HEARST ELEMENTARY SCHOOL NEW HVAC AND REROOFING

hearst elementary

5301 CASE AVENUE, PLEASANTON, CA 94566

PLEASANTON UNIFIED SCHOOL DISTRICT

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.

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	O.C.	ON CENTER
	CENTERLINE	OPNG.	OPENING
CER. TILE	CERAMIC TILE	OPP.	OPPOSITE
C.O.	CLEANOUT	O.H.	OPPOSITE HAND
C.O.T.G.	CLEANOUT TO GRADE	O.F.O.S.	OUTSIDE FACE OF STUD
CLR.	CLEAR	O.H.W.S.	OVAL HEAD WOOD SCREW
C.A.H.R.	CLEAR ALL HEART REDWOOD	O.D.	OVERFLOW DRAIN and/or OUTSIDE DIAMETER
C.W.	COLD WATER	O.F.C.I.	OWNER FURNISHED and CONTRACTOR INSTALLED
COL.	COLUMN	PR.	PAIR
COM.	COMMON	PART.	PARTITION
CONC.	CONCRETE	PL	PLATE
CONST.	CONSTRUCTION	d	PENNY (NAILS)
C.H.	CONSTRUCTION HEART	PLAS.	PLASTER
C.J.	CONSTRUCTION JOINT	PLYWD.	PLYWOOD
CONT.	CONTINUOUS	P.V.C.	POLY VINYL CHLORIDE
CONTR.	CONTRACTOR	P.T.	PRESSURE TREATED
CTR.	COUNTER	P.L.	PROPERTY LINE
CTSK.	COUNTER SUNK	R. or RAD.	RADIUS
DET.	DETAIL	R.W.L.	RAIN WATER LEADER
DIA. or Ø	DIAMETER	RWD./R.W.	REDWOOD
DIM.	DIMENSION	REINF.	REINFORCING
D.A.	DISABLED ACCESS	REQ'D	REQUIRED
DR.	DOOR	R.A.G.	RETURN AIR GRILLE
D.S.	DOWNSPOUT	R.E.	RIM ELEVATION
DWG.	DRAWING	R.D.	ROOF DRAIN
D.F.	DRINKING FOUNTAIN and/or DOUGLAS FIR	RM.	ROOM
EA.	EACH	R.O.	ROUGH OPENING
E.W.	EACH WAY	RND.	ROUND
ELEC.	ELECTRIC or ELECTRICAL	R.H.M.S.	ROUND HEAD METAL SCREW
EL. or ELEV.	ELEVATION	R.H.W.S.	ROUND HEAD WOOD SCREW
ENCL.	ENCLOSE and/or ENCLOSURE	SSD.	SEE STRUCTURAL DRAWINGS
EQ.	EQUAL	S.T.S.M.S.	SELF TAPPING SHEET METAL SCREW
EQUIP.	EQUIPMENT	SHEATH.	SHEATHING
(E)	EXISTING	S.M.	SHEET METAL
EX.	EXPANSION	S.M.S.	SHEET METAL SCREW
E.J.	EXPANSION JOINT	S.O.V.	SHUT OFF VALVE
EXP.	EXPOSED	SIM.	SIMILAR
EXT.	EXTERIOR	S.C.	SOLID CORE
F.O.C.	FACE OF CONCRETE	SPEC.	SPECIFICATION
F.O.M.	FACE OF MASONRY	SQ.	SQUARE
F.O.S.	FACE OF STUD	S.F.	SQUARE FEET
F.O.F.	FACE OF FINISH	STAG.	STAGGERED
FIN.	FINISH	STD.	STANDARD
F.F.	FINISHED FLOOR	S.S.	STAINLESS STEEL
F.S.	FINISH SLAB	STL.	STEEL
F.E.	FIRE EXTINGUISHER	STOR.	STORAGE
F.E.C.	FIRE EXTINGUISHER CABINET	STRUCT.	STRUCTURAL
F.H.	FIRE HYDRANT	S.A.G.	SUPPLY AIR GRILLE
F.H.M.S.	FLAT HEAD METAL SCREW	THRES.	THRESHOLD
F.H.W.S.	FLAT HEAD WOOD SCREW	T&G	TONGUE & GROOVE
FL. or FLR.	FLOOR	T.J.	TOOLED JOINT
F.D.	FLOOR DRAIN	T.O.B.	TOP OF BEAM
FTG.	FOOTING	T.O.C.	TOP OF CURB or CONCRETE
FND.	FOUNDATION	T.O.S.	TOP OF STEEL or SHEATHING
GALV.	GALVANIZED	T.O.W.	TOP OF WALK
G.I.	GALVANIZED IRON	TYP.	TYPICAL
GA.	GAUGE	U.O.N.	UNLESS OTHERWISE NOTED
GL.	GLASS	U.O.S.	UNLESS OTHERWISE SHOWN
GLU-LAM	GLUE-LAMINATED	V.T.R.	VENT THROUGH ROOF
GRD.	GRADE	VERT.	VERTICAL
GYP. BD.	GYPSUM BOARD	V.G.	VERTICAL GRAIN
HDW.	HARDWARE	V.I.F.	VERIFY IN FIELD
HT.	HEIGHT	V.C.T.	VINYL COMPOSITION TILE
H.C.	HOLLOW CORE	V.W.C.	VINYL WALL COVERING
H.M.	HOLLOW METAL	V.O.I.P.	VOICE OVER INTERNET PROTOCOL
HORIZ.	HORIZONTAL	W.C.	WATER CLOSET
H.B.	HOSE BIBB	W.H.	WATER HEATER
I.D.	INSIDE DIAMETER	WP.	WATERPROOF
INSUL.	INSULATION	W.R.	WATER RESISTANT
INT.	INTERIOR	W.W.M.	WELDED WIRE MESH
INV.	INVERT	W.D.	WINDOW DIMENSION
JT	JOINT	W/	WITH
J.H.	JOIST HANGER	W/O	WITHOUT
K.D.	KILN DRIED	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

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

PROJECT SUMMARY

MAJORITY OF BUILDINGS A, B AND ALL OF C, RE-SEAL OVER EXISTING LIQUID APPLIED ROOFING SYSTEM. REPLACE EXISTING ROOF DRAINS WITH NEW. REPLACE ALL HVAC UNITS WITH NEW INCLUDING THE EXISTING PLATFORMS. NEW THERMOSTATS WILL BE PROVIDED AND CONNECTED TO THE SITES EXISTING ENERGY MANAGEMENT SYSTEM. EXISTING FIRE ALARM SYSTEM WILL BE EVALUATED TO ENSURE THE SMOKE DETECTORS, SMOKE DAMPERS, Co MONITORS, ETC. ARE COMPLIANT TO CURRENT CODE.

DESIGN TEAM

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ELECTRICAL AND FIRE ALARM ENGINEER
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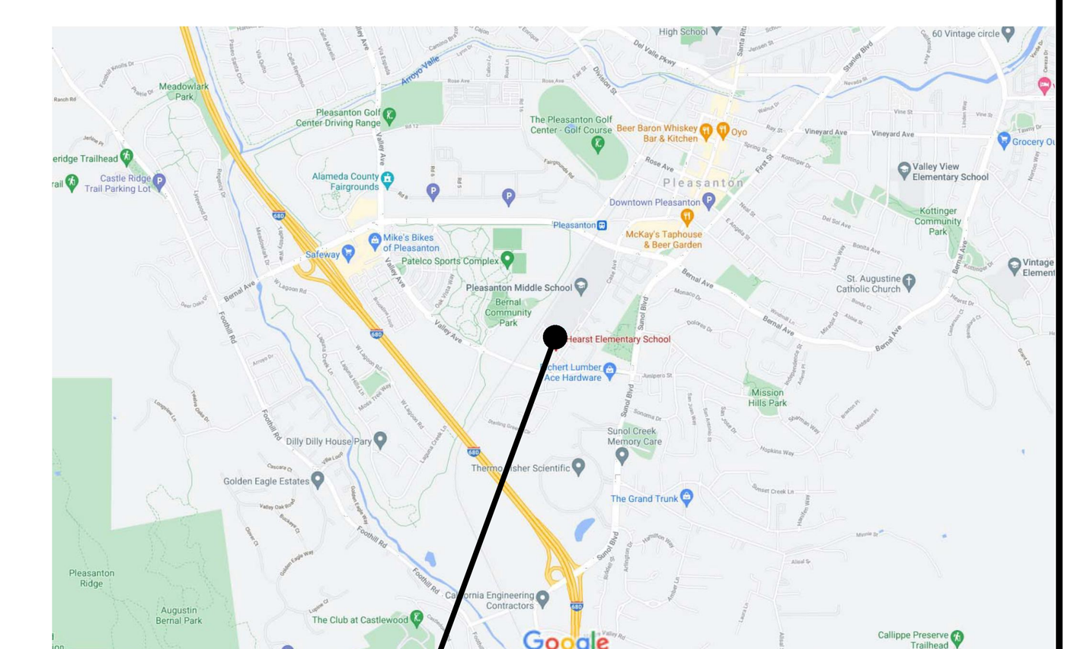
DRAWING INDEX

VICINITY MAP



PROJECT LOCATION

N

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TITLE SHEET

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

NO.	ITEM	DATE

DRAWN BY:	KNU
CHECKED BY:	MB
SFA JOB NO:	DATE:
18084	11/16/2021

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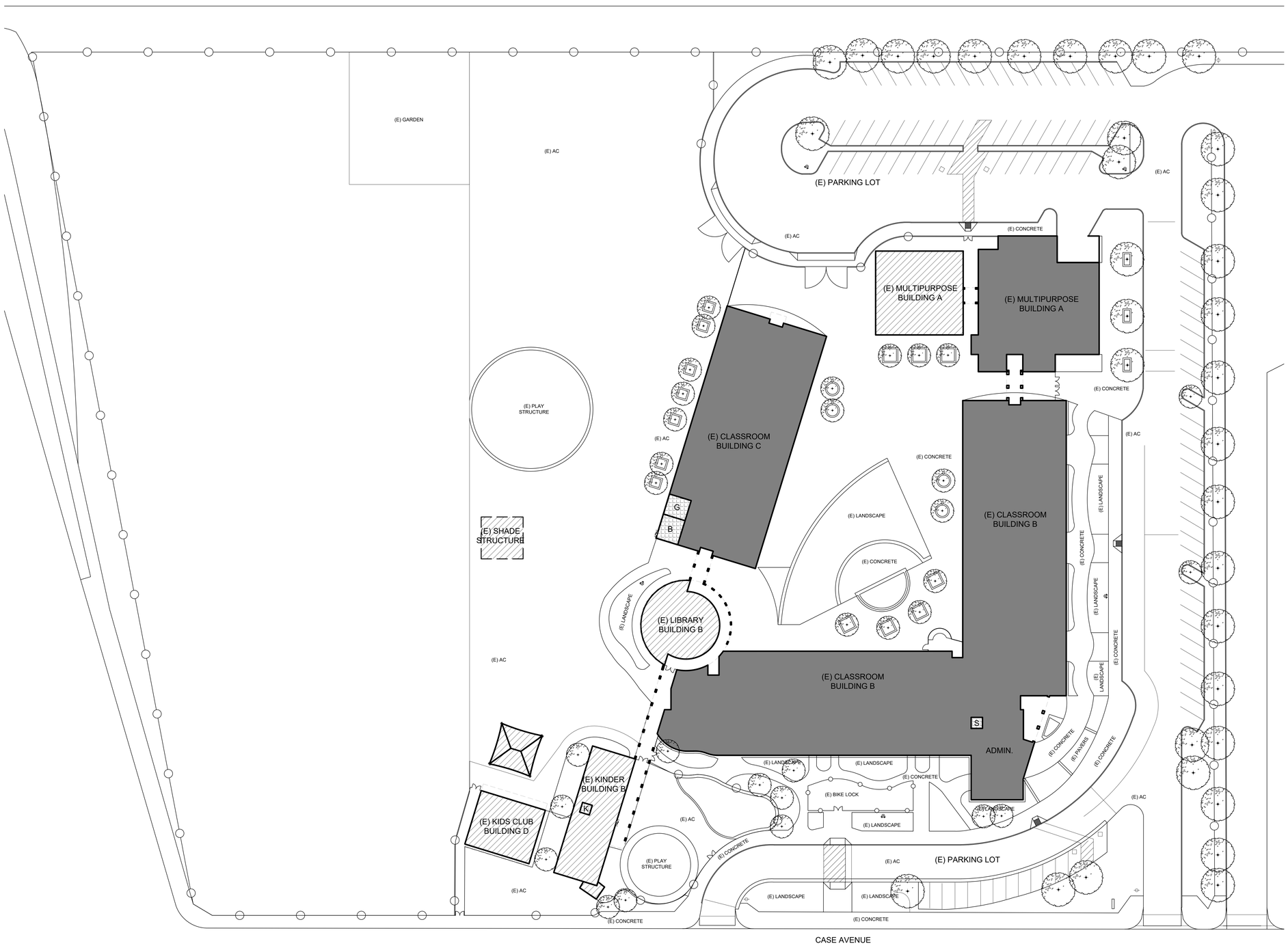
GENERAL NOTES

A. REFER TO MECHANICAL, ELECTRICAL AND FIRE ALARM DRAWINGS FOR EXTENT OF MECHANICAL, ELECTRICAL AND MECHANICAL WORK.



GRAPHIC KEY

- EXISTING PROPERTY LINE
- ROOF OVERHANG
- DECORATIVE FENCE
- EXISTING BUILDING
- SCOPE OF WORK

1 SITE PLAN

1" = 30'-0"

0 7.5' 15' 30' 60' 90'

TRUE NORTH

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SITE PLAN

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
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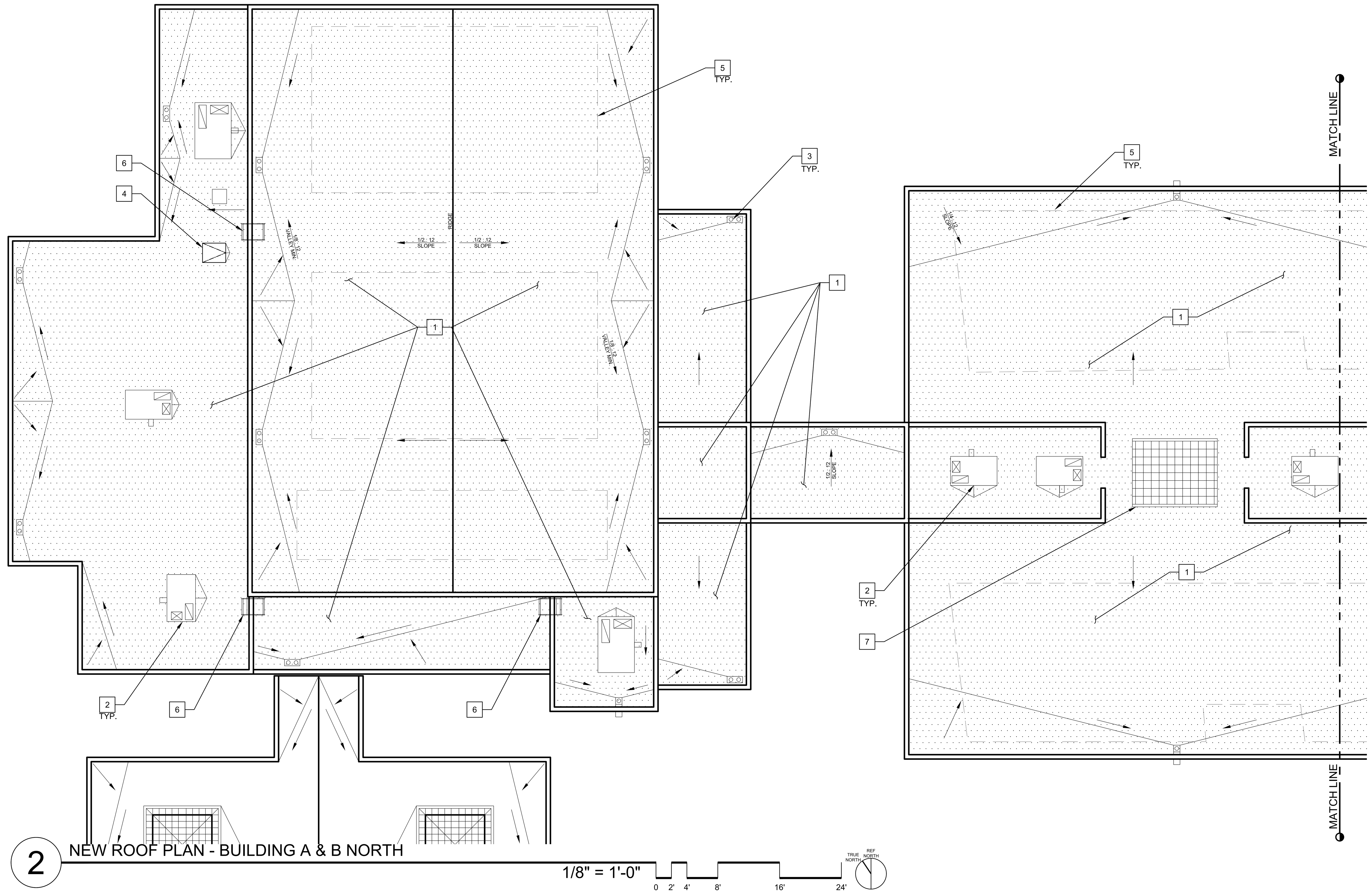
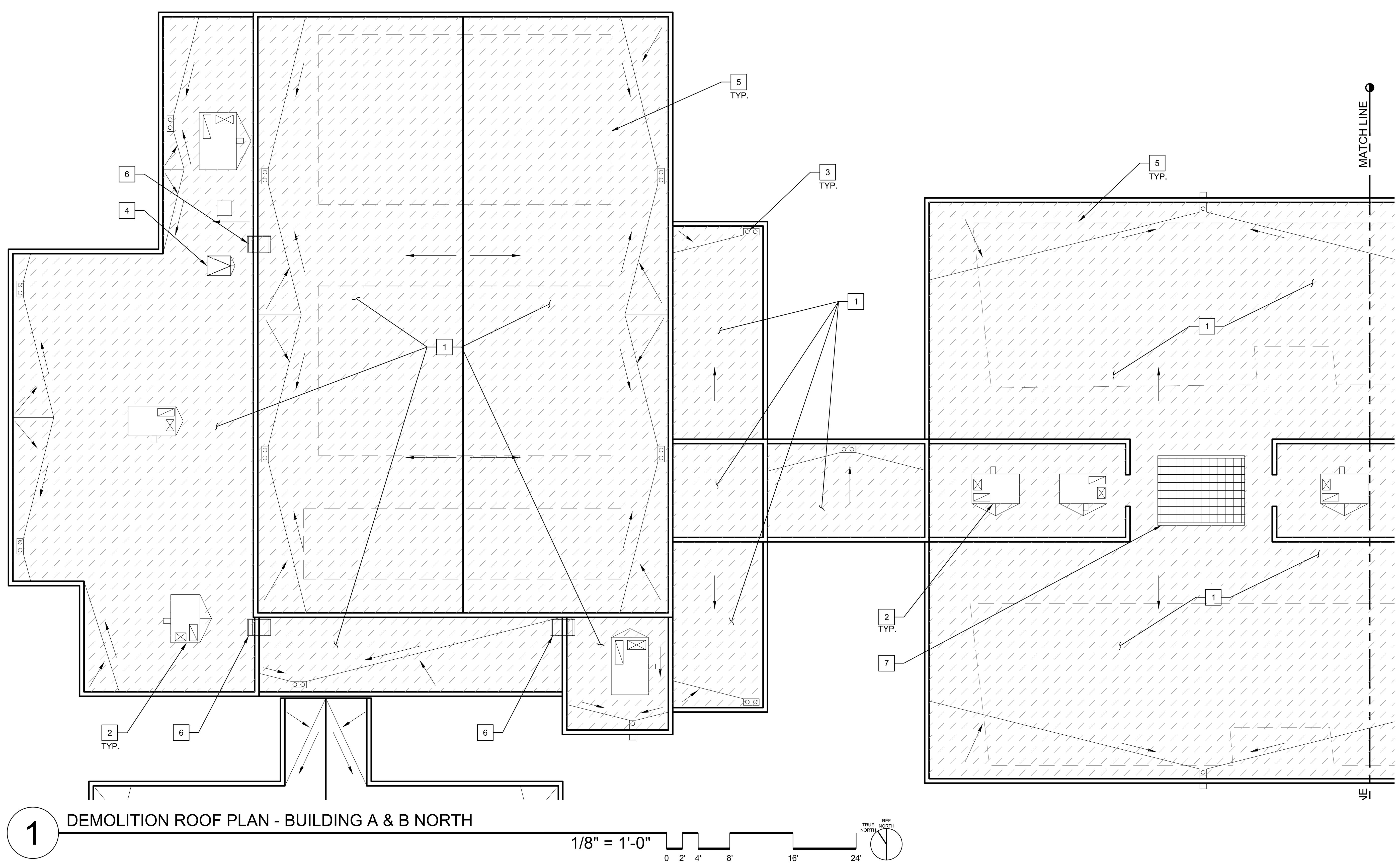


2 NEW ROOF PLAN - BUILDING A & B NORTH



1 DEMOLITION ROOF PLAN - BUILDING A & B 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. COORDINATE SLEEPER LOCATIONS WITH MECHANICAL, PLUMBING, AND/OR ELECTRICAL AS REQUIRED. SEE DETAILS 1 & 4/A9.1.

NEW ROOF PLAN NOTES

1. (N) TOP LAYER AND COATING OVER EXISTING ROOF SYSTEM.
2. (N) HVAC UNITS. SEE MECHANICAL DRAWINGS.
3. CONTRACTOR TO CLEAN OUT ALL EXISITNG ROOF DRAINS. REPLACE ALL DAMAGED ROOF SCREENS AS NEEDED.
4. (E) ROOF HATCH. INSTALL NEW RETRACTABLE SAFETY POST TO (E) ACCESS LADDER IF ONE IS NOT PRESENT.
5. (E) SOLAR PANELS TO REMAIN.
6. (E) ROOF LADDER TO REMAIN.
7. (E) SKYLIGHT TO REMAIN

DEMOLITION ROOF PLAN NOTES

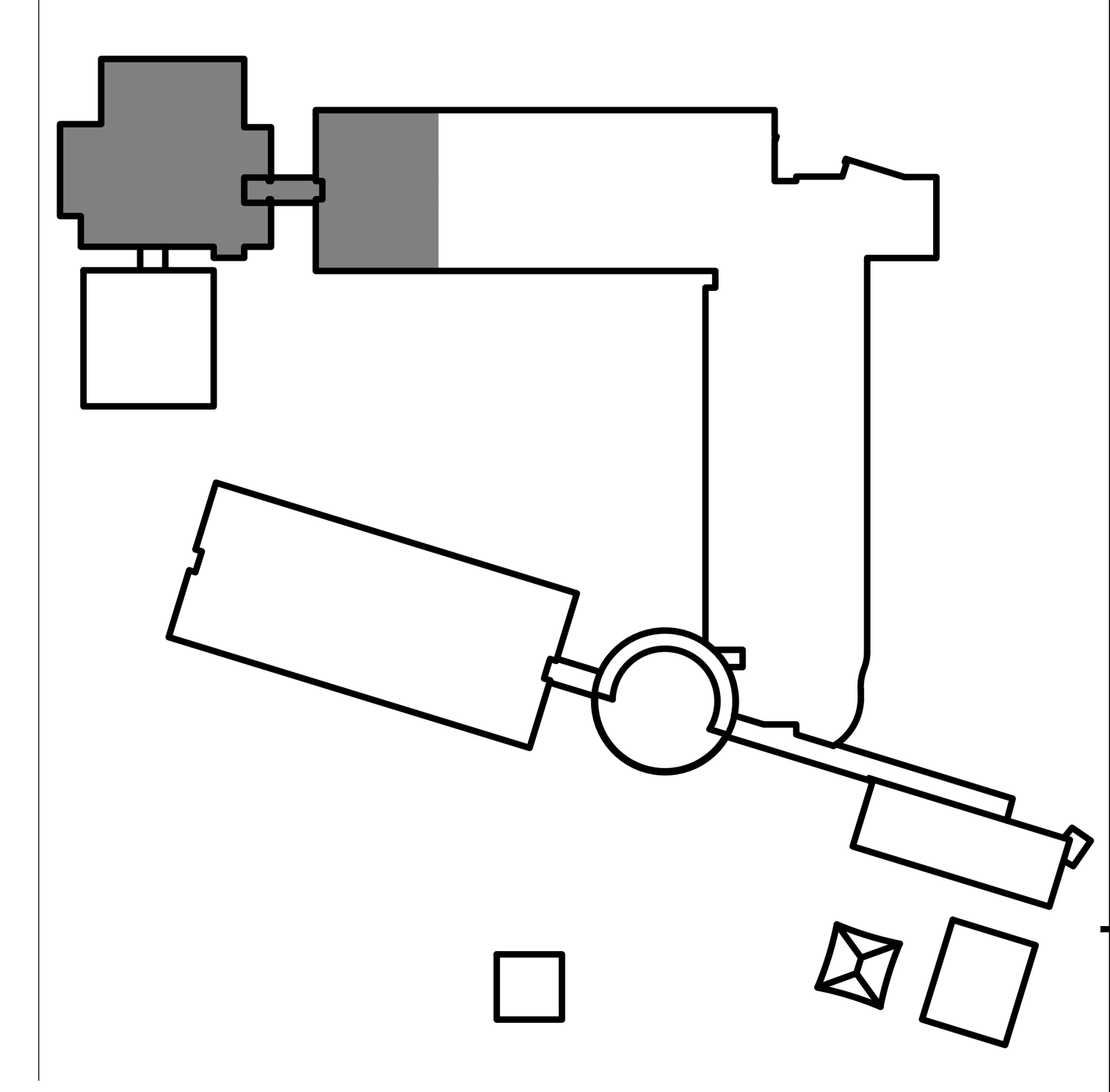
1. EXISTING ROOF TO REMAIN. PREPARE TO RECEIVE NEW TOP LAYER AND COATING.
2. EXISTING HVAC UNITS TO BE REMOVED. EXISTING CURB TO REMAIN, U.O.N..
3. CONTRACTOR TO CLEAN OUT ALL EXISTING ROOF DRAINS. REPLACE ALL DAMAGED ROOF SCREENS AS NEEDED.
4. (E) ROOF HATCH TO REMAIN. INSTALL NEW RETRACTABLE SAFETY POST TO (E) ACCESS LADDER IF ONE NOT PRESENT.
5. (E) SOLAR PANELS TO REMAIN.
6. (E) ROOF LADDER TO REMAIN.
7. (E) SKYLIGHT TO REMAIN.

GRAPHIC KEY

EXISTING ROOFING TO BE PREPARED FOR NEW ROOFING SYSTEM.

NEW ROOFING SYSTEM.

BUILDING KEY



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DEMOLITION & NEW ROOF PLANS - BLDG A & B NORTH

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
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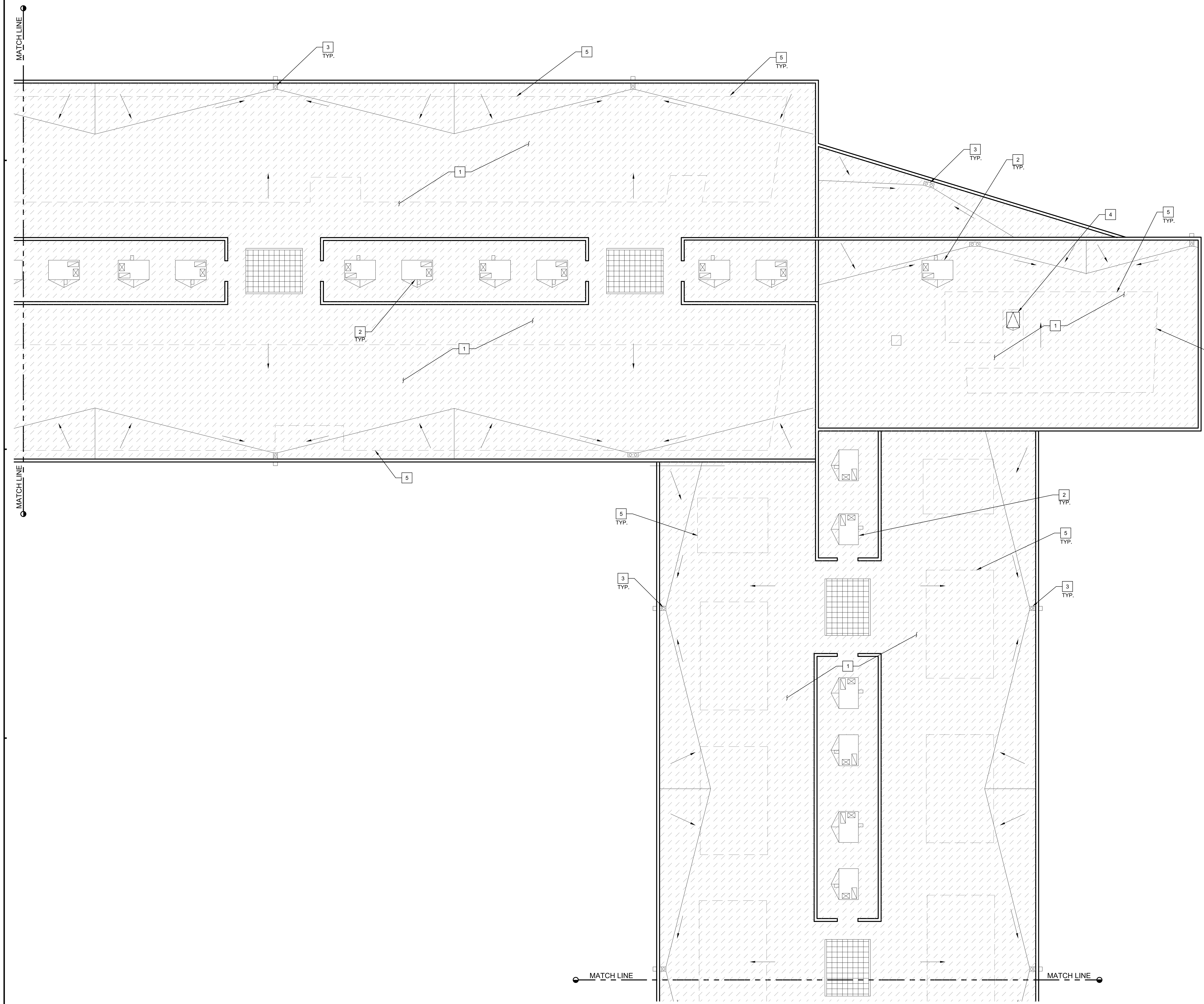
A4.1



1 DEMOLITION ROOF PLAN - BUILDING B NORTHEAST

1/8" = 1'-0"

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. COORDINATE SLEEPER LOCATIONS WITH MECHANICAL, PLUMBING, AND/OR ELECTRICAL AS REQUIRED. SEE DETAILS 1 & 4/A9.1.

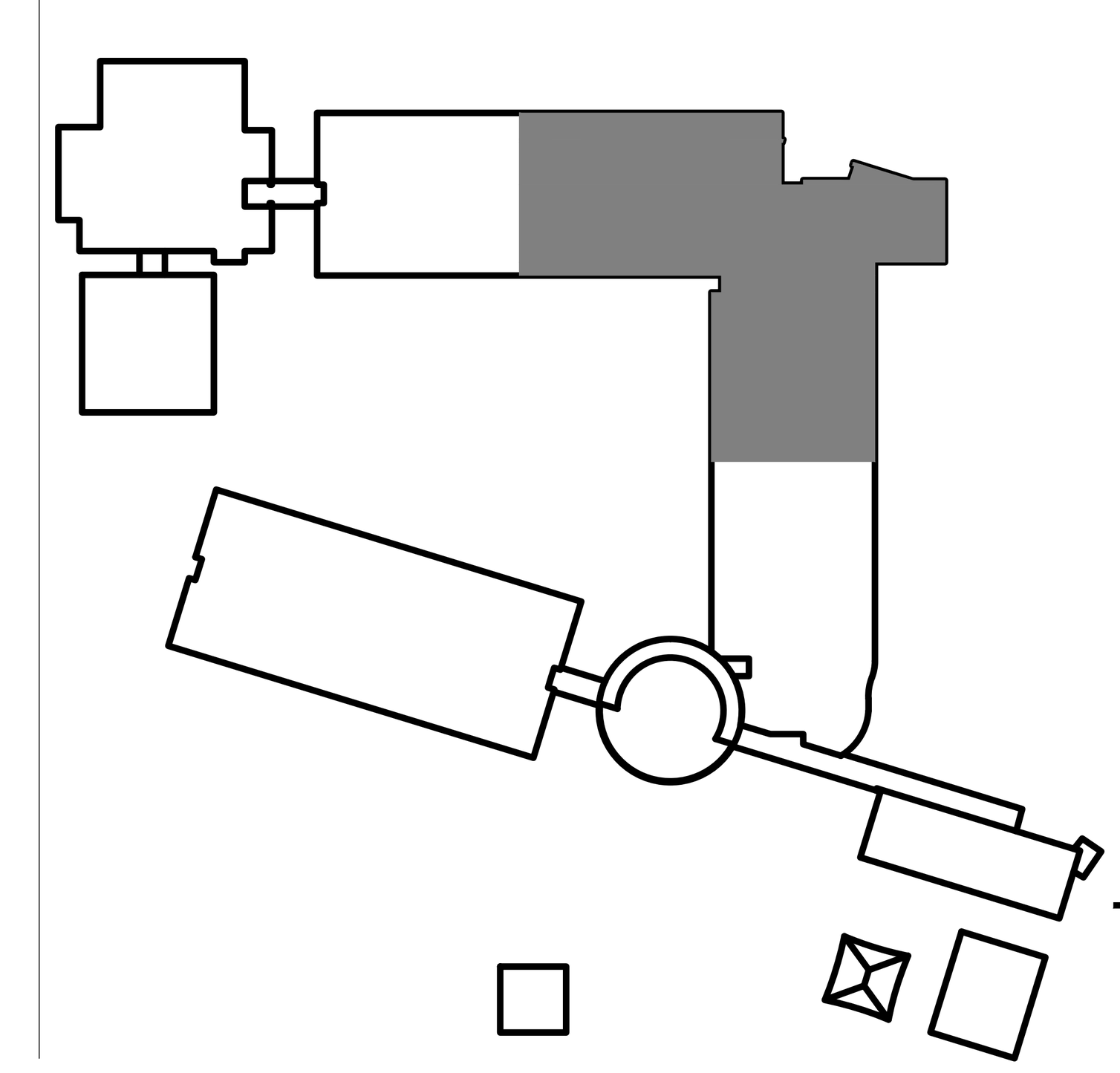
DEMOLITION ROOF PLAN NOTES

1. EXISTING ROOF TO REMAIN. PREPARE TO RECEIVE NEW TOP LAYER AND COATING.
2. EXISTING HVAC UNITS TO BE REMOVED. EXISTING CURB TO REMAIN, U.O.N..
3. CONTRACTOR TO CLEAN OUT ALL EXISTING ROOF DRAINS. REPLACE ALL DAMAGED ROOF SCREENS AS NEEDED.
4. (E) ROOF HATCH TO REMAIN. INSTALL NEW RETRACTABLE SAFETY POST TO (E) ACCESS LADDER IF ONE NOT PRESENT.
5. (E) SOLAR PANELS TO REMAIN.

GRAPHIC KEY

EXISTING ROOFING TO BE PREPARED FOR NEW ROOFING SYSTEM.

BUILDING KEY



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

DEMOLTION ROOF PLAN - BUILDING B NORTHEAST

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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A4.2

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.

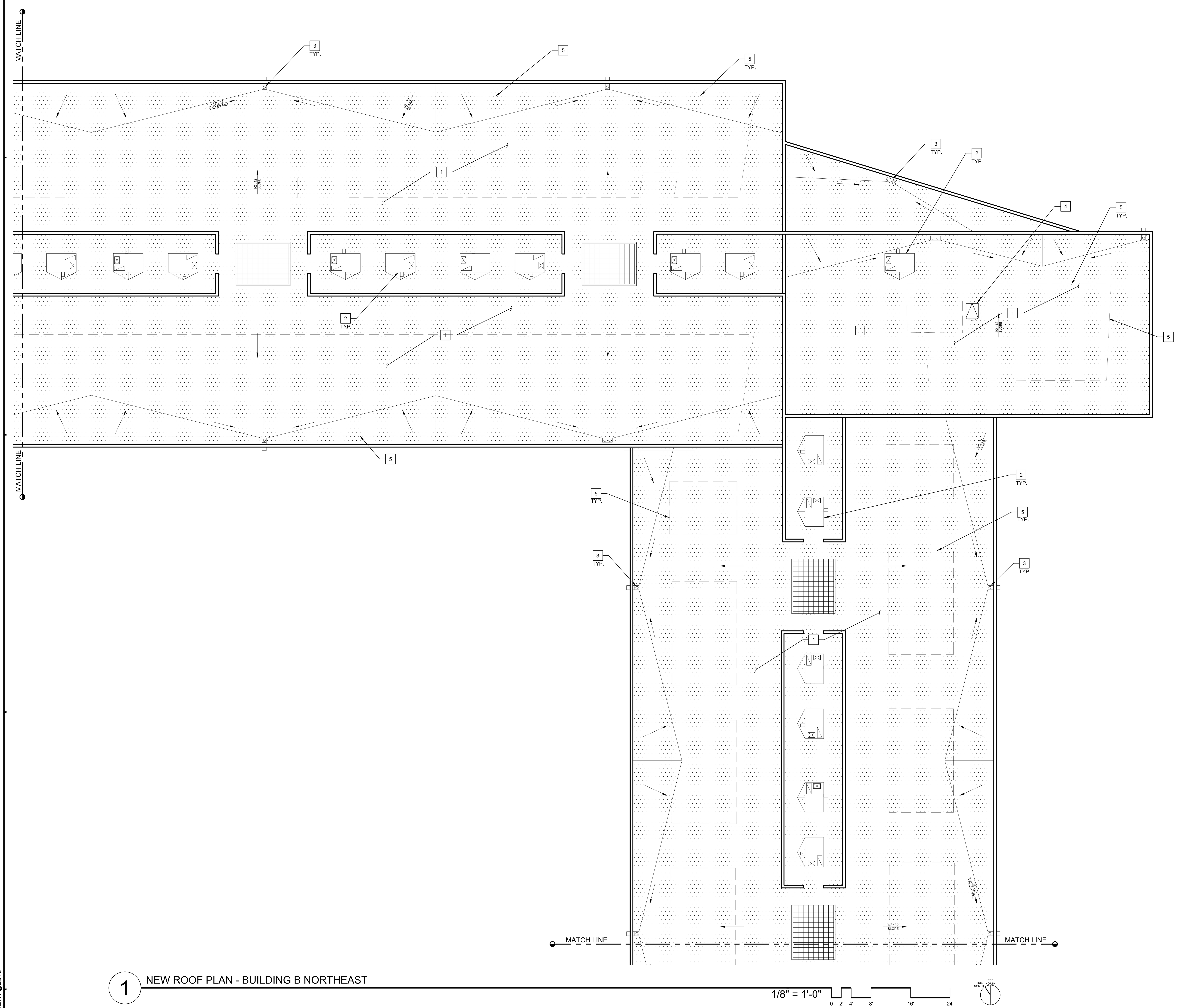
B. CONTRACTOR TO REMOVE AND REINSTALL MECHANICAL UNITS, DUCTWORK AND ALL OTHER ROOF TOP APPURTENANCES AS REQUIRED FOR INSTALLATION OF ROOFING. CONTRACTOR TO REINSTALL AND RECONNECT ALL DEVICES AND RETURN THEM TO WORKING ORDER. CONTRACTOR TO NOTIFY DISTRICT AND ARCHITECT OF ANY DEVICES NOT FUNCTIONING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

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

D. COORDINATE SLEEPER LOCATIONS WITH MECHANICAL, PLUMBING, AND/OR ELECTRICAL AS REQUIRED. SEE DETAILS 1 & 4/A9.1.

NEW ROOF PLAN NOTES

1. (N) TOP LAYER AND COATING OVER EXISTING ROOF SYSTEM.
2. (N) HVAC UNITS. SEE MECHANICAL DRAWINGS.
3. CONTRACTOR TO CLEAN OUT ALL EXISITNG ROOF DRAINS. REPLACE ALL DAMAGED ROOF SCREENS AS NEEDED.
4. (E) ROOF HATCH. INSTALL NEW RETRACTABLE SAFETY POST TO (E) ACCESS LADDER IF ONE IS NOT PRESENT.
5. (E) SOLAR PANELS TO REMAIN.



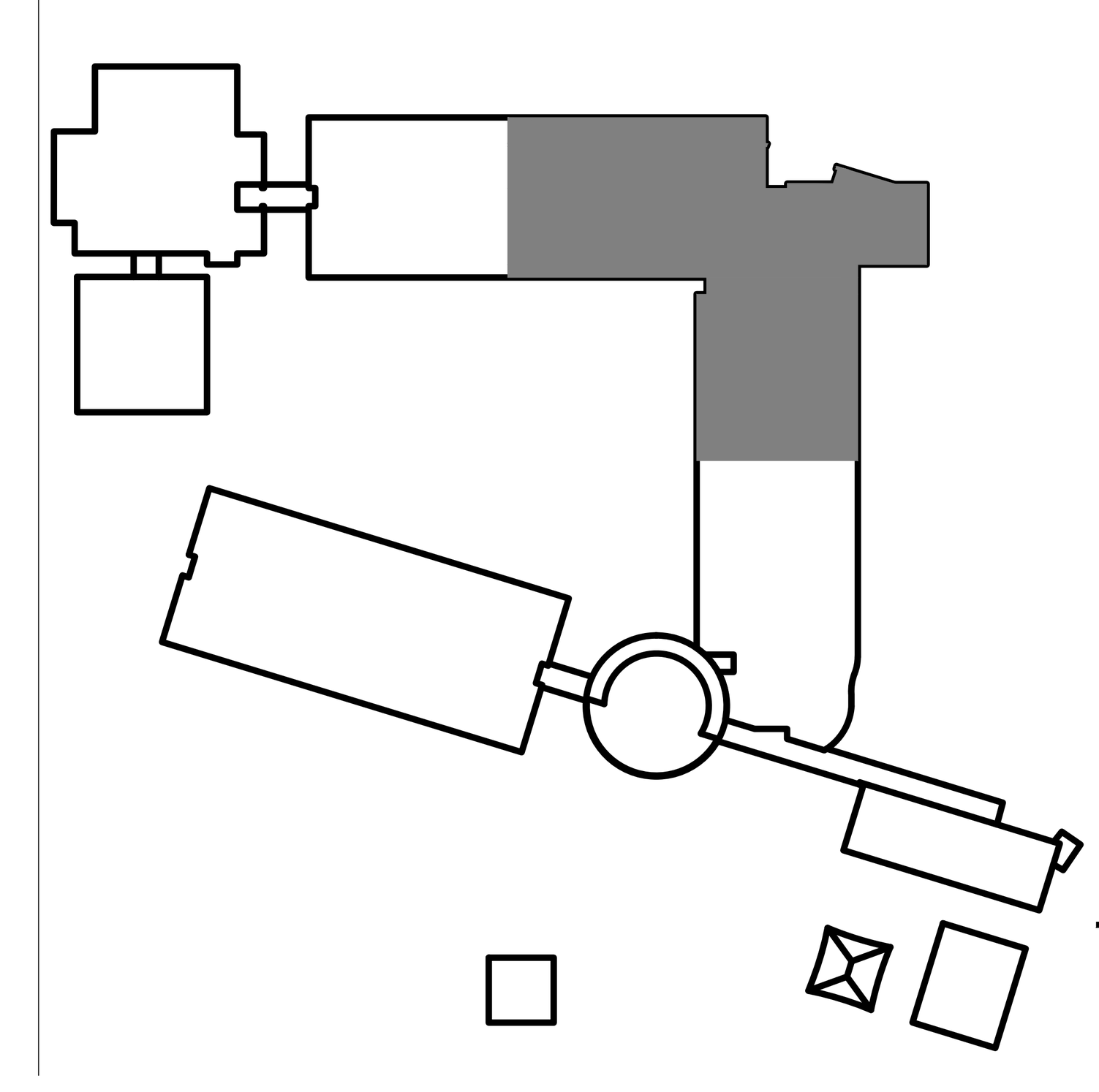
1 NEW ROOF PLAN - BUILDING B NORTHEAST

1/8" = 1'-0"

GRAPHIC KEY

NEW ROOFING SYSTEM.

BUILDING KEY



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REN. 9-30-23
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NEW ROOF PLAN - BUILDING B NORTHEAST

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
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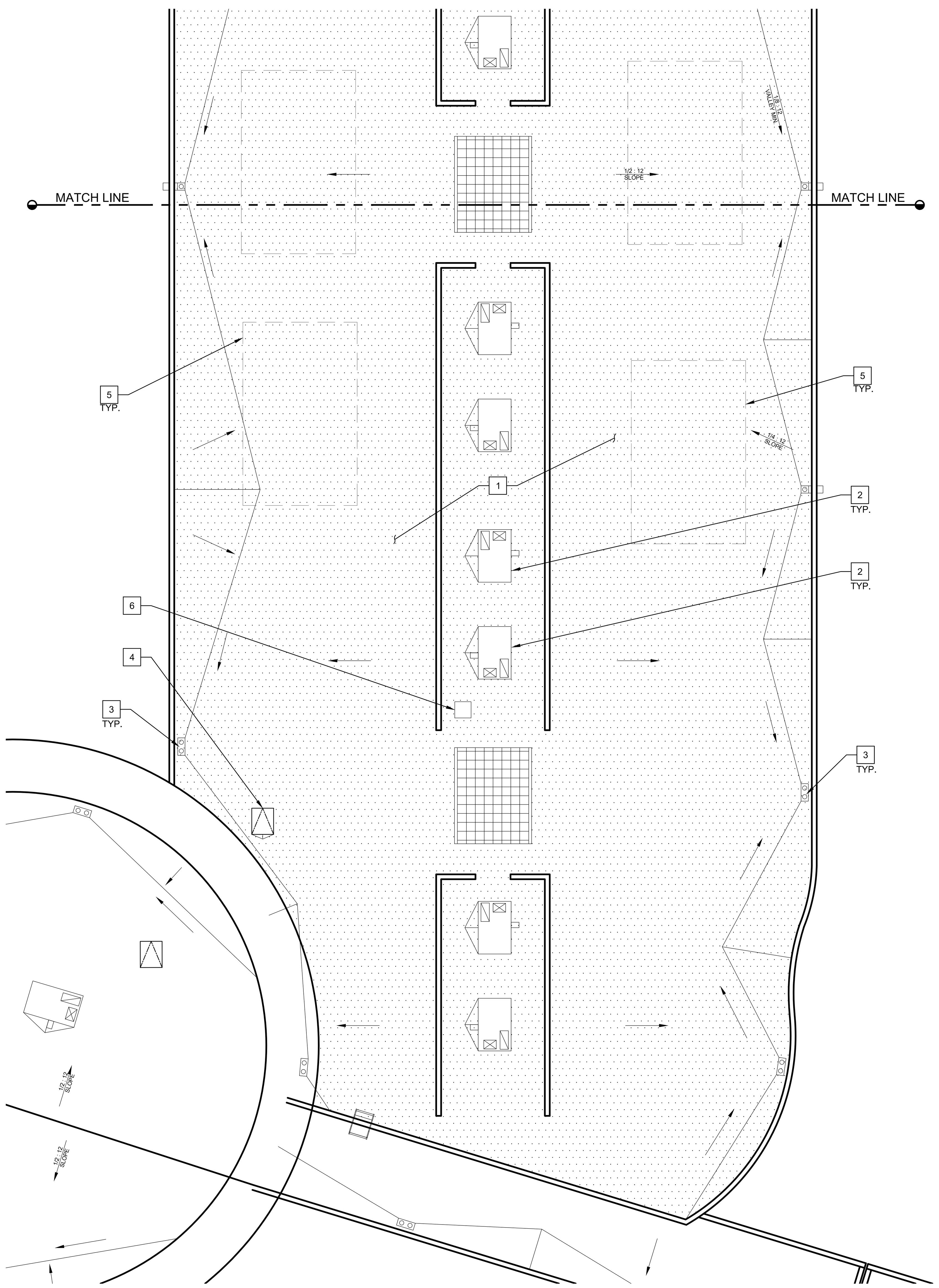
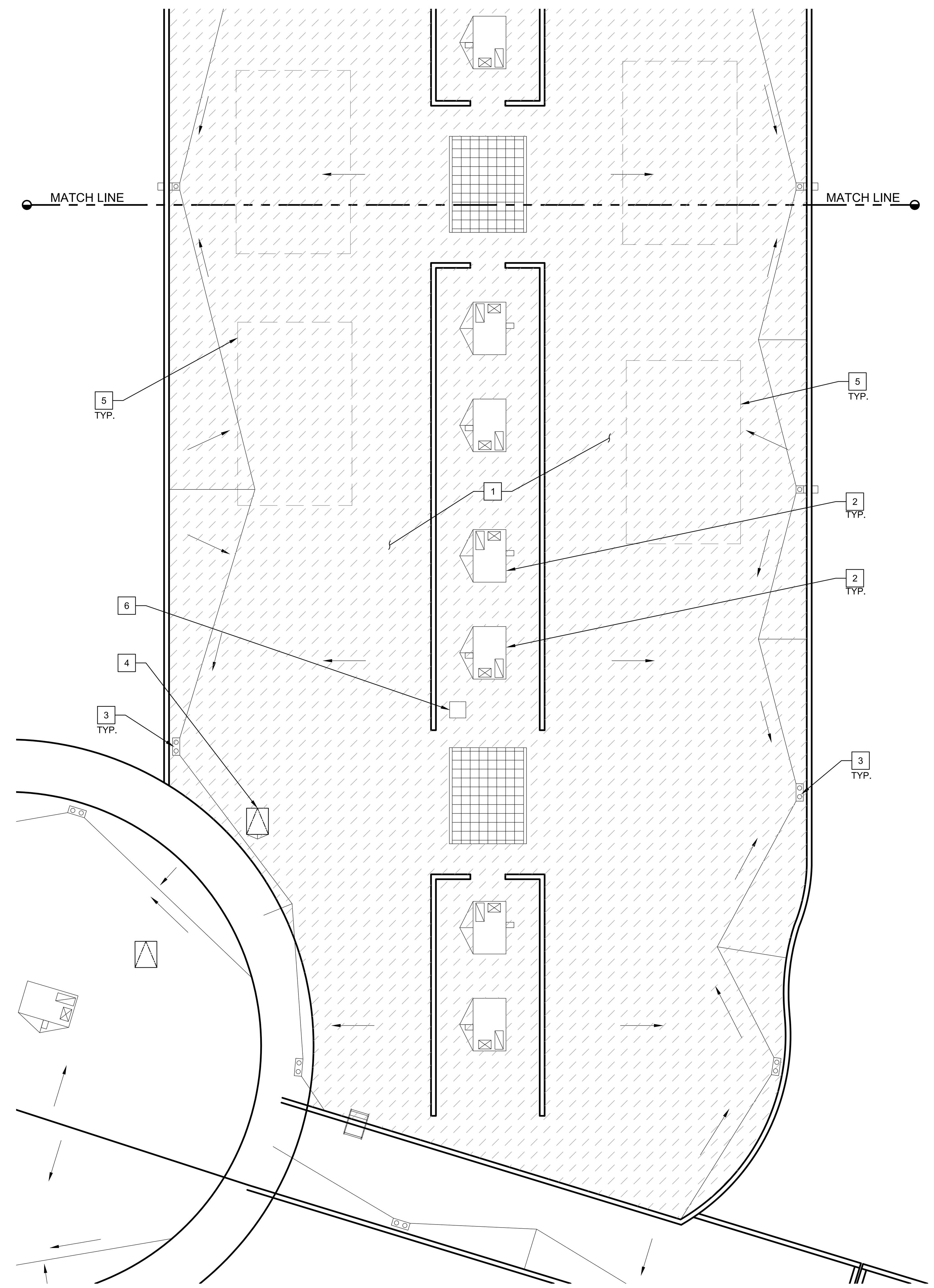
A4.3



2 NEW ROOF PLAN - BUILDING B SOUTH
1/8" = 1'-0"
0 2' 4' 8' 16' 24'



1 DEMOLITION ROOF PLAN - BUILDING B SOUTH
1/8" = 1'-0"
0 2' 4' 8' 16' 24'

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. COORDINATE SLEEPER LOCATIONS WITH MECHANICAL, PLUMBING, AND/OR ELECTRICAL AS REQUIRED. SEE DETAILS 1 & 4/A9.1.

DEMOLITION ROOF PLAN NOTES

1. EXISTING ROOF TO REMAIN. PREPARE TO RECEIVE NEW TOP LAYER AND COATING.
2. EXISTING HVAC UNITS TO BE REMOVED. EXISTING CURB TO REMAIN, U.O.N..
3. CONTRACTOR TO CLEAN OUT ALL EXISTING ROOF DRAINS. REPLACE ALL DAMAGED ROOF SCREENS AS NEEDED.
4. (E) ROOF HATCH TO REMAIN. INSTALL NEW RETRACTABLE SAFETY POST TO (E) ACCESS LADDER IF ONE NOT PRESENT.
5. (E) SOLAR PANELS TO REMAIN.
6. (E) ELECTRICAL TRANSFORMER.

NEW ROOF PLAN NOTES

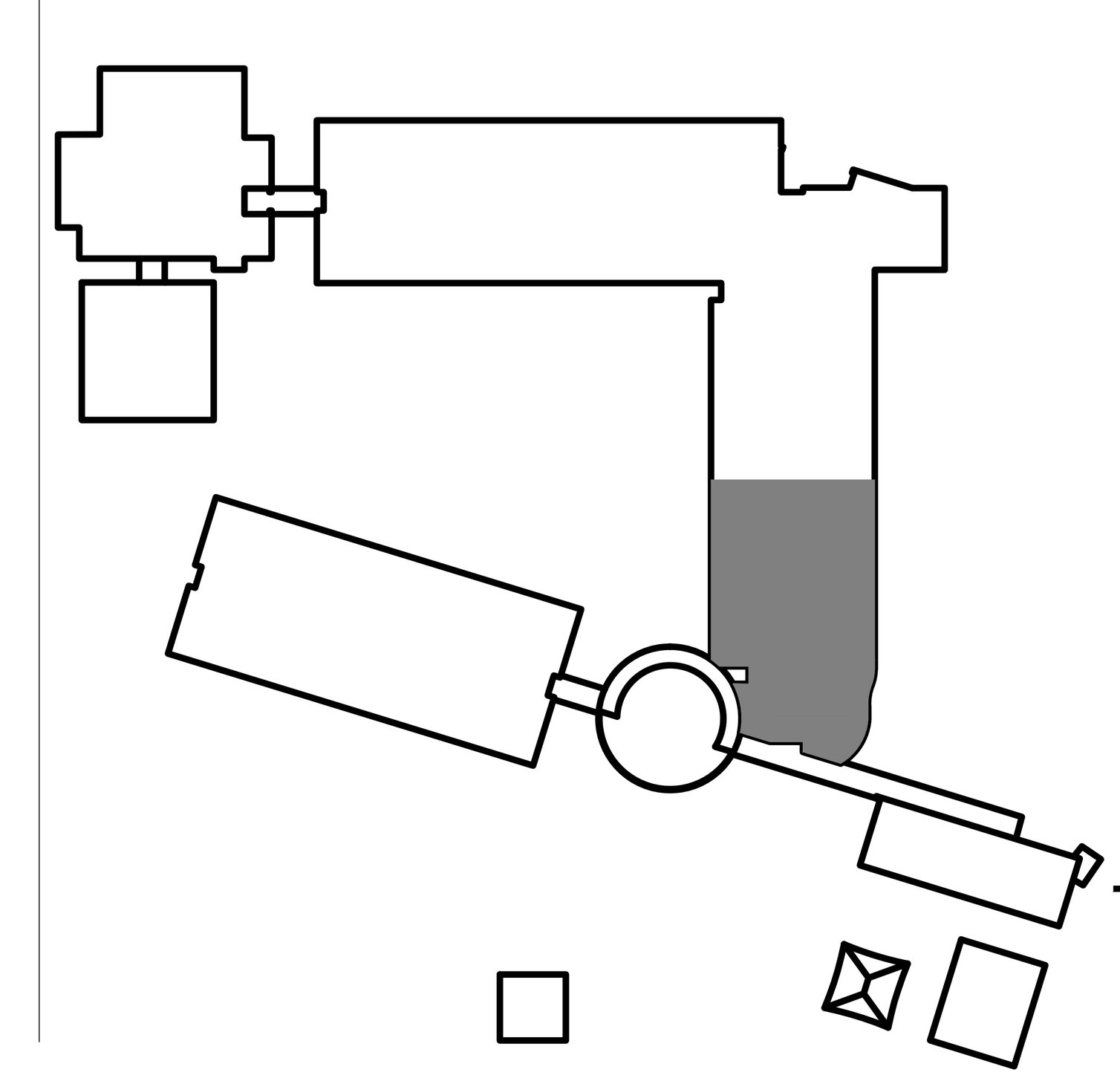
1. (N) TOP LAYER AND COATING OVER EXISTING ROOF SYSTEM.
2. (N) HVAC UNITS. SEE MECHANICAL DRAWINGS.
3. CONTRACTOR TO CLEAN OUT ALL EXISITNG ROOF DRAINS. REPLACE ALL DAMAGED ROOF SCREENS AS NEEDED.
4. (E) ROOF HATCH. INSTALL NEW RETRACTABLE SAFETY POST TO (E) ACCESS LADDER IF ONE IS NOT PRESENT.
5. (E) SOLAR PANELS TO REMAIN.
6. (E) ELECTRICAL TRANFORMER.

GRAPHIC KEY

EXISTING ROOFING TO BE PREPARED FOR NEW ROOFING SYSTEM.

NEW ROOFING SYSTEM.

BUILDING KEY



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REN. 9-30-23
STATE OF CALIFORNIA

DEMOLITION & NEW ROOF PLAN - BUILDING B - SOUTH

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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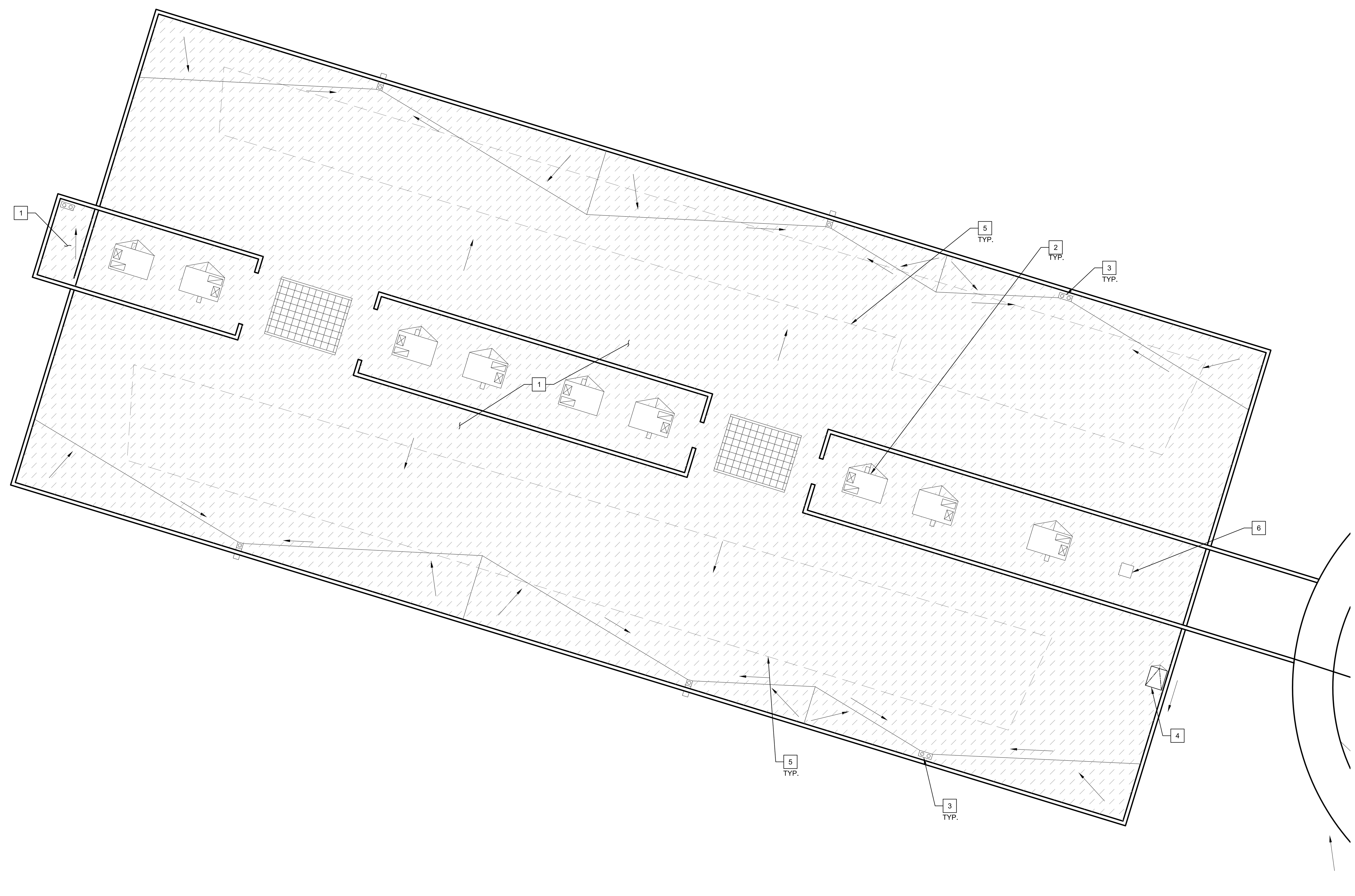
A4.4



1 DEMOLITION ROOF PLAN - BUILDING C

1/8" = 1'-0" 0 2' 4' 8' 16' 24'

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.

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DEMOLITION ROOF PLAN NOTES

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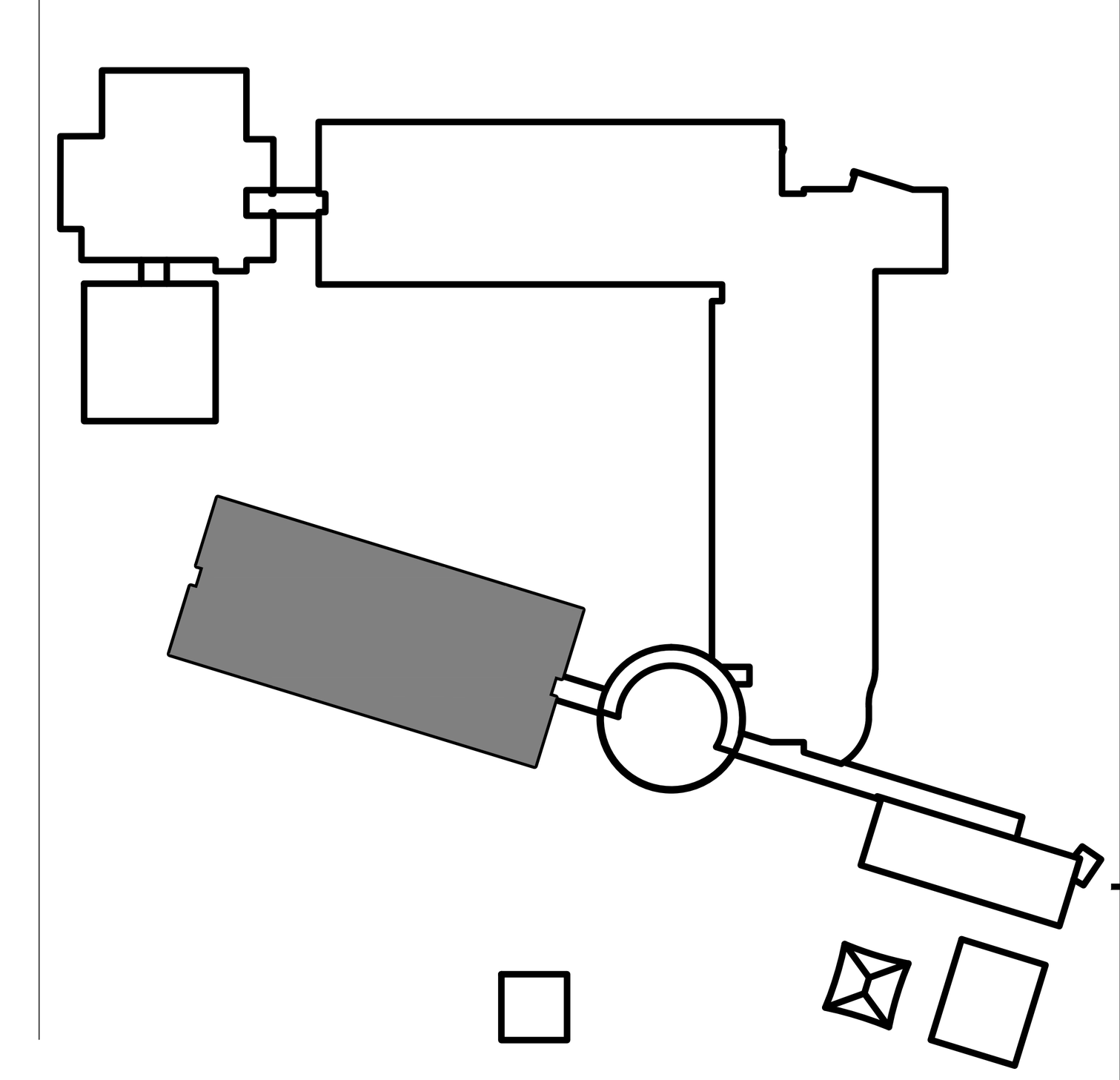
4. (E) ROOF HATCH TO REMAIN. INSTALL NEW RETRACTABLE SAFETY POST TO (E) ACCESS LADDER IF ONE IS NOT PRESENT.
5. (E) SOLAR PANELS TO REMAIN.
6. (E) ELECTRICAL TRANSFORMER.

GRAPHIC KEY

EXISTING ROOFING TO BE PREPARED FOR NEW ROOFING SYSTEM.

BUILDING KEY



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DEMOLITION ROOF PLAN - BUILDING C

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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A4.5

GENERAL NOTES

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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 DETAILS 1 & 4/A9.1.

NEW ROOF PLAN NOTES

1. (N) TOP LAYER AND COATING OVER EXISTING ROOF SYSTEM.
2. (N) HVAC UNITS. SEE MECHANICAL DRAWINGS.
3. CONTRACTOR TO CLEAN OUT ALL EXISITNG ROOF DRAINS. REPLACE ALL DAMAGED ROOF SCREENS AS NEEDED.
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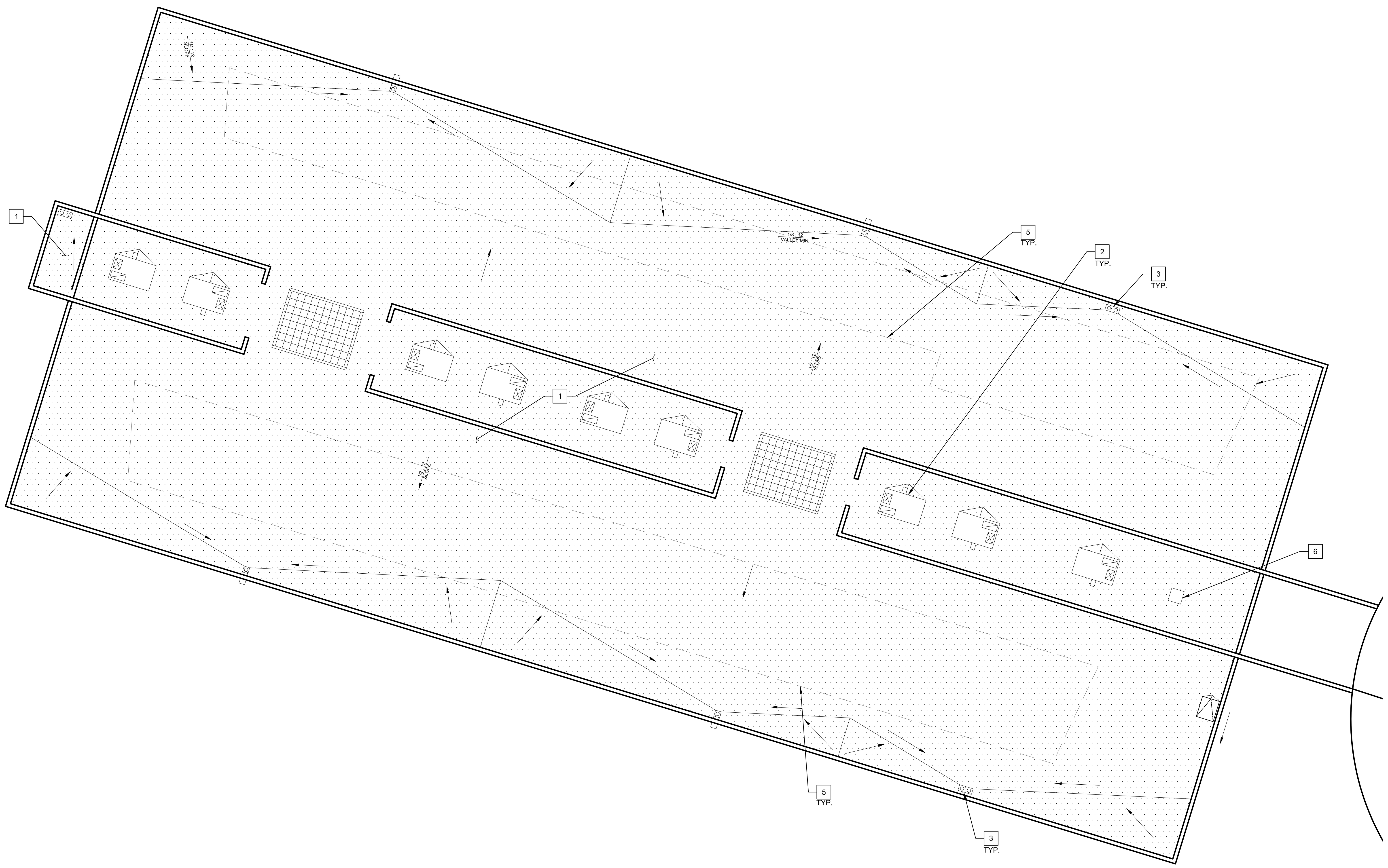


1 NEW ROOF PLAN - BUILDING C

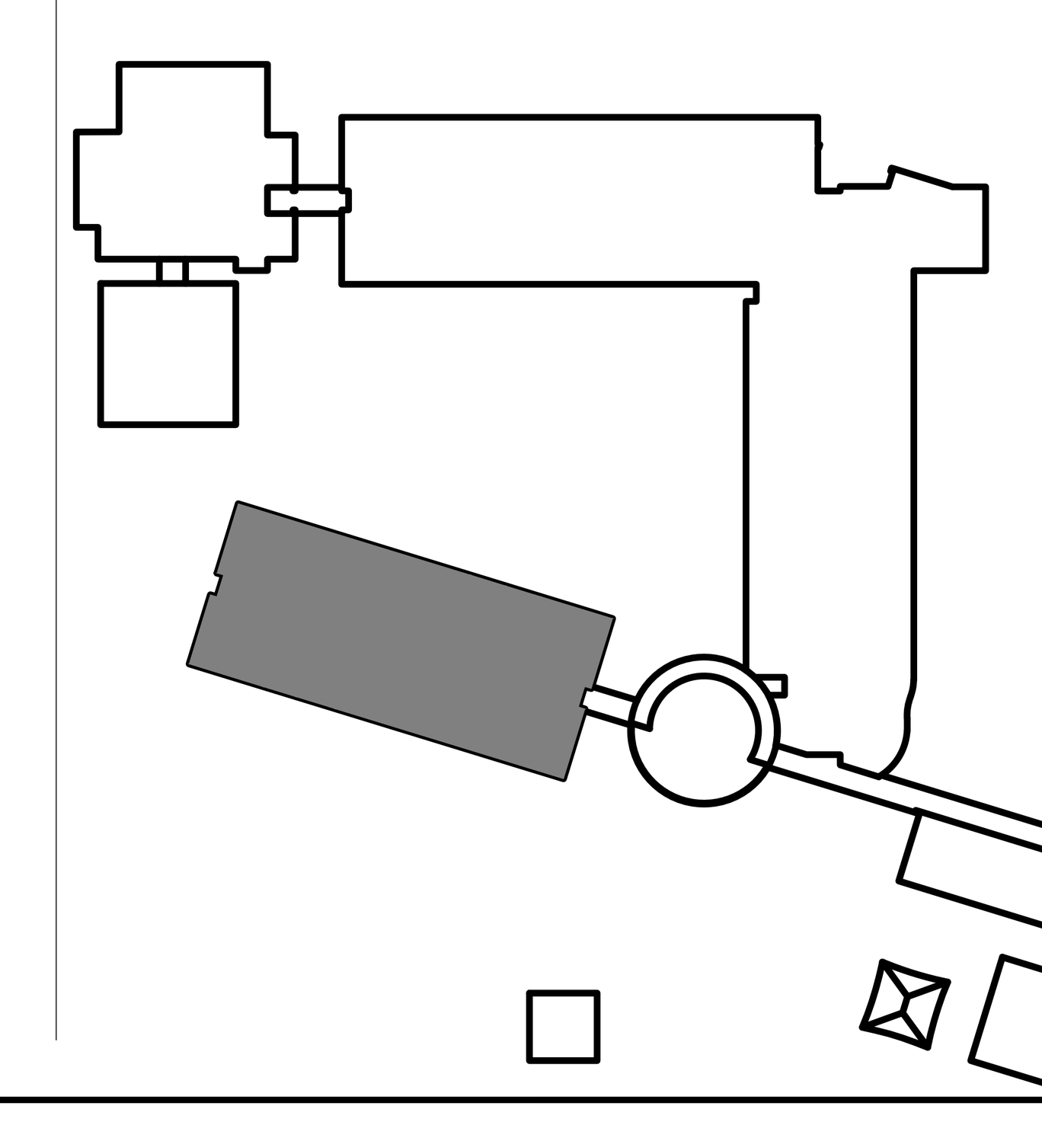
1/8" = 1'-0"
0 2' 4' 8' 16' 24'

TRUE NORTH REF NORTH

GRAPHIC KEY

NEW ROOFING SYSTEM.

BUILDING KEY



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

NEW ROOF PLAN - BUILDING C

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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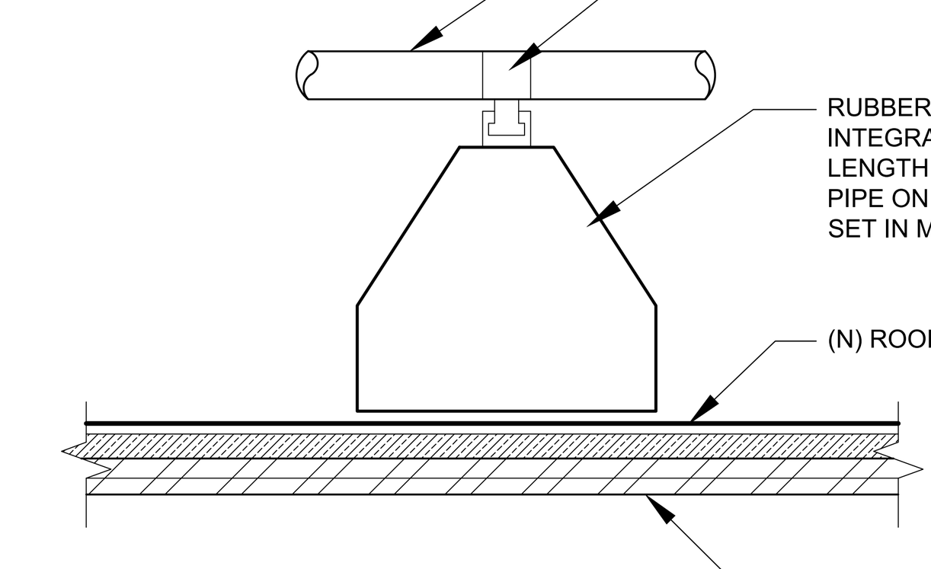
A4.6

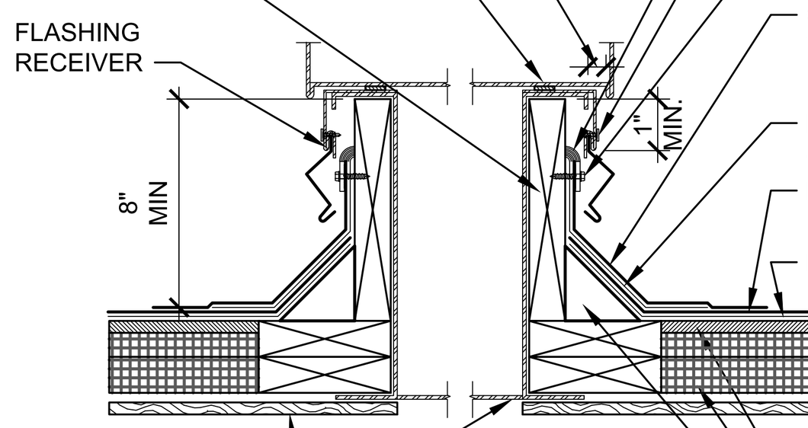


4 FLOATING SLEEPER

3"=1'-0"

8

9

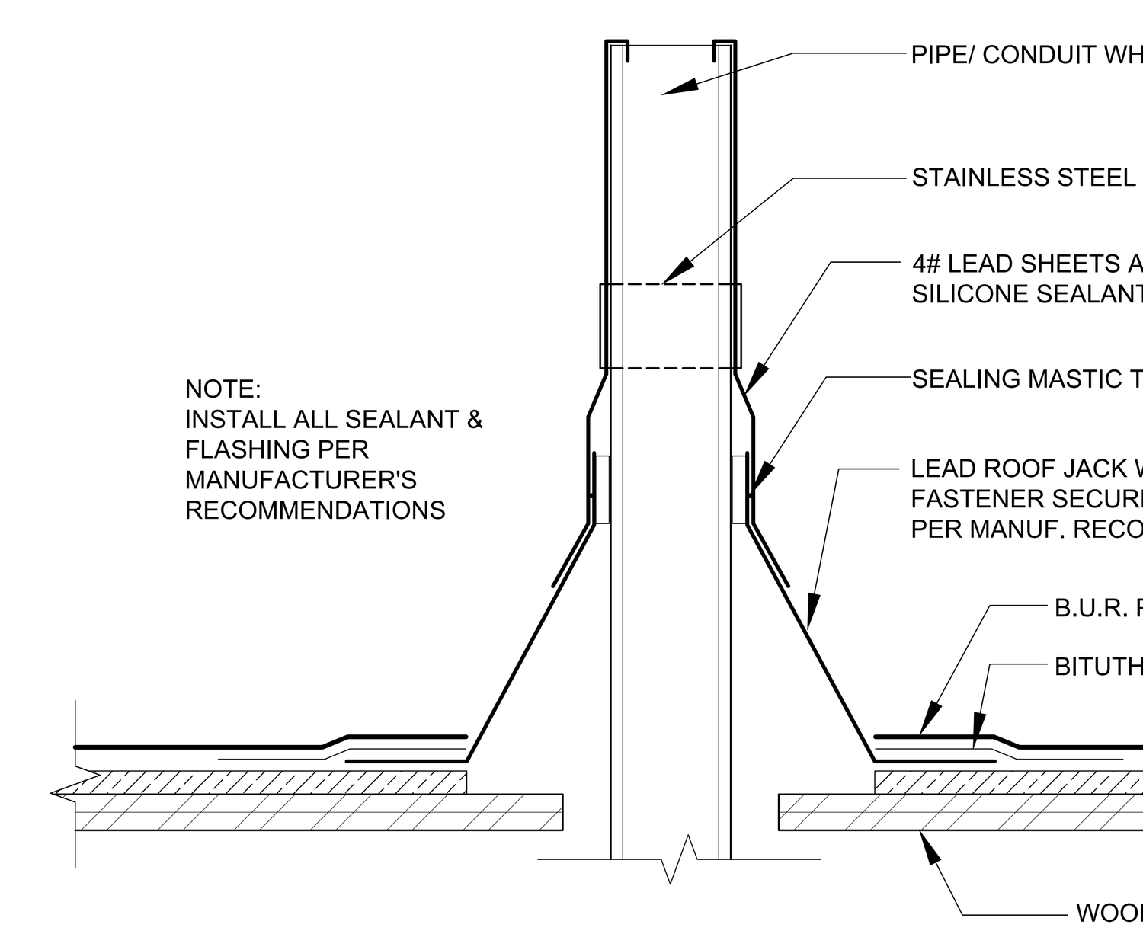


NOTE:
REFERENCE SPECIFICATION FOR SURFACING, MEMBRANE ADHESIVE TYPE, AND INSULATION/COVER BOARD TYPE AND ATTACHMENT METHOD.

6 FLASHING DETAIL
@ AC UNIT

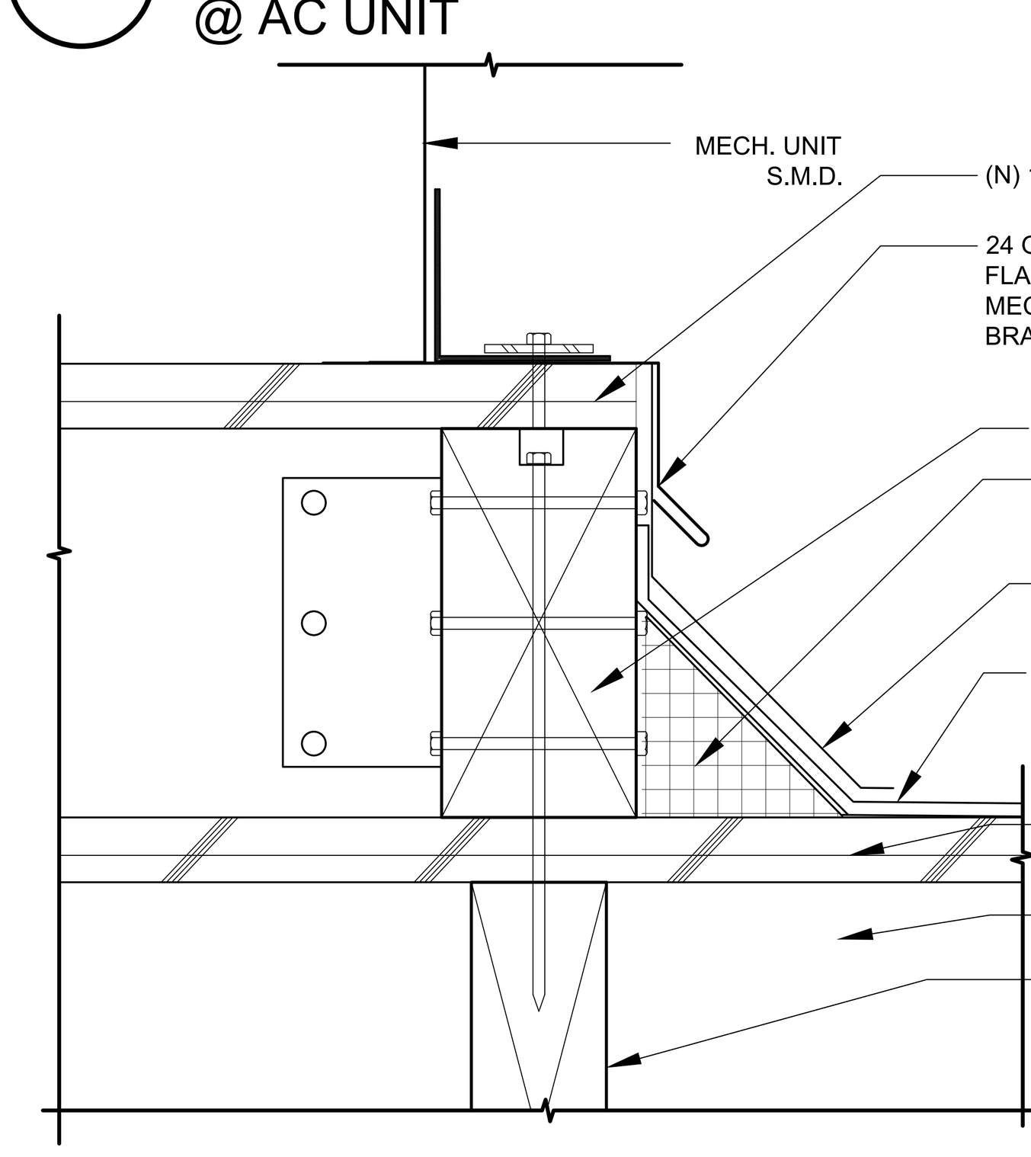
1-1/2"=1'-0"

NOTE:
INSTALL ALL SEALANT & FLASHING PER MANUFACTURER'S RECOMMENDATIONS



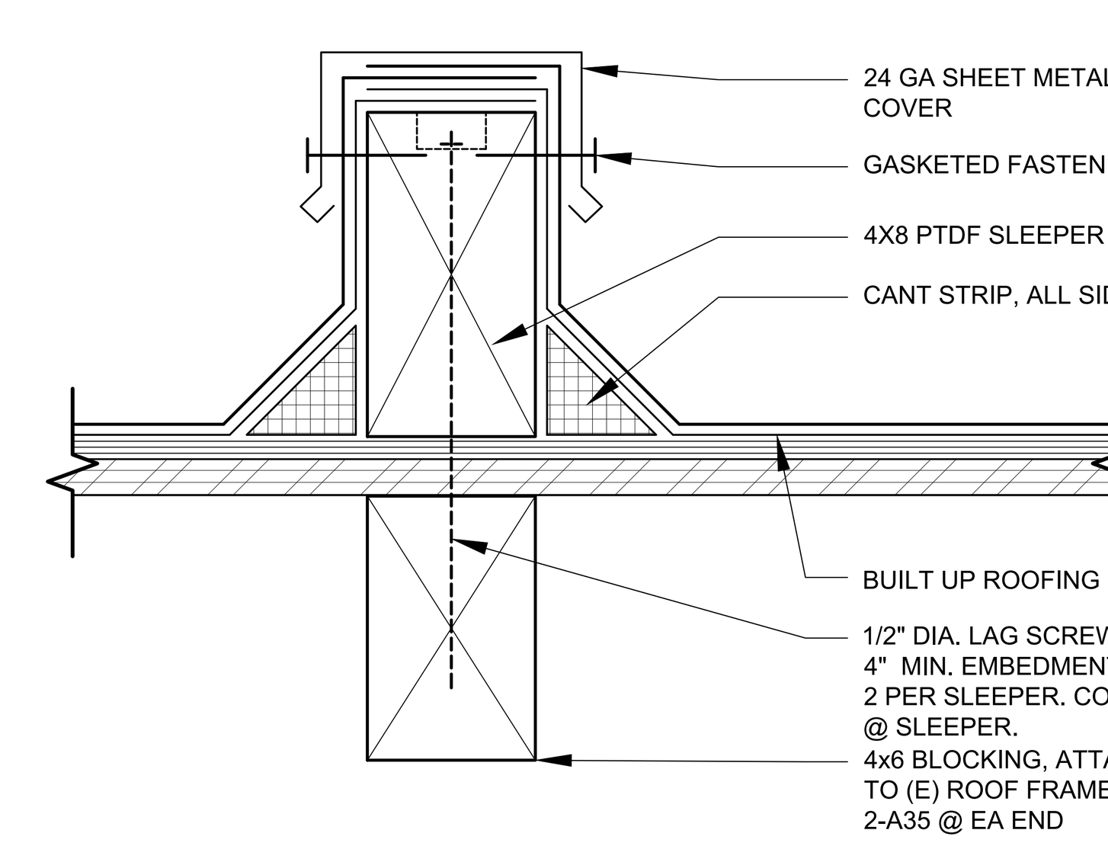
2 PIPE/CONDUIT FLASHING

3"=1'-0"



5 FLASHING @ MECH. UNIT PLATFORM

N.T.S.



1 EQUIPMENT/ PIPE SLEEPER

3"=1'-0"

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ROOFING DETAILS

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
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A9.1

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
BTWN	BETWEEN
CA	COMBUSTION AIR
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CIRC	CIRCULATING
℄	CENTERLINE
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
PLF	POUNDS PER LINEAR FOOT
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.

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.

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 #)
#0295-13, "UNISTRUT" OR
#0052-13, "B-LINE/TOLCO"

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

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

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. 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.
5. (E) DUCTWORK 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.
6. 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.
7. ALL WORK SHALL BE PERFORMED TO STATE, LOCAL, NATIONAL AND DISTRICT STANDARDS AND CODES. COORDINATE SPECIFIC REQUIREMENTS WITH DISTRICT STANDARDS AND AUTHORITY HAVING JURISDICTION.
8. ALL EQUIPMENT SHALL BE NEW AND CLEARLY LABELED AND IDENTIFIED. LABELS SHALL NOT BE COVERED BY OTHER CONSTRUCTION ELEMENTS.
9. UNLESS OTHERWISE NOTED IN CONTRACT DOCUMENTS, CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT AND WORK FOR A PERIOD OF ONE YEAR.

6\. UNLESS OTHERWISE NOTED OR REFERENCED ON THE DRAWINGS, EVERYTHING IS NEW.

7\. 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.

8\. 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.

9\. 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.

10\. THESE DRAWINGS AND ASSOCIATED SPECIFICATIONS ARE TO BE CONSIDERED CONTRACT DOCUMENTS FOR AGENCY REVIEW/ APPROVAL AND CONTRACTOR BIDDING PURPOSES.

11\. AT THE COMPLETION OF THE PROJECT THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A COMPLETE SET OF AS-BUILT DRAWINGS.

12\. 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.

13\. 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.

14\. 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.

15\. FURNISH AND INSTALL MANUAL AIR DAMPERS AT ALL DUCT BRANCH TAKEOFFS TO A SINGLE SUPPLY DIFFUSER.

16\. FOR ALL VOLUME DAMPERS LOCATED ABOVE CEILINGS, PROVIDE 12" LONG 1/2" WIDE FLUORESCENT ORANGE TAPE TO MARK DAMPER LOCATIONS.

17\. 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.

18\. CONTRACTOR SHALL PREPARE AND SUBMIT THE CALIFORNIA ENERGY COMMISSION TITLE 24 CERTIFICATE OF ACCEPTANCE FORMS RELATED TO INSTALLED EQUIPMENT AND SYSTEMS.

19\. 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.

20\. 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.

21\. ALL BUILDING MATERIALS MUST BE ASBESTOS FREE.

22\. 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.

23\. 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.

DRAWING INDEX

(DSA STAMP AREA)

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

REGISTERED PROFESSIONAL ENGINEER — MECHANICAL — STATE OF CALIFORNIA
BID SET 11-05-2021

CEG JOB NO: 21134

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

SYMBOL LEGENDS, ABBREVIATIONS, NOTES - MECHANICAL & PLUMBING

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS NO.	ITEM	DATE

DRAWN BY: CAD
CHECKED BY: CS
SFA JOB NO: 18082
DATE: 11/05/2021

MP0.1

HOSE BIBB SCHEDULE

TAG	MANUFACTURER	MODEL	NOTES
HB-1	WOODFORD	RHMC	1

1. PROVIDE WITH MOUNTING SYSTEM.

PELICAN CONTROLS AND SEQUENCE OF OPERATION

(E) SITE PELICAN WIRELESS GATEWAY SHALL BE USED. CONTRACTOR SHALL PROVIDE ADDITIONAL REPEATERS IF NEEDED FOR CONNECTIVITY.

(E) PELICAN WIRELESS THERMOSTATS SHALL BE RE-USED AND WIRED TO NEW UNITS.

CONTRACTOR SHALL PROVIDE PELICAN WIRELESS SUPPLY AIR TEMPERATURE SENSOR AT ALL UNITS.

ROOFTOP PACKAGED UNITS:

1. EACH UNIT 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 NEW WIRELESS GATEWAY ON CAMPUS. COORDINATE WITH DISTRICT REPRESENTATIVE FOR IP ADDRESS AND NETWORK SETTINGS.
3. UNIT SHALL OPERATE UNDER ITS OWN INTERNAL SEQUENCE TO PROVIDE HEATING OR COOLING BASED ON ROOM SETPOINT.
4. PELICAN WIRELESS PEARL ECONOMIZER CONTROLLER SHALL MODULATE OUTSIDE AIR DAMPER TO PROVIDE FREE COOLING WHEN OUTSIDE AIR IS BELOW 75°F (HIGH TEMPERATURE LIMIT) AND OUTSIDE AIR TEMP IS 2°F BELOW ROOM TEMPERATURE (MINIMUM TEMPERATURE DIFFERENTIAL).
5. PELICAN WIRELESS PEARL ECONOMIZER CONTROLLER SHALL MODULATE OUTSIDE AIR DAMPER OPEN IF ROOM CO2 LEVEL RISES ABOVE 1000 PPM.
6. UNIT SHALL OPERATE CONTINUOUSLY DURING SCHEDULED OCCUPIED HOURS.
7. MOTORIZED OUTSIDE AIR DAMPER SHALL OPEN TO MINIMUM POSITION WHEN UNIT IS OPERATING. BALANCE CONTRACTOR SHALL DETERMINE DAMPER SETPOINT.
8. WHEN UNIT IS OFF, OUTSIDE AIR DAMPER SHALL BE CLOSED.
9. POWER EXHAUST WILL BE CONTROLLED BY MANUFACTURER PROVIDED PRESSURE CONTROLS. CONTRACTOR TO INSTALL PRESSURE TUBING IN SPACE TO READ ROOM PRESSURE. POWER EXHAUST SHALL MODULATE TO MAINTAIN A ROOM PRESSURE OF 0.03 IN.W.C.

EXHAUST FANS:

1. EACH FAN SHALL BE CONTROLLED BY ROOM LIGHTS/OCCUPANCY SENSOR.
2. (E) FAN CONTROLS SHALL BE RECONNECTED TO NEW FANS.

POWER EXHAUST SCHEDULE BLD A

TAG	MANUFACTURER	MODEL NO.	AC UNIT SERVED	AIRFLOW CFM	ESP IN. W.G.	MOTOR HP	ELECTRICAL V / PH	ELECTRICAL MCA	ELECTRICAL MOCP	WEIGHT LBS	NOTES
PE-42	PROVENT	PECCSUN3672DB46CS	AC-42	1980	0.3	1	460 / 3	-	-	180	1

1. PROVIDE WITH MODULATING SPEED POWER EXHAUST AND PRESSURE TRANSDUCER TO CONTROL TO BUILDING PRESSURE.

POWER EXHAUST SCHEDULE BLD B

TAG	MANUFACTURER	MODEL NO.	AC UNIT SERVED	AIRFLOW CFM	ESP IN. W.G.	MOTOR HP	ELECTRICAL V / PH	ELECTRICAL MCA	ELECTRICAL MOCP	WEIGHT LBS	NOTES
PE-1	PROVENT	PECCSUN3672DB46CS	AC-1	1980	0.3	1	460 / 3	-	-	180	1
PE-2	PROVENT	PECCSUN3672DB46CS	AC-2	1600	0.4	1	460 / 3	-	-	180	1
PE-3	PROVENT	PECCSUN3672DB46CS	AC-3	1600	0.4	1	460 / 3	-	-	180	1
PE-4	PROVENT	PECCSUN3672DB46CS	AC-4	1600	0.4	1	460 / 3	-	-	180	1
PE-5	PROVENT	PECCSUN3672DB46CS	AC-5	1600	0.4	1	460 / 3	-	-	180	1
PE-6	PROVENT	PECCSUN3672DB46CS	AC-6	1600	0.4	1	460 / 3	-	-	180	1
PE-7	PROVENT	PECCSUN3672DB46CS	AC-7	1600	0.4	1	460 / 3	-	-	180	1
PE-8	PROVENT	PECCSUN3672DB46CS	AC-8	1600	0.4	1	460 / 3	-	-	180	1
PE-9	PROVENT	PECCSUN3672DB46CS	AC-9	1600	0.4	1	460 / 3	-	-	180	1
PE-10	PROVENT	PECCSUN3672DB46CS	AC-10	1600	0.4	1	460 / 3	-	-	180	1
PE-11	PROVENT	PECCSUN3672DB46CS	AC-11	1980	0.3	1	460 / 3	-	-	180	1
PE-12	PROVENT	PECCSUN3672DB46CS	AC-12	1980	0.3	1	460 / 3	-	-	180	1
PE-15	PROVENT	PECCSUN3672DB46CS	AC-15	1980	0.3	1	460 / 3	-	-	180	1
PE-16	PROVENT	PECCSUN3672DB46CS	AC-16	1980	0.3	1	460 / 3	-	-	180	1
PE-17	PROVENT	PECCSUN3672DB46CS	AC-17	1980	0.3	1	460 / 3	-	-	180	1
PE-18	PROVENT	PECCSUN3672DB46CS	AC-18	1980	0.3	1	460 / 3	-	-	180	1
PE-19	PROVENT	PECCSUN3672DB46CS	AC-19	1980	0.3	1	460 / 3	-	-	180	1
PE-20	PROVENT	PECCSUN3672DB46CS	AC-20	1980	0.3	1	460 / 3	-	-	180	1
PE-21	PROVENT	PECCSUN3672DB46CS	AC-21	1980	0.3	1	460 / 3	-	-	180	1
PE-22	PROVENT	PECCSUN3672DB46CS	AC-22	1980	0.3	1	460 / 3	-	-	180	1
PE-23	PROVENT	PECCSUN3672DB46CS	AC-23	1980	0.3	1	460 / 3	-	-	180	1
PE-24	PROVENT	PECCSUN3672DB46CS	AC-24	1980	0.3	1	460 / 3	-	-	180	1

1. PROVIDE WITH MODULATING SPEED POWER EXHAUST AND PRESSURE TRANSDUCER TO CONTROL TO BUILDING PRESSURE.

POWER EXHAUST SCHEDULE BLD C

TAG	MANUFACTURER	MODEL NO.	AC UNIT SERVED	AIRFLOW CFM	ESP IN. W.G.	MOTOR HP	ELECTRICAL V / PH	ELECTRICAL MCA	ELECTRICAL MOCP	WEIGHT LBS	NOTES
PE-28	PROVENT	PECCSUN3672DB46CS	AC-28	1980	0.3	1	460 / 3	-	-	180	1
PE-29	PROVENT	PECCSUN3672DB46CS	AC-29	1980	0.3	1	460 / 3	-	-	180	1
PE-30	PROVENT	PECCSUN3672DB46CS	AC-30	1600	0.4	1	460 / 3	-	-	180	1
PE-31	PROVENT	PECCSUN3672DB46CS	AC-31	1600	0.4	1	460 / 3	-	-	180	1
PE-32	PROVENT	PECCSUN3672DB46CS	AC-32	1980	0.3	1	460 / 3	-	-	180	1
PE-33	PROVENT	PECCSUN3672DB46CS	AC-33	1980	0.3	1	460 / 3	-	-	180	1
PE-34	PROVENT	PECCSUN3672DB46CS	AC-34	1980	0.3	1	460 / 3	-	-	180	1
PE-35	PROVENT	PECCSUN3672DB46CS	AC-35	1980	0.3	1	460 / 3	-	-	180	1

1. PROVIDE WITH MODULATING SPEED POWER EXHAUST AND PRESSURE TRANSDUCER TO CONTROL TO BUILDING PRESSURE.

ROOF EXHAUST FANS SCHEDULE

TAG	MANUFACTURER	MODEL NO.	AIRFLOW CFM	ESP IN. W.G.	FAN RPM	SOUND POWER SONES	MOTOR HP	MOTOR V / PH	WEIGHT LBS	MOUNTING DETAIL	NOTES
REF-1	GREENHECK	G-090-VG	350	0.375	1279	5.5	1 / 10	115 / 1	30	5/MP0.2	1, 2, 3
REF-2	GREENHECK	G-090-VG	350	0.375	1279	5.5	1 / 10	115 / 1	30	5/MP0.2	1, 2, 3
REF-3	GREENHECK	G-100-VG	520	0.375	1020	3.8	1 / 4	115 / 1	42	5/MP0.2	1, 2, 3
REF-4	GREENHECK	G-120-VG	960	0.375	1044	7	1 / 4	115 / 1	48	5/MP0.2	1, 2, 3
REF-5	GREENHECK	G-070-VG	265	0.375	1716	5.8	1 / 10	115 / 1	25	5/MP0.2	1, 2, 3
REF-6	GREENHECK	G-070-VG	265	0.375	1716	5.8	1 / 10	115 / 1	25	5/MP0.2	1, 2, 3
REF-7	GREENHECK	G-070-VG	265	0.375	1716	5.8	1 / 10	115 / 1	25	5/MP0.2	1, 2, 3
REF-8	GREENHECK	G-090-VG	510	0.375	1480	6.8	1 / 10	115 / 1	30	5/MP0.2	1, 2, 3
REF-9	GREENHECK	GB-070-VG	160	0.25	1277	2.6	1 / 15	115 / 1	23	5/MP0.2	1, 2, 3
HEF-1	GREENHECK	CUE-100-VG	750	0.64	1365	7.2	1 / 4	115 / 1	49	5/MP0.2	1, 2, 4

1. CONTRACTOR TO FIELD VERIFY CURB SIZE. PROVIDE GREENHECK CURB CAP ADAPTER OR REDUCER AS REQUIRED.
2. PROVIDE WITH BACK DRAFT DAMPER AND BIRD SCREEN
3. INTERCONNECT EXHAUST FAN WITH LIGHTS
4. INTERLOCK EXHAUST FAN WITH AC 42

PACKAGED ROOFTOP AIR CONDITIONING UNITS SCHEDULE BLD-A

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 BHP	SEER	AFUE %	ELECTRICAL V / PH	ELECTRICAL MCA	ELECTRICAL MOCP	WEIGHT LBS	MOUNTING DETAIL	NOTES
AC-39	YORK	ZF150N18	161.1	116.8	180	144	5000	0.8	1250	1445	5.75	10.8 EER	80	460 / 3	42.7	50	1565	1/MP0.2	1,2,3,4,5,6,9,10,12
AC-40	YORK	ZF150N18	161.1	116.8	180	144	5000	0.8	1250	1445	5.75	10.8 EER	80	460 / 3	42.7	50	1565	1/MP0.2	1,2,3,4,5,6,9,10,12
AC-41	YORK	PCG4A36050	37.0	27.6	50	40	1200	0.8	300	1445	0.5	14	81	460 / 3	7.6	15	630	2/MP0.2	1,3,4,6,7,10,11
AC-42	YORK	ZE060K10	60.7	46.2	100	80	1980	0.8	500	1216	1.73	14	80	460 / 3	14.1	20	875	1/MP0.2	1,3,4,5,6,8,9,10

1. WEIGHT INCLUDES ALL OPTIONS AND ACCESSORIES.
2. PROVIDE DRY BULB LOW LEAK ECONOMIZER W/ BAROMETRIC RELIEF AND POWER EXHAUST.
3. PROVIDE WITH LOUVERED HAIL GUARDS, NON-POWERED CONVENIENCE OUTLET, SINGLE POINT POWER CONNECTION. AND HINGED ACCESS PANELS.
4. PROVIDE WITH MERV 13 FILTERS.
5. PROVIDE PELICAN WIRELESS PEARL ECONOMIZER CONTROLLER. CONTROLLER TO BE FIELD INSTALLED. COORDINATE WITH MANUFACTURER.
6. VERTICAL DISCHARGE CONFIGURATION
7. PROVIDE WITH CURB ADAPTOR (S1-1TC0102). CONTRACTOR SHALL FIELD VERIFY (E) DIMENSIONS PRIOR TO ORDERING .
8. PROVIDE DRY BULB ECONOMIZER AND HOOD.
9. PROVIDE BAROMETRIC RELIEF DAMPER
10. PROVIDE FLUE EXTENSION KIT
11. PROVIDE OUTSIDE AIR HOOD
12. RECONNECT UNIT TO EXISTING DUCT SMOKE DETECTOR

PACKAGED ROOFTOP AIR CONDITIONING UNITS SCHEDULE BLD-B

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 BHP	SEER	AFUE %	ELECTRICAL V / PH	ELECTRICAL MCA	ELECTRICAL MOCP	WEIGHT LBS	MOUNTING DETAIL	NOTES
AC-1	YORK	ZE060K10	60.7	46.2	100	80	1980	0.8	500	1216	1.73	14	80	460 / 3	14.1	20	875	1/MP0.2	1,3,4,5,6,8,9,10
AC-2	YORK	ZE048K07	50.4	37.4	75	59	1600	0.8	400	1068	1.73	14	80	460 / 3	11	15	760	1/MP0.2	1,3,4,6,10
AC-3	YORK	ZE048K07	50.4	37.4	75	59	1600	0.8	400	1068	1.73	14	80	460 / 3	11	15	760	1/MP0.2	1,3,4,6,10
AC-4	YORK	ZE048K07	50.4	37.4	75	59	1600	0.8	400	1068	1.73	14	80	460 / 3	11	15	760	1/MP0.2	1,3,4,6,10
AC-5	YORK	ZE048K07	50.4	37.4	75	59	1600	0.8	400	1068	1.73	14	80	460 / 3	11	15	760	1/MP0.2	1,3,4,6,10
AC-6	YORK	ZE048K07	50.4	37.4	75	59	1600	0.8	400	1068	1.73	14	80	460 / 3	11	15	760	1/MP0.2	1,3,4,6,10
AC-7	YORK	ZE048K07	50.4	37.4	75	59	1600	0.8	400	1068	1.73	14	80	460 / 3	11	15	760	1/MP0.2	1,3,4,6,10
AC-8	YORK	ZE048K07	50.4	37.4	75	59	1600	0.8	400	1068	1.73	14	80	460 / 3	11	15	760	1/MP0.2	1,3,4,6,10
AC-9	YORK	ZE048K07	50.4	37.4	75	59	1600	0.8	400	1068	1.73	14	80	460 / 3	11	15	760	1/MP0.2	1,3,4,6,10
AC-10	YORK	ZE048K07	50.4	37.4	75	59	1600	0.8	400	1068	1.73	14	80	460 / 3	11	15	760	1/MP0.2	1,3,4,6,10
AC-11	YORK	ZE060K10	60.7	46.2	100	80	1980	0.8	500	1216	1.73	14	80	460 / 3	14.1	20	875	1/MP0.2	1,3,4,5,6,8,9,10
AC-12	YORK	ZE060K10	60.7	46.2	100	80	1980	0.8	500	1216	1.73	14	80	460 / 3	14.1	20	875	1/MP0.2	1,3,4,5,6,8,9,10
AC-13	YORK	ZF078N12	81.3	62.0	120	96	2600	0.8	650	1178	2.3	11.1 EER	80	460 / 3	20.4	25	1200	1/MP0.2	1,3,4,5,6,8,9,10
AC-14	YORK	PCG4A36050	37.0	27.6	50	40	1200	0.8	300	1445	0.5	14	81	460 / 3	7.6	15	630	2/MP0.2	1,3,4,6,7,10,11
AC-15	YORK	ZE060K10	60.7	46.2	100	80	1980	0.8	500	1216	1.73	14	80	460 / 3	14.1	20	875	1/MP0.2	1,3,4,5,6,8,9,10
AC-16	YORK	ZE060K10	60.7	46.2	100	80	1980	0.8	500	1216	1.73	14	80	460 / 3	14.1	20	875	1/MP0.2	1,3,4,5,6,8,9,10
AC-17	YORK	ZE060K10	60.7	46.2	100	80	1980	0.8	500	1216	1.73	14	80	460 / 3	14.1	20	875	1/MP0.2	1,3,4,5,6,8,9,10
AC-18	YORK	ZE060K10	60.7	46.2	100	80	1980	0.8	500	1216	1.73	14	80	460 / 3	14.1	20	875	1/MP0.2	1,3,4,5,6,8,9,10
AC-19	YORK	ZE060K10	60.7	46.2	100	80	1980	0.8	500	1216	1.73	14	80	460 / 3	14.1	20	875	1/MP0.2	1,3,4,5,6,8,9,10
AC-20	YORK	ZE060K10	60.7	46.2	100	80	1980	0.8	500	1216	1.73	14	80	460 / 3	14.1	20	875	1/MP0.2	1,3,4,5,6,8,9,10
AC-21	YORK	ZE060K10	60.7	46.2	100	80	1980	0.8	500	1216	1.73	14	80	460 / 3	14.1	20	875	1/MP0.2	1,3,4,5,6,8,9,10
AC-22	YORK	ZE060K10	60.7	46.2	100	80	1980	0.8	500	1216	1.73	14	80	460 / 3	14.1	20	875	1/MP0.2	1,3,4,5,6,8,9,10
AC-23	YORK	ZE060K10	60.7	46.2	100	80	1980	0.8	500	1216	1.73	14	80	460 / 3	14.1	20	875	1/MP0.2	1,3,4,5,6,8,9,10
AC-24	YORK	ZE060K10	60.7	46.2	100	80	1980	0.8	500	1216	1.73	14	80	460 / 3	14.1	20	875	1/MP0.2	1,3,4,5,6,8,9,10
AC-27	YORK	PCG4A36050	37.0	27.6	50	40	1200	0.8	300	1445	0.5	14	81	460 / 3	7.6	15	630	2/MP0.2	1,3,4,6,7,10,11

1. WEIGHT INCLUDES ALL OPTIONS AND ACCESSORIES.
2. PROVIDE DRY BULB LOW LEAK ECONOMIZER W/ BAROMETRIC RELIEF AND POWER EXHAUST.
3. PROVIDE WITH LOUVERED HAIL GUARDS, NON-POWERED CONVENIENCE OUTLET, SINGLE POINT POWER CONNECTION. AND HINGED ACCESS PANELS.
4. PROVIDE WITH MERV 13 FILTERS.
5. PROVIDE PELICAN WIRELESS PEARL ECONOMIZER CONTROLLER. CONTROLLER TO BE FIELD INSTALLED. COORDINATE WITH MANUFACTURER.
6. VERTICAL DISCHARGE CONFIGURATION.
7. PROVIDE WITH CURB ADAPTOR (S1-1TC0102). CONTRACTOR SHALL FIELD VERIFY (E) DIMENSIONS PRIOR TO ORDERING .
8. PROVIDE DRY BULB ECONOMIZER AND HOOD (NO BAROMETRIC RELIEF DAMPER).
9. PROVIDE BAROMETRIC RELIEF DAMPER
10. PROVIDE FLUE EXTENSION KIT
11. PROVIDE OUTSIDE AIR HOOD

PACKAGED ROOFTOP AIR CONDITIONING UNITS SCHEDULE BLD-C

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 BHP	SEER	AFUE %	ELECTRICAL V / PH	ELECTRICAL MCA	ELECTRICAL MOCP	WEIGHT LBS	MOUNTING DETAIL	NOTES
AC-28	YORK	ZE060K10	60.7	46.2	100	80	1980	0.8	500	1216	1.73	14	80	460 / 3	14.1	20	875	1/MP0.2	1,3,4,5,6,8,9,10
AC-29	YORK	ZE060K10	60.7	46.2	100	80	1980	0.8	500	1216	1.73	14	80	460 / 3	14.1	20	875	1/MP0.2	1,3,4,5,6,8,9,10
AC-30	YORK	ZE048K07	50.4	37.4	75	59	1600	0.8	400	1068	1.73	14	80	460 / 3	11	15	760	1/MP0.2	1,3,4,6,10
AC-31	YORK	ZE048K07	50.4	37.4	75	59	1600	0.8	400	1068	1.73	14	80	460 / 3	11	15	760	1/MP0.2	1,3,4,6,10
AC-32	YORK	ZE060K10	60.7	46.2	100	80	1980	0.8	500	1216	1.73	14	80	460 / 3	14.1	20	875	1/MP0.2	1,3,4,5,6,8,9,10
AC-33	YORK	ZE060K10	60.7	46.2	100	80	1980	0.8	500	1216	1.73	14	80	460 / 3	14.1	20	875	1/MP0.2	1,3,4,5,6,8,10,11
AC-34	YORK	ZE060K10	60.7	46.2	100	80	1980	0.8	500	1216	1.73	14	80	460 / 3	14.1	20	875	1/MP0.2	1,3,4,5,6,8,9,10
AC-35	YORK	ZE060K10	60.7	46.2	100	80	1980	0.8	500	1216	1.73	14	80	460 / 3	14.1	20	875	1/MP0.2	1,3,4,5,6,8,9,10
AC-36	YORK	PCG4A36050	37.0	27.6	50	40	1200	0.8	300	1445	0.5	14	81	460 / 3	7.6	15	630	2/MP0.2	1,3,4,6,7,10,11

1. WEIGHT INCLUDES ALL OPTIONS AND ACCESSORIES.
2. PROVIDE DRY BULB LOW LEAK ECONOMIZER W/ BAROMETRIC RELIEF AND POWER EXHAUST.
3. PROVIDE WITH LOUVERED HAIL GUARDS, NON-POWERED CONVENIENCE OUTLET, SINGLE POINT POWER CONNECTION. AND HINGED ACCESS PANELS.
4. PROVIDE WITH MERV 13 FILTERS.
5. PROVIDE PELICAN WIRELESS PEARL ECONOMIZER CONTROLLER. CONTROLLER TO BE FIELD INSTALLED. COORDINATE WITH MANUFACTURER.
6. VERTICAL DISCHARGE CONFIGURATION.
7. PROVIDE WITH CURB ADAPTOR (S1-1TC0102). CONTRACTOR SHALL FIELD VERIFY (E) DIMENSIONS PRIOR TO ORDERING .
8. PROVIDE DRY BULB ECONOMIZER AND HOOD (NO BAROMETRIC RELIEF DAMPER).
9. PROVIDE BAROMETRIC RELIEF DAMPER
10. PROVIDE FLUE EXTENSION KIT
11. PROVIDE OUTSIDE AIR HOOD

(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
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CAMPBELL, CA 95008
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REGISTERED PROFESSIONAL ENGINEER
No. M31059
EXP. JUNE 30, 2023
MECHANICAL
STATE OF CALIFORNIA
BID SET
11-05-2021

CEG JOB NO: 21134
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

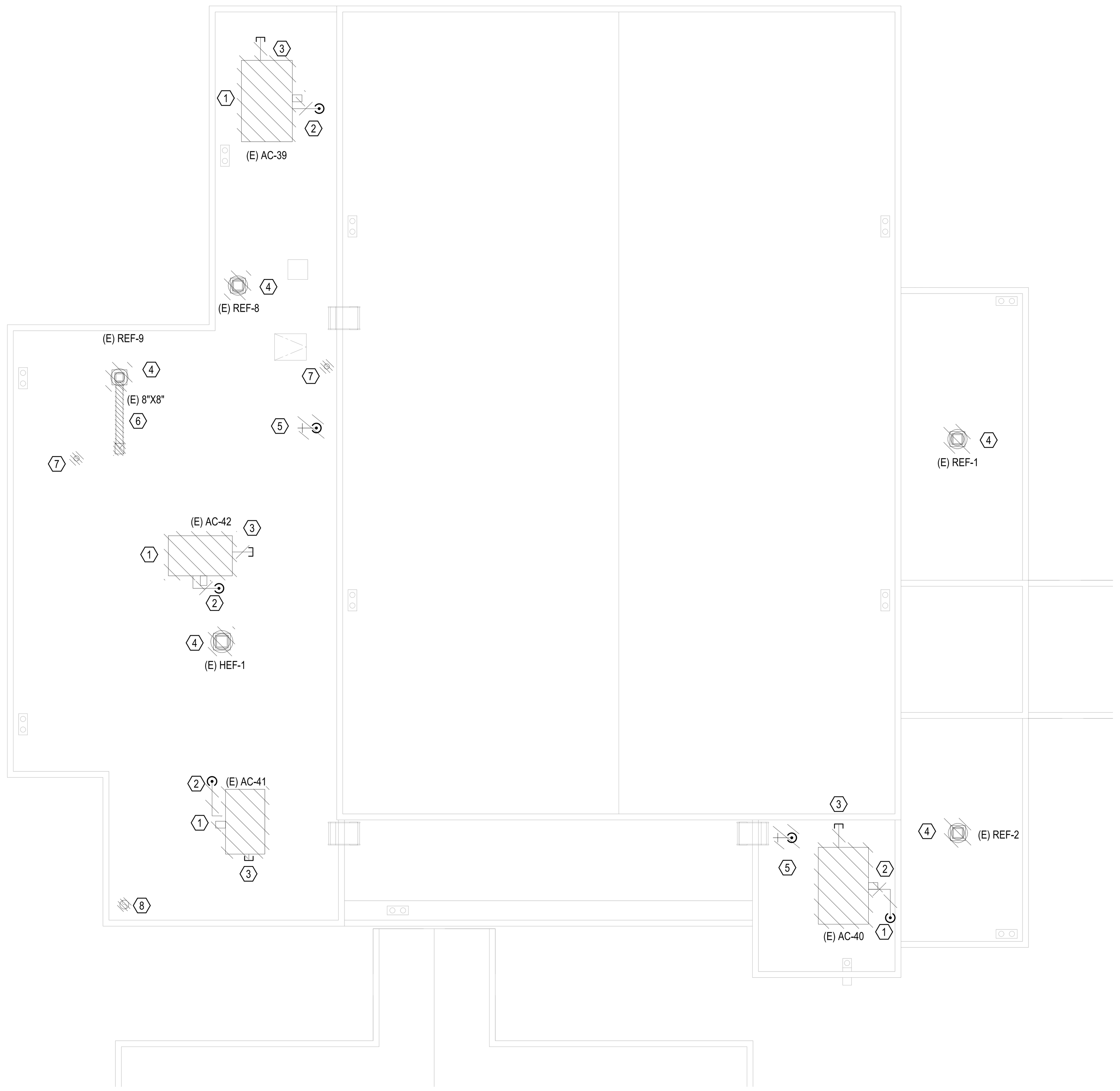
SCHEDULES & DETAILS - MECHANICAL & PLUMBING

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS NO.	ITEM	DATE

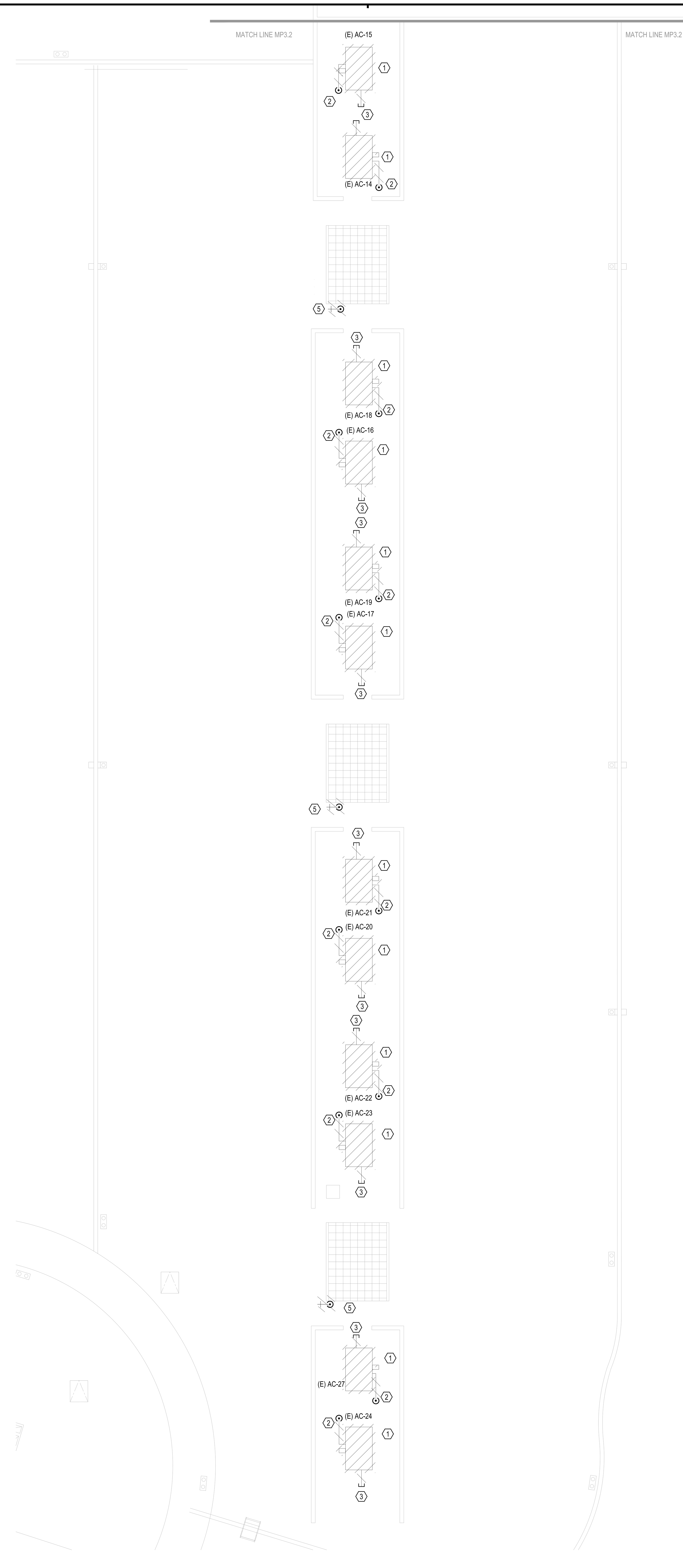
DRAWN BY: CAD
CHECKED BY: CS
SFA JOB NO: 18082
DATE: 11/05/2021

MP0.2



1 MP3.1 DEMOLITION ROOF PLAN - BUILDING A
SCALE: 1/8" = 1'-0"

NORTH



2 MP3.1 DEMOLITION ROOF PLAN - BUILDING B SOUTH
SCALE: 1/8" = 1'-0"

NORTH

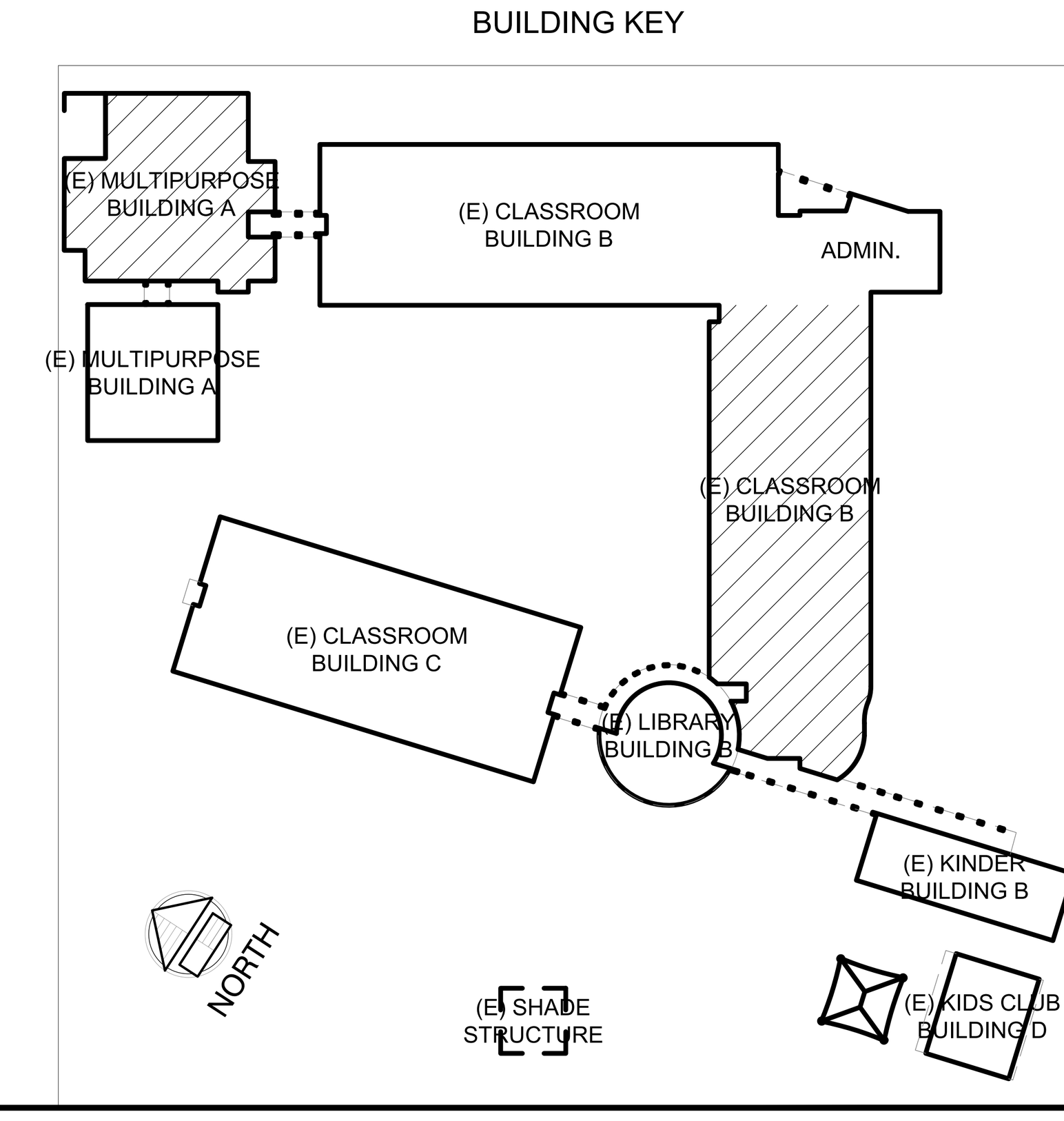
GENERAL NOTES

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 BUILDING SERVICES TO AVOID CONFLICT.
3. CONTRACTOR SHALL CONNECT (E) PELICAN THERMOSTATS TO NEW UNITS AND PELICAN ECONOMIZER CONTROLLER.
4. CONTRACTOR TO VERIFY ALL EXISTING CURB DIMENSIONS BEFORE SUBMITTAL PROCESS / ORDERING EQUIPMENT AND PROVIDE CURB ADAPTERS AS REQUIRED.
5. ALL PLUMBING VENTS TO STAY IN PLACE. EXTEND VENTS ABOVE NEW ROOF LEVEL WHERE REQUIRED.
6. PLANS ARE DRAWN FROM AVAILABLE RECORD DRAWINGS AND LIMITED FIELD VERIFICATION. CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND MAKE ADJUSTMENTS PRIOR TO ORDERING/FABRICATION.

DEMOLITION SHEET NOTES

1. REMOVE (E) AC UNIT. (E) ROOF CURB TO REMAIN. PRESERVE ROOF OPENING FOR NEW AC UNIT.
2. REMOVE (E) GAS PIPING ON ROOF. PROTECT ROOF OPENING FOR NEW GAS PIPING CONNECTION TO NEW AC UNIT.
3. REMOVE (E) CD PIPING ON ROOF. CAP PIPING GOING THRU ROOF.
4. REMOVE (E) ROOF EXHAUST FAN. (E) ROOF CURB TO REMAIN. PRESERVE ROOF OPENING FOR NEW ROOF EXHAUST FAN UNIT.
5. REMOVE (E) HOSE BIBB ON ROOF. CAP (E) CW PIPE FOR CONNECTION TO NEW.
6. REMOVE (E) DUCT ON ROOF AND REINSTALL IN SAME CONFIGURATION.
7. REMOVE (E) EXHAUST CAP. PROTECT OPENING FOR CONNECTION TO NEW CAP.
8. REMOVE (E) FLUE PIPE. PROTECT OPENING FOR CONNECTION TO NEW .

BUILDING KEY



(DSA STAMP AREA)

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CAMPBELL, CA 95008
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FAX: 408-377-6066

REGISTERED PROFESSIONAL ENGINEER
BID SET
11-05-2021
MECHANICAL
STATE OF CALIFORNIA

CEG JOB NO.: 21134

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

DEMOLITION ROOF PLANS - BUILDINGS A & B SOUTH - MECHANICAL & PLUMBING

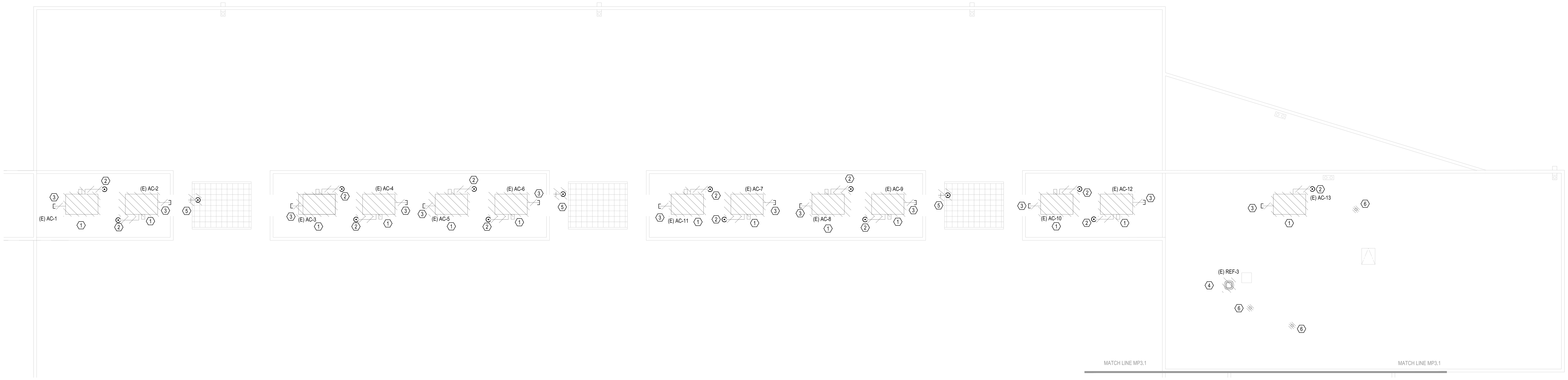
NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

NO.	ITEM	DATE

DRAWN BY:	CAD
CHECKED BY:	CS
SFA JOB NO: 18082	DATE: 11/05/2021

MP3.1



1 MP3.2 DEMOLITION ROOF PLAN - BUILDING B EAST
SCALE: 1/8" = 1'-0"

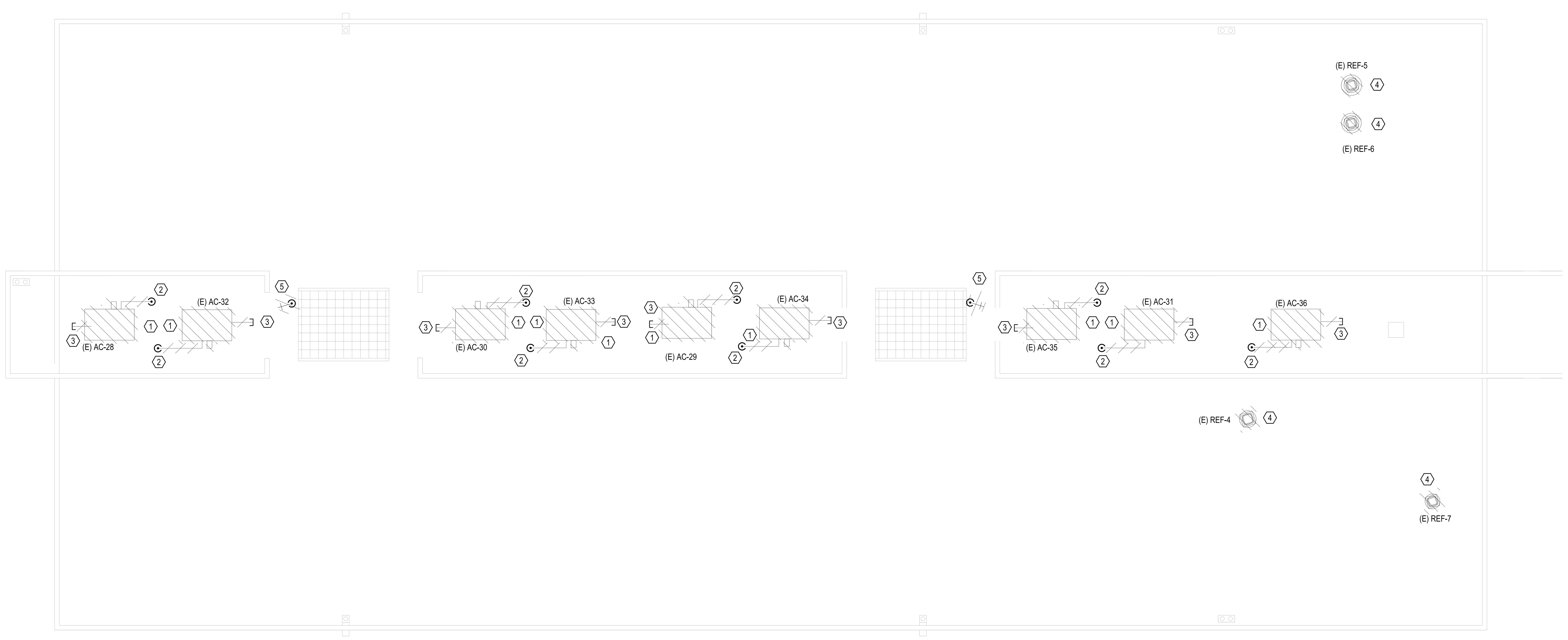
NORTH

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 BUILDING SERVICES TO AVOID CONFLICT.
3. CONTRACTOR SHALL CONNECT (E) PELICAN THERMOSTATS TO NEW UNITS AND PELICAN ECONOMIZER CONTROLLER.
4. CONTRACTOR TO VERIFY ALL EXISTING CURB DIMENSIONS BEFORE SUBMITTAL PROCESS / ORDERING EQUIPMENT AND PROVIDE CURB ADAPTERS AS REQUIRED.
5. ALL PLUMBING VENTS TO STAY IN PLACE. EXTEND VENTS ABOVE NEW ROOF LEVEL WHERE REQUIRED.
6. PLANS ARE DRAWN FROM AVAILABLE RECORD DRAWINGS AND LIMITED FIELD VERIFICATION. CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND MAKE ADJUSTMENTS PRIOR TO ORDERING/FABRICATION.

DEMOLITION SHEET NOTES

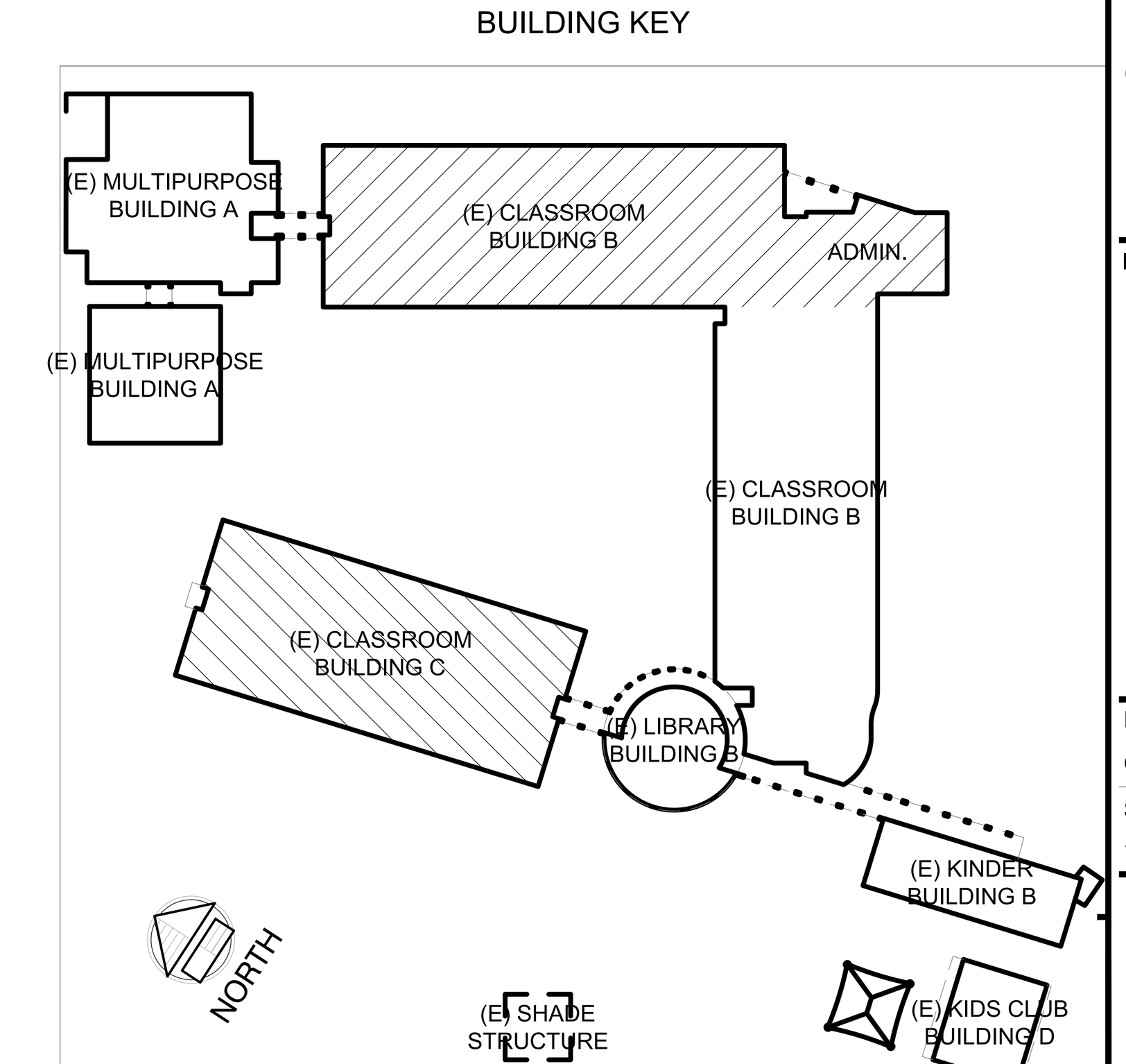
1. REMOVE (E) AC UNIT. (E) ROOF CURB TO REMAIN. PRESERVE ROOF OPENING FOR NEW AC UNIT.
2. REMOVE (E) GAS PIPING ON ROOF. PROTECT ROOF OPENING FOR NEW GAS PIPING CONNECTION TO NEW AC UNIT.
3. REMOVE (E) CD PIPING ON ROOF. CAP PIPING GOING THRU ROOF.
4. REMOVE (E) ROOF EXHAUST FAN. (E) ROOF CURB TO REMAIN. PRESERVE ROOF OPENING FOR NEW ROOF EXHAUST FAN UNIT.
5. REMOVE (E) HOSE BIBB ON ROOF. CAP (E) CW PIPE FOR CONNECTION TO NEW.
6. REMOVE (E) EXHAUST CAP. PROTECT OPENING FOR CONNECTION TO NEW CAP.



2 MP3.2 DEMOLITION ROOF PLAN - BUILDING C
SCALE: 1/8" = 1'-0"

NORTH

BUILDING KEY



(DSA STAMP AREA)

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CAMPBELL, CA 95008
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REGISTERED PROFESSIONAL ENGINEER
MARTIN SERTTUNC
No. M31059
EXP. JUNE 30, 2023
MECHANICAL
STATE OF CALIFORNIA
BID SET
11-05-2021

CEG JOB NO: 21134

CYPRESS Engineering Group
HVAC, Plumbing, Fire Protection
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DEMOLITION ROOF PLANS - BUILDINGS B NORTH & C - MECHANICAL & PLUMBING

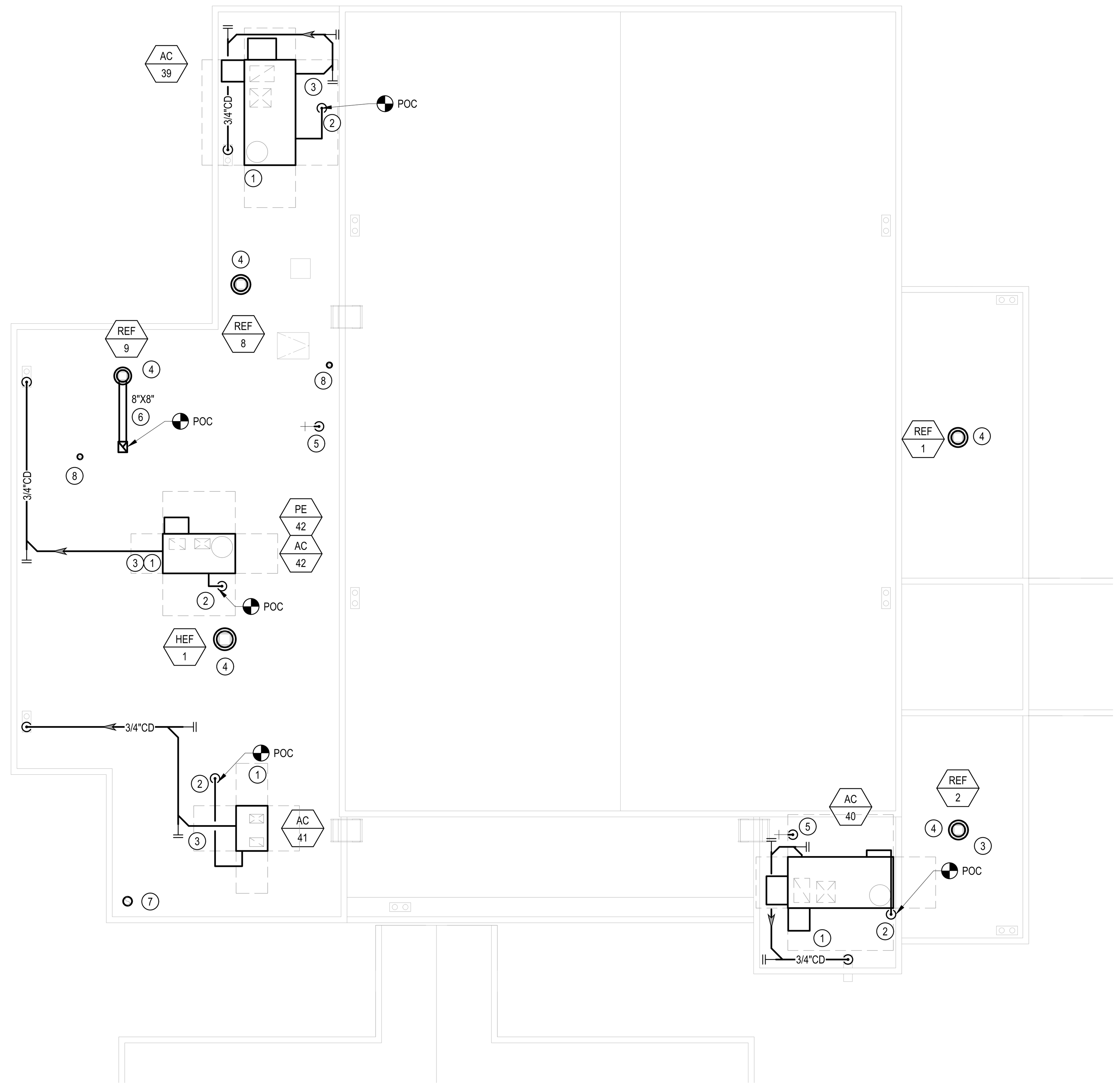
NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

NO.	ITEM	DATE

DRAWN BY:	CAD
CHECKED BY:	CS
SFA JOB NO: 18082	DATE: 11/05/2021

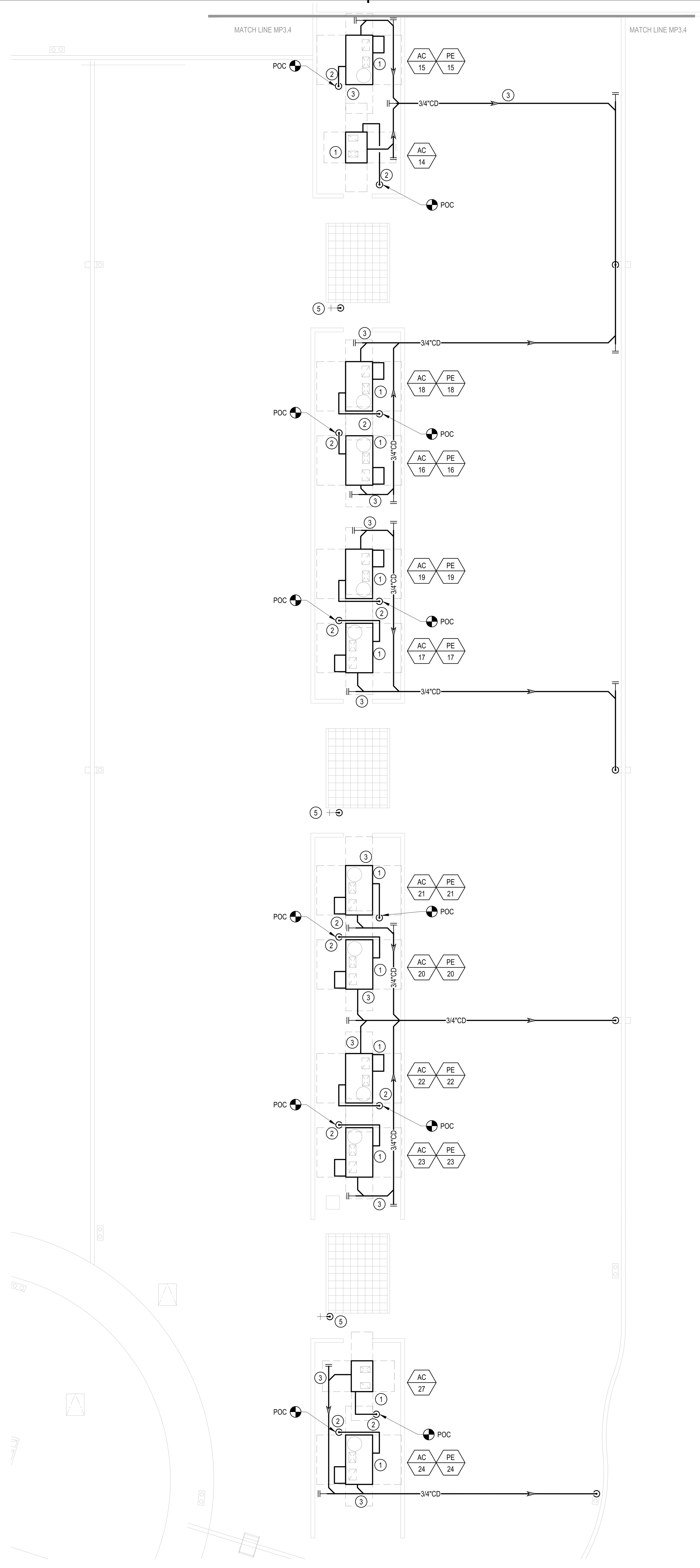
MP3.2



1 MP3.3 NEW ROOF PLAN - BUILDING A

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

NORTH



2 MP3.3 NEW ROOF PLAN - BUILDING B SOUTH

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

NORTH

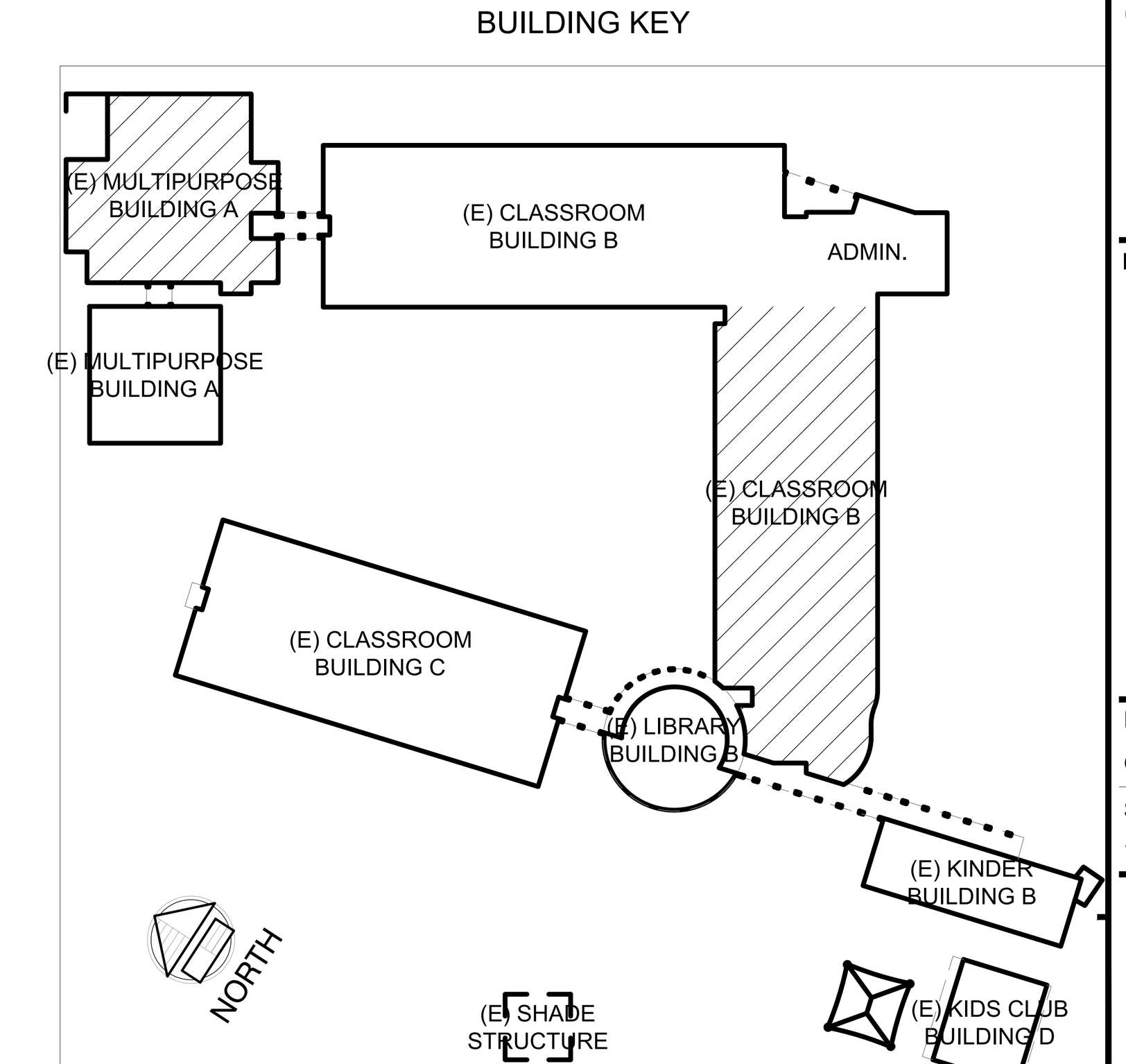
GENERAL NOTES

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 BUILDING SERVICES TO AVOID CONFLICT.
3. CONTRACTOR SHALL CONNECT (E) PELICAN THERMOSTATS TO NEW UNITS AND PELICAN ECONOMIZER CONTROLLER.
4. CONTRACTOR TO VERIFY ALL EXISTING CURB DIMENSIONS BEFORE SUBMITTAL PROCESS / ORDERING EQUIPMENT AND PROVIDE CURB ADAPTERS AS REQUIRED.
5. ALL PLUMBING VENTS TO STAY IN PLACE. EXTEND VENTS ABOVE NEW ROOF LEVEL WHERE REQUIRED.
6. PLANS ARE DRAWN FROM AVAILABLE RECORD DRAWINGS AND LIMITED FIELD VERIFICATION. CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND MAKE ADJUSTMENTS PRIOR TO ORDERING/FABRICATION.
7. CHECK THE UNITS FOR HEATING, COOLING, ECONOMIZER, AND CONTINUOUS FAN OPERATION. COORDINATE WITH SCHOOL DISTRICT TO PROGRAM THERMOSTATS FOR OCCUPIED SCHEDULE HOURS.

(#) NEW SHEET NOTES

1. INSTALL NEW AC UNIT ON (E) ROOF CURB. ENSURE CORRECT UNIT ORIENTATION AND CONNECT TO (E) SUPPLY AND RETURN DUCTWORK.
2. INSTALL NEW GAS PIPING WITH SHUTOFF VALVE, DIRT LEG, AND FLEX CONNECTION AT NEW AC UNIT. NEW GAS PIPE SIZE TO MATCH SIZE OF EXISTING PIPE AT POC. CONNECT GAS PIPING TO AC UNIT PER DETAIL 3/MP6.1. FOR PIPE SUPPORT SEE DETAIL 4/MP6.1.
3. INSTALL NEW CD PIPING WITH P-TRAP TO NEW AC UNIT. ROUTE TO NEAREST ROOF DRAIN AND SPILL WITH 1" AIR GAP. CONNECT CD PIPING TO AC UNIT PER DETAIL 3/MP6.1. FOR PIPE SUPPORT SEE DETAIL 4/MP6.1.
4. INSTALL A NEW ROOF EXHAUST FAN ON (E) ROOF CURB. ENSURE CORRECT UNIT ORIENTATION AND CONNECT TO (E) EXHAUST DUCTWORK.
5. CONNECT A NEW HOSE BIBB ON ROOF TO EXISTING WATER PIPING.
6. INSTALL EXHAUST FAN AND DUCT IN SAME CONFIGURATION AS (E) TO KEEP EXHAUST MIN. 10FT AWAY FROM AC OUTSIDE AIR INTAKE. SEE 6/MP6.1 FOR SIMPLIFIED SECTION.
7. INSTALL NEW FLUE. MATCH (E) SIZE. CONNECT TO DUCT BELOW AND EXTEND 2 FEET ABOVE ROOF PARAPET WALL.
8. INSTALL NEW EXHAUST CAP AND CONNECT TO (E) DUCTWORK . MATCH (E) SIZE. VERIFY IN FIELD.

BUILDING KEY



(DSA STAMP AREA)

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REGISTERED PROFESSIONAL ENGINEER — MARTIN SERTTUNC — No. M31059 — EXP. JUNE 30, 2023 — MECHANICAL — STATE OF CALIFORNIA

BID SET 11-05-2021

CEG JOB NO: 21134

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

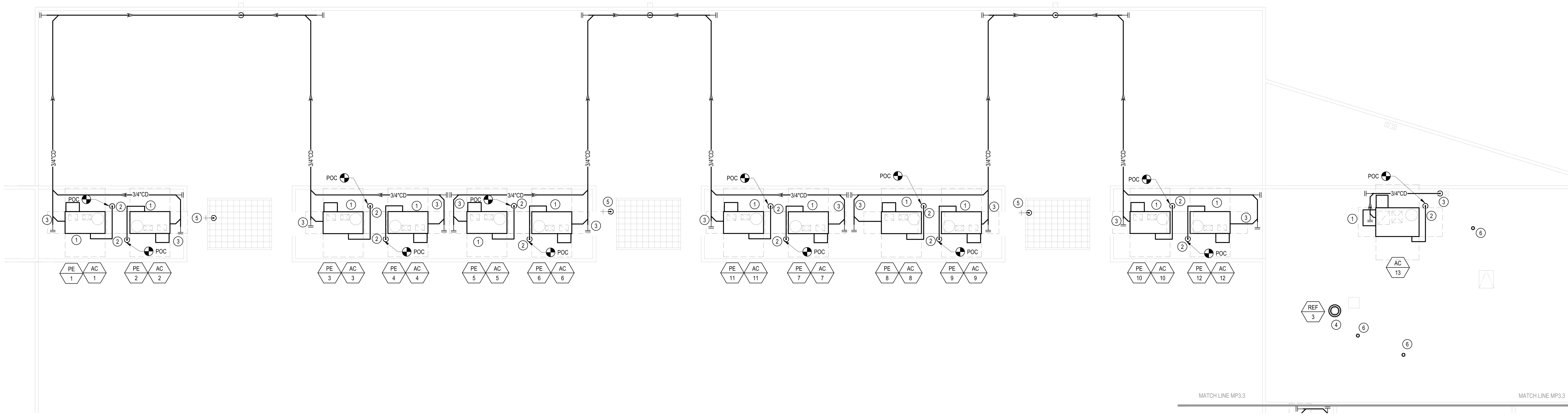
NEW ROOF PLANS - BUILDINGS A & B SOUTH - MECHANICAL & PLUMBING

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS		
NO.	ITEM	DATE

DRAWN BY:	CAD
CHECKED BY:	CS
SFA JOB NO: 18082	DATE: 11/05/2021

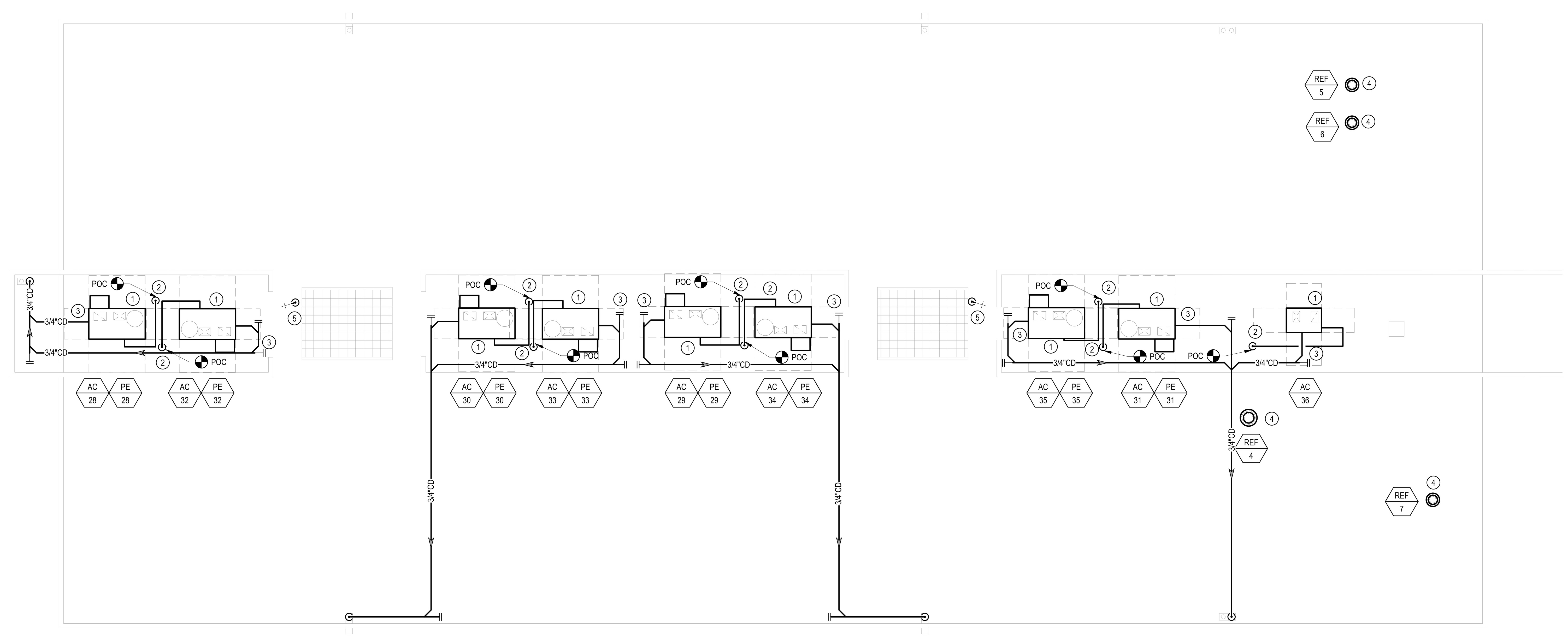
MP3.3



1 / MP3.4 — NEW ROOF PLAN - BUILDING B EAST

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

NORTH



2 / MP3.4 — NEW ROOF PLAN - BUILDING C

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

NORTH

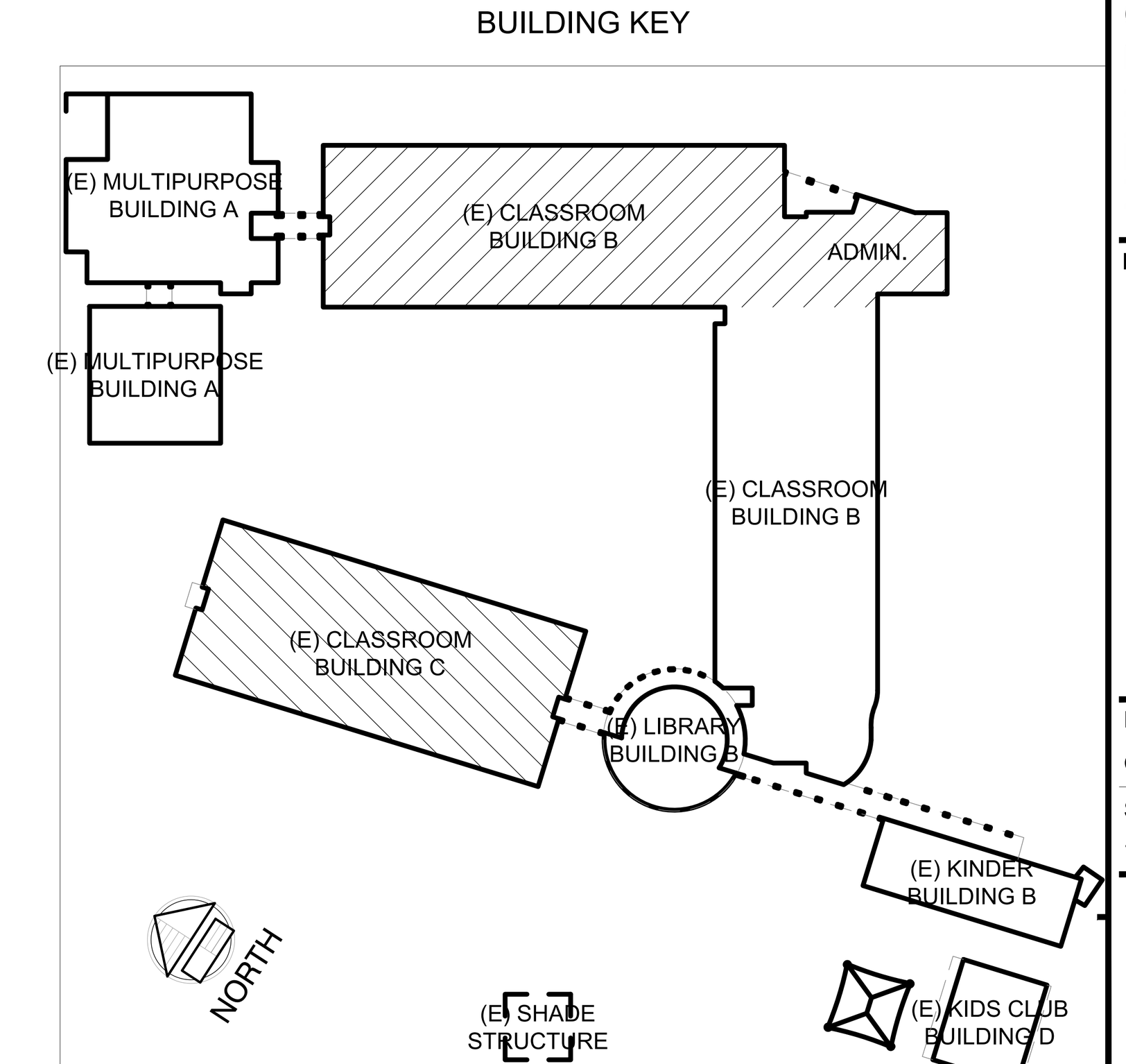
GENERAL NOTES

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 BUILDING SERVICES TO AVOID CONFLICT.
3. CONTRACTOR TO PROVIDE AND INSTALL THERMOSTAT CONTROL WIRING AND ASSOCIATED CONDUITS FOR ALL NEW HVAC EQUIPMENT. ALTHOUGH THESE ARE ROOF PLANS, THERMOSTATS SHOWN ARE LOCATED INDOORS, NOT ON THE ROOF.
4. CONTRACTOR TO VERIFY ALL EXISTING CURB DIMENSIONS BEFORE SUBMITTAL PROCESS / ORDERING EQUIPMENT AND PROVIDE CURB ADAPTERS AS REQUIRED.
5. ALL PLUMBING VENTS TO STAY IN PLACE. EXTEND VENTS ABOVE NEW ROOF LEVEL WHERE REQUIRED.
6. PLANS ARE DRAWN FROM AVAILABLE RECORD DRAWINGS AND LIMITED FIELD VERIFICATION. CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND MAKE ADJUSTMENTS PRIOR TO ORDERING/FABRICATION.
7. CHECK THE UNITS FOR HEATING, COOLING, ECONOMIZER, AND CONTINUOUS FAN OPERATION. COORDINATE WITH SCHOOL DISTRICT TO PROGRAM THERMOSTATS FOR OCCUPIED SCHEDULE HOURS.

(#) NEW SHEET NOTES

1. INSTALL NEW AC UNIT ON (E) ROOF CURB. ENSURE CORRECT UNIT ORIENTATION AND CONNECT TO (E) SUPPLY AND RETURN DUCTWORK.
2. INSTALL NEW GAS PIPING WITH SHUTOFF VALVE, DIRT LEG, AND FLEX CONNECTION AT NEW AC UNIT. NEW GAS PIPE SIZE TO MATCH SIZE OF EXISTING PIPE AT POC. CONNECT GAS PIPING TO AC UNIT PER DETAIL 3/MP6.1. FOR PIPE SUPPORT SEE DETAIL 4/MP6.1.
3. INSTALL NEW CD PIPING WITH P-TRAP TO NEW AC UNIT. ROUTE TO NEAREST ROOF DRAIN CONNECT CD PIPING TO AC UNIT PER DETAIL 3/MP6.1. FOR PIPE SUPPORT SEE DETAIL 4/MP6.1.
4. INSTALL NEW ROOF EXHAUST FAN ON (E) ROOF CURB. ENSURE CORRECT UNIT ORIENTATION AND CONNECT TO (E) EXHAUST DUCTWORK.
5. CONNECT A NEW HOSE BIBB ON ROOF TO EXISTING WATER PIPING.
6. INSTALL NEW EXHAUST CAP AND CONNECT TO (E) DUCTWORK . MATCH (E) SIZE. VERIFY IN FIELD.

BUILDING KEY



(DSA STAMP AREA)

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BID SET 11-05-2021

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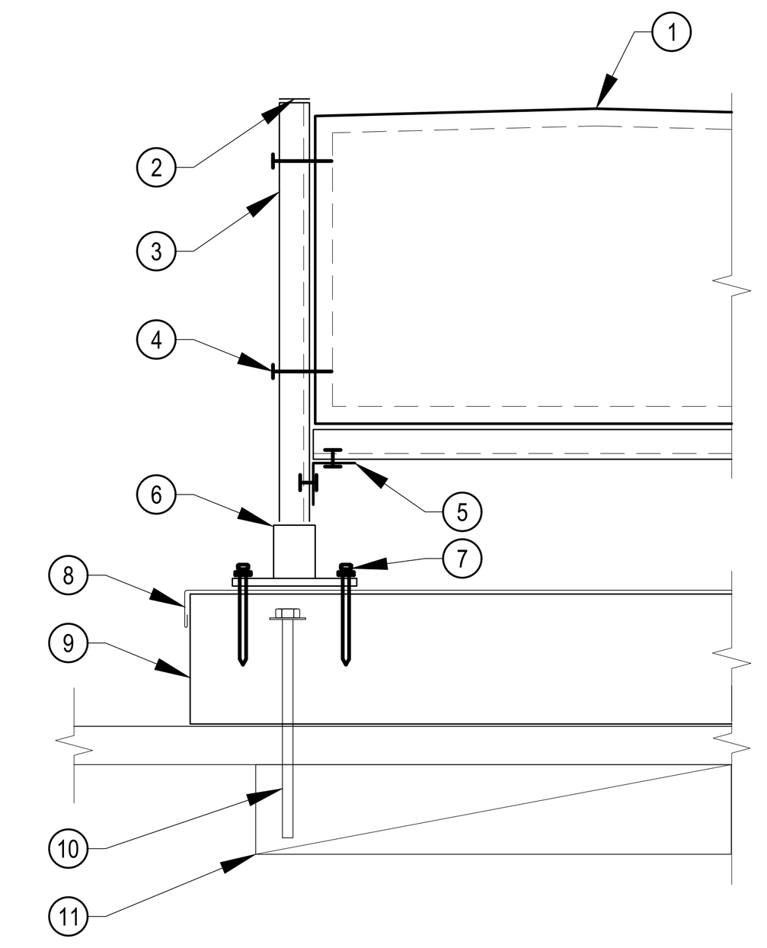
NEW ROOF PLANS - BUILDINGS B NORTH & C - MECHANICAL & PLUMBING

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS NO.	ITEM	DATE

DRAWN BY:	CAD
CHECKED BY:	CS
SFA JOB NO: 18082	DATE: 11/05/2021

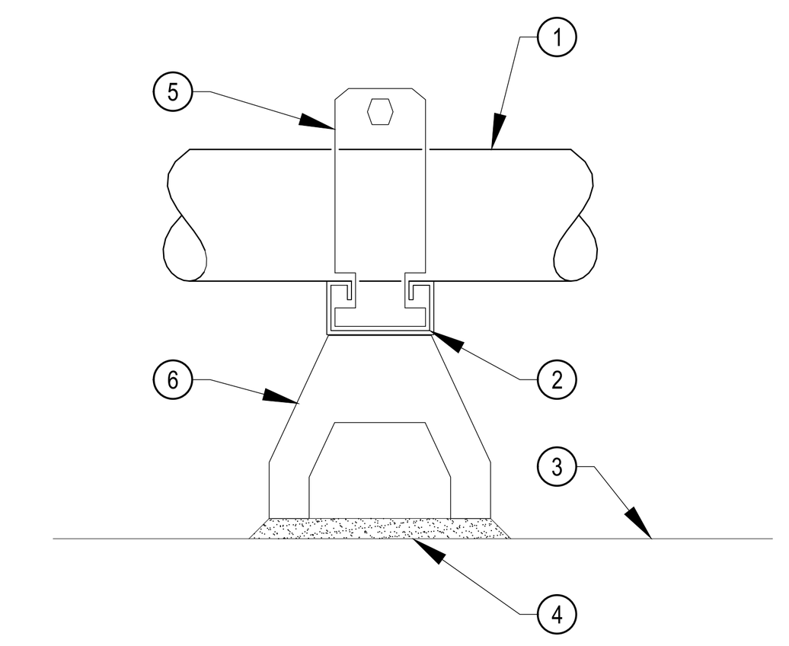
MP3.4



DETAIL NOTES:

1. BREAK TOP OF DUCT FOR 100% POSITIVE DRAINAGE, TYP.
2. END CAP, TYP.
3. P1000 CHANNEL, TYP.
4. #10 SHEET METAL SCREWS AT 12" ON CENTER.
5. ATTACH P2346 CORNER ANGLE W/ 1/2"Ø BOLT W/ CHANNEL NUT, TYP.
6. B-LINE B279FL POST BASE. ATTACH TO CHANNEL WITH 1/2"Ø BOLT AND CHANNEL NUT.
7. 1/2"Ø LAG SCREW, MINIMUM 3" EMBEDMENT, (2) PER BASE. CENTER SCREW OVER WIDTH OF SLEEPER.
8. MINIMUM 24 GAUGE GALVANIZED SHEET METAL CAP WITH HEMMED EDGES, FASTER AT 9" ON CENTER.
9. 4X12 PRESSURE TREATED SLEEPER WITH SHEET METAL CAP.
10. 1/2"Ø LAG SCREW WITH 3" MIN EMBEDMENT INTO BLOCKING. TYP OF 2 PER SLEEPER.
11. 6X8 BLOCKING, ATTACH TO (E) ROOF FRAME W/ HU EA END.

7 DUCT SUPPORT ON ROOF N.T.S.



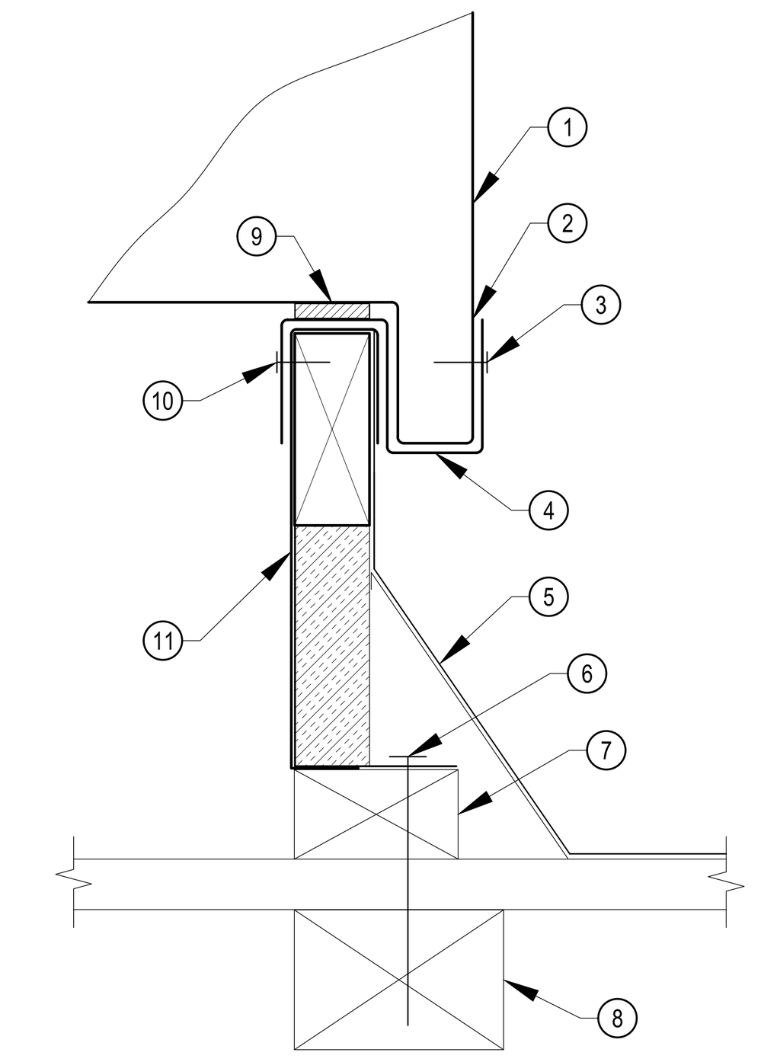
DETAIL NOTES:

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. ROOF DECK.
4. SET SUPPORT IN MASTIC COMPATIBLE WITH ROOF SURFACE.
5. PROVIDE STANDARD STRUT CLAMPS.
6. B-LINE DURA-BLOCK WITH INTEGRAL CHANNEL AND PIPE BRACKETS, WIDTH AS REQUIRED FOR NUMBER OF PIPES.

NOTES:

1. REFER TO SPECIFICATIONS FOR SPACING BETWEEN SUPPORT BLOCKS. ADDITIONALLY PROVIDE BLOCK WITHIN 2'-0" OF ANY CHANGE OF DIRECTION.

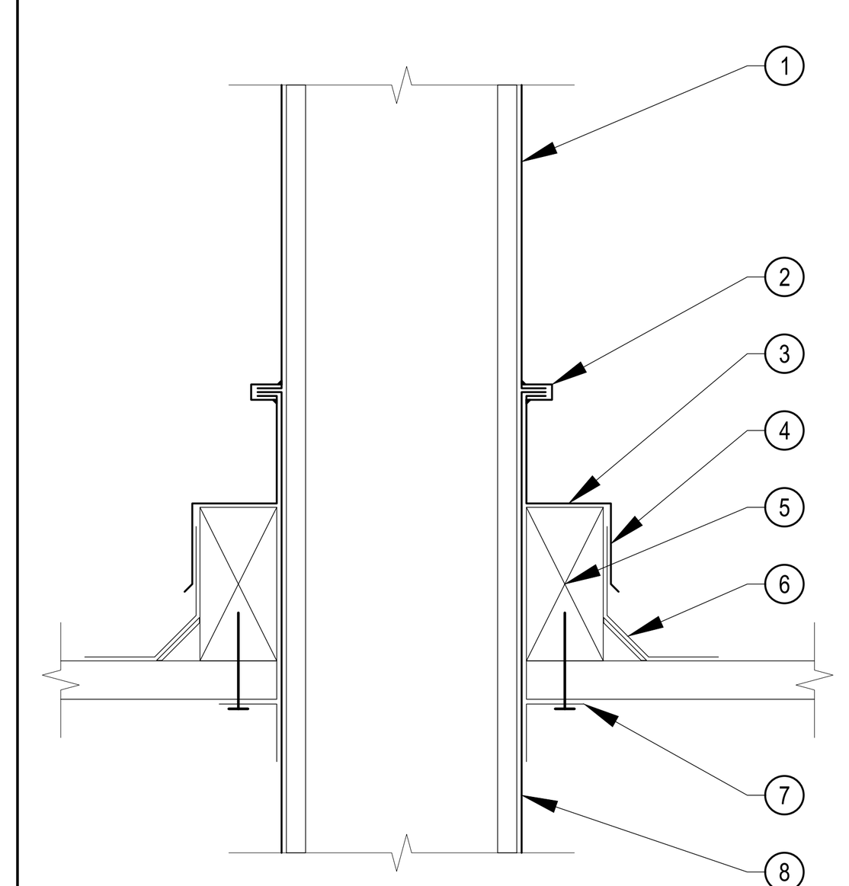
4 PIPE SUPPORT ON ROOF N.T.S.



DETAIL NOTES:

1. UNIT. FOR LOCATION, SEE PLANS.
2. UNIT BASE RAIL.
3. SECURE HOLD DOWN TO UNIT BASE RAIL WITH (4) #10 x1/2" TEK SCREWS.
4. MICROMETL UNIT HOLD DOWNS, TYPICAL OF 2 PER SIDE.
5. FOR FLASHING, SEE ARCHITECT'S DRAWINGS.
6. (E) LAG BOLT, V.I.F.
7. (E) LEVELING RAIL, V.I.F.
8. (E) BLOCKING, V.I.F.
9. SEALING GASKET.
10. SECURE HOLD DOWN TO UNIT CURB WITH (4) #10 x 1/2" TEK SCREWS, TYP.
11. (E) CURB WITH WOOD NAILER.

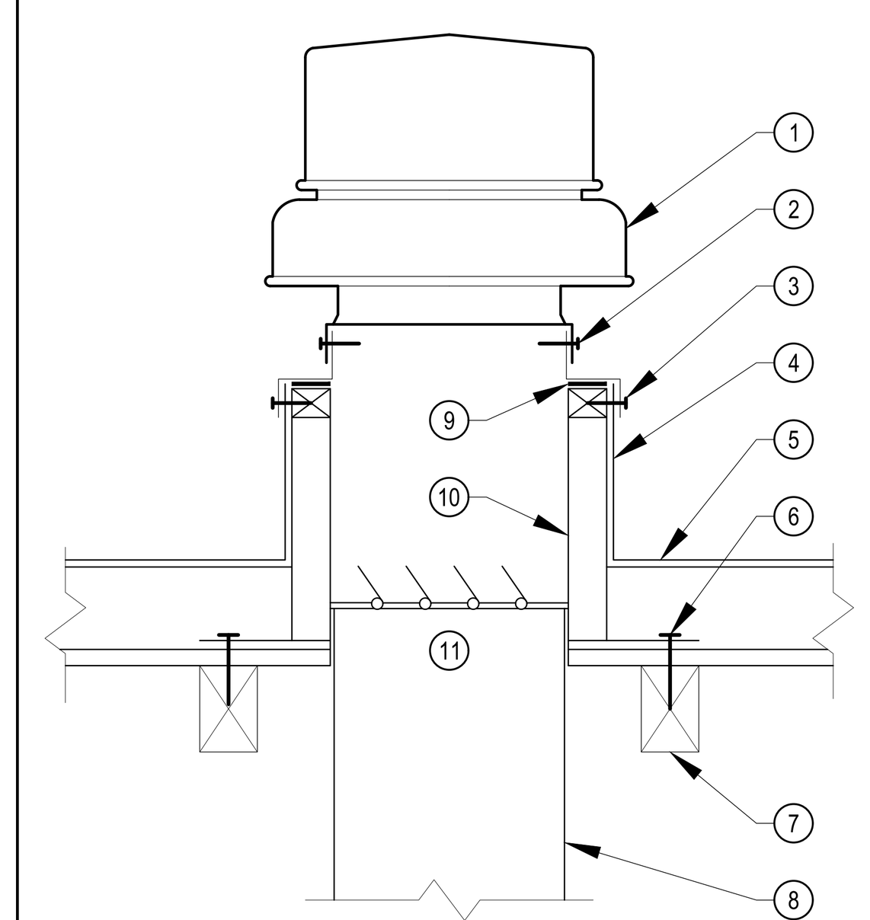
1 ROOFTOP AIR CONDITIONER MOUNTING ON EXISTING CURB N.T.S.



DETAIL NOTES:

1. DUCT ON ROOF. SEE PLANS FOR CONTINUATION.
2. 24 GAUGE GALVANIZED EDGE CLIP WITH MITERED CORNERS AND SET IN MASTIC.
3. 24 GAUGE GALVANIZED SHEETMETAL COUNTERFLASHING W/ DRIP EDGE.
4. 1-1/2" OVERLAP.
5. (E) CURB WITH SIMPSON A34 HANGER EACH CORNER.
6. SEE ARCHITECT'S DRAWINGS FOR ROOFING, FLASHING, AND CANT STRIP.
7. 3" x 3"x 3"x 1/4" ANGLE IRON CLIPS. ATTACH TO CURB WITH 1/2" Ø LAG SCREWS, MIN 3" EMBEDMENT, (2) PER SIDE.
8. CONNECT TO (E) DUCT BELOW ROOF.

8 DUCT THROUGH ROOF N.T.S.



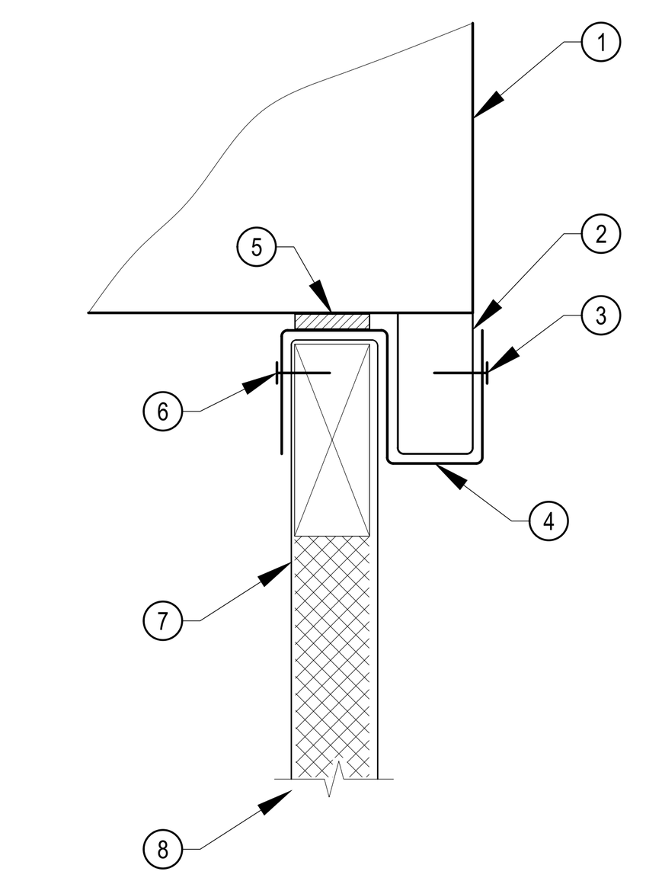
DETAIL NOTES:

1. ROOF EXHAUST FAN. SEE PLANS FOR LOCATIONS.
2. CURB ADAPTER OR REDUCER AS NECESSARY. ATTACH EXHAUST FAN TO CURB ADAPTER/REDUCER 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. FOR ROOFING AND FLASHING, SEE ARCHITECT'S DRAWINGS.
5. ROOF DECK.
6. 3/8"Ø BOLT THRU CURB AND ROOF WITH 3" MINIMUM EMBEDMENT INTO BLOCKING.
7. 4x BLOCKING. ATTACH TO (E) ROOF FRAMING.
8. DUCT.
9. SEALING GASKET.
10. (E) ROOF CURB WITH WOOD NAILER.
11. BACKDRAFT DAMPER.

NOTE:

ROOF HOOD MOUNTING SIMILAR.

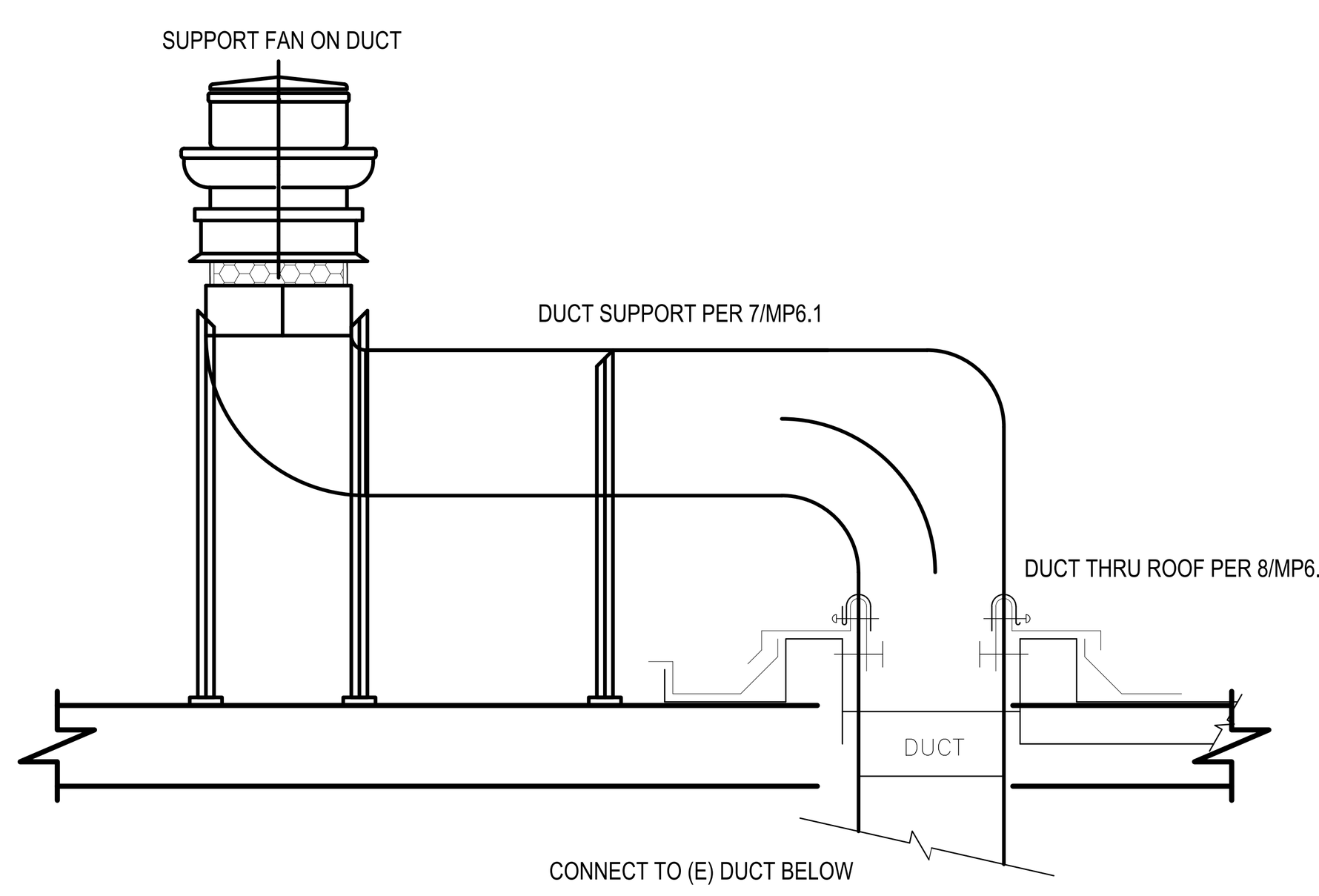
5 ROOF MOUNTED FAN N.T.S.



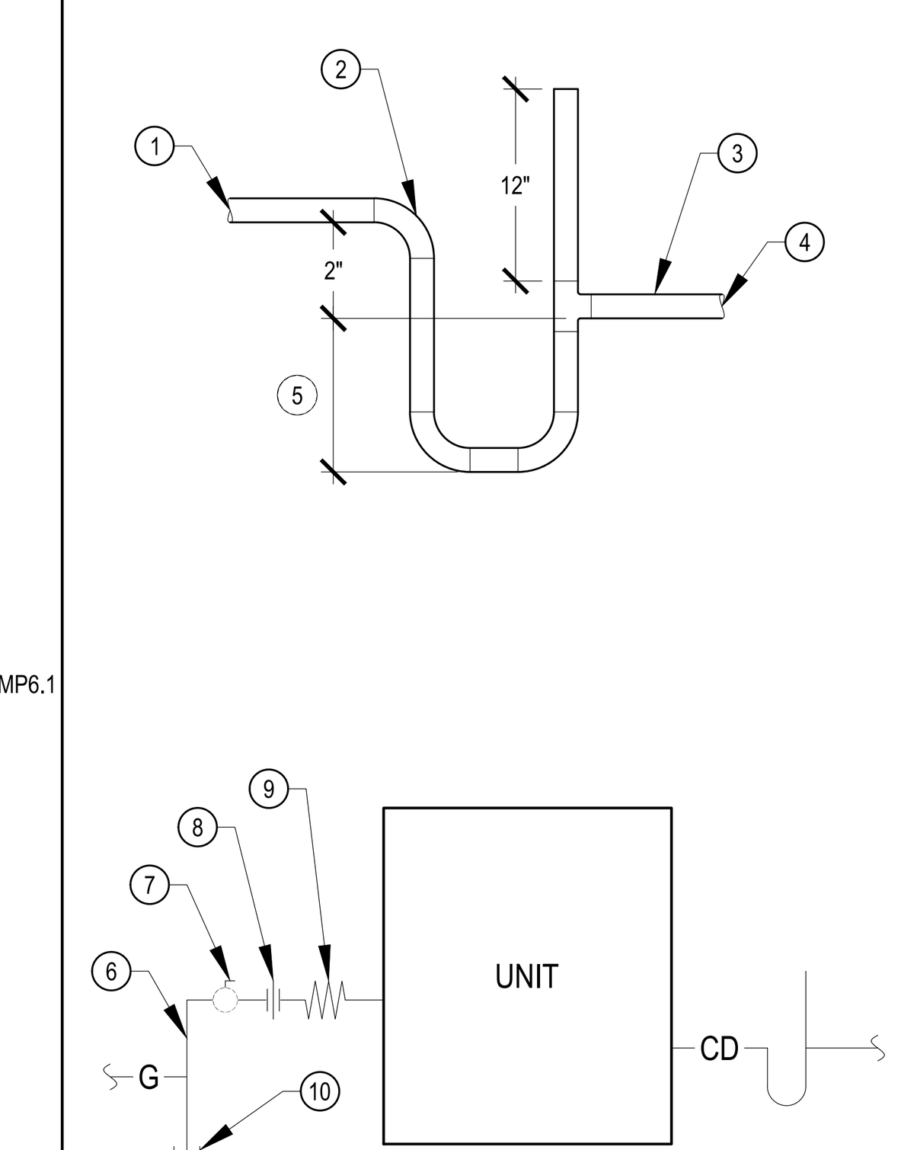
DETAIL NOTES:

1. UNIT. FOR LOCATION, SEE PLANS
2. UNIT BASE RAIL
3. SECURE HOLD DOWN TO UNIT BASE RAIL WITH (4) #10 x1/2" TEK SCREWS, TYP OF (4) LOCATIONS
4. MICROMETL UNIT HOLD DOWN, 16 GAUGE STEEL, TYP (2) PER SIDE.
5. NEOPRENE GASKET
6. SECURE HOLD DOWN TO CURB ADAPTER WITH (4) #10 x 1/2" TEK SCREWS, TYP.
7. CURB ADAPTER
8. ATTACH CURB ADAPTER TO (E) CURB WITH #10 TEK SCREWS 12" ON CENTER, MIN. (4) PER SIDE.

2 ROOFTOP AIR CONDITIONER MOUNTING WITH CURB ADAPTER N.T.S.



6 REF-9 SIMPLIFIED SECTION 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.
4. ROUTE TO POC. SEE PLANS.
5. 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.

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

(DSA STAMP AREA)

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REGISTERED PROFESSIONAL ENGINEER
BID SET
11-05-2021
No. M31059
MECHANICAL
STATE OF CALIFORNIA

CEG JOB NO: 21134

CYPRESS Engineering Group
HVAC, Plumbing, Fire Protection
Building Commissioning
Industrial Refrigeration
Environmental Compliance
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DETAILS - MECHANICAL & PLUMBING

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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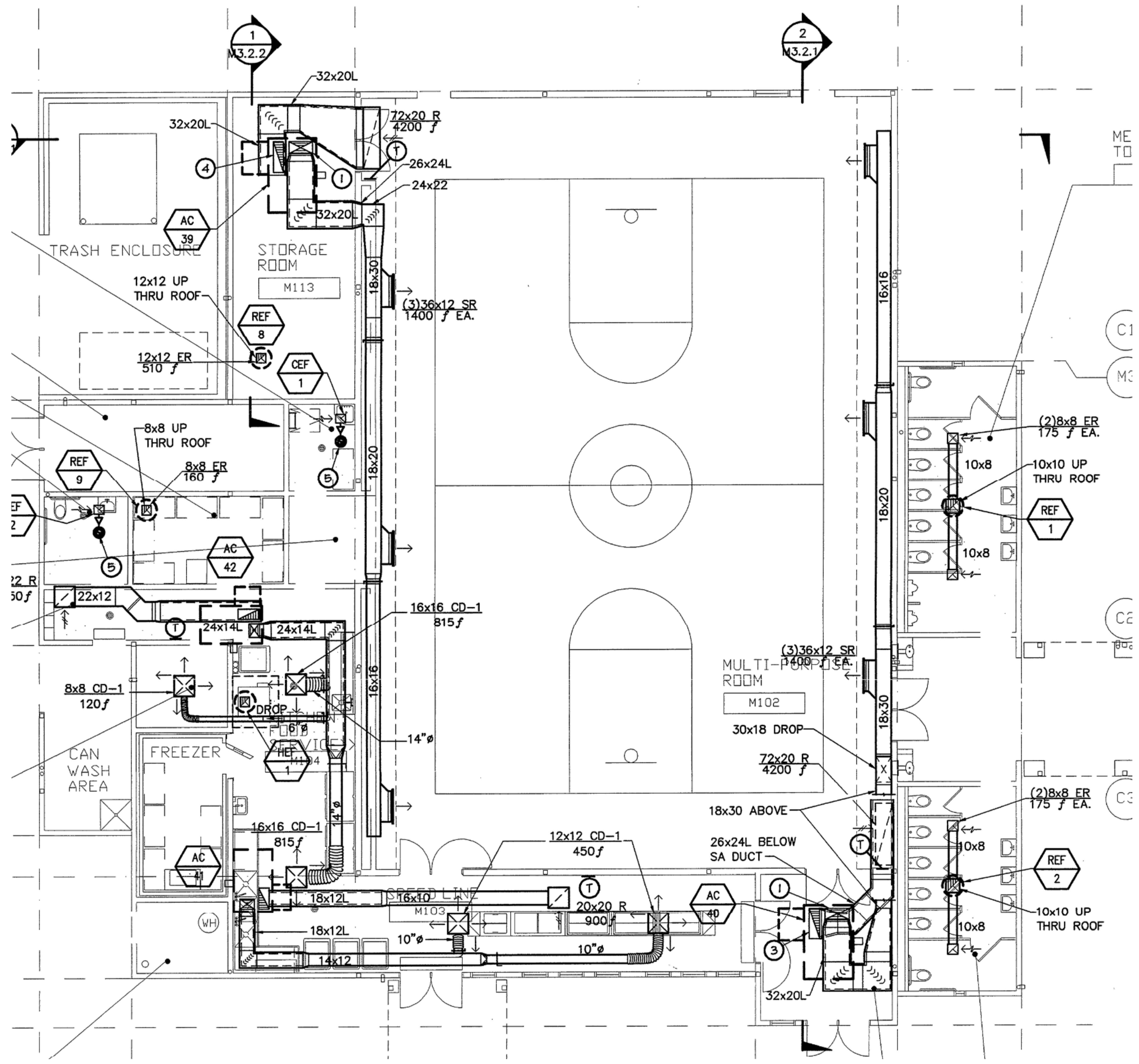
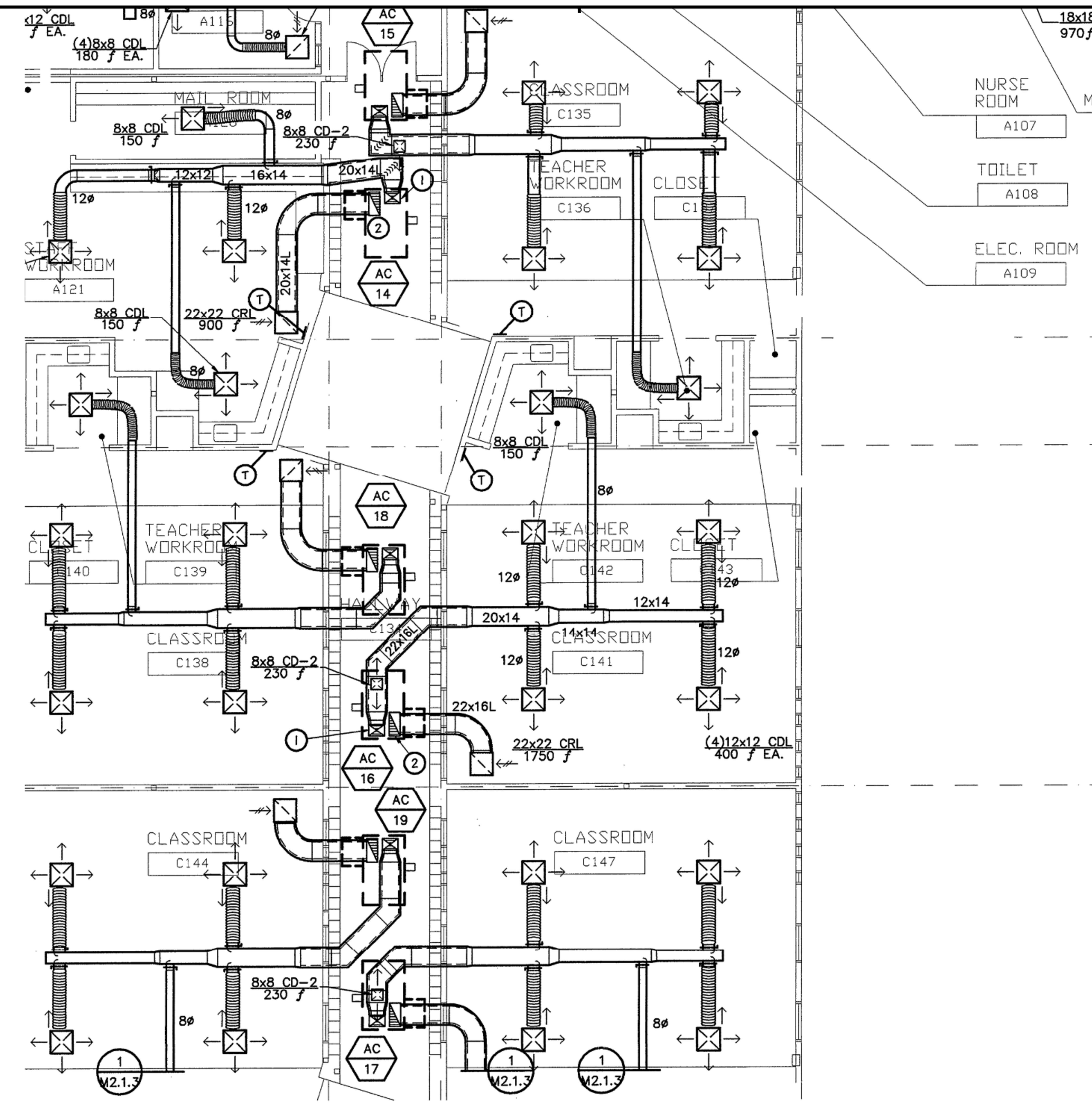
18082	11/05/2021

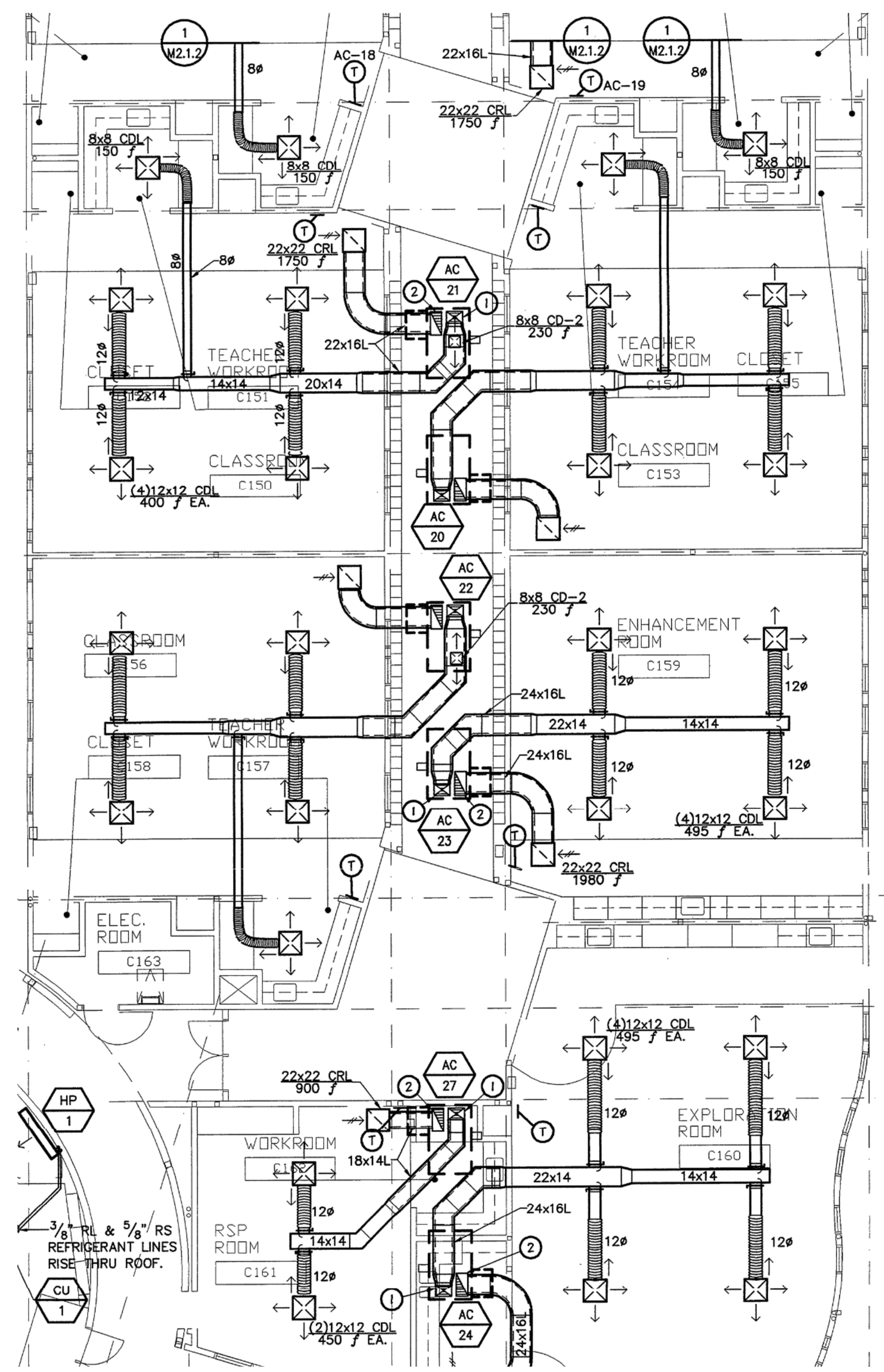
MP6.1



1 MP3.1 BUILDING A-MECHANICAL/TAB WORK

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





2 MP3.1 BUILDING B SOUTH-MECHANICAL/TAB WORK

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

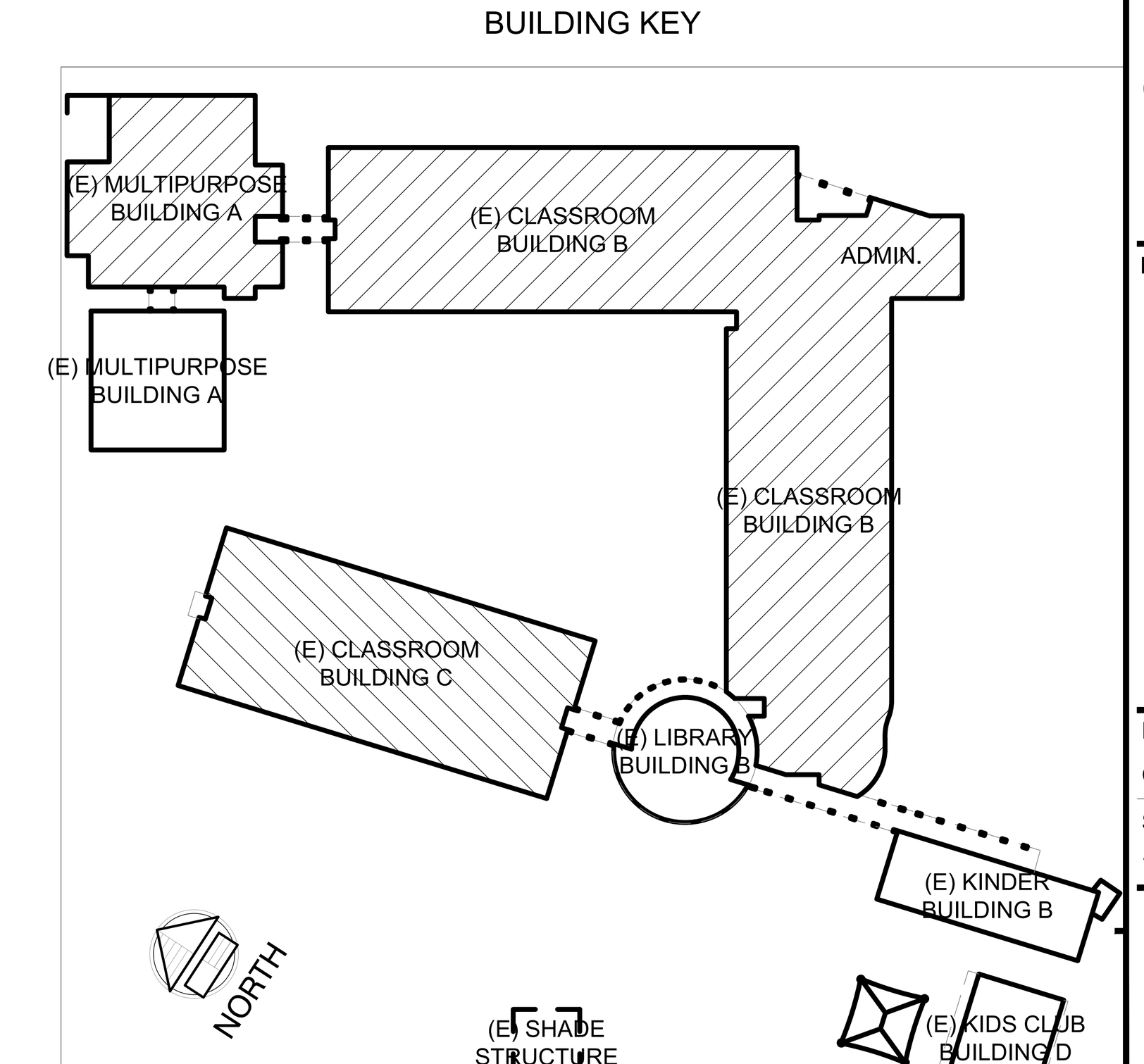
GENERAL NOTES

1. EXISTING FLOOR PLANS FROM RECORD DRAWINGS SHOWN FOR REFERENCE ONLY.
2. ADJUST AND BALANCE AIR FLOW TO CFM SHOWN ON AIR BALANCE SCHEDULE FOR EACH BUILDING.

AIR BALANCE SCHEDULE

UNIT NUMBER	LOCATION SERVED	SUPPLY CFM	RETURN CFM
AC-39	MULTI-PURPOSE ROOM M102	5000	3750
AC-42	KITCHEN FOOD SERVICES M104	1980	1500
AC-41	SPEED LINE M103	1200	900
AC-40	MULTI-PURPOSE ROOM M102	5000	3750
AC-15	CLASSROOM C135	1980	1500
AC-14	STAFF WORKROOM A121	1200	900
AC-18	CLASSROOM A138	1980	1500
AC-16	CLASSROOM A141	1980	1500
AC-19	CLASSROOM A144	1980	1500
AC-17	CLASSROOM A147	1980	1500
AC-21	CLASSROOM C150	1980	1500
AC-20	CLASSROOM C153	1980	1500
AC-22	CLASSROOM C156	1980	1500
AC-23	ENHANCEMENT ROOM C159	1980	1500
AC-27	RSP ROOM C161	1200	900
AC-24	EXPLORATION ROOM C160	1980	1500

BUILDING KEY



(DSA STAMP AREA)

SFA SUGIMURA FINNEY ARCHITECTS

BID SET 11-05-2021

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BLDG - EXISTING FLOOR PLANS - MECHANCIAL / TAB WORK

NEW HVAC AND REROOFING
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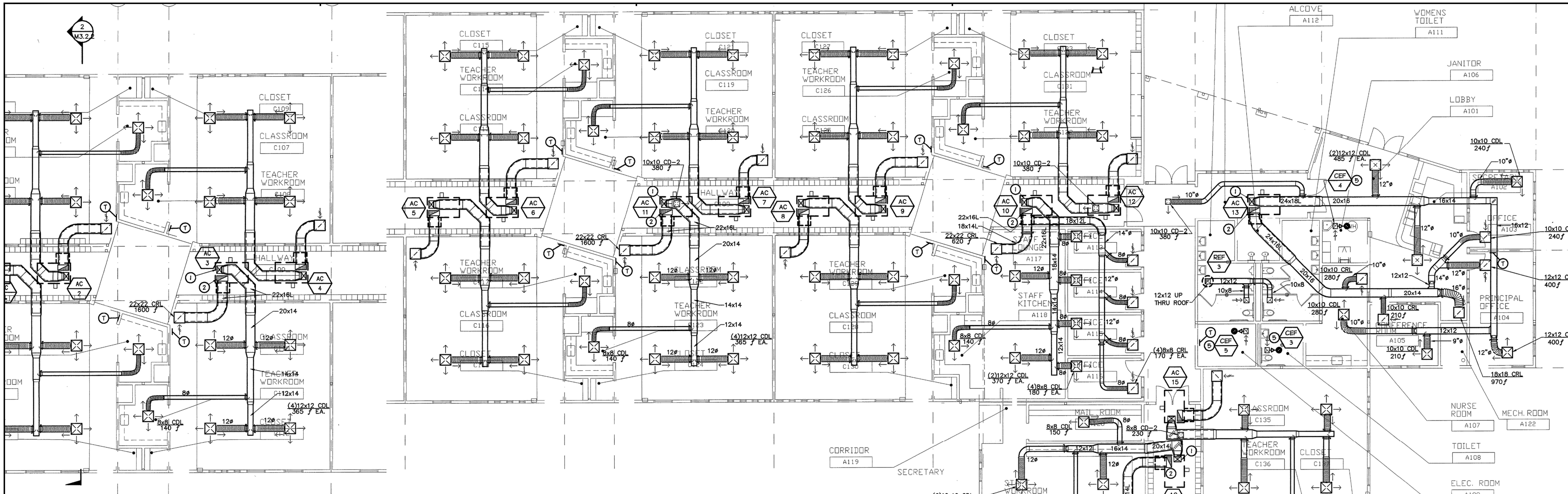
MP7.1



1 MP3.2 **BUILDING B EAST-MECHANICAL/TAB WORK**
SCALE: 1/8" = 1'-0"

NORTH

GENERAL NOTES

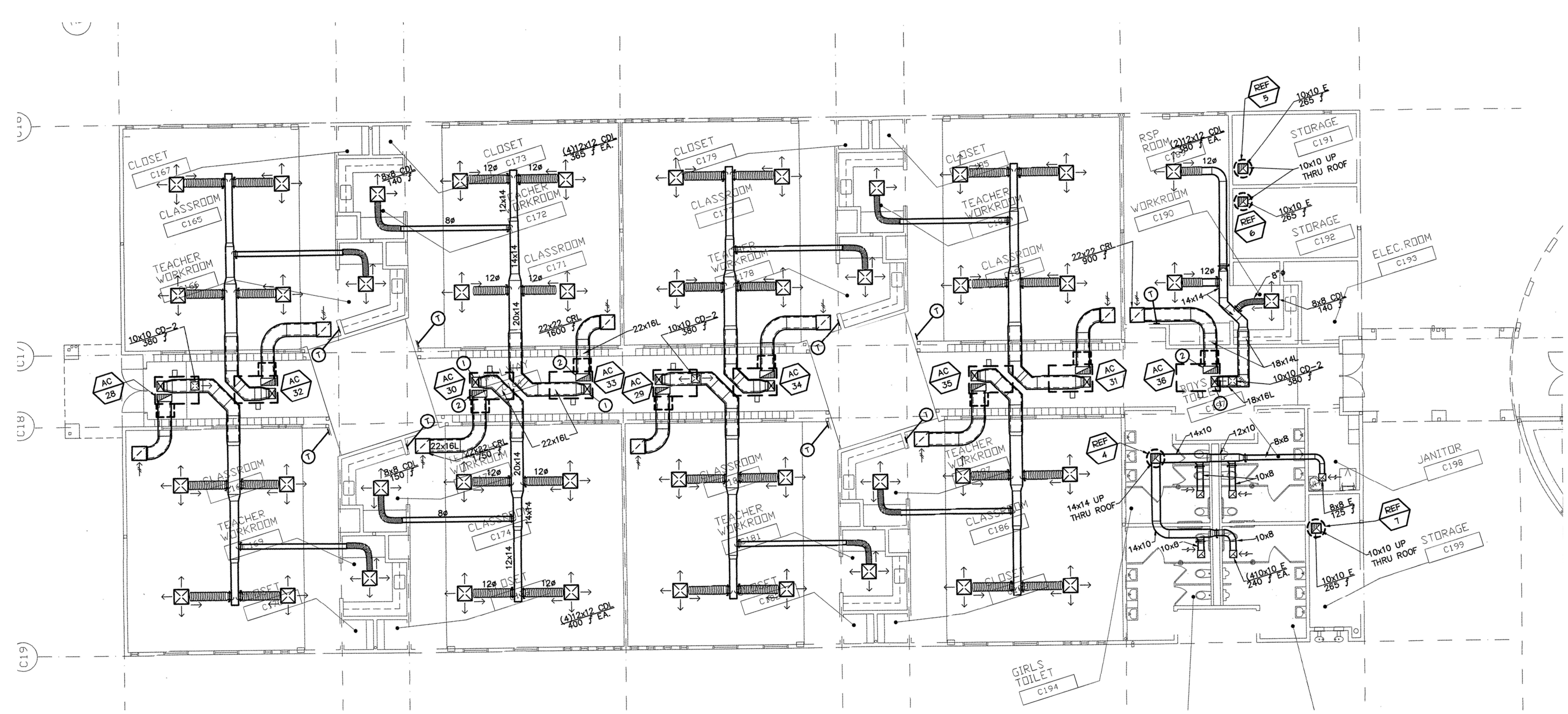
1. EXISTING FLOOR PLANS FROM RECORD DRAWINGS SHOWN FOR REFERENCE ONLY.
2. ADJUST AND BALANCE AIR FLOW TO CFM SHOWN ON AIR BALANCE SCHEDULE FOR EACH BUILDING.

AIR BALANCE SCHEDULE - BLDG A

UNIT NUMBER	LOCATION SERVED	SUPPLY CFM	RETURN CFM
AC-1	CLASSROOM A104	1980	1500
AC-2	CLASSROOM A101	1600	1200
AC-3	CLASSROOM A110	1600	1200
AC-4	CLASSROOM A107	1600	1200
AC-5	CLASSROOM A116	1600	1200
AC-6	CLASSROOM A114	1600	1200
AC-11	CLASSROOM A123	1980	1500
AC-7	CLASSROOM A119	1600	1200
AC-8	CLASSROOM A128	1600	1200
AC-9	CLASSROOM A125	1600	1200
AC-10	STAFF LOUNGE,KITCHEN,OFFICE	1600	1200
AC-12	CLASSROOM A131	1980	1500

AIR BALANCE SCHEDULE - BLDG A

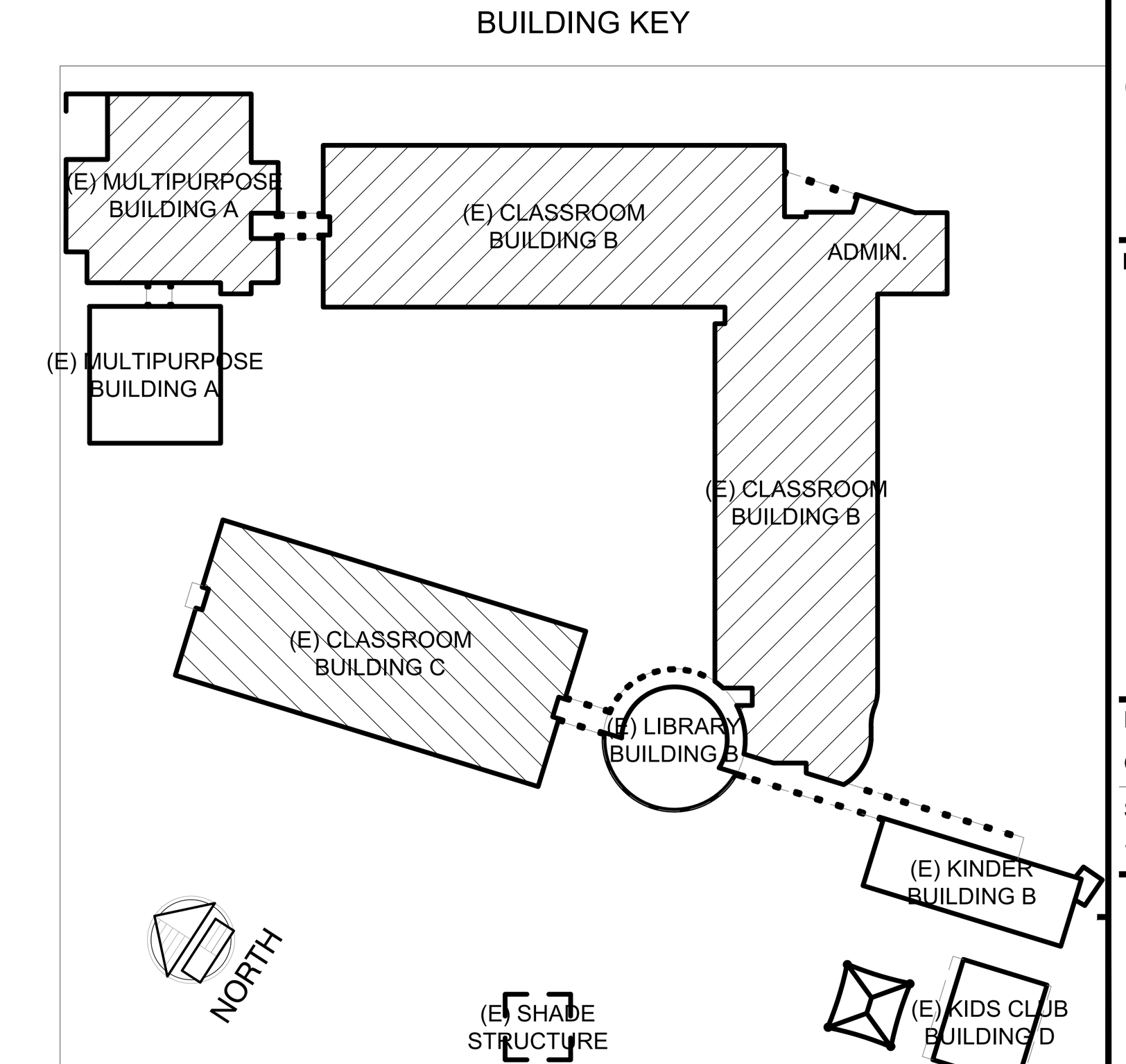
UNIT NUMBER	LOCATION SERVED	SUPPLY CFM	RETURN CFM
AC-13	CONFERENCE,PRINCIPAL OFFICE,OFFICE	2600	1950
AC-15	CLASSROOM C135	1980	1500
AC-36	WORKROOM C190	1200	900
AC-31	CLASSROOM C183	1600	1200
AC-35	CLASSROOM C186	1980	1500
AC-34	CLASSROOM C177	1980	1500
AC-29	CLASSROOM C180	1980	1500
AC-33	CLASSROOM C171	1980	1500
AC-30	CLASSROOM C174	1600	1200
AC-32	CLASSROOM C165	1980	1500
AC-28	CLASSROOM C168	1980	1500



2 MP3.2 **BUILDING C-MECHANICAL/TAB WORK**
SCALE: 1/8" = 1'-0"

NORTH

BUILDING KEY



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BLDG - EXISTING FLOOR PLANS - MECHANCIAL / TAB WORK

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MP7.2

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

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.			
Project Name:	New HVAC and Reroofing Hearst Elementary School	Report Page:	Page 1 of 11
Project Address:	5301 Case Avenue, Pleasanton, CA 94566	Date Prepared:	2021-11-03

A. GENERAL INFORMATION

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

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

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	New HVAC and Reroofing Hearst Elementary School	Report Page:	Page 2 of 11
Project Address:	5301 Case Avenue, Pleasanton, CA 94566	Date Prepared:	2021-11-03

D. EXCEPTIONAL CONDITIONS

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

Table H indicates a Fan Power System Index that exceeds the maximum allowed per §140.4(c). Please revise to demonstrate compliance.
Selections made in Table O have been changed by the permit applicant. See Table E. Additional Remarks for permit applicant's explanation.

E. ADDITIONAL REMARKS

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

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Table Instructions: Complete the following equipment schedules to show compliance with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), §140.4(b) and §140.4(k) or §141.0(b)2 for alterations.

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

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (kBtu/h) §140.4 (a&b)						
				Heating Output[2,3]			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	54	67		46	60		

[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

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

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	New HVAC and Reroofing Hearst Elementary School	Report Page:	Page 3 of 11
Project Address:	5301 Case Avenue, Pleasanton, CA 94566	Date Prepared:	2021-11-03

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	<65,000				0.8	SEER	13	16

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:	Constant Volume
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit[2]	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B: Device	Design Airflow through Device (CFM)
AC	Supply	1	1,800	BHP	1.05	None used	
						Calculated Adjustment (in H_2O)	
Total System Design Supply Airflow (CFM):	1,800	Total System Design (B)HP:	1.05	Maximum System Fan Power (B)HP:			

[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.*

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

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	New HVAC and Reroofing Hearst Elementary School	Report Page:	Page 4 of 11
Project Address:	5301 Case Avenue, Pleasanton, CA 94566	Date Prepared:	2021-11-03

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

[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.

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

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	New HVAC and Reroofing Hearst Elementary School	Report Page:	Page 5 of 11
Project Address:	5301 Case Avenue, Pleasanton, CA 94566	Date Prepared:	2021-11-03

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

Duct Leakage Sealing

The answers to the questions below apply to the following duct system(s):		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	Yes	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.	

Table Continued

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

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	New HVAC and Reroofing Hearst Elementary School	Report Page:	Page 6 of 11
Project Address:	5301 Case Avenue, Pleasanton, CA 94566	Date Prepared:	2021-11-03

Table Continued

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.		☐	☐

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

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	New HVAC and Reroofing Hearst Elementary School	Report Page:	Page 7 of 11
Project Address:	5301 Case Avenue, Pleasanton, CA 94566	Date Prepared:	2021-11-03

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(c)3) 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		☐	☐

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

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	New HVAC and Reroofing Hearst Elementary School	Report Page:	Page 8 of 11
Project Address:	5301 Case Avenue, Pleasanton, CA 94566	Date Prepared:	2021-11-03

◉	○	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		☐	☐

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

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	New HVAC and Reroofing Hearst Elementary School	Report Page:	Page 9 of 11
Project Address:	5301 Case Avenue, Pleasanton, CA 94566	Date Prepared:	2021-11-03

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*	☐	☐

(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
[illegible]
No. M31059
EXP. [illegible]
MECHANICAL
STATE OF CALIFORNIA
BID SET
11-05-2021

CEG JOB NO: 21134

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

TITLE 24 FORMS - MECHANICAL

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS NO.	ITEM	DATE

DRAWN BY:	CAD
CHECKED BY:	CS
SFA JOB NO: 18082	DATE: 11/05/2021

MP8.1

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

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: New HVAC and Reroofing Hearst Elementary School	Report Page:	Page 10 of 11
Project Address: 5301 Case Avenue, Pleasanton, CA 94566	Date Prepared:	2021-11-03

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	230500
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) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: New HVAC and Reroofing Hearst Elementary School	Report Page:	Page 11 of 11
Project Address: 5301 Case Avenue, Pleasanton, CA 94566	Date Prepared:	2021-11-03

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:	11/3/21
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:	M Serttunc
Company :	Cypress Engineering Group	Date Signed:	11/3/21
Address:	8 Harris Court, Suite A8	License:	M31059
City/State/Zip:	Monterey, CA 93940	Phone:	8312181802

(DSA STAMP AREA)

SUGIMURA FINNEY ARCHITECTS
SFA
2195 SOUTH BASCOM AVE.
SUITE 200
CAMPBELL, CA 95008
PHONE: 408.879.6600
FAX: 408.377.6650

REGISTERED PROFESSIONAL ENGINEER
METIN SERTTUNC
No. M31059
MECHANICAL
STATE OF CALIFORNIA

BID SET
11-05-2021

CEG JOB NO: 21134

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TITLE 24 FORMS - MECHANICAL

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS
NO. ITEM DATE

DRAWN BY: CAD
CHECKED BY: CS
SFA JOB NO: 18082
DATE: 11/05/2021

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. COORDINATE ALL CONDUIT RUNS, ELECTRICAL EQUIPMENT AND PANELS WITH ALL OTHER WORK TO AVOID CONFLICTS.
14. CONTRACTOR SHALL PROVIDE IN EVERY NEW EMPTY CONDUIT A DRAW STRING FOR USE IN FUTURE CONSTRUCTION.
15. 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.
16. 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.
17. 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.
18. 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.
19. 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.

ELECTRICAL SYMBOLS & ABBREVIATIONS

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

- SECURITY DOOR CONTACTS
- MD — SECURITY MOTION DETECTOR
- SC — CCTV CAMERA
- KP — SECURITY SYSTEM KEYPAD
- DOOR BELL PUSHBUTTON
- CH — DOOR CHIME WITH LED
- RECEPTACLE - DUPLEX *
- DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT
- GFCI CONVENIENCE RECEPTACLE - DUPLEX *
- GFCI CONVENIENCE DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT
- RECEPTACLE DOUBLE DUPLEX *
- HALF SWITCHED DUPLEX RECEPTACLE *
- SINGLE RECEPTACLE *
- DUPLEX RECEPTACLE - CEILING MOUNTED
- HC — LETTER INDICATES DUPLEX HALF CONTROLLED RECEPTACLE *
- 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
- S — INTERIOR SPEAKERS CEILING MOUNTED
- S — INTERIOR SPEAKERS WALL MOUNTED
- C — CLOCK +8'-0" AFF U.O.N. VERIFY BEFORE INSTALLATION

- PANELBOARD - FLUSH MOUNTED
- EQUIPMENT PANEL - FLUSH MOUNTED
- PANELBOARD - SURFACE MOUNTED
- EQUIPMENT PANEL - SURFACE MOUNTED
- M — METER W/ CURRENT TRANSFORMER
- J / J — 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
- SURFACE METAL OR NON-METALLIC RACEWAY
- CONDUIT - EXISTING
- CONDUIT - CONCEALED IN WALLS OR CEILING
- CONDUIT - BELOW SLAB OR UNDERGROUND: 3/4"MIN.
- CAPPED OR STUB-OUT CONDUIT
- CONDUIT CONTINUATION
- #10 — CONDUIT - HOME RUN TO PANEL, TERMINAL CABINET, ETC. AS INDICATED. 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	GFCI, GFI	GROUND FAULT INTERRUPTING	NTS	NOT TO SCALE
AFF	ABOVE FINISHED FLOOR	GND, G	GROUND	OAH	OVERALL HEIGHT
ALUM/AL	ALUMINUM	GRS	GALVANIZED RIGID STEEL	OC	ON CENTER
ARCH	ARCHITECT	HT	HEIGHT	OH	OVERHEAD
AWG	AMERICAN WIRE GAUGE	IC	INTERCOM	PA	PUBLIC ADDRESS
BKR	BREAKER	IDF	INTERMEDIATE DISTRIBUTION FRAME	PB	PULL BOX
C	CONDUIT	INCAND	INCANDESCENT	PF	POWER FACTOR
CATV	CABLE TV	JB	JUNCTION BOX	PH	PHASE
CB	CIRCUIT BREAKER	KV	KILOVOLT	PIR	PASSIVE INFRARED
CCTV	CLOSED CIRCUIT TV	KVA	KILOVOLT AMPERES	PNL	PANEL
CKT	CIRCUIT	KW	KILOWATT	PV	PHOTOVOLTAIC
CL	CENTER LINE	LCP	LIGHTING CONTROL PANEL	PVC	POLYVINYL CHLORIDE
CLG	CEILING	LTG	LIGHTING	PWR	POWER
C.O.	CONDUIT ONLY	LV	LOW VOLTAGE	(R)	RELOCATE
CTR	CENTER	KCM	THOUSAND CIRCULAR MILS	(RP)	REMOVABLE POLE
D	DIMMER	M.B.	MAIN CIRCUIT BREAKER	RECPT'S	RECEPTACLES
DIM	DIMENSION	MCA	MINIMUM CIRCUIT AMPS	REQD	REQUIRED
DIST	DISTRIBUTION	MDF	MAIN DISTRIBUTION FRAME	REQMT'S	REQUIREMENT(S)
(E)	EXISTING	MECH	MECHANICAL	SHT	SHEET
EC	ELECTRICAL CONTRACTOR	MH	METAL HALIDE	SLD	SINGLE LINE DIAGRAM
(EL)	EVENING LIGHT	MLO	MAIN LUGS ONLY	STC	SYSTEMS TERMINATION CABINET
EM	EMERGENCY	MPOE	MAIN POINT OF ENTRANCE	SW	SWITCH
EMT	ELECTRICAL METALLIC TUBING	MTD	MOUNTED	SWBD	SWITCHBOARD
EQUIP	EQUIPMENT	MTG	MOUNTING	TTB	TELEPHONE TERMINAL BACKBOARD
EV	ELECTRICAL VEHICLE	MOCP	MAXIMUM OVER CURRENT PROTECTION	TYP	TYPICAL
FA	FIRE ALARM	(N)	NEW	UON	UNLESS OTHERWISE NOTED
FACP	FIRE ALARM CONTROL PANEL	NIC	NOT IN CONTRACT	UG	UNDERGROUND
FC	FOOT CANDLE	NIEC	NOT IN ELECTRICAL CONTRACT	V	VOLT
FIN	FINISH	(NL)	NIGHT LIGHT	VD	VOLTAGE DROP
FL	FLOOR	NO.	NUMBER	W	WATT
FLA	FULL LOAD AMPS	NOM	NOMINAL	W/	WITH
FLUOR	FLUORESCENT			WP	WEATHERPROOF
(F)	FUTURE			XFMR	TRANSFORMER
GC	GENERAL CONTRACTOR				

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
- 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).

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.

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 #) #____________.

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

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SYMBOLS, ABBREVIATIONS, CODES, STANDARDS, EQUIPMENT ANCHORAGE, NOTES & SHEET INDEX

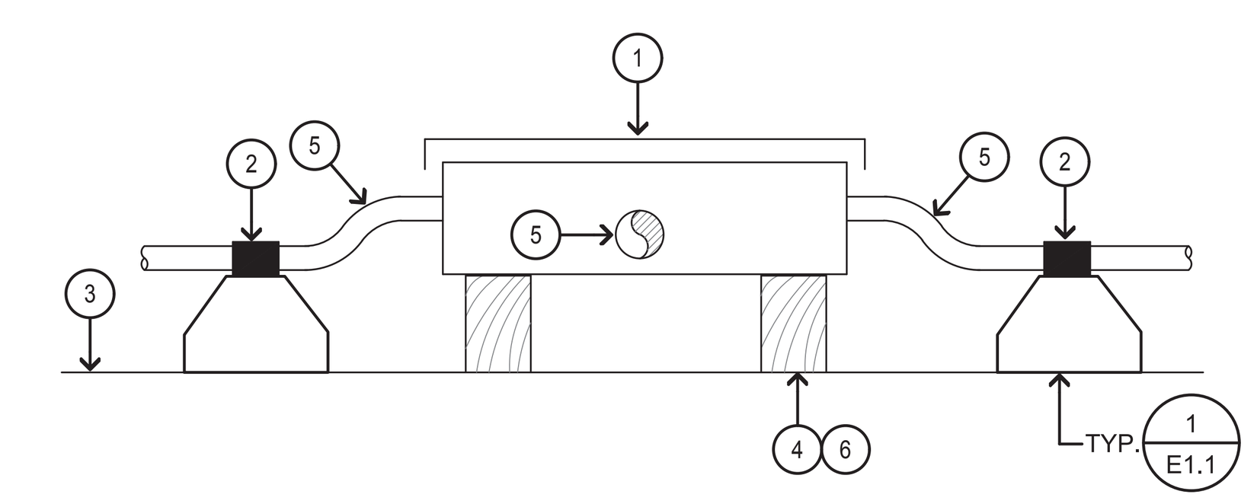
NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

NO.	ITEM	DATE

DRAWN BY: FS
CHECKED BY: NA
SFA JOB NO: 18082
DATE: 11/05/2021

E0.1

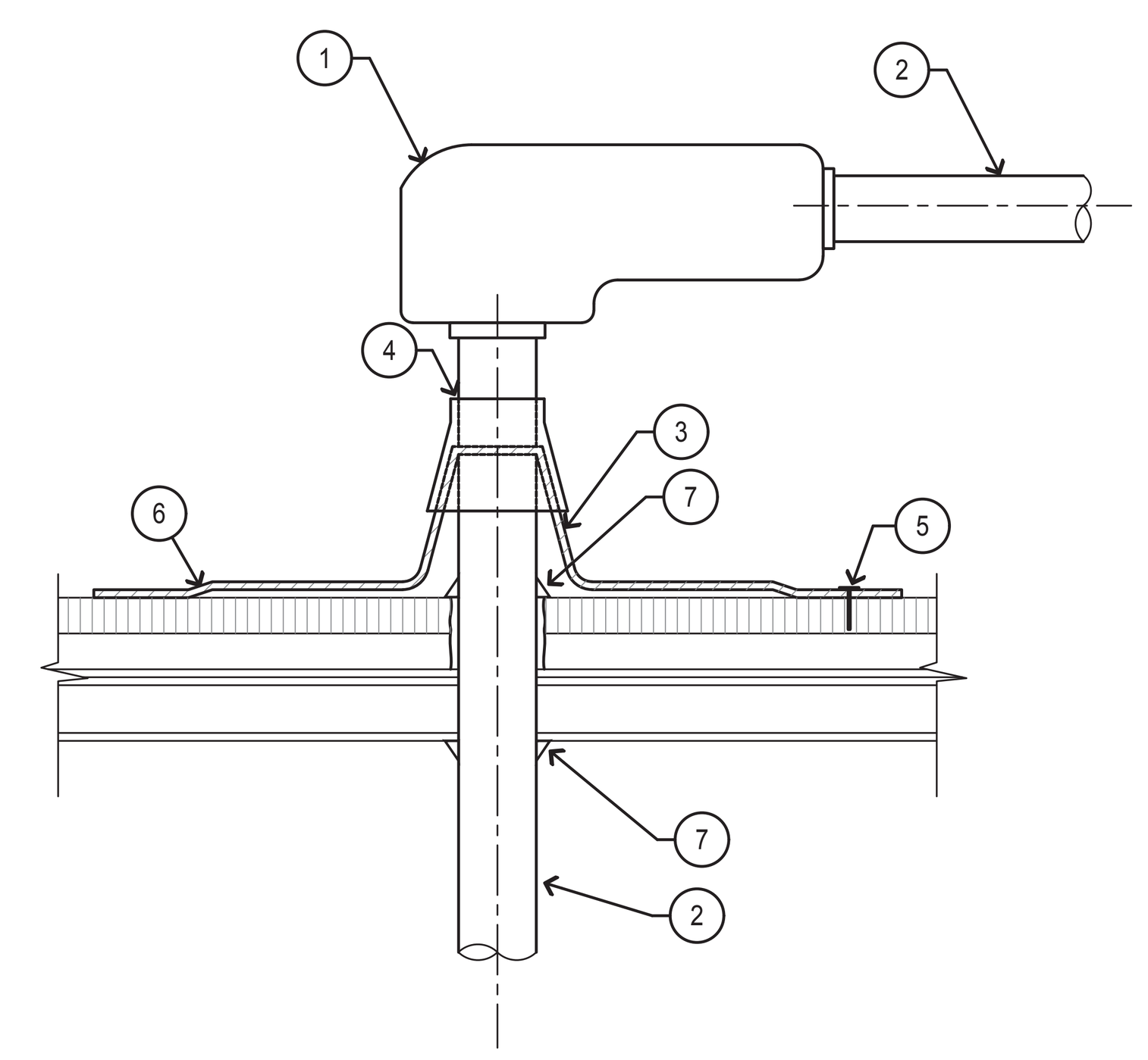


DETAIL NOTES:

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.

3 PULLCAN AT ROOF DETAIL

NO SCALE

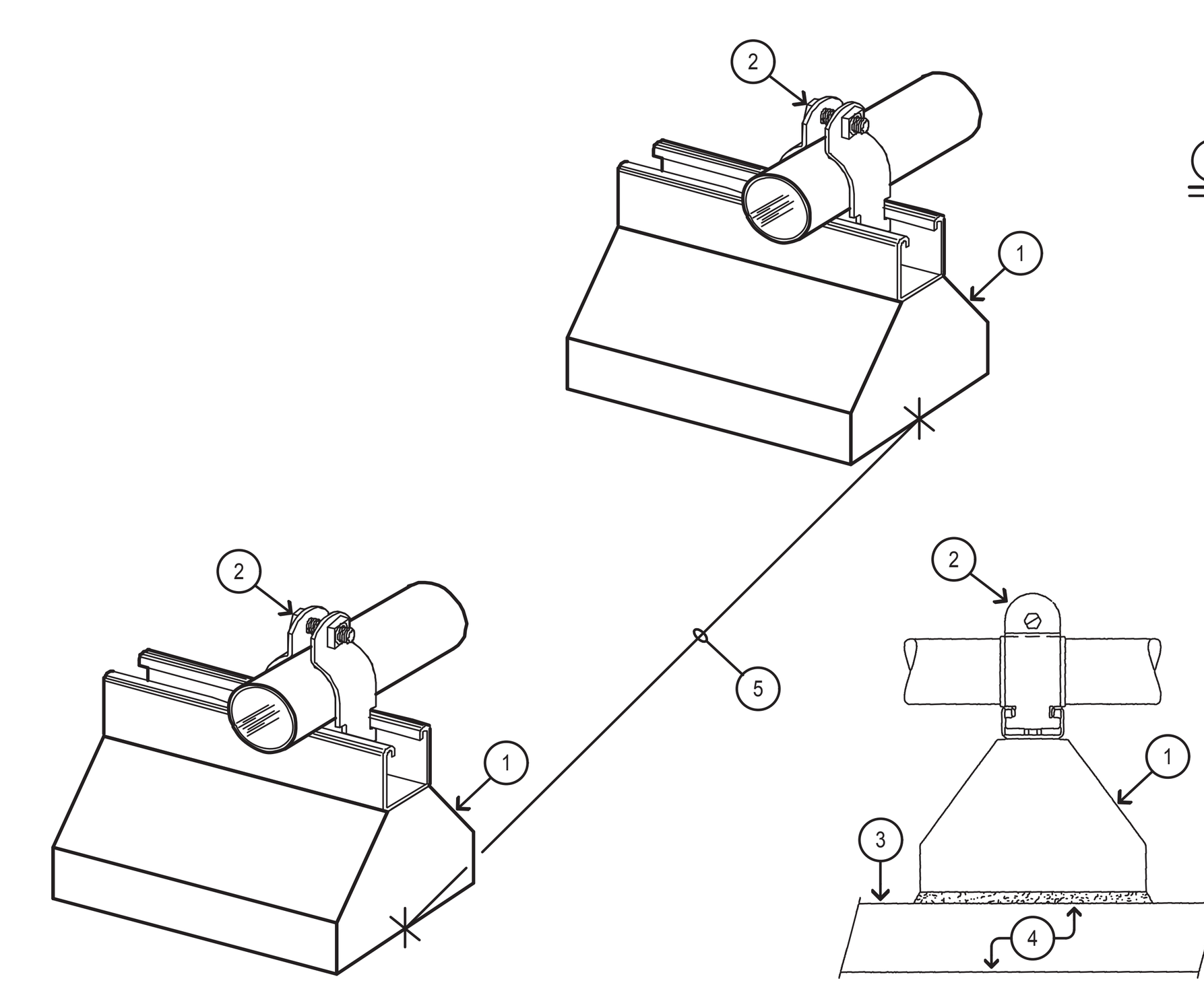


DETAIL NOTES:

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.

2 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.

1 ROOF MOUNTED CONDUIT SUPPORT DETAIL

NO SCALE

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ELECTRICAL DETAILS

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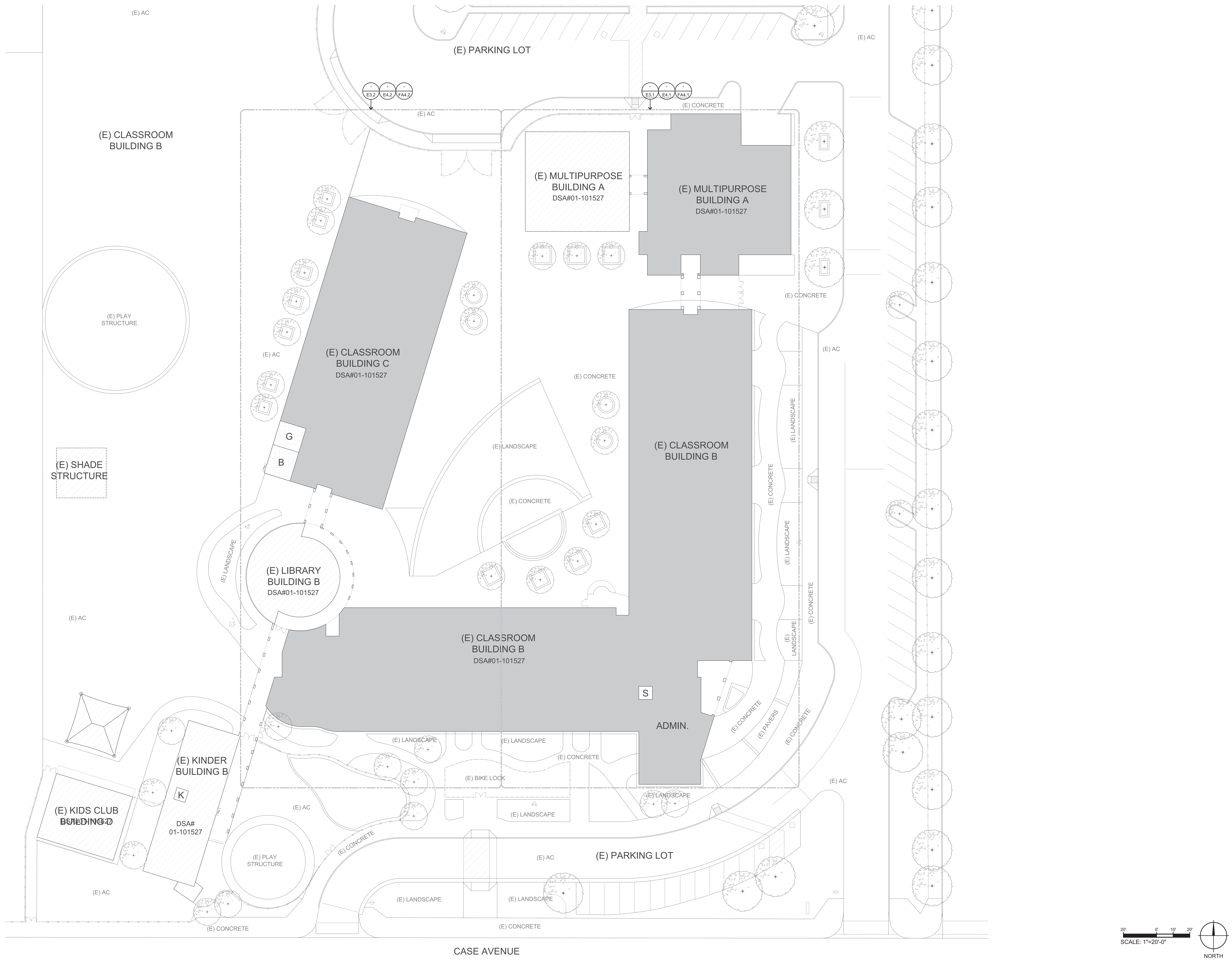

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ELECTRICAL SITE PLAN

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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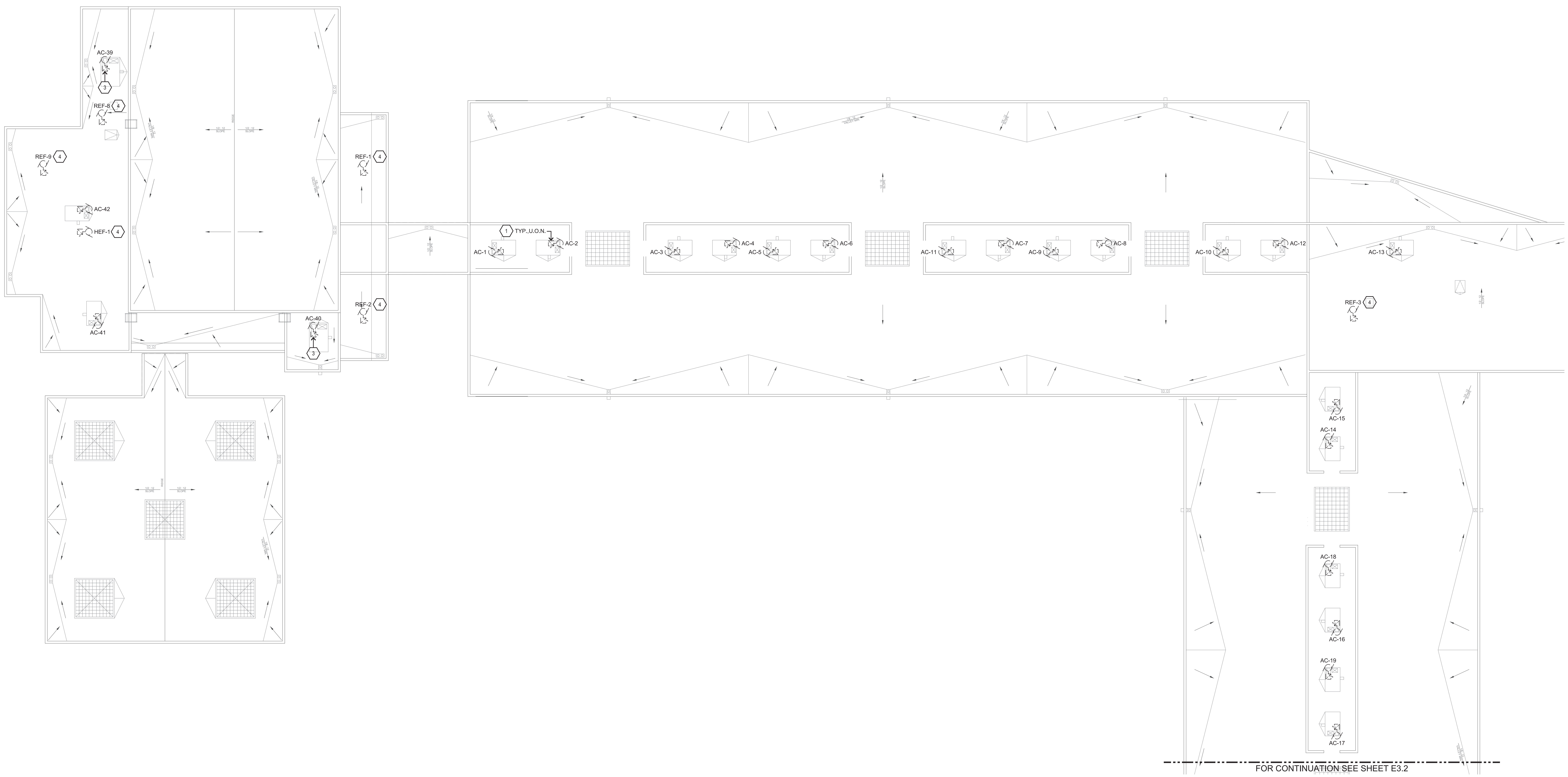
E2.1

SHEET NOTES

1. CONTRACTOR SHALL DEMOLISH EXISTING AC UNIT, ASSOCIATED FEEDER CONDUITS AND CIRCUIT BREAKER PER GENERAL DEMOLITION NOTES ON SHEET E0.1. SEE SHEET E4.1 FOR NEW WORK.
2. DEMOLISH EXISTING AC UNIT AND ASSOCIATED FEEDER CONDUITS PER GENERAL DEMOLITION NOTES ON SHEET E0.1. CONTRACTOR PRESERVE EXISTING CIRCUIT BREAKER AT PANEL FOR CONNECTION OF NEW AC UNIT UNDER NEW WORK; SEE SHEET E4.1 FOR NEW WORK
3. CONTRACTOR SHALL DEMOLISH EXISTING AC UNIT, ASSOCIATED FEEDER CONDUITS AND CIRCUIT BREAKER PER GENERAL DEMOLITION NOTES ON SHEET E0.1. CONTRACTOR SHALL PRESERVE AND PROTECT ASSOCIATED DUCT SMOKE DETECTOR AND FIRE ALARM CABLES FOR RECONNECTION UNDER NEW WORK; SEE SHEET E4.1 FOR NEW WORK.
4. DEMOLISH EXISTING MECHANICAL UNIT PER GENERAL DEMOLITION NOTES ON SHEET E0.1. CONTRACTOR SHALL CUT BACK FEEDER CONDUIT TO NEAREST ACCESSIBLE CEILING SPACE AND PRESERVE AND PROTECT FOR CONNECTION OF NEW MECHANICAL UNIT UNDER NEW WORK; SEE SHEET E4.1 FOR NEW WORK.

GENERAL NOTE:

ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ROOFING CONTRACTOR TO PRESERVE EXISTING SOLAR PV/ELECTRICAL CONDUITS NOT PART OF HVAC POWER SUPPLIES TO REMAIN. EXISTING ELECTRICAL PANELS/TRANSFORMERS AT ROOF TO BE PRESERVED AND REMAIN DURING REROOFING WORK.



FOR CONTINUATION SEE SHEET E3.2

SCALE: 3/32"=1'-0"

NORTH

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REGISTERED PROFESSIONAL ENGINEER NAJIB ANWAR ELECTRICAL STATE OF CALIFORNIA

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PARTIAL ELECTRICAL DEMOLITION PLAN

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS		
NO.	ITEM	DATE

DRAWN BY:	FS
CHECKED BY:	NA
SFA JOB NO: 18082	DATE: 11/05/2021

E3.1

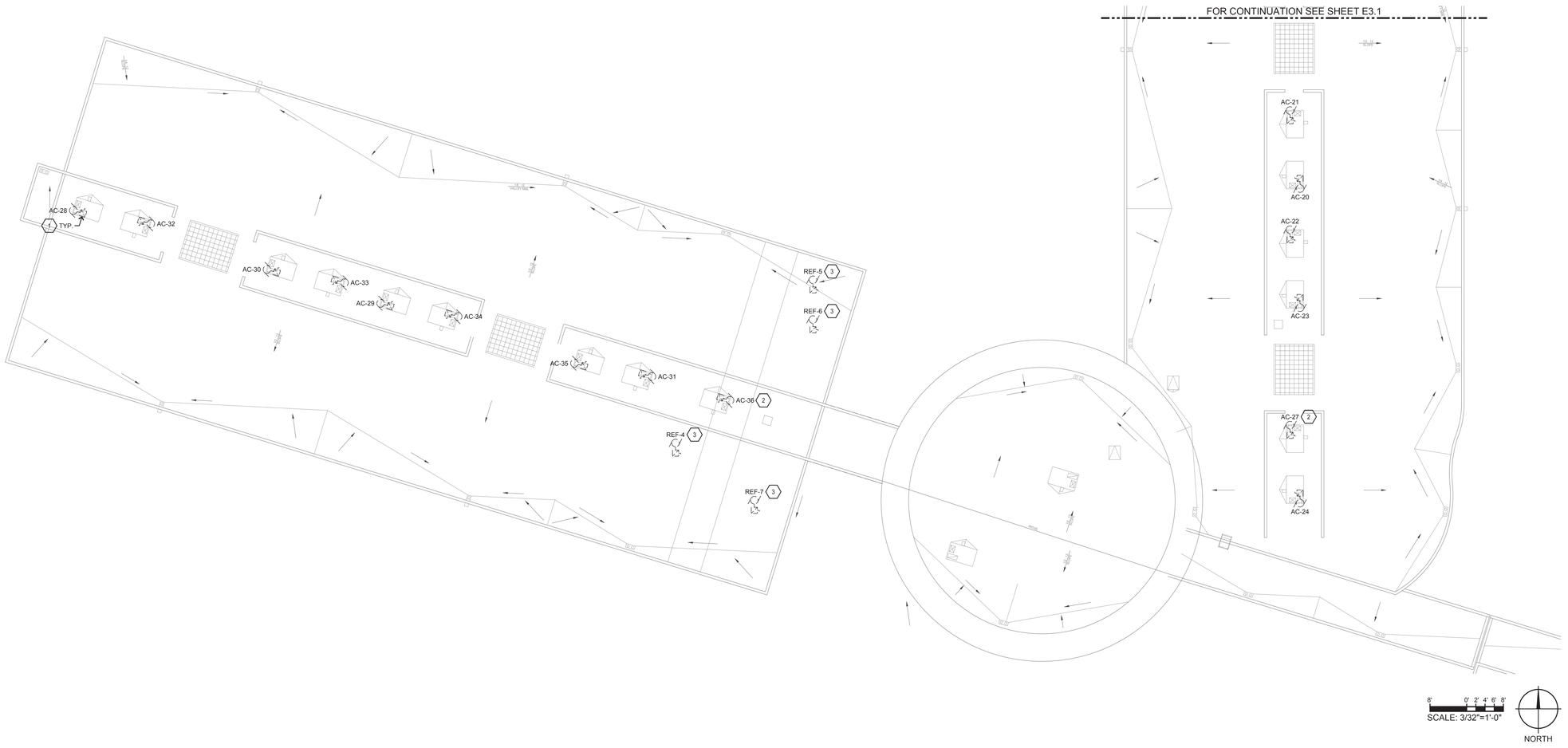
SHEET NOTES

1. CONTRACTOR SHALL DEMOLISH EXISTING AC UNIT, ASSOCIATED FEEDER CONDUITS AND CIRCUIT BREAKER PER GENERAL DEMOLITION NOTES ON SHEET E0.1. SEE SHEET E4.1 FOR NEW WORK.
2. DEMOLISH EXISTING AC UNIT AND ASSOCIATED FEEDER CONDUITS PER GENERAL DEMOLITION NOTES ON SHEET E0.1. CONTRACTOR PRESERVE EXISTING CIRCUIT BREAKER AT PANEL FOR CONNECTION OF NEW AC UNIT UNDER NEW WORK; SEE SHEET E4.1 FOR NEW WORK
3. DEMOLISH EXISTING MECHANICAL UNIT PER GENERAL DEMOLITION NOTES ON SHEET E0.1. CONTRACTOR SHALL CUT BACK FEEDER CONDUIT TO NEAREST ACCESSIBLE CEILING SPACE AND PRESERVE AND PROTECT FOR CONNECTION OF NEW MECHANICAL UNIT UNDER NEW WORK; SEE SHEET E4.1 FOR NEW WORK.

GENERAL NOTE:

ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ROOFING CONTRACTOR TO PRESERVE EXISTING SOLAR PV/ELECTRICAL CONDUITS NOT PART OF HVAC POWER SUPPLIES TO REMAIN. EXISTING ELECTRICAL PANELS/TRANSFORMERS AT ROOF TO BE PRESERVED AND REMAIN DURING REROOFING WORK.

FOR CONTINUATION SEE SHEET E3.1



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LICENSED ARCHITECT
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E3.2

BRANCH CIRCUIT CONDUCTOR SIZING TABLE

CIRCUIT AMPACITY/VOLTAGE	CIRCUIT LENGTH	REQUIREMENT
20/120	56'-90'	½" C., 2 #10 & 1 #10 GND.
20/120	91'-140'	½" C., 2 #8 & 1 #10 GND.
20/277	131'-205'	½" C., 2 #10 & 1 #10 GND.
20/277	206'-330'	½" C., 2 #8 & 1 #10 GND.

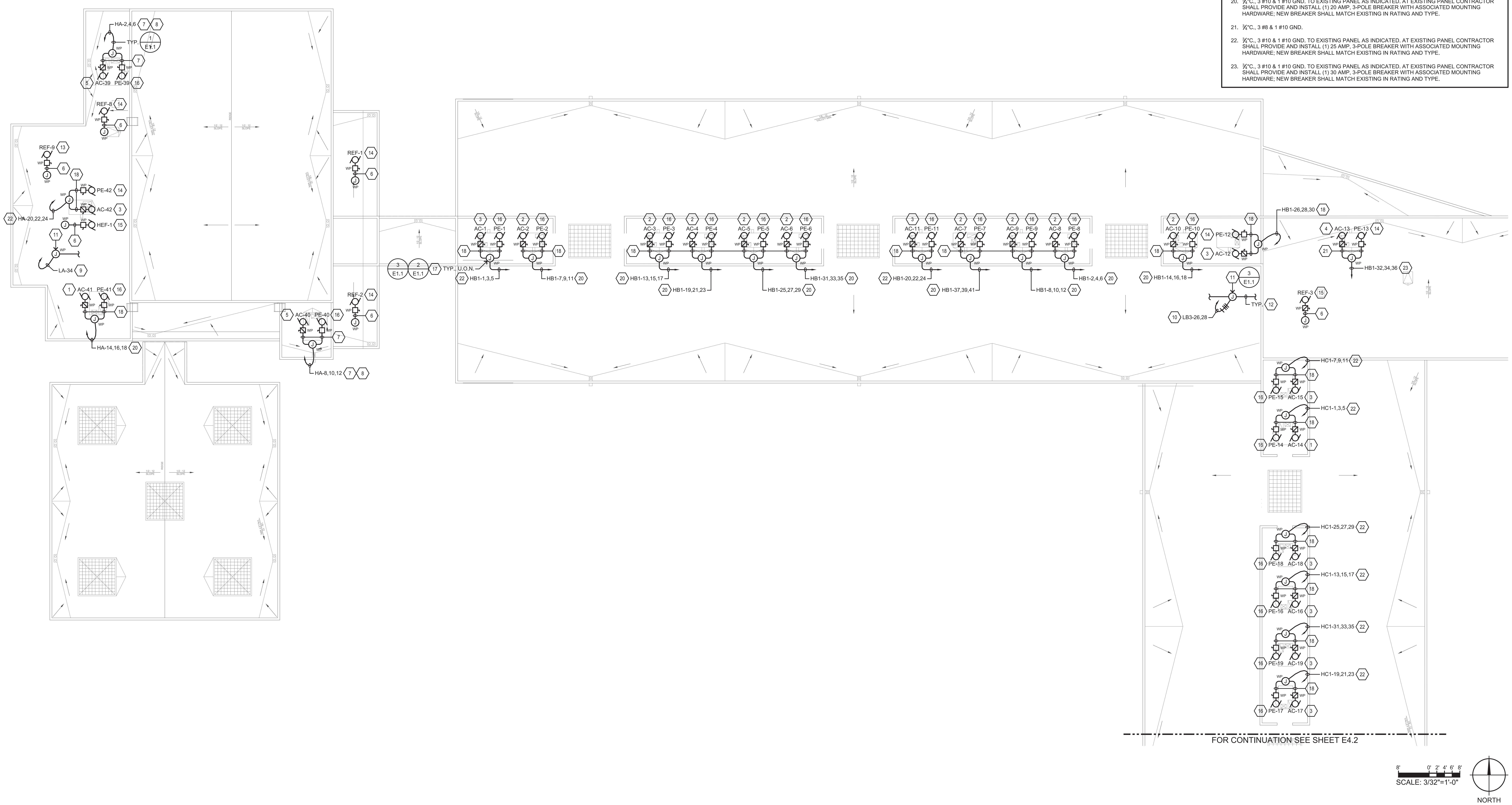
NOTE:
CONTRACTOR SHALL SIZE BRANCH CIRCUIT CONDUCTORS PER THE TABLE ABOVE AS DETERMINED BY THE CIRCUIT CONDUCTOR LENGTH, U.O.N. CONTRACTOR SHALL SPLICE TO #12 AWG WITHIN TERMINATION BOX FOR DEVICE CONNECTION IF NECESSARY.

GENERAL NOTE:

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 DISTRICT & ARCHITECT FOR EXACT REQUIREMENTS. CONTRACTOR SHALL CONCEAL CONDUIT WITHIN BUILDING INTERIOR.

SHEET NOTES

1. AIR CONDITIONING UNIT; 7.6 MCA, 480V, 3Ø.
2. AIR CONDITIONING UNIT; 11 MCA, 480V, 3Ø.
3. AIR CONDITIONING UNIT; 14.1 MCA, 480V, 3Ø.
4. AIR CONDITIONING UNIT; 20.4 MCA, 480V, 3Ø.
5. AIR CONDITIONING UNIT; 42.7 MCA, 480V, 3Ø. RECONNECT AC UNIT TO EXISTING DUCT SMOKE DETECTOR. PROVIDE AND INSTALL ¾"C. WITH FIRE ALARM CABLES PRESERVED DURING DEMOLITION WORK; EXTEND TO DUCT SMOKE DETECTOR AND ENSURE FULLY FUNCTIONALITY AND TESTING OF DUCT SMOKE DETECTOR.
6. CONTRACTOR SHALL INTERCEPT EXISTING FEEDER CONDUIT PRESERVED DURING DEMOLITION WORK WITH JUNCTION BOX AT ACCESSIBLE CEILING SPACE AND SPLICE AND EXTEND WITH ¾"C., 2 #10 & 1 #10 GND. TO NEW MECHANICAL UNITS.
7. ¾"C., 3 #4 & 1 #10 GND.
8. PROVIDE AND INSTALL 60 AMP, 3-POLE BREAKER WITH ASSOCIATED MOUNTING HARDWARE AT EXISTING PANEL; NEW BREAKER SHALL MATCH EXISTING IN RATING AND TYPE.
9. ¾"C., 2 #8 & 1 #10 GND. TO EXISTING PANEL AS INDICATED. AT EXISTING PANEL CONTRACTOR SHALL PROVIDE AND INSTALL (1) 20 AMP, 1-POLE BREAKER WITH ASSOCIATED MOUNTING HARDWARE; NEW BREAKER SHALL MATCH EXISTING IN RATING AND TYPE.
10. ¾"C., 4 #8 & 1 #10 GND. TO EXISTING PANEL AS INDICATED. AT EXISTING PANEL CONTRACTOR SHALL PROVIDE AND INSTALL (2) 20 AMP, 1-POLE BREAKERS WITH ASSOCIATED MOUNTING HARDWARE; NEW BREAKERS SHALL MATCH EXISTING IN RATING AND TYPE.
11. CONTRACTOR SHALL PROVIDE AND INSTALL 8" SQ. X 4" DEEP NEMA 3R PULLCAN. CONTRACTOR SHALL INSTALL AS NECESSARY TO NOT EXCEED 270 DEGREES OF CONDUIT BENDS.
12. CONNECT ALL CONVENIENCE RECEPTACLES FURNISHED WITH NEW AC UNITS; CONTRACTOR SHALL NOT EXCEED (10) RECEPTACLES PER 120V CIRCUIT.
13. ROOF EXHAUST FAN; 1/15 HP, 120V, 1Ø. CONNECT VIA EXISTING LIGHTING CONTROLS.
14. ROOF EXHAUST FAN; 1/10 HP, 120V, 1Ø. CONNECT VIA EXISTING LIGHTING CONTROLS.
15. ROOF EXHAUST FAN; 1/4 HP, 120V, 1Ø. CONNECT VIA EXISTING LIGHTING CONTROLS.
16. POWER EXHAUST FAN; 1 HP, 480V, 3Ø.
17. PROVIDE AND INSTALL 8" SQ. X 4" DEEP NEMA 3R PULLCAN FOR SPLICE OF NEW CIRCUIT TO MECHANICAL UNITS.
18. ¾"C., 3 #10 & 1 #10 GND.
19. CONTRACTOR SHALL INTERCEPT EXISTING FEEDER CONDUIT PRESERVED DURING DEMOLITION WORK WITH JUNCTION BOX AT ACCESSIBLE CEILING SPACE AND SPLICE AND EXTEND WITH ¾"C., 3 #10 & 1 #10 GND. TO NEW MECHANICAL UNITS.
20. ¾"C., 3 #10 & 1 #10 GND. TO EXISTING PANEL AS INDICATED. AT EXISTING PANEL CONTRACTOR SHALL PROVIDE AND INSTALL (1) 20 AMP, 3-POLE BREAKER WITH ASSOCIATED MOUNTING HARDWARE; NEW BREAKER SHALL MATCH EXISTING IN RATING AND TYPE.
21. ¾"C., 3 #8 & 1 #10 GND.
22. ¾"C., 3 #10 & 1 #10 GND. TO EXISTING PANEL AS INDICATED. AT EXISTING PANEL CONTRACTOR SHALL PROVIDE AND INSTALL (1) 25 AMP, 3-POLE BREAKER WITH ASSOCIATED MOUNTING HARDWARE; NEW BREAKER SHALL MATCH EXISTING IN RATING AND TYPE.
23. ¾"C., 3 #10 & 1 #10 GND. TO EXISTING PANEL AS INDICATED. AT EXISTING PANEL CONTRACTOR SHALL PROVIDE AND INSTALL (1) 30 AMP, 3-POLE BREAKER WITH ASSOCIATED MOUNTING HARDWARE; NEW BREAKER SHALL MATCH EXISTING IN RATING AND TYPE.



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

REGISTERED PROFESSIONAL ENGINEER NAJIB ANWAR ELECTRICAL STATE OF CALIFORNIA

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PARTIAL ELECTRICAL ROOF PLAN

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS NO.	ITEM	DATE

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CHECKED BY: NA
SFA JOB NO: 18082
DATE: 11/05/2021

E4.1

BRANCH CIRCUIT CONDUCTOR SIZING TABLE

CIRCUIT AMPACITY/VOLTAGE	CIRCUIT LENGTH	REQUIREMENT
20/120	56'-90'	½" C., 2 #10 & 1 #10 GND.
20/120	91'-140'	½" C., 2 #8 & 1 #10 GND.
20/277	131'-205'	½" C., 2 #10 & 1 #10 GND.
20/277	206'-330'	½" C., 2 #8 & 1 #10 GND.

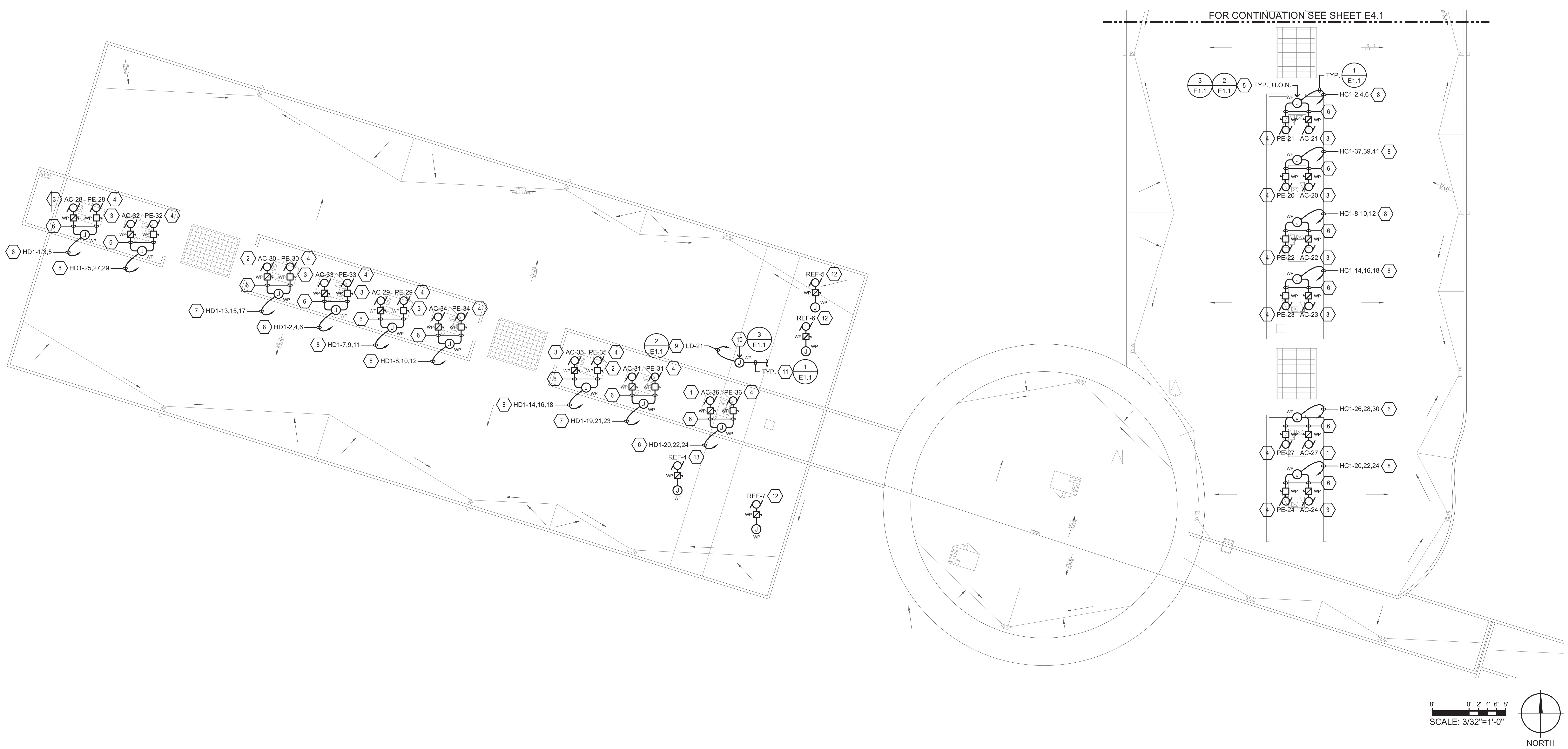
NOTE:
CONTRACTOR SHALL SIZE BRANCH CIRCUIT CONDUCTORS PER THE TABLE ABOVE AS DETERMINED BY THE CIRCUIT CONDUCTOR LENGTH, U.O.N. CONTRACTOR SHALL SPLICE TO #12 AWG WITHIN TERMINATION BOX FOR DEVICE CONNECTION IF NECESSARY.

GENERAL NOTE:

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 DISTRICT & ARCHITECT FOR EXACT REQUIREMENTS. CONTRACTOR SHALL CONCEAL CONDUIT WITHIN BUILDING INTERIOR.

SHEET NOTES

1. AIR CONDITIONING UNIT; 7.6 MCA, 480V, 3Ø.
2. AIR CONDITIONING UNIT; 11 MCA, 480V, 3Ø.
3. AIR CONDITIONING UNIT; 14.1 MCA, 480V, 3Ø.
4. POWER EXHAUST FAN; 1 HP, 480V, 3Ø.
5. PROVIDE AND INSTALL 8" SQ. X 4" DEEP NEMA 3R PULLCAN FOR SPLICE OF NEW CIRCUIT TO MECHANICAL UNITS.
6. ¾"C., 3 #10 & 1 #10 GND.
7. ¾"C., 3 #10 & 1 #10 GND. TO EXISTING PANEL AS INDICATED. AT EXISTING PANEL CONTRACTOR SHALL PROVIDE AND INSTALL (1) 20 AMP, 3-POLE BREAKER WITH ASSOCIATED MOUNTING HARDWARE; NEW BREAKER SHALL MATCH EXISTING IN RATING AND TYPE.
8. ¾"C., 3 #10 & 1 #10 GND. TO EXISTING PANEL AS INDICATED. AT EXISTING PANEL CONTRACTOR SHALL PROVIDE AND INSTALL (1) 25 AMP, 3-POLE BREAKER WITH ASSOCIATED MOUNTING HARDWARE; NEW BREAKER SHALL MATCH EXISTING IN RATING AND TYPE.
9. ¾"C., 2 #8 & 1 #10 GND. TO EXISTING PANEL AS INDICATED. AT EXISTING PANEL CONTRACTOR SHALL PROVIDE AND INSTALL (1) 20 AMP, 1-POLE BREAKER WITH ASSOCIATED MOUNTING HARDWARE; NEW BREAKER SHALL MATCH EXISTING IN RATING AND TYPE.
10. CONTRACTOR SHALL PROVIDE AND INSTALL 8" SQ. X 4" DEEP NEMA 3R PULLCAN. CONTRACTOR SHALL INSTALL MINIMUM (2) AS NECESSARY TO NOT EXCEED 270 DEGREES OF CONDUIT BENDS.
11. CONNECT ALL CONVENIENCE RECEPTACLES FURNISHED WITH NEW AIR CONDITIONING UNITS; (10) RECEPACLES MAX. PER 120V CIRCUIT.
12. EXHAUST FAN; 1/10 HP, 120V, 1Ø. CONNECT VIA EXISTING LIGHTING CONTROLS.
13. EXHAUST FAN; 1/4 HP, 120V, 1Ø. CONNECT VIA EXISTING LIGHTING CONTROLS.



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REGISTERED PROFESSIONAL ENGINEER NAJIB ANWAR No. E21... EXP. 3/31/23 ELECTRICAL STATE OF CALIFORNIA

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PARTIAL ELECTRICAL ROOF PLAN

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

NO.	ITEM	DATE

DRAWN BY:	FS
CHECKED BY:	NA
SFA JOB NO:	DATE:
18082	11/05/2021

E4.2

BRANCH CIRCUIT CONDUCTOR SIZING TABLE

CIRCUIT AMPACITY/VOLTAGE	CIRCUIT LENGTH	REQUIREMENT
20/120	56'-90'	½" C., 2 #10 & 1 #10 GND.
20/120	91'-140'	½" C., 2 #8 & 1 #10 GND.
20/277	131'-205'	½" C., 2 #10 & 1 #10 GND.
20/277	206'-330'	½" C., 2 #8 & 1 #10 GND.

NOTE:
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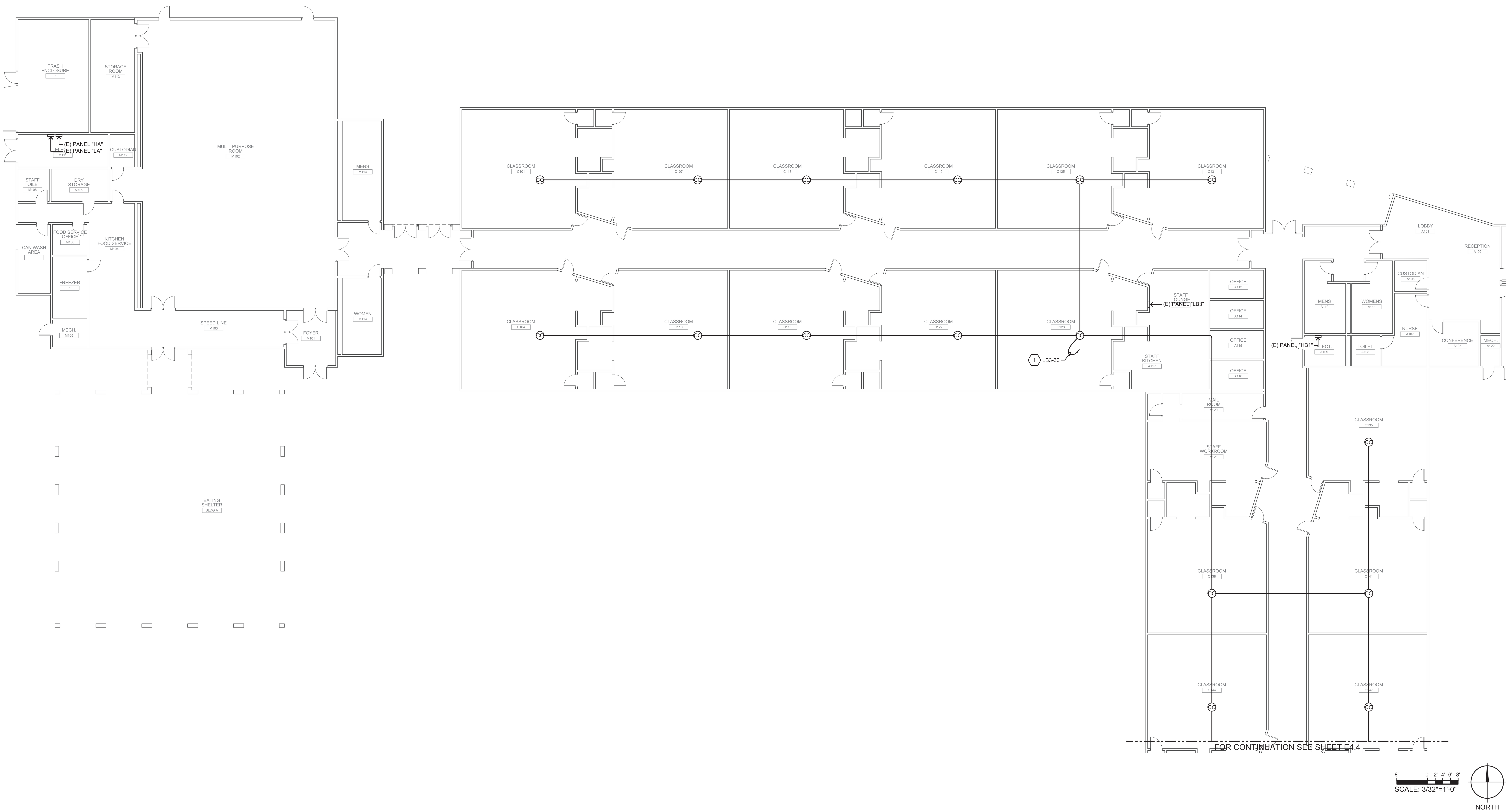
GENERAL NOTE:

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 DISTRICT & ARCHITECT FOR EXACT REQUIREMENTS. CONTRACTOR SHALL CONCEAL CONDUIT WITHIN BUILDING INTERIOR.

SHEET NOTES

1. CONTRACTOR SHALL PROVIDE AND INSTALL 20 AMP, 1-POLE BREAKER WITH ASSOCIATED MOUNTING HARDWARE AND LOCK ON DEVICE, RED IN COLOR; NEW BREAKER SHALL MATCH EXISTING IN RATING AND TYPE.



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PARTIAL POWER PLAN

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
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PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

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E4.3

BRANCH CIRCUIT CONDUCTOR SIZING TABLE

CIRCUIT AMPACITY/VOLTAGE	CIRCUIT LENGTH	REQUIREMENT
20/120	56'-90'	½" C., 2 #10 & 1 #10 GND.
20/120	91'-140'	½" C., 2 #8 & 1 #10 GND.
20/277	131'-205'	½" C., 2 #10 & 1 #10 GND.
20/277	206'-330'	½" C., 2 #8 & 1 #10 GND.

NOTE:
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GENERAL NOTE:

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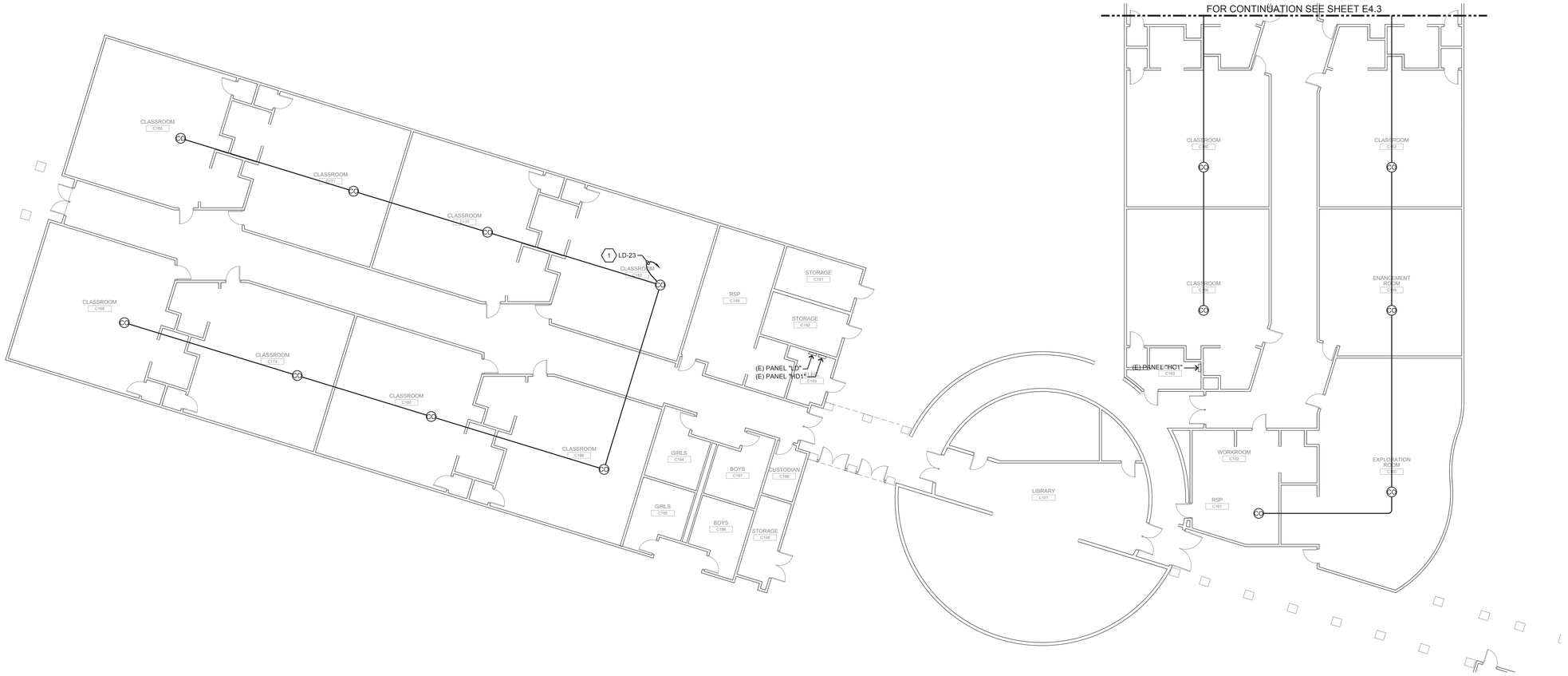
SHEET NOTES

1. CONTRACTOR SHALL PROVIDE AND INSTALL 20 AMP, 1-POLE BREAKER WITH ASSOCIATED MOUNTING HARDWARE AND LOCK ON DEVICE, RED IN COLOR; NEW BREAKER SHALL MATCH EXISTING IN RATING AND TYPE.

FOR CONTINUATION SEE SHEET E4.3



SCALE: 3/32"=1'-0"

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LICENSED ARCHITECT
MARK C. FINNEY
No. C-24673
RENEWAL 8-30-23
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PARTIAL POWER PLAN

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E4.4

FIRE ALARM EQUIPMENT LIST

SYMBOL	DESCRIPTION AND MODEL NUMBER	MFGR'S PART No.	CSFM LISTING
FACP	(E) ADDRESSABLE FIRE ALARM CONTROL PANEL, NOTIFIER AM2020 SERIES.	AM2020	7165-0028:0141
M	ADDRESSABLE MONITOR MODULE, NOTIFIER FMM SERIES.	FMM-1	7300-0028:0219
CO	CARBON MONOXIDE DETECTOR WITH CONTACT RELAY, GENTEX CO1209.	CO1209	5276-0659:0143

BATTERY CALCULATIONS

EXISTING FIRE ALARM CONTROL PANEL "FACP"

QTY	PRODUCT ID	DESCRIPTION	STANDBY		ALARM	
			EACH	TOTAL	EACH	TOTAL
1	AM2020	(E) PRIMARY INPUT POWER UNIT	0.1300	0.1300	0.0520	0.0520
1	CPU-2020	(E) PRIMARY DISPLAY	0.1200	0.1200	0.1200	0.1200
1	SLC	(E) SLC DEVICE ACTIVATION CURRENT	0.2000	0.2000	0.2000	0.2000
1	LCD-80	(E) LIQUID CRYTAL DISPLAY MODULE	0.0500	0.0500	0.1000	0.1000
		PANEL STANDBY CURRENT		0.5000		
		PANEL ALARM CURRENT				0.4720

FIELD DEVICES

QTY	PRODUCT ID	DESCRIPTION	STANDBY		ALARM	
			EACH	TOTAL	EACH	TOTAL
30	**FMM-1**	**ADDRESSABLE MONITOR MODULE**	**0.0004**	**0.0113**	**0.0004**	**0.0113**

DESCRIPTION	STANDBY	ALARM
CONTROL PANEL	0.5000	0.4720
FIELD DEVICES	0.0116	0.0116
TOTAL STANDBY CURRENT	0.5116	
X 24 HOUR STANDBY	12.2790	
TOTAL ALARM CURRENT		0.4836
15 MINUTES OF ALARM (X .25)		0.1209
TOTAL BATTERY REQUIREMENT		12.3999
SAFETY MARGIN (20%)		14.8799
BATTERY SUPPLIED		(2) 12V 35AH

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

———	CONDUIT - CONCEALED IN WALLS OR CEILING.
- - - - -	CONDUIT - IN OR BELOW FLOOR: 3/4"C MIN.
———	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		
FA	FIRE ALARM	TYP	TYPICAL
FACP	FIRE ALARM CONTROL PANEL	UON	UNLESS OTHERWISE NOTED
		WP	WEATHERPROOF
FBO	FURNISHED BY OTHERS		

TYPICAL ZONE NOMENCLATURE

S2 75 4 B
"S2" DENOTES SIGNAL CIRCUIT #2
"75CD" DENOTES CANDELA RATING
"4" DENOTES DEVICE #4

M1-5 P A
"M" DENOTES MODULE DEVICE; "D" DENOTES DETECTOR DEVICE
"1" DENOTES LOOP#
"5" DENOTES DEVICE #5
CROSSHATCH INDICATES NUMBER OF WIRES REQUIRED, SUBSCRIPT LETTER INDICATES TYPE OF CIRCUIT. SEE GENERAL NOTES THIS SHEET FOR NUMBER & TYPE OF WIRES AND CIRCUIT TYPE.

PROJECT DESCRIPTION

SCOPE OF WORK:

EXTENSION OF INITIATION DETECTION CIRCUIT FOR ADDITION OF CARBON MONOXIDE DEVICES IN EXISTING CLASSROOMS IN EXISTING BUILDINGS "B" & "C".

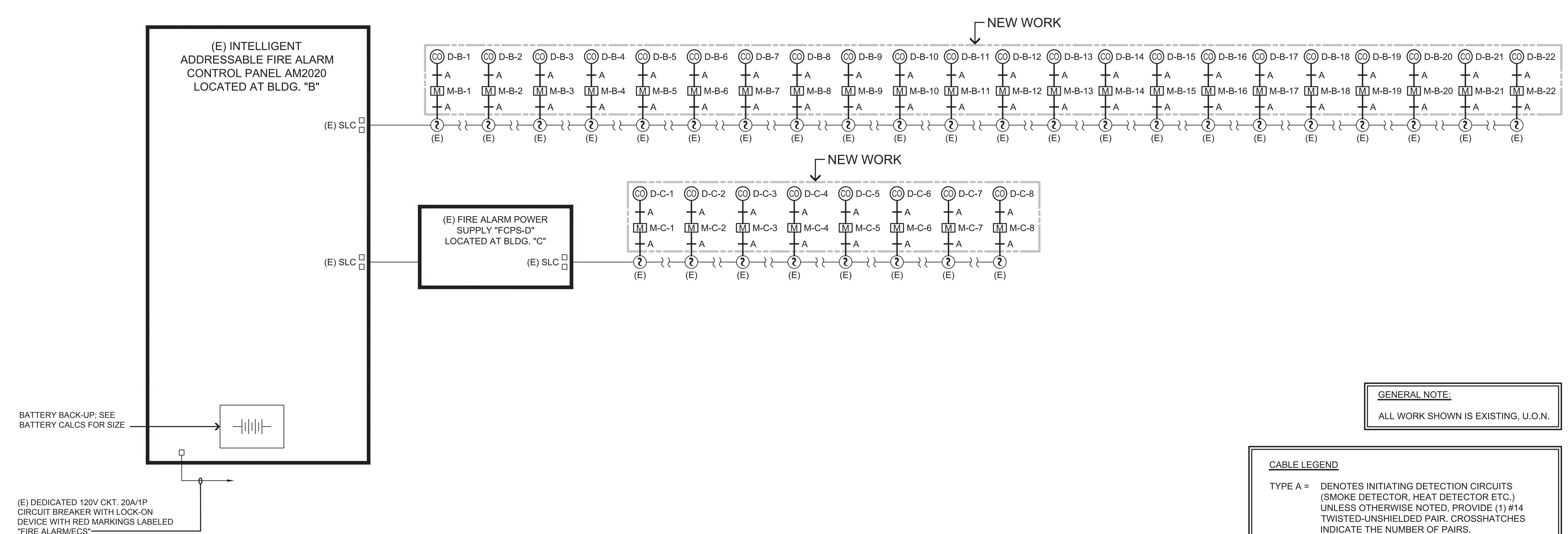
SYSTEM DESCRIPTION:
SLC = CLASS B
IDC = CLASS B
NAC = CLASS B

FIRE ALARM SYSTEM DESIGN BY:
NAJIB ANWARY PE.

FIRE ALARM SYSTEM OPERATIONAL MATRIX

Column groups: ALARM | TROUBLE | SUPERVISORY | MISC.

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



GENERAL NOTE:
ALL WORK SHOWN IS EXISTING, U.O.N.

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.

1 EXISTING FIRE ALARM RISER DIAGRAM

NO SCALE

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REGISTERED PROFESSIONAL ENGINEER NAJIB ANWARY ELECTRICAL STATE OF CALIFORNIA
BID SET

AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.
Project No. 21-415.00
60 Garden Court • Suite 210 • Monterey, CA 93940
T.831.646.3330 • F.831.646.3336 • www.acemb.com

FIRE ALARM SYMBOLS, ABBREVIATIONS, EQUIPMENT LIST, BATTERY CALCULATION, OPERATIONAL MATRIX, NOTES & FIRE ALARM RISER DIAGRAM

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

REVISIONS

NO.	ITEM	DATE

DRAWN BY: FS
CHECKED BY: NA
SFA JOB NO: 18082
DATE: 11/05/2021

FA0.1

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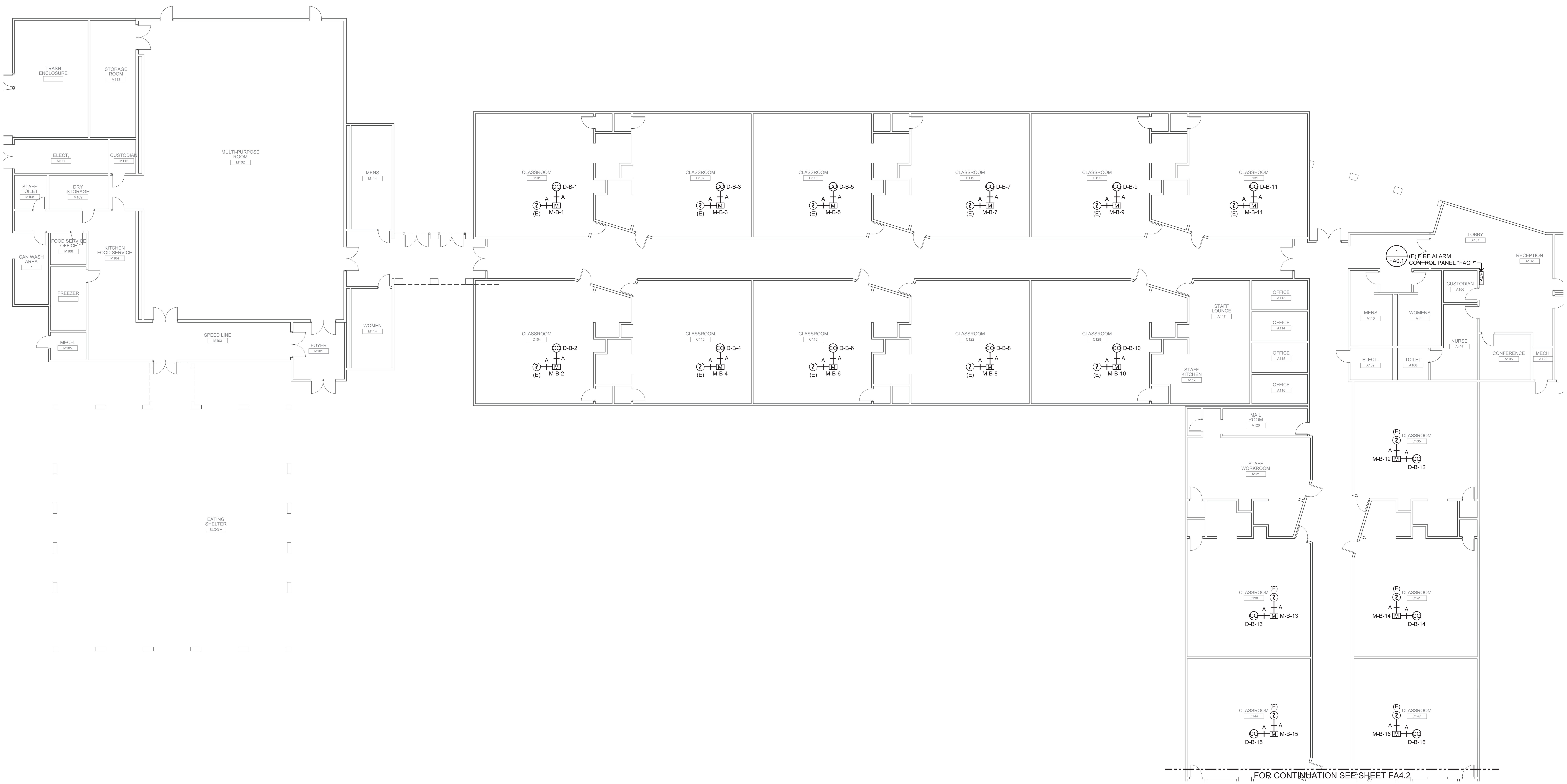

FOR CONTINUATION SEE SHEET FA4.2

SCALE: 3/32"=1'-0"

NORTH

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These drawings are instruments of service and are the property of AURUM CONSULTING ENGINEERS MONTEREY BAY, INC.

PARTIAL FIRE ALARM PLAN

NEW HVAC AND REROOFING
HEARST ELEMENTARY SCHOOL
5301 CASE AVENUE, PLEASANTON, CALIFORNIA 94566
PLEASANTON UNIFIED SCHOOL DISTRICT

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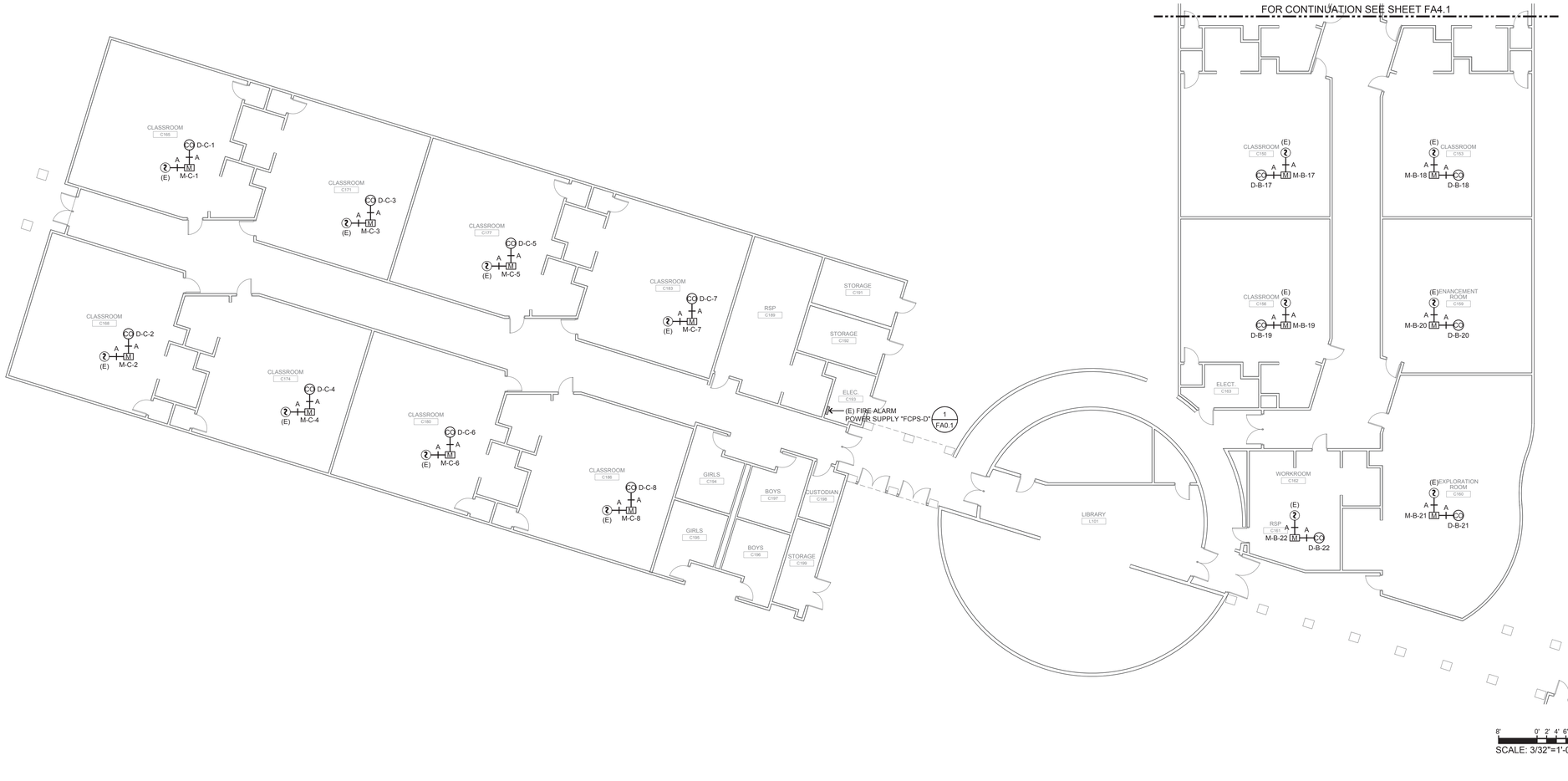

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