHED AND SACKED TO A UNIFORM FINISH.

- REINFORCING STEEL

A. REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH ACI 315 AND ACI 318.

B. REINFORCING STEEL SHALL BE AS FOLLOWS:

REINF.	TYPE
BARS/TIES/SPIRALS	ASTM A615, GRADE 60, U.O.N.

C. DO NOT FIELD BEND OR STRAIGHTEN IN ANY MANNER THAT WILL DAMAGE REINFORCING.

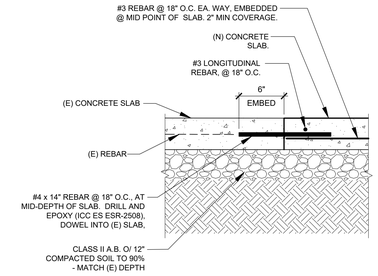
DESIGN BASIS:

A. APPLICABLE CODE: CBC 2019

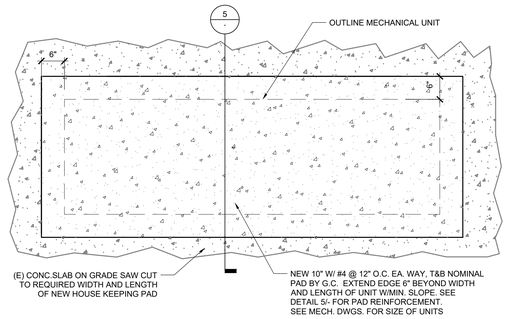
B. VERTICAL LOADS - LIVE LOADS
1. ROOF: 20 PSF REDUCIBLE

C. LATERAL LOADS:
1. DESIGN WIND CRITERIA PER ASCE 7-16
BASIC WIND SPEED: 100 MPH (STR)
EXPOSURE C
2. DESIGN SEISMIC CRITERIA
SITE CLASS D
SDS: 1.541 g
SD1:
IMPORTANCE FACTOR: 1.25
RISK CATEGORY III

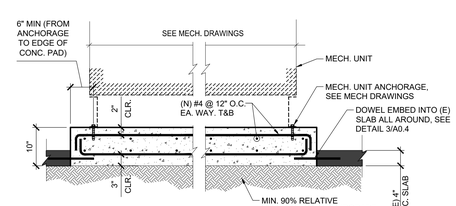
D. GEOTECHNICAL CRITERIA PER CBC ALLOWABLE MINIMUM, U.O.N.



3 CONCRETE SLAB PATCH DETAIL
1-1/2"=1'-0"



6 HOUSEKEEPING PAD - PLAN
AT (E) CONCRETE 3/4"=1'-0"



5 HOUSEKEEPING PAD - SECTION
AT (E) CONCRETE 3/4"=1'-0"

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SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 200
CAMPBELL, CA 95008
PHONE: 408-879-6000
FAX: 408-377-6000

LICENSED ARCHITECT
MARK C. FINNEY
NO. C-24673
EXPIRES 9-30-21
STATE OF CALIFORNIA

TYPICAL SITE DETAILS

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
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PLEASANTON UNIFIED SCHOOL DISTRICT

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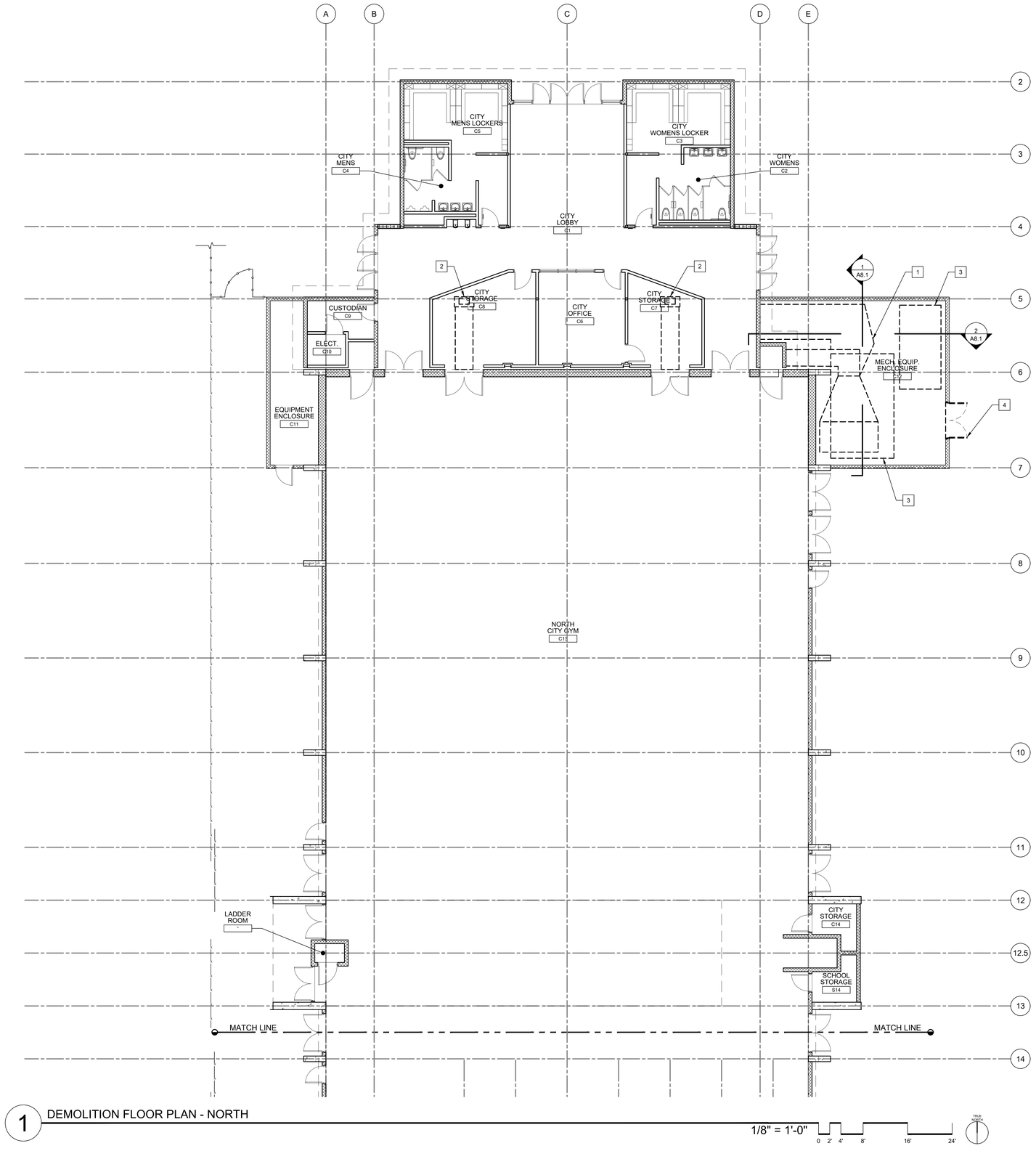
A0.4



1 DEMOLITION FLOOR PLAN - NORTH

1/8" = 1'-0"

0 2' 4' 8' 16' 24'

TRUE NORTH

GENERAL NOTES

A. ROOM NAMES AND NUMBERS MAY NOT BE CONSISTENT BETWEEN DEMOLITION FLOOR PLANS AND NEW FLOOR PLANS.
B. REFER TO MECHANICAL, PLUMBING, ELECTRICAL, FIRE ALARM, AND FIRE PROTECTION DRAWINGS FOR EXTENT OF OTHER RELATED WORK.
C. ITEMS SHOWN DASHED ARE TO BE REMOVED U.O.N.
D. ALL PLUMBING, ELECTRICAL, AND MECHANICAL DEVICES TO BE REMOVED, ARE TO BE REMOVED IN THEIR ENTIRETY. INCLUDE ALL ACCESSORIES, ETC. CAP IN WALL, BELOW FLOOR, OR REMOVE BACK TO PANEL.
E. CONTRACTOR TO PATCH, REPAIR AND PAINT ALL DAMAGED SURFACES AND/OR SURFACES TO BE EXPOSED TO VIEW AS A RESULT OF DEMOLITION WORK.
F. WHERE SINKS AND/OR OTHER PLUMBING FIXTURES EXIST IN CASEWORK TO BE DEMOLISHED, PLUMBING IS ALSO TO BE DEMOLISHED AS PER GENERAL NOTE D.

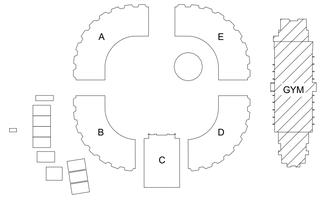
DEMOLITION FLOOR PLAN NOTES

1. REMOVE (E) MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS FOR MORE INFORMATION.
2. REMOVE (E) HVAC EQUIPMENT, SEE MECHANICAL DRAWINGS FOR MORE INFORMATION.
3. DEMOLISH (E) HOUSEKEEPING PAD, PATCH (E) SLAB TO PREPARE FOR NEW HOUSEKEEPING PAD. SEE DETAILS 5 & 6/A0.4
4. DEMOLISH (E) DOOR, FRAME AND ALL ASSOCIATED HARDWARE. THRESHOLD T REMAIN.

GRAPHIC KEY

- (E) STUD WALL TO REMAIN
- (E) CMU WALL TO REMAIN
- (E) CONC. WALL TO REMAIN
- (E) GLASS BLOCK WALL

BUILDING KEY



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SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 200
CAMPBELL, CA 95008
PHONE: 408-879-6699
FAX: 408-377-6066

LICENSED ARCHITECT
MARK C. FINNEY
NO. C-24573
RENEWAL 9-30-21
STATE OF CALIFORNIA

DEMOLITION FLOOR PLAN - NORTH

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4900 VALLEY AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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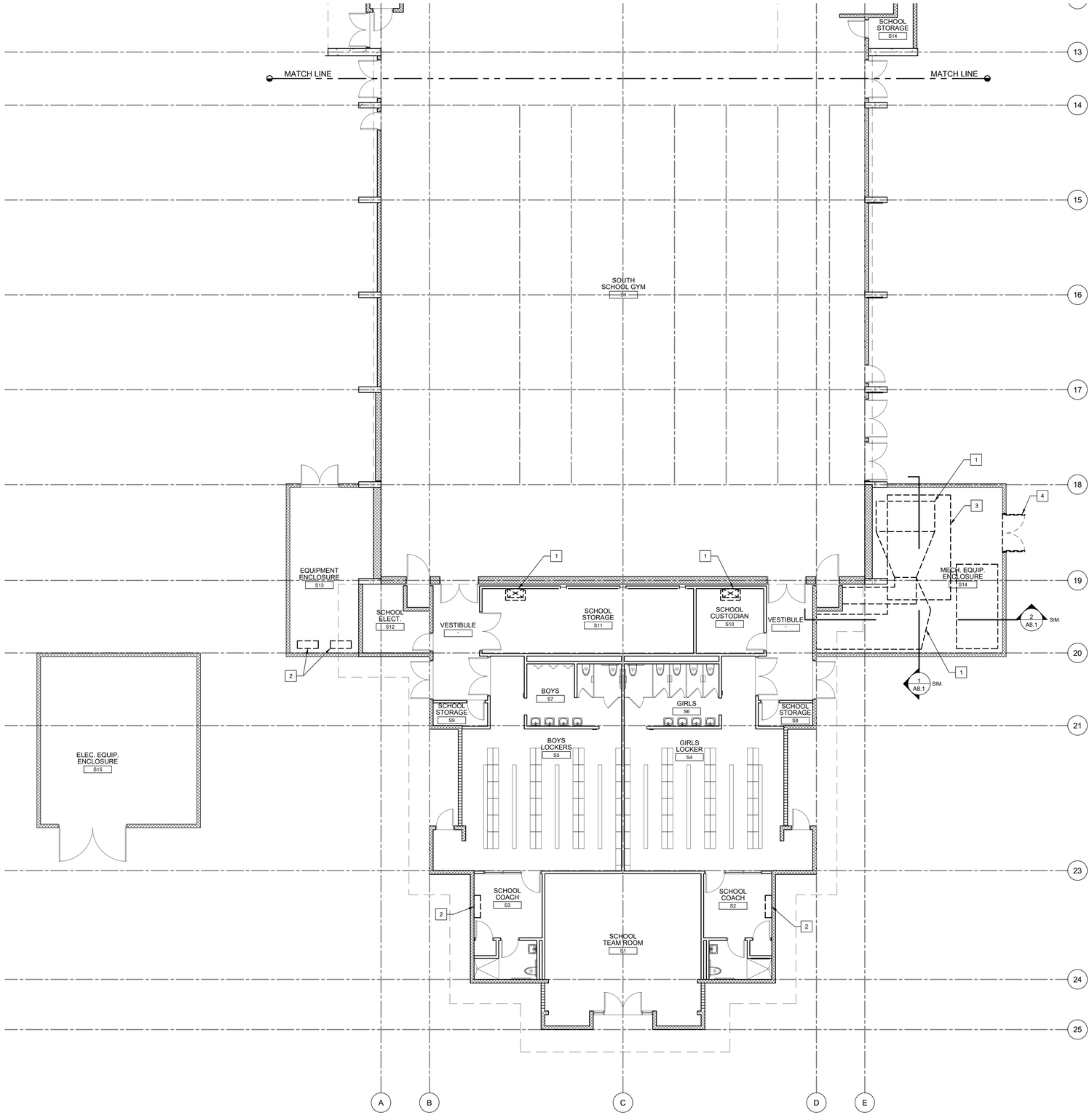


1 DEMOLITION FLOOR PLAN - SOUTH

1/8" = 1'-0"

0 2' 4' 8' 16' 24'

GENERAL NOTES

A. ROOM NAMES AND NUMBERS MAY NOT BE CONSISTENT BETWEEN DEMOLITION FLOOR PLANS AND NEW FLOOR PLANS.
B. REFER TO STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL, FIRE ALARM, AND FIRE PROTECTION DRAWINGS FOR EXTENT OF OTHER RELATED WORK.
C. ITEMS SHOWN DASHED ARE TO BE REMOVED U.O.N.
D. ALL PLUMBING, ELECTRICAL, AND MECHANICAL DEVICES TO BE REMOVED, ARE TO BE REMOVED IN THEIR ENTIRETY. INCLUDE ALL ACCESSORIES, ETC. CAP IN WALL, BELOW FLOOR, OR REMOVE BACK TO PANEL.
E. CONTRACTOR TO PATCH, REPAIR AND PAINT ALL DAMAGED SURFACES AND/OR SURFACES TO BE EXPOSED TO VIEW AS A RESULT OF DEMOLITION WORK.
F. WHERE SINKS AND/OR OTHER PLUMBING FIXTURES EXIST IN CASEWORK TO BE DEMOLISHED, PLUMBING IS ALSO TO BE DEMOLISHED AS PER GENERAL NOTE D.

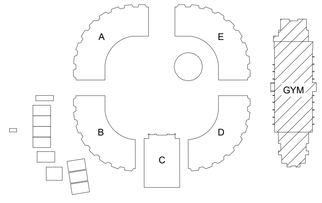
DEMOLITION FLOOR PLAN NOTES

1. REMOVE (E) MECHANICAL EQUIPMENT, SEE MECHANICAL SHEETS FOR MORE INFORMATION.
2. REMOVE (E) HVAC EQUIPMENT, SEE MECHANICAL SHEETS FOR MORE INFORMATION.
3. DEMOLISH (E) HOUSEKEEPING PAD, PATCH (E) SLAB TO PREPARE FOR NEW HOUSEKEEPING PAD. SEE DETAILS 5 & 6/A0.4
4. DEMO (E) DOOR & FRAME

GRAPHIC KEY

- (E) STUD WALL TO REMAIN
- (E) CMU WALL TO REMAIN
- (E) CONC. WALL TO REMAIN
- (E) GLASS BLOCK WALL

BUILDING KEY



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SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 200
CAMPBELL, CA 95008
PHONE: 408-879-6600
FAX: 408-377-6666

LICENSED ARCHITECT
MARK C. FINNEY
NO. C-24673
STATE OF CALIFORNIA
REN. 9-30-21

DEMOLITION FLOOR PLAN - SOUTH

HVAC BOILER REPLACEMENT
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PLEASANTON UNIFIED SCHOOL DISTRICT

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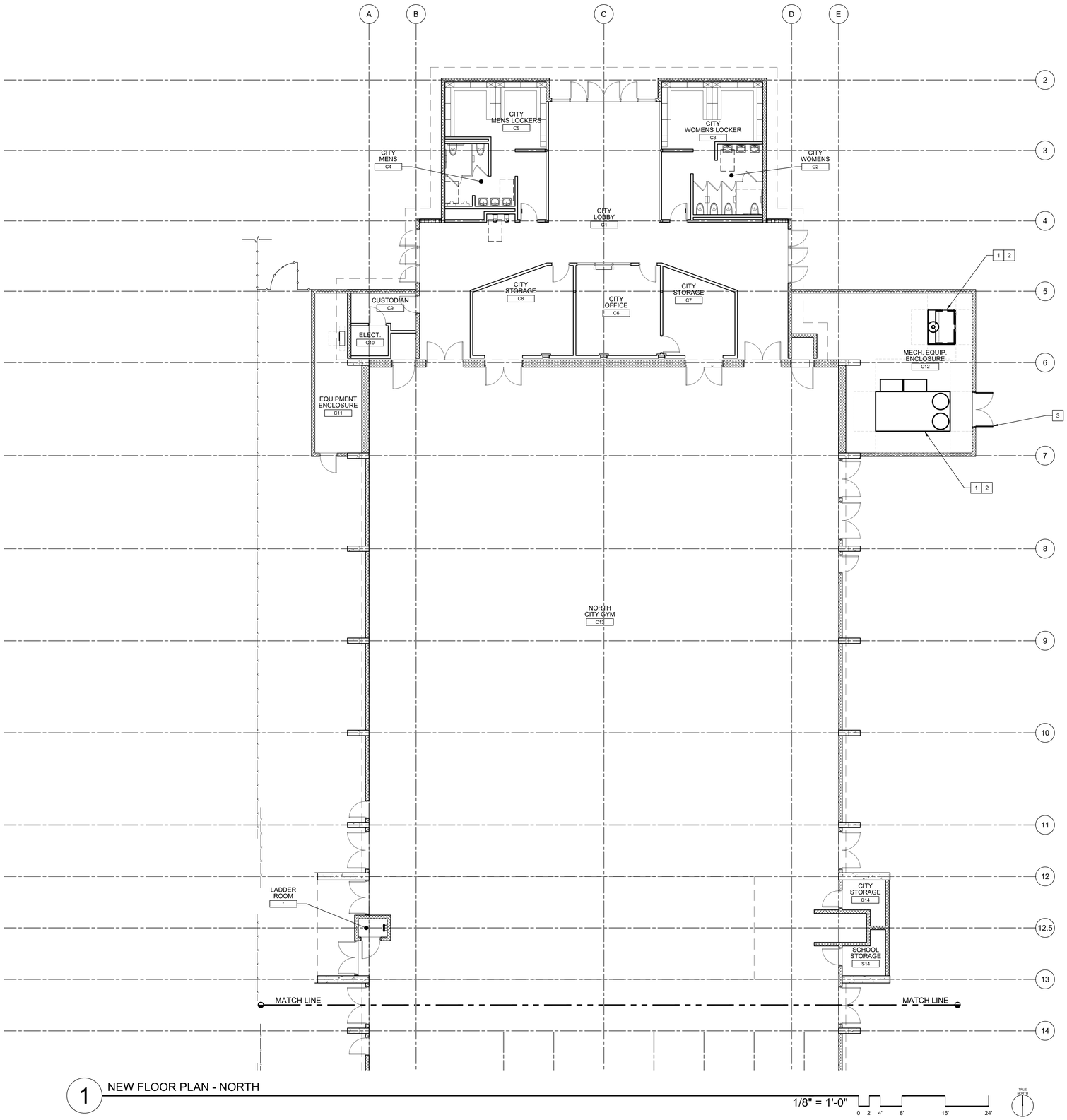


1 NEW FLOOR PLAN - NORTH

1/8" = 1'-0"

0 2' 4' 8' 16' 24'

TRUE NORTH

GENERAL NOTES

A. ROOM NAMES AND NUMBERS MAY NOT BE CONSISTENT BETWEEN DEMOLITION FLOOR PLANS AND NEW FLOOR PLANS.
B. REFER TO MECHANICAL, PLUMBING, ELECTRICAL, FIRE ALARM, AND FIRE PROTECTION DRAWINGS FOR EXTENT OF OTHER RELATED WORK.
C. OPENINGS FROM DEMOLISHED ITEMS ARE TO BE FRAMED IN AND PATCHED TO MATCH ADJACENT SURFACES.

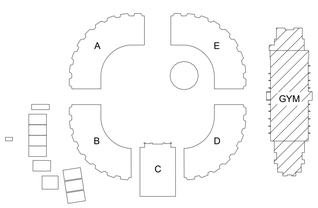
NEW FLOOR PLAN NOTES

1. (N) MECHANICAL UNITS, SEE MECHANICAL SHEETS FOR MORE INFORMATION.
2. NEW HOUSEKEEPING PAD, SEE DETAILS 5 & 6 / A0.4
3. NEW DOOR AND FRAME, SEE DOOR SCHEDULE.

GRAPHIC KEY

- (E) STUD WALL
- (E) CMU WALL
- (E) CONC. WALL
- (E) GLASS BLOCK WALL

BUILDING KEY



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SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 209
CAMPBELL, CA 95008
PHONE: 408-879-0699
FAX: 408-377-0669

LICENSED ARCHITECT
MARK C. FINNEY
NO. C-24573
RENEWAL 9-30-23
STATE OF CALIFORNIA

NEW FLOOR PLAN - NORTH

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4900 VALLEY AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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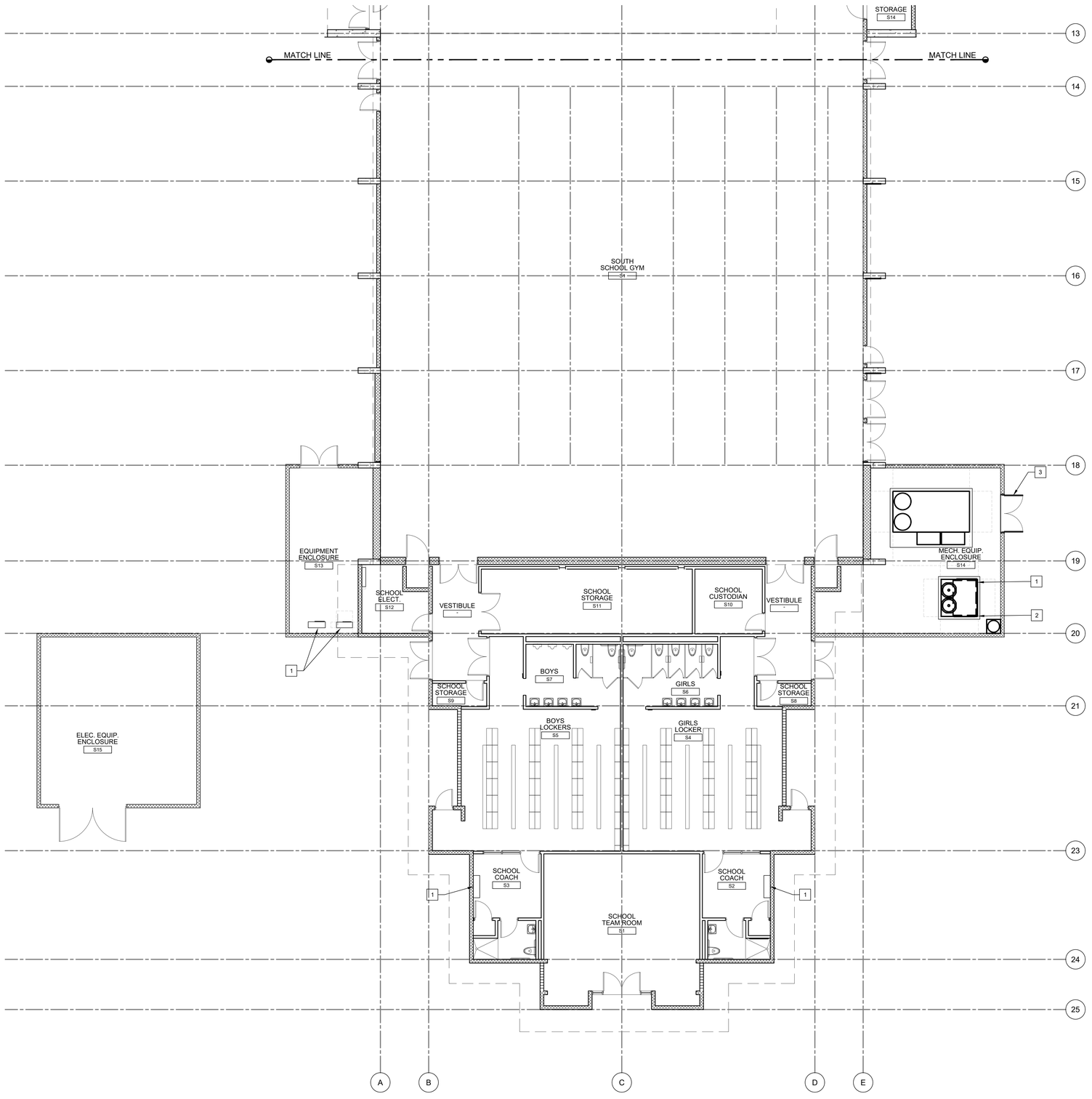

1 NEW FLOOR PLAN - SOUTH

1/8" = 1'-0"

0 2' 4' 8' 16' 24'

TRUE NORTH

GENERAL NOTES

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B. REFER TO STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL, FIRE ALARM, AND FIRE PROTECTION DRAWINGS FOR EXTENT OF OTHER RELATED WORK.
C. OPENINGS FROM DEMOLISHED ITEMS ARE TO BE FRAMED IN AND PATCHED TO MATCH ADJACENT SURFACES.
D. ALL (E) EXTERIOR STUD WALLS THAT ARE EXPOSED SHALL HAVE R-19 INSULATION.
E. ALL (E) INTERIOR STUD WALLS THAT ARE EXPOSED SHALL HAVE R-19 ACOUSTICAL INSULATION.

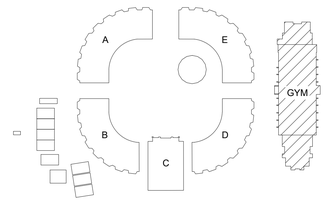
NEW FLOOR PLAN NOTES

1. (N) MECHANICAL UNITS, SEE MECHANICAL SHEETS FOR MORE INFORMATION.
2. NEW HOUSEKEEPING PAD
3. NEW DOOR AND FRAME

GRAPHIC KEY

- (E) STUD WALL
- (E) CMU WALL
- (E) CONC. WALL
- (E) GLASS BLOCK WALL

BUILDING KEY



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ARCHITECTURE INTERIORS PLANNING
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NEW FLOOR PLAN - SOUTH

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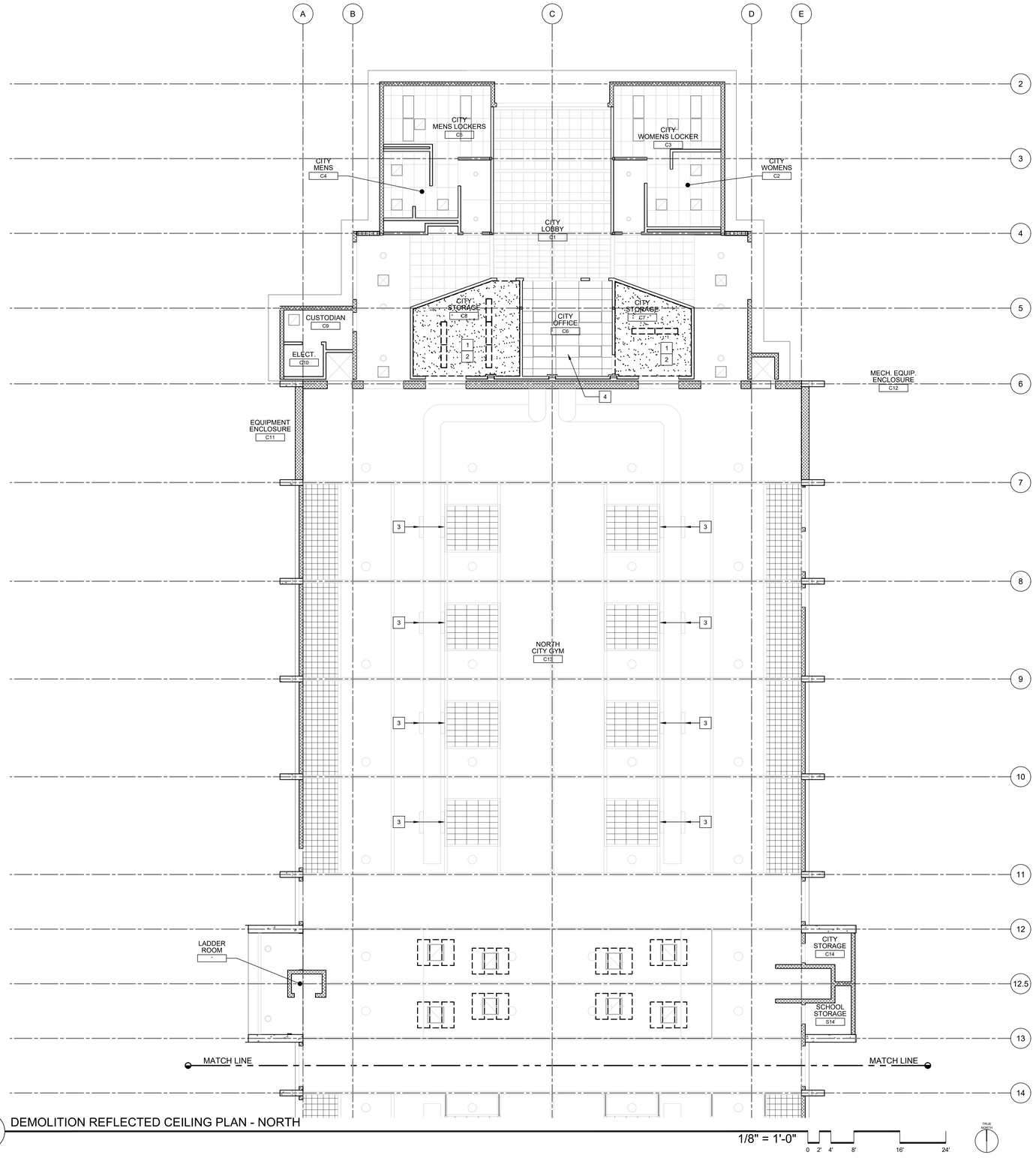


1 DEMOLITION REFLECTED CEILING PLAN - NORTH

1/8" = 1'-0"

0 2' 4' 8' 16' 24'

TRUE NORTH

GENERAL NOTES

A. ALL CEILING / ROOF FRAMING TO HAVE R-30 INSULATION.

REFLECTED CEILING PLAN NOTES

1. REMOVE PARTIAL (E) CEILING FINISH AS NEEDED TO ACCOMMODATE FOR HVAC DUCT REMOVAL AND NEW INSTALLATION.
2. REMOVE (E) LIGHT FIXTURES AND PREPARE FOR REINSTALLATION.
3. REGISTERS TO BE REPLACED, SEE MECHANICAL DRAWINGS
4. REMOVE CEILING TILES AND LIGHT FIXTURES AS NEEDED TO ACCOMMODATE FOR HVAC DUCT REMOVAL AND NEW INSTALLATION.

GRAPHIC KEY

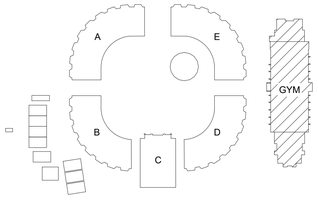
MECHANICAL

- SUPPLY DIFFUSER
- RETURN AIR GRILLE
- EXHAUST GRILLE

ELECTRICAL

- SUSPENDED LIGHT FIXTURE
- 2' X 4' LIGHT FIXTURE
- 2' X 2' LIGHT FIXTURE
- RECESSED DOWNLIGHT
- EXIT SIGN

BUILDING KEY



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-119604 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/30/2021
(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 209
CAMPBELL, CA 95008
PHONE: 408-879-6699
FAX: 408-377-6699

LICENSED ARCHITECT
MARK C. FINNEY
NO. C-24673
RENEWAL 9-30-23
STATE OF CALIFORNIA

DEMOLITION REFLECTED CEILING PLAN - NORTH

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4900 VALLEY AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

NO.	ITEM	DATE
1		

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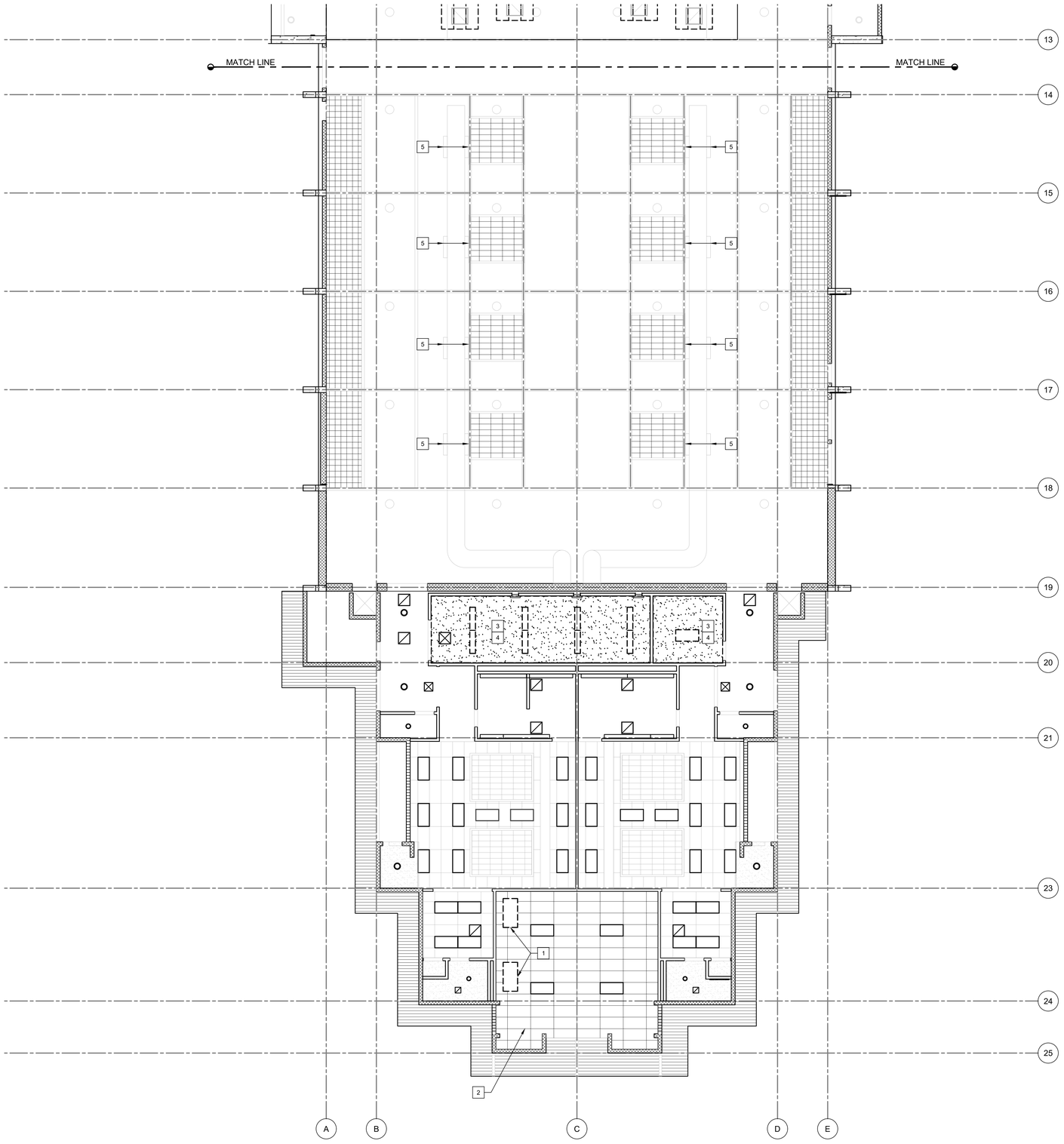
CHECKED BY: MB
SFA JOB NO: 20061
DATE: 10/04/2021

A3.1



1 DEMOLITION REFLECTED CEILING PLAN - SOUTH

1/8" = 1'-0"

0 2' 4' 8' 16' 24'

TRUE NORTH

GENERAL NOTES

A. ALL CEILING / ROOF FRAMING TO HAVE R-30 INSULATION.

REFLECTED CEILING PLAN NOTES

1. REMOVE EXISTING SPLIT SYSTEM, SEE MECHANICAL SHEETS FOR MORE INFORMATION.
2. REMOVE DAMAGED CEILING TILES, APPROX. 20%. TO BE REPLACED WITH NEW.
3. REMOVE (E) LIGHT AND MECHANICAL FIXTURES AND PREPARE FOR REINSTALLATION.
4. REMOVE (E) PARTIAL CEILING FINISH AS NEEDED TO ACCOMMODATE FOR HVAC DUCT REMOVAL AND NEW INSTALLATION.
5. REGISTERS TO BE REPLACED, SEE MECHANICAL DRAWINGS

GRAPHIC KEY

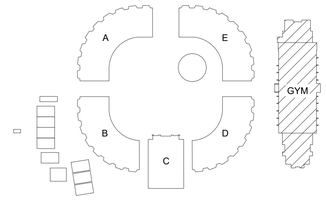
MECHANICAL

- SUPPLY DIFFUSER
- RETURN AIR GRILLE
- EXHAUST GRILLE

ELECTRICAL

- SUSPENDED LIGHT FIXTURE
- 2' X 4' LIGHT FIXTURE
- 2' X 2' LIGHT FIXTURE
- RECESSED DOWNLIGHT
- EXIT SIGN

BUILDING KEY



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SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 209
CAMPBELL, CA 95008
PHONE: 408-879-0699
FAX: 408-377-6069

LICENSED ARCHITECT
MARK C FINNEY
NO. C-24673
REN. 9-30-23
STATE OF CALIFORNIA

DEMOLITION REFLECTED CEILING PLAN - SOUTH

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4900 VALLEY AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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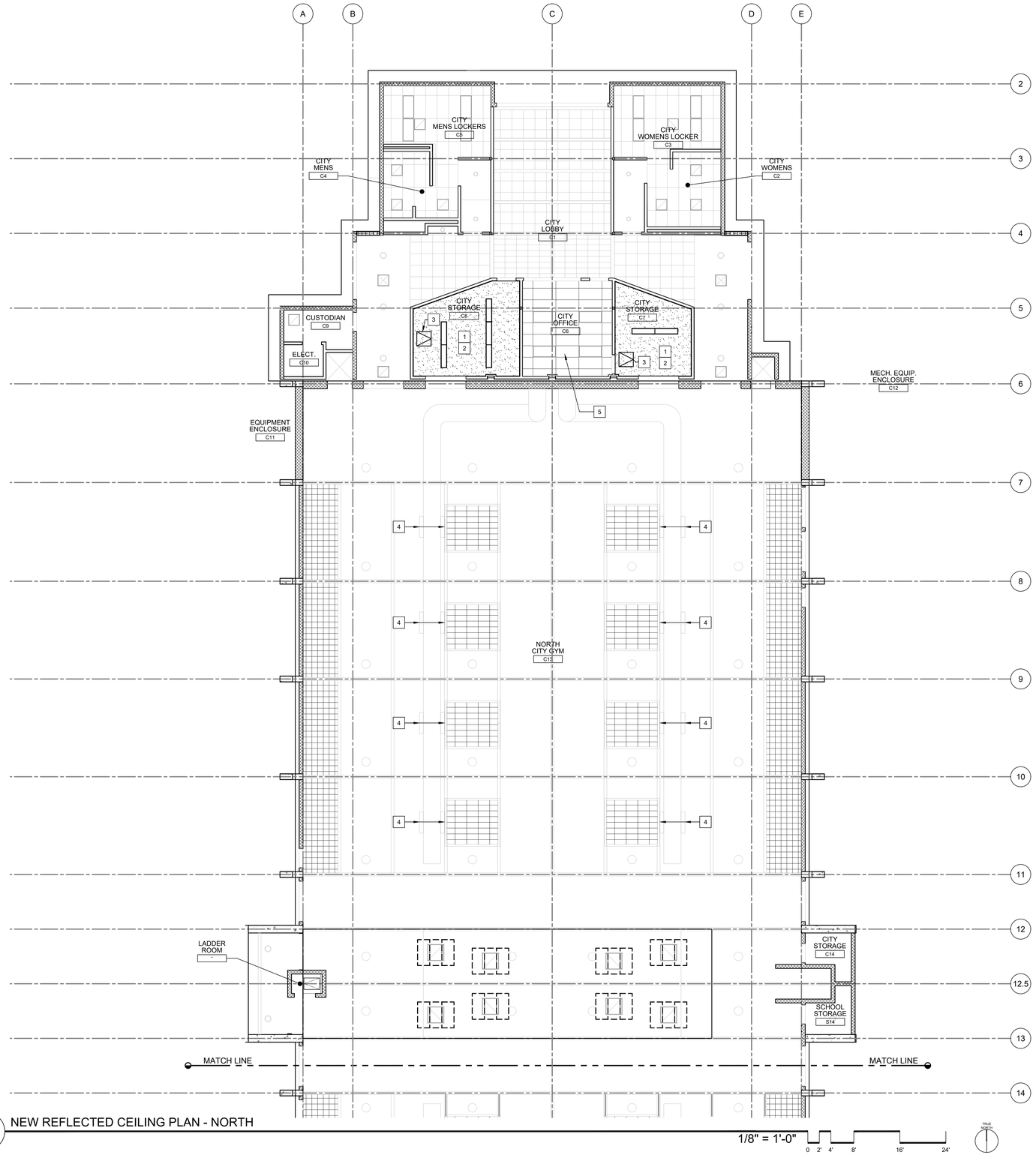
A3.2



1 NEW REFLECTED CEILING PLAN - NORTH

1/8" = 1'-0"

0 2' 4' 8' 16' 24'

TRUE NORTH

GENERAL NOTES

A. ALL CEILING / ROOF FRAMING TO HAVE R-30 INSULATION.

REFLECTED CEILING PLAN NOTES

1. INSTALL NEW GYP BOARD CEILING, SEE SHEET A9.2
2. REINSTALL EXISTING LIGHT FIXTURES
3. NEW CEILING ACCESS PANEL SEE DETAIL 9/A9.2
4. NEW REGISTERS, SEE MECHANICAL DRAWINGS.
5. RE-INSTALL PREVIOUSLY REMOVED CEILING TILES.

GRAPHIC KEY

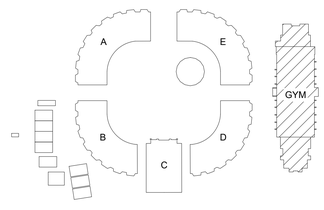
MECHANICAL

- SUPPLY DIFFUSER
- RETURN AIR GRILLE
- EXHAUST GRILLE

ELECTRICAL

- SUSPENDED LIGHT FIXTURE
- 2' X 4' LIGHT FIXTURE
- 2' X 2' LIGHT FIXTURE
- RECESSED DOWNLIGHT
- EXIT SIGN

BUILDING KEY



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LICENSED ARCHITECT
MARK C. FINNEY
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RENEWAL 8-30-23
STATE OF CALIFORNIA

NEW REFLECTED CEILING PLAN - NORTH

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4900 VALLEY AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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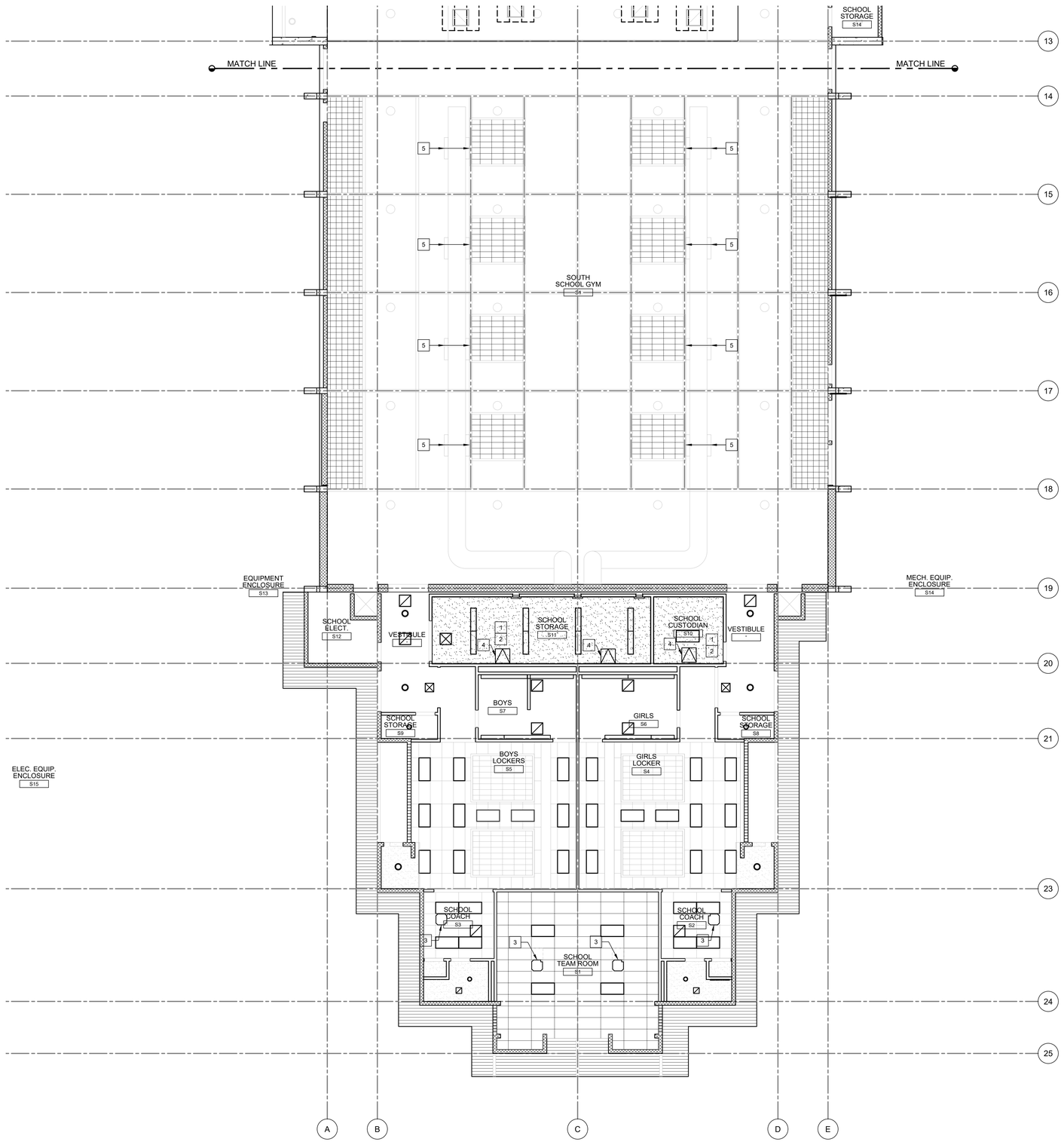
A3.3



1 NEW REFLECTED CEILING PLAN - SOUTH

1/8" = 1'-0"

0 2' 4' 8' 16' 24'

TRUE NORTH

GENERAL NOTES

A. ALL CEILING / ROOF FRAMING TO HAVE R-30 INSULATION.

REFLECTED CEILING PLAN NOTES

1. NEW GYP BOARD CEILING, SEE SHEET A9.2
2. REINSTALL EXISTING LIGHT AND MECHANICAL FIXTURES
3. NEW MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS
4. NEW CEILING ACCESS PANEL SEE DETAIL 9/A9.2
5. NEW REGISTERS, SEE MECHANICAL DRAWINGS.

GRAPHIC KEY

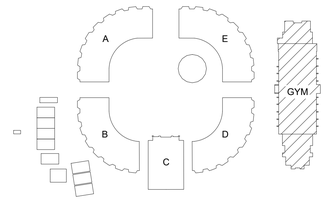
MECHANICAL

- SUPPLY DIFFUSER
- RETURN AIR GRILLE
- EXHAUST GRILLE

ELECTRICAL

- SUSPENDED LIGHT FIXTURE
- 2' X 4' LIGHT FIXTURE
- 2' X 2' LIGHT FIXTURE
- RECESSED DOWNLIGHT
- EXIT SIGN

BUILDING KEY



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NO. C-24673
EXP. REN. 9-30-23
STATE OF CALIFORNIA

NEW REFLECTED CEILING PLAN - SOUTH

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4900 VALLEY AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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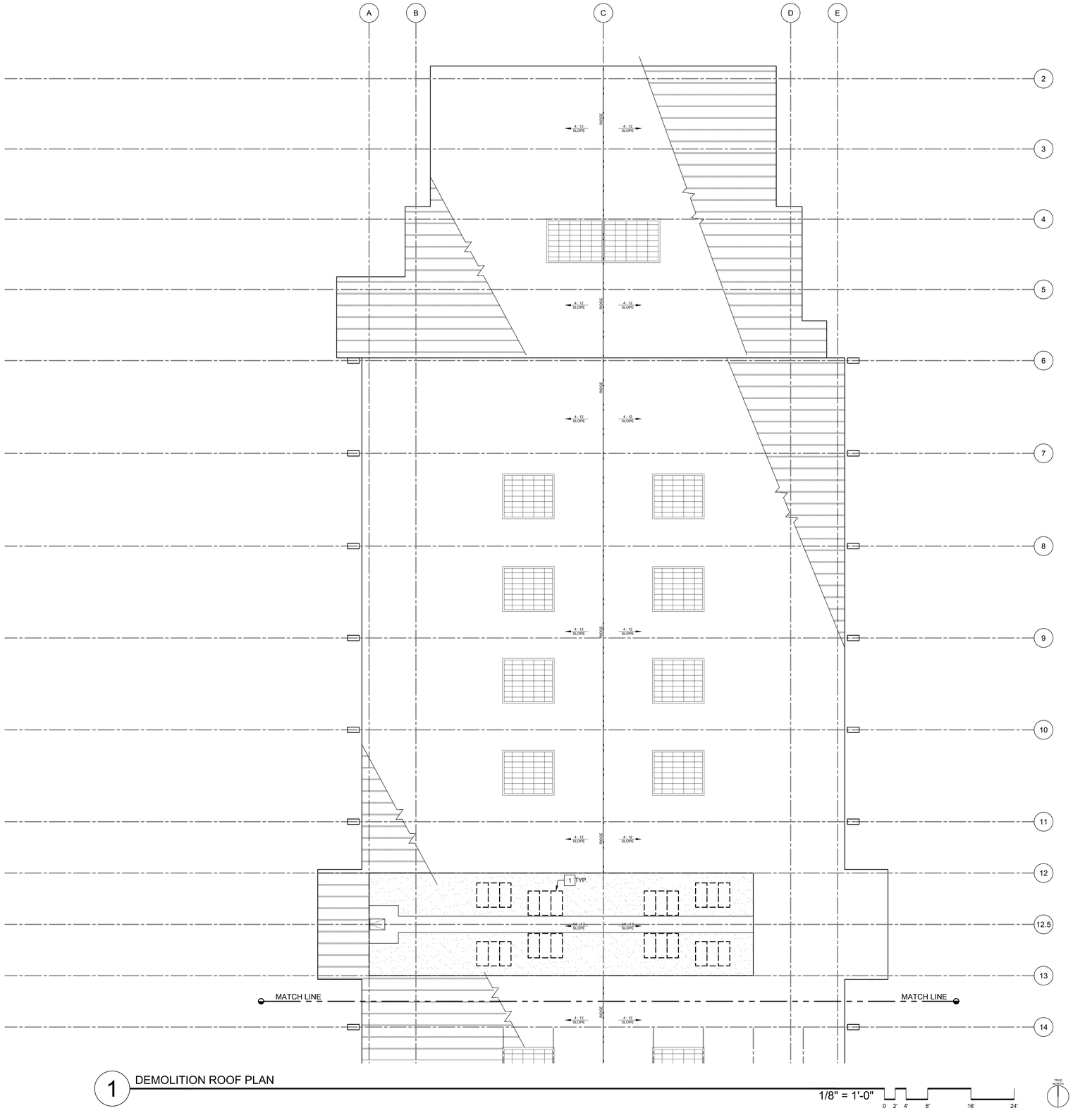


1 DEMOLITION ROOF PLAN

1/8" = 1'-0"

0 2' 4' 8' 16' 24'

TRUE NORTH

GENERAL NOTES

A. NOT ALL ROOF APPURTENANCES ARE SHOWN ON DRAWINGS. CONTRACTOR TO FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL DEVICES AND EQUIPMENT. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL SCOPE OF WORK.

B. CONTRACTOR TO REMOVE AND REINSTALL MECHANICAL UNITS, DUCTWORK AND ALL OTHER ROOF TOP APPURTENANCES AS REQUIRED FOR INSTALLATION OF ROOFING. CONTRACTOR TO REINSTALL AND RECONNECT ALL DEVICES AND RETURN THEM TO WORKING ORDER. CONTRACTOR TO NOTIFY DISTRICT AND ARCHITECT OF ANY DEVICES NOT FUNCTIONING PRIOR TO REMOVAL.

C. PATCH AND REPAIR BUILT-UP ROOFING WHERE REQUIRED AS A RESULT OF NEW WORK.

D. PROVIDE R-30 INSULATION AT ROOF FRAMING.

E. COORDINATE SLEEPER LOCATIONS WITH MECHANICAL, PLUMBING, AND/OR ELECTRICAL AS REQUIRED. SEE DETAIL XX.

PM VERIFY THE FOLLOWING:

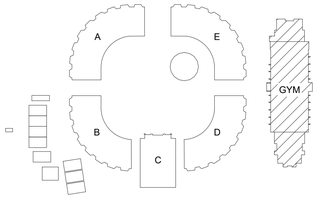
F. ALL EXISTING ROOF SYSTEM, INSULATION, FLASHING, ETC. ARE TO BE REMOVED AND PREPARED FOR INSTALLATION OF NEW ROOFING AND FLASHING SYSTEMS.

ROOF PLAN NOTES

1. DEMOLISH (E) MECHANICAL UNITS

GRAPHIC KEY

BUILDING KEY



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SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 209
CAMPBELL, CA 95008
PHONE: 408-879-6699
FAX: 408-377-6959

LICENSED ARCHITECT
MARK C FINNEY
NO. C-24673
EXP. REN. 9-30-23
STATE OF CALIFORNIA

DEMOLITION ROOF PLAN

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4900 VALLEY AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS
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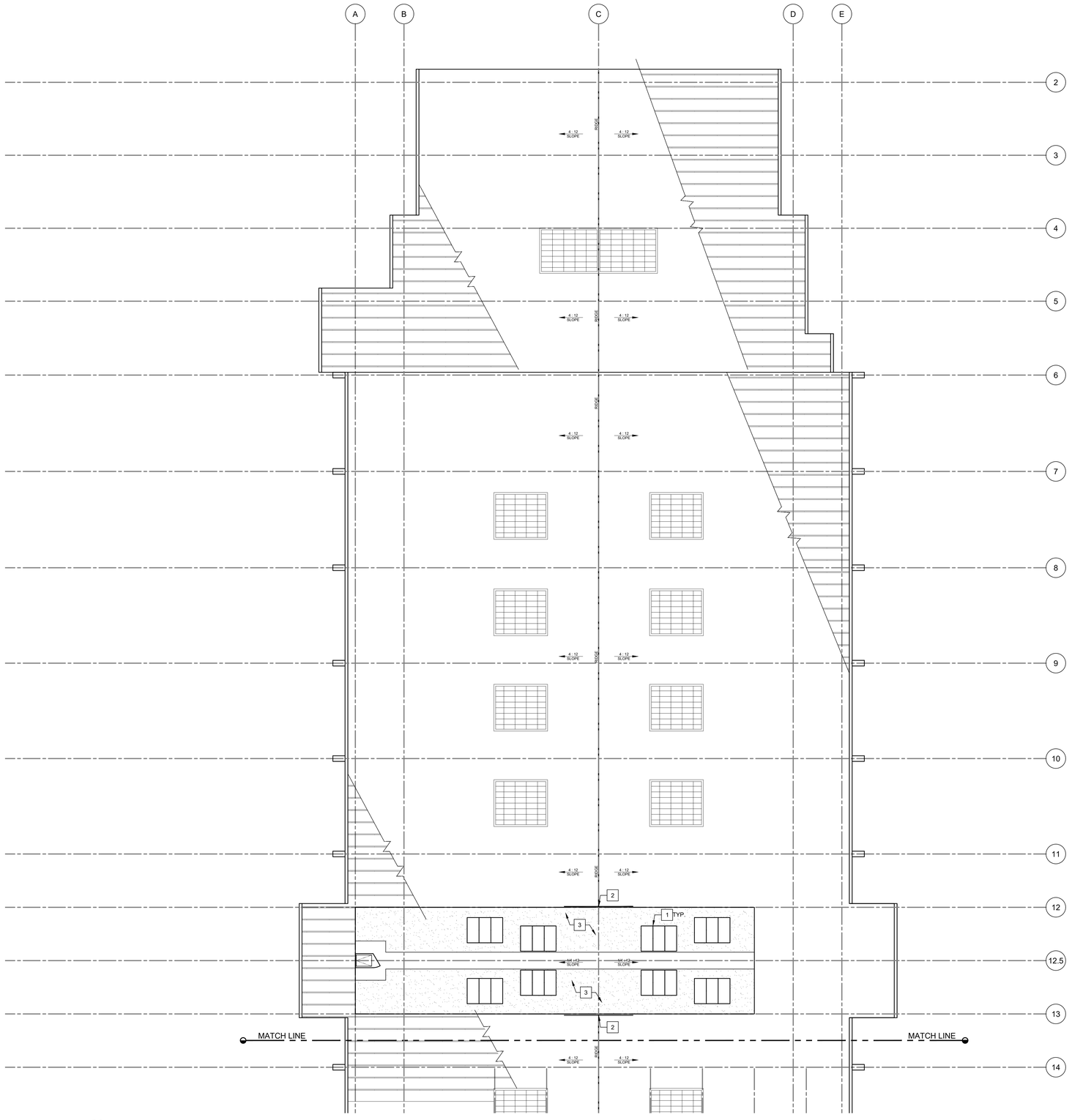
20061 10/04/2021

A4.1



1 NEW ROOF PLAN

1/8" = 1'-0"

0 2' 4' 8' 16' 24'

TRUE NORTH

GENERAL NOTES

A. NOT ALL ROOF APPURTENANCES ARE SHOWN ON DRAWINGS. CONTRACTOR TO FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL DEVICES AND EQUIPMENT. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL SCOPE OF WORK.

B. CONTRACTOR TO REMOVE AND REINSTALL MECHANICAL UNITS, DUCTWORK AND ALL OTHER ROOF TOP APPURTENANCES AS REQUIRED FOR INSTALLATION OF ROOFING. CONTRACTOR TO REINSTALL AND RECONNECT ALL DEVICES AND RETURN THEM TO WORKING ORDER. CONTRACTOR TO NOTIFY DISTRICT AND ARCHITECT OF ANY DEVICES NOT FUNCTIONING PRIOR TO REMOVAL.

C. PATCH AND REPAIR BUILT-UP ROOFING WHERE REQUIRED AS A RESULT OF NEW WORK.

D. PROVIDE R-30 INSULATION AT ROOF FRAMING.

E. COORDINATE SLEEPER LOCATIONS WITH MECHANICAL, PLUMBING, AND/OR ELECTRICAL AS REQUIRED. SEE DETAIL XX.

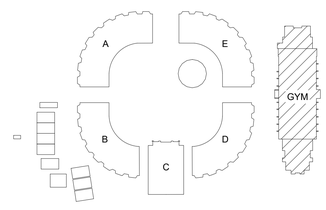
PM VERIFY THE FOLLOWING:

F. ALL EXISTING ROOF SYSTEM, INSULATION, FLASHING, ETC. ARE TO BE REMOVED AND PREPARED FOR INSTALLATION OF NEW ROOFING AND FLASHING SYSTEMS.

ROOF PLAN NOTES

1. NEW MECHANICAL UNIT, SEE MECHANICAL DRAWINGS
2. CLEAN EXISTING LOUVERS
3. NEW TOP LAYER AND COATING OVER EXISTING ROOF SYSTEM.

BUILDING KEY



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SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 209
CAMPBELL, CA 95008
PHONE: 408-879-6699
FAX: 408-377-6959

LICENSED ARCHITECT
MARK C. FINNEY
NO. C-24673
EXP. REN. 8-30-23
STATE OF CALIFORNIA

NEW ROOF PLAN

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4900 VALLEY AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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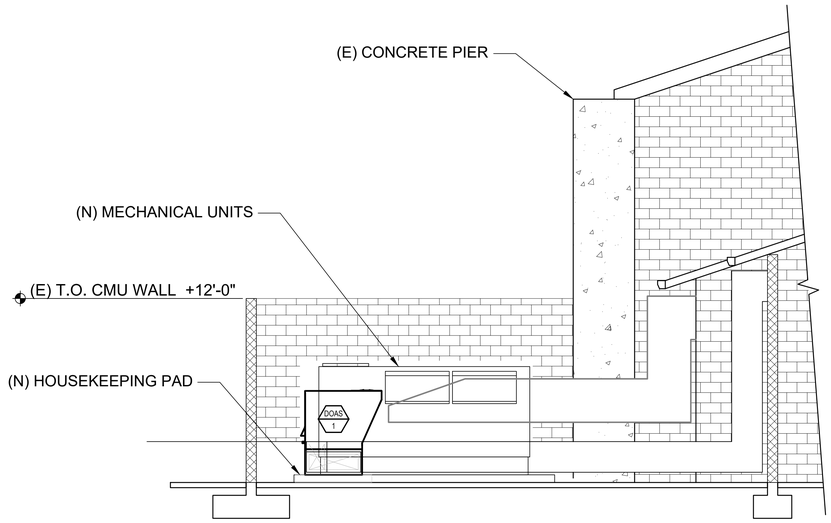
A4.2

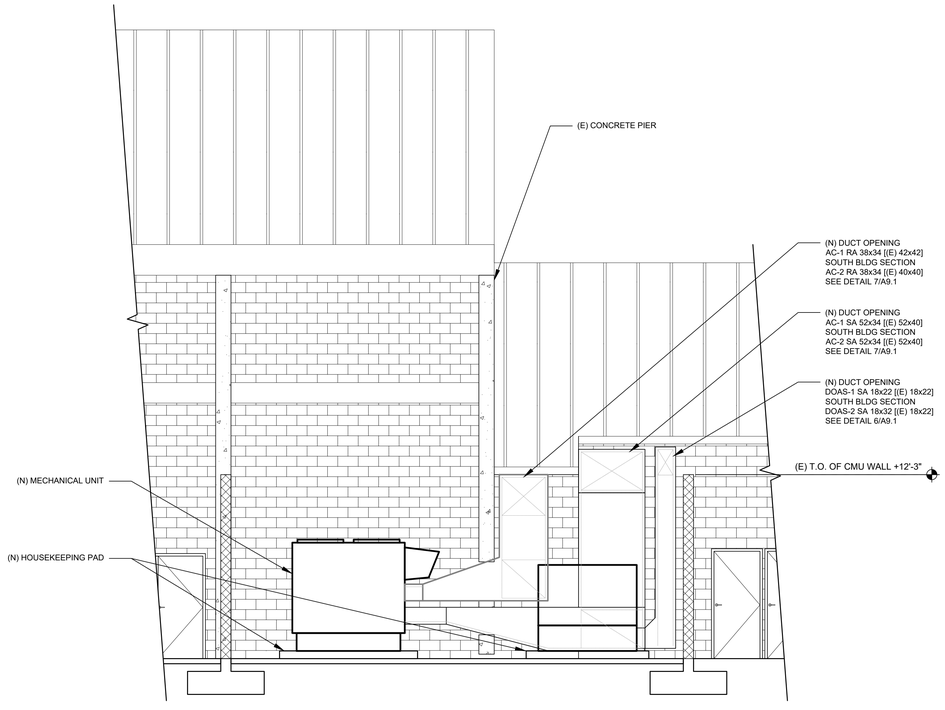


2 (E) NORTH BUILDING SECTION - MECHANICAL CMU ENCLOSURE

SOUTH BUILDING SECTION - MECHANICAL CMU ENCLOSURE SIMILAR

1/4" = 1'-0"

0 1' 2' 4' 8' 12'



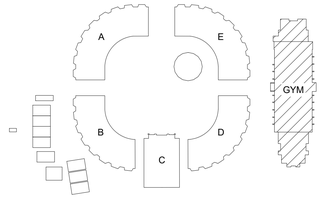
1 (E) NORTH BUILDING SECTION - MECHANICAL CMU ENCLOSURE

SOUTH BUILDING SECTION - MECHANICAL CMU ENCLOSURE SIMILAR

1/4" = 1'-0"

0 1' 2' 4' 8' 12'

BUILDING KEY



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SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 200
CAMPBELL, CA 95008
PHONE: 408-879-0606
FAX: 408-377-6066

LICENSED ARCHITECT
MARK C. FINNEY
NO. C-24573
RENEW 9-30-23
STATE OF CALIFORNIA

SECTIONS - MECHANICAL CMU ENCLOSURE

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4900 VALLEY AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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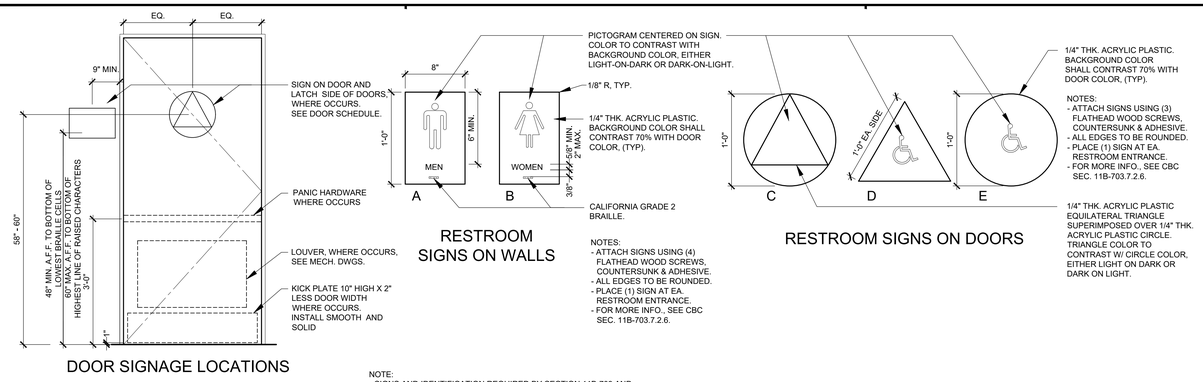


DOOR SIGNAGE LOCATIONS

NOTES:
- ATTACH SIGNS USING (4) FLATHEAD WOOD SCREWS, COUNTERSUNK & ADHESIVE.
- ALL EDGES TO BE ROUNDED.
- PLACE (1) SIGN AT EA. RESTROOM ENTRANCE.
- FOR MORE INFO., SEE CBC SEC. 11B-703.7.2.6.

RESTROOM SIGNS ON WALLS

NOTES:
- ATTACH SIGNS USING (3) FLATHEAD WOOD SCREWS, COUNTERSUNK & ADHESIVE.
- ALL EDGES TO BE ROUNDED.
- PLACE (1) SIGN AT EA. RESTROOM ENTRANCE.
- FOR MORE INFO., SEE CBC SEC. 11B-703.7.2.6.

1/4" THK. ACRYLIC PLASTIC EQUILATERAL TRIANGLE SUPERIMPOSED OVER 1/4" THK. ACRYLIC PLASTIC CIRCLE. TRIANGLE COLOR TO CONTRAST W/ CIRCLE COLOR, EITHER LIGHT ON DARK OR DARK ON LIGHT.

RESTROOM SIGNS ON DOORS

NOTE:
- SIGNS AND IDENTIFICATION REQUIRED BY SECTION 11B-703 AND 1011.4 OF THE CBC SHALL BE INSPECTED PER CBC 11B-703.2.5.

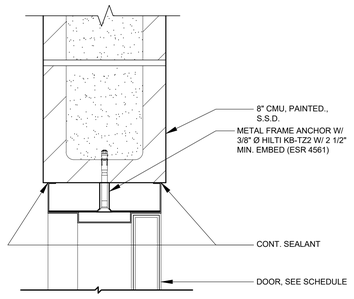
20 TYPICAL SIGNAGE

N.T.S.

ROOM	TYPE	DOOR SIZE - WIDTH X HEIGHT X THICKNESS	DOOR		FRAME		FIRE RATING (MIN.*)	DETAILS				HARDWARE GROUP	SIGNAGE (SEE DETAIL 9/-)	
			MAT.	FINISH	MAT.	FIN.		REF	HEAD	JAMB	THRES.		TYPES	TEXT
MECHANICAL YARD NORTH	B	3'-8" X 7'-0"	STL	PTD	STL	PTD	---	---	18/-	18/-	---	1	-	-
MECHANICAL YARD SOUTH	B	3'-8" X 7'-0"	STL	PTD	STL	PTD	---	---	18/-	18/-	---	1	-	-
MEN	(E)	(E)					---	---	---	---	---	---	A	-
WOMEN	(E)	(E)					---	---	---	---	---	---	B	-
BOYS	(E)	(E)	-	-			---	---	---	---	---	---	A	-
GIRLS	(E)	(E)	-	-			---	---	---	---	---	---	B	-

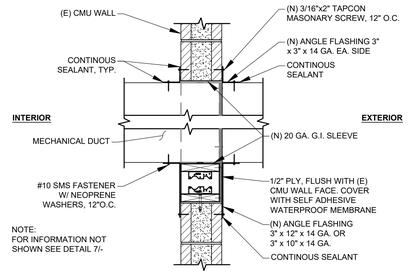
LEGEND
(E) - EXISTING
HM - HOLLOW METAL
PTD - PAINTED
STL - STEEL

19 DOOR SCHEDULE



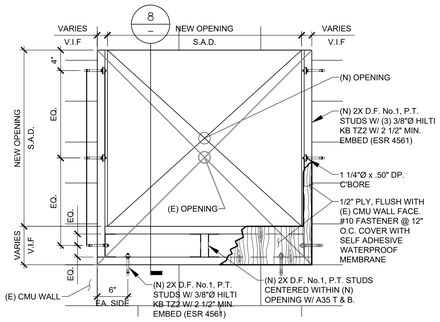
18 HOLLOW METAL DOOR JAMB @ CMU WALL (HEAD SIM.)

3"=1'-0"



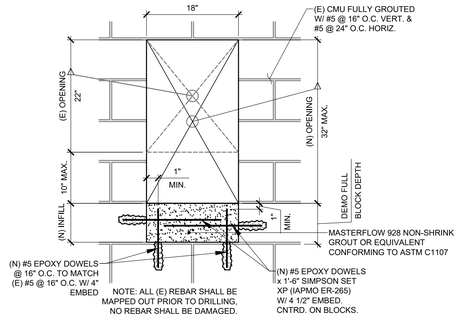
8 CMU WALL INFILL - SECTION

1"=1'-0"



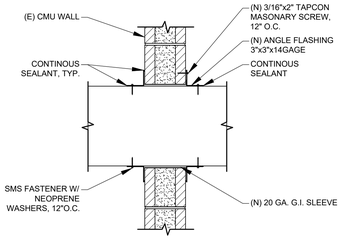
7 CMU WALL INFILL

1"=1'-0"



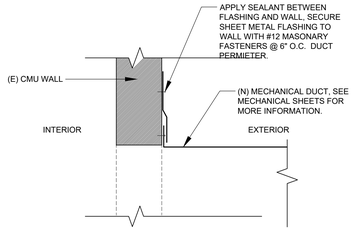
6 CMU WALL OPENING

1"=1'-0"



9 CMU WALL DUCT FLASHING

1"=1'-0"



5 FLASHING DUCT-CMU WALL

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

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SUITE 200
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PHONE: 408-879-6600
FAX: 408-377-6060

LICENSED ARCHITECT
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RENEWAL 9-30-21
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TYPICAL DETAILS

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4900 VALLEY AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS
NO. ITEM DATE
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DRAWN BY: KNU
CHECKED BY: MB
SFA JOB NO: 20061
DATE: 10/04/2021

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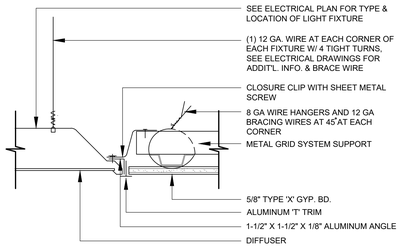
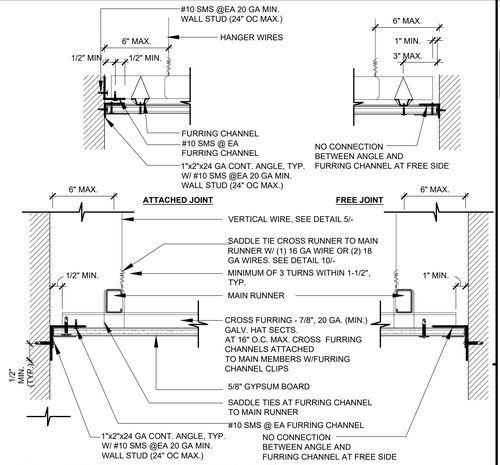
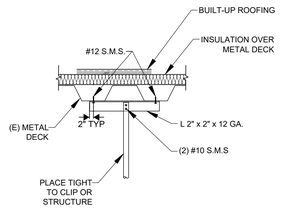


8 FLUORESCENT FIXTURE IN CEILING
(GYPSUM BOARD) 3"=1'-0"

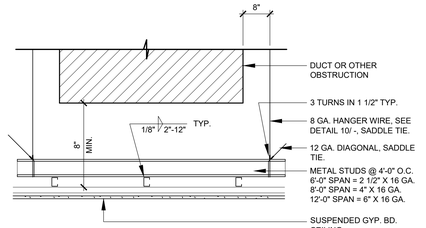


4 CEILING AT WALL SECTION
CEILING PERIMETER (GYPSUM BOARD) 3"=1'-0"

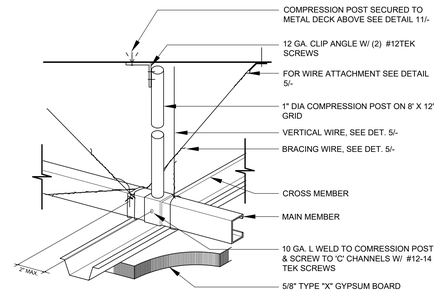


TUBE STRUT

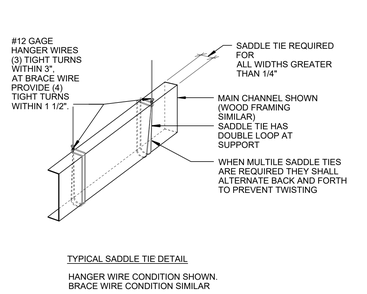
11 STRUT CONNECTION TO METAL DECK
1"=1'-0"



7 TRAPEZE DETAIL
(GYPSUM BOARD) N.T.S.



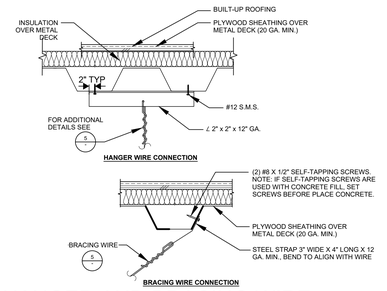
3 COMPRESSION MEMBER
(GYPSUM BOARD) N.T.S.



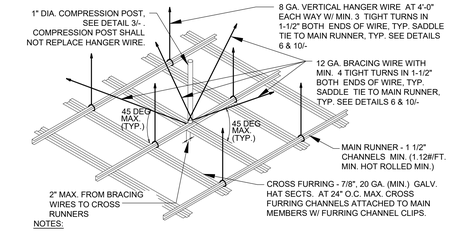
TYPICAL SADDLE TIE DETAIL

HANGER WIRE CONDITION SHOWN.
BRACE WIRE CONDITION SIMILAR

10 TYPICAL SADDLE TIE
6"=1'-0"

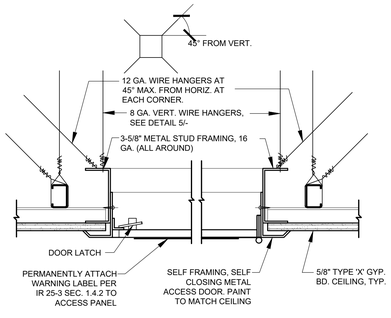


6 HANGER AND BRACING WIRE CONNECTION TO METAL DECK
1-1/2"=1'-0"



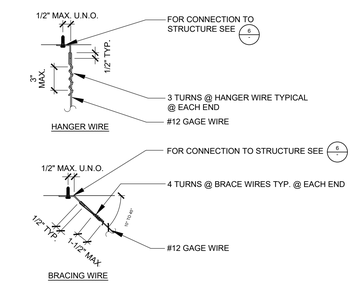
NOTES:
1. SEE DETAIL 6/- FOR CONNECTIONS OF BRACING & HANGER WIRES TO THE STRUCTURE ABOVE
2. REFER TO 2019 CBC CHAPTER 25 AND IR 25-3.13 FOR ADDITIONAL REQUIREMENTS.
3. MAIN RUNNERS SHALL BE SPLICED BY LAPPING AND INTERLOCKING FLANGES 12" MINIMUM AND (2) #8 SCREWS EA. END. SEE DETAIL 4/-
4. CROSS FURRING SHALL BE SPLICED BY LAPPING AND INTERLOCKING THE PIECES 8" MINIMUM AND (2) #8 SCREWS EA. END.

2 DIAGRAMATIC ATTACHMENT
(GYPSUM BOARD) 3"=1'-0"

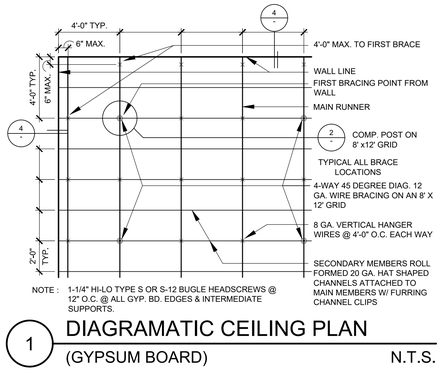


ACCESS ASSEMBLY TO BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN 4 TAUT 8 GA. WIRES ATTACHED TO STRUCTURE. WIRE SUPPORTS MUST BE CAPABLE OF CARRYING 4 TIMES THE WEIGHT OF THE ASSEMBLY.

9 NON-RATED ACCESS PANEL<300 SQ. IN.
@ GYPSUM BOARD CEILING 3"=1'-0"



5 HANGER & BRACING WIRE CONN.
1-1/2"=1'-0"



NOTE : 1-1/4" HI-LO TYPE S OR S-12 BUGLE HEADSCREWS @ 12" O.C. @ ALL GYP. BD. EDGES & INTERMEDIATE SUPPORTS.

1 DIAGRAMATIC CEILING PLAN
(GYPSUM BOARD) N.T.S.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-119604 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/30/2021
(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 200
CAMPBELL, CA 95008
PHONE: 408-879-6600
FAX: 408-377-6060

LICENSED ARCHITECT
MARK C. FINNEY
NO. C-24673
EXPIRES 9-30-21
STATE OF CALIFORNIA

CEILING DETAILS

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4900 VALLEY AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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ABBREVIATIONS

&	AND
°F	DEGREES FAHRENHEIT
AAV	AUTOMATIC AIR VENT
AC	AIR CONDITIONER
AD	ACCESS DOOR
AFF	ABOVE FINISH FLOOR
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
AL	ACOUSTICALLY LINED
AMP	AMPERE
AP	ACCESS PANEL
APPROX	APPROXIMATE
ARCH	ARCHITECT/ARCHITECTURAL
BDD	BACK DRAFT DAMPER
BFP	BACK FLOW PREVENTER
BHP	BRAKE HORSEPOWER
BLDG	BUILDING
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNITS PER HOUR
CA	COMBUSTION AIR
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CIRC	CIRCULATING
CLG	COOLING, CEILING
CLR	CLEAR
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUED, CONTINUATION
COOL	COOLING
COP	COEFFICIENT OF PERFORMANCE
DB	DRY BULB
DF	DRINKING FOUNTAIN
D/L	DOOR LOUVER
DN	DOWN
DP	DIFFERENTIAL PRESSURE
DWGS	DRAWINGS
(E)	EXISTING
EA	EXHAUST AIR
EAD	EXHAUST AIR DAMPER
EAT	ENTERING AIR TEMPERATURE
EDB	ENTERING DRY BULB
EER	ENERGY EFFICIENCY RATIO
EFF	EFFICIENCY
ELEC	ELECTRICAL
ELEV	ELEVATION
ENT	ENTERING
EQ	EQUAL
EQUIP	EQUIPMENT

ESP	EXTERNAL STATIC PRESSURE
EW	ENTERING WATER
EWB	ENTERING WET BULB
EWT	ENTERING WATER TEMPERATURE
EXT	EXTERIOR
FD	FLOOR DRAIN
FFE	FINISHED FLOOR ELEVATION
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FPM	FEET PER MINUTE
FS	FLOOR SINK
FT	FEET
FT HD	FEET HEAD
FTR	FLUE THRU ROOF
GA	GAUGE
GAL	GALLON
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HR	HOUR
HTG	HEATING
HZ	HERTZ
IE	INVERT ELEVATION
IN	INCH
INV	INVERT
KW	KILOWATTS
KWH	KILOWATT HOUR
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LVR	LOUVER
LWT	LEAVING WATER TEMPERATURE
LWB	LEAVING WET BULB
MAD, MD	MANUAL AIR DAMPER
MAV	MANUAL AIR VENT
MAX	MAXIMUM
MBH	1000 BTU PER HOUR
MCA	MINIMUM CIRCUIT AMPS
MCP	MECHANICAL CONTROL PANEL
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
(N)	NEW
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAD	OUTSIDE AIR DAMPER
OC	ON CENTER
OD	OUTSIDE DIAMETER
PD	PRESSURE DROP

PH	PHASE
POC	POINT OF CONNECTION
PRV	PRESSURE REDUCING VALVE
PSI (G) (A)	POUNDS PER SQUARE INCH (GAUGE) (ABSOLUTE)
P/T	PRESSURE/TEMPERATURE
QTY	QUANTITY
RA	RETURN AIR
RAD	RETURN AIR DAMPER
RH	RELATIVE HUMIDITY
RL	REFRIGERANT LIQUID
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION
RV	RELIEF VALVE
SA	SUPPLY AIR
SC	SENSIBLE COOLING
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SD	SMOKE DAMPER
SM	SHEET METAL
SOV	SHUT-OFF VALVE
SP	STATIC PRESSURE
SPEC	SPECIFICATION
SQ	SQUARE
SQFT, FT^2	SQUARE FEET
SQIN, IN^2	SQUARE INCHES
STRUCT	STRUCTURAL
T	THERMOSTAT, "X" INDICATES DEVICE CONTROLLED. 48" AFF (TO TOP OF STAT)
TC	TOTAL COOLING
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPERATURE
THRU	THROUGH
TSP	TOTAL STATIC PRESSURE
TV	TURNING VANES
TYP	TYPICAL
UL	UNDERWRITER'S LABORATORIES
UON	UNLESS OTHERWISE NOTED
V	VOLT
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THROUGH ROOF
W	WATTS
W/	WITH
WB	WET BULB
WC	WATER COLUMN
WH	WATER HEATER
WT	WEIGHT

LIST OF GOVERNING CODES

2019 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24, C.C.R.
2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24, C.C.R.
2019 CALIFORNIA ELECTRICAL CODE, PART 3, TITLE 24, C.C.R.
2019 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24, C.C.R.
2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24, C.C.R.
2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24, C.C.R.
2019 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24, C.C.R.
2019 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24, C.C.R.
2019 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24, C.C.R.
TITLE 19, C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.

ALL SECTION NUMBERS BELOW REFER TO GROUP 1, CHAPTER 4, PART 1, TITLE 24, C.C.R.

1. ADDENDA, CONSTRUCTION CHANGES PER SECTION 4-338.
2. INSPECTOR APPROVED BY DSA. INSPECTOR AND CONTINUOUS INSPECTION OF WORK PER SECTION 4-333(b) AND 4-342.
3. TESTS AND TESTING LABORATORY PER SECTION 4-335.
4. SPECIAL INSPECTION PER SECTION 4-333(c).
5. CONTRACTOR SHALL SUBMIT VERIFIED REPORTS PER SECTION 4-336 AND 4-343(c).
6. ADMINISTRATION OF CONSTRUCTION PER PART 1, TITLE 24, C.C.R. - DUTIES OF ARCHITECT, STRUCTURAL ENGINEER OR PROFESSIONAL ENGINEER PER SECTION 4-333(a) AND 4-341.
7. GOVERNING CODES: TITLE 24.
8. A COPY OF PARTS 1, 2, 3, 4, AND 5 OF TITLE 24 SHALL BE KEPT AVAILABLE IN THE FIELD DURING CONSTRUCTION.
9. DSA SHALL BE NOTIFIED OF START OF CONSTRUCTION PER SECTION 4-331.
10. SUPERVISION BY THE DIVISION OF THE STATE ARCHITECT PER SECTION 4-334.

DSA GENERAL NOTES

1. THE INTENT OF THE CONTRACT DOCUMENTS IS TO MODERNIZE THE SCHOOL'S CAMPUS. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS, A CONSTRUCTION CHANGE DOCUMENT DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK.
2. THE SEISMIC SUPPORT AND ANCHORAGE OF THE EQUIPMENT DESCRIBED ON THESE DRAWINGS HAVE BEEN ENGINEERED BY THE ENGINEER OF RECORD FOR CONFORMANCE WITH APPROPRIATE BUILDING CODES. THE ENGINEER OF RECORD WAS NOT RESPONSIBLE FOR THE EQUIPMENT DESIGN.
3. ALL MECHANICAL AND PLUMBING EQUIPMENT SHALL BE BRACED OR ANCHORED TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION USING THE CRITERIA FROM CHAPTER 16A CALIFORNIA BUILDING CODE (CBC) 2019.
4. WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND THE FIELD REPRESENTATIVE OF THE DIVISION OF THE STATE ARCHITECT.
5. NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY DSA.

SYMBOL LEGEND

SINGLE LINE SYMBOL	DOUBLE LINE SYMBOL	DESCRIPTION
		LONG SWEEP 90° ELBOW - RECTANGULAR, ROUND OR OVAL
		45° ELBOW - RECTANGULAR, ROUND OR OVAL
		30° ELBOW - RECTANGULAR, ROUND OR OVAL
		90° ELBOW - RECTANGULAR DUCT WITH TURNING VANES
		45° LATERAL - ROUND TO ROUND OR OVAL TO OVAL
		90° TAKEOFF WITH 45° TAPER - RECTANGULAR TO RECTANGULAR (FOR BRANCH TAKEOFF LONGER THAN 50'-0", USE 15)
		90° TAKEOFF WITH 45° ELONGATED TEE - ROUND TO ROUND
		Y BRANCH - ROUND OR OVAL DUCT
		90° RADIUS SPLIT - RECTANGULAR DUCT, PROVIDE SPLITTER DAMPER, X/Y PROPORTIONAL SPLIT
		90° RECTANGULAR SPLIT - RECTANGULAR DUCT, PROVIDE SPLITTER DAMPER, X/Y PROPORTIONAL SPLIT
		TRANSITION - RECTANGULAR TO ROUND OR RECTANGULAR TO OVAL
		FLEXIBLE DUCT - ROUND
		FLEXIBLE DUCT - RECTANGULAR

SINGLE LINE SYMBOL	DOUBLE LINE SYMBOL	DESCRIPTION
		SECTION AT SUPPLY AIR OR MAKE-UP AIR DUCT UP
		SECTION AT RETURN AIR OR COMBUSTION AIR DUCT UP
		SECTION AT EXHAUST AIR OR RELIEF AIR DUCT UP
		SUPPLY AIR DUCT DOWN
		RETURN AIR DUCT DOWN
		EXHAUST AIR DUCT DOWN
		ROUND DUCT UP - SUPPLY, RETURN OR EXHAUST
		ROUND DUCT DOWN - SUPPLY, RETURN OR EXHAUST
		CEILING DIFFUSER - ONE, TWO, THREE AND FOUR WAY THROW
		CEILING - RETURN AND EXHAUST REGISTERS
		SIDEWALL - SUPPLY DIFFUSER, RETURN AND EXHAUST REGISTERS
		MANUAL BALANCE DAMPER WITH DUCT ACCESS DOOR
M	M	MOTORIZED BALANCE DAMPER WITH DUCT ACCESS DOOR
FSD OR F/D	FSD OR F/D	FIRE DAMPER WITH DUCT ACCESS DOOR FIRE/SMOKE DAMPER WITH DUCT ACCESS DOOR
24 x 12	24 x 12	ACOUSTICALLY LINED DUCT, DIMENSIONS ARE INSIDE
	12x12 CD-1 300	REGISTER NECK SIZE AND TAG DESIGN CFM PANEL AT T-BAR CEILING

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON 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 CHAPTER 13, 26 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVABLE, OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCED 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 HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.

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

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

GENERAL NOTES

1. CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMISSION OF FINAL BID TO VERIFY ALL EXISTING SITE CONDITIONS WHICH MAY AFFECT THE COMPLETION OF THE INSTALLATION. ALL METHODS AND REQUIREMENTS FOR INSTALLATION SHALL BE DETERMINED PRIOR TO BID DATE. CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF RECORD OF ANY REQUIRED MODIFICATIONS WHICH ARE NOT REFERENCED ON THESE PLANS PRIOR TO SUBMITTING BID. SUBMITTAL OF THE CONTRACTOR'S BID DEMONSTRATES THE CONTRACTOR'S AWARENESS OF ALL SITE CONDITIONS AND REQUIRED WORK TO BE PERFORMED.
2. CONTRACTOR SHALL INCLUDE AND PROVIDE IN BID ALL LABOR AND MATERIALS NECESSARY FOR A COMPLETE AND OPERATIONAL INSTALLATION OF ALL SYSTEMS.
3. THE DRAWINGS INCLUDED IN THIS SET ARE DIAGRAMMATIC. THEY ARE REPRESENTATIVE OF THE ENGINEER OF RECORD'S DESIGN INTENT FOR ALL EQUIPMENT AND RELATED PIPING ETC. INDIVIDUAL POWER NEEDS, CONTROLS AND OTHER CONNECTIONS SHALL BE COORDINATED AND COMPLETED/ PROVIDED FOR COMPLETE SYSTEM OPERATION BY CONTRACTOR.
4. EVERYTHING IS NEW UNLESS OTHERWISE NOTED.
5. EQUIPMENT LOCATIONS AND PIPE ROUTING ARE NOT PRECISE AND SHALL BE COORDINATED, VERIFIED, AND DETERMINED IN THE FIELD. CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND ROUTE PIPING IN LOCATIONS WHICH MEET CODE REQUIREMENTS AND DO NOT INTERFERE WITH ANY BUILDING STRUCTURES, UTILITIES, OR OTHER TRADE EQUIPMENT.
6. (E) DUCTWORK, PIPING AND ITEMS TO BE REMOVED ARE SHOWN HATCHED. SEE LEGEND. COORDINATE CLOSELY WITH (N) DUCTWORK AND P.O.C.'S SHOWN. ALL OTHER (E) DUCTWORK, ETC. TO REMAIN.
7. REMOVE ALL ABANDONED PIPING, DUCTWORK, EQUIPMENT, WIRING, EQUIPMENT, AND FIXTURES INTERFERING WITH NEW WORK WHETHER NEW WORK IS ARCHITECTURAL, STRUCTURAL, MECHANICAL, OR ELECTRICAL
8. ABANDON IN PLACE BEHIND NEW FINISHES ALL PIPING, WIRING, AND DUCTWORK NOT INTERFERING WITH NEW WORK UNLESS REQUIRED FOR CONTINUED SERVICE.
9. ALL EQUIPMENT, EQUIPMENT CONNECTIONS, PIPING, MOUNTING LOCATIONS ETC. ARE TO BE VERIFIED WITH OWNER'S REPRESENTATIVE AND EQUIPMENT SUPPLIER PRIOR TO BEGINNING OF THE ROUGH-IN.
10. ALL WORK SHALL BE PERFORMED TO STATE, LOCAL, NATIONAL AND DISTRICT STANDARDS AND CODES. COORDINATE SPECIFIC REQUIREMENTS WITH DISTRICT STANDARDS AND AUTHORITY HAVING JURISDICTION.
11. ALL EQUIPMENT SHALL BE NEW AND CLEARLY LABELED AND IDENTIFIED. LABELS SHALL NOT BE COVERED BY OTHER CONSTRUCTION ELEMENTS.
12. UNLESS OTHERWISE NOTED IN CONTRACT DOCUMENTS, CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT AND WORK FOR A PERIOD OF ONE YEAR.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED SAW CUTTING, CORE DRILLING, PATCHING, REFINISHING, ETC. AS REQUIRED FOR INSTALLATION OF SYSTEMS. ANY PENETRATIONS OR OPENINGS MADE IN WALLS OR STRUCTURES SHALL BE PATCHED AND/OR SEALED AS REQUIRED TO MAINTAIN THE INTEGRITY OF THE WALL OR STRUCTURE.
14. CONTRACTOR IS RESPONSIBLE FOR COMPLETING ALL FINAL CONNECTIONS TO OWNER FURNISHED EQUIPMENT AND SHALL INCLUDE THE PRICE OF INSTALLING ALL CONNECTIONS AS REQUIRED IN THEIR BIDS.
15. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE APPROVAL OF THE ENGINEER OF RECORD . ALL APPROVALS BY THE ENGINEER OF RECORD MUST BE SECURED PRIOR TO COMPLETION OF ANY PURCHASE ORDERS OR ROUGH-IN WORK.
16. THESE DRAWINGS AND ASSOCIATED SPECIFICATIONS ARE TO BE CONSIDERED CONTRACT DOCUMENTS FOR AGENCY REVIEW/ APPROVAL AND CONTRACTOR BIDDING PURPOSES.
17. AT THE COMPLETION OF THE PROJECT THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A COMPLETE SET OF AS-BUILT DRAWINGS.
18. ANY AND ALL WORK THAT REQUIRES AN INTERRUPTION TO BUILDING SERVICES(S) (ELECTRICAL/ HVAC/ PLUMBING ETC.) MUST BE COORDINATED WITH THE DISTRICT A MINIMUM OF 48 HOURS IN ADVANCE. ANY SERVICE DOWNTIME SHALL NOT OCCUR DURING SCHOOL OPERATION HOURS.
19. IN INSTANCES WHERE A CONFLICT BETWEEN THE DRAWINGS AND THE SPECIFICATIONS AND INSTALLATION MANUALS FOR THE PROJECT EXISTS, THE CONTRACTOR SHALL ADHERE TO THE MORE STRINGENT REQUIREMENT.
20. ANY EXISTING BUILDING STRUCTURES OR SURFACES DAMAGED BY DEMOLITION OR DURING INSTALLATION ACTIVITIES SHALL BE REPAIRED, PATCHED, AND/OR REFINISHED TO THE SATISFACTION OF THE OWNER.
21. FURNISH AND INSTALL MANUAL AIR DAMPERS AT ALL DUCT BRANCH TAKEOFFS TO A SINGLE SUPPLY DIFFUSER.
22. FOR ALL VOLUME DAMPERS LOCATED ABOVE CEILINGS, PROVIDE 12" LONG 1/2" WIDE FLUORESCENT ORANGE TAPE TO MARK DAMPER LOCATIONS.
23. ALL DUCTWORK, CONDUITS, BOXES, SURFACE MOUNTED RACEWAYS, SUPPORT DEVICES, AND ASSOCIATED FITTINGS SHALL BE MOUNTED IN CONCEALED LOCATIONS ABOVE CEILINGS, DUCTS, TRUSSES, BEAMS, ETC. WHERE WORK HAS TO BE INSTALLED IN EXPOSED LOCATIONS, IT SHALL BE PAINTED TO MATCH THE ADJACENT SURFACES OR PER ARCHITECT'S DIRECTION.
24. CONTRACTOR SHALL PREPARE AND SUBMIT THE CALIFORNIA ENERGY COMMISSION TITLE 24 CERTIFICATE OF ACCEPTANCE FORMS RELATED TO INSTALLED EQUIPMENT AND SYSTEMS.
25. SAFETY: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
26. CONTRACTOR'S EQUIPMENT: COORDINATE WITH OWNER'S REPRESENTATIVE FOR APPROVED LOCATION OF JOB SITE ACCESS, PARKING, AND LOCATION OF CONTRACTOR'S EQUIPMENT AND MATERIAL STORAGE AREA. COORDINATE WITH OWNER FOR LOCATION AND PROCEDURES.
27. ALL BUILDING MATERIALS MUST BE ASBESTOS FREE.
28. CONSTRUCTION SCHEDULING: CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION OPERATIONS WITH OWNER'S REPRESENTATIVE PRIOR TO SCHEDULING AND START OF THE WORK. CONTRACTOR SHALL PROVIDE PROTECTION TO ALL EXISTING SPACES AND SYSTEMS WHICH ARE IN USE, ADJOINING THE PROJECT, AND NOT PART OF THE PROJECT.
29. TITLE 24 COMPLIANCE: THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS (2019 CBC). SHOULD ANY CONDITIONS BE DISCOVERED NOT COVERED BY THE CONTRACT DOCUMENTS WHERE IN THE FINISHED WORK DOES NOT COMPLY WITH 2019 CBC, A CONSTRUCTION CHANGE DOCUMENT OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK, SHALL BE SUBMITTED TO AND APPROVED BY THE DSA BEFORE PROCEEDING WITH THE WORK.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 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 BC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

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

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

MP [X] MD [X] PP [ ] E [ ] - OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) #0043-13, "MASON WEST, INC. SEISMIC RESTRAINT GUIDELINES FOR SUSPENDED DISTRIBUTION SYSTEMS" OR #0052-13, "B-LINE/TOLCO SEISMIC RESTRAINT SYSTEMS GUIDELINES"

SYMBOL	ABBRV.	IDENTIFICATION
		CAP
	CONT	CONTINUATION
		UNION
		LINE BREAK
	CKV	CHECK VALVE
	T&PRV	TEMP. & PRESS. RELIEF VALVE
OR		VALVE
		CONCENTRIC & ECCENTRIC REDUCERS
	AD, AP	ACCESS DOOR, ACCESS PANEL
	MAV	MANUAL AIR VENT
T	T	THERMOSTAT MOUNTED @ 48" AFF. MAX.
CO2	CO2	CARBON DIOXIDE (CO2) SENSOR

SYMBOL	ABBRV.	IDENTIFICATION
	P.O.C.	POINT OF CONNECTION
		REMOVE EXISTING
		TEE DOWN
		90 DOWN
FC A-1		EQUIPMENT DESIGNATION
		TAG NUMBER
1 M2.1		SECTION 1 / SHEET M2.1

DRAWING INDEX

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-119604 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/30/2021
(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 200
CAMPBELL, CA 95008
PHONE: 408-879-0600
FAX: 408-377-6066

REGISTERED PROFESSIONAL ENGINEER
No. 31059
EXP. JUNE 30, 2023
MECHANICAL
STATE OF CALIFORNIA

CEG JOB NO: 21063
CYPRESS Engineering Group
HVAC, Plumbing, Fire Protection
Building Commissioning
Industrial Refrigeration
Environmental Compliance
Training & Technical Support
831.218.1602
8 Harris Court, Suite A8
Monterey, CA 93940
cypresseng.com

SYMBOL LEGENDS, ABBREVIATIONS, NOTES - MECHANICAL & PLUMBING

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS NO.	ITEM	DATE

DRAWN BY:	JL
CHECKED BY:	CS
SFA JOB NO: 20061	DATE: 09/17/2021

MP0.1

EXHAUST FANS SCHEDULE

TAG	MANUFACTURER	MODEL NO.	AREA(S) SERVED	AIRFLOW CFM	ESP IN. W.G.	FAN RPM	SOUND POWER SONES	MOTOR WATTS	MOTOR HP	MOTOR V / PH	WEIGHT LBS	MOUNTING DETAIL	NOTES
EF-1	GREENHECK	CSP-A1300	BOYS TOILET BOYS LOCKER	1015	0.50	1310	2.5	789	—	115 / 1	60	8/MP6.1	1, 2, 3
EF-2	GREENHECK	CSP-A1410	GIRLS TOILET GIRLS LOCKER	1275	0.50	1450	3.5	699	—	115 / 1	60	8/MP6.1	1, 2, 3
EF-3	GREENHECK	SP-A90	BOYS COACH OFFICE SHOWER	75	0.25	900	0.4	15	—	115 / 1	15	7/MP6.1	1, 2, 3, 7
EF-4	GREENHECK	SP-A90	GIRLS COACH OFFICE SHOWER	75	0.25	900	0.4	15	—	115 / 1	15	7/MP6.1	1, 2, 3, 7
EF-5	GREENHECK	CSP-A700-VG	MENS LOCKER MENS TOILET	600	0.50	1196	0.8	126	—	115 / 1	40	8/MP6.1	1, 2, 3
EF-6	GREENHECK	CSP-A700-VG	WOMENS LOCKER WOMENS TOILET	600	0.50	1196	0.8	126	—	115 / 1	40	8/MP6.1	1, 2, 3
EF-7	GREENHECK	SP-A110	JANITOR	90	0.25	950	0.6	17	—	115 / 1	20	7/MP6.1	1, 2, 3, 7
EF-8	GREENHECK	G-260-VGD-5	NORTH GYM	3400	0.25	367	8.7	—	1/2	460 / 3	250	9/MP6.1	1, 4, 5, 6
EF-9	GREENHECK	G-260-VGD-5	NORTH GYM	3400	0.25	367	8.7	—	1/2	460 / 3	250	9/MP6.1	1, 4, 5, 6
EF-10	GREENHECK	G-260-VGD-5	NORTH GYM	3400	0.25	367	8.7	—	1/2	460 / 3	250	9/MP6.1	1, 4, 5, 6
EF-11	GREENHECK	G-260-VGD-5	NORTH GYM	3400	0.25	367	8.7	—	1/2	460 / 3	250	9/MP6.1	1, 4, 5, 6
EF-12	GREENHECK	G-260-VGD-5	SOUTH GYM	3400	0.25	367	8.7	—	1/2	460 / 3	250	9/MP6.1	1, 4, 5, 6
EF-13	GREENHECK	G-260-VGD-5	SOUTH GYM	3400	0.25	367	8.7	—	1/2	460 / 3	250	9/MP6.1	1, 4, 5, 6
EF-14	GREENHECK	G-260-VGD-5	SOUTH GYM	3400	0.25	367	8.7	—	1/2	460 / 3	250	9/MP6.1	1, 4, 5, 6
EF-15	GREENHECK	G-260-VGD-5	SOUTH GYM	3400	0.25	367	8.7	—	1/2	460 / 3	250	9/MP6.1	1, 4, 5, 6

1. WEIGHT INCLUDES ACCESSORIES.
2. PROVIDE WITH UL LISTING, BACKDRAFT DAMPER, AND FACTORY ISOLATION KIT.
3. PROVIDE WITH FAN MOUNTED SPEED CONTROL.
4. PROVIDE WITH UL LISTING, GRAVITY OPERATED BACKDRAFT DAMPER, AND BIRDSCREEN.
5. FIELD VERIFY EXISTING ROOF CURB DIMENSIONS AND PROVIDE CURB ADAPTER AS NECESSARY.
6. PROVIDE WITH VARI-GREEN CONSTANT PRESSURE CONTROL WITH REMOTE TRANSDUCER, ROOM STATIC PROBE, OUTDOOR STATIC PROBE, AND DIAL FOR BALANCING.
7. SWITCH WITH LIGHTS.
8. PROVIDE WITH PELICAN WIRELESS PM5-120 POWER CONTROL MODULE. COORDINATE INSTALLATION WITH ELECTRICAL CONTRACTOR.

DEDICATED OUTSIDE AIR SYSTEMS SCHEDULE

TAG	MANUFACTURER	MODEL NO.	COOLING MBH TOTAL	COOLING MBH SENSIBLE	GAS HEATING MBH INPUT	GAS HEATING MBH OUTPUT	AIRFLOW CFM	ESP IN. W.G.	OUTSIDE AIR CFM	FAN RPM	MOTOR HP	IEER	AFUE %	ELECTRICAL V / PH	ELECTRICAL MCA	ELECTRICAL MOCP	WEIGHT LBS	MOUNTING DETAIL	NOTES
DOAS-1	CAPTIVEAIRE	CASRTU1-I.125-18-5T-DOAS	58.2	37.9	125	100	1240	1.5	1240	1449	1.5	17.9	80	460 / 3	13	15	1440	2/MP6.1	1, 2, 3, 4, 5
DOAS-2	CAPTIVEAIRE	CASRTU2-I.250-18-10T-DOAS	114.9	75.3	250	200	2500	1.5	2500	1771	3.0	18.6	80	460 / 3	29.7	30	2285	2/MP6.1	1, 2, 3, 4, 5, 6

1. PROVIDE WITH HINGED ACCESS PANELS, HAIL GUARDS, AND POWERED CONVENIENCE OUTLET.
2. WEIGHT INCLUDES ALL OPTIONS AND ACCESSORIES.
3. PROVIDE WITH 2" THICK, MERV 13 FILTERS.
4. PROVIDE WITH DOWN DISCHARGE AND PROVENT PLENUM CURB WITH SIDE DISCHARGE, SEE MP7.1.
5. PROVIDE WITH PELICAN WIRELESS TS250 THERMOSTAT.
6. PROVIDE WITH DUCT SMOKE DETECTOR AND SHUTDOWN PER CMC 608.1. WIRING BY FIRE ALARM CONTRACTOR.

PACKAGED AIR CONDITIONING UNITS SCHEDULE

TAG	MANUFACTURER	MODEL NO.	DISCHARGE ORIENTATION	AREA SERVED	COOLING MBH TOTAL	COOLING MBH SENSIBLE	GAS HEATING MBH INPUT	GAS HEATING MBH OUTPUT	AIRFLOW CFM	ESP IN. W.G.	OUTSIDE AIR CFM	FAN RPM	MOTOR BHP	IEER	AFUE %	ELECTRICAL V / PH	ELECTRICAL MCA	ELECTRICAL MOCP	WEIGHT LBS	MOUNTING DETAIL	NOTES
AC-1	CARRIER	48A9T035	HORIZONTAL	NORTH GYM 114	410	336.2	800	648	14,000	2.2	4510	1103	14.57	13.4	81	460 / 3	95	110	5400	1/MP6.1	1, 2, 3, 4, 5, 6, 7
AC-2	CARRIER	48A9T035	HORIZONTAL	SOUTH GYM 136	410	336.2	800	648	14,000	2.2	4525	1103	14.57	13.4	81	460 / 3	95	110	5400	1/MP6.1	1, 2, 3, 4, 5, 6, 7

1. WEIGHT INCLUDES ALL OPTIONS AND ACCESSORIES.
2. PROVIDE WITH GREENSPEED INTELLIGENCE, STAGED HIGH GAS HEAT STAINLESS, CONTROLS EXPANSION MODULE WITH PHASE MONITOR, 20 HP MOTOR WITH VFD, E-COAT AL/CU CONDENSER AND E-COAT AL/CU EVAPORATOR WITH VARIABLE COMPRESSOR, LOW LEAK ECONOMIZER WITH BAROMETRIC RELIEF, LOUVERED HAIL GUARD, POWERED CONVENIENCE OUTLET, HINGED ACCESS PANELS, AND STAINLESS STEEL DRAIN PAN.
3. PROVIDE WITH MERV 13 FILTERS.
4. PROVIDE WITH PELICAN TS250 THERMOSTAT AND PRX1 PROXIMITY SENSOR.
5. PROVIDE WITH PELICAN PEARL ECONOMIZER CONTROLLER.
6. PROVIDE WITH DUCT SMOKE DETECTOR AND SHUTDOWN PER CMC 608.1. WIRING BY FIRE ALARM CONTRACTOR.
7. PROVIDE WITH MICROMETL STRUCTURALLY CALCULATED CURB.

VRF OUTDOOR UNIT HEAT PUMP SCHEDULE

TAG	MANUFACTURER	MODEL NO.	NOMINAL CAPACITY, MBH COOLING	NOMINAL CAPACITY, MBH HEATING	REFRIGERANT PIPING LIQUID	REFRIGERANT PIPING GAS	SEER	HSPF	ELECTRICAL V / PH	ELECTRICAL MCA	ELECTRICAL MOCP	WEIGHT LBS	MOUNTING DETAIL	NOTES
HP-1	SAMSUNG	AM060NXMDCR/AA	60	66	3/8"	3/4" SUCTION 5/8" HP GAS	20.6	11.5	208 / 1	32	50	280	3/MP6.1	1, 2

1. VERIFY REFRIGERANT PIPE SIZES AND ROUTING LIMITATIONS WITH MANUFACTURER PRIOR TO INSTALLATION.
2. PROVIDE WITH OUTDOOR REFRIGERANT TEE MXJ-TA3819M.

VRF BRANCH CONTROLLER SCHEDULE

TAG	MANUFACTURER	MODEL NO.	REFRIG PIPING TO ODU / OTHER MCUs LIQUID	REFRIG PIPING TO ODU / OTHER MCUs GAS	REFRIG PIPING TO INDOOR UNITS LIQUID	REFRIG PIPING TO INDOOR UNITS GAS	ELECTRICAL V / PH	ELECTRICAL MCA	ELECTRICAL MOCP	WEIGHT LBS	MOUNTING DETAIL	NOTES
BC-1	SAMSUNG	MCU-R4NEK0N	3/8"	3/4" SUCTION 5/8" HP GAS	1/4"	1/2"	208 / 1	2	15	50	6/MP6.1	1, 2

1. VERIFY REFRIGERANT PIPE SIZES AND ROUTING LIMITATIONS WITH MANUFACTURER PRIOR TO INSTALLATION.
2. PROVIDE WITH BALL VALVES AT EACH PORT.

VRF INDOOR FAN COIL UNITS SCHEDULE

TAG	MANUFACTURER	MODEL NO.	AREA SERVED	COOLING MBH	HEATING MBH	AIRFLOW CFM	REFRIGERANT PIPING LIQUID	REFRIGERANT PIPING GAS	ELECTRICAL V / PH	ELECTRICAL MCA	ELECTRICAL MOCP	WEIGHT	MOUNTING DETAIL	NOTES
FC-1	SAMSUNG	AM009NNNDCH/AA	COACH OFFICE 128	9.5	10.5	353	1/4"	1/2"	208 / 1	0.24	15	30	5/MP6.1	1, 2, 3
FC-2	SAMSUNG	AM009NNNDCH/AA	COACH OFFICE 123	9.5	10.5	353	1/4"	1/2"	208 / 1	0.24	15	30	5/MP6.1	1, 2, 3
FC-3	SAMSUNG	AM018NNNDCH/AA	CLASSROOM 126	18	20	459	1/4"	1/2"	208 / 1	0.38	15	30	5/MP6.1	1, 2, 3
FC-4	SAMSUNG	AM018NNNDCH/AA	CLASSROOM 126	20	23	459	1/4"	1/2"	208 / 1	0.41	15	30	5/MP6.1	1, 2, 3

1. VERIFY REFRIGERANT PIPE SIZES AND ROUTING LIMITATIONS WITH MANUFACTURER PRIOR TO INSTALLATION.
2. PROVIDE WITH SAMSUNG MIM-A60UN 24VAC THERMOSTAT ADAPTER AND 24VAC TRANSFORMER.
3. PROVIDE WITH PELICAN TS250 THERMOSTAT.

SPLIT SYSTEM HEAT PUMPS SCHEDULE

TAG	MANUFACTURER	MODEL	LOCATION	COOLING TOTAL MBH	HEATING TOTAL MBH	AIRFLOW CFM	REFRIGERANT PIPING LIQUID	REFRIGERANT PIPING GAS	SEER	HSPF	ELECTRICAL V / PH	ELECTRICAL MCA	ELECTRICAL MOCP	WEIGHT LBS	MOUNTING DETAIL	NOTES
SSO-1	SAMSUNG	AR12TSFABWKXCV	EQUIP AREA OUTSIDE ELEC 138	12	12	—	1/4"	3/8"	23	12.5	208 / 1	12.5	20	75	3/MP6.1	
SSI-1	SAMSUNG	AR12TSFABWKNCV	OFFICE 109			427	1/4"	3/8"	—	—	NOTE 1			25	4/MP6.1	2, 3, 4, 5

1. INDOOR UNIT POWERED BY OUTDOOR UNIT.
2. PROVIDE WITH WALL MOUNTING BRACKET.
3. PROVIDE WITH SAMSUNG MIM-A60UN 24VAC THERMOSTAT ADAPTER AND 24VAC TRANSFORMER.
4. PROVIDE WITH PELICAN TS250 THERMOSTAT.
5. PROVIDE WITH CONDENSATE PUMP.

SPLIT SYSTEM AIR CONDITIONERS SCHEDULE

TAG	MANUFACTURER	MODEL	LOCATION	COOLING TOTAL MBH	HEATING TOTAL MBH	AIRFLOW CFM	REFRIGERANT PIPING LIQUID	REFRIGERANT PIPING GAS	SEER	ELECTRICAL V / PH	ELECTRICAL MCA	ELECTRICAL MOCP	WEIGHT LBS	MOUNTING DETAIL	NOTES
SSO-2	SAMSUNG	AR24TSFYBWKXCV	EQUIP AREA OUTSIDE ELEC 134	22	NOTE 1	—	1/4"	5/8"	18	208 / 1	20	30	125	3/MP6.1	
SSI-2	SAMSUNG	AR24TSFYBWKNCV	ELEC 134			657	1/4"	5/8"	—	NOTE 2			30	4/MP6.1	3, 4, 5, 6

1. LOCKOUT HEATING MODE.
2. INDOOR UNIT POWERED BY OUTDOOR UNIT.
3. PROVIDE WITH WALL MOUNTING BRACKET.
4. PROVIDE WITH SAMSUNG MIM-A60UN 24VAC THERMOSTAT ADAPTER AND 24VAC TRANSFORMER.
5. PROVIDE WITH PELICAN TS250 THERMOSTAT.
6. PROVIDE WITH CONDENSATE PUMP.

GAS PRESSURE REGULATORS SCHEDULE

TAG	MANUFACTURER	MODEL NO.	MIN. CAPACITY CFH	INLET PRESSURE	OUTLET PRESSURE	ORIFICE SIZE	VENT SIZE	PIPE SIZE	SPRING NUMBER	NOTES
GPR-1	AMERICAN METER	1800 SERIES	1050	3 PSI	7" WC	1/2"	2"	2"	71424P018	

AIR DISTRIBUTION SCHEDULE

TAG	MANUFACTURER	MODEL NO.	DESCRIPTION	BORDER TYPE	NOTES
CD-1	TITUS	MCD	CEILING DIFFUSER	LAY-IN	
EG-1	TITUS	50R	EXHAUST GRILLE	SURFACE MOUNT	

DOOR LOUVER SCHEDULE

TAG	MANUFACTURER	MODEL NO.	SIZE	NOTES
DL-1	TITUS	T-700L	24" X 18"	1, 2

1. BORDER TYPE 1, SURFACE MOUNT.
2. PRIME AND PAINT TO MATCH DOOR COLOR OR PER ARCHITECT'S INSTRUCTIONS.

SEQUENCES OF OPERATION

NOTE:
MECHANICAL CONTRACTOR TO PROVIDE OCCUPANCY SENSORS FOR VACANCY CONTROL. OCCUPANCY SENSORS SHALL BE LOCATED TO PROVIDE TOTAL AREA COVERAGE OF ENTIRE SPACE.

PROVIDE PELICAN WIRELESS REPEATER IF NECESSARY TO OBTAIN STRONG SIGNAL CONNECTION. CONTRACTOR RESPONSIBLE FOR PROGRAMMING AND INITIAL SETUP.
PROVIDE PELICAN WIRELESS SUPPLY AIR TEMPERATURE SENSOR AT ALL UNITS.

PACKAGED AC UNITS:

1. EACH AC UNIT SHALL BE CONTROLLED BY PELICAN WIRELESS THERMOSTAT. COORDINATE WITH OWNER'S REPRESENTATIVE FOR NETWORK SETTINGS, OCCUPANCY SCHEDULES, SETPOINTS, SETBACK, ETC.
2. PELICAN WIRELESS THERMOSTAT SHALL BE CONNECTED TO (E) WIRELESS GATEWAY ON CAMPUS. COORDINATE WITH OWNER'S REPRESENTATIVE FOR IP ADDRESS AND NETWORK SETTINGS.
3. AC UNIT SHALL OPERATE UNDER ITS OWN INTERNAL CONTROL TO PROVIDE HEATING OR COOLING BASED ON ROOM SETPOINT.
4. AC UNIT SHALL OPERATE CONTINUOUSLY DURING SCHEDULED OCCUPIED HOURS.
5. DURING UNOCCUPIED HOURS, FAN SHALL ONLY RUN TO MAINTAIN AFTER-HOURS SETPOINT. UNOCCUPIED HEATING SETPOINT SHALL BE SET TO 60°F. UNOCCUPIED COOLING SETPOINT SHALL BE SET TO 90°F.
6. OCCUPANCY SENSOR SHALL BE HARDWIRED TO DRY CONTACT INPUT ON PRX1. IF SPACE IS VACANT DURING OCCUPIED HOURS, THERMOSTAT SHALL SETBACK SETPOINTS TO UNOCCUPIED SETPOINTS AND AC UNIT SHALL ONLY OPERATE IF THERE IS A HEATING OR COOLING DEMAND.
7. PELICAN WIRELESS PEARL ECONOMIZER CONTROLLER SHALL MODULATE OUTSIDE AIR DAMPER TO PROVIDE FREE COOLING WHEN OUTSIDE AIR IS BELOW 75°F (HIGH TEMP LIMIT) AND OUTSIDE AIR TEMPERATURE IS 2°F BELOW ROOM TEMPERATURE (MIN TEMP DIFFERENTIAL).
8. PELICAN WIRELESS PEARL ECONOMIZER CONTROLLER SHALL MODULATE OUTSIDE AIR DAMPER OPEN IF ROOM CO2 LEVEL RISES ABOVE 1000 PPM.
9. MOTORIZED OUTSIDE AIR DAMPER SHALL OPEN TO MINIMUM POSITION WHEN AC UNIT IS OPERATING. BALANCE CONTRACTOR SHALL DETERMINE SETPOINT. CONTROLLER SHALL ADJUST OUTSIDE AIR DAMPER POSITION BASED ON FAN SPEED TO MAINTAIN OUTSIDE AIR CFM.
10. WHEN UNIT IS OFF, OUTSIDE AIR DAMPER SHALL BE CLOSED.
11. DURING UNOCCUPIED HOURS OPERATION, OUTSIDE AIR DAMPER SHALL REMAIN CLOSED.

DOAS UNITS:

1. EACH DOAS UNIT SHALL BE CONTROLLED BY PELICAN WIRELESS THERMOSTAT. COORDINATE WITH OWNER'S REPRESENTATIVE FOR NETWORK SETTINGS, OCCUPANCY SCHEDULES, SETPOINTS, SETBACK, ETC.
2. PELICAN WIRELESS THERMOSTAT SHALL BE CONNECTED TO (E) WIRELESS GATEWAY ON CAMPUS. COORDINATE WITH OWNER'S REPRESENTATIVE FOR IP ADDRESS AND NETWORK SETTINGS.
3. DOAS UNIT SHALL OPERATE UNDER ITS OWN INTERNAL CONTROL TO PROVIDE HEATING OR COOLING BASED ON ROOM SETPOINT.
4. DOAS UNIT SHALL OPERATE CONTINUOUSLY DURING SCHEDULED OCCUPIED HOURS.
5. DURING UNOCCUPIED HOURS, FAN SHALL ONLY RUN TO MAINTAIN AFTER-HOURS SETPOINT. UNOCCUPIED HEATING SETPOINT SHALL BE SET TO 60°F. UNOCCUPIED COOLING SETPOINT SHALL BE SET TO 90°F.

ROOF EXHAUST FANS (EF-8 THRU 15):

1. EACH EXHAUST FAN SHALL BE CONTROLLED BY GREENHECK VARI-GREEN CONSTANT PRESSURE CONTROLLER.
2. PRESSURE TRANSDUCER SHALL BE LOCATED INSIDE BUILDING.
3. CONTRACTOR SHALL INSTALL PRESSURE TUBING TO MEASURE BUILDING STATIC PRESSURE IN REFERENCE TO OUTDOOR AMBIENT PRESSURE.
4. CONTROLLER SHALL BE ADJUSTED TO MAINTAIN A MAXIMUM BUILDING STATIC PRESSURE OF +0.03".
5. CONTROLLER SHALL MODULATE FAN SPEED TO MAINTAIN BUILDING PRESSURE SETPOINT.

SPLIT SYSTEM HEAT PUMPS AND VRF FAN COILS:

1. EACH FAN COIL SHALL BE CONTROLLED BY PELICAN WIRELESS THERMOSTAT. COORDINATE WITH DISTRICT REPRESENTATIVE FOR NETWORK SETTINGS, OCCUPANCY SCHEDULES, SETPOINTS, SETBACK, ETC.
2. PELICAN WIRELESS THERMOSTAT SHALL BE CONNECTED TO (E) WIRELESS GATEWAY ON CAMPUS. COORDINATE WITH DISTRICT REPRESENTATIVE FOR IP ADDRESS AND NETWORK SETTINGS.
3. HEAT PUMP/FAN COIL SHALL OPERATE UNDER ITS OWN INTERNAL SEQUENCE TO PROVIDE HEATING OR COOLING BASED ON ROOM SETPOINT.

SPLIT SYSTEM AIR CONDITIONER:

1. FAN COIL SHALL BE CONTROLLED BY PELICAN WIRELESS THERMOSTAT. COORDINATE WITH DISTRICT REPRESENTATIVE FOR NETWORK SETTINGS.
2. PELICAN WIRELESS THERMOSTAT SHALL BE CONNECTED TO (E) WIRELESS GATEWAY ON CAMPUS. COORDINATE WITH DISTRICT REPRESENTATIVE FOR IP ADDRESS AND NETWORK SETTINGS.
3. HEAT PUMP/FAN COIL SHALL OPERATE UNDER ITS OWN INTERNAL SEQUENCE TO PROVIDE COOLING BASED ON ROOM SETPOINT.
4. UNIT SHALL BE SET TO 24/7 COOLING ONLY MODE TO MAINTAIN SPACE TEMPERATURE BELOW 75°F.

CEILING EXHAUST FANS (EF-3, 4, 7):

1. EACH EXHAUST FAN SHALL BE INTERLOCKED WITH ROOM LIGHT SWITCH / OCCUPANCY SENSOR.

INLINE EXHAUST FANS (EF-1, 2, 5, 6):

1. EACH EXHAUST FAN SHALL BE CONTROLLED BY PELICAN WIRELESS POWER CONTORL MODULE.
2. FAN SHALL RUN CONTINUOUSLY DURING SCHEDULED OCCUPANCY HOURS. OCCUPANCY SCHEDULE SHALL BE SAME AS DOAS UNIT OCCUPANCY SCHEDULE.

NOTE:
THERMOSTAT CONNECTION TO OWNER'S CLOUD THERMOSTAT MANAGEMENT SYSTEM AND HVAC SYSTEM OPERATION SHALL BE VERIFIED BY COMMISSIONING AUTHORITY DIRECTLY HIRED BY DISTRICT. CONTRACTOR TO PROVIDE SUPPORT AND ASSISTANCE AS REQUIRED.

SEQUENCES OF OPERATION

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-119604 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/30/2021
(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 200
CAMPBELL, CA 95008
PHONE: 408-879-0600
FAX: 408-377-6066

REGISTERED PROFESSIONAL ENGINEER
METIN SERTTUNC
No. 31059
EXP. JUNE 30, 2023
MECHANICAL
STATE OF CALIFORNIA

CEG JOB NO: 21063
CYPRESS Engineering Group
HVAC, Plumbing, Fire Protection
Building Commissioning
Industrial Refrigeration
Environmental Compliance
Training & Technical Support
831.218.1802
8 Harris Court, Suite A8
Monterey, CA 93940
cypresseg.com

SCHEDULES AND SEQUENCES OF OPERATION - MECHANICAL & PLUMBING

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS NO.	ITEM	DATE

DRAWN BY: JL
CHECKED BY: CS
SFA JOB NO: 20061
DATE: 09/17/2021

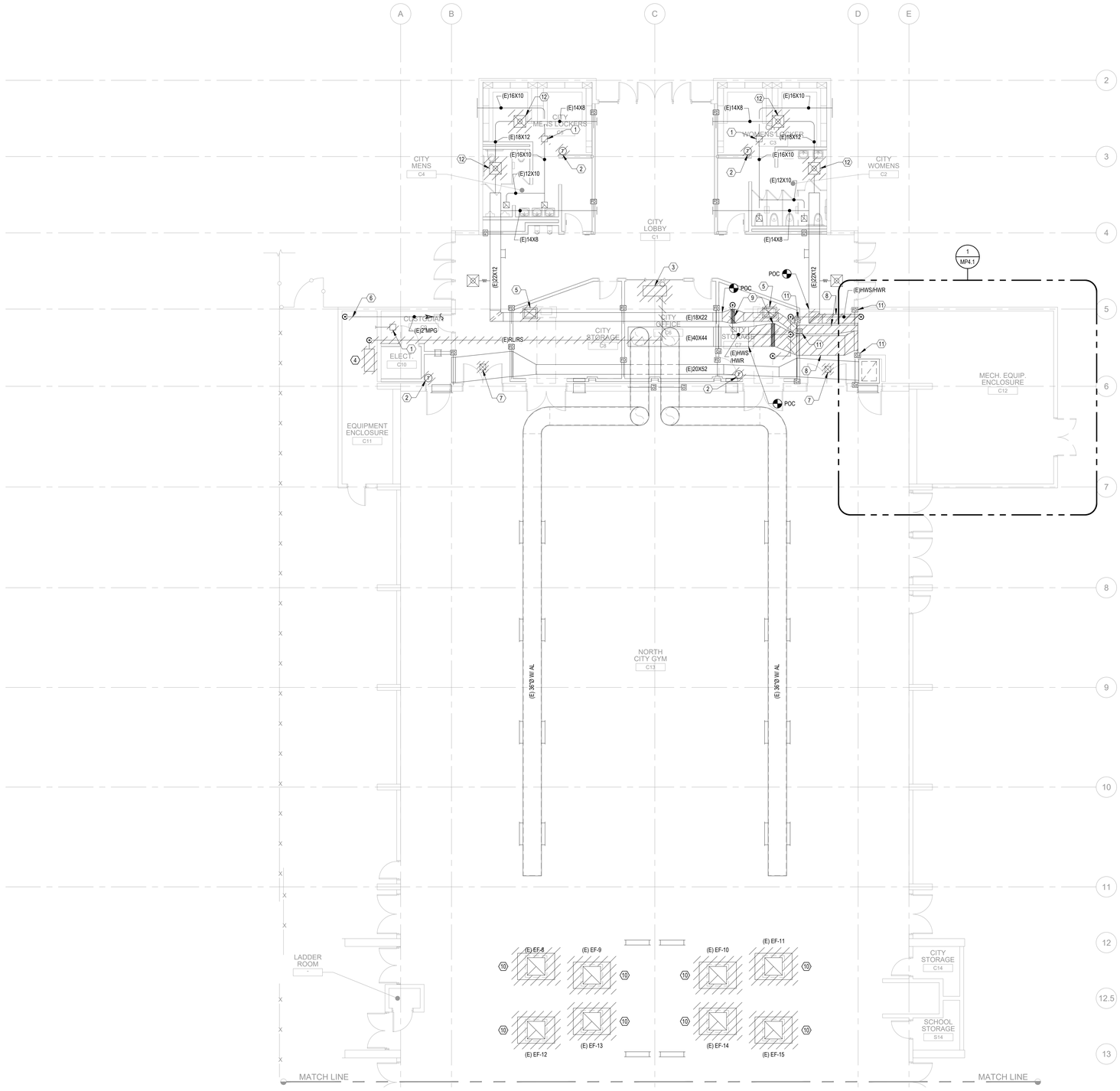
MP0.2

GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW BUILDING STRUCTURES, SERVICES, AND OWNER'S PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION.
2. COORDINATE THE LOCATIONS OF ROOF/WALL OPENINGS, PENETRATIONS, DUCTWORK, AND ALL MECHANICAL EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER SERVICES TO AVOID CONFLICT.
3. ALL (E) FIRE DAMPERS TO REMAIN UNLESS OTHERWISE NOTED.
4. ALL (E) DUCTWORK AND REGISTERS TO REMAIN UNLESS OTHERWISE NOTED.
5. SEE ARCHITECT'S DRAWINGS FOR CEILING ACCESS PANELS.

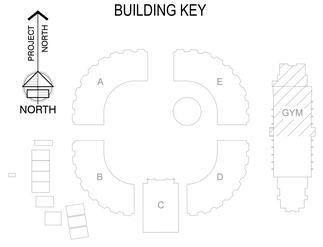
(#) DEMOLITION SHEET NOTES

1. REMOVE (E) EXHAUST FAN, TYPICAL. PROTECT (E) DUCT OPENINGS FOR CONNECTION TO NEW.
2. REMOVE (E) THERMOSTAT AND CONTROL WIRING, TYPICAL.
3. REMOVE (E) FAN COIL AND REFRIGERANT PIPING. PROTECT (E) CD PIPE FOR CONNECTION TO NEW.
4. REMOVE (E) HEAT PUMP.
5. REMOVE (E) FLOOR MOUNTED SUPPLY FAN. (E) TRENCH BELOW AND COVER PLATE TO REMAIN. SEAL ANY FLOOR OPENINGS PER ARCHITECT'S DIRECTIONS.
6. REMOVE PORTION OF GAS PIPING AT RISER FOR NEW SHUT-OFF VALVE. SEE 1/MP2.3.
7. REMOVE (E) RETURN REGISTER. CAP (E) DUCT ABOVE CEILING. PATCH CEILING PER ARCHITECT'S DIRECTION.
8. REMOVE (E) SUPPLY DUCTWORK ABOVE CEILING. PROTECT (E) DUCT OPENINGS AT POC FOR CONNECTION TO NEW.
9. REMOVE (E) HOT WATER COIL AND (E) HWS & HWR PIPING AND SUPPORTS COMPLETE, TYPICAL.
10. REMOVE (E) EXHAUST FAN ON ROOF, TYPICAL. (E) ROOF CURB TO REMAIN. PROTECT (E) DUCT OPENING FOR CONNECTION TO NEW.
11. REMOVE (E) FIRE DAMPER.
12. REMOVE (E) SUPPLY REGISTER. CAP (E) DUCT ABOVE CEILING. PATCH CEILING PER ARCHITECT'S DIRECTIONS.



1 MP2.1 DEMO FLOOR PLAN - GYM - NORTH HALF
SCALE: 1/8" = 1'-0"

BUILDING KEY



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-119604 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/30/2021
(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTS INTERIORS PLANNING
2195 SOUTH BASCOM AVE.
SUITE 250
CAMPBELL, CA 95008
PHONE: 408.879.9500
FAX: 408.879.9501

REGISTERED PROFESSIONAL ENGINEER
MEIN SERTSU
No. 31059
EXP. JUNE 30, 2023
MECHANICAL
STATE OF CALIFORNIA

CEG JOB NO: 21063
CYPRESS Engineering Group
HVAC, Plumbing, Fire Protection
Building Commissioning
Industrial Refrigeration
Environmental Consulting
Training & Technical Support
831.218.1802
8 Harris Court, Suite A8
Monterey, CA 93940
cypresseg.com

DEMO FLOOR PLAN - GYM - NORTH HALF
MECHANICAL & PLUMBING

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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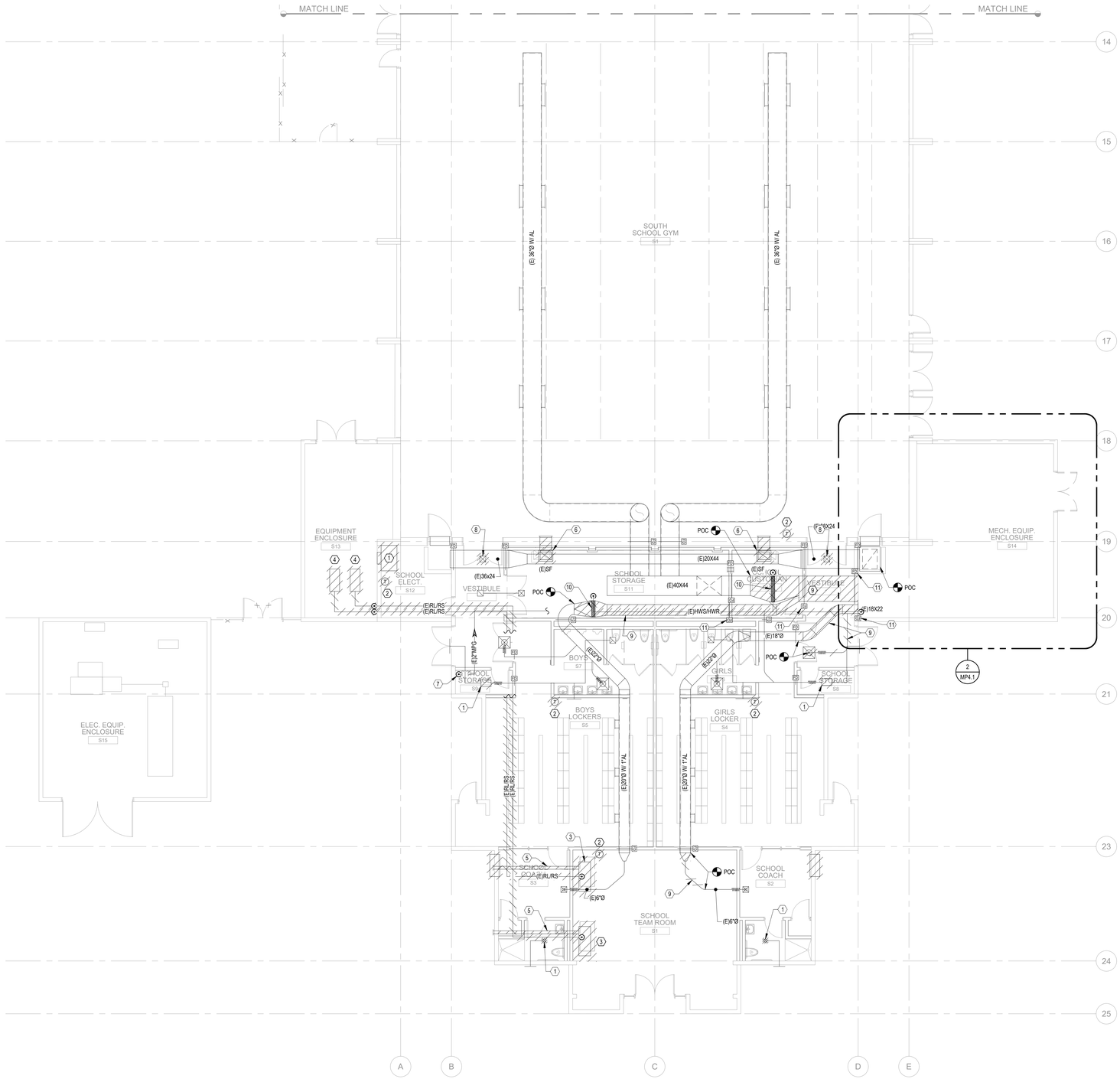
MP2.1



1 MP2.2 DEMO FLOOR PLAN - GYM - SOUTH HALF

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

GENERAL NOTES

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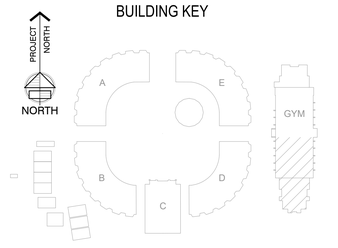
3. ALL (E) FIRE DAMPERS TO REMAIN UNLESS OTHERWISE NOTED.
4. ALL (E) DUCTWORK AND REGISTERS TO REMAIN UNLESS OTHERWISE NOTED.
5. SEE ARCHITECT'S DRAWINGS FOR CEILING ACCESS PANELS.

(#) DEMOLITION SHEET NOTES

1. REMOVE (E) EXHAUST FAN, TYPICAL. PROTECT (E) DUCT OPENINGS FOR CONNECTION TO NEW.
2. REMOVE (E) THERMOSTAT AND CONTROL WIRING, TYPICAL.
3. REMOVE (E) FAN COIL AND REFRIGERANT PIPING, TYPICAL. PROTECT (E) CD PIPE FOR CONNECTION TO NEW.
4. REMOVE (E) HEAT PUMP, TYPICAL.
5. REMOVE (E) OUTSIDE AIR DUCT ABOVE CEILING. (E) LOUVER TO REMAIN.
6. REMOVE (E) FLOOR MOUNTED SUPPLY FAN. (E) TRENCH BELOW AND COVER PLATE TO REMAIN. SEAL ANY FLOOR OPENINGS PER ARCHITECT'S DIRECTIONS.
7. REMOVE PORTION OF GAS PIPING AT RISER FOR NEW SHUT-OFF VALVE. SEE 1/MP2.4.
8. REMOVE (E) RETURN REGISTER. CAP (E) DUCT ABOVE CEILING. PATCH CEILING PER ARCHITECT'S DIRECTION.
9. REMOVE (E) SUPPLY DUCTWORK ABOVE CEILING. PROTECT (E) DUCT OPENINGS AT POC FOR CONNECTION TO NEW.
10. REMOVE (E) HOT WATER COIL AND (E) HWS & HWR PIPING AND SUPPORTS COMPLETE, TYPICAL.
11. REMOVE (E) FIRE DAMPER.

BUILDING KEY



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SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE INTERIORS PLANNING
2195 SOUTH BASCOM AVE.
SUITE 150
CAMPBELL, CA 95008
PHONE: 408.879.6600
FAX: 408.879.6699

REGISTERED PROFESSIONAL ENGINEER
MEIN SERTSU
No. 31059
EXP. JUNE 30, 2023
MECHANICAL
STATE OF CALIFORNIA

CYPRESS Engineering Group
CEG JOB NO: 21063
HVAC, Plumbing, Fire Protection
Building Commissioning
Industrial Refrigeration
Environmental Compliance
Training & Technical Support
831.218.1802 Suite A8
8 Harris Court
Monterey, CA 93940
cypresseng.com

DEMO FLOOR PLAN - GYM - SOUTH HALF
MECHANICAL & PLUMBING

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

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MP2.2

GENERAL NOTES

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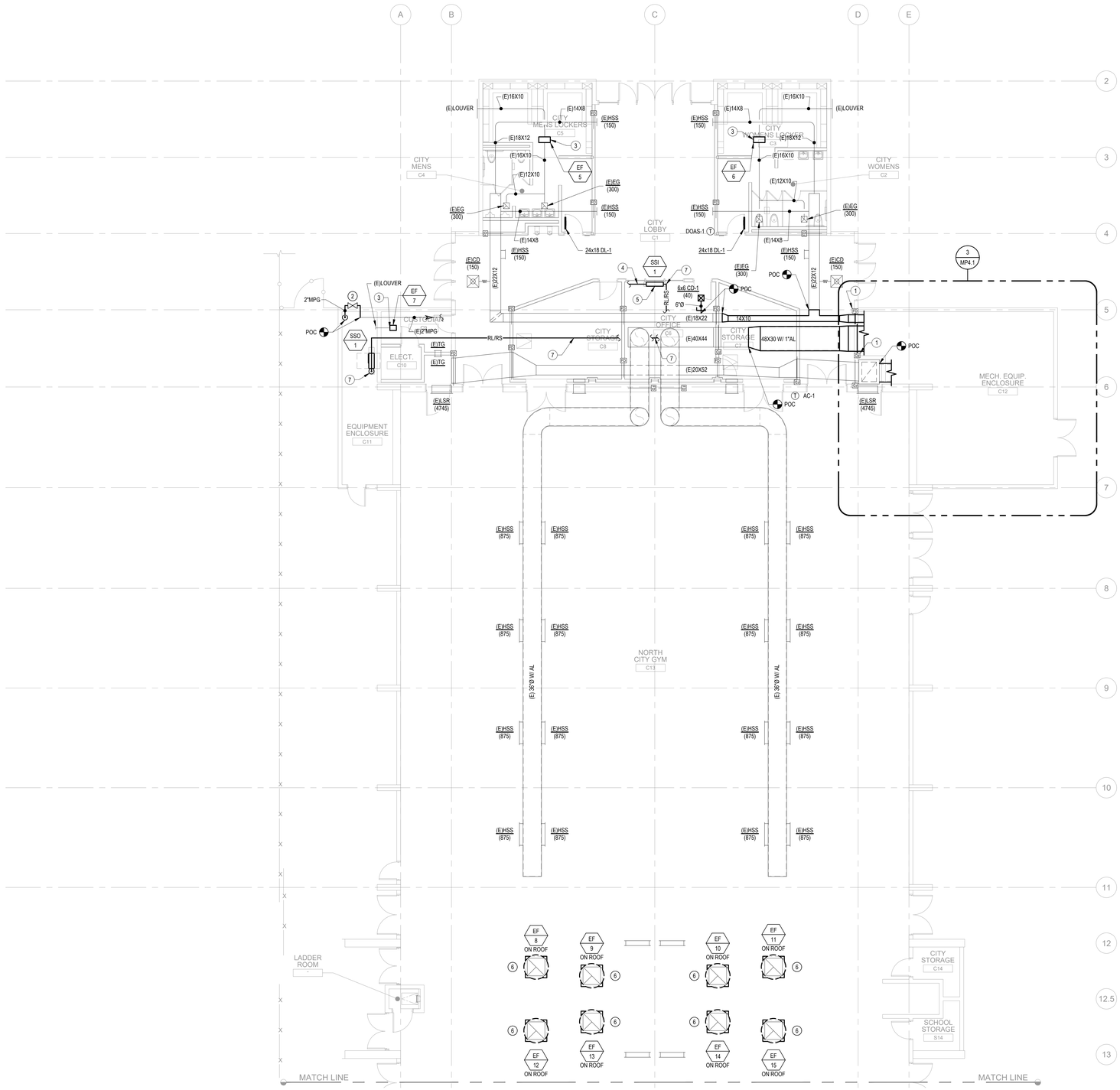
3. COORDINATE THE LOCATIONS OF ROOF/WALL OPENINGS, PENETRATIONS, DUCTWORK, AND ALL MECHANICAL EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER SERVICES TO AVOID CONFLICT.
4. EXAMINE AND SERVICE ALL (E) FIRE DAMPERS TO ENSURE PROPER OPERATION.
5. CLEAN ALL (E) DUCTWORK AND REGISTERS PER SPECIFICATION 23 01 30.
6. PAINT ALL EXPOSED DUCTWORK AND REGISTERS PER ARCHITECT'S DIRECTIONS.
7. COORDINATE DUCT SIZES TO ENSURE THERE ARE NO CONFLICTS WITH OTHER TRADES OR STRUCTURAL ELEMENTS. DUCT SIZES MAY BE MODIFIED TO ALLOW FOR CONDITIONS ENCOUNTERED DURING CONSTRUCTION. DUCT FREE AREA SHALL BE EQUAL OR GREATER THAN THAT SHOWN ON DRAWINGS.
8. DUCT DIMENSIONS NOTED ARE INSIDE CLEAR DIMENSIONS.
9. SEE ARCHITECT'S DRAWINGS FOR PATCHING/REFINISHING OF WALLS AND CEILINGS.
10. SEE ARCHITECT'S DRAWINGS FOR CEILING ACCESS PANELS.

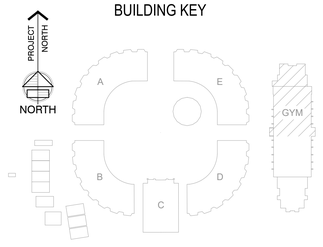
(#) NEW SHEET NOTES

1. INSTALL NEW FIRE DAMPER.
2. INSTALL GAS SHUT-OFF VALVE OUTSIDE ENCLOSURE AT ACCESSIBLE HEIGHT. PROVIDE SIGNAGE PER 15/MP6.1.
3. CONNECT (E) DUCT TO EXHAUST FAN. PROVIDE FLEX DUCT CONNECTOR AT FAN INLET AND OUTLET, TYPICAL.
4. CD PIPE FROM FAN COIL. CONNECT TO (E) CD ABOVE CEILING. FIELD VERIFY LOCATION.
5. INSTALL FAN COIL HIGH ON WALL. VERIFY LOCATION IN FIELD.
6. INSTALL FAN ON (E) ROOF CURB, TYPICAL. PROVIDE CURB ADAPTER.
7. CONNECT REFRIGERANT PIPING FROM HEAT PUMP TO FAN COIL. FOR PIPE SIZES, SEE MP5.1.



1 MP2.3 **NEW FLOOR PLAN - GYM - NORTH HALF**
SCALE: 1/8" = 1'-0"

BUILDING KEY



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SUGIMURA FINNEY ARCHITECTS
SFA
2195 SOUTH BASCOM AVE.
SUITE 250
CAMPBELL, CA 95008
PHONE: 408.879.9699
FAX: 408.877.8296

REGISTERED PROFESSIONAL ENGINEER
MEIN SER TUN
No. 31059
EXP. JUNE 30, 2023
MECHANICAL
STATE OF CALIFORNIA

CEG JOB NO: 21063
CYPRESS Engineering Group
HVAC, Plumbing, Fire Protection
Building Commissioning
Industrial Refrigeration
Environmental Controls
Training & Technical Support
831.218.1802
8 Harris Court, Suite A8
Monterey, CA 93940
cypresseg.com

NEW FLOOR PLAN - GYM - NORTH HALF
MECHANICAL & PLUMBING

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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MP2.3

GENERAL NOTES

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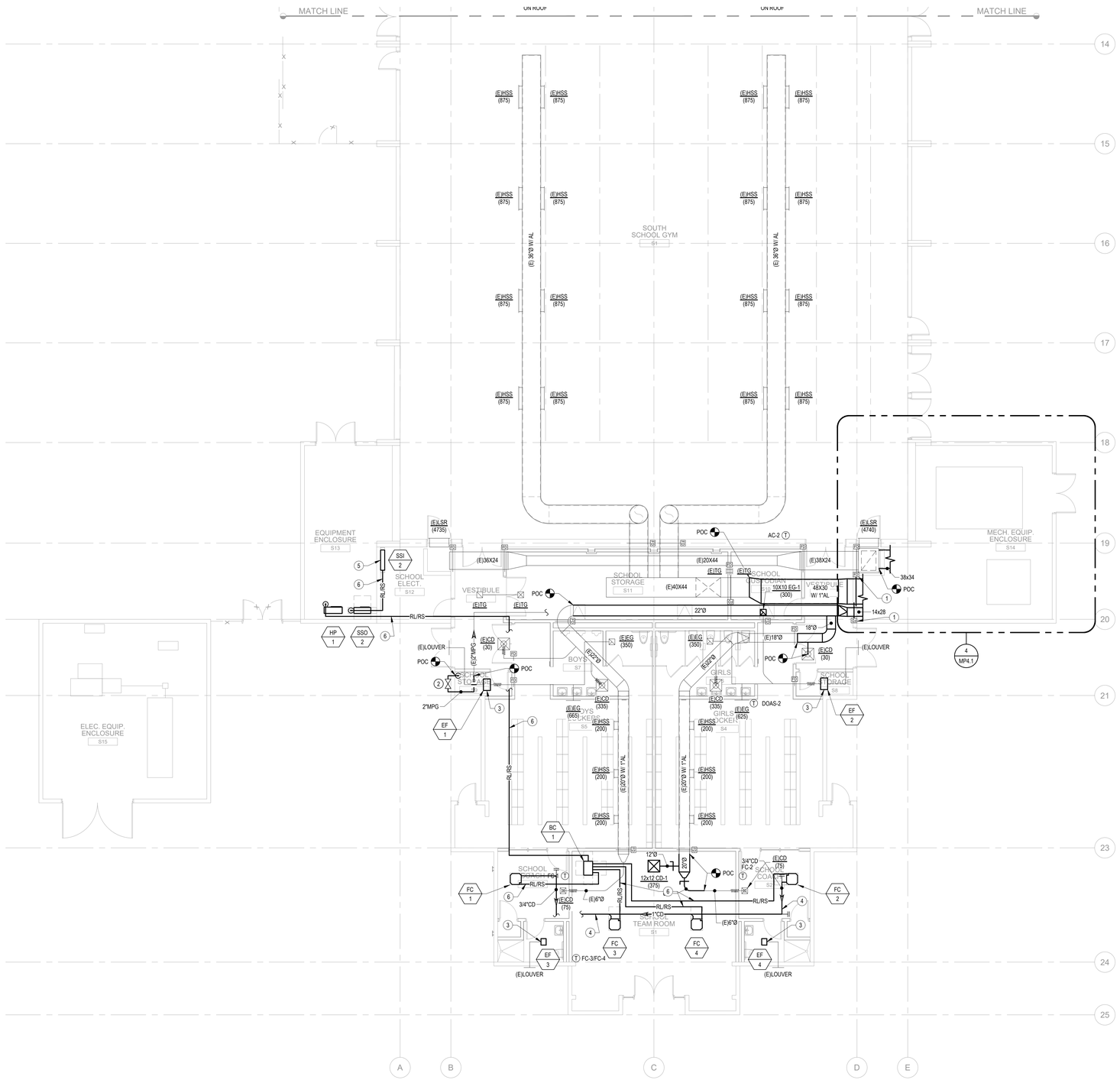
8. DUCT DIMENSIONS NOTED ARE INSIDE CLEAR DIMENSIONS.
9. SEE ARCHITECT'S DRAWINGS FOR PATCHING/REFINISHING OF WALLS AND CEILINGS.
10. SEE ARCHITECT'S DRAWINGS FOR CEILING ACCESS PANELS.

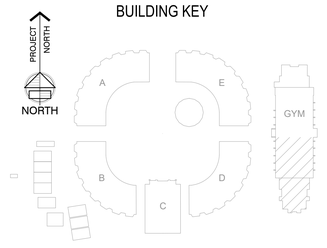
(#) NEW SHEET NOTES

1. INSTALL NEW FIRE DAMPER.
2. INSTALL GAS SHUT-OFF VALVE OUTSIDE STORAGE ROOM AT ACCESSIBLE HEIGHT. PROVIDE SIGNAGE PER 15/MP6.1.
3. CONNECT (E) DUCT TO EXHAUST FAN. PROVIDE FLEX DUCT CONNECTOR AT FAN INLET AND OUTLET, TYPICAL.
4. CD PIPE FROM FAN COIL. CONNECT TO (E) CD ABOVE CEILING. FIELD VERIFY LOCATION.
5. INSTALL FAN COIL HIGH ON WALL. VERIFY LOCATION IN FIELD.
6. CONNECT REFRIGERANT PIPING FROM HEAT PUMP TO FAN COIL(S). FOR PIPE SIZES, SEE MP5.1.



1 MP2.4 NEW FLOOR PLAN - GYM - SOUTH HALF
SCALE: 1/8" = 1'-0"

BUILDING KEY



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SUGIMURA FINNEY ARCHITECTS
SFA
2195 SOUTH BASCOM AVE.
SUITE 210
CAMPBELL, CA 95008
PHONE: 408.879.6600
FAX: 408.879.6699

REGISTERED PROFESSIONAL ENGINEER
MEIN SERTSU
No. 31059
EXP. JUNE 30, 2023
MECHANICAL
STATE OF CALIFORNIA

CYPRESS Engineering Group
CEG JOB NO: 21063
HVAC, Plumbing, Fire Protection
Building Commissioning
Industrial Refrigeration
Environmental Assessment
Training & Technical Support
831.218.1802 Suite A8
8 Harris Court
Monterey, CA 93940
cypresseng.com

NEW FLOOR PLAN - GYM - SOUTH HALF
MECHANICAL & PLUMBING

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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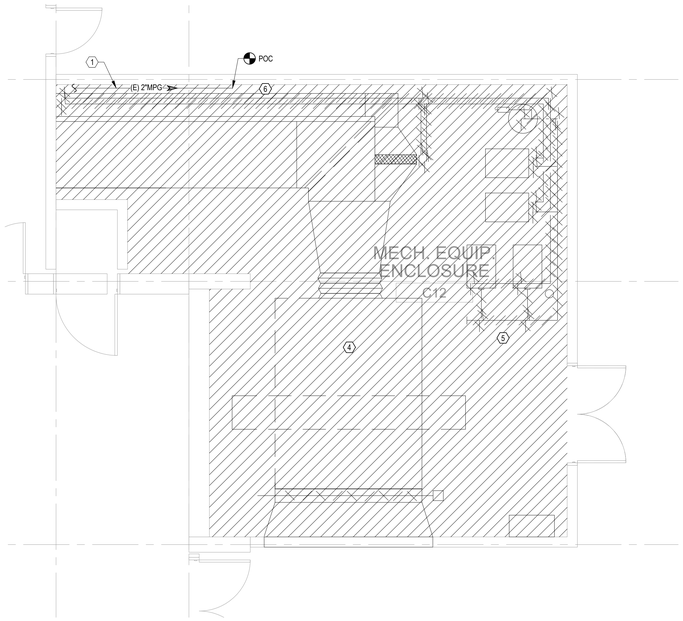
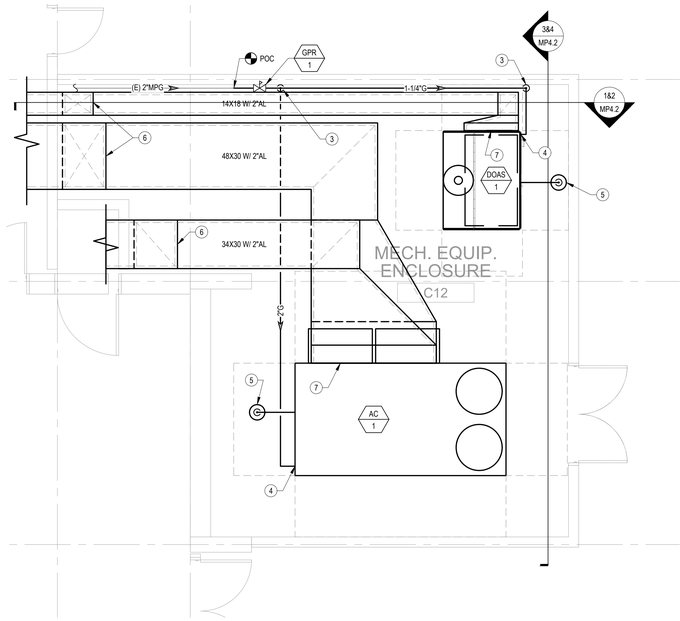
SFA JOB NO: 20061
DATE: 09/17/2021

MP2.4



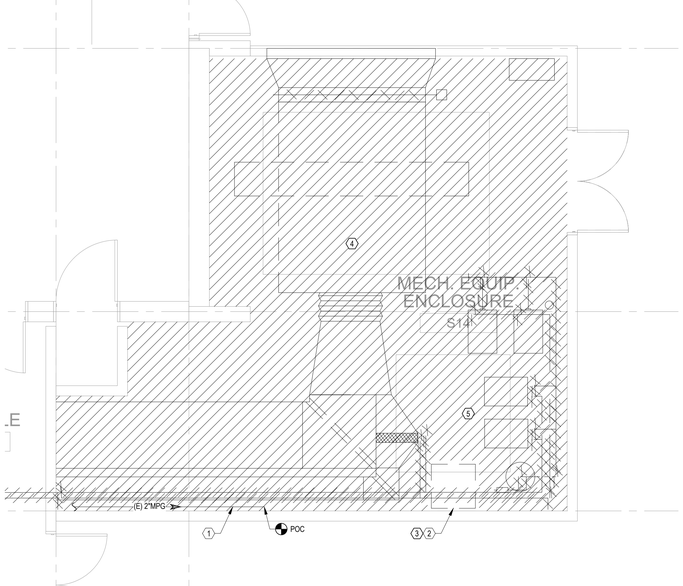
1 MP4.1 DEMO PARTIAL FLOOR PLAN - GYM - NORTH MECHANICAL YARD

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



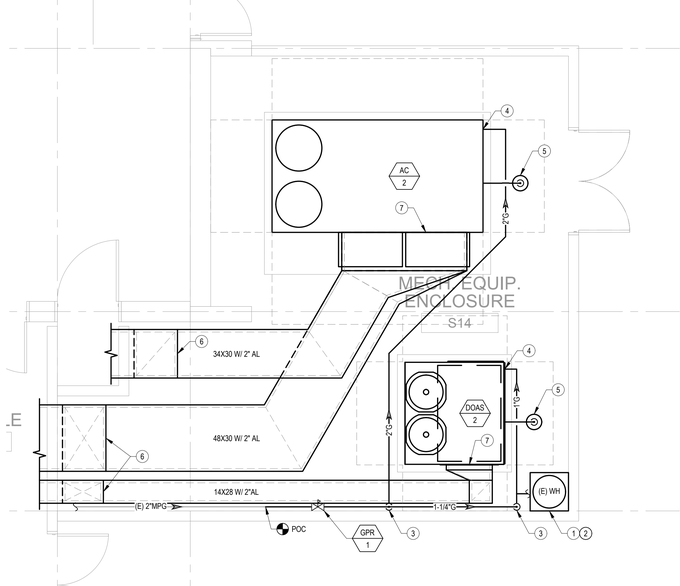
3 MP4.1 NEW PARTIAL FLOOR PLAN - GYM - NORTH MECHANICAL YARD

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



2 MP4.1 DEMO PARTIAL FLOOR PLAN - GYM - SOUTH MECHANICAL YARD

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



4 MP4.1 NEW PARTIAL FLOOR PLAN - GYM - SOUTH MECHANICAL YARD

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

GENERAL NOTES

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3. COORDINATE THE LOCATIONS OF ROOF/WALL OPENINGS, PENETRATIONS, DUCTWORK, AND ALL MECHANICAL EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER SERVICES TO AVOID CONFLICT.
4. PAINT ALL EXPOSED DUCTWORK AND REGISTERS PER ARCHITECT'S DIRECTIONS.
5. COORDINATE DUCT SIZES TO ENSURE THERE ARE NO CONFLICTS WITH OTHER TRADES OR STRUCTURAL ELEMENTS. DUCT SIZES MAY BE MODIFIED TO ALLOW FOR CONDITIONS ENCOUNTERED DURING CONSTRUCTION. DUCT FREE AREA SHALL BE EQUAL OR GREATER THAN THAT SHOWN ON DRAWINGS.
6. DUCT DIMENSIONS NOTED ARE INSIDE CLEAR DIMENSIONS.
7. SEE ARCHITECT'S DRAWINGS FOR REMOVAL OF (E) HOUSEKEEPING PADS AND NEW HOUSEKEEPING PADS FOR NEW EQUIPMENT.
8. FOR DUCT SUPPORTS IN MECHANICAL YARD, SEE 10/MP6.1 AND 13/MP6.1.
9. PROVIDE TURNING VANES AT ALL DUCT TURNS.
10. FOR PIPE SUPPORTS IN MECHANICAL YARD, SEE 17/MP6.1 AND 18/MP6.1.

(#) DEMOLITION SHEET NOTES

1. (E) GAS PIPING HIGH ON WALL TO REMAIN.
2. (E) WATER HEATER TO BE RELOCATED. SEE 4/MP4.1.
3. (E) DOMESTIC COLD WATER AND HOT WATER PIPING IN MECHANICAL YARD TO REMAIN.
4. REMOVE (E) AIR HANDLER AND ALL ASSOCIATED DUCTWORK, HEATING COILS, AND SUPPORTS IN MECHANICAL YARD.
5. REMOVE (E) BOILERS, PUMPS, AND ALL ASSOCIATED HEATING HOT WATER PIPING AND SUPPORTS IN MECHANICAL YARD.
6. REMOVE (E) GAS PIPING AND PRESSURE REGULATORS AT GRADE.

(#) NEW SHEET NOTES

1. RELOCATE (E) WATER HEATER. PROVIDE NEW SHEET METAL ENCLOSURE. HOLDRITE QUICK-SHED #QS-30-B OR SIMILAR. PROVIDE CONCRETE HOUSEKEEPING PAD PER ARCHITECT'S DRAWINGS, SEE 19/MP6.1.
2. EXTEND (E) DOMESTIC CW AND HW PIPING AND RECONNECT TO WATER HEATER. CONNECT GAS TO WATER HEATER. PERFORM STARTUP AND ENSURE PROPER OPERATION OF WATER HEATER.
3. DROP GAS PIPING DOWN AND ROUTE TO EQUIPMENT.
4. CONNECT GAS TO UNIT PER 12/MP6.1.
5. CONNECT CD TO UNIT PER 12/MP6.1 AND ROUTE TO DRYWELL, SEE 16/MP6.1.
6. RISE DUCT TIGHT TO WALL, TYPICAL. FOR DUCT SUPPORT AT WALL, SEE 14/MP6.1.
7. INSTALL FLEX DUCT CONNECTOR AT CONNECTIONS TO UNIT. PROVIDE SHEET METAL RAIN HOOD ABOVE FLEX CONNECTOR, TYPICAL.

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SUGIMURA FINNEY ARCHITECTS
SFA
ALL RIGHTS RESERVED
2195 SOUTH BASCOM AVE.
SUITE 250
CAMPBELL, CA 95008
PHONE: 408.879.6600
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DEMO & NEW PARTIAL PLANS -
GYM MECHANICAL YARDS - MECHANICAL & PLUMBING

HVAC BOILER REPLACEMENT
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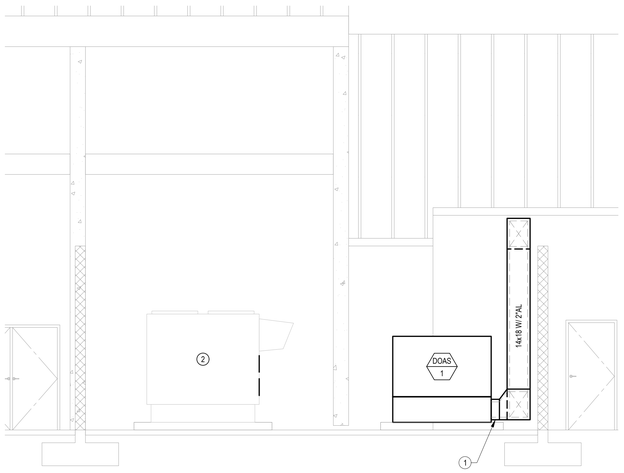
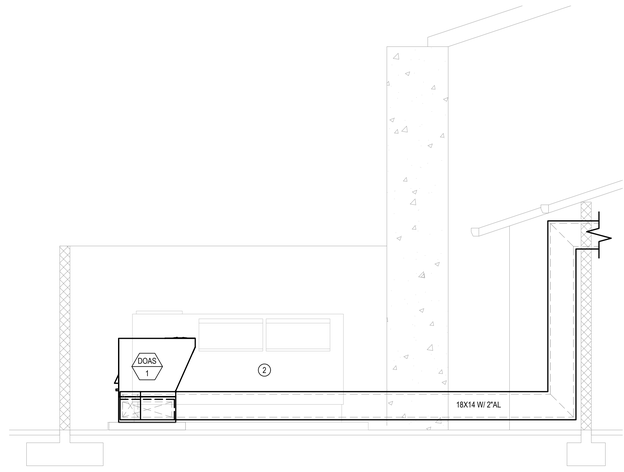
MP4.1



3 MP4.2

SECTION VIEW
NORTH EQUIPMENT YARD - DOAS UNIT

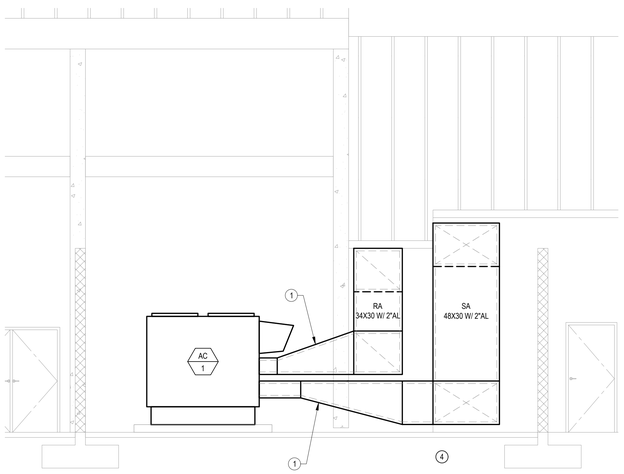
SCALE: 1/4" = 1'-0"



1 MP4.2

SECTION VIEW
NORTH EQUIPMENT YARD - DOAS UNIT

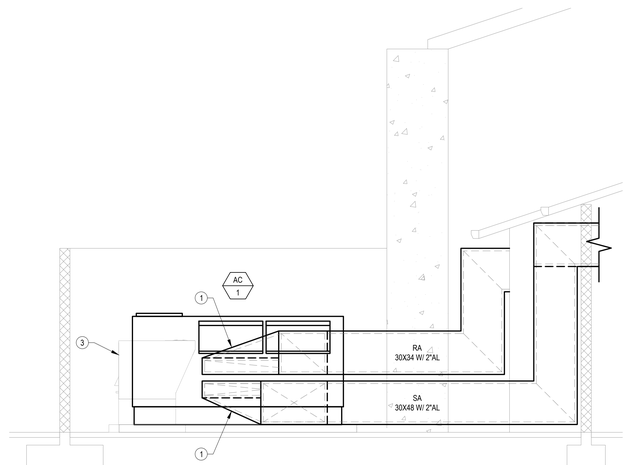
SCALE: 1/4" = 1'-0"



4 MP4.2

SECTION VIEW
NORTH EQUIPMENT YARD - AC UNIT

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



2 MP4.2

SECTION VIEW
NORTH EQUIPMENT YARD - AC UNIT

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

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1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW BUILDING STRUCTURES, SERVICES, AND OWNER'S PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION.
2. COORDINATE THE LOCATIONS OF ROOF/WALL OPENINGS, PENETRATIONS, DUCTWORK, AND ALL MECHANICAL EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER SERVICES TO AVOID CONFLICT.
3. COORDINATE DUCT SIZES TO ENSURE THERE ARE NO CONFLICTS WITH OTHER TRADES OR STRUCTURAL ELEMENTS. DUCT SIZES MAY BE MODIFIED TO ALLOW FOR CONDITIONS ENCOUNTERED DURING CONSTRUCTION. DUCT FREE AREA SHALL BE EQUAL OR GREATER THAN THAT SHOWN ON DRAWINGS.
4. DUCT DIMENSIONS NOTED ARE INSIDE CLEAR DIMENSIONS.
5. SECTIONS THROUGH SOUTH EQUIPMENT ENCLOSURE SIMILAR.

(#) NEW SHEET NOTES

1. TRANSITION DUCT TO MATCH UNIT CONNECTION DIMENSIONS.
2. AC UNIT OUTLINE SHOWN FOR REFERENCE. SEE SECTIONS 2&4/MP4.2 FOR DUCTWORK.
3. DOAS UNIT OUTLINE SHOWN FOR REFERENCE. SEE SECTIONS 1&3/MP4.2 FOR DUCTWORK.
4. FOR CLARITY, DOAS UNIT IS NOT SHOWN IN THIS VIEW. SEE SECTIONS 1&3/MP4.2 FOR DUCTWORK.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-119604 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/30/2021

(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
2195 SOUTH BASCOM AVE.
SUITE 210
CAMPBELL, CA 95008
PHONE: 408.879.6600
FAX: 408.377.6650

REGISTERED PROFESSIONAL ENGINEER
MEIN SERTSU
No. 31059
EXP. JUNE 30, 2023
MECHANICAL
STATE OF CALIFORNIA

CEG JOB NO: 21063

CYPRESS Engineering Group

HVAC, Plumbing, Fire Protection
Building Commissioning
Industrial Refrigeration
Environmental Controls
Training & Technical Support

831.218.1802
8 Harris Court, Suite A8
Monterey, CA 93940
cypresseg.com

SECTIONS -
GYM MECHANICAL YARDS - MECHANICAL

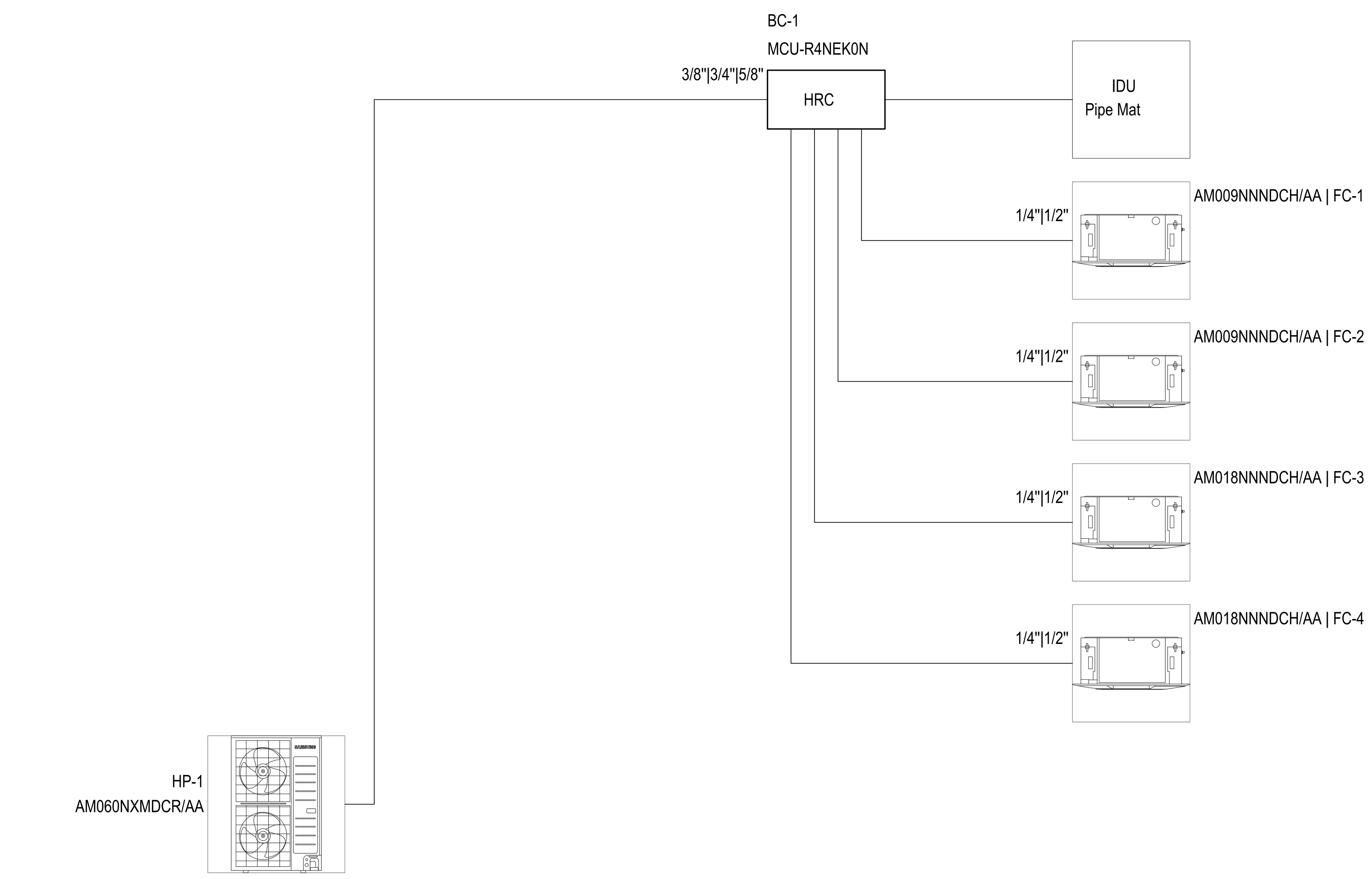
HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

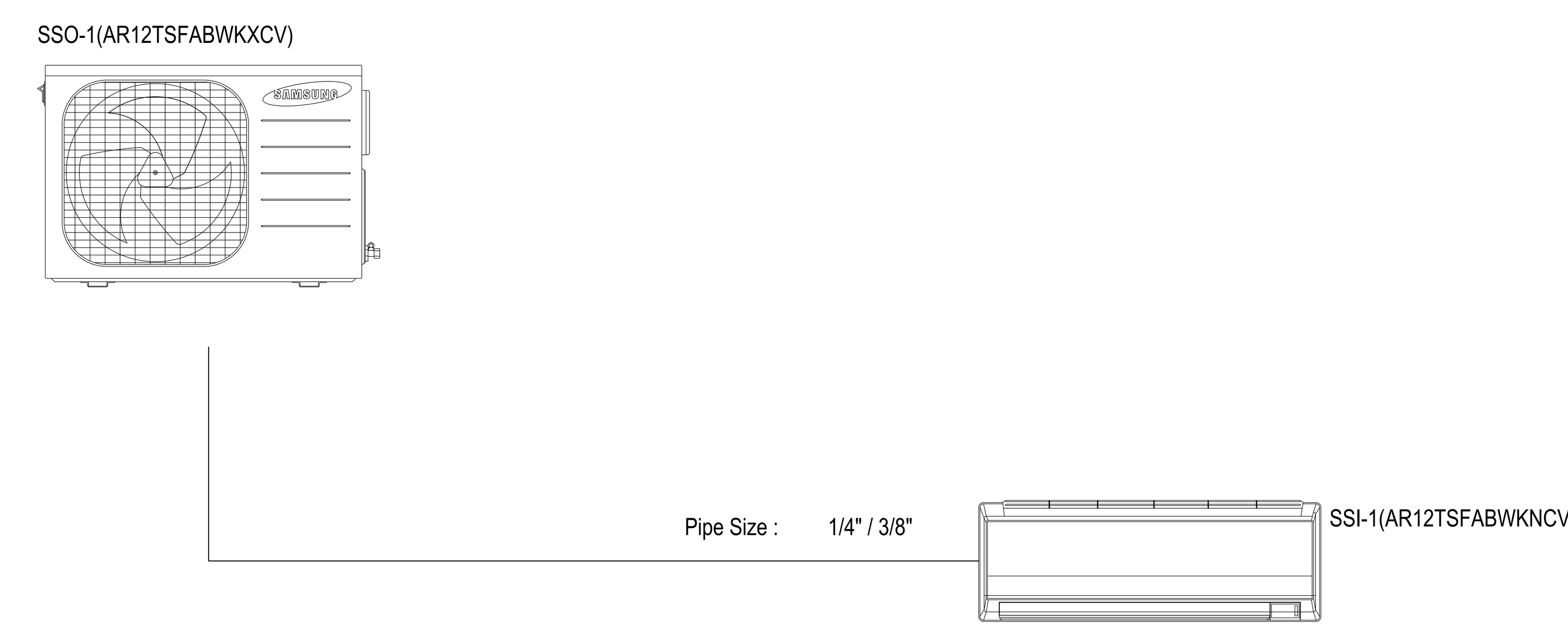
NO.	ITEM	DATE

DRAWN BY:	JL
CHECKED BY:	CS
SFA JOB NO:	DATE:
20061	09/17/2021

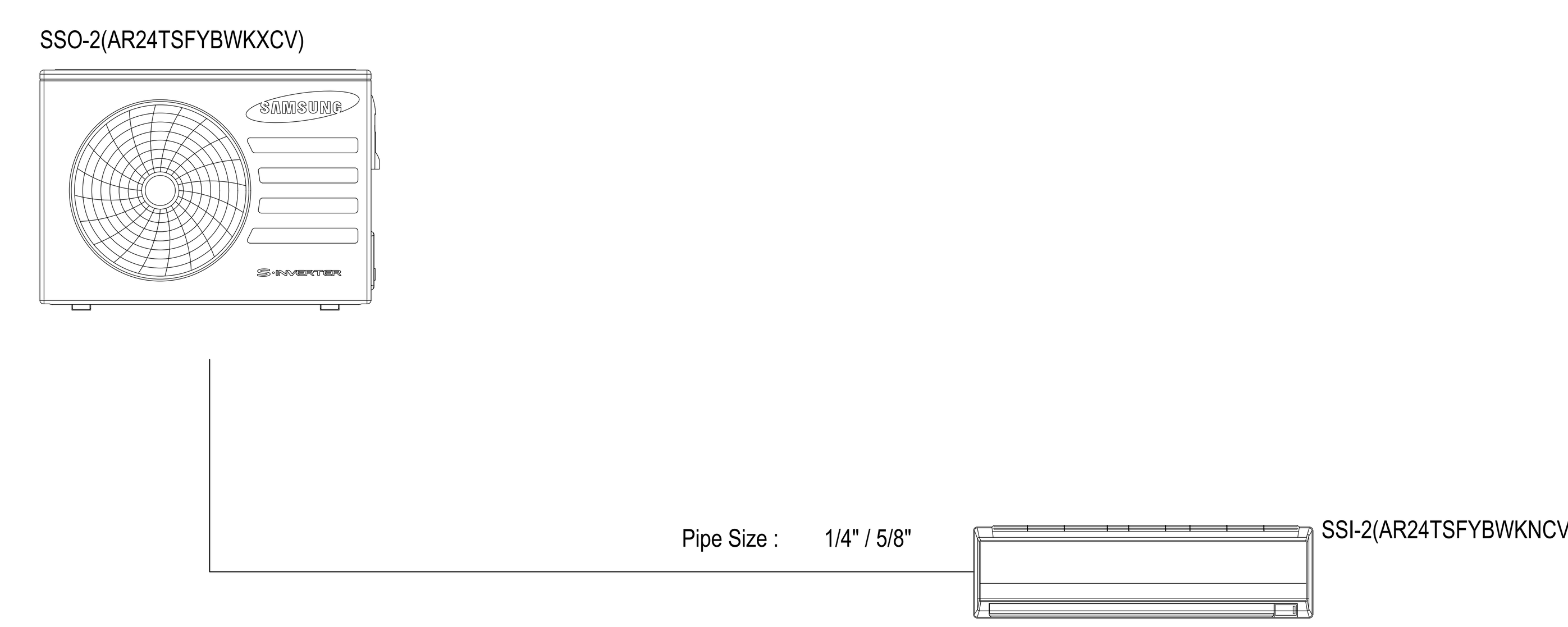
MP4.2



1 VRF SYSTEM PIPING DIAGRAM



2 SSO-1/SSI-1 PIPING DIAGRAM



3 SSO-2/SSI-2 PIPING DIAGRAM

IDENTIFICATION STAMP
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(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE · INTERIORS · PLANNING
2155 SOUTH BASCOM AVE.
SUITE 200
CAMPBELL, CA 95008
PHONE: 408-879-0600
FAX: 408-377-6066

REGISTERED PROFESSIONAL ENGINEER
METIN SERTTUNC
No. 31059
EXP. JUNE 30, 2023
MECHANICAL
STATE OF CALIFORNIA

CEG JOB NO.: 21063

CYPRESS
Engineering Group
HVAC, Plumbing, Fire Protection
Building Commissioning
Industrial Refrigeration
Environmental Compliance
Training & Technical Support

831.218.1602
8 Harris Court, Suite A8
Monterey, CA 93940
cypresseg.com

REFRIGERANT PIPING DIAGRAMS - MECHANICAL

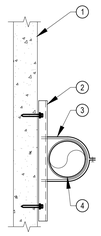
HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

NO.	ITEM	DATE

DRAWN BY:	JL
CHECKED BY:	CS
SFA JOB NO:	DATE:
20061	09/17/2021

MP5.1



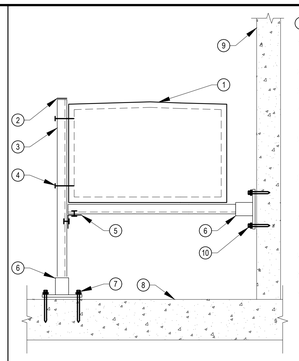
DETAIL NOTES:

1. (E) WALL.
2. B-LINE B22 CHANNEL ATTACH TO WALL WITH (2) 3/8"Ø HILTI KWIK BOLT TZ2 WEDGE ANCHOR, MINIMUM 2" EMBEDMENT. ESR 4561
3. B-LINE VIBRA-CLAMP PIPE CLAMP
4. PIPING, SEE PLANS FOR SIZES

NOTES:

1. MAX 10'-0" BETWEEN SUPPORTS.

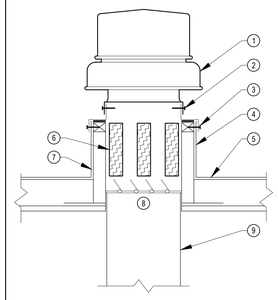
17 PIPE SUPPORT ON WALL N.T.S.



DETAIL NOTES:

1. BREAK TOP OF DUCT FOR 100% POSITIVE DRAINAGE, TYP.
2. END CAP, TYP.
3. UNISTRUT P1000 CHANNEL, TYP.
4. #10 SHEET METAL SCREWS AT 12" ON CENTER.
5. ATTACH UNISTRUT P2347 CORNER ANGLE WITH 1/2"Ø BOTL WITH CHANNEL NUT, TYP. ESR 4266
6. UNISTRUT P2942 POST BASE. ATTACH TO CHANNEL WITH (2) 1/2"Ø BOLTS AND CHANNEL NUTS, TYP.
7. 3/8" DIA. CARBON STEEL THREADED ROD COMPLYING W/ (ASTM B633 SC 1, Gr. 36) HILTI HIT-RE V3 W/ 2 3/8" EMBED (ESR 3814. (4) PER BASE
8. (E) SLAB ON GRADE.
9. (E) WALL.
10. 3/8" DIA. CARBON STEEL THREADED ROD COMPLYING W/ (ASTM B633 SC 1, Gr. 36) HILTI HIT-RE V3 W/ 2 3/8" EMBED (ESR 3814. (4) PER BASE

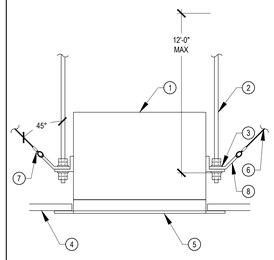
13 DUCT SUPPORT N.T.S.



DETAIL NOTES:

1. ROOF EXHAUST FAN. SEE PLANS FOR LOCATIONS.
2. CURB ADAPTER. ATTACH EXHAUST FAN TO CURB ADAPTER WITH #12 SELF TAPPING SCREWS AT 12" ON CENTER. MINIMUM 2 PER SIDE.
3. SECURE TO ROOF CURB WITH #12 SELF TAPPING SCREWS AT 12" ON CENTER. MINIMUM 2 PER SIDE.
4. (E) FLASHING.
5. (E) ROOF DECK.
6. SOUND BAFFLE TO MATCH (E) CURB OPENING DIMENSIONS.
7. (E) ROOF CURB.
8. (E) BACKDRAFT DAMPER. VERIFY IN FIELD. PROVIDE NEW OTHERWISE.
9. (E) DUCT.

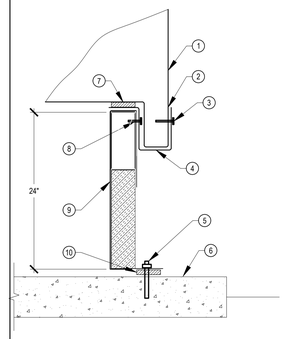
9 EXHAUST FAN MOUNTING ON EXISTING CURB N.T.S.



DETAIL NOTES:

1. CEILING CASSETTE UNIT. FOR LOCATION, SEE PLANS.
2. 3/8" THREADED ROD, (TYP. OF 4). FOR TOP CONNECTION, SEE 11/MP6.1.
3. FACTORY-SUPPLIED BRACKETS. PROVIDE DOUBLE NUTS WITH LOCKWASHER AT TOP AND BOTTOM OF FLANGE. REFER TO AND FOLLOW MANUFACTURER INSTALLATION INSTRUCTIONS AND PROVIDE ALL NECESSARY HARDWARE.
4. CEILING ASSEMBLY. SEE ARCHITECT'S DRAWINGS.
5. FACTORY GRILLE.
6. 3/16"Ø CABLE. PRETENSIONED AT 5 LBS, TYP. FOR TOP CONNECTION, SEE 11/MP6.1.
7. CABLE CLAMP, EACH END.
8. UNISTRUT LS500 PIVOT FITTING, TYP.

5 CEILING CASSETTE FAN COIL DETAIL N.T.S.



DETAIL NOTES:

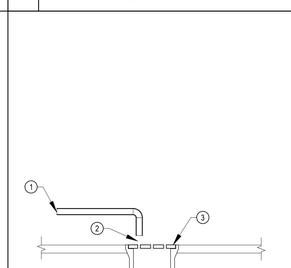
1. UNIT. FOR LOCATION, SEE PLANS.
2. UNIT BASE RAIL.
3. SECURE HOLD DOWN TO UNIT BASE RAIL WITH (4) #12 x1-1/2" TEK SCREWS.
4. UNIT HOLD DOWNS, TYPICAL OF 3 PER LONG SIDE.
5. 1/2"Ø HILTI KWIK BOLT STAINLESS STEEL TZ2 - ESR 4266 WEDGE ANCHOR. MINIMUM 3-1/4" EMBEDMENT. TYP 24" ON CENTER. MINIMUM 4 PER SIDE.
6. CONCRETE HOUSEKEEPING PAD, SEE ARCHITECT'S DRAWINGS.
7. SEALING GASKET.
8. SECURE HOLD DOWN TO UNIT CURB WITH (4) #10 x 1/2" TEK SCREWS, TYP.
9. UNIT CURB, 24" HEIGHT, SEE MP7.1.
10. NEOPRENE ISOLATION PAD.

1 AIR CONDITIONER MOUNTING ON NEW CURB N.T.S.

DETAIL NOTES:

1. FOR PIPE SIZES AND TYPES, SEE PLANS
2. PROVIDE GAP BETWEEN INTEGRAL STRUT CHANNEL AND HARDWARE USED TO SECURE PIPE TO ALLOW FOR MOVEMENT OF SYSTEM
3. (E) FLOOR
4. PROVIDE STANDARD STRUT CLAMPS
5. B-LINE DURA-BLOCK WITH INTEGRAL CHANNEL AND PIPE BRACKETS, WIDTH AS REQUIRED FOR NUMBER OF PIPES

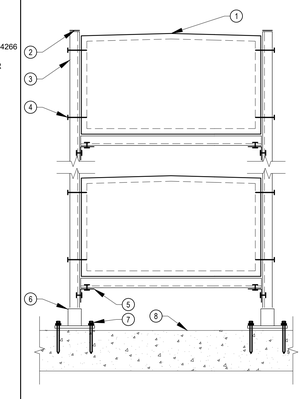
18 PIPE SUPPORT ON FLOOR N.T.S.



DETAIL NOTES:

1. 2"X 16 GA. SHEET METAL STRAP. SECURE TO CHANNEL WITH 3/8"Ø BOLT AND CHANNEL NUT, TYP. ESR 4266
2. 3"x3" 16 GA. CORNER GUARD UNDER STRAP, TYP.
3. DUCT.
4. B-LINE B22 CHANNEL.
5. 1/2"Ø HILTI KWIK BOLT TZ2 WEDGE ANCHOR, MINIMUM 3" EMBEDMENT, (2) PER CHANNEL. ESR 4561
6. (E) WALL.

14 DUCT SUPPORT AT WALL N.T.S.



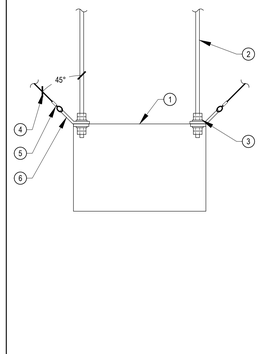
DETAIL NOTES:

1. BRACE TOP OF DUCT FOR 100% POSITIVE DRAINAGE, TYP.
2. END CAP, TYP.
3. UNISTRUT P1000 CHANNEL, TYP.
4. #10 SHEET METAL SCREWS AT 12" ON CENTER.
5. ATTACH UNISTRUT 92347 CORNER ANGLE WITH 1/2"Ø BOTL WITH CHANNEL NUT, TYP.
6. UNISTRUT P2942 POST BASE. ATTACH TO CHANNEL WITH (2) 1/2"Ø BOLTS AND CHANNEL NUTS, TYP.
7. 3/8" DIA. CARBON STEEL THREADED ROD COMPLYING W/ (ASTM B633 SC 1, Gr. 36) HILTI HIT-RE V3 W/ 2 3/8" EMBED (ESR 3814. (4) PER BASE
8. (E) SLAB ON GRADE.

NOTES:

1. MAX 8'-0" BETWEEN SUPPORTS.

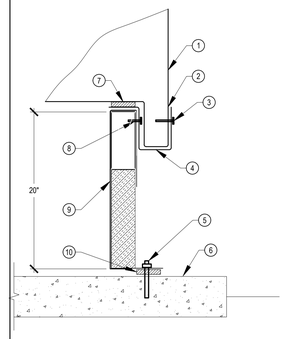
10 DUCT SUPPORT N.T.S.



DETAIL NOTES:

1. BRANCH CONTROLLER. FOR LOCATION, SEE PLANS.
2. 3/8" THREADED ROD, (TYP. OF 4). FOR TOP CONNECTION, SEE 11/MP6.1.
3. FACTORY-SUPPLIED BRACKETS. PROVIDE DOUBLE NUTS WITH LOCKWASHER AT TOP AND BOTTOM OF FLANGE. REFER TO AND FOLLOW MANUFACTURER INSTALLATION INSTRUCTIONS AND PROVIDE ALL NECESSARY HARDWARE.
4. 3/16"Ø CABLE. PRETENSIONED AT 5 LBS. TYP. FOR TOP CONNECTION, SEE 11/MP6.1.
5. CABLE CLAMP, EACH END.
6. UNISTRUT LS500 PIVOT FITTING, TYP.

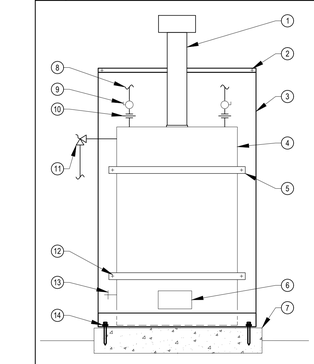
6 BRANCH CONTROLLER DETAIL N.T.S.



DETAIL NOTES:

1. UNIT. FOR LOCATION, SEE PLANS.
2. UNIT BASE RAIL.
3. SECURE HOLD DOWN TO UNIT BASE RAIL WITH (3) #12 x 1-1/2" TEK SCREWS ESR-1976.
4. UNIT HOLD DOWNS, TYPICAL OF 3 PER LONG SIDE.
5. 3/8"Ø HILTI KWIK BOLT STAINLESS STEEL TZ2 - ESR 4266 WEDGE ANCHOR. MINIMUM 2-3/4" EMBEDMENT. TYP OF 4 PER SIDE.
6. CONCRETE HOUSEKEEPING PAD, SEE ARCHITECT'S DRAWINGS.
7. SEALING GASKET.
8. SECURE HOLD DOWN TO UNIT CURB WITH (3) #12 x 3/4" TEK SCREWS ESR-1976.
9. UNIT CURB, 20" HEIGHT, WITH SIDE SUPPLY DISCHARGE. SEE MP7.1 FOR LOCATION.
10. NEOPRENE ISOLATION PAD.

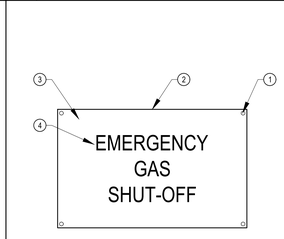
2 DOAS MOUNTING ON NEW CURB N.T.S.



DETAIL NOTES:

1. TYPE B DOUBLE WALL METAL FLUE. EXTEND 2 FT ABOVE (E) CMU WALL.
2. SECURE TOP PANEL TO (E) WALL WITH (2) 3/8"Ø WEDGE ANCHORS. ESR 4266
3. HOLDRITE QUICK SHED QS-30 WATER HEATER ENCLOSURE.
4. (E) WATER HEATER RELOCATED.
5. HOLDRITE SEISMIC RESTRAINT STRAP. AT UPPER ONE THIRD (1/3) AND LOWER ONE-THIRD (1/3). A MINIMUM DISTANCE OF FOUR (4) INCHES SHALL BE MAINTAINED ABOVE THE CONTROLS.
6. CONNECT GAS PER 12/MP6.1.
7. CONCRETE HOUSEKEEPING PAD, SEE ARCHITECT'S DRAWINGS.
8. CONNECT TO (E) PIPING, TYPICAL.
9. BALL VALVE, TYPICAL.
10. DIELECTRIC UNION, TYPICAL.
11. T&P RELIEF VALVE, CONNECT TO (E) DRAIN PIPING.
12. 1/2"Ø HILTI KB TZ2 WITH 3-1/2" MIN EMBEDMENT, TYPICAL 2 PER STRAP. ESR 4266
13. HOSE BIBB.
14. 3/8"Ø HILTI KWIK BOLT TZ2 WEDGE ANCHOR, TYPICAL OF 4. ESR 4266

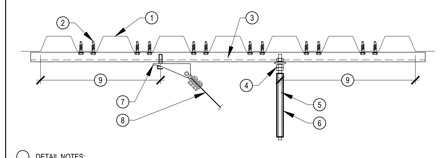
19 WATER HEATER MOUNTING N.T.S.



DETAIL NOTES:

1. SECURE ON WALL WITH VANDAL PROOF SCREWS
2. SIGN NEAR SHUT-OFF VALVE
3. RED BACKGROUND ON 20 GAUGE SHEET METAL
4. 1" HIGH WHITE LETTERING

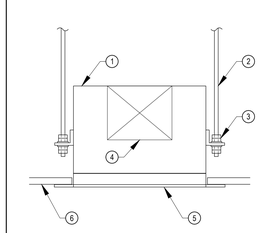
15 GAS VALVE SIGNAGE N.T.S.



DETAIL NOTES:

1. (E) METAL DECK.
2. #10 TEK SCREWS, TYP. (2) PER FLUTE.
3. B-LINE B22 CHANNEL.
4. ATTACH ROD TO CHANNEL WITH DOUBLE NUTS AND CHANNEL NUT WITH SPRING.
5. 3/8"Ø HANGER ROD.
6. ROD STIFFENER IF LENGTH > 12". P100T CHANNEL WITH P2485 CRADDLE CLIPS AT 12" ON CENTER.
7. TOLCO FIG. 990 CABLE SWAY BRACE ATTACHMENT. ATTACH TO CHANNEL WITH 3/8"Ø BOLT AND CHANNEL NUT WITH SPRING. ESR 4266
8. BRACING CABLE.
9. CHANNEL TO EXTEND TWO FLUTES BEYOND ROD OR BRACE ATTACH POINT.

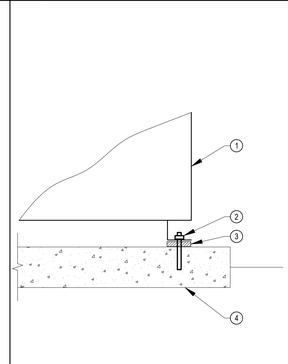
11 TOP CONNECTION N.T.S.



DETAIL NOTES:

1. EXHAUST/TRANSFER FAN. FOR LOCATION, SEE PLANS. 20 LB MAX.
2. 3/8" THREADED ROD, (TYP. OF 4). FOR TOP CONNECTION, SEE 11/MP6.1.
3. FACTORY-SUPPLIED BRACKETS. PROVIDE DOUBLE NUTS WITH LOCKWASHER AT TOP AND BOTTOM OF FLANGE WITH FACTORY ISOLATION KIT. REFER TO AND FOLLOW MANUFACTURER INSTALLATION INSTRUCTIONS AND PROVIDE ALL NECESSARY HARDWARE.
4. DUCTWORK. CONNECT TO FAN WITH FLEX CONNECTOR. FOR SIZES, SEE FLOOR PLANS.
5. FACTORY GRILLE.
6. CEILING ASSEMBLY. SEE ARCHITECT'S DRAWINGS.

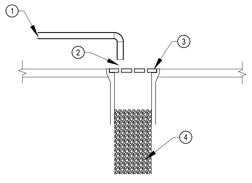
7 CEILING EXHAUST FAN DETAIL N.T.S.



DETAIL NOTES:

1. HEAT PUMP. FOR LOCATION, SEE PLANS
2. PRE-INSTALLED 3/8"Ø HILTI KWIK BOLT TZ2 WEDGE ANCHOR. MINIMUM 2-1/2" EMBEDMENT. TYP OF 4. ESR 4266
3. NEOPRENE ISOLATION PAD.
4. (E) CONCRETE HOUSEKEEPING PAD.

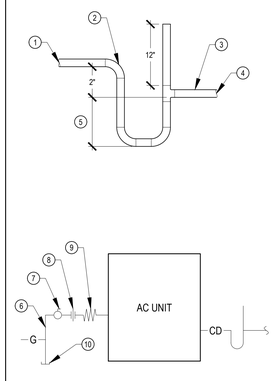
3 OUTDOOR HEAT PUMP DETAIL N.T.S.



DETAIL NOTES:

1. CONDENSATE DRAIN, FOR LOCATION, SEE PLANS.
2. SPILL WITH 1" AIR GAP.
3. CHRISTY F22 CURB VALVE BOX WITH ADS SNAP ADAPTER AND 18" ADS EXTENSION. WITH V01-71C GRATE LID. FLUSH WITH GRADE.
4. FILL WITH ±1" GRAVEL.

16 CONDENSATE DRYWELL N.T.S.



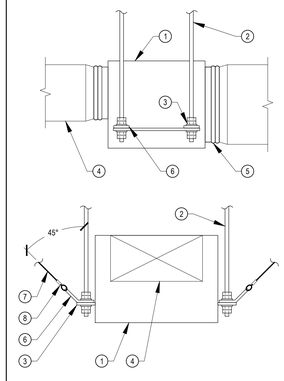
DETAIL NOTES:

1. CONNECT CD TO UNIT PER MANUFACTURER'S INSTALLATION REQUIREMENTS
2. LONG RADIUS ELBOW, TYP
3. PITCH MINIMUM 1/8" PER FOOT TO DRAIN
4. ROUTE TO ROOF DRAIN
5. AC UNIT TOTAL INCHES STATIC PRESSURE ±2"
6. NATURAL GAS PIPE
7. GAS SHUTOFF VALVE TYP AT EACH UNIT
8. UNION
9. FLEXIBLE CONNECTOR
10. DIRT LEG

NOTES:

1. CD PIPE SIZE SHALL NOT BE SMALLER THAN UNIT DRAIN CONNECTION SIZE.
2. FOR PIPE SIZES AND LOCATIONS, SEE PLANS.

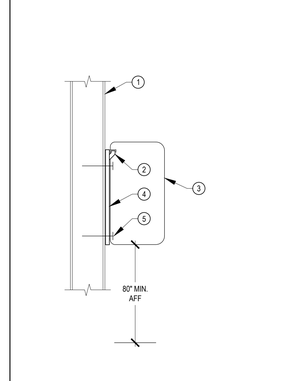
12 GAS AND CONDENSATE DRAIN CONNECTION TO EQUIPMENT N.T.S.



DETAIL NOTES:

1. EXHAUST FAN. FOR LOCATION, SEE PLANS.
2. 3/8" THREADED ROD, (TYP. OF 4). FOR TOP CONNECTION, SEE 11/MP6.1.
3. FACTORY-SUPPLIED BRACKETS. PROVIDE DOUBLE NUTS WITH LOCKWASHER AT TOP AND BOTTOM OF FLANGE WITH FACTORY ISOLATION KIT. REFER TO AND FOLLOW MANUFACTURER INSTALLATION INSTRUCTIONS AND PROVIDE ALL NECESSARY HARDWARE.
4. DUCTWORK. FOR SIZES SEE FLOOR PLANS.
5. FLEX CONNECTOR.
6. UNISTRUT LS500 PIVOT FITTING, TYP.
7. 3/16"Ø CABLE, PRE-TENSIONED AT 5 LBS, TYP. FOR TOP CONNECTION, SEE 11/MP6.1.
8. CABLE CLAMP, EACH END.

8 INLINE FAN DETAIL N.T.S.



DETAIL NOTES:

1. (E) WALL. SEE ARCHITECT'S DRAWINGS.
2. INSTALL THE UNIT TO MOUNTING PLATE PER MANUFACTURER INSTALLATION AND OPERATION MANUAL.
3. INDOOR UNIT, SEE PLANS FOR LOCATIONS. MAX WEIGHT, 30 LB.
4. MANUFACTURER'S MOUNTING PLATE.
5. (4) 3/8" Ø LAG SCREW, 3" MIN EMBEDMENT INTO STUD WALL OR (4) 3/8"Ø HILTI KB TZ2, 2-1/2" MIN EMBEDMENT INTO CMU WALL. ESR 4561

4 SPLIT SYSTEM FAN COIL MOUNTING N.T.S.

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SFA
ARCHITECTURE INTERIORS PLANNING
2195 SOUTH BASCOM AVE. SUITE 250
CAMPBELL, CA 95008
PHONE: 408.879.6600
FAX: 408.377.6690

REGISTERED PROFESSIONAL ENGINEER
MEHIN SERTUNC
No. 31059
EXP. JUNE 30, 2023
MECHANICAL
STATE OF CALIFORNIA

CEG JOB NO: 21063

CYPRESS Engineering Group
HVAC, Plumbing, Fire Protection
Building Commissioning
Industrial Refrigeration
Environmental Consulting
Training & Technical Support
831.218.1802 Suite A8
8 Harris Court
Monterey, CA 93940
cypresseng.com

DETAILS - MECHANICAL & PLUMBING

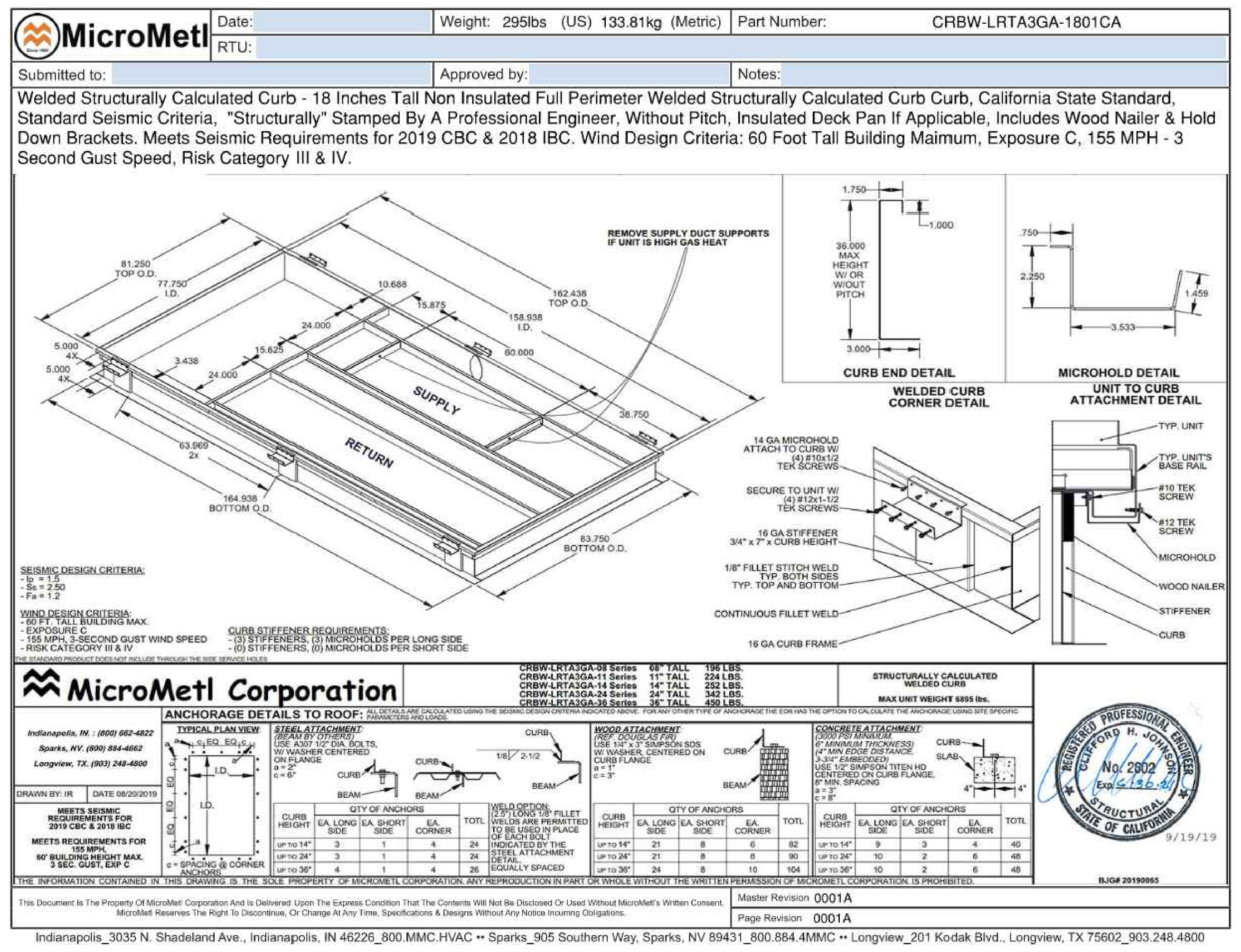
HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

NO.	ITEM	DATE

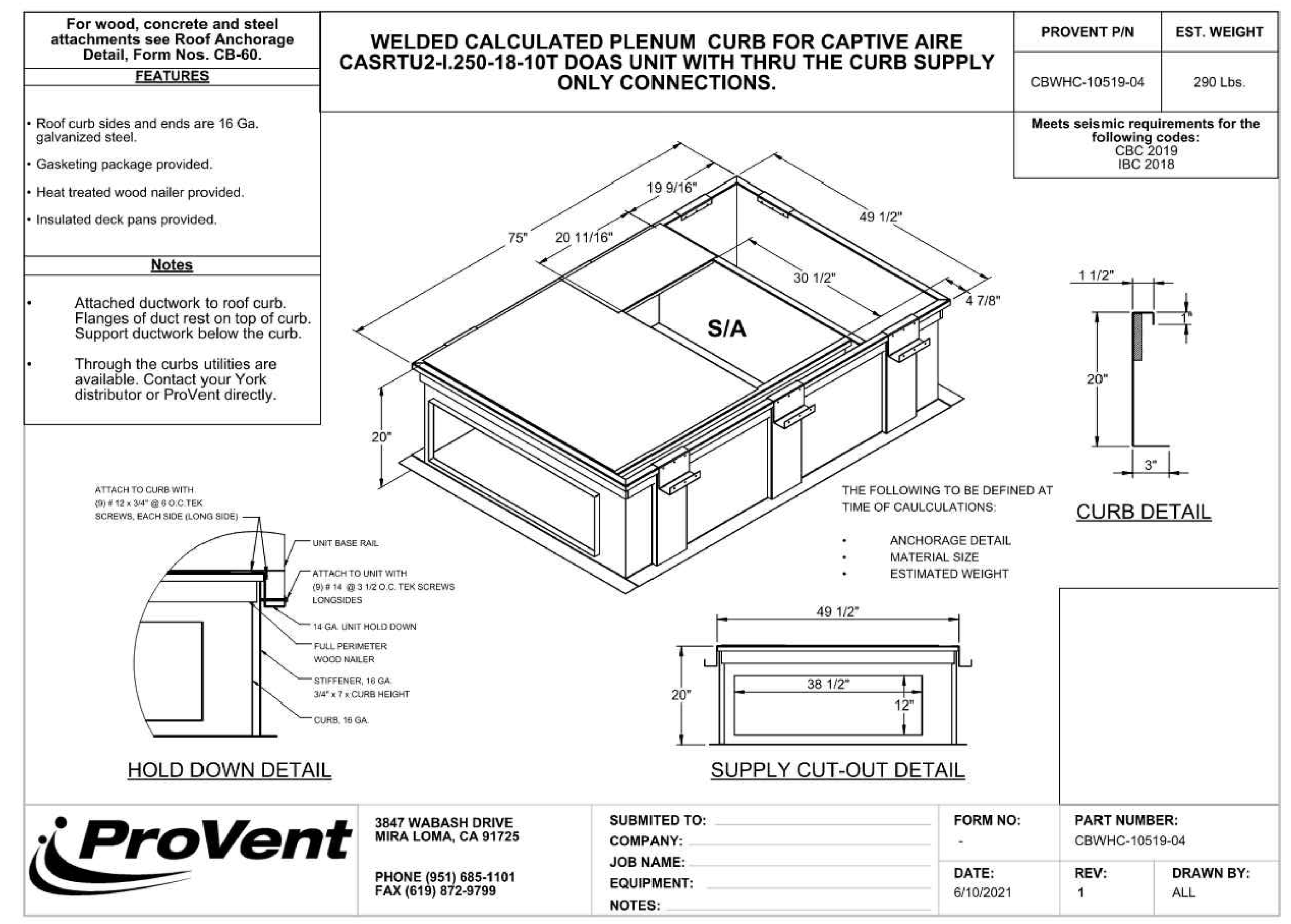
DRAWN BY:	JL
CHECKED BY:	CS
SFA JOB NO:	DATE:
20061	09/17/2021

MP6.1



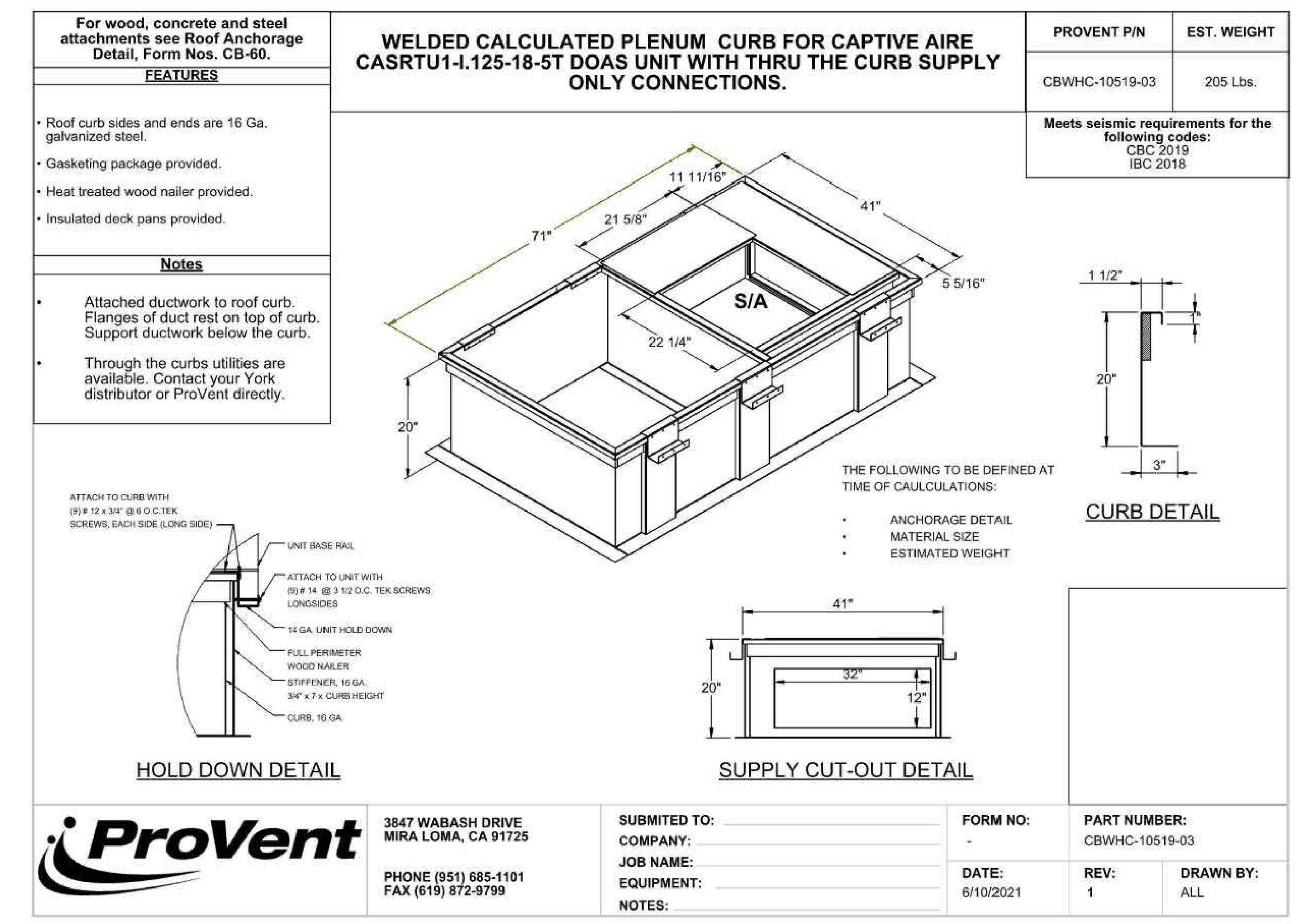
MicroMetl
Weight: 295lbs (US) 133.81kg (Metric)
Part Number: CRBW-LRTA3GA-1801CA
Submitted to:
Approved by:
Notes:
Welded Structurally Calculated Curb - 18 Inches Tall Non Insulated Full Perimeter Welded Structurally Calculated Curb Curb, California State Standard, Standard Seismic Criteria, "Structurally" Stamped By A Professional Engineer, Without Pitch, Insulated Deck Pan If Applicable, Includes Wood Nailer & Hold Down Brackets. Meets Seismic Requirements for 2019 CBC & 2018 IBC. Wind Design Criteria: 60 Foot Tall Building Maimum, Exposure C, 155 MPH - 3 Second Gust Speed, Risk Category III & IV.
SUPPLY
RETURN
CURB END DETAIL
WELDED CURB CORNER DETAIL
MICROHOLD DETAIL
UNIT TO CURB ATTACHMENT DETAIL
MicroMetl Corporation
ANCHORAGE DETAILS TO ROOF
Indianapolis_3035 N. Shadeland Ave., Indianapolis, IN 46226_800.MMC.HVAC ∞ Sparks_905 Southern Way, Sparks, NV 89431_800.884.4MMC ∞ Longview_201 Kodak Blvd., Longview, TX 75602_903.248.4800

1	CURB DRAWING - AC-1 & AC-2	N.T.S.



For wood, concrete and steel attachments see Roof Anchorage Detail, Form Nos. CB-60.
WELDED CALCULATED PLENUM CURB FOR CAPTIVE AIRE CASRTU2-I.250-18-10T DOAS UNIT WITH THRU THE CURB SUPPLY ONLY CONNECTIONS.
PROVENT P/N
CBWHC-10519-04
EST. WEIGHT
290 Lbs.
Meets seismic requirements for the following codes: CBC 2019 IBC 2018
FEATURES
Roof curb sides and ends are 16 Ga. galvanized steel.
Gasketing package provided.
Heat treated wood nailer provided.
Insulated deck pans provided.
Notes
Attached ductwork to roof curb. Flanges of duct rest on top of curb. Support ductwork below the curb.
Through the curbs utilities are available. Contact your York distributor or ProVent directly.
S/A
THE FOLLOWING TO BE DEFINED AT TIME OF CAULCULATIONS:
ANCHORAGE DETAIL
MATERIAL SIZE
ESTIMATED WEIGHT
CURB DETAIL
HOLD DOWN DETAIL
SUPPLY CUT-OUT DETAIL
ProVent
3847 WABASH DRIVE MIRA LOMA, CA 91725
PHONE (951) 685-1101 FAX (619) 872-9799
PART NUMBER: CBWHC-10519-04
DATE: 6/10/2021
REV: 1
DRAWN BY: ALL

2	CURB DRAWING - DOAS-2	N.T.S.



For wood, concrete and steel attachments see Roof Anchorage Detail, Form Nos. CB-60.
WELDED CALCULATED PLENUM CURB FOR CAPTIVE AIRE CASRTU1-I.125-18-5T DOAS UNIT WITH THRU THE CURB SUPPLY ONLY CONNECTIONS.
PROVENT P/N
CBWHC-10519-03
EST. WEIGHT
205 Lbs.
Meets seismic requirements for the following codes: CBC 2019 IBC 2018
FEATURES
Roof curb sides and ends are 16 Ga. galvanized steel.
Gasketing package provided.
Heat treated wood nailer provided.
Insulated deck pans provided.
Notes
Attached ductwork to roof curb. Flanges of duct rest on top of curb. Support ductwork below the curb.
Through the curbs utilities are available. Contact your York distributor or ProVent directly.
S/A
THE FOLLOWING TO BE DEFINED AT TIME OF CAULCULATIONS:
ANCHORAGE DETAIL
MATERIAL SIZE
ESTIMATED WEIGHT
CURB DETAIL
HOLD DOWN DETAIL
SUPPLY CUT-OUT DETAIL
ProVent
3847 WABASH DRIVE MIRA LOMA, CA 91725
PHONE (951) 685-1101 FAX (619) 872-9799
PART NUMBER: CBWHC-10519-03
DATE: 6/10/2021
REV: 1
DRAWN BY: ALL

3	CURB DRAWING - DOAS-1	N.T.S.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-119604 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/30/2021

(DSA STAMP AREA)

SFA
SUGIMURA FINNEY ARCHITECTS
ARCHITECTURE · INTERIORS · PLANNING
2155 SOUTH BASCOM AVE. SUITE 200
CAMPBELL, CA 95008
PHONE: 408-879-0600
FAX: 408-377-6066

REGISTERED PROFESSIONAL ENGINEER
METIN SERTTURK
No. 31059
EXP. JUNE 30, 2023
MECHANICAL
STATE OF CALIFORNIA

CEG JOB NO. 21063

CYPRESS Engineering Group
HVAC, Plumbing, Fire Protection
Building Commissioning
Industrial Refrigeration
Environmental Compliance
Training & Technical Support
831.218.1802
8 Harris Court, Suite A8
Monterey, CA 93940
cypresseg.com

EQUIPMENT CURB DRAWINGS - MECHANICAL

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

NO.	ITEM	DATE

DRAWN BY: JL
CHECKED BY: CS
SFA JOB NO: 20061
DATE: 09/17/2021

MP7.1

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: HVAC Boiler Replacement	Report Page:	Page 7 of 11
Project Address: 4665 Bernal Avenue, Pleasanton, CA 94566	Date Prepared:	2021-06-18

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	NO	Form/Title	Systems To Be Field Verified	Field Inspector Pass	Field Inspector Fail
◉	○	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. *Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.*		☐	☐
◉	○	NRCA-MCH-03-A Constant Volume Single Zone HVAC *NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".*		☐	☐
○	◉	NRCA-MCH-04-A Air Distribution Duct Leakage		☐	☐
◉	○	NRCA-MCH-05-A Air Economizer Controls		☐	☐
◉	○	NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.		☐	☐
◉	○	NRCA-MCH-07-A Supply Fan Variable Flow Controls		☐	☐
○	◉	NRCA-MCH-08-A Valve Leakage Test		☐	☐
○	◉	NRCA-MCH-09-A Supply Water Temperature Reset Controls		☐	☐
○	◉	NRCA-MCH-10-A Hydronic System Variable Flow Controls		☐	☐
○	◉	NRCA-MCH-11-A Automatic Demand Shed Controls		☐	☐

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: HVAC Boiler Replacement	Report Page:	Page 4 of 11
Project Address: 4665 Bernal Avenue, Pleasanton, CA 94566	Date Prepared:	2021-06-18

[1] *FOOTNOTE: Computer room economizers must meet requirements of §140.9(a) and will be documented on the NRCC-PRC-E document.*
[2] *The unit used for HP must be consistent for all fans within a system.*

I. SYSTEM CONTROLS

Table Instructions: Complete the following Table to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4[f] and [n] or requirements in §141.0(b)2E for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats §110.2(b) & (c)[1], §120.2(a) or §141.0(b)2E	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(g)	Demand Response §110.12 and §120.2(b)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
AC	single zone	≤ 25,000 ft²	Setback + DR Tstat per §110.12	NA: 7 day per §120.2(e)1	NA: Single Zone	DR Tstat per §110.12	NA: Single Zone	NA: Alteration project
DOAS	single zone	≤ 25,000 ft²	Setback + DR Tstat per §110.12	NA: 7 day per §120.2(e)1	NA: Single Zone	DR Tstat per §110.12	NA: Single Zone	NA: Alteration project

[1] *FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.*
** 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 §140.4(d); EXCEPTION 1 to §140.4(f)

J. VENTILATION AND INDOOR AIR QUALITY

Table Instructions: Complete the following Table to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(e)3B for all nonresidential, high-rise residential and hotel/motel occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	☐	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☑	Check this box if the project includes Nonresidential or Hotel/Motel spaces
	☐	Check this box if the 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 rates per §120.1(c)2.

Nonresidential and Hotel/ Motel Ventilation Systems

04	05	06	07

Table Continued

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: HVAC Boiler Replacement	Report Page:	Page 1 of 11
Project Address: 4665 Bernal Avenue, Pleasanton, CA 94566	Date Prepared:	2021-06-18

This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.

Project Name: HVAC Boiler Replacement	Report Page:	Page 1 of 11
Project Address: 4665 Bernal Avenue, Pleasanton, CA 94566	Date Prepared:	2021-06-18

A. GENERAL INFORMATION

01	Project Location (city)	Pleasanton	04	Total Conditioned Floor Area	25,000
02	Climate Zone	12	05	Total Unconditioned Floor Area	
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

☐ Office (B) ☐ Retail (M) ☐ Non-refrigerated Warehouse (S)
☐ Hotel/ Motel Guest Rooms (R-1) ☑ School (E) ☐ Healthcare Facility (I)
☐ High-Rise Residential (R-2/R-3) ☐ Relocatable Class Bldg (E) ☐ Other (Write In):

[1] *FOOTNOTES: Climate zone can be determined on the California Energy Commission's website at http://www.energy.ca.gov/maps/renewable/building_climate_zones.html*

B. PROJECT SCOPE

Table Instructions: Include any mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.

My project consists of (check all that apply)		
01	02	03
Air System(s)	Wet System Components	Dry System Components
☑ Heating Air System	☐ Water Economizer	☑ Air Economizer
☑ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ Hydronic System Piping	☑ Fan Systems
☑ Mechanical Controls (existing to remain, altered or new)	☐ Cooling Towers	☑ Ductwork (existing to remain, altered or new)
	☐ Chillers	☑ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

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

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: HVAC Boiler Replacement	Report Page:	Page 8 of 11
Project Address: 4665 Bernal Avenue, Pleasanton, CA 94566	Date Prepared:	2021-06-18

◉	○	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units		☐	☐
○	◉	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance		☐	☐
○	◉	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance *NOTE: This form does not automatically move to "Yes". If Distributed Energy Storage DX AC Systems are included in the scope, permit applicant should move this form to "Yes".*		☐	☐
○	◉	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance *NOTE: This form does not automatically move to "Yes". If Chilled Water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External Melt, Ice Harvester, Brine, Ice-Slurry, Eutectic Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapulated (Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".*		☐	☐
○	◉	NRCA-MCH-16-A Supply Air Temperature Reset Controls		☐	☐
○	◉	NRCA-MCH-17-A Condenser Water Temperature Reset Controls		☐	☐
○	◉	NRCA-MCH-18 Energy Management Control Systems		☐	☐
○	◉	NRCA-MCH-19 Occupancy Sensor Controls		☐	☐
○	◉	NRCA-MCH-20 Multi-Family Ventilation		☐	☐
○	◉	NRCA-MCH-21 Multi-Family Envelope Leakage		☐	☐

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: HVAC Boiler Replacement	Report Page:	Page 5 of 11
Project Address: 4665 Bernal Avenue, Pleasanton, CA 94566	Date Prepared:	2021-06-18

Table Continued

System Name:	AC	System Design OA CFM Air Flow[1]:	4,500	System Design Transfer Air CFM:	0	Air Filtration per §120.1(c) and §141.0(b)2[2]
						Provided per §141.0(b)2c (alteration)

08	09	10	11	12	13	14	15	16	
	Mechanical Ventilation Required per §120.1(c3)[3]					Exh. Vent. per §120.1(c)4		DCV or Occupant Sensor Controls per §120.1(d)3, §120.1(d)5 & §120.2(e)3[4]	
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showerheads / toilets	# of people[5]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM		
AC	Gym/ sports arena (play area)	11,000			1,650	5,500	13,600	DCV	Provided per §120.1(d)4
								Occ Sensor	NA: Not required space type

17	Total System Required Min OA CFM	1,650	18	Ventilation for this System Complies?	Yes

[1] *FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system.*
[2] *Air filtration requirements apply to the following three system types per §120.1(c)14: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.*
[3] *Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.*
[4] *See Standards Tables 120.1-A and 120.1-B*
[5] *For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.*
[6] *§120.2(e)3 requires systems serving rooms that are required by §130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by §130.1(c).*

K. TERMINAL BOX CONTROLS

This Section Does Not Apply

L. DISTRIBUTION (DUCTWORK AND PIPING)

Table Instructions: Complete the following tables to show compliance with mandatory pipe insulation requirements found in §120.3 and prescriptive requirements found in §140.4(l) for duct leakage testing.

Table Continued

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: HVAC Boiler Replacement	Report Page:	Page 2 of 11
Project Address: 4665 Bernal Avenue, Pleasanton, CA 94566	Date Prepared:	2021-06-18

D. EXCEPTIONAL CONDITIONS

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

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)

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (kBtu/h) §140.4 (a&b)						
				Heating Output[1,3]		Cooling Output[2,3]		Load Calculations[3,4]		
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available[1] §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)	Total Sensible Cooling Load (kBtu/h)
AC	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	648	800	0	336	410		
DOAS	Unitary AC/ Condensers	AC, air cooled, package (3 phase)	Yes	200	250	0	75	115		

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

Table Continued

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: HVAC Boiler Replacement	Report Page:	Page 9 of 11
Project Address: 4665 Bernal Avenue, Pleasanton, CA 94566	Date Prepared:	2021-06-18

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

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 completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
○	◉	NRCV-MCH-04-H Duct Leakage Test *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-24 Enclosure Air Leakage Worksheet *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-27 High-rise Residential *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-32 Local Mechanical Exhaust *NOTE: Must be completed by a HERS Rater*	☐	☐

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: HVAC Boiler Replacement	Report Page:	Page 6 of 11
Project Address: 4665 Bernal Avenue, Pleasanton, CA 94566	Date Prepared:	2021-06-18

Table Continued

Duct Leakage Sealing

The answers to the questions below apply to the following duct system(s):		AC and DOAS	Duct leakage testing triggered for these systems?	No
11	No	The scope of the project includes only duct systems serving healthcare facilites.		
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.		
13	No	The space conditioning system serves less than 5,000 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:		
		☐ Outdoors		
		☐ In a space directly under a roof that has a U-factor greater than the U-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces		
		☐ In an unconditioned crawlspace		
		☐ In other unconditioned spaces		
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.		
17		Duct system shall be sealed in accordance with the California Mechanical Code.		

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/

YES	NO	Form/Title	Systems To Be Field Verified	Field Inspector Pass	Field Inspector Fail
◉		NRCI-MCH-01-E - Must be submitted for all buildings.		☐	☐

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: HVAC Boiler Replacement	Report Page:	Page 3 of 11
Project Address: 4665 Bernal Avenue, Pleasanton, CA 94566	Date Prepared:	2021-06-18

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

01	02	03	04	05	06	07	08	09
			Heating Mode				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
AC	≥240,000 and <760,000				0.81	EER	10	11
						IEER	11.6	13.4
DOAS	≥65,000 and <135,000				0.81	EER	11.2	11.5
						IEER	12.9	18.6

G. PUMPS

This Section Does Not Apply

H. FAN SYSTEMS & AIR ECONOMIZERS

Table Instructions: Complete the following Table for fan systems to demonstrate compliance with prescriptive requirements found in §140.4(c), §140.4(e) and §140.4(m). First document the system details, then add fans within that system to document compliance with fan power requirements. Fan systems serving only process loads are exempt from these requirements and do not need to be included in Table H.

System Name:	AC	**Economizer:**[1]	Differential Temperature	**Economizer Controls:**	Designed per §140.4(e) and (m)	**System Fan Type:**	Variable Air Volume

01	02	03	04	05	06	07	08
						Fan Power Pressure Drop Adjustment - Table 140.4-B	
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit[2]	Design HP	Device	Design Airflow through Device (CFM)
AC	Supply	1	14,000	BHP	14.57	None used	
						Calculated Adjustment (in H_2O)	

Total System Design Supply Airflow (CFM):	14,000	Total System Design (B)HP:	14.57	**Maximum System Fan Power (B)HP:**	18.2

SUGIMURA FINNEY ARCHITECTS
SFA
2195 SOUTH BASCOM AVE
SUITE 150
CAMPBELL, CA 95008
PHONE: 408.879.8600
FAX: 408.879.8699

REGISTERED PROFESSIONAL ENGINEER
No. 31059
EXP. JUNE 30, 2023
MECHANICAL
STATE OF CALIFORNIA

CEG JOB NO: 21063

CYPRESS Engineering Group
HVAC, Plumbing, Fire Protection
Building Commissioning
Industrial Refrigeration
Environmental Impact
Training & Technical Support
831.218.1802
8 Harris Court, Suite A8
Monterey, CA 93940
cypresseg.com

TITLE 24 DOCUMENTS - MECHANICAL

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS
NO. ITEM DATE

DRAWN BY: JL
CHECKED BY: CS
SFA JOB NO: 20061
DATE: 09/17/2021

MP8.1

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 09/2020) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: HVAC Boiler Replacement		Report Page: Page 10 of 11
Project Address: 4665 Bernal Avenue, Pleasanton, CA 94566		Date Prepared: 2021-06-18

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

Table Instructions: Indicate where mandatory measures are documented in the plan set or construction documentation. For any mandatory measures that do not apply, mark the plan sheet or construction document location as "N/A", any active cells that are left blank will result in non-compliance in Table C.

01		02
		Plan sheet or construction document location
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block:	No	

03	04
Mandatory Measure	Plan sheet or construction document location
Heating Equipment Efficiency per §110.1	MP0.2
Cooling Equipment Efficiency per §110.1	MP0.2
Furnace Standby Loss Control per §110.2(d)	NA
Duct Insulation per §120.4	23 05 00
Heating Hot Water Equipment Efficiency per §110.1	NA
Cooling Chilled and Condenser Water Equipment Efficiency per §110.1	NA
Open and Closed Circuit Cooling Towers conductivity of flow-based controls per §110.2(e)1	NA
Open and Closed Circuit Cooling Towers Flow Meter with analog output per §110.2(e)3	NA
Open and Closed Circuit Cooling Towers Overflow Alarm per §110.2(e)4	NA
Open and Closed Circuit Cooling Towers Efficient Drift Eliminators per §110.2(e)5	NA
Pipe Insulation per §120.3(b)	NA
Combustion air shutoff, combustion air fan controls and stack design and controls for boilers per §120.9	NA
Heat Pump with Supplementary Electric Resistance Heater Controls per §110.2(b)	NA
The air duct and plenum system is designed per §120.4(a)-(f)	NA
Kitchen range hoods shall be rated for sound in accordance with Section 7.2 of ASHRAE 62.2	NA

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 09/2020) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: HVAC Boiler Replacement		Report Page: Page 11 of 11
Project Address: 4665 Bernal Avenue, Pleasanton, CA 94566		Date Prepared: 2021-06-18

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Chahan Shah	Documentation Author Signature:	Chahan S. Shah
Company:	Cypress Engineering Group	Signature Date:	6/18/21
Address:	8 Harris Court, Suite A8	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	Monterey, CA 93940	Phone:	8312181802

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

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

Responsible Designer Name:	Metin Serttunc	Responsible Designer Signature:	Metin Serttunc
Company :	Cypress Engineering Group	Date Signed:	6/18/21
Address:	8 Harris Court, Suite A9	License:	M31059
City/State/Zip:	Monterey, CA 93940	Phone:	8312181802

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards September 2020

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-119604 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/30/2021
(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
2195 SOUTH BASCOM AVE.
SUITE 150
CAMPBELL, CA 95008
PHONE: 408.879.6600
FAX: 408.879.6699

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REVISIONS
NO. ITEM DATE

DRAWN BY: JL
CHECKED BY: CS
SFA JOB NO: 20061
DATE: 09/17/2021

MP8.2

GENERAL CONSTRUCTION NOTES

1. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS. MATERIALS AND EQUIPMENT SHALL BE U.L. LISTED AND LABELED FOR THE APPLICATION.
2. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, LICENSES AND INSPECTION FEES REQUIRED BY THIS CONTRACT WORK.
3. CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO BIDDING AND ALLOW FOR ALL FIELD CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ELECTRICAL WORK NOTED AND CALLED OUT ON ALL CONTRACT DOCUMENTS. THE CONTRACTOR SHALL OBTAIN INFORMATION AND BE FAMILIAR WITH ALL OTHER TRADES WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN OTHER TRADES ON PROJECT.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONS AND PROPERTY AND SHALL PROVIDE INSURANCE COVERAGE AS NECESSARY FOR LIABILITY AND PERSONAL, PROPERTY DAMAGE, TO FULLY PROTECT THE OWNER, ARCHITECT AND ENGINEER FROM ANY AND ALL CLAIMS RESULTING FROM THIS WORK.
5. CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS AT THE PROJECT SITE INDICATING ALL MODIFICATIONS TO ELECTRICAL SYSTEMS. THE CONTRACTOR SHALL AT THE CONCLUSION OF THE PROJECT PROVIDE ACCURATE "AS-BUILT" DRAWINGS ACCEPTABLE TO THE ARCHITECT.
6. ALL MATERIALS PROVIDED TO THE PROJECT SHALL BE NEW. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL ALL INCIDENTAL MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.
7. CONTRACTOR SHALL PROVIDE TO THE ARCHITECT A CONSTRUCTION SCHEDULE OF ELECTRICAL WORK. THE CONSTRUCTION SCHEDULE SHALL IDENTIFY ALL SIGNIFICANT MILESTONES WITH COMPLETION DATES.
8. CONTRACTOR SHALL PROVIDE ALL REQUIRED "CUTTING, PATCHING, EXCAVATION, BACKFILL AND REPAIRS" NECESSARY TO RESTORE DAMAGED SURFACES TO EQUAL OR BETTER THAN ORIGINAL CONDITIONS EXISTING AT START OF WORK.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR PAINTING ALL EXPOSED CONDUITS AND ELECTRICAL EQUIPMENT. REFER TO ARCHITECTS PAINTING SECTION FOR REQUIREMENTS.
10. ALL ELECTRICAL EQUIPMENT INSTALLED OUTDOORS SHALL BE WEATHERPROOF. EXTERIOR CONDUITS RUN INTO BUILDINGS SHALL BE INSTALLED WITH FLASHING, CAULKED AND SEALED. CONDUITS FOR EXTERIOR ELECTRICAL DEVICES SHALL BE RUN INSIDE BUILDING UNLESS OTHERWISE NOTED ON DRAWINGS.
11. ALL CONDUITS UNLESS OTHERWISE NOTED ON DRAWINGS SHALL HAVE AS A MINIMUM: TWO (2) #12s WITH ONE (1) #12 GROUND. "TICK" MARKS SHOWN ON CIRCUITRY ARE FOR ROUGH ESTIMATING ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WIRES AND WIRE SIZES REQUIRED BY LATEST CODE.
12. ALL BRANCH CIRCUITS SHALL HAVE INDIVIDUAL NEUTRALS. SHARED NEUTRALS ON MULTIWIRE CIRCUITS IS NOT ALLOWED.
13. ALL 120/277V LIGHT SWITCHES AND WALL OCCUPANT SENSORS SHALL HAVE A NEUTRAL INSTALLED TO THE DEVICE BOX EXCEPT WHERE A CONDUIT OR SURFACE RACEWAY SYSTEM IS INSTALLED.
14. COORDINATE ALL CONDUIT RUNS, ELECTRICAL EQUIPMENT AND PANELS WITH ALL OTHER WORK TO AVOID CONFLICTS.
15. SEE ARCHITECTURAL DOCUMENTS FOR EXACT PLACEMENT OF LIGHTING FIXTURES AND DEVICES. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF CEILING TYPES FROM ARCHITECTURAL DOCUMENTS AND PROVIDE AND INSTALL ALL REQUIRED FIXTURE MOUNTING HARDWARE. PROVIDE AND INSTALL U.L. LISTED FIRE STOP ENCLOSURES FOR ALL RECESSED FIXTURES IN FIRE RATED CEILINGS.
16. FROM ALL NEW FLUSH MOUNT PANELS; THE CONTRACTOR SHALL STUB UP INTO ACCESSIBLE CEILING SPACE A MINIMUM OF FOUR (4) 3/4" CONDUITS FOR FUTURE USE.
17. CONTRACTOR SHALL, PRIOR TO BID, FIELD VERIFY ALL REQUIREMENTS FOR MODIFYING THE EXISTING CLOCK, DATA, AND INTERCOM SYSTEMS TO ACCOMMODATE ADDITIONS NOTED. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS NEEDED TO MAKE A FULLY OPERATIONAL SYSTEM AT THE CONCLUSION OF PROJECT WORK.
18. CONTRACTOR SHALL PROVIDE IN EVERY NEW EMPTY CONDUIT A DRAW STRING FOR USE IN FUTURE CONSTRUCTION.
19. ALL CONDUIT SHALL BE CONCEALED WHERE POSSIBLE. CUT AND PATCH EXISTING WALLS WHERE NECESSARY. WHERE IT IS NECESSARY TO CUT OR BORE EXISTING STRUCTURAL WALLS FOR NEW ELECTRICAL WORK OBTAIN PERMISSION FROM THE ARCHITECT PRIOR TO STARTING WORK. REUSE EXISTING CONDUIT WHERE POSSIBLE.
20. WHERE IT IS NOT POSSIBLE TO REUSE EXISTING CONDUIT OR RUN NEW CONCEALED CONDUIT USE NON-METALLIC SURFACE RACEWAY AND BOXES. ROUTING OF ALL NON-METALLIC RACEWAYS SHALL BE APPROVED BY THE ARCHITECT OR OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.
21. EXTENSION RINGS OR RESET BOXES TO BE FLUSH WITH NEW WALL THICKNESS.
22. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO EXISTING UNDERGROUND SYSTEMS (GAS, WATER, TELEPHONE, ELECTRICAL, SEWER, ETC.). THE CONTRACTOR SHALL REPAIR & PAY ALL EXPENSES FOR DAMAGE TO EXISTING UNDERGROUND SYSTEMS AS A RESULT OF NEW WORK. REPAIR TO DAMAGED UNDERGROUND SYSTEMS SHALL BE TO THE OWNERS SATISFACTION WITHOUT EXTRA EXPENSE TO THE OWNER.
23. EXISTING WIRING SHOWN HAS BEEN TAKEN FROM OLD PLANS AND IS ASSUMED TO BE CORRECT. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY ACTUAL CONDITIONS AND MAKE ADJUSTMENTS TO SUIT ACTUAL CONDITIONS AND TO MEET THE INTENT OF THE CONTRACT DOCUMENTS.
24. WHERE NON-METALLIC SHEATHED CONDUCTORS ARE FOUND, THE CONTRACTOR SHALL REMOVE TO FULLEST EXTENT PER THE GENERAL DEMOLITION NOTES AND REPLACE WITH CONDUIT. METAL CLAD CABLE WILL BE PERMITTED ON A CASE-BY-CASE BASIS ONLY BY WRITTEN APPROVAL FROM THE ARCHITECT.
25. ALL INSTALLATION OF EXPOSED SURFACE MOUNTED RACEWAY IN PUBLIC AREAS SHALL BE REVIEWED BY ARCHITECT BEFORE ROUGH-IN. CONTRACTOR IS TO DETERMINE THE ACCESSIBILITY OF ATTIC, FURRED SPACE, HOLLOW MULLIONS, ETC. IN EACH AREA AND REVIEW WITH ARCHITECT. IF SYSTEM CAN BE ROUTED CONCEALED EITHER BY FISHING OR ACCESSIBILITY, CONTRACTOR IS TO DO SO. IF INACCESSIBILITY IS DETERMINED, CONTRACTOR SHALL INSTALL SURFACE MOUNTED RACEWAY IN THE MOST AESTHETICALLY PLEASING MEANS AS DETERMINED BY THE ARCHITECT. NO ALLOWANCE FOR ADDITIONAL COMPENSATION DUE TO ROUTING AS DIRECTED BY THE ARCHITECT WILL BE MADE.

GENERAL DEMOLITION NOTES

A. CONTRACTOR SHALL FIELD VERIFY EXTENT OF ELECTRICAL DEMOLITION AND QUANTITIES OF ELECTRICAL TO BE REMOVED AS DICTATED BY THE REQUIREMENTS OF THE PROJECT.
B. REMOVAL SHALL INCLUDE WIRING, RACEWAY, BOXES, SWITCHES, LIGHT FIXTURES, ETC. AS INDICATED ON THE PLANS AND AS REQUIRED BY THESE DEMOLITION NOTES.
C. RACEWAYS ASSOCIATED WITH ELECTRICAL BEING DEMOLISHED WHICH ARE CONCEALED IN EXISTING REMAINING WALLS MAY BE ABANDONED IN PLACE. REMOVE WIRING FROM CONDUIT.
D. RACEWAYS ASSOCIATED WITH ELECTRICAL BEING DEMOLISHED WHICH ARE EXPOSED SHALL BE REMOVED.
E. WHERE REMOVAL OF EQUIPMENT OR WIRING IS INDICATED, IT SHALL INCLUDE ALL ASSOCIATED WIRING BACK TO LAST ACTIVE REMAINING OUTLET, DEVICE, FIXTURE OR PANEL.
F. ELECTRICAL CONTRACTOR SHALL INSURE THAT ALL REMAINING ACTIVE CIRCUITS, DEVICES, OUTLETS, LIGHT FIXTURES, ETC. HAVE NOT BEEN DISCONNECTED OR MADE INOPERATIVE DURING DEMOLITION. ELECTRICAL CONTRACTOR SHALL RESTORE ALL INTERRUPTED OR DISCONNECTED CIRCUITS TO OPERATION.
G. ELECTRICAL CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL REMOVED ELECTRICAL EQUIPMENT AND MATERIAL.
H. NO REMOVED EQUIPMENT OR MATERIAL SHALL BE REUSED AS PART OF NEW WORK, U.O.N.
I. EXISTING REMAINING CONCEALED RACEWAYS MAY BE REUSED FOR NEW WORK PROVIDED THEY MEET ALL REQUIREMENTS OF THE SPECIFICATION FOR NEW WORK.
J. EXISTING FLUSH OUTLETS MAY BE REUSED FOR NEW WORK PROVIDED THEY MEET ALL REQUIREMENTS OF THE SPECIFICATION FOR NEW WORK, MEET THE REQUIREMENTS OF THE CURRENT C.E.C. FOR VOLUME AND COINCIDE WITH LOCATION SHOWN FOR THE NEW WORK.
K. FLUSH OUTLET BOXES IN EXISTING WALLS TO REMAIN MAY BE ABANDONED IN PLACE. REMOVE DEVICES AND WIRING, PLUG OPENING AND PROVIDE AND INSTALL A BLANK DEVICE PLATE.
L. EXISTING WIRING SHOWN HAS BEEN TAKEN FROM OLD PLANS AND IS ASSUMED TO BE CORRECT. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY ACTUAL CONDITIONS AND MAKE ADJUSTMENTS TO SUIT ACTUAL CONDITIONS AND TO MEET THE INTENT OF THE CONTRACT DOCUMENTS.
M. WHERE TELEPHONE, COMPUTER DATA, FIBER OPTICS, FIRE ALARM OR OTHER COMMUNICATIONS OUTLETS OR WIRING IS TO BE DEMOLISHED IT SHALL BE REMOVED BACK TO THE NEXT TERMINAL POINT. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OWNER OR HIS REPRESENTATIVE TO HAVE EQUIPMENT AND WIRING DESIGNATED FOR REMOVAL OR PRESERVATION PRIOR TO REMOVAL OF OUTLET BOXES, CONDUIT OR WIRING BY ELECTRICAL CONTRACTOR.
N. COORDINATE WITH OWNER PRIOR TO START OF DEMOLITION TO MINIMIZE POWER INTERRUPTIONS, WORK MAY HAVE TO OCCUR DURING NON-REGULAR BUSINESS HOURS. COORDINATE IN WRITING WITH OWNER ONE WEEK PRIOR TO PLANNED POWER INTERRUPTIONS.

ELECTRICAL SYMBOLS & ABBREVIATIONS

SYMBOLS & ABBREVIATIONS SHOWN ARE FOR GENERAL USE. DISREGARD THOSE WHICH DO NOT APPEAR ON THE PLANS.

▭	FLUORESCENT OR LED LUMINAIRE - SEE SCHEDULE
◩	EMERGENCY OR NIGHT LIGHT
├─○─┤	STRIP FLUORESCENT OR LED LUMINAIRE - SEE SCHEDULE
□	LUMINAIRE - RECESSED - SEE SCHEDULE
□→	RECESSED WALL WASHER
○	LUMINAIRE - SURFACE MOUNTED - SEE SCHEDULE
•○	LUMINAIRE - POLE OR POST MOUNTED - SEE SCHEDULE
├○	LUMINAIRE - WALL MOUNTED SEE SCHEDULE
⊙	BOLLARD OR PATH LIGHT - SEE SCHEDULE
⊗	EXIT LIGHT - DIRECTIONAL ARROWS AS INDICATED - SEE SCHEDULE
○ ○ ○	TRACK LIGHTING - SEE SCHEDULE
▬	EMERGENCY LIGHT
⬡	DIGITAL DUAL TECHNOLOGY OCC. SENSOR
◁	LIGHTING CONTROL OCCUPANCY SENSOR CORNER MOUNTED
DRC	DIMMER ROOM CONTROLLER
PC	PLUG LOAD CONTROLLER
RC	ROOM LIGHTING CONTROLLER
LCP	LIGHTING CONTROL PANEL
DL	DIGITAL DAYLIGHT SENSOR
$	SINGLE POLE SWITCH **
$a	SINGLE POLE SWITCH, ** a = CIRCUIT CONTROLLED
$3	THREE WAY SWITCH **
$4	FOUR WAY SWITCH **
$M	MANUAL MOTOR STARTER
$K	KEY OPERATED SWITCH **
($)	LIGHTING DIMMER **
[$]	DIGITAL ON/OFF SWITCH **
[$]D	DIGITAL DIMMER SWITCH **
[$]M#	DIGITAL MULTI SCENE LIGHTING SWITCH **
[$]S	DIGITAL DUAL TECHNOLOGY WALL OCC. SENSOR **
◇$	WALL OCCUPANCY SENSOR **
◇$2	DOUBLE SWITCHED WALL OCCUPANCY SENSOR **
($)	DIMMING DUAL TECHNOLOGY WALL SWITCH OCCUPANCY SENSOR **
($)2	2-BUTTON DIMMING DUAL TECHNOLOGY WALL SWITCH OCCUPANCY SENSOR **

◆	SECURITY DOOR CONTACTS
MD	SECURITY MOTION DETECTOR
SC	CCTV CAMERA
KP	SECURITY SYSTEM KEYPAD
├⊡	DOOR BELL PUSHBUTTON
CH	DOOR CHIME WITH LED
Φ	RECEPTACLE - DUPLEX *
Φ	DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT
Φ	GFCI CONVENIENCE RECEPTACLE - DUPLEX *
Φ	GFCI CONVENIENCE DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT
Φ	RECEPTACLE DOUBLE DUPLEX *
Φ	HALF SWITCHED DUPLEX RECEPTACLE *
Φ	SINGLE RECEPTACLE *
Φ	DUPLEX RECEPTACLE - CEILING MOUNTED
Φ HC	LETTER INDICATES DUPLEX HALF CONTROLLED RECEPTACLE *
Φ C	LETTER INDICATES DUPLEX FULLY CONTROLLED RECEPTACLE *
⊙	FLOOR MOUNTED DUPLEX RECEPTACLE
⊙▼	FLOOR MOUNTED BOX
●	POWER OUTLET - SEE PLANS FOR NEMA TYPE *
▚	POWER POLE
▽	WALL TELEPHONE OUTLET **
▼ [#]	VOICE/DATA WALL OUTLET *
▼ [#]	VOICE/DATA OUTLET MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT
▼ [#]	SURFACE MOUNTED VOICE/DATA WALL OUTLET *
▼ [#]	SURFACE MOUNTED VOICE/DATA OUTLET MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT
▽	WIRELESS ACCESS POINT (WAP) - CEILING MOUNTED
▽	WIRELESS ACCESS POINT (WAP) - WALL MOUNTED - FIELD VERIFY HEIGHT
▼ [#]	VOICE/DATA OUTLET - FLOOR MOUNTED
▽	TV OUTLET *
⬢ [#]	VOICE/DATA OUTLET - CEILING MOUNTED
Ⓢ	INTERIOR SPEAKERS CEILING MOUNTED
├Ⓢ	INTERIOR SPEAKERS WALL MOUNTED
├Ⓒ	CLOCK +8'-0" AFF U.O.N. VERIFY BEFORE INSTALLATION

▬	PANELBOARD - FLUSH MOUNTED
▨	EQUIPMENT PANEL - FLUSH MOUNTED
▬	PANELBOARD - SURFACE MOUNTED
▨	EQUIPMENT PANEL - SURFACE MOUNTED
Ⓜ	METER W/ CURRENT TRANSFORMER
Ⓙ / ├Ⓙ	JUNCTION BOX - CEILING OR WALL MOUNTED, SIZE PER CODE, TAPE AND TAG WIRES
⌀	MOTOR CONNECTION
□	NON-FUSED DISCONNECT SWITCH
◪	FUSED DISCONNECT SWITCH; FUSED WITH DUAL-ELEMENT FUSES SIZED PER EQUIPMENT MFGR'S NAMEPLATE DATA
⊠	COMBINATION STARTER/FUSED DISCONNECT SWITCH; FUSED DISCONNECT SWITCH ELEMENT FUSES SIZED PER EQUIPMENT MFGRS NAMEPLATE DATA
⊠	MAGNETIC STARTER - NEMA SIZE INDICATED NEMA 3R ENCLOSURE UNLESS OTHERWISE SPECIFIED
⌒	CIRCUIT BREAKER
⊡─⊥	GROUND ROD WITH GROUNDWELL BOX
•─⊥	GROUND ELECTRODE
─┤├─	NORMALLY OPEN CONTACT
─┤/├─	NORMALLY CLOSED CONTACT
⊠	TRANSFORMER - SEE SINGLE LINE FOR SIZE
▨	PULLBOX
∿	FLEX CONDUIT WITH CONNECTION
───○	CONDUIT - UP
───●	CONDUIT - DOWN
── E ──	CONDUIT EMERGENCY SYSTEM
── LV ──	LOW VOLTAGE WIRING
▨	SURFACE METAL OR NON-METALLIC RACEWAY
────	CONDUIT - CONCEALED IN WALLS OR CEILING
─·─·─	CONDUIT - EXISTING
- - - -	CONDUIT - BELOW SLAB OR UNDERGROUND: 3/4"MIN.
E──	CAPPED OR STUB-OUT CONDUIT
∫──	CONDUIT CONTINUATION
#10	CONDUIT - HOME RUN TO PANEL, TERMINAL CABINET, ETC. RUNS MARKED WITH CROSSHATCHES INDICATE NUMBER OF #12 AWG WIRES WHEN MORE THAN TWO. SIZE CONDUIT ACCORDING TO SPECIFICATIONS AND APPLICABLE CODE. CROSS HATCHES WITH NUMBER ADJACENT INDICATES WIRE SIZE OTHER THAN #12 AWG.
⬡ 2	SHEET NOTE REFERENCE SYMBOL; SEE ASSOCIATED NOTE ON SAME SHEET
◇ 3	SCHEDULE SYMBOL; SEE ASSOCIATED NOTE ON SAME SHEET

②	DETAIL NOTE REFERENCE SYMBOL SEE ASSOCIATED NOTE ON SAME DETAIL
F301	FEEDER DESIGNATION; SEE ASSOCIATED NOTE ON SAME DETAIL
1 / E3.0	DETAIL NUMBER DETAIL OR SECTION REFERENCE SHEET NUMBER
1 / 2	INDICATES QUANTITY OF TELEPHONE OUTLETS INDICATES QUANTITY OF DATA OUTLETS

ABBREVIATIONS

A	AMPERE
AFF	ABOVE FINISHED FLOOR
ALUM/AL	ALUMINUM
ARCH	ARCHITECT
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
C	CONDUIT
CATV	CABLE TV
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TV
CKT	CIRCUIT
CL	CENTER LINE
CLG	CEILING
C.O.	CONDUIT ONLY
CTR	CENTER
D	DIMMER
DIM	DIMENSION
DIST	DISTRIBUTION
(E)	EXISTING
EC	ELECTRICAL CONTRACTOR
(EL)	EVENING LIGHT
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EQUIP	EQUIPMENT
EV	ELECTRICAL VEHICLE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FC	FOOT CANDLE
FIN	FINISH
FL	FLOOR
FLA	FULL LOAD AMPS
FLUOR	FLUORESCENT
(F)	FUTURE
GC	GENERAL CONTRACTOR
GFCI GFI	GROUND FAULT INTERRUPTING
GND, G	GROUND
GRS	GALVANIZED RIGID STEEL
HT	HEIGHT
IC	INTERCOM
IDF	INTERMEDIATE DISTRIBUTION FRAME
INCAND	INCANDESCENT
JB	JUNCTION BOX
KV	KILOVOLT
KVA	KILOVOLT AMPERES
KW	KILOWATT
LCP	LIGHTING CONTROL PANEL
LTG	LIGHTING
LV	LOW VOLTAGE
KCM	THOUSAND CIRCULAR MILS
M.B.	MAIN CIRCUIT BREAKER
MCA	MINIMUM CIRCUIT AMPS
MDF	MAIN DISTRIBUTION FRAME
MECH	MECHANICAL
MH	METAL HALIDE
MLO	MAIN LUGS ONLY
MPOE	MAIN POINT OF ENTRANCE
MTD	MOUNTED
MTG	MOUNTING
MOCP	MAXIMUM OVER CURRENT PROTECTION
(N)	NEW
NIC	NOT IN CONTRACT
NIEC	NOT IN ELECTRICAL CONTRACT
(NL)	NIGHT LIGHT
NO.	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OAH	OVERALL HEIGHT
OC	ON CENTER
OH	OVERHEAD
PA	PUBLIC ADDRESS
PB	PULL BOX
PF	POWER FACTOR
PH	PHASE
PIR	PASSIVE INFRARED
PNL	PANEL
PV	PHOTOVOLTAIC
PVC	POLYVINYL CHLORIDE
PWR	POWER
(R)	EXISTING TO BE REMOVED
(RP)	REMOVABLE POLE
RECPT'S	RECEPTACLES
REQD	REQUIRED
REQMT'S	REQUIREMENT(S)
SHT	SHEET
SLD	SINGLE LINE DIAGRAM
STC	SYSTEMS TERMINATION CABINET
SW	SWITCH
SWBD	SWITCHBOARD
TTB	TELEPHONE TERMINAL BACKBOARD
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UG	UNDERGROUND
V	VOLT
VD	VOLTAGE DROP
W	WATT
W/	WITH
WP	WEATHERPROOF
XFMR	TRANSFORMER

FIRE ALARM

NOTE: SEE FIRE ALARM DRAWINGS FOR QUANTITIES AND MOUNTING HEIGHTS.

□P	MANUAL PULL STATION
⌧	STROBE ONLY
▽□	HORN ONLY
▽M	MINI HORN
▽⌧	HORN/STROBE
○⌧	CHIME/STROBE
ⓘ	HEAT DETECTOR
ⓢ	SMOKE DETECTOR
CO	CARBON MONOXIDE ALARM
ⓢ	DUCT SMOKE DETECTOR
⊘	TAMPER SWITCH
◊	FLOW SWITCH
⋈	POST INDICATING VALVE
S	FIRE SMOKE DAMPER
⌓	BELL (GONG)
FCP	FIRE ALARM CONTROL PANEL
APS	AUXILIARY POWER SUPPLY
FSA	FIRE SYSTEM ANNUNCIATOR
FTR	FIRE ALARM TRANSPONDER OR TRANSMITTER
ESR	ELEVATOR STATUS/RECALL
FAC	FIRE ALARM COMMUNICATOR
ANN	REMOTE ANNUNCIATORS
EOL	END OF LINE

* +15" A.F.F. TO BOTTOM OF BOX, U.O.N.
** +48" A.F.F. TO TOP OF BOX, U.O.N.
[#] NUMBER IN BRACKETS DENOTES NUMBER OF CABLE DROPS WHEN MORE THAN (2).

EQUIPMENT ANCHORAGE

M/E/P COMPONENT ANCHORAGE NOTES:

ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTION 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTER 13, 26 & 30:

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED(e.g. HARD WIRE) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 120 / 220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED IN THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING AND CONDUIT. FELXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS.

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

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

PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8 AND 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 PRE-APPROVED 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.
MP ☐ MD ☐ PP ☐ E ☐ - OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVED (OPM #) #____________.

LIGHT FIXTURE SCHEDULE

FIXTURE NOTES:

1. ALL LED LIGHT FIXTURE DRIVERS SHALL BE ELECTRONIC TYPE, 10% TOTAL HARMONIC DISTORTION MAXIMUM.
2. ALL LED LIGHT MODULES SHALL BE ENERGY SAVING 3500° K, 80 CRI MINIMUM, U.O.N. (SEE SPECIFICATIONS FOR MORE INFORMATION).
3. ALL LED DRIVERS (AND ASSOC. FIXTS.) SHALL HAVE MANUFACTURER'S CERTIFICATION OF COMPLIANCE WITH CALIFORNIA ENERGY COMMISSION STANDARDS AND REQUIREMENTS, WHERE SUCH ARE USED IN CONDITIONED SPACES.
4. EXIT SIGNS , EMERGENCY LIGHTS AND LIGHT FIXTURES WITH EMERGENCY BATTERY BACK-UP SHALL SUPPLY A MINIMUM DURATION OF 90 MINUTES OF POWER IN THE EVENT OF A POWER OUTAGE/FAILURE.
5. ALL RECESSED LIGHT FIXTURES SHALL BE U.L. APPROVED FOR ZERO CLEARANCE INSULATION COVER WHEN INSTALLED IN INSULATED CEILINGS.

TYPE	DESCRIPTION	LAMPS	MANUFACTURER
XAE	16⅝" W x 10" H x 12¾" DEEP WALL PACK LED FIXTURE WITH BOROSILICATE GLASS DOOR, WIRE GUARD OPTION, EMERGENCY BATTERY BACK-UP OPTION, WET LABEL, 277V. FINISH PER ARCHITECT.	32W LED 4160 LUMENS 4000K	COOPER LIGHTING LUMARK LDWP-GL SERIES

APPLICABLE CODES & STANDARDS

CODES:

1. 2019 CALIFORNIA ADMINISTRATIVE CODE C.C.R., TITLE 24, PART 1.
2. 2019 CALIFORNIA BUILDING CODE (CBC) C.C.R., TITLE 24, VOL. 1 & 2 BASED ON THE 2018 INTERNATIONAL BUILDING CODE (IBC) WITH CALIFORNIA AMENDMENTS.
3. 2019 CALIFORNIA ELECTRICAL CODE (CEC) C.C.R., TITLE 24, PART 3 BASED ON THE 2017 NATIONAL ELECTRICAL CODE (NEC) WITH CALIFORNIA AMENDMENTS.
4. 2019 CALIFORNIA MECHANICAL CODE (CMC) C.C.R., TITLE 24, PART 4 BASED ON THE 2018 UNIFORM MECHANICAL CODE (UMC) WITH CALIFORNIA AMENDMENTS.
5. 2019 CALIFORNIA PLUMBING CODE (CPC) C.C.R., TITLE 24, PART 5 BASED ON THE 2018 UNIFORM PLUMBING CODE (UPC) WITH CALIFORNIA AMENDMENTS.
6. 2019 CALIFORNIA ENERGY CODE C.C.R., TITLE 24, PART 6.
7. 2019 CALIFORNIA FIRE CODE (CFC) C.C.R., TITLE 24, PART 9 BASED ON THE 2018 INTERNATIONAL FIRE CODE (IFC) WITH CALIFORNIA AMENDMENTS.
8. 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE C.C.R., TITLE 24, PART 11.
9. 2019 CALIFORNIA REFERENCED STANDARDS CODE C.C.R., TITLE 24, PART 12.
10. TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
11. NATIONAL FIRE ALARM CODE (NFPA 72) 2016.

STANDARDS:

1. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
2. ELECTRONICS INDUSTRIES ASSOCIATION (EIA)
3. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
4. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
5. NATIONAL ELECTRICAL TESTING ASSOCIATION (NETA)
6. UNDERWRITER LABORATORIES (UL)
7. CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ACT STANDARDS (CAL/OSHA)

SHEET INDEX

E0.1	SYMBOLS, ABBREVIATIONS, LIGHT FIXTURE SCHEDULE, CODES, STANDARDS, NOTES & SHEET INDEX.
E0.2	CALIFORNIA ENERGY COMPLIANCE TITLE 24 - OUTDOOR.
E1.1	PANELBOARD SCHEDULES.
E2.1	ELECTRICAL SITE PLAN.
E3.1	ELECTRICAL DEMOLITION PLAN - GYM NORTH HALF.
E3.2	ELECTRICAL DEMOLITION PLAN - GYM SOUTH HALF
E4.1	ELECTRICAL PLAN - GYM NORTH HALF.
E4.2	ELECTRICAL PLAN - GYM SOUTH HALF.
E6.1	ELECTRICAL DETAILS.
FA0.1	FIRE ALARM SYMBOLS, ABBREVIATIONS, EQUIPMENT LIST, OPERATIONAL MATRIX, DETAILS & NOTES.
FA1.1	FIRE ALARM RISER DIAGRAM & BATTERY CALCULATIONS.
FA2.1	FIRE ALARM SITE PLAN.
FA4.1	FIRE ALARM PLAN - GYM NORTH HALF.
FA4.2	FIRE ALARM PLAN - GYM SOUTH HALF.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-119604 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/30/2021
(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 200
CAMPBELL, CA 95008
PHONE: 408-879-0600
FAX: 408-377-6066

NO. C-24673
REN. 9-30-23

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.
Project No. 21-070.00
60 Garden Court • Suite 210 • Monterey, CA 93940
T.831.646.3330 • F.831.646.3336 • www.acemb.com

SYMBOLS, ABBREVIATIONS, LIGHT FIXTURE SCHEDULE, CODES, STANDARDS, NOTES & SHEET INDEX

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

NO.	ITEM	DATE
△		

DRAWN BY: GP
CHECKED BY: NA
SFA JOB NO: 20061
DATE: 03/31/2021

E0.1

G:\Projects\2021\Jobs\21-070.00 Harvest Park Boiler Replacement\Dwgs\01\21-070E0.1.dwg, 9/13/2021 10:14:34 AM

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E (Created 01/21) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
This document is used to demonstrate compliance with requirements in §110.9, §130.0, §130.2, §140.7, and §141.0(b)2I for outdoor lighting scopes using the prescriptive path.	
Project Name: HVAC Boiler Replacement	Report Page: Page 1 of 5
Project Address: 4900 Valley Ave. Pleasanton CA 94566	Date Prepared: 06/22/2021

A. GENERAL INFORMATION

01	Project Location (city)	Pleasanton	04	Total Illuminated Hardscape Area (ft²)	1,572
02	Climate Zone	12			
03	Outdoor Lighting Zone per Title 24, Part 1 §10-114 or as designated by Authority Having Jurisdiction (AHJ):				
☐ LZ-0: Very Low - Undeveloped Parkland	☐ LZ-2: Moderate - Rural Areas	☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval			
☐ LZ-1: Low - Developed Parkland	☑ LZ-3: Moderately High - Urban Areas				

B. PROJECT SCOPE

Table Instructions: Include any outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.0(b)2I for alterations.

My project consists of:

01	02	
☐ New Lighting System	Must Comply with Allowances from §140.7.	
☑ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)? ○ Yes ◉ No	
03	04	05
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method
☑ < 10% ☐ ≥ 10% and < 50% ☐ ≥ 50%	4	

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

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Calculation of Total Allowed Lighting Power (Watts) §140.7 or §141.0(b)2L												Compliance Results		
01		02		03		04		05		06		07		08	09
General Hardscape Allowance §140.7(d)1	+	Per Application §140.7(d)2	+	Sales Frontage §140.7(d)2	+	Ornamental §140.7(d)2	+	Per Specific Area §140.7(d)2	OR	Existing Power §141.0(b)2L	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 Must be ≥ 08**
(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)		(See Table N)				(See Table F)	
	+		+		+		+		OR	200	=	200	≥	128	**COMPLIES**
Cutoff Compliance (See Table G for Details)														**Not Applicable**	
Controls Compliance (See Table H for Details)															

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E (Created 01/21) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: HVAC Boiler Replacement	Report Page: Page 2 of 5
Project Address: 4900 Valley Ave. Pleasanton CA 94566	Date Prepared: 06/22/2021

D. EXCEPTIONAL CONDITIONS

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

Table N. Existing Conditions Power Allowance Notes:
Existing: Wattage is per as-builts.

E. ADDITIONAL REMARKS

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

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

Table Instructions: For new or altered lighting systems demonstrating compliance with §140.7 (ie Table I has expanded for input), include all luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)2L (ie Table N has expanded for input), include only new luminaires being installed and replacement luminaires being installed as part of the project scope (ie, do not include existing luminaires remaining or existing luminaires being moved).

Designed Wattage:

01	02		03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description		Watts per luminaire[1,2]	How Wattage is determined	Total number luminaires[2]	Luminaire Status[3]	Excluded per §140.7(a)	Design Watts	Cutoff Req. ≥ 6,200 initial lumen output §130.2(b)[4]	Field Inspector	
										Pass	Fail
XAE	Wall Pack LED	☐ Linear	32	Mfr. Spec[1]	4	New	☐	128	NA: <6,200 lumens	☐	☐
						Total Designed Watts:		**128**			

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

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

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E (Created 01/21) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: HVAC Boiler Replacement	Report Page: Page 3 of 5
Project Address: 4900 Valley Ave. Pleasanton CA 94566	Date Prepared: 06/22/2021

G. CUTOFF REQUIREMENTS (BUG)
This Section Does Not Apply

H. OUTDOOR LIGHTING CONTROLS
This Section Does Not Apply

I. LIGHTING POWER ALLOWANCE (per §140.7)
This Section Does Not Apply

J. LIGHTING ALLOWANCE: PER APPLICATION
This Section Does Not Apply

K. LIGHTING ALLOWANCE: SALES FRONTAGE
This Section Does Not Apply

L. LIGHTING ALLOWANCE: ORNAMENTAL
This Section Does Not Apply

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA
This Section Does Not Apply

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

Table Instructions: Include all existing luminaires being replaced to establish the lighting power allowance per §141.0(b)2Lii or §141.0(b)2Liii. Existing luminaires that are remaining or being moved should NOT be included.

Existing Conditions Wattage:

01	02	03	04	05	06	07	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire[1,2]	How Wattage is determined	# of Luminaires Being Replaced[2]	Existing Watts	Field Inspector	
						Pass	Fail
Existing	Wall Pack	50	Other*	4	200	☐	☐
				Total Existing Watts:	**200**		
				Allowance per §141.0(b)2L:	**200**		

Table Continued

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E (Created 01/21) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: HVAC Boiler Replacement	Report Page: Page 4 of 5
Project Address: 4900 Valley Ave. Pleasanton CA 94566	Date Prepared: 06/22/2021

01	02	03	04	05	06	07	
Name or Item Tag	Complete Luminaire Description	Watts per luminaire[1,2]	How Wattage is determined	# of Luminaires Being Replaced[2]	Existing Watts	Field Inspector	
						Pass	Fail

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

Existing	Wattage is per as-builts.

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet for the luminaire should be indicated in column 05 instead of number of luminaires.*

O. 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/

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
◉	○	NRCI-LTO-01-E - Must be submitted for all buildings.	☐	☐
◉	○	NRCI-LTO-02-E - Must be submitted for a lighting control system; or for an Energy Management Control System (EMCS), to be recognized for compliance.	☐	☐

P. 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 must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
◉	○	NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls area added to ≤ 20 luminaires.	☐	☐

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E (Created 01/21) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: HVAC Boiler Replacement	Report Page: Page 5 of 5
Project Address: 4900 Valley Ave. Pleasanton CA 94566	Date Prepared: 06/22/2021

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Najib Anwary	Documentation Author Signature:	
Company:	Aurum Consulting Engineers	Signature Date:	06/22/2021
Address:	1798 Technology Drive Suite 242	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	San Jose, CA 95110	Phone:	(408) 564-7925

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permi(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:	Najib Anwary	Responsible Designer Signature:	
Company :	Aurum Consulting Engineers	Date Signed:	06/22/2021
Address:	1798 Technology Drive Suite 242	License:	E21043
City/State/Zip:	San Jose, CA 95110	Phone:	(408) 564-7925

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-119604 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/30/2021
(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE · INTERIORS · PLANNING
2185 SOUTH BASCOM AVE. SUITE 208
CAMPBELL, CA 95008
PHONE: 408.879.6000
FAX: 408.377.6698

LICENSED ARCHITECT
MARK C. FINNEY
No. C-24573
RENEWAL 9-30-23
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
NAJIB ANWARY
No. E21043
EXP. 5/31/23
ELECTRICAL
STATE OF CALIFORNIA

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.
Project No. 21-070.00
60 Garden Court • Suite 210 • Monterey, CA 93940
T 831.646.3330 • F 831.646.3336 • www.acemb.com

CALIFORNIA ENERGY COMPLIANCE
TITLE 24 - OUTDOOR

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

NO.	ITEM	DATE
1		

DRAWN BY: GP
CHECKED BY: NA
SFA JOB NO: 20061
DATE: 03/31/2021

E0.2

[1] (E) PANEL GL

Voltage:	120/208V,3ø
Wire:	4W
Type:	NEMA 1
Mains:	M.L.O.
Bussing:	400A
Feed:	EXISTING
Mounting:	EXISTING
A.I.C.	EXISTING

Note	Load	A	B	C	Bkr	Ck	Ck	Bkr	A	B	C	Load	Note
	EXISTING LOAD				40/2	1	2	200/3				EXISTING LOAD	
	EXISTING LOAD					3	4					EXISTING LOAD	
	EXISTING LOAD				40/2	5	6					EXISTING LOAD	
	EXISTING LOAD					7	8	20/1				EXISTING LOAD	
	EXISTING LOAD				20/2	9	10	20/1				EXISTING LOAD	
	EXISTING LOAD					11	12	20/1				EXISTING LOAD	
	EXISTING LOAD				20/2	13	14	20/1				EXISTING LOAD	
	EXISTING LOAD					15	16	20/1				EXISTING LOAD	
	EXISTING LOAD				20/1	17	18	20/1				EXISTING LOAD	
	EXISTING LOAD				20/1	19	20	20/1				EXISTING LOAD	
	EXISTING LOAD				30/2	21	22	30/2				EXISTING LOAD	
	EXISTING LOAD					23	24					EXISTING LOAD	
	EXISTING LOAD				20/1	25	26	20/1				EXISTING LOAD	
	EXISTING LOAD				20/1	27	28	30/2		2080		SPLIT SYSTEM SSO-2 & SSI-2	3
3	EXHAUST FANS EF-1,2,3 & 4			1518	20/1	29	30				2080	SPLIT SYSTEM SSO-2 & SSI-2	3
3	INDOOR FAN COILS FC-1,2,3 & 4	100			15/2	31	32	50/2	3328			OUTDOOR UNIT HEAT PUMP HP-1	3
3	INDOOR FAN COILS FC-1,2,3 & 4		100			33	34			3328		OUTDOOR UNIT HEAT PUMP HP-1	3
3	BRANCH CONTROLLER BC-1			208	15/2	35	36	20/1			200	DUCT SMOKE AC-2 & DOAS-2	3,4
3	BRANCH CONTROLLER BC-1	208				37	38	-				SPACE ONLY	
	SPACE ONLY				-	39	40	-				SPACE ONLY	
	SPACE ONLY				-	41	42	-				SPACE ONLY	

1. U.O.N., ALL BREAKERS AND LOADS SHOWN ARE EXISTING.
2. EXISTING BREAKER, NEW LOAD.
3. NEW BREAKER, NEW LOAD.
4. PROVIDE & INSTALL LOCK-ON DEVICE COLOR "RED".

[1] (E) PANEL GL2

Voltage:	120/208V,3ø
Wire:	4W
Type:	NEMA 1
Mains:	M.L.O.
Bussing:	225A
Feed:	EXISTING
Mounting:	EXISTING
A.I.C.	EXISTING

Note	Load	A	B	C	Bkr	Ck	Ck	Bkr	A	B	C	Load	Note
	EXISTING LOAD				20/1	1	2	20/1				SPARE	
	EXISTING LOAD				20/1	3	4	20/1				SPARE	
	EXISTING LOAD				20/1	5	6	20/1				SPARE	
	EXISTING LOAD				20/1	7	8	20/1				SPARE	
	EXISTING LOAD				20/1	9	10	20/1				SPARE	
	EXISTING LOAD				20/1	11	12	20/1				SPARE	
	EXISTING LOAD				20/1	13	14	20/1				SPARE	
	EXISTING LOAD				20/1	15	16	20/1				SPARE	
	EXISTING LOAD				20/1	17	18	20/1				SPARE	
	EXISTING LOAD				20/1	19	20	20/1				SPARE	
	EXISTING LOAD				20/1	21	22	20/1				SPARE	
	EXISTING LOAD				20/1	23	24	20/1				SPARE	
2	EXHAUST FANS EF-5,6 & 7	269			20/1	25	26	20/1				SPARE	
	EXISTING LOAD				20/1	27	28	20/1				SPARE	
	EXISTING LOAD				30/1	29	30	20/1				SPARE	
	EXISTING LOAD				20/1	31	32	30/2				SPARE	
2	SPLIT SYSTEM SSO-1 & SSI-1		1300		20/2	33	34					SPARE	
2	SPLIT SYSTEM SSO-1 & SSI-1			1300		35	36	20/1				SPARE	
	EXISTING LOAD				30/2	37	38	20/1				SPARE	
	EXISTING LOAD					39	40	20/1				SPARE	
	EXISTING LOAD				20/1	41	42	20/1			500	DUCT SMOKE DETECTOR AC-1	3,4

1. U.O.N., ALL BREAKERS AND LOADS SHOWN ARE EXISTING.
2. EXISTING BREAKER, NEW LOAD.
3. NEW BREAKER, NEW LOAD.
4. PROVIDE & INSTALL LOCK-ON DEVICE COLOR "RED".

[1] (E) DISTRIBUTION PANEL G

Voltage:	277/480V,3ø
Wire:	4W
Type:	NEMA 1
Mains:	600/3
Bussing:	600A
Feed:	EXISTING
Mounting:	EXISTING
A.I.C.	EXISTING

Note	Load	A	B	C	Bkr	Ck	Ck	Bkr	A	B	C	Load	Note
2	XFMR G2				70/3	1	2	175/3				XFMR G1	2
2	XFMR G2					3	4					XFMR G1	2
2	XFMR G2					5	6					XFMR G1	2
2	PANEL GH1				200/3	7	8	200/3				PANEL GH2	2
2	PANEL GH1					9	10					PANEL GH2	2
2	PANEL GH1					11	12					PANEL GH2	2
3	AIR CONDITIONING UNIT AC-1	26315			110/3	13	14	110/3	26315			AIR CONDITIONING UNIT AC-2	3
3	AIR CONDITIONING UNIT AC-1		26315			15	16			26315		AIR CONDITIONING UNIT AC-2	3
3	AIR CONDITIONING UNIT AC-1			26315		17	18				26315	AIR CONDITIONING UNIT AC-2	3
	SPACE ONLY				-	19	20	-				SPACE ONLY	
	SPACE ONLY				-	21	22	-				SPACE ONLY	
	SPACE ONLY				-	23	24	-				SPACE ONLY	

1. U.O.N., ALL BREAKERS AND LOADS SHOWN ARE EXISTING.
2. EXISTING BREAKER, NEW LOAD.
3. NEW BREAKER, NEW LOAD.

[1] (E) PANEL GH1

Voltage:	277/480V,3ø
Wire:	4W
Type:	NEMA 1
Mains:	M.L.O.
Bussing:	225A
Feed:	EXISTING
Mounting:	EXISTING
A.I.C.	EXISTING

Note	Load	A	B	C	Bkr	Ck	Ck	Bkr	A	B	C	Load	Note
	EXISTING LOAD				20/2	1	2	20/1				EXISTING LOAD	
	EXISTING LOAD					3	4	20/1				EXISTING LOAD	
2	EXHAUST FAN EF-12,13,14 & 15			1200	20/3	5	6	20/1				EXISTING LOAD	
2	EXHAUST FAN EF-12,13,14 & 15	1200				7	8	20/1				EXISTING LOAD	
2	EXHAUST FAN EF-12,13,14 & 15		1200			9	10	20/3				EXISTING LOAD	
	EXISTING LOAD				20/1	11	12					EXISTING LOAD	
	EXISTING LOAD				50/1	13	14					EXISTING LOAD	
	EXISTING LOAD				20/1	15	16	20/1				EXISTING LOAD	
	EXISTING LOAD				20/1	17	18	20/1				EXISTING LOAD	
	EXISTING LOAD				20/1	19	20	20/1				EXISTING LOAD	
	EXISTING LOAD				20/1	21	22	-				SPACE ONLY	
	SPACE ONLY				-	23	24	-				SPACE ONLY	
	EXISTING LOAD				20/3	25	26	20/3				EXISTING LOAD	
	EXISTING LOAD					27	28					EXISTING LOAD	
	EXISTING LOAD					29	30					EXISTING LOAD	
	EXISTING LOAD				20/2	31	32	20/3				EXISTING LOAD	
	EXISTING LOAD					33	34					EXISTING LOAD	
	EXISTING LOAD				20/2	35	36					EXISTING LOAD	
	EXISTING LOAD					37	38	20/3				EXISTING LOAD	
	EXISTING LOAD				20/2	39	40					EXISTING LOAD	
	EXISTING LOAD					41	42					EXISTING LOAD	
	EXISTING LOAD				70/3	43	44	30/3	8226			OUTSIDE AIR SYSTEM DOAS-2	3
	EXISTING LOAD					45	46			8226		OUTSIDE AIR SYSTEM DOAS-2	3
	EXISTING LOAD					47	48				8226	OUTSIDE AIR SYSTEM DOAS-2	3
	SPACE ONLY				-	49	50	-				SPACE ONLY	
	SPACE ONLY				-	51	52	-				SPACE ONLY	
	SPACE ONLY				-	53	54	-				SPACE ONLY	

1. U.O.N., ALL BREAKERS AND LOADS SHOWN ARE EXISTING.
2. EXISTING BREAKER, NEW LOAD.
3. NEW BREAKER, NEW LOAD.

[1] (E) PANEL GH2

Voltage:	277/480V,3ø
Wire:	4W
Type:	NEMA 1
Mains:	M.L.O.
Bussing:	225A
Feed:	EXISTING
Mounting:	EXISTING
A.I.C.	EXISTING

Note	Load	A	B	C	Bkr	Ck	Ck	Bkr	A	B	C	Load	Note
	EXISTING LOAD				20/2	1	2	20/3	1200			EXHAUST FAN ROOF EF-8,9,10 & 11	2
	EXISTING LOAD					3	4			1200		EXHAUST FAN ROOF EF-8,9,10 & 11	2
	EXISTING LOAD				20/2	5	6				1200	EXHAUST FAN ROOF EF-8,9,10 & 11	2
	EXISTING LOAD					7	8	20/1				EXISTING LOAD	
	EXISTING LOAD				20/2	9	10	20/1				EXISTING LOAD	
	EXISTING LOAD					11	12	20/1				EXISTING LOAD	
	EXISTING LOAD				20/2	13	14	20/3				EXISTING LOAD	
	EXISTING LOAD					15	16					EXISTING LOAD	
	EXISTING LOAD				20/1	17	18					EXISTING LOAD	
	EXISTING LOAD				20/1	19	20	20/3				EXISTING LOAD	
	EXISTING LOAD				20/1	21	22					EXISTING LOAD	
	EXISTING LOAD				20/1	23	24					EXISTING LOAD	
	EXISTING LOAD				20/3	25	26	20/3				EXISTING LOAD	
	EXISTING LOAD					27	28					EXISTING LOAD	
	EXISTING LOAD					29	30					EXISTING LOAD	
	EXISTING LOAD				70/3	31	32	15/3	3601			OUTSIDE AIR SYSTEM DOAS-1	3
	EXISTING LOAD					33	34			3601		OUTSIDE AIR SYSTEM DOAS-1	3
	EXISTING LOAD					35	36				3601	OUTSIDE AIR SYSTEM DOAS-1	3
	SPACE ONLY				-	37	38	-				SPACE ONLY	
	SPACE ONLY				-	39	40	-				SPACE ONLY	
	SPACE ONLY				-	41	42	-				SPACE ONLY	

1. U.O.N., ALL BREAKERS AND LOADS SHOWN ARE EXISTING.
2. EXISTING BREAKER, NEW LOAD.
3. NEW BREAKER, NEW LOAD.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-119604 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/30/2021
(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 200
CAMPBELL, CA 95008
PHONE: 408-879-0600
FAX: 408-377-6066

LICENSED ARCHITECT
MARK C. FINNEY
NO. C-24673
REN. 9-30-23
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
NAJIB ANWARY
No. E21043
EXP. 3/31/23
ELECTRICAL
STATE OF CALIFORNIA

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.
Project No. 21-070.00
60 Garden Court • Suite 210 • Monterey, CA 93940
T.831.646.3330 • F.831.646.3336 • www.acemb.com

PANELBOARD SCHEDULES

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

NO.	ITEM	DATE
1		

DRAWN BY: GP
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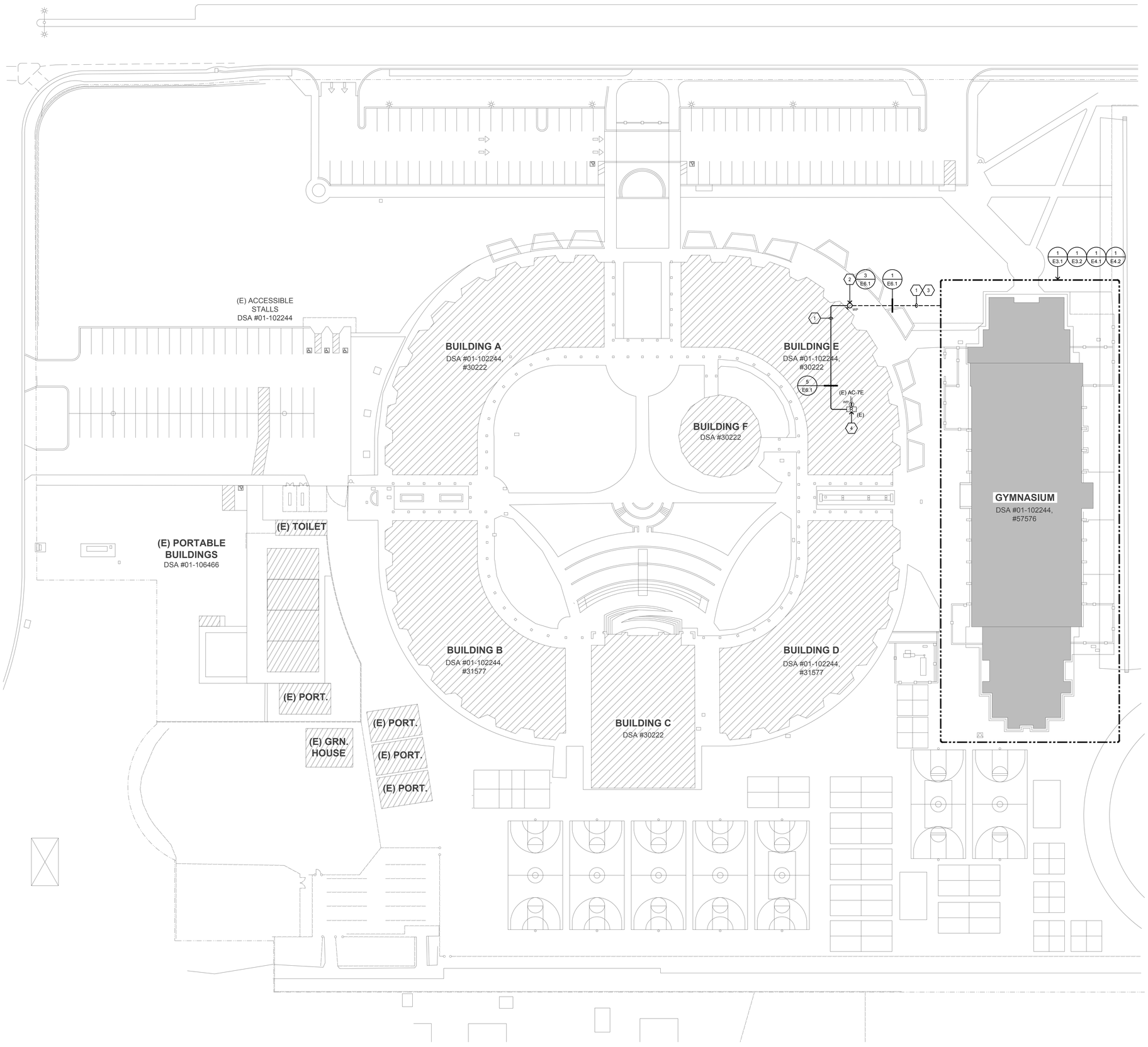
SFA JOB NO.: 20061
DATE: 03/31/2021

E1.1



1 ELECTRICAL SITE PLAN
SCALE: 1"=30'-0"

SHEET NOTES

1. PROVIDE & INSTALL 2"C. FOR FIRE ALARM.
2. PROVIDE & INSTALL 16" SQ. x 8" DEEP NEMA 3R PULLCAN.
3. SEE 1/E4.1 FOR CONTINUATION.
4. LOCATED ON ROOF.

GENERAL NOTES:

A. CONTRACTOR SHALL LOCATE ALL (E) UNDERGROUND UTILITIES PRIOR TO TRENCHING AND TAKE CAUTION TO AVOID DAMAGE DURING TRENCHING. HAND TRENCH IF NECESSARY. CONTRACTOR SHALL MAKE ALL REPAIRS TO DAMAGED UTILITIES AT NO CHARGE TO OWNER. REPAIR EXISTING GRADING/CONCRETE TO EQUAL OR BETTER CONDITION WHERE NEW TRENCHING OCCURS.

B. SEAL ALL EXTERIOR/INTERIOR BUILDING PENETRATIONS, CUT AND PATCH WALLS/CEILINGS FOR CONDUIT ROUTING AS NECESSARY. PAINT/FINISH EXPOSED CONDUITS/BOXES TO MATCH BUILDING FINISH. COORDINATE WITH ARCHITECT FOR EXACT REQUIREMENTS.

C. SCAN THE EXISTING CONCRETE OR MASONRY WALL FOR EXISTING REINFORCING. EXISTING REINFORCING SHALL NOT BE CUT.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-119604 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/30/2021
(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE · INTERIORS · PLANNING
2155 SOUTH BASCOM AVE.
SUITE 208
CAMPBELL, CA 95008
PHONE: 408.879.6099
FAX: 408.377.6068

LICENSED ARCHITECT
MARK C. FINNEY
NO. C-24673
EXP. REN. 9-30-21
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
NAJIB ANDRAOS
No. E21043
EXP. 5/31/23
ELECTRICAL

AURUM CONSULTING ENGINEERS
MONTEREY BAY, INC.
Project No. 21-070.00
60 Garden Court ● Suite 210 ● Monterey, CA 93940
T. 831.646.3330 ● F. 831.646.3336 ● www.acemb.com

ELECTRICAL SITE PLAN

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

NO.	ITEM	DATE
1		

DRAWN BY: GP
CHECKED BY: NA
SFA JOB NO: 20061
DATE: 03/31/2021

E2.1

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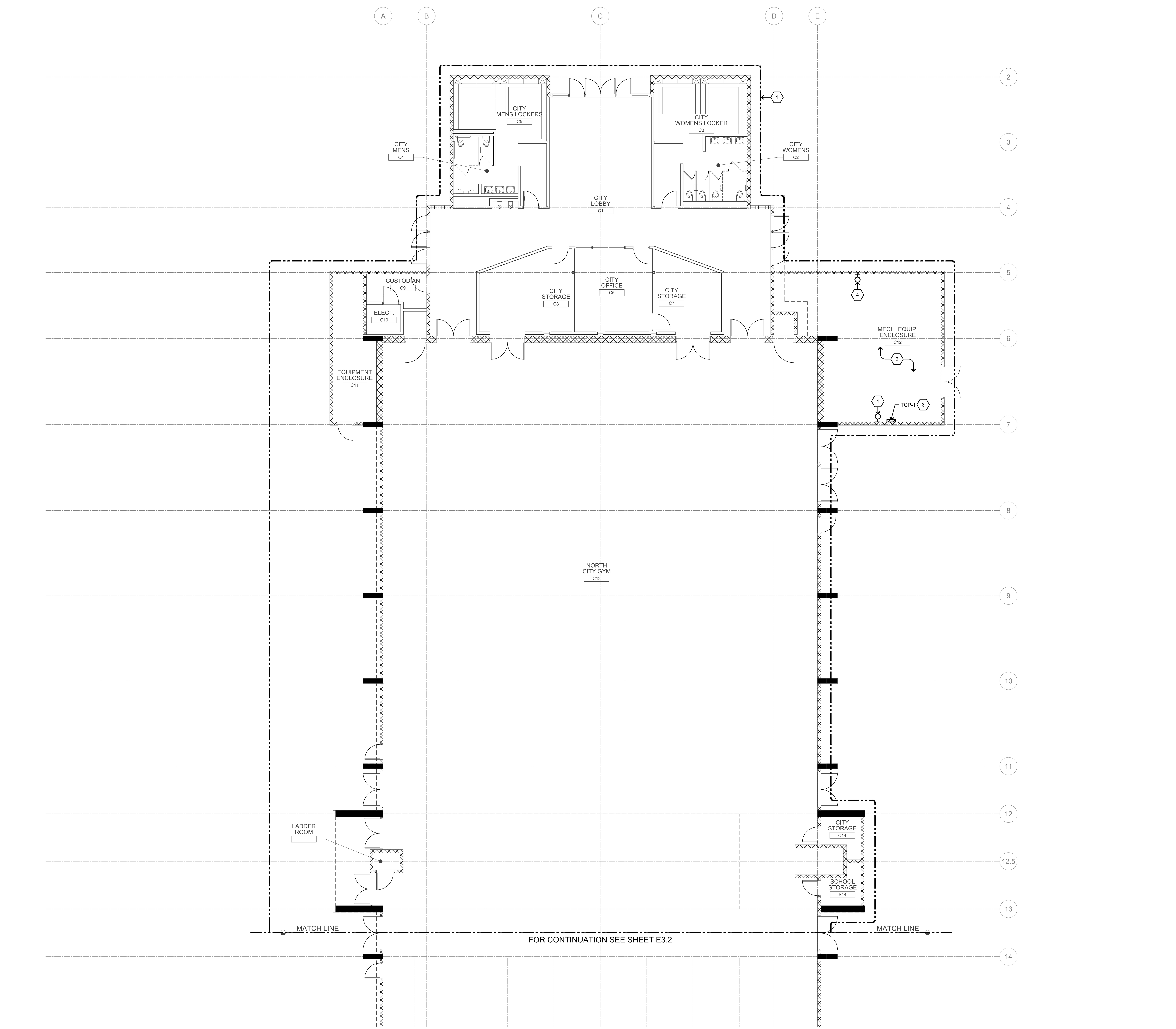
SHEET NOTES

1. COORDINATE WITH MECHANICAL PLANS FOR UNITS TO BE DEMOLISHED. DEMOLISH ELECTRICAL CONNECTIONS FOR UNITS PER GENERAL DEMOLITION NOTES ON E0.1.
2. CONTRACTOR SHALL PRESERVE AND MAKE ALL NECESSARY PROVISIONS (BOXES, CONDUITS AND WIRES) TO KEEP ACTIVE EXISTING ELECTRICAL CONNECTIONS FOR LIGHTING AND RECEPTACLES IN EQUIPMENT ENCLOSURE/UTILITY YARD.
3. DEMOLISH ELECTRICAL CONNECTION PER GENERAL DEMOLITION NOTES ON E0.1
4. PER GENERAL DEMOLITION NOTES ON E0.1, REMOVE LIGHT FIXTURE AND PRESERVE ASSOCIATED CONNECTIONS FOR REUSE UNDER NEW WORK.



1 ELECTRICAL DEMOLITION PLAN - GYM NORTH HALF

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

8' 0' 2' 4' 6' 8'

NORTH

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-119604 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/30/2021
(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 200
CAMPBELL, CA 95008
PHONE: 408-879-0600
FAX: 408-377-6066

LICENSED ARCHITECT MARK C. FINNEY NO. C-24673 REN 9-30-23 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER NAJIB ANSARY No. E21043 EXP. 3/31/23 ELECTRICAL STATE OF CALIFORNIA

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.
Project No. 21-070.00
60 Garden Court • Suite 210 • Monterey, CA 93940
T.831.646.3330 • F.831.646.3336 • www.acemb.com

ELECTRICAL DEMOLITION PLAN - GYM NORTH HALF

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

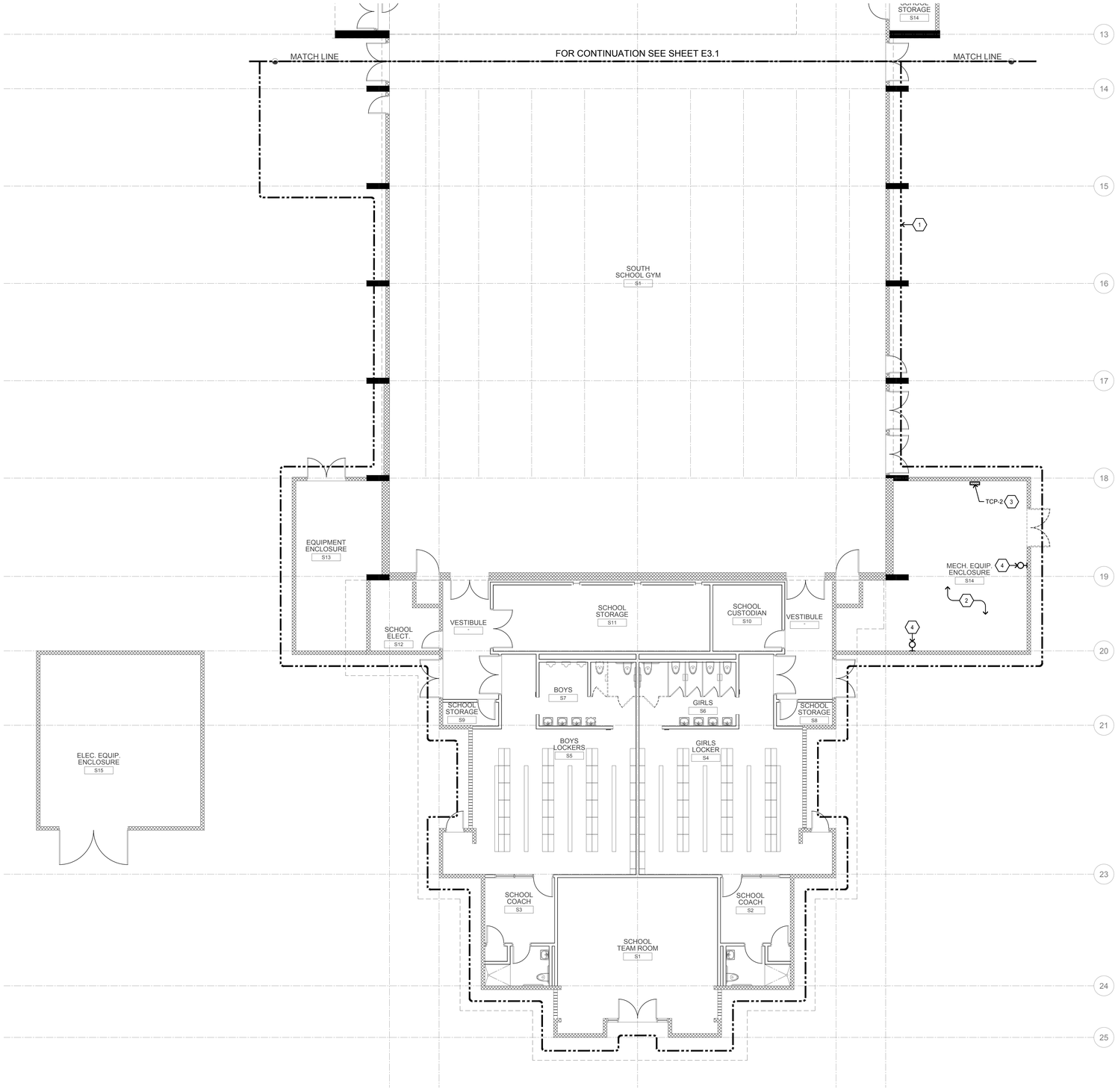
REVISIONS NO.	ITEM	DATE
1		

DRAWN BY:	GP
CHECKED BY:	NA
SFA JOB NO: 20061	DATE: 03/31/2021

E3.1

SHEET NOTES

1. COORDINATE WITH MECHANICAL PLANS FOR UNITS TO BE DEMOLISHED. DEMOLISH ELECTRICAL CONNECTIONS FOR UNITS PER GENERAL DEMOLITION NOTES ON E0.1.
2. CONTRACTOR SHALL PRESERVE AND MAKE ALL NECESSARY PROVISIONS (BOXES, CONDUITS AND WIRES) TO KEEP ACTIVE EXISTING ELECTRICAL CONNECTIONS FOR LIGHTING AND RECEPTACLES IN EQUIPMENT ENCLOSURE/UTILITY YARD.
3. DEMOLISH ELECTRICAL CONNECTION PER GENERAL DEMOLITION NOTES ON E0.1.
4. PER GENERAL DEMOLITION NOTES ON E0.1, REMOVE LIGHT FIXTURE AND PRESERVE ASSOCIATED CONNECTIONS FOR REUSE UNDER NEW WORK.



1 ELECTRICAL DEMOLITION PLAN - GYM SOUTH HALF

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

0' 2' 4' 6' 8'

NORTH

G:\Projects\2021\dsb\21-070\00 Harvest Park Boiler Replacement\Dwgs\01\21-070E3.2.dwg, 9/13/2021 10:15:13 AM

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-119604 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/30/2021
(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE INTERIORS PLANNING
2105 SOUTH BASCOM AVE.
SUITE 205
CAMPBELL, CA 95008
PHONE: 408.879.9009
FAX: 408.377.4666

LICENSED ARCHITECT
MARK C FINNEY
NO. C-24673
SIGNED 9-30-21
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
MATTHEW ANDREW
No. E21043
EXP. 5/31/23
ELECTRICAL

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.
Project No. 21-070.00
60 Garden Court ♦ Suite 210 ♦ Monterey, CA 93940
T 831.646.3330 ♦ F 831.646.3336 ♦ www.acemb.com

ELECTRICAL DEMOLITION PLAN - GYM SOUTH HALF

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

NO.	ITEM	DATE
1		

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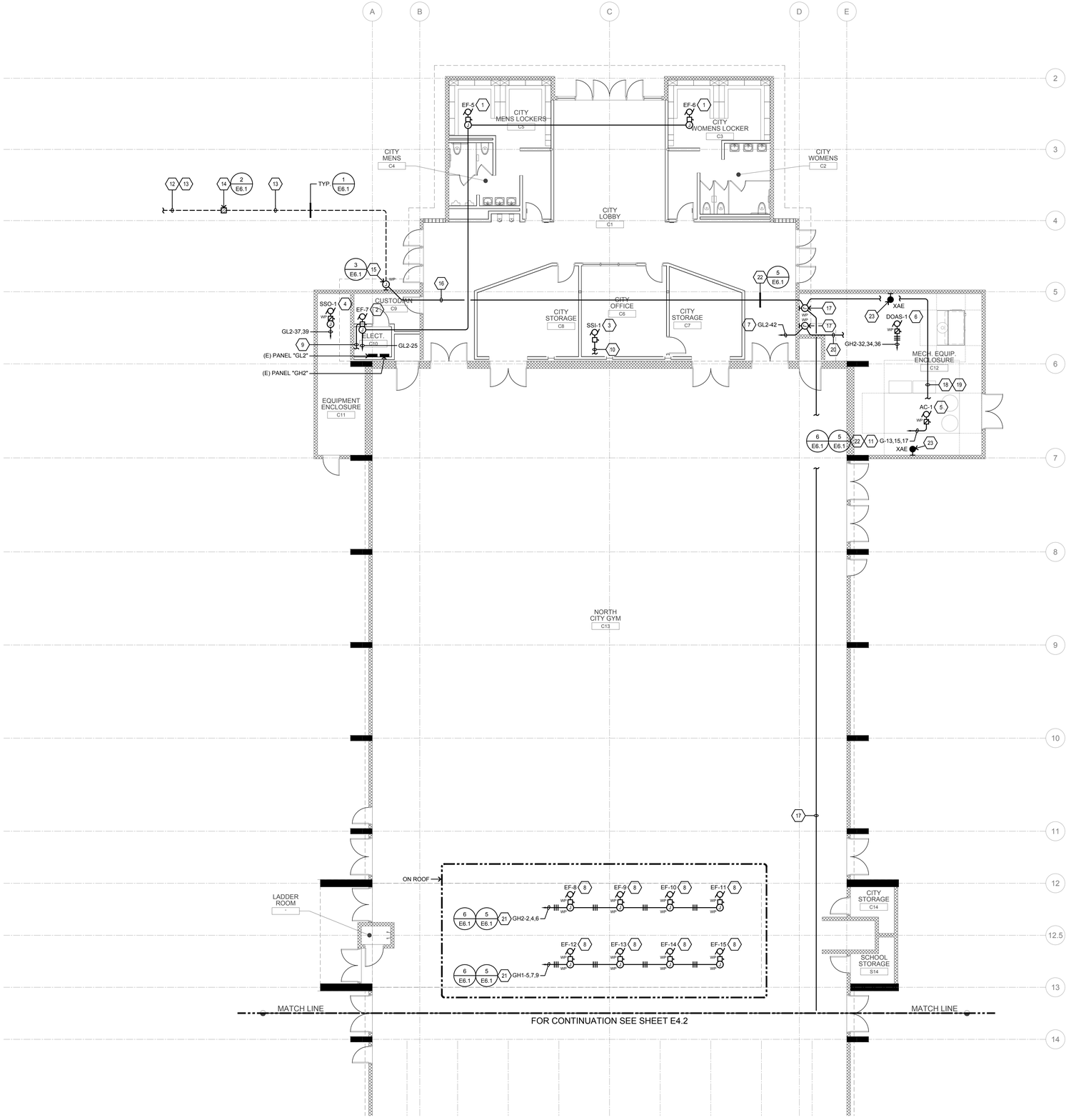
SFA JOB NO: 20061
DATE: 03/31/2021

E3.2



1 ELECTRICAL PLAN - GYM NORTH HALF

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

NORTH

SHEET NOTES

1. FOR EXHAUST FAN; 126 WATTS, 120V.
2. FOR EXHAUST FAN; 17 WATTS, 120V.
3. FOR SPLIT SYSTEM HEAT PUMP INDOOR UNIT.
4. FOR SPLIT SYSTEM HEAT PUMP OUTDOOR UNIT; 12.5 MCA, 208V, 1Ø.
5. AIR CONDITIONING UNIT; 95 MCA, 480V, 3Ø.
6. DEDICATED OUTSIDE AIR SYSTEM; 13 MCA, 480V, 3Ø.
7. FOR DUCT SMOKE DETECTOR; 120V.
8. FOR EXHAUST FAN; 1/2 HP, 480V, 3Ø.
9. PROVIDE & INSTALL ½"C. WITH CONTROL CABLES TO LIGHT SWITCH.
10. PROVIDE & INSTALL ¾"C. TO ASSOCIATED OUTDOOR UNIT WITH 2 #10 & 1 #10 GND.
11. 1½" C., 3 #1\0 & 1 #6 GND.
12. SEE 1/FA2.1 FOR CONTINUATION.
13. PROVIDE & INSTALL 2"C. FOR FIRE ALARM.
14. PROVIDE & INSTALL IN-GRADE CHRISTY PULLBOX #N30, LID LABELED "FIRE ALARM".
15. PROVIDE & INSTALL 16" SQ. x 8" DEEP NEMA 3R PULLCAN.
16. PROVIDE & INSTALL (2) ¾"C. FOR FIRE ALARM.
17. PROVIDE & INSTALL 8" SQ. x 4" DEEP NEMA 3R PULLCAN.
18. PROVIDE & INSTALL ¾"C. FOR FIRE ALARM.
19. FOR DUCT SMOKE DETECTOR FOR UNIT AC-1.
20. PROVIDE & INSTALL ¾"C. WITH 2 #12 & 1 #12 GND TO DUCT SMOKE DETECTOR DEVICES AT AC-1.
21. ¾"C., 3 #10 & 1 #10 GND.
22. ROUTE CONDUIT ON ROOF.
23. CONNECT TO EXISTING LIGHTING CIRCUIT AND ASSOCIATED LIGHTING CONTROLS PRESERVED DURING DEMOLITION WORK. CONNECT EMERGENCY BATTERY BACK-UP VIA LIGHTING CIRCUIT UNSWITCHED HOT.

GENERAL NOTES:

A. CONTRACTOR SHALL LOCATE ALL (E) UNDERGROUND UTILITIES PRIOR TO TRENCHING AND TAKE CAUTION TO AVOID DAMAGE DURING TRENCHING. HAND TRENCH IF NECESSARY. CONTRACTOR SHALL MAKE ALL REPAIRS TO DAMAGED UTILITIES AT NO CHARGE TO OWNER. REPAIR EXISTING GRADING/CONCRETE TO EQUAL OR BETTER CONDITION WHERE NEW TRENCHING OCCURS.

B. SEAL ALL EXTERIOR/INTERIOR BUILDING PENETRATIONS, CUT AND PATCH WALLS/CEILINGS FOR CONDUIT ROUTING AS NECESSARY. PAINT/FINISH EXPOSED CONDUITS/BOXES TO MATCH BUILDING FINISH. COORDINATE WITH ARCHITECT FOR EXACT REQUIREMENTS.

C. COORDINATE WITH MECHANICAL PLANS FOR EXACT LOCATION AND REQUIREMENTS OF MECHANICAL UNITS.

D. SCAN THE EXISTING CONCRETE OR MASONRY WALL FOR EXISTING REINFORCING. EXISTING REINFORCING SHALL NOT BE CUT.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-119604 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/30/2021
(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE INTERIORS PLANNING
2355 SOUTH BASCOM AVE.
SUITE 210
CAMPBELL, CA 95008
PHONE: 408-879-9008
FAX: 408-377-6088

LICENSED ARCHITECT
MARK C. FINNEY
No. C-24673
REN. 9-30-23
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
MATTHEW B. ANDREWS
No. E21043
EXP. 5/31/23
ELECTRICAL

AURUM CONSULTING ENGINEERS
MONTEREY BAY, INC.
Project No. 21-070.00
60 Garden Court ♦ Suite 210 ♦ Monterey, CA 93940
T 831.646.3330 ♦ F 831.646.3336 ♦ www.acemb.com

ELECTRICAL PLAN - GYM NORTH HALF

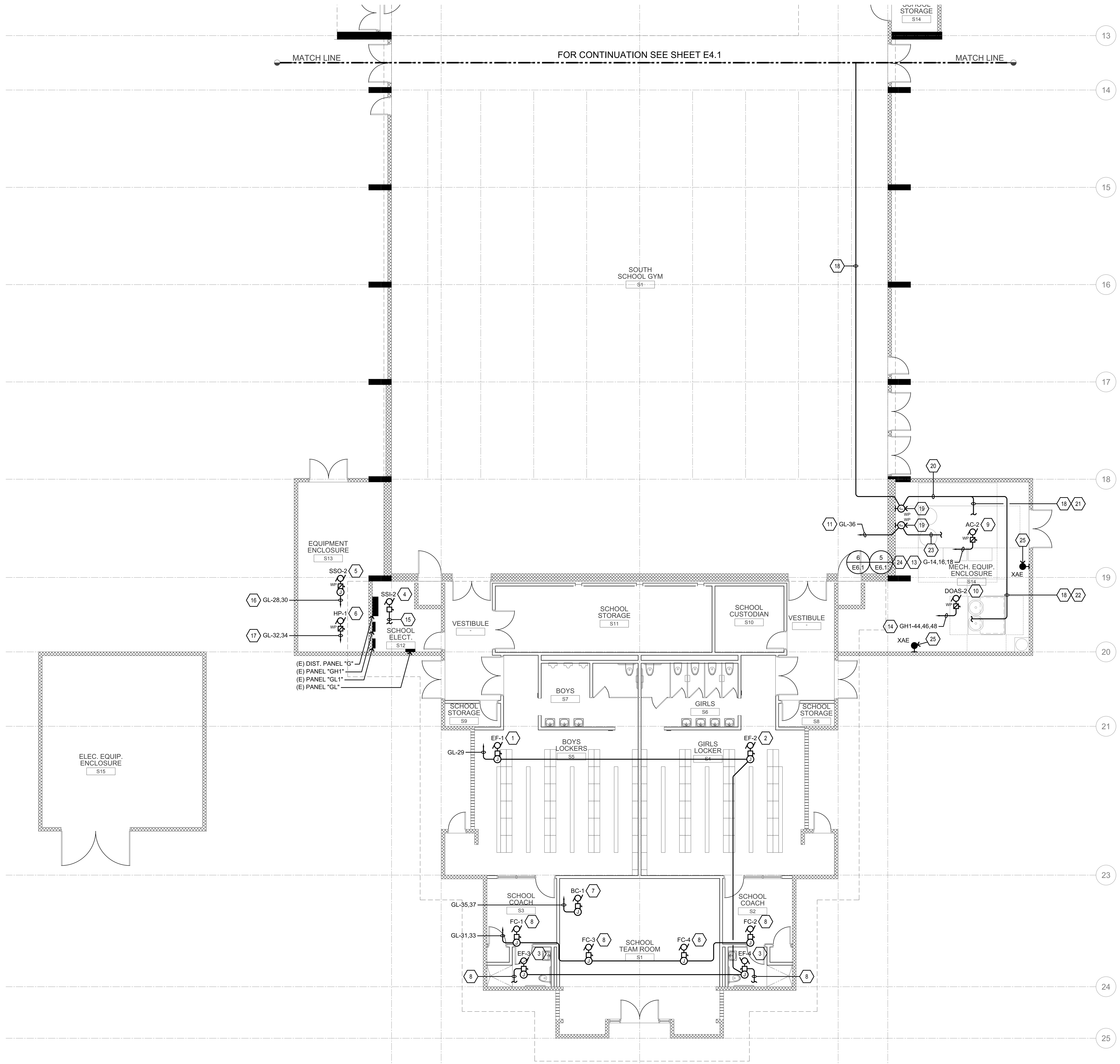
HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

NO.	ITEM	DATE
1		

DRAWN BY: GP
CHECKED BY: NA
SFA JOB NO: 20061
DATE: 03/31/2021

E4.1



1 ELECTRICAL PLAN - GYM SOUTH HALF

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

NORTH

SHEET NOTES

1. FOR EXHAUST FAN; 789 WATTS, 120V.
2. FOR EXHAUST FAN; 228 WATTS, 120V.
3. FOR EXHAUST FAN; 15 WATTS, 120V
4. FOR SPLIT SYSTEM AIR CONDITIONER INDOOR UNIT.
5. FOR SPLIT SYSTEM HEAT PUMP OUTDOOR UNIT; 20 MCA, 208V, 1Ø.
6. VRF OUTDOOR UNIT HEAT PUMP; 32 MCA, 208V, 1Ø.
7. VRF BRANCH CONTROLLER; 2 MCA, 208V, 1Ø.
8. VRF INDOOR FAN COIL UNIT; 0.24 MCA, 208V, 1Ø.
9. AIR CONDITIONING UNIT; 95 MCA, 480V, 3Ø.
10. DEDICATED OUTSIDE AIR SYSTEM; 29.7 MCA, 480V, 3Ø.
11. FOR DUCT SMOKE DETECTOR; 120V.
12. PROVIDE & INSTALL ½"C. WITH CONTROL CABLES TO LIGHT SWITCH.
13. 1½" C., 3 #1/0 & 1 #6 GND.
14. ¾"C., 3 #10 & 1 #10 GND.
15. PROVIDE & INSTALL ¾"C. TO ASSOCIATED OUTDOOR UNIT WITH 2 #10 & 1 #10 GND.
16. ¾"C., 2 #10 & 1 #10 GND.
17. ¾"C., 2 #6 & 1 #10 GND.
18. PROVIDE & INSTALL ¾"C. FOR FIRE ALARM.
19. PROVIDE & INSTALL 8" SQ. x 4" DEEP NEMA 3R PULLCAN.
20. PROVIDE & INSTALL (2) ¾"C. FOR FIRE ALARM.
21. TO DUCT SMOKE DETECTOR FOR UNIT AC-2.
22. TO DUCT SMOKE DETECTOR FOR UNIT DOAS-2.
23. PROVIDE & INSTALL ¾"C. WITH 2 #12 & 1 #12 GND TO EACH DUCT SMOKE DETECTOR DEVICES AT AC-2 & DOAS-2.
24. ROUTE CONDUIT ON ROOF.
25. CONNECT TO EXISTING LIGHTING CIRCUIT AND ASSOCIATED LIGHTING CONTROLS PRESERVED DURING DEMOLITION WORK. CONNECT EMERGENCY BATTERY BACK-UP VIA LIGHTING CIRCUIT UNSWITCHED HOT.

GENERAL NOTES:

A. SEAL ALL EXTERIOR/INTERIOR BUILDING PENETRATIONS, CUT AND PATCH WALLS/CEILINGS FOR CONDUIT ROUTING AS NECESSARY. PAINT/FINISH EXPOSED CONDUITS/BOXES TO MATCH BUILDING FINISH. COORDINATE WITH ARCHITECT FOR EXACT REQUIREMENTS.
B. COORDINATE WITH MECHANICAL PLANS FOR EXACT LOCATION AND REQUIREMENTS OF MECHANICAL UNITS.
C. SCAN THE EXISTING CONCRETE OR MASONRY WALL FOR EXISTING REINFORCING. EXISTING REINFORCING SHALL NOT BE CUT.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-119604 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/30/2021
(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 200
CAMPBELL, CA 95008
PHONE: 408-879-0600
FAX: 408-377-6046

LICENSED ARCHITECT
MARK C. FINNEY
NO. C-24673
REN. 9-30-23
STATE OF CALIFORNIA

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.
Project No. 21-070.00
60 Garden Court • Suite 210 • Monterey, CA 93940
T.831.646.3330 • F.831.646.3336 • www.acemb.com

ELECTRICAL PLAN - GYM SOUTH HALF

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS NO.	ITEM	DATE
1		

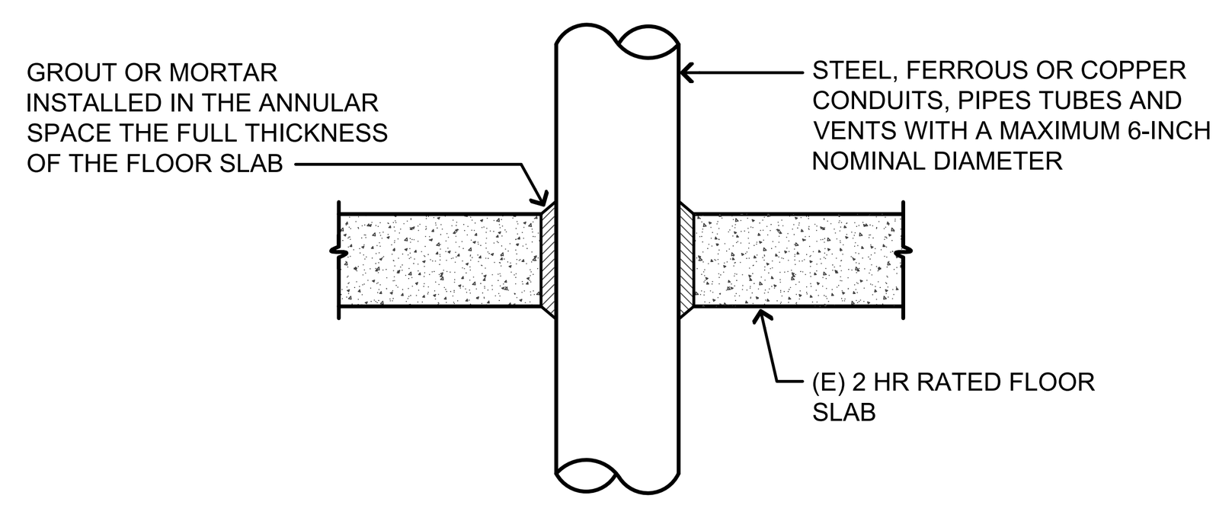
DRAWN BY:	GP
CHECKED BY:	NA
SFA JOB NO: 20061	DATE: 03/31/2021

E4.2

FIRE RATED PENETRATIONS SHOWN ARE FOR USE WHERE THE PROJECT WALL OR/AND FLOOR CONSTRUCTION CORRESPONDS TO ANY SHOWN IN DETAILS 7, 8, 9 & 10 BELOW

SEE FLOOR PLAN DRAWINGS
FOR RATED FLOOR LOCATIONS

FLOOR PENETRATION PER 2019 CALIFORNIA BUILDING CODE, VOLUME 1, SECTION 714.5.1, EXCEPTION 2.



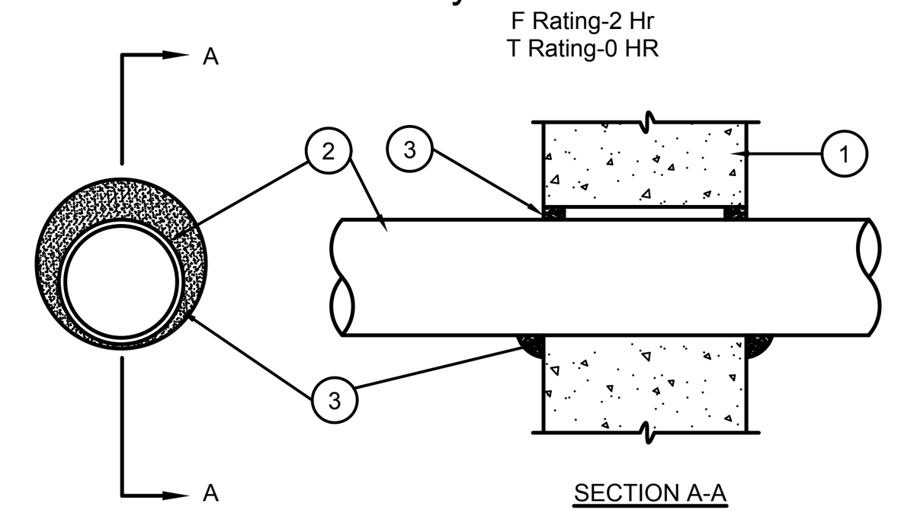
SECTION

10 2-HR FIRE-RATED FLOOR PENETRATION

NO SCALE

SEE FLOOR PLAN DRAWINGS
FOR RATED WALL LOCATIONS

U.L. System No. W-J-1055
F Rating-2 Hr
T Rating-0 HR



SECTION A-A

1. Wall Assembly-Min 6 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 26 in.
See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Through Penetrant-One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min 0 in. (point contact) to max 1-3/4 in. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduit or tubing may be used:

A. Conduit-Nom 4 in. diam (or smaller) steel electrical metallic tubing, nom 6 in. diam (or smaller) steel conduit or nom I in. diam (or smaller) flexible steel conduit.

B. Copper Tubing-Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.

C. Copper Pipe-Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.

3. Fill, Void or Cavity Material*-Sealant-Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall. At the point contact location between through penetrant and concrete, a min 3/8 in. diam bead of fill material shall be applied at the concrete/through penetrant interface on both surfaces of wall.

Specified Technologies Inc.-SpecSeal 100, 101, 102 or 105 Sealant
*Bearing the UL Classification Marking

GENERAL NOTE:

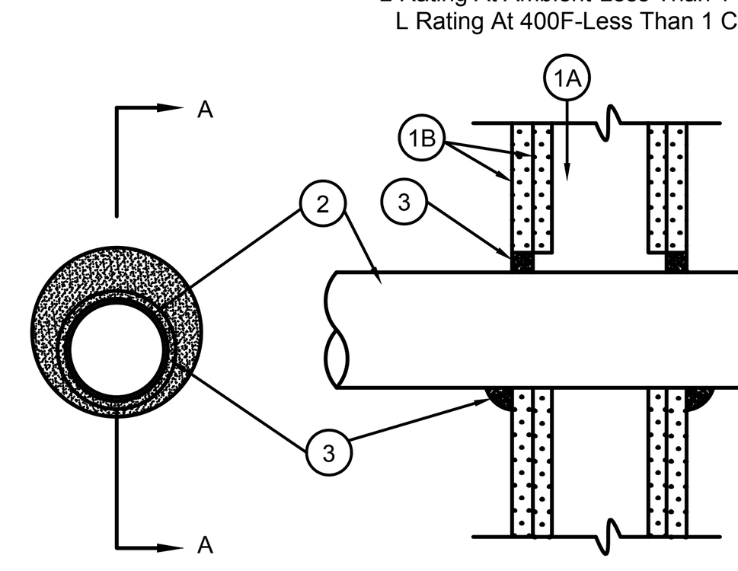
SCAN THE EXISTING CONCRETE OR MASONRY WALL FOR EXISTING REINFORCING. EXISTING REINFORCING SHALL NOT BE CUT.

9 2-HR FIRE-RATED WALL PENETRATION

NO SCALE

SEE FLOOR PLAN DRAWINGS
FOR RATED WALL LOCATIONS

U.L. System No. W-L-1049
F Rating-1 and 2 Hr (See Item 1B)
T Rating-0 HR
L Rating At Ambient-Less Than 1 CFM/sq ft
L Rating At 400F-Less Than 1 CFM/sq ft



SECTION A-A

1. Wall Assembly-The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
A. Studs-Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC. When steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. The framed opening in the wall shall be 4 to 6 in. wider and 4 to 6 in. higher than the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. clearance is present between the penetrating item and the framing on all four sides.

B. Wallboard, Gypsum*-5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 25-3/4 in. for steel stud walls. Max diam of opening is 14-1/2 in. for wood stud walls.
The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. Through Penetrant-One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min 0 in. (point contact) to max 1-3/4 in. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. Conduit-Nom 4 in. diam (or smaller) steel electrical metallic tubing, nom 6 in. diam (or smaller) steel conduit or nom I in. diam (or smaller) flexible steel conduit.

B. Copper Tubing-Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.

C. Copper Pipe-Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.

3. Fill, Void or Cavity Material*-Sealant-Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall. At the point contact location between through penetrant and gypsum wallboard, a min 3/8 in. diam bead of fill material shall be applied at the gypsum wallboard/through penetrant interface on both surfaces of wall.

Specified Technologies Inc.-SpecSeal 100, 101, 102 or 105 Sealant
'Bearing the UL Classification Marking

GENERAL NOTE:

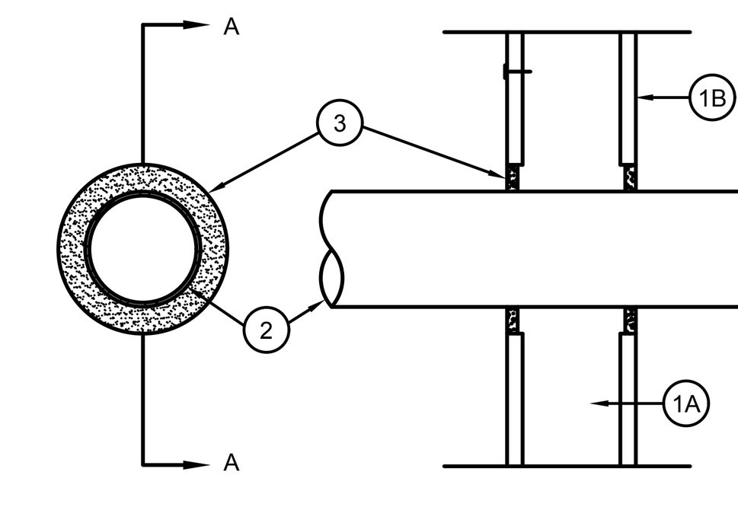
SCAN THE EXISTING CONCRETE OR MASONRY WALL FOR EXISTING REINFORCING. EXISTING REINFORCING SHALL NOT BE CUT.

8 2-HR FIRE-RATED WALL PENETRATION

NO SCALE

SEE FLOOR PLAN DRAWINGS
FOR RATED WALL LOCATIONS

U.L. System No. W-L-1062
F Rating-1 HR
T Rating-0 HR
L Rating At Ambient-Less Than 1 CFM/sq ft
L Rating At 400F-Less Than 1 CFM/sq ft



SECTION A-A

1. Wall Assembly-The fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs-Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in OC. Steel studs to be min 3 5/8 in. wide and spaced max 24 in. OC.

B. Wallboard Gypsum*-One Layer of nom 5/8 in. thick gypsum wallboard as specified in the individual Wall and Partition Design. Max diam of opening is 4 3/4 in.

2. Through Penetrants-One metallic conduit to be installed within the firestop system. The space between the conduit and periphery of opening shall be a min 1/4 in. to a max 3/8 in. Conduit to be rigidly supported on both sides of wall assembly. A nominal 4 in. diameter (or smaller) electrical metallic tubing or steel conduit may be used.

3. Fill, Void or Cavity Material*-Caulk-Min 1 1/2 in. thickness of fill material applied within the annulus, flush with both surfaces of wall.

General Electric Co.-Pensit 100 Caulk.

Specified Technologies Inc.-Pensil 100 Sealant and Pensit 300 Sealant.

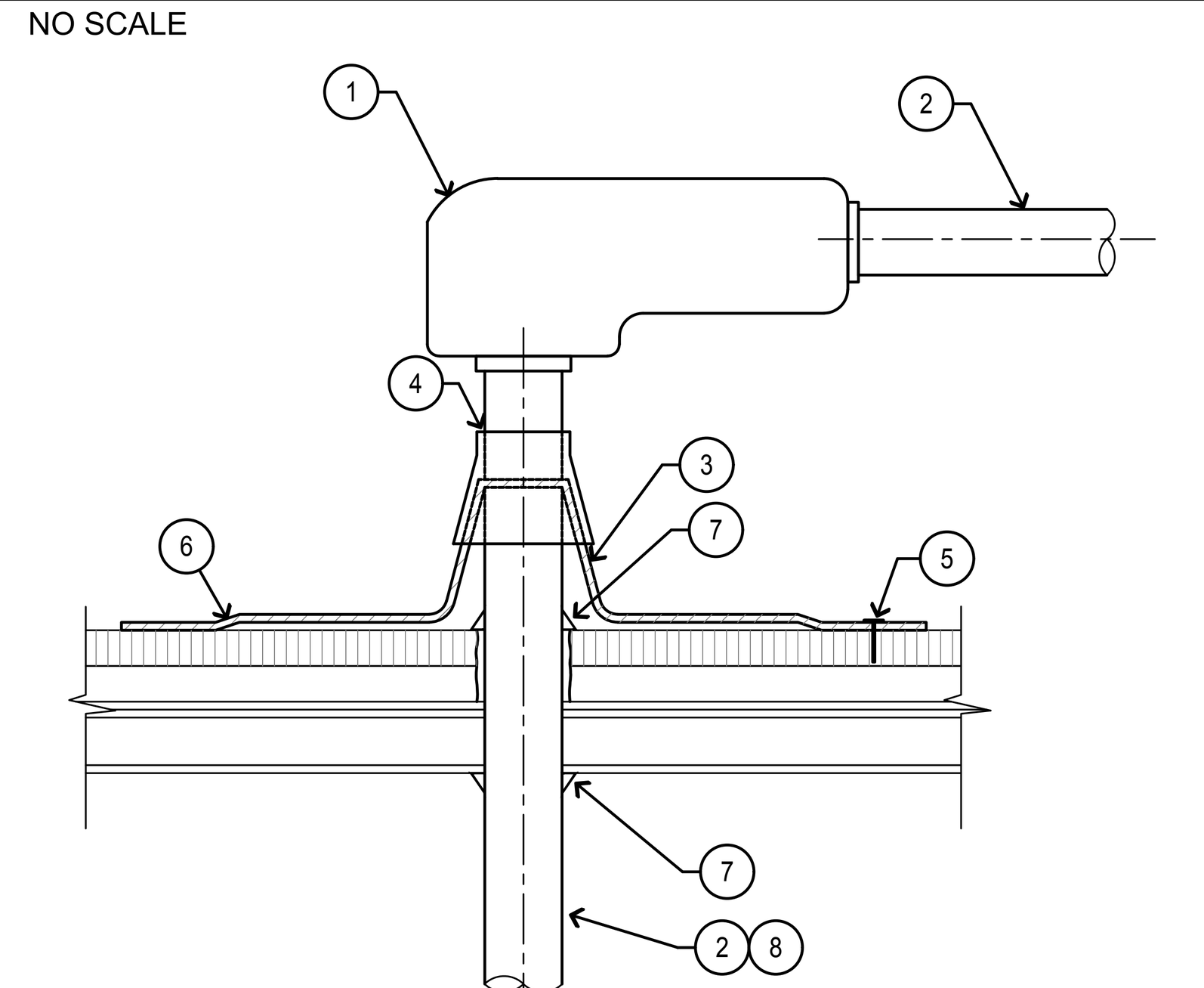
*Bearing the UL Classification Marking

GENERAL NOTE:

SCAN THE EXISTING CONCRETE OR MASONRY WALL FOR EXISTING REINFORCING. EXISTING REINFORCING SHALL NOT BE CUT.

7 1-HR FIRE-RATED WALL PENETRATION

NO SCALE

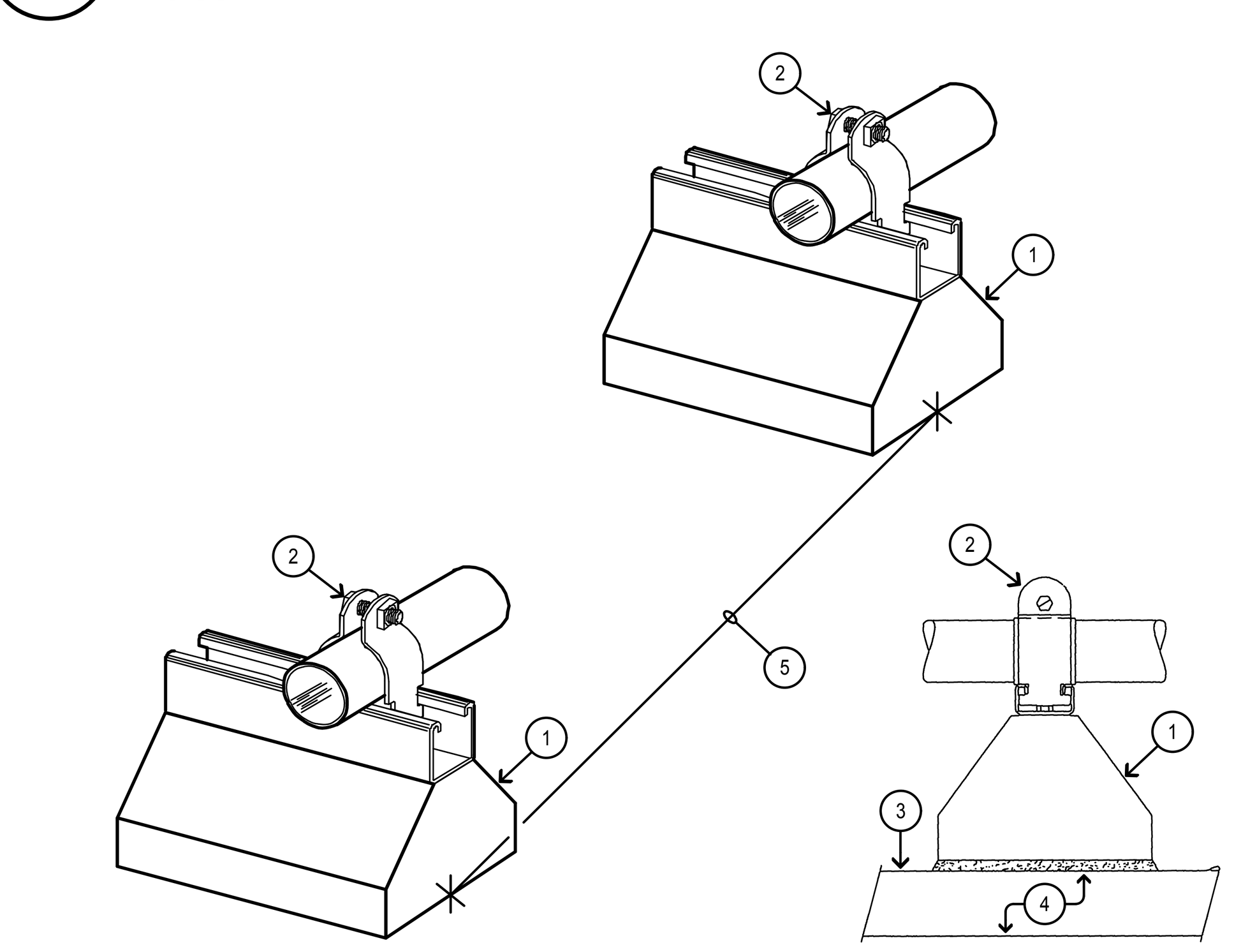


DETAIL NOTES:

1. WEATHERPROOF CONDULET.
2. CONDUIT PER DRAWINGS.
3. PENETRATION FLASHING ("ROOF JACK") SET IN PREHEATED SURFACE.
4. 3" WIDE ELASTOMERIC FLASHING STRIP OR NON-HARDENING MASTIC.
5. STAGGERED NAILING.
6. MOPPED HOT TAR.
7. PROVIDE FIRE STOPPING MATERIAL SIMILAR TO U.L. FC 1002 REQUIREMENTS.
8. 2" DIA. MAXIMUM PENETRATION SIZE.

6 CONDUIT PENETRATION

NO SCALE

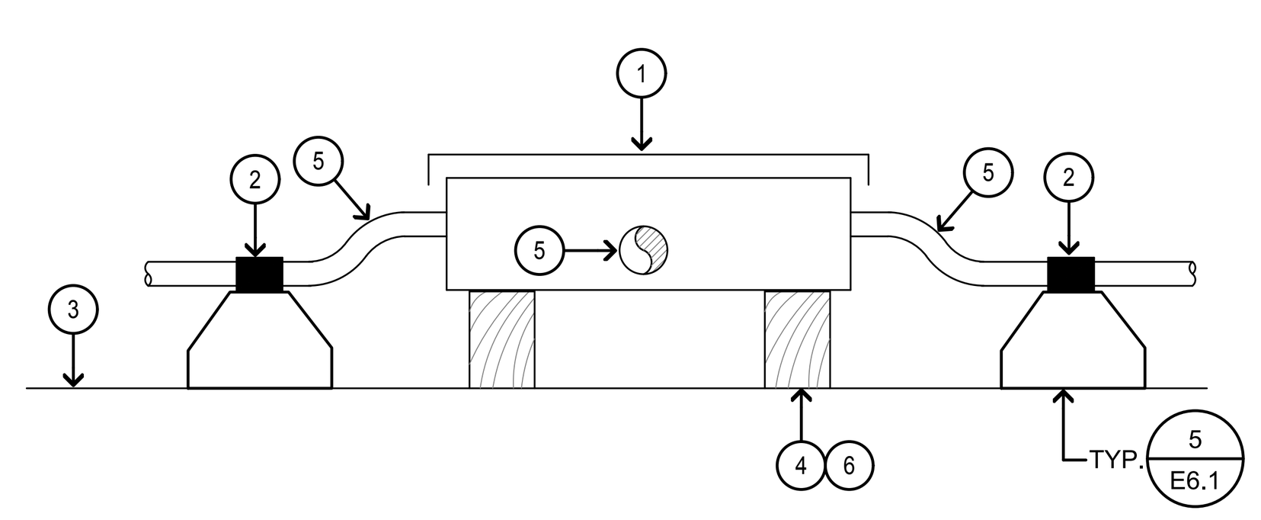


DETAIL NOTES:

1. ROOF TOP CONDUIT SUPPORT; 5" x 6" x 9.5" WITH 1" HIGH 14 GA. GALVANIZED CHANNEL STRUT. COOPER B-LINE "DB" SERIES.
2. 14 GA. RIGID CONDUIT CLAMP WITH RECESS HEX HEAD MACHINE SCREW AND SQUARE NUT COMBINATION. COPPER B-LINE B200 SERIES.
3. CLEAN (E) ROOF AREA AS REQUIRED.
4. ROOF STRUCTURE.
5. PROVIDE AND INSTALL CONDUIT SUPPORT PER CEC REQUIREMENTS.

5 ROOF MOUNTED CONDUIT SUPPORT DETAIL

NO SCALE

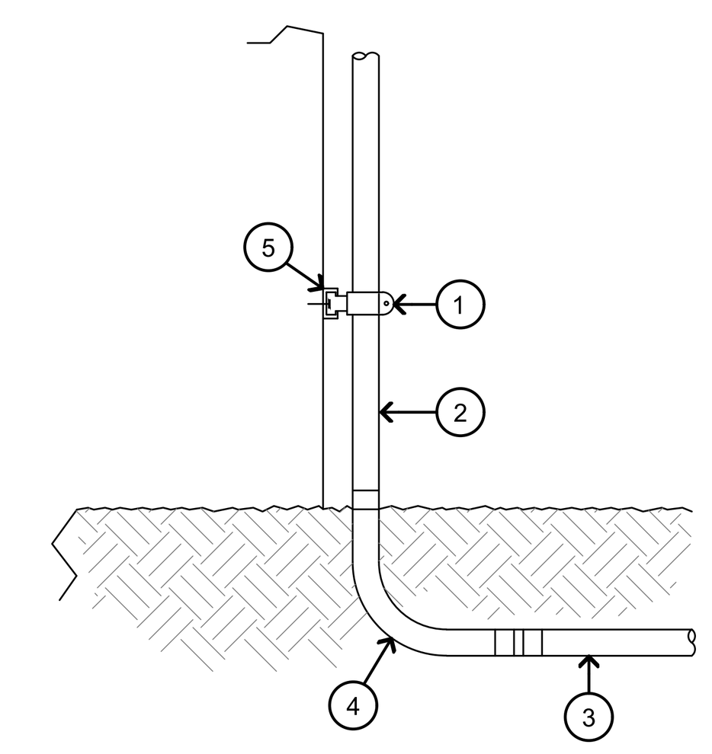


DETAIL NOTES:

1. PULLCAN, NEMA 4 LOCKABLE.
2. CONDUIT STRAP.
3. FINISHED ROOF.
4. 4 x 4 SLEEPER, SET IN MASTIC.
5. RIGID STEEL CONDUITS.
6. PRESSURE TREATED LUMBER.

4 PULLCAN AT ROOF DETAIL

NO SCALE



DETAIL NOTES:

1. UNISTRUT BRACKET.
2. GALVANIZED RIGID STEEL CONDUIT.
3. SCHEDULE 40 PVC.
4. WRAPPED GALVANIZED RIGID STEEL ELBOW AND UNDERGROUND RISER.
5. UNISTRUT CHANNEL.

GENERAL NOTES:
A. FOR WOOD STUD WALL:
USE 3/8" LAG BOLT WITH MIN. 3/4" EMBEDMENT INTO STUDS.
(ONE AT EACH END OF BRACKET)

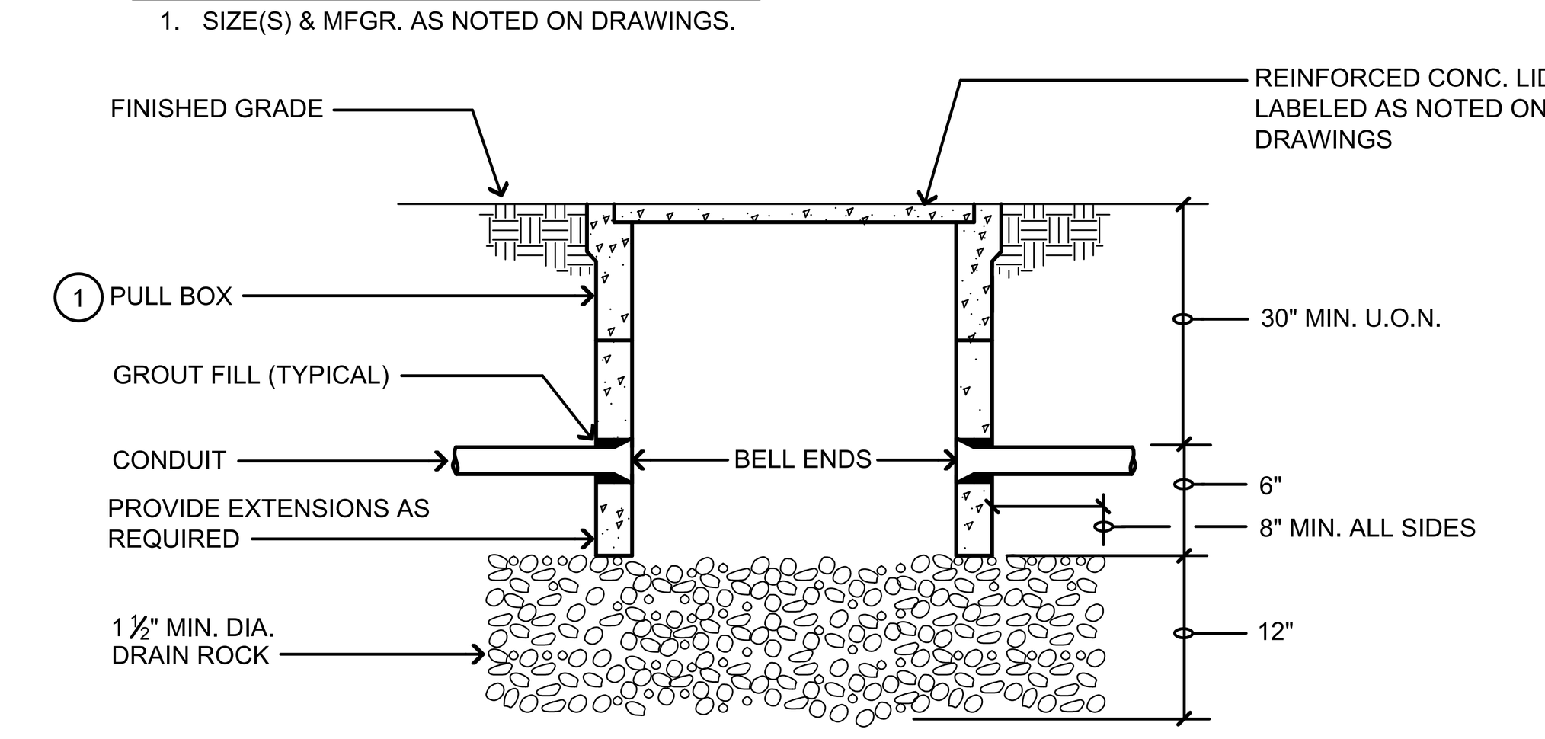
B. FOR CONCRETE WALL:
USE 3/8" WEDGE ANCHOR WITH MIN. 2 1/2" EMBEDMENT INTO CONCRETE WALL. (ONE AT EACH END OF BRACKET)

3 UNDERGROUND CONDUIT RISER DETAIL

NO SCALE

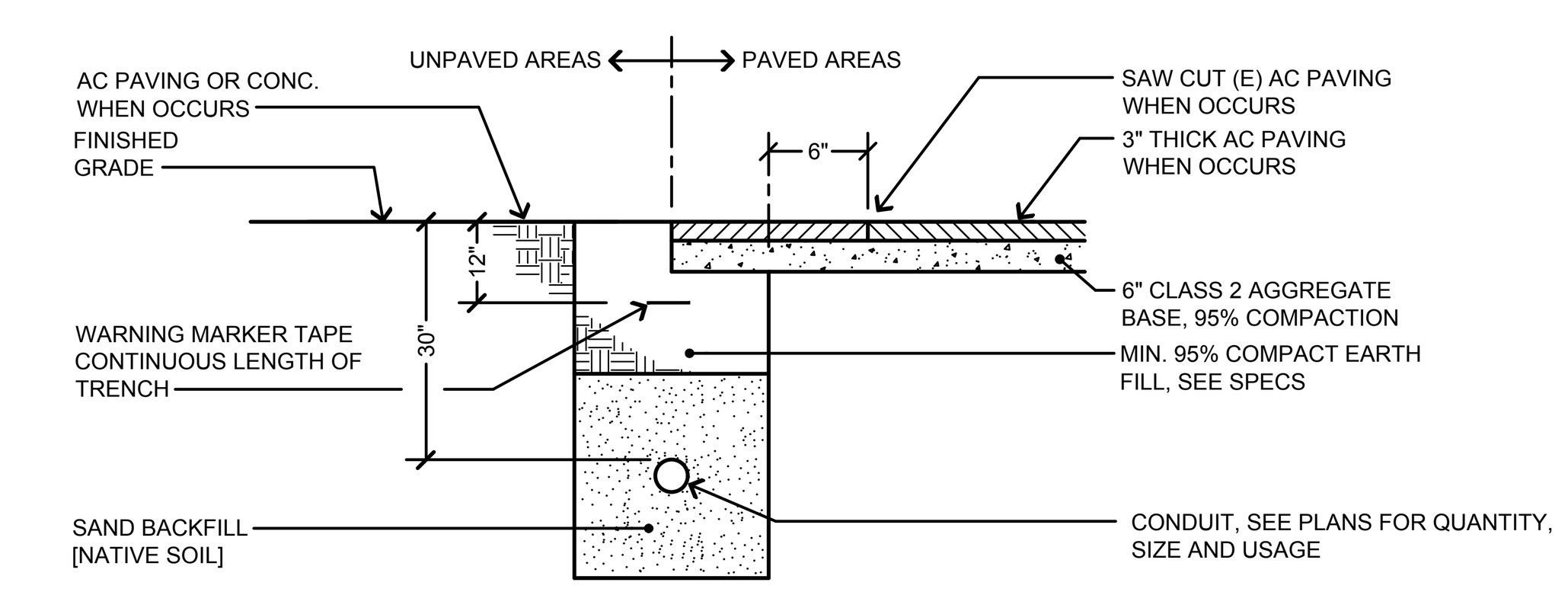
DETAIL NOTES:

1. SIZE(S) & MFGR. AS NOTED ON DRAWINGS.



2 TYPICAL PULLBOX DETAIL

NO SCALE



GENERAL NOTES:

1. SAW CUT, TRENCH & BACKFILL FOR (N) CONDUITS. PATCH WALKWAY TO MATCH (E) SURROUNDING SURFACES. CARE SHALL BE TAKEN TO PROTECT EXISTING TREES. RESEED OR RESOD (E) DISTURBED PLANTED AREAS TO ARCHITECT'S SATISFACTION.
2. EXISTING A.C. SHALL BE CUT AND REMOVED IN SUCH A MANNER SO AS NOT TO TEAR BULGE OR DISPLACE ADJACENT PAVEMENT. EDGES SHALL BE CLEAN AND VERTICAL. ALL CUTS SHALL BE PARALLEL OR PERPENDICULAR TO STREET CENTERLINE, WHEN PRACTICAL.
3. BASE MATERIAL TO BE REPLACED TO THE DEPTH OF EXISTING BASE AND COMPACTED TO A MIN. 95% RELATIVE COMPACTION. A.C. MAY BE SUBSTITUTED FOR BASE MATERIAL. WHEN USED AS BACKFILL, CLASS 100-E-100 P.C.C. MAY BE SUBSTITUTED FOR BASE MATERIAL.
4. A TACK COAT OF ASPHALTIC EMULSION OR PAVING ASPHALT SHALL BE APPLIED TO EXISTING A.C. AT ALL CONTACT SURFACES, PRIOR TO RESURFACING.
5. ASPHALTIC CONCRETE RESURFACING;
A) MINIMUM TOTAL THICKNESS SHALL BE ONE INCH GREATER THAN EXISTING A.C.
B) A.C. SHALL BE HOT PLANT MIX.
6. ALL A.C. RESURFACING SHALL BE SEAL COATED WITH AN EMULSIFIED ASPHALT AND COVERED WITH CLEAN SAND.

1 TYPICAL TRENCH SECTION

NO SCALE

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SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE. SUITE 200
CAMPBELL, CA 95008
PHONE: 408-879-0600
FAX: 408-377-6066

LICENSED ARCHITECT
MARK C FINNEY
NO. C-24573
REN. 9-30-23
STATE OF CALIFORNIA

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.
Project No. 21-070.00
60 Garden Court • Suite 210 • Monterey, CA 93940
T.831.646.3330 • F.831.646.3336 • www.acemb.com

ELECTRICAL DETAILS

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

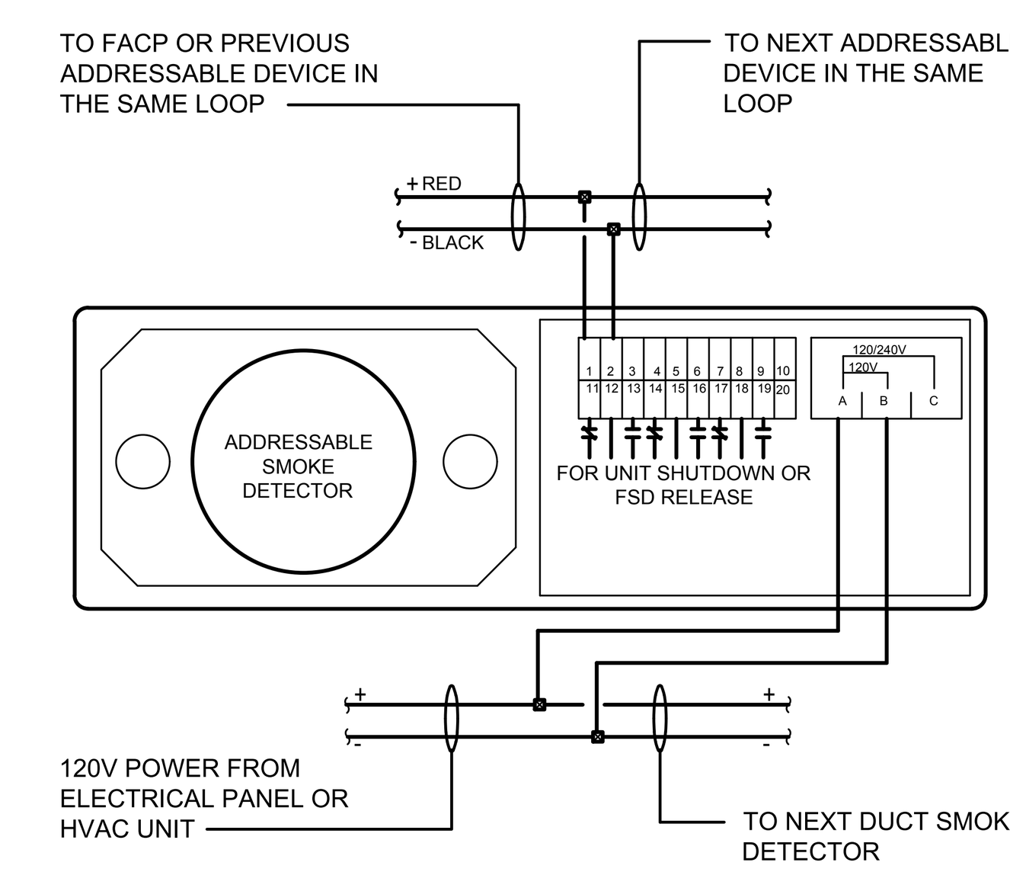
REVISIONS NO.	ITEM	DATE
1		

DRAWN BY: GP
CHECKED BY: NA
SFA JOB NO: 20061
DATE: 03/31/2021

E6.1

FIRE ALARM EQUIPMENT LIST

SYMBOL	DESCRIPTION AND MODEL NUMBER	MFGR'S PART No.	CSFM LISTING
FACP	EXISTING FIRE ALARM CONTROL PANEL, NOTIFIER AM2020/AFP-1010 SERIES.	AM2020/AFP-1010	7165-0028-0141
R	INTELLIGENT ADDRESSABLE RELAY MODULE, NOTIFIER FRM-1 SERIES.	FRM-1	7300-0028:0219
	INTELLIGENT ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR, NOTIFIER FSP-751 SERIES.	FSP-751	7272-0028:0206
	WATERTIGHT PHOTOELECTRIC DUCT SMOKE DETECTOR HOUSING, NOTIFIER DNRW SERIES.	DNRW	3240:1653:0209



GENERAL NOTE:
COORDINATE REQUIRED CONNECTIONS WITH MECHANICAL CONTRACTOR.

1 DUCT DETECTOR WIRING DIAGRAM

NO SCALE

FIRE ALARM GENERAL NOTES

1. WIRING MUST BE LISTED FOR USE AS REQUIRED BY TITLE 24/CEC, ARTICLE 760.
2. WIRE USED IN WET LOCATIONS SHALL BE OF AN APPROVED TYPE IN ACCORDANCE WITH 3-310-8, T24/CEC (I.E. THHW OR EQUAL).
3. UNDER GROUND AND EXTERIOR CONDUITS TO HAVE WATERTIGHT FITTINGS AND WIRES APPROVED FOR WET LOCATION.
4. ALL CONDUCTORS SHALL BE ROUTED IN CONDUIT UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS. MINIMUM CONDUIT SIZE SHALL BE 3/4."
5. THE CONDUIT AND WIRE SHOWN ON THESE PLANS ARE SHOWN DIAGRAMMATICALLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD TO SUIT FIELD CONDITIONS. "AS-BUILT" PLANS SHALL BE MAINTAINED AND BE PROVIDED AS REQUIRED BY THE PROJECT INSPECTOR OF RECORD.
6. PENETRATIONS OF FIRE RATED WALLS SHALL BE PROTECTED IN ACCORDANCE WITH CALIFORNIA BUILDING CODE, CHAPTER 7, TITLE 24. PROVIDE DETAILS OF THROUGH PENETRATION FIRE-STOP SYSTEMS FOR ALL PIPE/CABLE/CONDUIT PASSING THROUGH FIRE RATED WALLS/FLOORS REQUIRING PROTECTED OPENINGS.
7. ALL DEVICES SHALL BE "CSFM" LISTED.
8. EXTERIOR DEVICES SHALL BE LISTED FOR EXTERIOR USE BY "CSFM."
9. AUDIBLE ALARM PRODUCED BY "FACP" SHALL SOUND THE CALIFORNIA UNIFORM SIGNAL IN TEMPORAL MODE.
10. AUDIBLE FIRE ALARM SOUND LEVEL SHALL BE AT LEAST 15DBA ABOVE THE AVERAGE SOUND LEVEL.
11. AUDIBLE SIGNALS INTENDED FOR OPERATION IN THE PUBLIC SHALL HAVE A SOUND LEVEL OF NOT LESS THAN 75DBA AT 10 FEET OR MORE THAN 110DBA AT THE MINIMUM HEARING DISTANCES FROM THE AUDIBLE APPLIANCE.
12. WHERE VISUAL DEVICES ARE REQUIRED, VISUAL DEVICE SHOULD NOT EXCEED 2 FLASHES PER SECOND AND SHOULD NOT BE SLOWER THAN 1 FLASH EVERY SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15 CANDELA. NO PLACE IN ANY ROOM SHALL BE MORE THAN 50 FEET FROM A DEVICE.
13. APPROVED BY THE "DIVISION OF THE STATE ARCHITECT/OFFICE OF REGULATION SERVICES." CONTRACTOR SHALL PROVIDE COPIES OF APPROVED PLANS TO THE PROJECT INSPECTOR OF RECORD PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL SUBMIT SHOP DRAWING TO ENGINEER PRIOR TO PURCHASE FOR REVIEW. THE FIRE PROTECTION SYSTEM SHALL NOT BE INSTALLED UNTIL SHOP DRAWINGS HAVE BEEN SUBMITTED TO AND RECEIVED BY THE ENGINEER OF RECORD.
14. FINAL ALARM TEST SHALL BE WITNESSED BY THE DSA INSPECTOR OF RECORD (IOR). BOTH THE DSA INSPECTOR OF RECORD (IOR) AND THE LOCAL FIRE AUTHORITY SHALL BE NOTIFIED OF DATE AND TIME OF FINAL FIRE ALARM TESTING BY THE FIRE ALARM CONTRACTOR. FIRE ALARM CONTRACTOR SHALL PROVIDE "RECORD OF COMPLETION" TO THE INSPECTOR OF RECORD (IOR)/DSA AFTER COMPLETION OF OPERATIONAL ACCEPTANCE TEST.
15. POWER SERVICE SHALL BE ON A DEDICATED, 120V BRANCH CIRCUIT, WITH A RED MARKING AND IDENTIFIED AS "FIRE ALARM CIRCUIT CONTROL."
16. AUTOMATIC FIRE ALARM SYSTEM SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION AS REQUIRED BY NFPA 72 AS AMENDED BY CFC CHAPTER 80. THE SUPERVISING STATION SHALL BE LISTED AS EITHER UUFX OR UUJS BY UNDERWRITERS LABORATORY OR SHALL MEET THE REQUIREMENTS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011.

SYMBOLS & ABBREVIATIONS

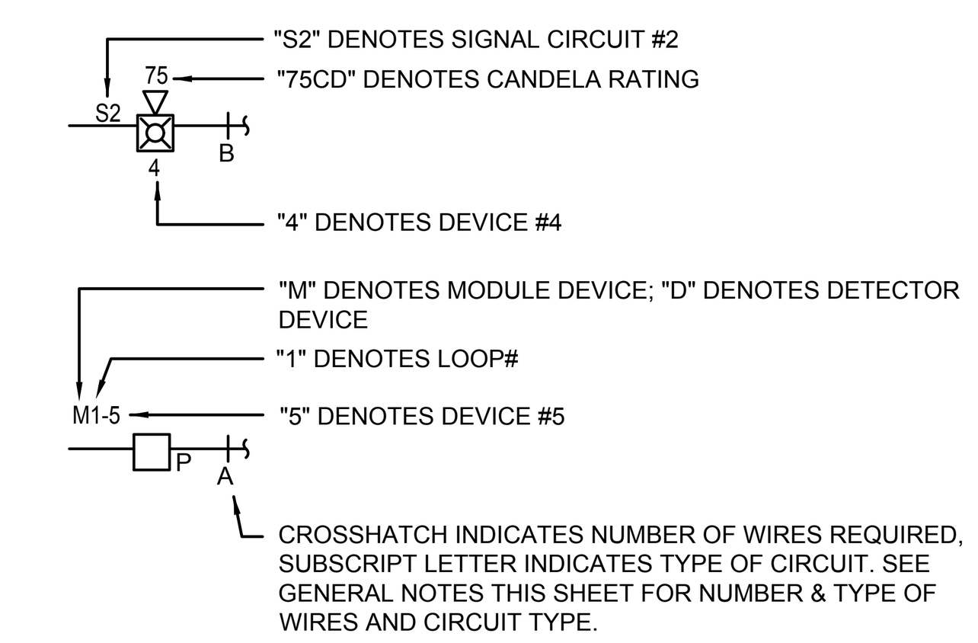
SYMBOLS

(solid line)	CONDUIT - CONCEALED IN WALLS OR CEILING.
(dashed line)	CONDUIT - IN OR BELOW FLOOR: 3/4"C MIN.
(line with break)	CONDUIT CONTINUATION.
201	ROOM NUMBER.
2	SHEET NOTE REFERENCE SYMBOL; SEE ASSOCIATED NOTE ON SAME SHEET.
2 / E1	DETAIL OR SECTION DESIGNATION.

ABBREVIATIONS

ARCH.	ARCHITECT	FSD	FIRE SMOKE DAMPER
AWG	AMERICAN WIRE GAUGE	IDC	INITIATING DEVICE CIRCUITS
BKR	BREAKER	(N)	NEW
C	CONDUIT	NAC	NOTIFICATION APPLIANCE CIRCUITS
CB	CIRCUIT BREAKER		
CKT	CIRCUIT	NIC	NOT IN CONTRACT
CLG	CEILING	NO	NUMBER
(E)	EXISTING	SLC	SIGNALING LINE CIRCUITS
EOL	END OF LINE	TYP	TYPICAL
FA	FIRE ALARM	UON	UNLESS OTHERWISE NOTED
FACP	FIRE ALARM CONTROL PANEL	WP	WEATHERPROOF
FBO	FURNISHED BY OTHERS		

TYPICAL ZONE NOMENCLATURE



PROJECT DESCRIPTION

SCOPE OF WORK:

EXTENSION OF INITIATION DETECTION CIRCUIT FOR ADDITION DUCT SMOKE DETECTOR DEVICES FOR REPLACEMENT OF A/C UNITS.

SYSTEM DESCRIPTION:
SLC = CLASS B
IDC = CLASS B
NAC = CLASS B

DESIGN BY:
NAJIB ANWARY, PE.

FIRE ALARM SYSTEM OPERATIONAL MATRIX

EFFECT	ALARM									TROUBLE					SUPERVISORY					MISC.								REMARKS
CAUSE	ALARM AT FACP	ALARM AT ANNUNCIATOR	ALARM AT OFF SITE REPORTING	ACTIVATE F.A. PANEL	ACTIVATE AUDIBLES	ACTIVATE VISUALS	ACTIVATE AUDIO/VISUALS	ACTIVATE VOICE EVAC.	ACTIVATE AUDIBLE SIGNAL (TEMPORAL 4) AS LOCAL ALARM IN CLASSROOM	TROUBLE AT FACP	TROUBLE AT ANNUNCIATOR	TROUBLE AT OFF SITE REPORTING			SUPERVISORY AT FACP	SUPERVISORY AT ANNUNCIATOR	SUPERVISORY AT OFF SITE REPORTING	SUPERVISORY AT CARBON MONOXIDE ALARM		FAN SHUT DOWN	DEACTIVATE AUDIBLES	DEACTIVATE VISUALS	DEACTIVATE AUDIO/VISUALS	SYSTEM NORMAL	ELEVATOR RECALL	DOOR HOLDER RELEASE	SHUT FIRE SMOKE DAMPERS	
DUCT SMOKE DETECTORS	•	•	•	•	•	•	•	•												•						•	•	
SIGNAL SILENCE																						•						
SYSTEM RESET																					•	•	•	•				
AC POWER FAILURE										•	•	•																
FIRE ALARM TROUBLE (OPEN, SHORTS, OR GROUNDS) ON INITIATION OR SIGNALING CIRCUITS										•	•	•																

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REGISTERED PROFESSIONAL ENGINEER
NAJIB ANWARY
No. E21043
EXP. 3/31/23
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FIRE ALARM SYMBOLS, ABBREV., EQUIPMENT LIST, OPERATIONAL MATRIX, DETAILS & NOTES.

HVAC BOILER REPLACEMENT
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REVISIONS

NO.	ITEM	DATE
1		

DRAWN BY:	GP
CHECKED BY:	NA
SFA JOB NO: 20061	DATE: 03/31/2021

FA0.1

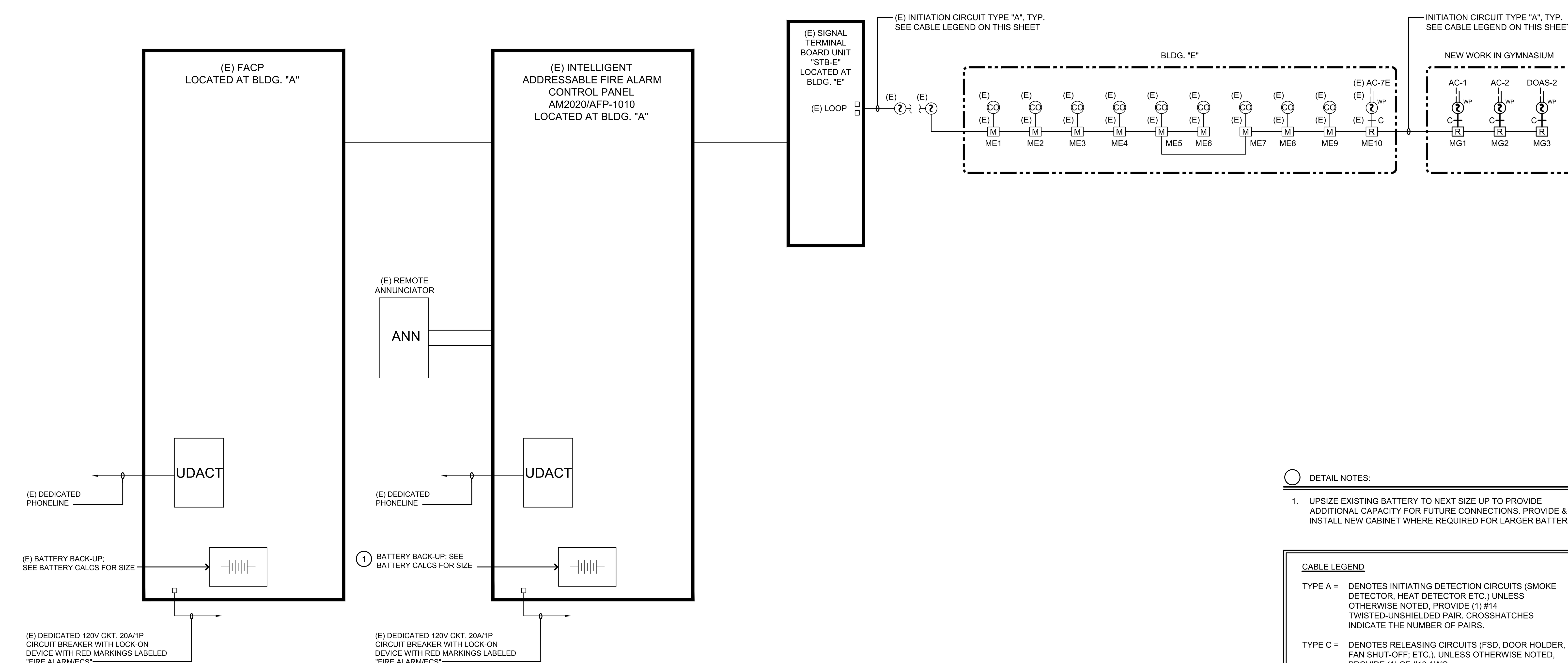
BATTERY CALCULATIONS

EXISTING FIRE ALARM CONTROL PANEL "FACP"

QTY	PRODUCT ID	DESCRIPTION	STANDBY		ALARM	
			EACH	TOTAL	EACH	TOTAL
1	AMPS-24	(E) PRIMARY INPUT POWER UNIT	0.1300	0.1300	0.0520	0.0520
1	CPU2-3030	(E) PRIMARY DISPLAY	0.1200	0.1200	0.1200	0.1200
1	LCM-320	(E) SIGNALING LINE CIRCUIT	0.1300	0.1300	0.1300	0.1300
3	LEM-3030	(E) SIGNALING LINE CIRCUIT	0.1000	0.3000	0.1000	0.3000
1	ACPS-610	(E) ADDRESSABLE POWER SUPPLY	0.0000	0.0000	0.0000	0.0000
3	SLC	(E) SLC DEVICE ACTIVATION CURRENT	0.2000	0.6000	0.2000	0.6000
1	LCD-160	(E) LIQUID CRYTAL DISPLAY MODULE	0.0500	0.0500	0.1000	0.1000
1	UDACT	(E) UNIVERSAL DACT	0.0400	0.0400	0.1000	0.1000
		PANEL STANDBY CURRENT		1.3700		
		PANEL ALARM CURRENT				1.4020

FIELD DEVICES

QTY	PRODUCT ID	DESCRIPTION	STANDBY		ALARM	
			EACH	TOTAL	EACH	TOTAL
3	FRM-1	NEW ADDRESSABLE RELAY MODULE	0.0002	0.0007	0.0004	0.0011
3	FSP-751	NEW ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR	0.0004	0.0011	0.0004	0.0011
		DESCRIPTION		STANDBY		ALARM
		CONTROL PANEL		1.3700		1.4020
		FIELD DEVICES		0.0018		0.0023
		TOTAL STANDBY CURRENT		1.3718		
		X 24 HOUR STANDBY		32.9223		
		TOTAL ALARM CURRENT				1.4043
		5 MINUTES OF ALARM (X .083)				0.1166
		TOTAL BATTERY REQUIREMENT				33.0389
		SAFETY MARGIN (20%)				39.6467
		BATTERY SUPPLIED				(2) 12V 55AH



1 FIRE ALARM RISER DIAGRAM

NO SCALE

DETAIL NOTES:

1. UPSIZE EXISTING BATTERY TO NEXT SIZE UP TO PROVIDE ADDITIONAL CAPACITY FOR FUTURE CONNECTIONS. PROVIDE & INSTALL NEW CABINET WHERE REQUIRED FOR LARGER BATTERIES.

CABLE LEGEND

TYPE A = DENOTES INITIATING DETECTION CIRCUITS (SMOKE DETECTOR, HEAT DETECTOR ETC.) UNLESS OTHERWISE NOTED, PROVIDE (1) #14 TWISTED-UNSHIELDED PAIR. CROSSHATCHES INDICATE THE NUMBER OF PAIRS.

TYPE C = DENOTES RELEASING CIRCUITS (FSD, DOOR HOLDER, FAN SHUT-OFF; ETC.), UNLESS OTHERWISE NOTED, PROVIDE (1) OF #16 AWG.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-119604 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/30/2021
(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE INTERIORS PLANNING
2155 SOUTH BASCOM AVE.
SUITE 200
CAMPBELL, CA 95008
PHONE: 408-879-0600
FAX: 408-377-6066

LICENSED ARCHITECT
MARK C FINNEY
NO. C-24673
REN 9-30-23
STATE OF CALIFORNIA

NAJIB ANWARY
No. E21043
EXP. 3/31/22
ELECTRICAL

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.
Project No. 21-070.00
60 Garden Court • Suite 210 • Monterey, CA 93940
T.831.646.3330 • F.831.646.3336 • www.acemb.com

FIRE ALARM RISER DIAGRAM & BATTERY CALCULATIONS

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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FA1.1

SHEET NOTES

1. LOCATED ON ROOF.
2. SHOWN FOR REFERENCE ONLY.

CABLE LEGEND

TYPE A = DENOTES INITIATING DETECTION CIRCUITS (SMOKE DETECTOR, HEAT DETECTOR ETC.) UNLESS OTHERWISE NOTED, PROVIDE (1) #14 TWISTED-UNSHIELDED PAIR. CROSSHATCHES INDICATE THE NUMBER OF PAIRS.

(E) ACCESSIBLE STALLS
DSA #01-102244

BUILDING A
DSA #01-102244, #30222

BUILDING E
DSA #01-102244, #30222

BUILDING F
DSA #30222

(E) FACP 2

(E) AC-7E
WP
R
(E)
1

WP
A
A

D.A

1 FA4.1 1 FA4.2

GYMNASIUM
DSA #01-102244, #57576

(E) TOILET

(E) PORTABLE BUILDINGS
DSA #01-106466

BUILDING B
DSA #01-102244, #31577

BUILDING D
DSA #01-102244, #31577

BUILDING C
DSA #30222

(E) PORT.
(E) GRN. HOUSE
(E) PORT.
(E) PORT.
(E) PORT.

1 FIRE ALARM SITE PLAN
SCALE: 1"=30'-0"

30' 0' 15' 30'

NORTH

G:\Projects\2021\dsh\21-070\00 Harvest Park Boiler Replacement\Dwgs\01\21-070FA2.1.dwg, 9/13/2021 10:15:53 AM

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SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE INTERIORS PLANNING
2355 SOUTH BASCOM AVE.
SUITE 200
CAMPBELL, CA 95008
PHONE: 408.879.6000
FAX: 408.377.6666

LICENSED ARCHITECT
MARK C FINNEY
NO. C-24673
REN. 9-30-23
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
MAJID ANDANI
No. E21043
EXP. 5/31/23
ELECTRICAL
STATE OF CALIFORNIA

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.
Project No. 21-070.00
60 Garden Court ♦ Suite 210 ♦ Monterey, CA 93940
T 831.646.3330 ♦ F 831.646.3336 ♦ www.acemb.com

FIRE ALARM SITE PLAN

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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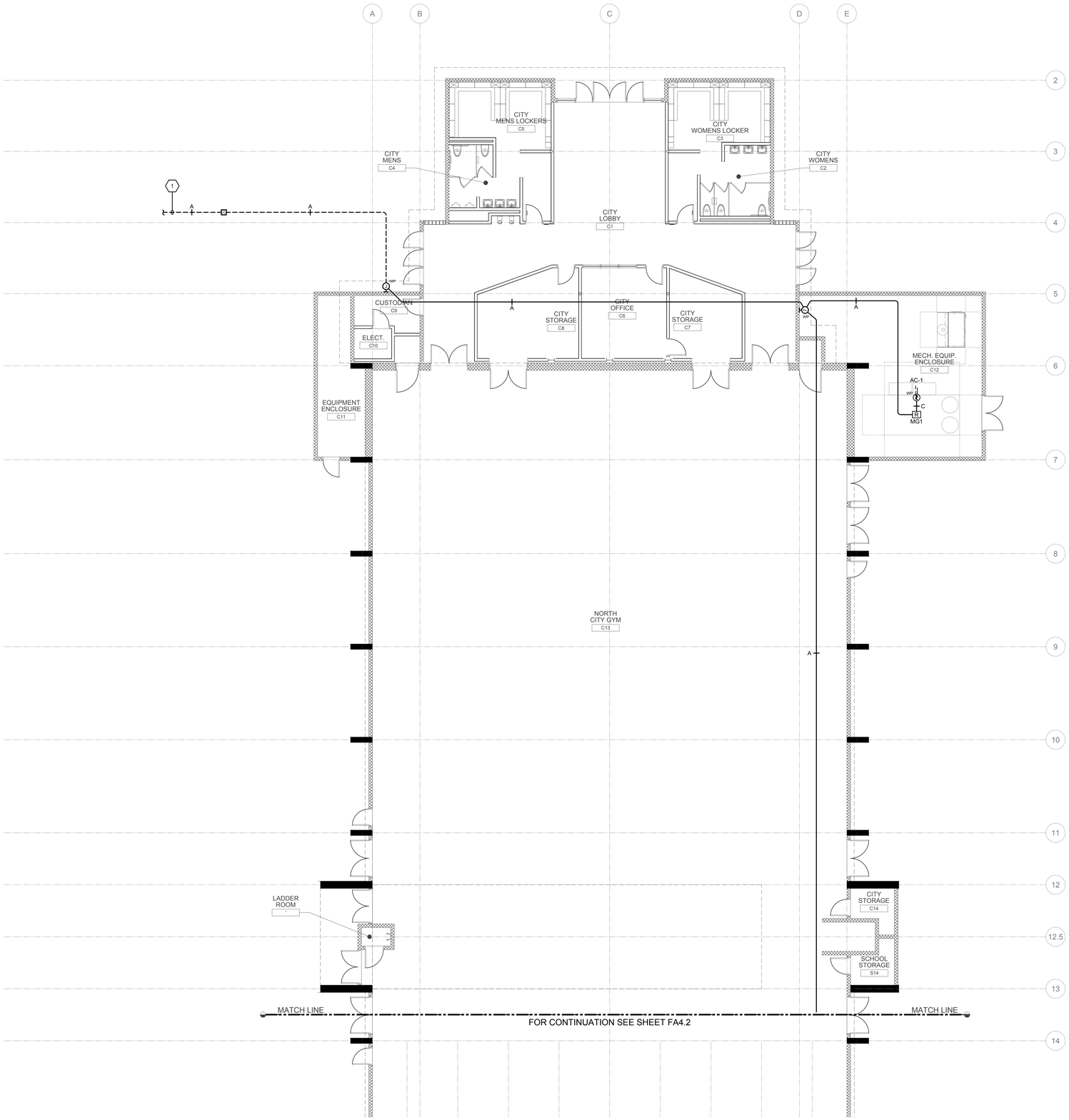

1 FIRE ALARM PLAN - GYM NORTH HALF

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

8" 0' 2' 4' 6' 8'

NORTH

SHEET NOTES

1. SEE 1/FA2.1 FOR CONTINUATION.

CABLE LEGEND

TYPE A = DENOTES INITIATING DETECTION CIRCUITS (SMOKE DETECTOR, HEAT DETECTOR ETC.) UNLESS OTHERWISE NOTED, PROVIDE (1) #14 TWISTED-UNSHIELDED PAIR. CROSSHATCHES INDICATE THE NUMBER OF PAIRS.

TYPE C = DENOTES RELEASING CIRCUITS (FSD, DOOR HOLDER, FAN SHUT-OFF; ETC.). UNLESS OTHERWISE NOTED, PROVIDE (1) OF #16 AWG.

GENERAL NOTE:

FOR MOUNTING AND WIRING OF INITIATING DEVICES SEE FA0.1.

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SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE · INTERIORS · PLANNING
2185 SOUTH BASCOM AVE.
SUITE 200
CAMPBELL, CA 95008
PHONE: 408.879.6109
FAX: 408.377.4666

LICENSED ARCHITECT
MARK C FINNEY
No. C-24673
REN. 9-30-21
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
MAJID ANDANI
No. E21043
EXP. 3/31/23
MECHANICAL
STATE OF CALIFORNIA

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.
Project No. 21-070.00
60 Garden Court ♦ Suite 210 ♦ Monterey, CA 93940
T 831.646.3330 ♦ F 831.646.3336 ♦ www.acemb.com

FIRE ALARM PLAN - GYM NORTH HALF

HVAC BOILER REPLACEMENT
HARVEST PARK MIDDLE SCHOOL
4665 BERNAL AVENUE, PLEASANTON, CA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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FA4.1

CABLE LEGEND

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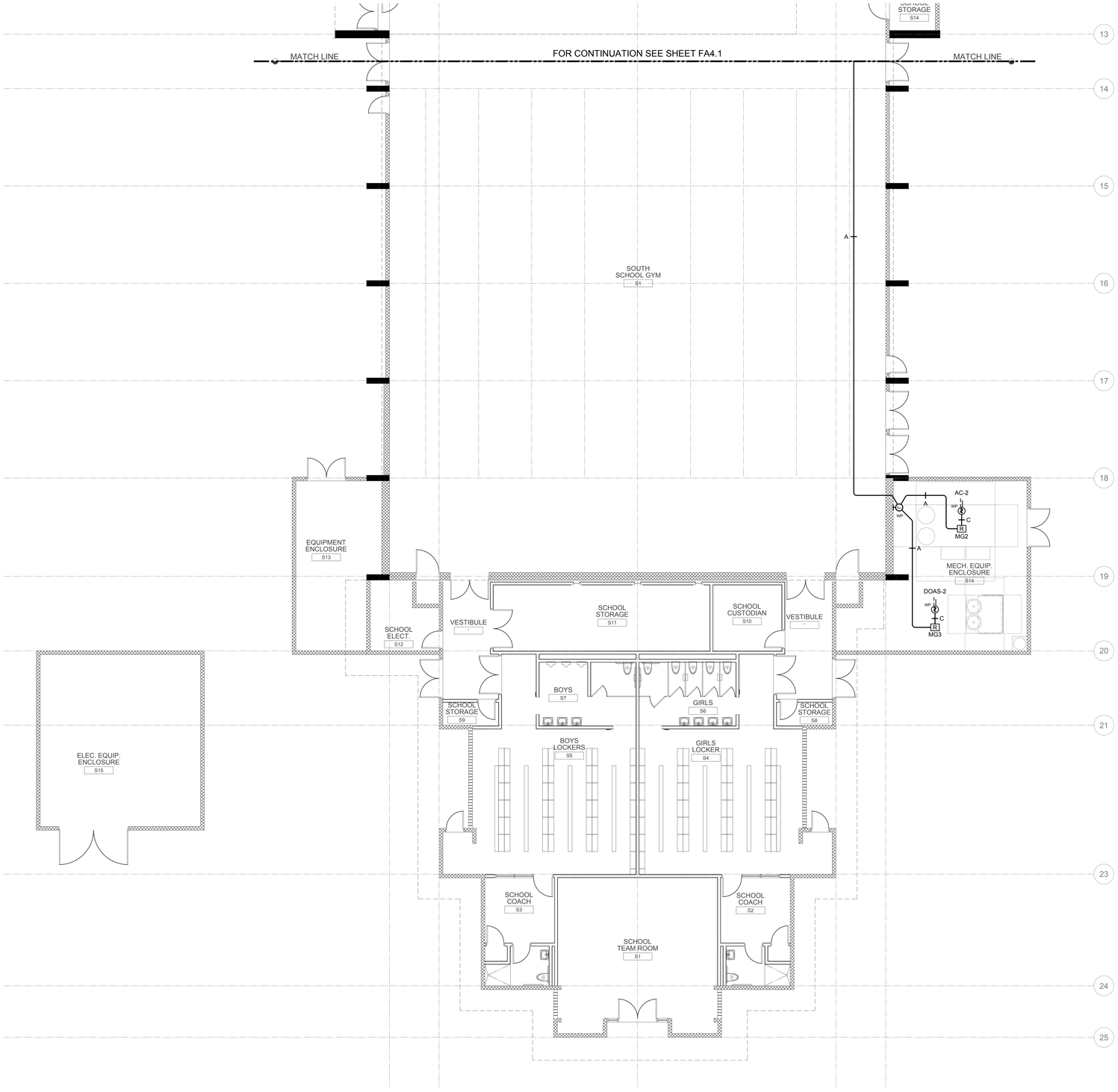
GENERAL NOTE:

FOR MOUNTING AND WIRING OF INITIATING DEVICES SEE FA0.1.



1 FIRE ALARM PLAN - GYM SOUTH HALF

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

NORTH

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SUGIMURA FINNEY ARCHITECTS
SFA
ARCHITECTURE INTERIORS PLANNING
2185 SOUTH BASCOM AVE.
SUITE 208
CAMPBELL, CA 95008
PHONE: 408.879.6009
FAX: 408.377.6066

LICENSED ARCHITECT
MARK C FINNEY
NO. C-24673
REN. 9-30-21
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
MATTHEW ANDREW
No. E21043
EXP. 5/31/23
ELECTRICAL

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.
Project No. 21-070.00
60 Garden Court ♦ Suite 210 ♦ Monterey, CA 93940
T 831.646.3330 ♦ F 831.646.3336 ♦ www.acemb.com

FIRE ALARM PLAN - GYM SOUTH HALF

HVAC BOILER REPLACEMENT
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FA4.2