

Bid 643 New HVAC Modernization Project for Rio Mesa High School

BID CLARIFICATION ADDENDUM #1

Dated: December 30, 2020

All interested parties seeking to submit responses to the Oxnard Union High School District's Bid #638 shall execute the certification at the end of this addendum and shall attach the addendum to the documents submitted to the District.

The Oxnard Union High School District hereby amends Bid 643 New HVAC Modernization Project for Rio Mesa High School <u>as follows:</u>

- Question: Where will the temporary power be pulled from?
 Answer: Temp. power can be pulled from existing panels
- 2) Please refer to Attachment A for Pre-Bid RFIs from Viola
- 3) Please refer to Attachment B for Architect's addendum 1
- **4)** INSTRUCTIONS TO BIDDERS, ITEM 41, ALLOWANCES, Document 00 72 13-xxv. *Allowance value shall be \$800,000 "IN LIEU OF" \$500,000 as shown below:*

Allowances: The Contractor (General Contractor) shall provide and incorporate an "Allowance" of \$800,000.00 (Eight Hundred Thousand US Dollars) into the base bid value submitted. This Allowance is for future and/or unforeseen conditions encountered during the contract duration.

<u>Note</u>: The Allowance shall be included/added in the Contract Base Bid Value of the General Contractor's proposal.

This value (\$800,000.00) will be designated as a line item within the contractor's schedule of values ("SOV"). The District shall have sole discretion to authorize all expenditures from the Allowance. The District shall issue directives to be used against the Allowance in the form of a Price Request ("PR"). All pricing in response to ("PR") for additional or unforeseen work shall include the direct cost of labor, materials, equipment, transportation, design fees, applicable markup, overall management and general condition costs, overhead and profit, taxes and insurance associated with ("Price Request"). Any unused Allowance or unused portion thereof shall be credited back to the District at the conclusion of work.

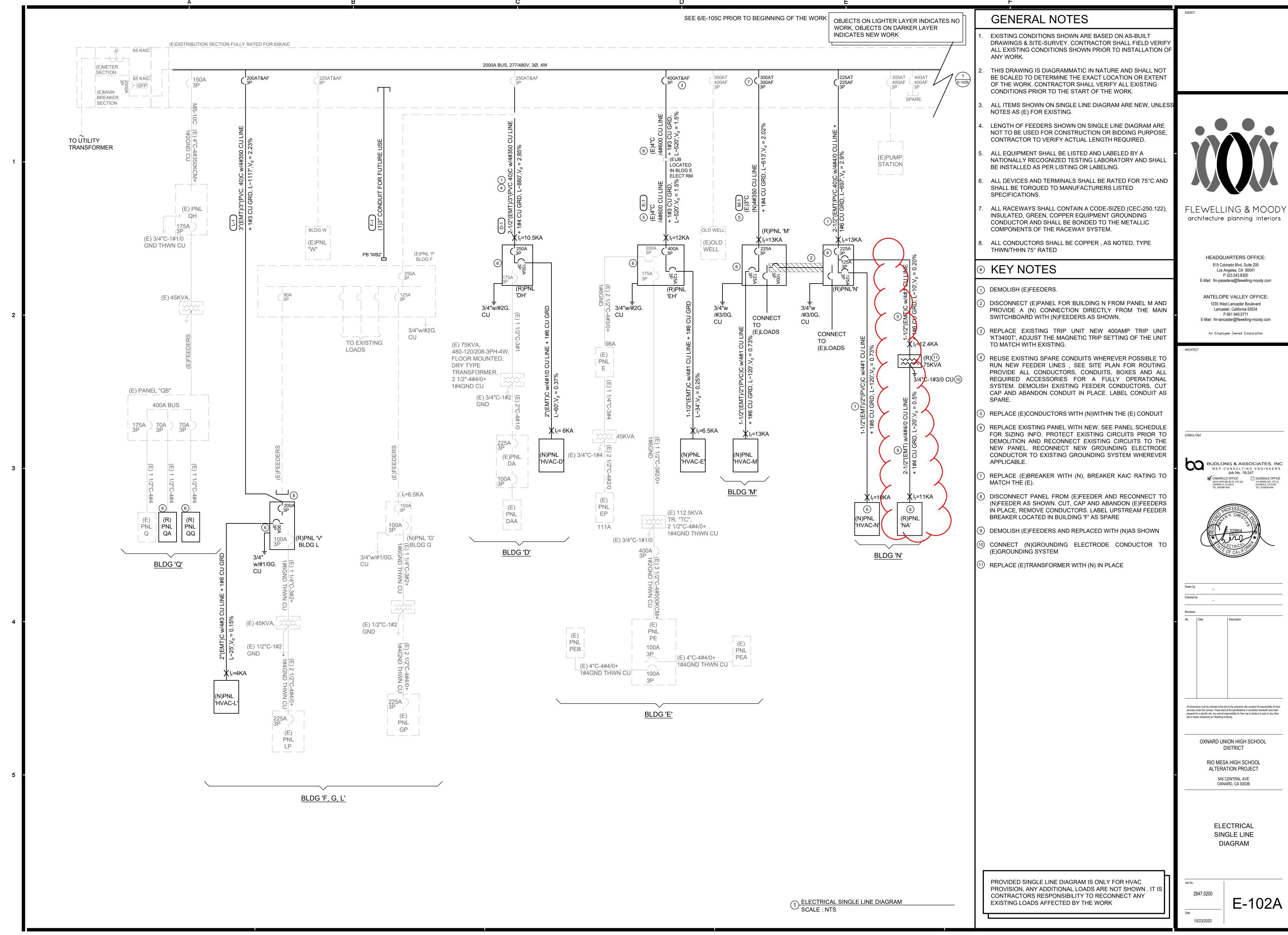
BIDDER'S CERTIFICATION I acknowledge receipt of the foregoing Addendum # 1 and accept all conditions contained herein. Dated: _______ BIDDER: _______ (company/entity) By: _______ Printed Name: ______ (authorized representative signature)

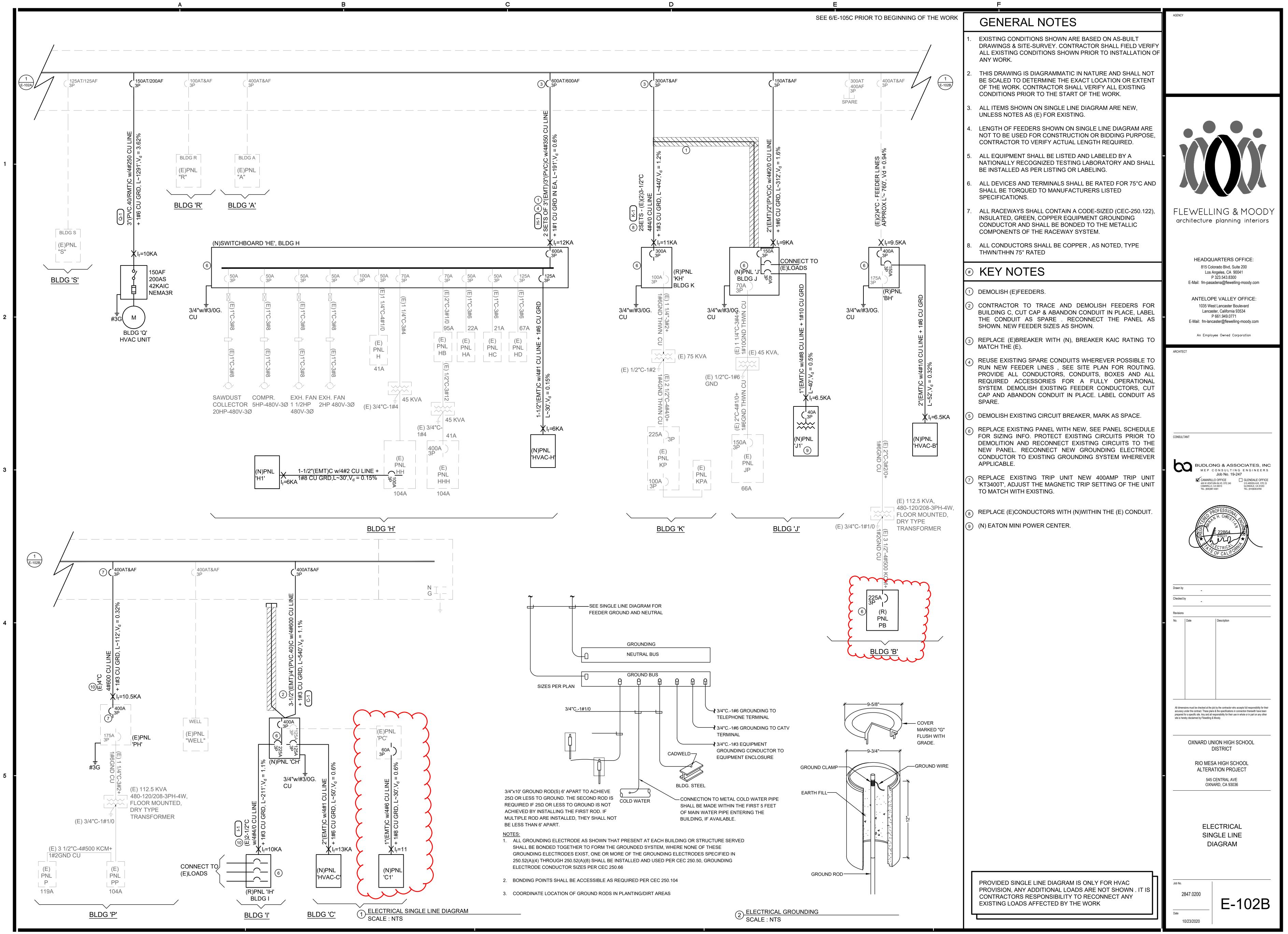
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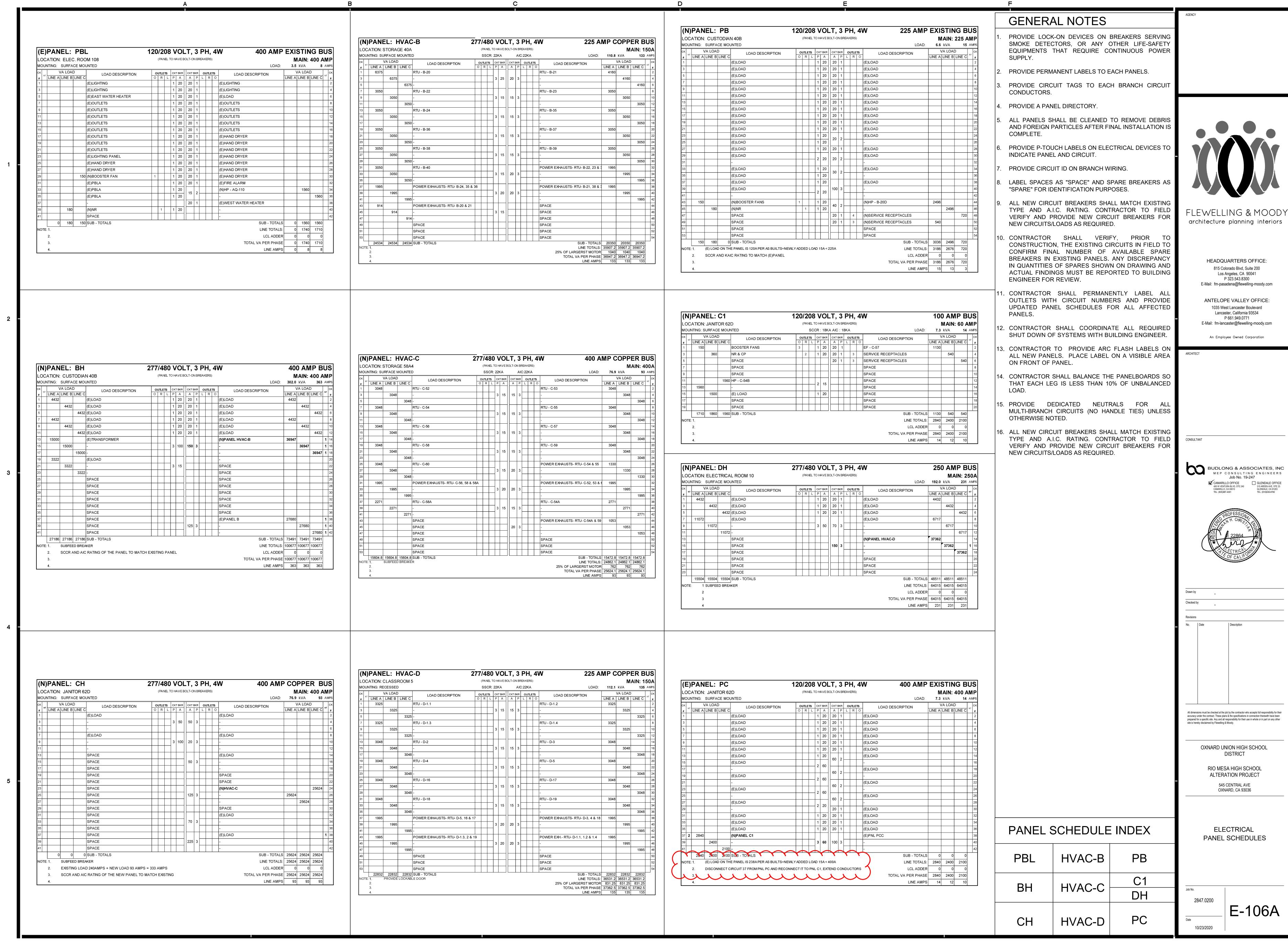
Bid Clarification Addendum #1 Attachment A Viola RFIs

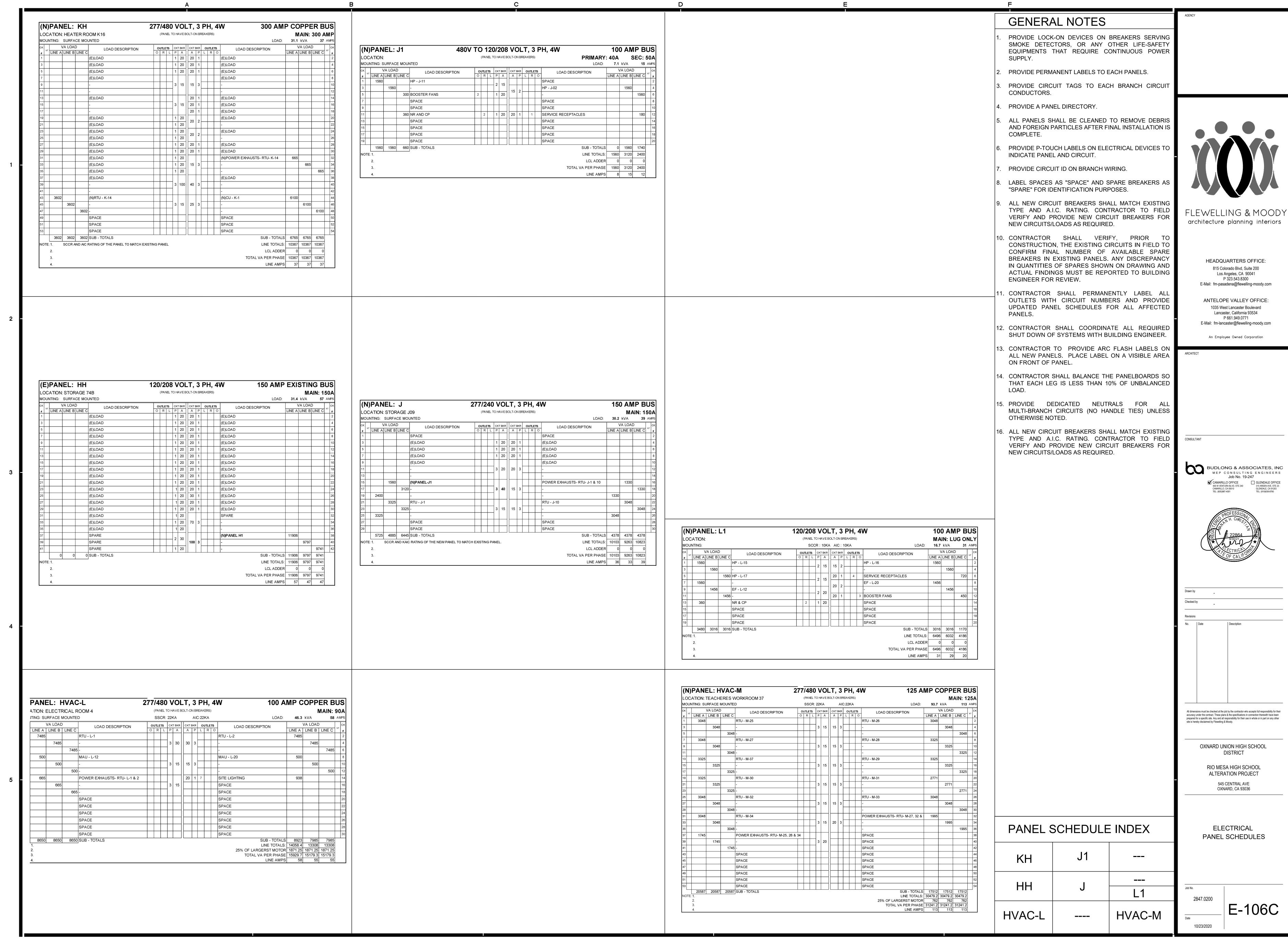


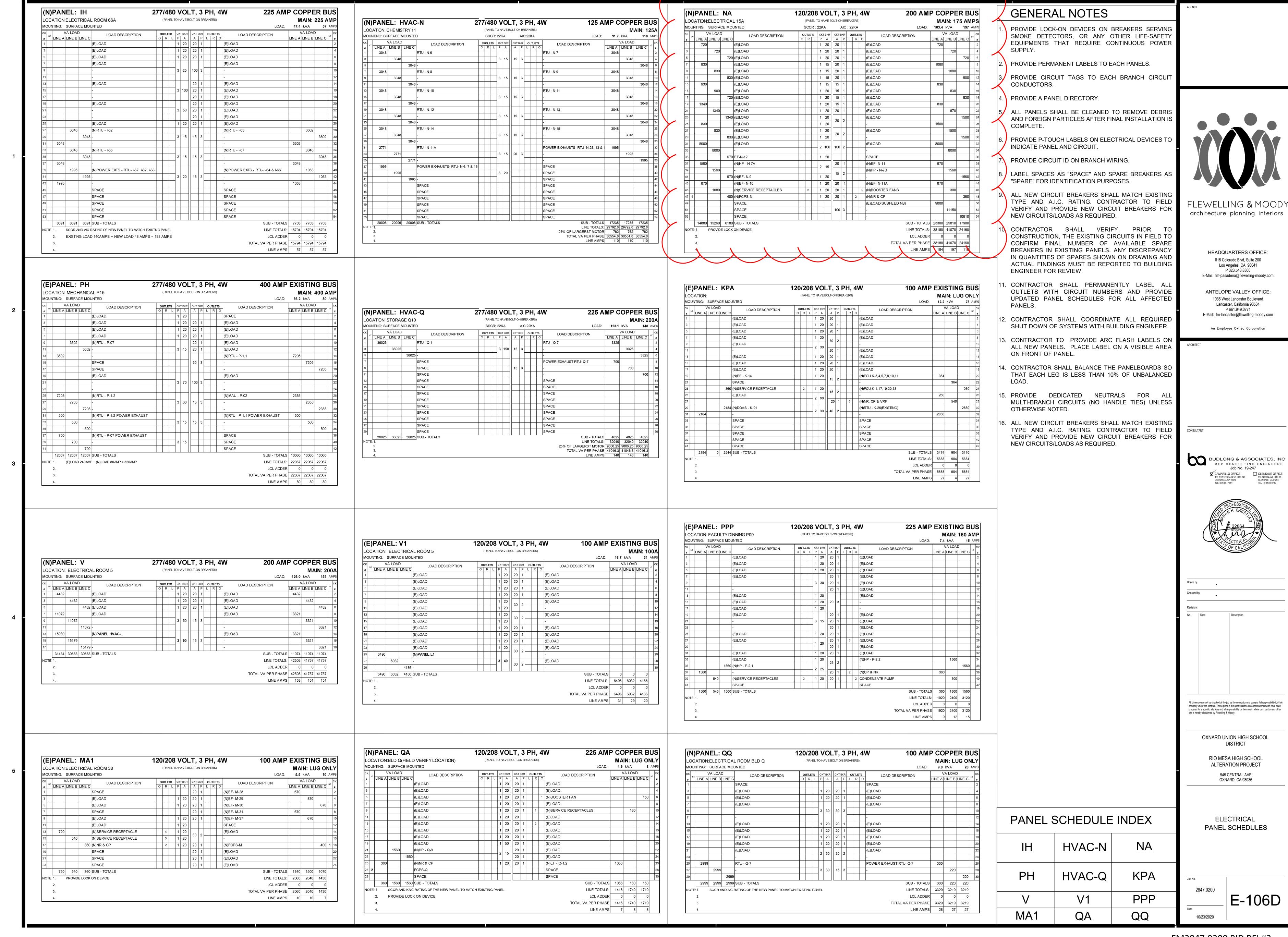
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RFI B	ID CLARI	FICATION REQ	UEST				RFI#	001
REQUE	ESTED BY:	Tim Viola					DATE:	12/17/2020
PROJE	CT NAME:	Bid 643 New HVA	C Mode	rnization 1	or Rio Mesa	High	Spec #:	26 05 00
SUBMI	TTED TO:	Oxnard Union High	school	District			PGS:	1
ATTEN	TION:	Arvind Balaji & Kar Aldridge	1 1	EMAIL:		ernards.com, bernards.com	FAX:	
YOUR	RESPONSE	TO THE FOLLOWI	NG BID	CLARIF	ICATION R	REQUEST IS R	PEQUIRED .	BY ASAP
		ubmitted the following que						
		panel NA is existing to rerope for Panel HVAC-J. It				lding plan but is sh	nown as new in	the panel
	chedules. Please clarify so	cope for panel BP. Panel so	chedules a	nd building	plan show it as	new, but the singl	e line shows it	as existing to
4. F		ope for panel C1. Panel sci						
		s listed on sheet index and page please be provided?	the pdf pa	age 326 file	has same name	, however it appear	rs to be a dupli	cate of EB-201.
					Che	ck here if additio	nal pages atta	iched
							1 &	
	SED SOLUT	ION						
None curr	ently.							
					Che	ck here if additio	nal pages atta	iched
v	0 0	tion is provided in res for extra work	ponse to	your bid	clarification	request above.	This is not o	a change
1 - PANEL NA IS X'MER WILL NE	S BEING REPLACED, F ED TO BE PLACED WI	LOOR PLANS ARE CALLING OUT AS ITH (N)75KVA WITH ALL RELATED FE	REPLACED , I EDERS REVIS	REVISED THE F SED SHEET EN-2	ANEL SCH AS WELL. 11 AND E-102A, SEE A	SEE ATTACHED REVISED	D E-106D & E-106E. A	LSO THE (E)45KVA
2 - WE ARE NO E-106C	T USING HVAC-J ANYI	MORE, REVISED THE PNL SCH TO RE	EMOVE HVAC-	J, SEE ATTACHE	D REVISED			
3 - I BELIEVE YO CALLED OUT A		OT 'BP' WE DONT HAVE 'BP' SHOWN (ON FLOOR PLA	ANS OR PNL SC	I, WE ARE REPLACIN	G 'PB', SEE REVISED SINC	GLE LINE DIAGRAM E	102B WITH PB BEING
4 SHOWN PANE 5 - ATTACHED I		E, ALSO CHANGED AIC AND SCCR TO) 18KA, ALSO	ADDED A NOTE	N (E)PC PANEL SCH	SEE REVISED E102B, E10	6A	
By:	BUDLONG	& ASSOCIATES, INC			Che	ck here if additio	nal pages atta	iched 🔀
Name:	MANAN CH	RISTIAN	Title:	ELECTR	ICAL ENGG	D	ate: 2020-12	2-22

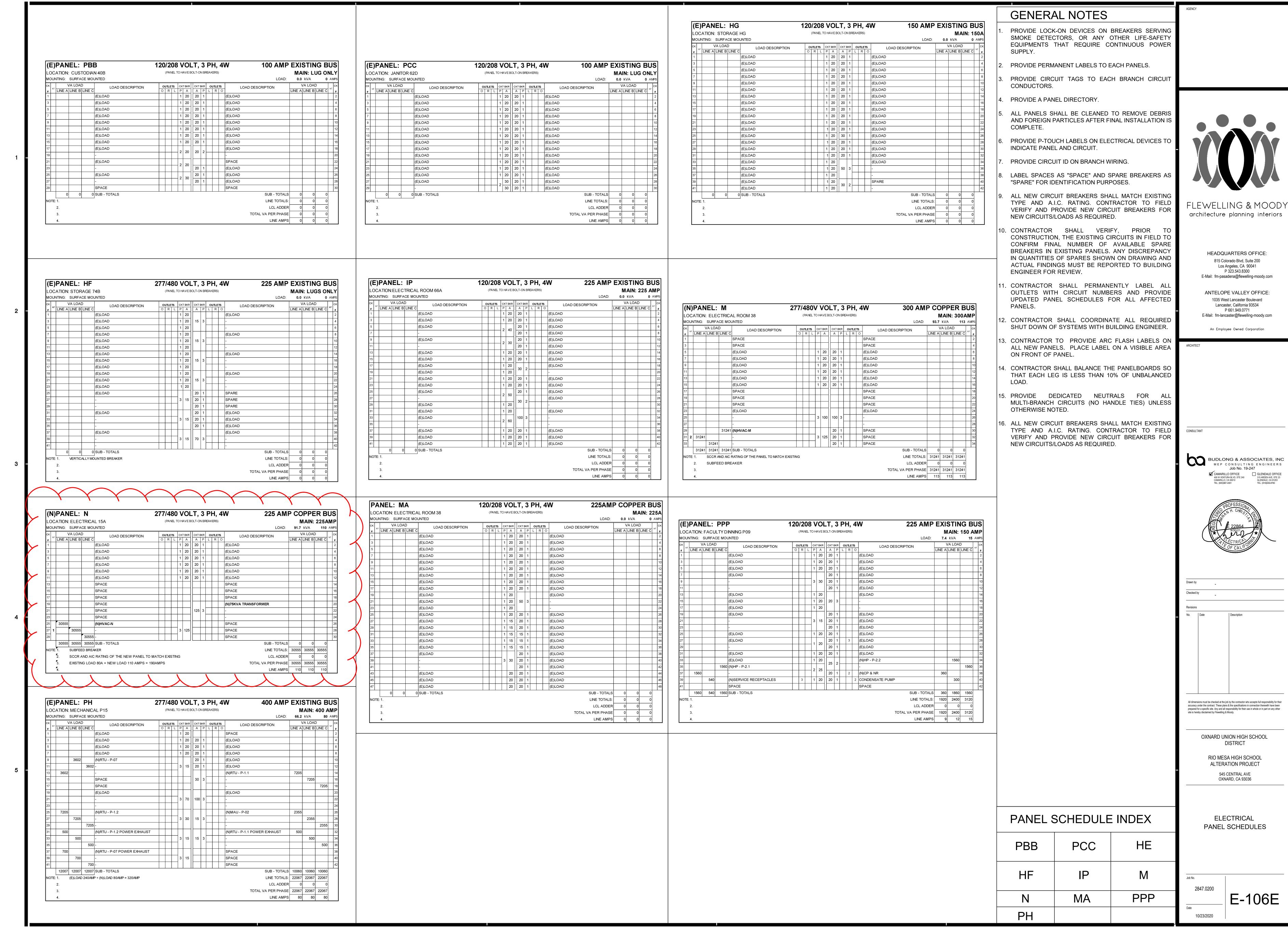


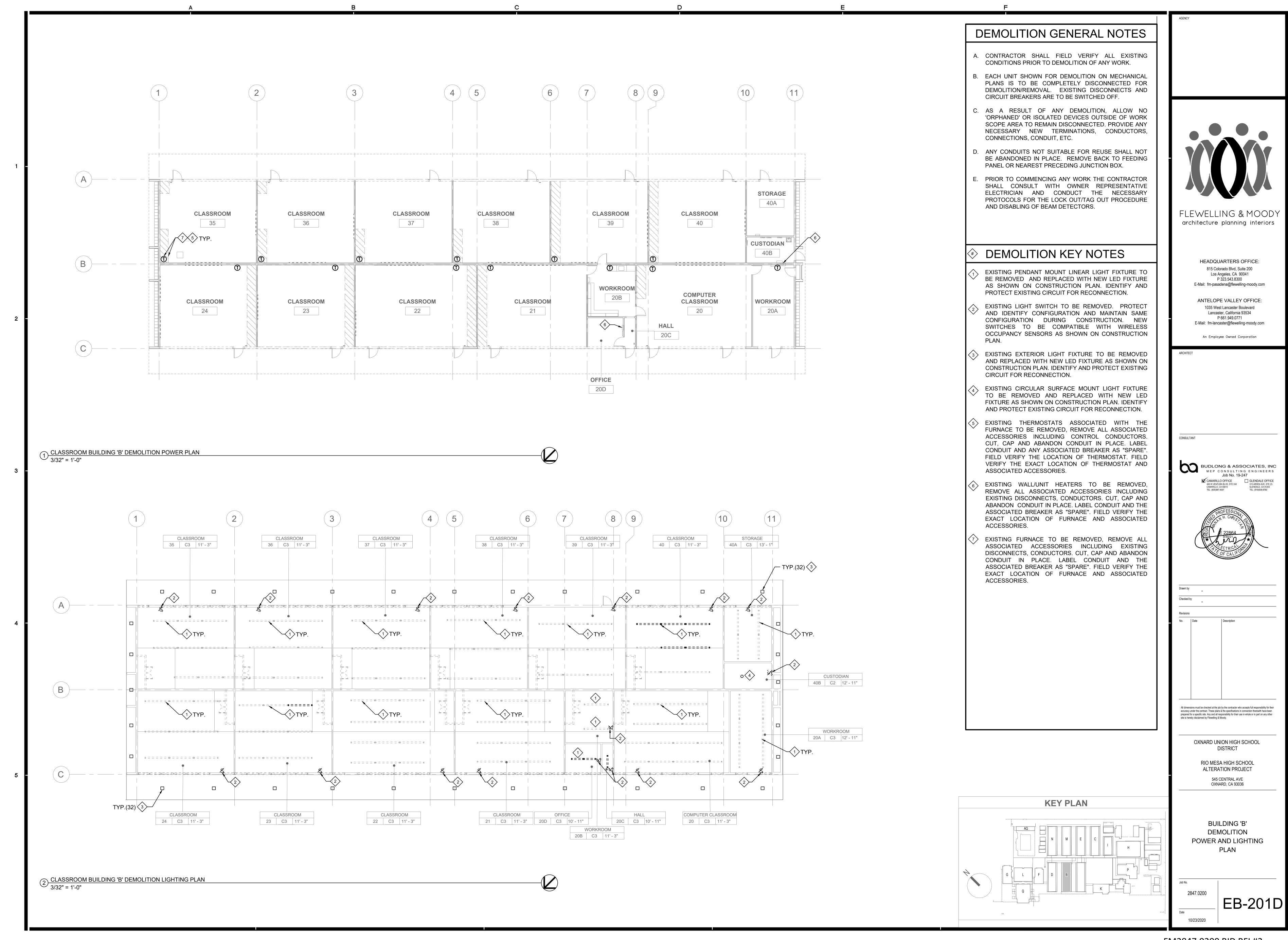


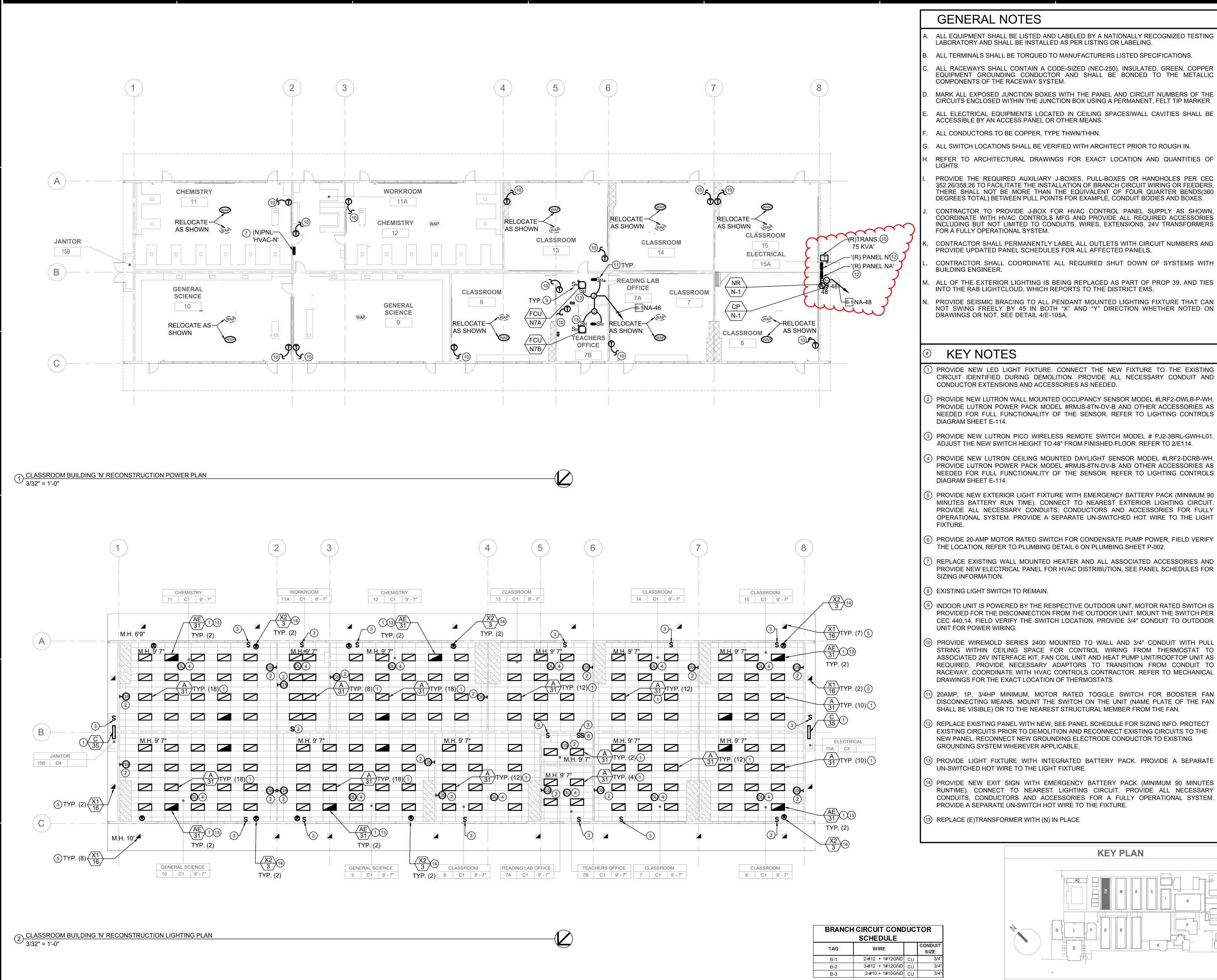












FLEWELLING & MOODY architecture planning interiors

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ANTELOPE VALLEY OFFICE: 1035 West Lancaster Boulevard Lancaster, California 93534 P 661.949.0771 E-Mail: fm-lancaster@flewelling-moody.com

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BUDLONG & ASSOCIATES, INC
MEP CONSULTING ENGINEERS

Checked by

No. Date

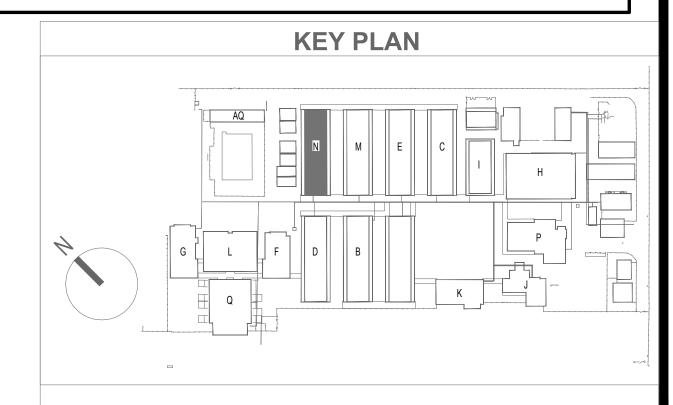
MEP CONSULTING ENGINEERS Job No. 19-247

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315 ARDEN AVE, STE 23
GLENDALE, CA 91203
TEL: (818)638-8780

- CIRCUIT IDENTIFIED DURING DEMOLITION. PROVIDE ALL NECESSARY CONDUIT AND
- (2) PROVIDE NEW LUTRON WALL MOUNTED OCCUPANCY SENSOR MODEL #LRF2-OWLB-P-WH. PROVIDE LUTRON POWER PACK MODEL #RMJS-8TN-DV-B AND OTHER ACCESSORIES AS NEEDED FOR FULL FUNCTIONALITY OF THE SENSOR. REFER TO LIGHTING CONTROLS
- 3 PROVIDE NEW LUTRON PICO WIRELESS REMOTE SWITCH MODEL # PJ2-3BRL-GWH-L01. ADJUST THE NEW SWITCH HEIGHT TO 48" FROM FINISHED FLOOR, REFER TO 2/E114.
- (4) PROVIDE NEW LUTRON CEILING MOUNTED DAYLIGHT SENSOR MODEL #LRF2-DCRB-WH. PROVIDE LUTRON POWER PACK MODEL #RMJS-8TN-DV-B AND OTHER ACCESSORIES AS NEEDED FOR FULL FUNCTIONALITY OF THE SENSOR. REFER TO LIGHTING CONTROLS
- 5) PROVIDE NEW EXTERIOR LIGHT FIXTURE WITH EMERGENCY BATTERY PACK (MINIMUM 90) MINUTES BATTERY RUN TIME). CONNECT TO NEAREST EXTERIOR LIGHTING CIRCUIT. PROVIDE ALL NECESSARY CONDUITS, CONDUCTORS AND ACCESSORIES FOR FULLY OPERATIONAL SYSTEM. PROVIDE A SEPARATE UN-SWITCHED HOT WIRE TO THE LIGHT
- (6) PROVIDE 20-AMP MOTOR RATED SWITCH FOR CONDENSATE PUMP POWER, FIELD VERIFY
- (7) REPLACE EXISTING WALL MOUNTED HEATER AND ALL ASSOCIATED ACCESSORIES AND PROVIDE NEW ELECTRICAL PANEL FOR HVAC DISTRIBUTION, SEE PANEL SCHEDULES FOR
- 9) INDOOR UNIT IS POWERED BY THE RESPECTIVE OUTDOOR UNIT, MOTOR RATED SWITCH IS PROVIDED FOR THE DISCONNECTION FROM THE OUTDOOR UNIT, MOUNT THE SWITCH PER CEC 440.14, FIELD VERIFY THE SWITCH LOCATION. PROVIDE 3/4" CONDUIT TO OUTDOOR
- 10) PROVIDE WIREMOLD SERIES 2400 MOUNTED TO WALL AND 3/4" CONDUIT WITH PULL STRING WITHIN CEILING SPACE FOR CONTROL WIRING FROM THERMOSTAT TO ASSOCIATED 24V INTERFACE KIT, FAN COIL UNIT AND HEAT PUMP UNIT/ROOFTOP UNIT AS REQUIRED, PROVIDE NECESSARY ADAPTORS TO TRANSITION FROM CONDUIT TO RACEWAY. COORDINATE WITH HVAC CONTROLS CONTRACTOR. REFER TO MECHANICAL
- 20AMP, 1P, 3/4HP MINIMUM, MOTOR RATED TOGGLE SWITCH FOR BOOSTER FAN DISCONNECTING MEANS, MOUNT THE SWITCH ON THE UNIT (NAME PLATE OF THE FAN SHALL BE VISIBLE) OR TO THE NEAREST STRUCTURAL MEMBER FROM THE FAN.
- REPLACE EXISTING PANEL WITH NEW, SEE PANEL SCHEDULE FOR SIZING INFO. PROTECT EXISTING CIRCUITS PRIOR TO DEMOLITION AND RECONNECT EXISTING CIRCUITS TO THE NEW PANEL. RECONNECT NEW GROUNDING ELECTRODE CONDUCTOR TO EXISTING
- (13) PROVIDE LIGHT FIXTURE WITH INTEGRATED BATTERY PACK. PROVIDE A SEPARATE
- RUNTIME). CONNECT TO NEAREST LIGHTING CIRCUIT. PROVIDE ALL NECESSARY CONDUITS, CONDUCTORS AND ACCESSORIES FOR A FULLY OPERATIONAL SYSTEM.



BUILDING 'N' RECONSTRUCTION POWER AND LIGHTING PLAN

accuracy under the contract. These plans & the specifications in connection therewith have been prepared for a specific site. Any and all responsibility for their use in whole or in part on any other

OXNARD UNION HIGH SCHOOL

DISTRICT

RIO MESA HIGH SCHOOL ALTERATION PROJECT

> 545 CENTRAL AVE OXNARD, CA 93036

EN-201



RFI B	ID CLARI	FICATION RE	QUEST			RFI#	002
REQUE	ESTED BY:	Tim Viola				DATE:	12/18/2020
PROJE	CT NAME:	Bid 643 New HV	AC Mode	rnization f	for Rio Mesa High	Spec #:	23 33 01
SUBMI	TTED TO:	Oxnard Union H	igh School	District		PGS:	6
ATTEN	TION:	Arvind Balaji & K Aldridge	Karl 1	EMAIL:	abalaji@bernards.com, kaldridge@bernards.com	FAX:	
YOUR	RESPONSE	TO THE FOLLO	WING BIL	O CLARIF	FICATION REQUEST IS R	EQUIRED	BY ASAP
Note 10 o to quantif	y and quote the ct silencers requ	duct silencers. ired for the return ducts	s?	11 1	charge of the roof top units. Addit basis of design model numbers?	ional informat	ion is required
					Check here if addition	nal pages atta	iched 🖂
	SED SOLUT	ION					
None curr	rently.						
					Check here if addition	nal pages atta	ached
•		tion is provided in 1 or extra work	response to	your bid	clarification request above.	This is not	a change
		M-007 with duct silend Budlong & Associates			dated specification section 23 3	3 01 without	strikethroughs.
By:					Check here if addition	nal pages atta	ached
Name:	IRVINE CARRILL	0	Title:	ARCHITEC	T Da	ate:	22/2020

SECTION 23 33 01 AIR DUCT SILENCERS

PART 1 - GENERAL

- 1.1 Basis-of-Design Product: Silencers shall be Vibro-Acoustics or approved equal.
- 1.2 Alternate manufacturers must request and obtain written approval by the Engineer to bid the project at least 10 day prior to the bid due-date. As a condition of pre-approval, alternate manufacturers must submit to the Engineer a minimum of twenty (20) different HVAC silencer test reports. Each report shall be for a silencer tested in full accordance with the ASTM E-477-13 silencer test standard in an aero-acoustic test facility which is NVLAP accredited for the ASTM E477-13 standard. Each test shall have been conducted within the last 12 month period. A copy of the laboratory's NVLAP accreditation certificate must be included with the submitted reports. Any changes to the specifications must be submitted and approved in writing by the Engineer at least 10 days prior to the bid due-date.
- 1.3 If products other than those of the basis of design manufacturer are supplied on the project, the purchasing contractor assumes full performance, project schedule and monetary responsibility for meeting the project noise criteria, including any retrofit work that may be required

1.4 SUBMITTALS

A. Performance Data:

- 1. Silencer manufacturer to provide submittal drawings detailing all duct silencer data specified in the mechanical drawing schedule.
- 2. The silencer manufacturer shall provide, for approval, acoustical system calculations for all duct systems with silencers to demonstrate that the submitted silencers will reduce mechanical fan noise to following NC-Levels in the occupied space. Use sound power levels of actual equipment to be installed on project. Analysis shall include breakout noise calculations.
- 3. Supplier shall be responsible for the overall system pressure loss of the installation based on duct conditions upstream and downstream of the silencer to ensure required airflow is provided. Supplier shall submit detailed pressure drop analysis for the installation and detailed procedure outlining methodology for site measurement of overall system pressure loss for approval prior to manufacture.
 - a. Silencer internal design will provide ideal pressure drop value as scheduled
 - b. Installed pressure drop including system effect is maintained at maximum as scheduled.
- 4. Acoustical and pressure drop calculations must be supplied with PE/P.Eng stamp at the time of submittal

B. Source quality-control reports:

 Silencer manufacturer to provide a copy of their laboratory NVLAP accreditation certificate for the ASTM E-477-06a test standard with the submittals. Data from non-NVLAP accredited test facilities will not be accepted.

PART 2 - PRODUCTS

2.1 DUCT SILENCERS

A. General Requirements:

REQUEST LATEST VERSION OF SPECIFICATION FROM MANUFACTURER FOR DUCT SILENCERS TO HAVE NON-FIBROUS MATERIALS OF ANY KIND THAT MAY BECOME AIRBORN.

- 1. Silencers shall be of the size, configuration, capacity and acoustic performance as scheduled on the drawings. All silencers shall be factory fabricated and supplied by the same manufacturer.
- 2. Transitions on inlet and outlet will not be accepted. Silencers shall fit the ducting system they are installed in without requiring duct fittings/transitions. Silencer inlet and outlet must match duct dimensions. See contract documents for silencer configuration. Non-basis of design suppliers must submit details of internal geometry of silencers to be supplied.
- Silencer inlet and outlet connection dimensions must be equal to the duct sizes shown
 on the drawings. Duct transitions at silencers are not permitted unless shown on the
 contract drawings.
- 4. Silencers shall be constructed in accordance with ASHRAE and SMACNA standards for the pressure and velocity classification specified for the air distribution system in which it is installed. Material gauges noted in other sections are minimums. Material gauges shall be increased as required for the system pressure and velocity classification. The silencers shall not fail structurally when subjected to a differential air pressure of 8 inches water gauge.
- 5. All casing seams and joints shall be lock-formed and sealed or stitch welded and sealed except as noted in Section G below, to provide leakage-resistant construction. Airtight construction shall be achieved by use of a duct-sealing compound supplied and installed by the contractor at the jobsite.
- 6. All perforated steel shall be adequately stiffened to insure flatness and form.
- 7. Fire Performance Characteristics: Silencer assemblies, scalants, and acoustical spacer, shall have flame-spread index not exceeding 25 and smoke-developed index not exceeding 50 when tested according to ASTM E 84, NFPA 255 or UL 723.
- 8. Airstream Surfaces: Surfaces in contact with the airstream shall comply with requirements in ASHRAE 62.1-2007.
- B. Rectangular Silencers including models RD, RED: Outer casing shall be ASTM A 653/A 653M, G90 galvanized sheet steel. Gauge 22 and Gauge 18 respectively. Inner perforated metal liner: ASTM A 653/A 653M, G90 galvanized sheet steel, Gauge 26 and Gauge 22
- C. Principal Sound-Absorbing Mechanism:
 - 1. Dissipative silencers:
 - Models RD, RED: type with acoustic media. Media shall be of acoustic quality, shot-free glass fiber insulation with long, resilient fibers bonded with a

thermosetting resin. Glass fiber density and compression shall be as required to insure conformance with laboratory test data. Glass fiber shall be packed with a minimum of 15% compression during silencer assembly. Media shall be resilient such that it will not crumble or break, and conform to irregular surfaces. Media shall not cause or accelerate corrosion of aluminum or steel. Mineral wool will not be permitted as a substitute for glass fiber.

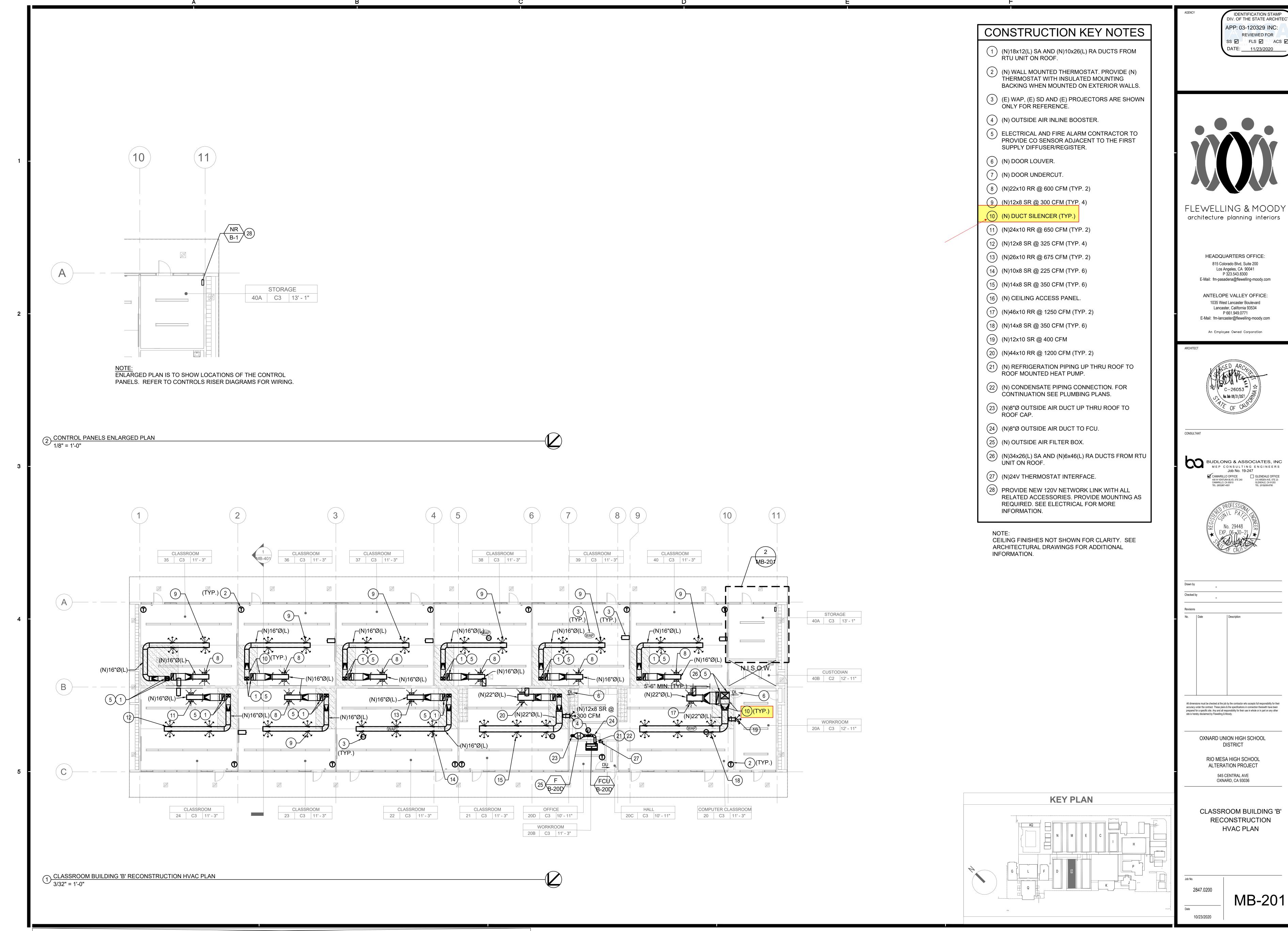
D. HTL Casings: Where indicated on the silencer schedule, silencers shall have high transmission loss (HTL) walls externally applied and completely sealed to the silencer casing by the silencer manufacturer to assure quality controlled transmission loss. The HTL walls shall consist of media, airspace, mass and outer protective metal skin, as required, to obtain the specified room noise criteria. Standard acoustical panels will not be accepted as HTL walls. If requested by the Engineer, break-out noise calculations for each air handling and fan system shall be provided with the silencer submittal to insure compliance with the room noise criteria. Break-out noise calculations shall be based on the sound power levels of the specified equipment.

PART 3 - EXECUTION

3.1 INSTALLATION

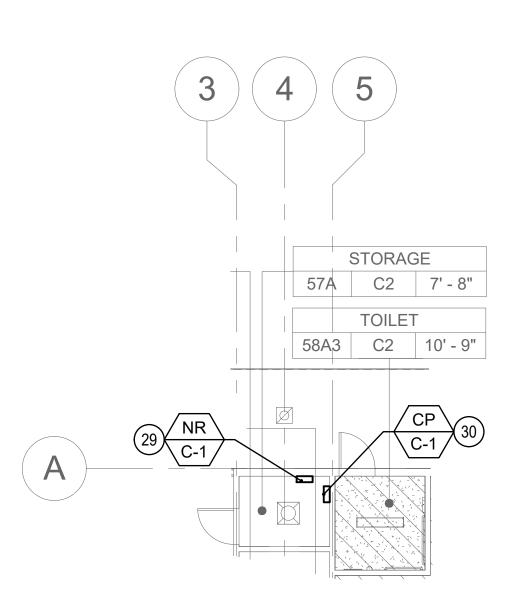
A. Install silencer according to manufacturer's written installation instructions.

END OF SECTION

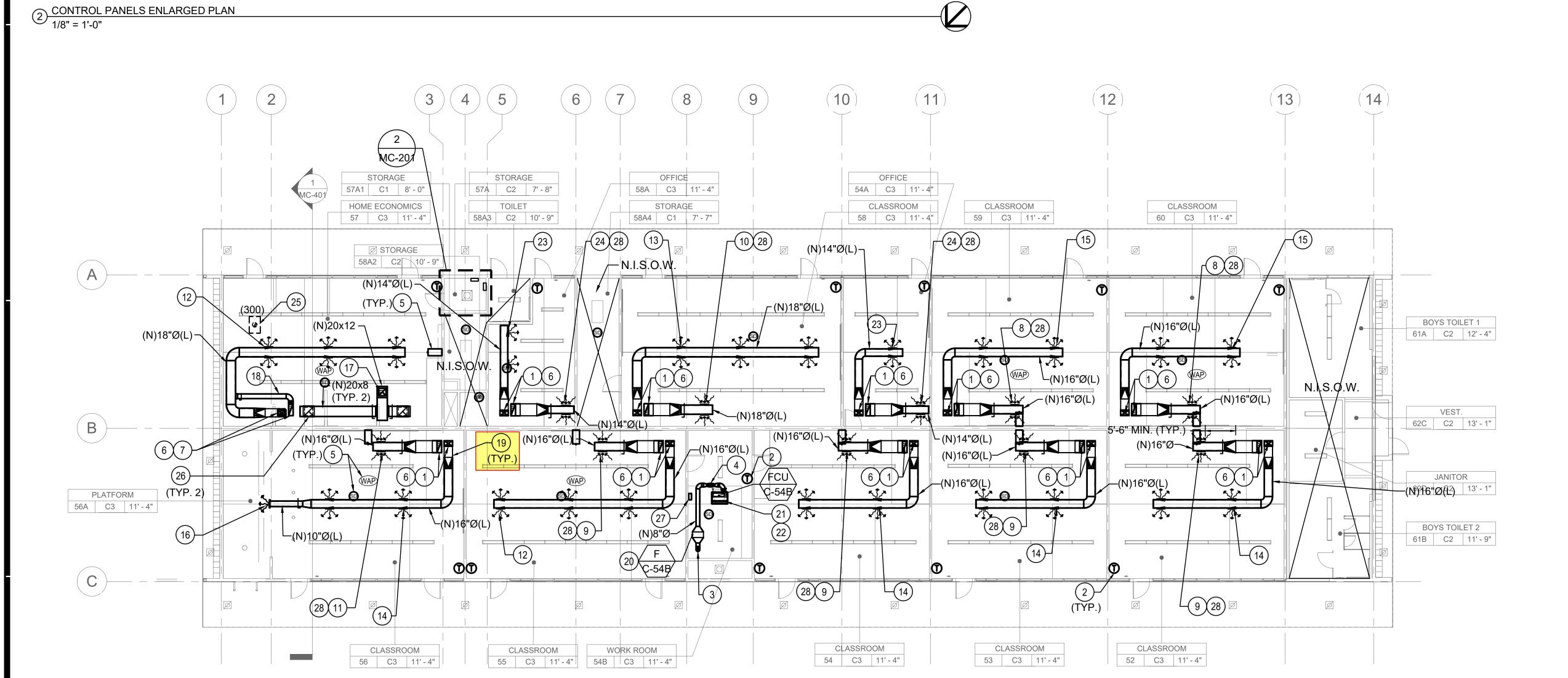


IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT SS 🗹 FLS 🗹 ACS 🗹

BUDLONG & ASSOCIATES, INC
MEP CONSULTING ENGINEERS
Job No. 19-247



ENLARGED PLAN IS TO SHOW LOCATIONS OF THE CONTROL PANELS. REFER TO CONTROLS RISER DIAGRAMS FOR WIRING



CONSTRUCTION KEY NOTES

- (N)18x12 SA AND (N)10x26 RA DUCTS FROM RTU UNIT ON ROOF.
- (2) (N) WALL MOUNTED THERMOSTAT. PROVIDE (N) THERMOSTAT WITH INSULATED MOUNTING

BACKING WHEN MOUNTED ON EXTERIOR WALLS.

- (3) (N)8"Ø OA DUCT UP THRU ROOF TO ROOF CAP.
- (N) OUTSIDE AIR INLINE BOOSTER.
- (E) WAP, SD AND PROJECTORS SHOWN FOR REFERENCE ONLY.
- (6) ELECTRICAL AND FIRE ALARM CONTRACTOR TO PROVIDE CO SENSOR ADJACENT TO THE FIRST SUPPLY DIFFUSER/REGISTER.
- (7) (N)18x12 SA AND (N)10x26 RA DUCTS FROM RTU UNIT ON ROOF. CAP RETURN DUCT BELOW (N)8x10 BY-PASS DUCT CONNECTION.
- (8) (N)24x10 RR @ 650 CFM (TYP.2)
- 9 (N)22x10 RR @ 600 CFM (TYP.2)
- (N)26x10 RR @ 675 CFM (TYP.2)
- (11) (N)26x10 RR @ 700 CFM (TYP.2)
- (12) (N)8x8 SR @ 200 CFM (TYP.6)
- (N)10x8 SR @ 225 CFM (TYP.6)
- (N)12x8 SR @ 300 CFM (TYP.4)
- (N)12x8 SR @ 325 CFM (TYP.4)
- (N)8x8 SR @ 200 CFM
- (N)16x16 EXHAUST DUCT UP TO EF/C-57 ON ROOF
- (18) (N)8x10(L) BY-PASS DUCT WITH MODULATING BY-PASS DAMPER CONTROLLED BY RTU APPLICATION CONTROLLER SET @ 300 CFM
- (19) (N) DUCT SILENCER (TYP.)
- (N) OUTSIDE AIR FILTER BOX.
- (N) REFRIGERANT PIPING UP THRU ROOF TO ROOF MOUNTED HEAT PUMP.
- (22) (N) CONDENSATE PIPING CONNECTION. FOR CONTINUATION SEE PLUMBING PLANS.
- (N)14x8 SR @ 350 CFM (TYP.2)
- (N)14x8 RR @ 350 CFM (TYP.2)
- (E) KITCHEN HOOD TO REMAIN. SHOWN FOR REFERENCE ONLY.
- (N) EXHAUST CEILING REGISTER MIN. 450 CFM/MAX. 600 CFM EACH (TYP. 2)
- (N)24V THERMOSTAT INTERFACE.
- 28) PROXIMITY TO LIGHTS MAY REQUIRE BRACING.
- 29) PROVIDE NEW 120V NETWORK LINK WITH ALL RELATED ACCESSORIES. PROVIDE MOUNTING AS REQUIRED. SEE ELECTRICAL FOR MORE INFORMATION.
- (30) PROVIDE NEW 120V CONTROL PANEL WITH ALL RELATED ACCESSORIES. PROVIDE MOUNTING AS REQUIRED. SEE ELECTRICAL FOR MORE INFORMATION.

CEILING FINISHES NOT SHOWN FOR CLARITY. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

KEY PLAN





FLEWELLING & MOODY architecture planning interiors

> **HEADQUARTERS OFFICE:** 815 Colorado Blvd, Suite 200 Los Angeles, CA 90041 P 323.543.8300 E-Mail: fm-pasadena@flewelling-moody.com

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GLENDALE OFFICE
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TEL: (818)638-8780



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accuracy under the contract. These plans & the specifications in connection therewith have been prepared for a specific site. Any and all responsibility for their use in whole or in part on any other

All dimensions must be checked at the job by the contractor who accepts full responsibility for their

OXNARD UNION HIGH SCHOOL DISTRICT

> ALTERATION PROJECT 545 CENTRAL AVE OXNARD, CA 93036

RIO MESA HIGH SCHOOL

CLASSROOM BUILDING 'C' RECONSTRUCTION **HVAC PLAN**

MC-201

1) CLASSROOM BUILDING 'C' HVAC PLAN 3/32" = 1'-0"

SECTION 23 33 01 AIR DUCT SILENCERS

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B. Source quality-control reports:

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PART 2 - PRODUCTS

2.1 DUCT SILENCERS

A. General Requirements:

- 1. Silencers shall be of the size, configuration, capacity and acoustic performance as scheduled on the drawings. All silencers shall be factory fabricated and supplied by the same manufacturer. Provide with non-fibrous materials.
- Transitions on inlet and outlet will not be accepted. Silencers shall fit the ducting system
 they are installed in without requiring duct fittings/transitions. Silencer inlet and outlet
 must match duct dimensions. See contract documents for silencer configuration. Nonbasis of design suppliers must submit details of internal geometry of silencers to be
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- 5. All casing seams and joints shall be lock-formed and sealed or stitch welded and sealed except as noted in Section G below, to provide leakage-resistant construction. Airtight construction shall be achieved by use of a duct-sealing compound supplied and installed by the contractor at the jobsite.
- 6. All perforated steel shall be adequately stiffened to insure flatness and form.
- 7. Fire-Performance Characteristics: Silencer assemblies, sealants, and acoustical spacer, shall have flame-spread index not exceeding 25 and smoke-developed index not exceeding 50 when tested according to ASTM E 84, NFPA 255 or UL 723.
- 8. Airstream Surfaces: Surfaces in contact with the airstream shall comply with requirements in ASHRAE 62.1-2007.
- B. Rectangular Silencers including models RD, RED: Outer casing shall be ASTM A 653/A 653M, G90 galvanized sheet steel. Gauge22 and Gauge 18 respectively. Inner perforated metal liner: ASTM A 653/A 653M, G90 galvanized sheet steel, Gauge 26 and Gauge 22
- C. Principal Sound-Absorbing Mechanism:
 - 1. Dissipative silencers:
 - a. Models RD, RED: type with acoustic media. Media shall be of acoustic quality, shot-free glass fiber insulation with long, resilient fibers bonded with a thermosetting resin. Glass fiber density and compression shall be as required to insure conformance with laboratory test data. Glass fiber shall be packed with a

minimum of 15% compression during silencer assembly. Media shall be resilient such that it will not crumble or break, and conform to irregular surfaces. Media shall not cause or accelerate corrosion of aluminum or steel. Mineral wool will not be permitted as a substitute for glass fiber.

D. HTL Casings: Where indicated on the silencer schedule, silencers shall have high transmission loss (HTL) walls externally applied and completely sealed to the silencer casing by the silencer manufacturer to assure quality controlled transmission loss. The HTL walls shall consist of media, airspace, mass and outer protective metal skin, as required, to obtain the specified room noise criteria. Standard acoustical panels will not be accepted as HTL walls. If requested by the Engineer, break-out noise calculations for each air handling and fan system shall be provided with the silencer submittal to insure compliance with the room noise criteria. Break-out noise calculations shall be based on the sound power levels of the specified equipment.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install silencer according to manufacturer's written installation instructions.

END OF SECTION

Tag No.	Flow Rate	PD	PD Sys Effects		Size (in)				T	1	ertion Los	1	ı	ı	- Manufacturer	Model No.	
_	(cfm)	(in.w.g.)	(in.w.g.)	Н	W	L	63	125	250	500	1000	2000	4000	8000			
RTU-B20-S RTU-B21-S	2500 2400	0.09	0.15 0.36	26 12	34 18	60 72	8 6	17 10	29 14	40 23	40 29	42 31	29 25	21 19	Vibro-Acoustics Vibro-Acoustics	REMB-LV-F8	
RTU-B22-S	1300	0.15	0.25	12	18	60	7	10	15	24	29	33	25	19	Vibro-Acoustics		
RTU-B24-S RTU-B23-S	1300 1200	0.15	0.25 0.34	12 12	18 18	60 60	7 8	10 12	15 21	24 27	29 29	33 34	25 25	19 18	Vibro-Acoustics Vibro-Acoustics		
RTU-B35-S RTU-B36-S	1200 1200	0.2	0.34 0.34	12 12	18 18	60 60	8	12 12	21 21	27 27	29 29	34 34	25 25	18 18	Vibro-Acoustics Vibro-Acoustics	REMB-UHV-F9	
RTU-B37-S	1200	0.2	0.34	12	18	60	8	12	21	27	29	34	25	18	Vibro-Acoustics		
RTU-B38-S RTU-B39-S	1200 1200	0.2	0.34 0.34	12 12	18 18	60 60	8	12 12	21	27 27	29 29	34 34	25 25	18 18	Vibro-Acoustics Vibro-Acoustics		
RTU-B40-S	1200	0.2	0.34	12	18	60	8	12	21	27	29	34	25	18	Vibro-Acoustics	20.42 0.07.56	1,2,3,4,
RTU-B21 R RTU-B20 R	-2400 -2500	0.18 0.18	0.31	10 12	26 46	36 60	10	7 14	12 25	19 32	24 37	18 38	12 28	20	Vibro-Acoustics Vibro-Acoustics	RMB-MV-F6 REMB-MLV-F8	
RTU-B22 R RTU-B23 R	-1300 -1200	0.14 0.12	0.24 0.2	10 10	26 26	36 36	6	8	15 15	23 23	30 30	24 24	15 15	11 11	Vibro-Acoustics Vibro-Acoustics		
RTU-B24 R	-1300	0.14	0.24	10	26	36	6	8	15	23	30	24	15	11	Vibro-Acoustics		
RTU-B35 R RTU-B36 R	-1200 -1200	0.12 0.12	0.2	10 10	26 26	36 36	6	8	15 15	23 23	30 30	24 24	15 15	11	Vibro-Acoustics Vibro-Acoustics	RMB-LV-F9	
RTU-B37 R	-1200	0.12	0.2	10	26	36	6	8	15	23	30	24	15	11	Vibro-Acoustics		
RTU-B38 R RTU-B39 R	-1200 -1200	0.12 0.12	0.2 0.2	10 10	26 26	36 36	6	8	15 15	23 23	30 30	24 24	15 15	11 11	Vibro-Acoustics Vibro-Acoustics		
RTU-B40 R	-1200	0.12	0.2	10	26	36	6	8	15	23	30	24	15	11	Vibro-Acoustics		
RTU-C52-S	1200	0.13	0.21	12	18	60	7	10	15	24	29	33	25	19	Vibro-Acoustics		
RTU-C53-S RTU-C54-S	1200 1200	0.13 0.13	0.21 0.21	12 12	18 18	60 60	7	10 10	15 15	24 24	29 29	33 33	25 25	19 19	Vibro-Acoustics Vibro-Acoustics		
TU-C54A-S	700	0.11	0.18	12	18	60	10	16	28	35	46	45	30	20	Vibro-Acoustics		
RTU-C55-S RTU-C57-S	1200 1200	0.13 0.13	0.21 0.21	12 12	18 18	60 60	7	10 10	15 15	24 24	29 29	33 33	25 25	19 19	Vibro-Acoustics Vibro-Acoustics	REMB-MHV-F9	
RTU-C56-S RTU-C58-S	1400 1400	0.17 0.17	0.29 0.29	12 12	18 18	60 60	7	10 10	15 15	24 24	29 29	33 33	25 25	19 19	Vibro-Acoustics Vibro-Acoustics		
RTU-C59-S	1300	0.15	0.25	12	18	60	7	10	15	24	29	33	25	19	Vibro-Acoustics Vibro-Acoustics		
RTU-C60-S RTU-C58A-S	1300 700	0.15 0.11	0.25 0.18	12 12	18 18	60 60	7	10 16	15 28	24 35	29 46	33 45	25 30	19 20	Vibro-Acoustics Vibro-Acoustics		
RTU-C52 R	-1200	0.07	0.26	26	10	36	5	8	15	19	20	16	12	10	Vibro-Acoustics		1,2,3,4
RTU-C53 R RTU-C54 R	-1200 -1200	0.07 0.07	0.26 0.26	26 26	10 10	36 36	5	8	15 15	19 19	20 20	16 16	12 12	10 10	Vibro-Acoustics Vibro-Acoustics	RMB-MLV-F9	
RTU-C55 R RTU-C57 R	-1200 -1200	0.07 0.07	0.26 0.24	26 10	10 26	36 48	5 6	8	15 13	19 18	20 27	16 23	12 18	10 17	Vibro-Acoustics Vibro-Acoustics	REMB-HV-F6	
RTU-C56 R	-1400	0.07	0.23	26	10	36	5	8	13	17	18	14	11	9	Vibro-Acoustics	IVEINID-UA-FO	
RTU-C58 R RTU-C59 R	-1400 -1300	0.07 0.06	0.23 0.2	26 26	10 10	36 36	5 5	8	13 13	17 17	18 18	14 14	11 11	9	Vibro-Acoustics Vibro-Acoustics		
RTU-C60 R	-1300	0.06	0.2	26	10	36	5	8	13	17	18	14	11	9	Vibro-Acoustics	RMB-MV-F9	
TU-C54A R TU-C58A R	-700 -700	0.04 0.04	0.13 0.13	26 26	10 10	36 36	6	9	17 17	21 21	23 23	18 18	13 13	11 11	Vibro-Acoustics Vibro-Acoustics		
	1200	0.13	0.21	12	18	60	7	10	15		29	33	25	19	Vibro-Acoustics		
RTU-D2-S RTU-D3-S	1200	0.13	0.21	12	18	60	7	10	15	24 24	29	33	25	19	Vibro-Acoustics		
RTU-D4-S RTU-D5-S	1200 1200	0.13 0.13	0.21 0.21	12 12	18 18	60 60	7	10 10	15 15	24 24	29 29	33 33	25 25	19 19	Vibro-Acoustics Vibro-Acoustics		
RTU-D16-S	1200	0.13	0.21	12	18	60	7	10	15	24	29	33	25	19	Vibro-Acoustics	REMB-MHV-F9	
RTU-D17-S RTU-D18-S	1200 1200	0.13 0.13	0.21 0.21	12 12	18 18	60 60	7	10	15 15	24 24	29 29	33 33	25 25	19 19	Vibro-Acoustics Vibro-Acoustics		
RTU-D19-S	1200	0.13	0.21	12	18	60	7	10	15	24	29	33	25	19	Vibro-Acoustics		1,2,3,4 _.
RTU-D2-R RTU-D3-R	-1200 -1200	0.07 0.07	0.26 0.26	26 26	10 10	36 36	5	8	15 15	19 19	20	16 16	12 12	10	Vibro-Acoustics Vibro-Acoustics		
RTU-D4-R RTU-D5-R	-1200 -1200	0.07 0.07	0.26 0.26	26 26	10 10	36 36	5 5	8	15 15	19 19	20 20	16 16	12 12	10 10	Vibro-Acoustics		
RTU-16-R	-1200	0.07	0.26	26	10	36	5	8	15	19	20	16	12	10	Vibro-Acoustics Vibro-Acoustics	RMB-MLV-F9	
RTU-17-R RTU-18-R	-1200 -1200	0.07	0.26 0.26	26 26	10 10	36 36	5	8	15 15	19 19	20 20	16 16	12 12	10 10	Vibro-Acoustics Vibro-Acoustics		
RTU-19-R	-1200	0.07	0.26	26	10	36	5	8	15	19	20	16	12	10	Vibro-Acoustics		
RTU-E42-S	1200	0.13	0.21	12	18	60	7	10	15	24	29	33	25	19	Vibro-Acoustics		
RTU-E43-S RTU-E44-S	1200 1200	0.13 0.13	0.21 0.21	12 12	18 18	60 60	7	10 10	15 15	24 24	29 29	33 33	25 25	19 19	Vibro-Acoustics Vibro-Acoustics		
RTU-E45-S	1200	0.13	0.21	12	18	60	7	10	15	24	29	33	25	19	Vibro-Acoustics		
RTU-E46-S RTU-E47-S	1200 1200	0.13 0.13	0.21 0.21	12 12	18 18	60 60	7	10 10	15 15	24 24	29 29	33 33	25 25	19 19	Vibro-Acoustics Vibro-Acoustics	 REMB-MHV-F9	
TU-E47A-S	1200	0.13	0.21	12	18	60	7	10	15	24	29	33	25	19	Vibro-Acoustics		
RTU-E48-S RTU-E49-S	1200 1200	0.13 0.13	0.21 0.21	12 12	18 18	60 60	7	10 10	15 15	24 24	29 29	33 33	25 25	19 19	Vibro-Acoustics Vibro-Acoustics		1,2,3,4 _.
RTU-E50-S RTU-E51-S	1200 1200	0.13 0.13	0.21 0.21	12 12	18 18	60 60	7	10 10	15 15	24 24	29 29	33 33	25 25	19 19	Vibro-Acoustics Vibro-Acoustics		
RTU-E42-R	-1200	0.07	0.26	26	10	36	5	8	15	19	20	16	12	10	Vibro-Acoustics		
RTU-E43-R RTU-E44-R	-1200 -1200	0.07	0.26 0.26	26 26	10 10	36 36	5	8	15 15	19 19	20 20	16 16	12 12	10	Vibro-Acoustics Vibro-Acoustics		
RTU-E49-R	-1200	0.07	0.26	26 26	10 10	36 36	5 5	8	15 15	19 19	20	16	12	10 10	Vibro-Acoustics	RMB-MLV-F9	
RTU-E50-R RTU-E51-R	-1200 -1200	0.07	0.26 0.26	26	10	36	5	8	15	19	20 20	16 16	12 12	10	Vibro-Acoustics Vibro-Acoustics		
RTU-H13-S	900	0.15	0.26	12	18	60	9	14	25	32	38	39	28	19	Vibro-Acoustics		
RTU-H71-S	2400	0.21	0.36	12	18	72	6	10	14	23	29	31	25	19	Vibro-Acoustics		
RTU-H72-S RTU-H74-S	1500 1750	0.17 0.23	0.28 0.38	12 12	18 18	60 60	6	9	14 14	22 22	27 27	28 28	24 24	18 18	Vibro-Acoustics Vibro-Acoustics	DEMARK TO	
RTU-H75-S	1200	0.13	0.21	12	18	60	7	10	15	24	29	33	25	19	Vibro-Acoustics	REMB-MLV-F9	
TU-H77-1-S TU-H77-2-S	1350 1350	0.16 0.16	0.27 0.27	12 12	18 18	60 60	7	10 10	15 15	24 24	29 29	33 33	25 25	19 19	Vibro-Acoustics Vibro-Acoustics		
RTU-H76-S RTU-H13-R	900 -900	0.15 0.06	0.26 0.22	12 26	18 10	60 36	9	14 9	25 17	32 21	38 23	39 18	28 13	19 11	Vibro-Acoustics Vibro-Acoustics		1,2,3,4
RTU-H76-R	-900	0.06	0.22	26	10	36	6	9	17	21	23	18	13	11	Vibro-Acoustics		
RTU-H71-R RTU-H72-R	-2400 -1500	0.07 0.08	0.25 0.27	26 26	10 10	36 36	3 5	4 8	8 13	16 17	26 18	19 14	12 11	8	Vibro-Acoustics Vibro-Acoustics	D. 45 ···	
RTU-H74-R	-1750	0.06	0.22	26	10	36	4	7	11	16	16	12	10	8	Vibro-Acoustics	RMB-LV-F9	
RTU-H75-R TU-H77-1-R	-1200 -1350	0.07 0.06	0.26 0.22	26 26	10 10	36 36	5	8	15 13	19 17	20 18	16 14	12 11	10 9	Vibro-Acoustics Vibro-Acoustics		
ΓU-H77-2-R	-1350	0.06	0.22	26	10	36	5	8	13	17	18	14	11	9	Vibro-Acoustics		
RTU-I162-S	1200	0.13	0.21	12	18	60	7	10	15	24	29	33	25	19	Vibro-Acoustics		
RTU-I166-S RTU-I167-S	1200 1200	0.13 0.13	0.21 0.21	12 12	18 18	60 60	7	10 10	15 15	24 24	29 29	33 33	25 25	19 19	Vibro-Acoustics Vibro-Acoustics		
RTU-I163-S	1550	0.21	0.36	12	18	60	7	10	15	24	29	33	25	19	Vibro-Acoustics	REMB-MHV-F9	
RTU-I164-S RTU-K14-S	700 2000	0.11	0.18 0.32	12 12	18 18	60 60	10 5	16 8	28 11	35 19	46 25	45 28	30 23	20 16	Vibro-Acoustics Vibro-Acoustics		
RTU-I162-R	-1200 -1200	0.07 0.07	0.26	26	10 10	36 36	5	8	15 15	19 19	20 20	16 16	12 12	10 10	Vibro-Acoustics		1,2,3,4
RTU-I166-R RTU-I167-R	-1200 -1200	0.07	0.26 0.26	26 26	10	36	5	8	15	19	20	16 16	12	10	Vibro-Acoustics Vibro-Acoustics		
RTU-I163-R RTU-I164-R	-1550 -700	0.08 0.04	0.28 0.13	26 26	10 10	36 36	5 6	8 9	13 17	17 21	18 23	14 18	11 13	9 11	Vibro-Acoustics Vibro-Acoustics	RMB-MLV-F9	
RTU-K14-R	-2000	0.08	0.29	26	10	36	4	7	11	16	16	12	10	8	Vibro-Acoustics		
RTU-M26-S	1500	0.2	0.33	12	18	60	7	10	15	24	29	33	25	19	Vibro-Acoustics		
RTU-M27-S RTU-M28-S	1500 1500	0.2	0.33 0.33	12 12	18 18	60 60	7	10 10	15 15	24 24	29 29	33 33	25 25	19 19	Vibro-Acoustics Vibro-Acoustics		
RTU-M29-S	1500	0.2	0.33	12	18	60	7	10	15	24	29	33	25	19	Vibro-Acoustics		
RTU-M30-S RTU-M31-S	1500 1500	0.2	0.33 0.33	12 12	18 18	60 60	7	10 10	15 15	24 24	29 29	33 33	25 25	19 19	Vibro-Acoustics Vibro-Acoustics	REMB-MHV-F9	
RTU-M32-S	1500	0.2	0.33	12	18	60	7	10	15	24	29	33	25	19	Vibro-Acoustics		1 2 2 4
RTU-M33-S RTU-M34-S	1500 1950	0.2 0.18	0.33 0.31	12 12	18 18	60 60	7 5	10 8	15 11	24 19	29 25	33 28	25 23	19 16	Vibro-Acoustics Vibro-Acoustics		1,2,3,4
RTU-M37-S RTU-M26-R	900	0.15 0.07	0.26 0.26	12 26	18 10	60 36	9 5	14 8	25 15	32 19	38 20	39 16	28 12	19 10	Vibro-Acoustics Vibro-Acoustics		
TU-M27-R	-1200 -1200	0.07	0.26	26	10	36	5	8	15	19	20	16	12	10	Vibro-Acoustics Vibro-Acoustics		
TU-M32-R TU-M33-R	-1200 -1200	0.07 0.07	0.26 0.26	26 26	10 10	36 36	5	8	15 15	19 19	20 20	16 16	12 12	10 10	Vibro-Acoustics Vibro-Acoustics	RMB-MLV-F9	
RTU-M34-R	-1950	0.07	0.28	26	10	36	4	7	11	16	16	12	10	8	Vibro-Acoustics	1	

J:\19—247 F&M OUHSD Rio Mesa HS HVAC Upgrade\M\19—247 M—007 HVAC Schedules.dwg; Last Saved By: patrick — Dec 17, 2020 — 1:04pm Last Printed By: PATRICK — Dec 17, 2020, 1:05pm;

SUPPLY CEI (ACOUSTICA OR EXPOSE	AL TILE ON	I PLASTER ()	CEILING	i	MODEL DF MODEL DF SQUARE S THROW PA	(T-BAR) SUPPLY C	CEILING EILING	€)	,	4-WAY)	SIDE SUPPLY REGISTER MODEL ECO20L (FOR ROUND DOUBLE DEFLECTION WITH 3/4" BLADE SPACING NOTES: 1. PROVIDE WITH DIVERTING DAMPERS.
CFM RANGE	NECK SIZE	DIFFUSER SIZE	NECK VELOCITY	NC	FOR 10'-0"	HIGH OF	MORE	CEILII	NGS		SEE DRAWINGS FOR SIZES.
0 - 125	6x6	10x10	>500	<20	CFM RANGE	NECK S	/L	-USER SIZE	NECK VELOCI		SIDE RETURN REGISTER MODEL ECO-P (FOR ROUND D NOTE: OPTION TO USE ECO20L WITH FULLY OPEN BLAD
126 - 200	8x8	12x12	>500	<20	0 - 125	6x6	24	24x24	>500	<20	NOTES:
201 - 350	10x10	14x14	>500	21	126 - 275	9x9	24	24x24	>500	23	1. SEE DRAWINGS FOR SIZES.
351 - 500	12x12	16x16	>500	23	276 - 500	12x1	2 2	24x24	>500	27	SIDEWALL SUPPLY REGISTER MODEL 20L (1/2" SPACING
501 - 675	14x14	18x18	>500	24	501 - 775	15x1	5 24	24x24	>500	30	NOTES:
676 - 875	16x16	20x20	>500	26	776 - 1125	18x1	8 2	24x24	>500	31	1. PROVIDE WITH VOLUME DAMPERS. 2. SEE DRAWINGS FOR SIZES.
876 - 1100	18x18	22x22	>500	27	1126 - 1525	21x2	1 2	24x24	>500	34	2: 022 3:0000000000000000000000000000000
1101 - 1375 NOTES: 1. PROVIDE I REQUIRED 2. SUPPLY D AND 4 WA 3. PROVIDE I)). IFFUSER SC Y BLOW DEV	HEDULE API	PLIES TO 1,	27	NOTES: 1. SUPPLY 4-WAY E 2. ALUMINI 3. PROVIDI (IF REQU 4. PROVIDE 5. PROVIDE	SLOW DEVI JM CONST E (SRA) RC JIRED). E WITH VOL	CES. RUCTION OUND TO: LUME DAM	N. SQUAR MPERS	RE ADAPT		SIDEWALL RETURN/EXHAUST/TRANSFER REGISTER MC (45-L) (45° DEFLECTION AND 3/4" SPACING) NOTES: 1. PROVIDE WITH VOLUME DAMPERS. 2. SEE DRAWINGS FOR SIZES.
SUPPLY CEI QC-L (T-BAI CFM RANGE	R CEILING))		NC	RETURN A FOR ACOL MODEL 35 SPACING)	ISTICAL 7	ΓILE ON	I PLAS	TER CE	ILING	
0 - 125	6x6	24x24	>500	<20	CFM RANGE	NECK S		SISTER	NECK		7
126 - 200	8x8	24x24	>500	<20		_	- 3	SIZE	VELOCI	1 1	4
201 - 350	10x10	24x24	>500	21	0 - 75	6x6		8x8	>400	21	-
351 - 500	12x12	24x24	>500	23	76 - 150	8x8		0x10	>400	24	-
501 - 675	14x14	24x24	>500	24	151 - 225	10x10		2x12	>400	26	4
676 - 875	16x16	24x24	>500	26	226 - 350	12x12		4x14	>400	28	4
876 - 1100	18x18	24x24	>500	27	351 - 475	14x14		6x16	>400	29	4
1101 - 1375	20x20	24x24	>500	27	476 - 650 651 - 1025	16x16		8x18 22x22	>400	31	_
1. PROVIDE I REQUIRED 2. SUPPLY D AND 4 WA 3. PROVIDE O AS NEEDE 4. PROVIDE O	D). IFFUSER SC Y BLOW DEV CEILING DIFF ED.	HEDULE API /ICES. FUSERS WIT	PLIES TO 1, 'H FILLER PA		3. PROVIDI	ED). E CEILING AS NEEDE E WITH VO	REGISTE :D. LUME DA	RS WIT	TH FILLER		
ROUND SUF C-27 (SURFA			SER MODE		RETURN A MODEL AC DEFLECTION	35-L 24">	(24" FOF	R T-BA	AR CEILI		0
		SIZE	VELOCITY	NC -20		NECK DI	FFUSER SIZE	NE(NC	
0 - 100	6"Ø	12-3/4"Ø	>500	<20						04	-
101 - 150	8"Ø	18-1/2"Ø	>500	<20	0 - 75	6x6	24x24		100	21	-
151 - 250	10"Ø	24-1/4"Ø	>500	<20	76 - 150	8x8	24x24	<u> </u>	100	24	-
251 - 375 376 - 600	12"Ø 15"Ø	24-1/4"Ø 35-1/2"Ø	>500 >500	<20 <20		10x10	24x24		100	26	-
	15"Ø	35-1/2"Ø 35-1/2"Ø	+	<20 <20		12x12	24x24		100	28	-
601 - 875 876 1200		1	>500			14x14	24x24		100	29	-
876 - 1200 1201 - 1550	21"Ø 24"Ø	46-1/4"Ø 46-1/4"Ø	>500 >500	<20 <20		16x16	24x24		100	31	-
1201 - 1000	24 W	40-1/4 1/	/300	<20	NOTES:	20x20	24x24	>4	100	33	-

DUCT SILENCER SCHEDULE

								JLE	ERSCHEDU	ICT SILENC	DU		1	1	ı	
Madal Na	B.d			s Hz	ertion Los	imum Ins	Min				Size (in)		PD Sys Effects	PD	Flow Rate	Toe No
Model No.	- Manufacturer	8000	4000	2000	1000	500	250	125	63	L	W	Н	(in.w.g.)	(in.w.g.)	(cfm)	Tag No.
	Vibro-Acoustics	19	25	33	29	24	15	10	7	60	18	12	0.21	0.13	1200	RTU-N6-S
	Vibro-Acoustics	19	25	33	29	24	15	10	7	60	18	12	0.21	0.13	1200	RTU-N7-S
	Vibro-Acoustics	19	25	33	29	24	15	10	7	60	18	12	0.21	0.13	1200	RTU-N8-S
	Vibro-Acoustics	19	25	33	29	24	15	10	7	60	18	12	0.21	0.13	1200	RTU-N9-S
	Vibro-Acoustics	19	25	33	29	24	15	10	7	60	18	12	0.21	0.13	1200	RTU-N10-S
MB-MHV-F9	Vibro-Acoustics	19	25	33	29	24	15	10	7	60	18	12	0.21	0.13	1200	RTU-N11-S
	Vibro-Acoustics	19	25	33	29	24	15	10	7	60	18	12	0.21	0.13	1200	RTU-N12-S
	Vibro-Acoustics	19	25	33	29	24	15	10	7	60	18	12	0.21	0.13	1200	RTU-N13-S
	Vibro-Acoustics	19	25	33	29	24	15	10	7	60	18	12	0.21	0.13	1200	RTU-N14-S
	Vibro-Acoustics	19	25	33	29	24	15	10	7	60	18	12	0.21	0.13	1200	RTU-N15-S
	Vibro-Acoustics	20	30	45	46	35	28	16	10	60	18	12	0.29	0.17	900	RTU-N11A-S
	Vibro-Acoustics	10	12	16	20	19	15	8	5	36	10	26	0.26	0.07	-1200	RTU-N6-R
	Vibro-Acoustics	10	12	16	20	19	15	8	5	36	10	26	0.26	0.07	-1200	RTU-N7-R
NAD NALVA FO	Vibro-Acoustics	10	12	16	20	19	15	8	5	36	10	26	0.26	0.07	-1200	RTU-N8-R
MB-MLV-F9	Vibro-Acoustics	10	12	16	20	19	15	8	5	36	10	26	0.26	0.07	-1200	RTU-N13-R
	Vibro-Acoustics	10	12	16	20	19	15	8	5	36	10	26	0.26	0.07	-1200	RTU-N14-R
	Vibro-Acoustics	10	12	16	20	19	15	8	5	36	10	26	0.26	0.07	-1200	RTU-N15-R

1. Contractor/Silencer Manufacturer shall provide acoustical analysis with PEng stamp showing silencer meets required NC-45-50 as scheduled during submittal review 2. Contractor/Silencer manufacturer must provide pressure drop calculations with PEng stamp to demonstrate the pressure drop including system effect as scheduled during submittal review 3. Alternative silencer manufacturer must provide silencer internal geometry for engineer's approval during submittal review 4. For Non-basis of Design product supplied, contractor is financially responsible to ensure noise control solution is delivered as per NC levels in spaces or dBA at specified distance

RED= Rectangular Elbow Dissipative

(+/-) The symbol (+) designates forward flow and the symbol (-) designates reverse flow.

5. (HTL casing) equivalent to 14 ga should be used to cover breakout noise issues for all silencers

The scheduled silencer pressure drop(s) are reported in accordance with ASTM E477 test methods. The pressure drop(s) are at IDEAL FLOW CONDITIONS (3-4 duct diameters of straight duct on silencer inlet and 4-5 duct diameters of staight duct on silencer outlet). Less than ideal conditions will result in increase in pressure drop - see VA representative for assistance.

Silencer Pressure Drop including estimated system effects based on less than ideal inlet and outlet flow conditions.

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OXNARD UNION HIGH SCHOOL DISTRICT

RIO MESA HIGH SCHOOL ALTERATION PROJECT 545 CENTRAL AVE OXNARD, CA 93036

SCHEDULES

Attachment B Architect's Addendum #1 Rio Mesa HS

Rio Mesa High School
OXNARD UNION HIGH SCHOOL DISTRICT
FM2847.0200
Page 1 of 3

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December 22, 2020

The following changes and/or clarifications shall be made to the drawings and specifications and all other conditions shall remain the same. All changes and/or clarifications provided shall be included in the scope of contracted work. Pursuant to PR13-01 all work that requires approval by the DSA shall not begin until said approvals are obtained.

SPECIFICATIONS

- 1. Specification Section 09 51 13 Acoustical Tile Ceilings:
 - a. **Revise** item 2.3A to read "Basis of design product: As indicated on the drawings."

DRAWINGS

1. Sheet T0.01

- a. Add note: "The G.C. shall be responsible for providing all necessary demolition and new construction at restrooms & drinking fountains, including utility layout, sizing, and verification. Refer to corresponding architectural building sheets "A(Bldg Letter)-501" for required parameters and areas of scope. Include in bid amount both the cost of preparing shop drawings complying with all applicable codes for improvements shown and the cost of performing the work for each building. All new toilet partitions shall be HDPE, see specification."
- b. Add note: "In addition to the extents of demolition & replacement shown on the architectural plans. G.C. shall remove all existing finishes required for installation of all duct hangers, blocking, and new structural members. All removed finishes shall be replaced, patched, repaired, and painted to match the existing adjacent finishes. Refer to structural drawings for member locations and Finish Schedules for finishes to match. Typical of all buildings"

- c. **Add** note: "Basis of design for all areas receiving 12x12 glued on tile shall be 'Armstrong 12x12 Straight Drilled Tile, Adhered' as manufactured by Classic Acoustical Tel No. 760-775-7745 Contact: Jacob."
- d. Add note: "Where Mechanical and Architectural dimensions conflict, the most restrictive dimension shall govern to ensure roof edge distance is a minimum of 10'-0" and minimum outdoor air intake clearances are maintained."
- e. **Add** note: "Coordinate with owner during the start of demolition. All electrical equipment and devices with salvage value as determined by the owner shall be delivered to the designated District warehouse without extra cost to the owner."
- f. Add note: "Contractor shall take precautions necessary to protect existing specialty flooring such as the gym wood floor, and wrestling mats. Provide protective plastic sheets, plywood sheathing, etc. to ensure floor is not damaged. Any damage resulting shall be repaired at no cost to District."

2. Sheet A1.01

- a. Add note: "G.C. shall Patch & Repair existing built up roof membranes & existing roof shingles affected by project scope. Refer to Roof Type Table for roof type at each building. See typical roof details on sheet A9.04. Provide a separate square foot unit cost for cover board, insulation board, and sheathing replacement." See attachment 1A.
- b. **Add** note: "Where site utility distribution requires trenching at existing pavers, monuments, plaques, and similarly unique conditions, G.C. shall photo document existing condition, salvage and reinstall in place to like new condition."
- c. **Add** note: "Provide Transom Infill as per Addendum No.1 detail 14/A9.02 at all exterior doors buildings B, C, D, E, I, M, and N"
- d. **Add** notes to sheet A1.01 as shown in the clouded areas on Addendum No. 1 detail 1/-.

3. Sheet A1.05

- a. **Replace** detail 10/A1.05 in its entirety with Addendum No.1 detail 10/-.
- b. **Replace** detail 11/A1.05 in its entirety with Addendum No.1 detail 11/-.

4. Sheet A9.02

a. Add Addendum No. 1 detail 14/- to Sheet A9.02.

5. Sheet A9.03

- a. Replace detail 13/A9.03 in its entirety with Addendum No. 1 detail 13/-.
- b. Add detail 14/A9.03 as per Addendum No. 1 detail 14/-.
- c. Add detail 15/A9.03 as per Addendum No. 1 detail 15/-.

6. **Sheet S-102**

a. **Add** note to detail 7/S102 to read "For thickened edge and additional requirements at RTU Q-1 equipment pad, see 10/A1.05"

7. Sheet S-303

a. **Replace** sheet S-303 in its entirety with Addendum No. 1 S-303.

8. Sheet SB-201

a. Revise RTU-B20 enlarged plan reference to 4/SB-201.

9. Sheet SQ-202

a. Replace sheet SQ-202 in its entirety with Addendum No. 1 SQ-202.

10. Sheet M-601

a. **Replace** detail 1/M-601 in its entirety with Addendum No. 1 detail 1/M-601.

11. Sheet M-603

 a. Revise detail 1/M-603 per clouded changes shown on Addendum No. 1 detail 3/M-603.

12. Sheet M-607

 a. Revised sheet M-607 per clouded changes shown on Addendum No. 1 Sheet M-607.

13. Sheet MQ-201

 a. Replace sheet MQ-201 in its entirety with Addendum No. 1 Sheet MQ-201.

14. Sheet MQ-202

 Replace sheet MQ-202 in its entirety with Addendum No. 1 Sheet MQ-202.

15. Sheet MQ-401

a. Replace sheet MQ-401 in its entirety with Addendum No. 1 Sheet MQ-401.

16. Sheet PB-201

a. Revise sheet PB-201 in its entirety with Addendum No. 1 Sheet PB-201.

17. Sheet PQ-201

 a. Replace sheet PQ-201 in its entirety with Addendum No. 1 Sheet PQ-201.

18. Sheet E-107F

a. Add Addendum No. 1 Sheet E-107F in its entirety.

19. **Sheet E-107G**

a. Add Addendum No. 1 Sheet E-107G in its entirety.

20. Sheet EB-201D

a. Add Addendum No. 1 Sheet EB-201D in its entirety.

Flewelling & Moody,

Irvine Carrillo

(E) ROOF	ING TYPES
BUILDING	ROOFING TYPE
AQUATICS	BUILT-UP
В	BUILT-UP
С	BUILT-UP
D	BUILT-UP
Е	BUILT-UP
Н	BUILT-UP
1	BUILT-UP
J	BUILT-UP
K	BUILT-UP
L	BUILT-UP
M	BUILT-UP
N	BUILT-UP
P	BUILT-UP
Q	BUILT-UP / SHINGLE
COVERED WALKWAY	BUILT-UP

ATTACHMENT 1A



ADDENDUM

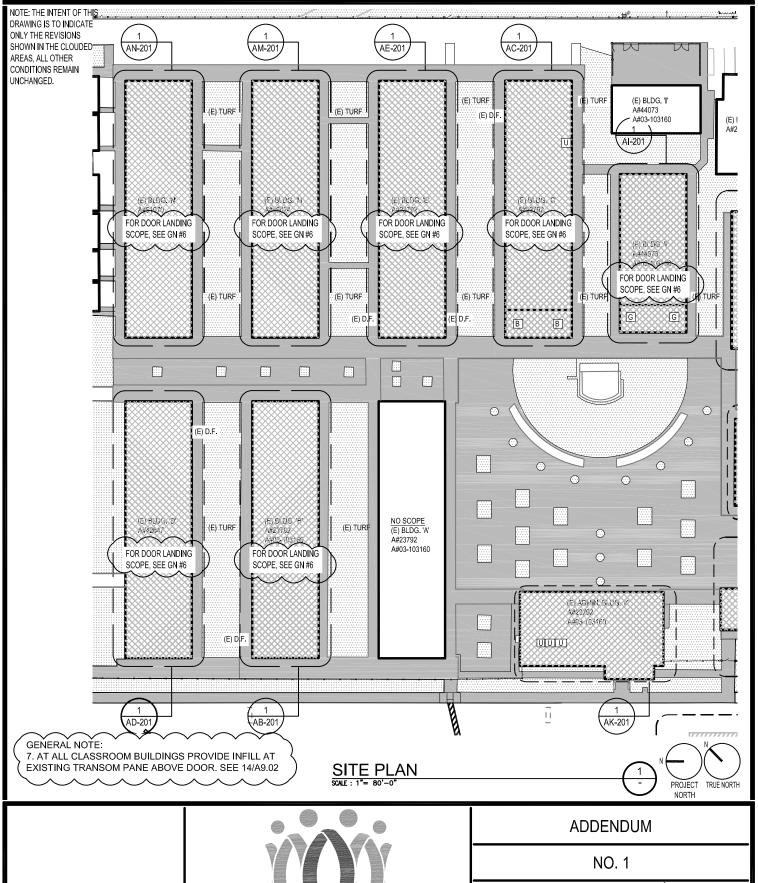
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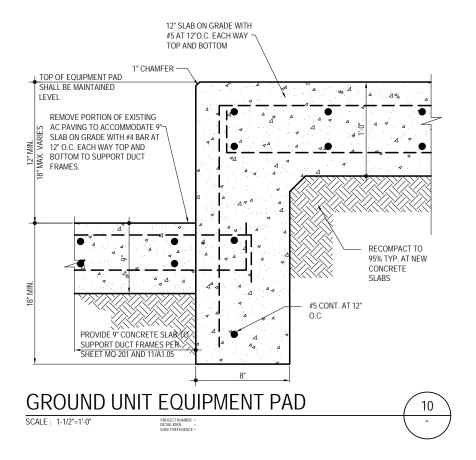
OUHSD 545 CENTRAL AVE OXNARD, CA 93036 12/22/2020

2847.0200

Sheet No.
A1.01









ADDENDUM

NO. 1

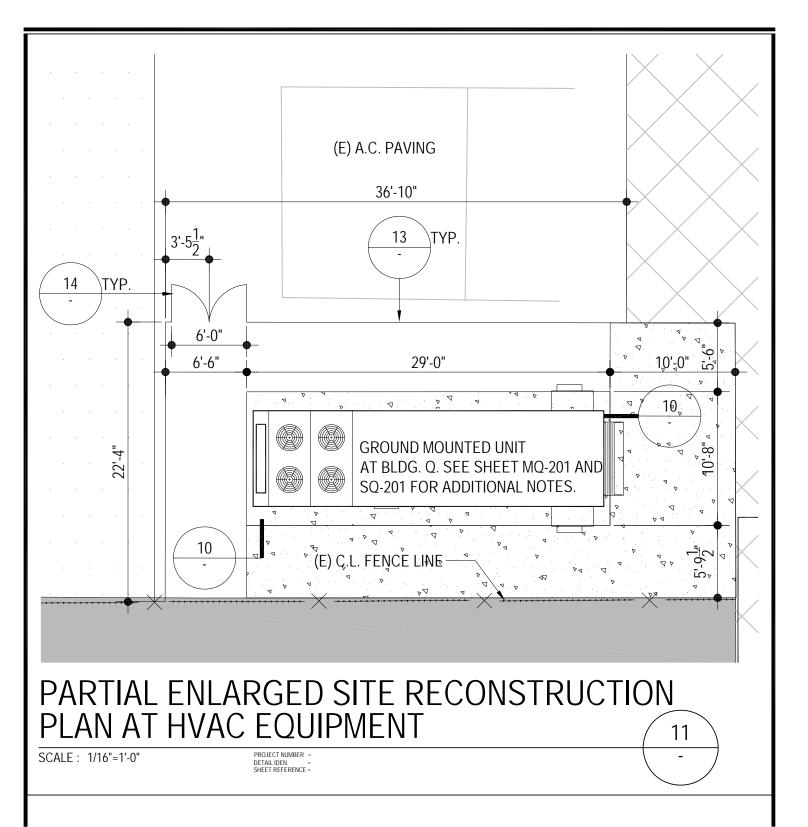
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OUHSD 545 CENTRAL AVE OXNARD, CA 93036 12/22/2020

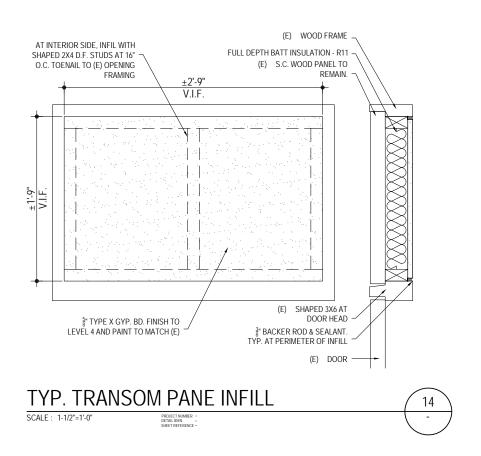
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Sheet No.

A1.05









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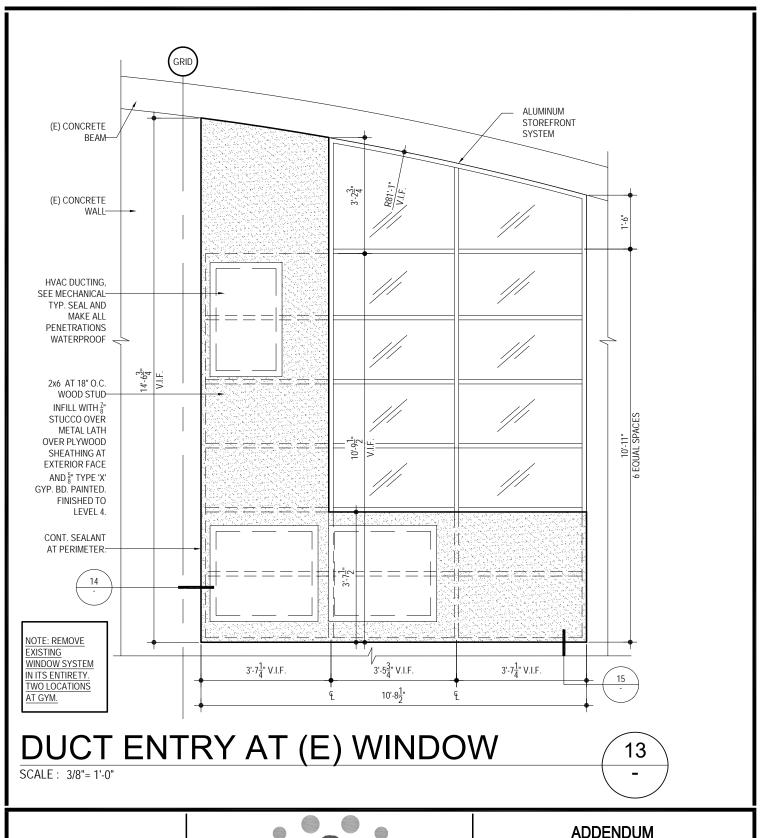
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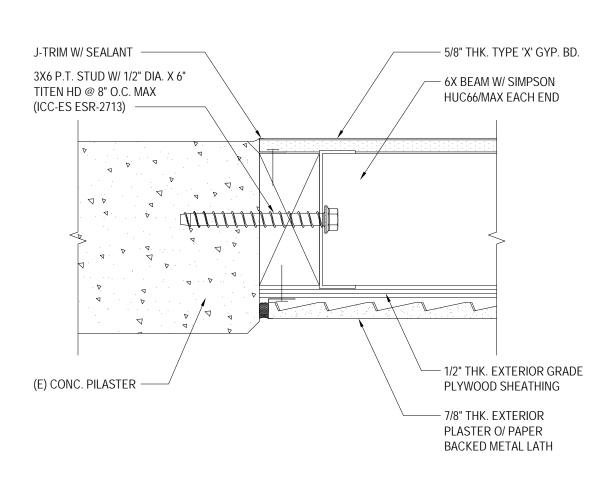
OUHSD 545 CENTRAL AVE OXNARD, CA 93036 Date 12/22/2020 Job No.

2847.0200 Sheet No.

A9.02







INFILL WALL JAMB E) CONC. OPENING

SCALE: 3"= 1'-0"



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ADDENDUM

14

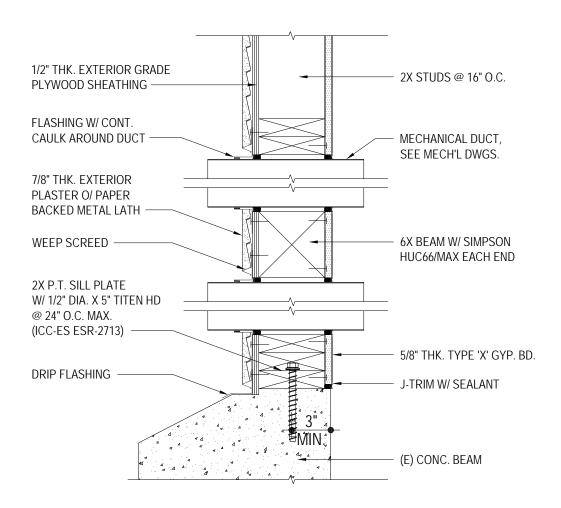
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RMHS ALTERATION PROJECT for OUHSD

545 CENTRAL AVE **OXNARD, CA 93036** 12/22/2020

2847.0200

Sheet No. A9.03



INFILL WALL SILL AT (E) CONC. OPENING

SCALE: 3"= 1'-0"



RMHS ALTERATION PROJECT for

OUHSD 545 CENTRAL AVE OXNARD, CA 93036 12/22/2020 Job No. 2847.0200

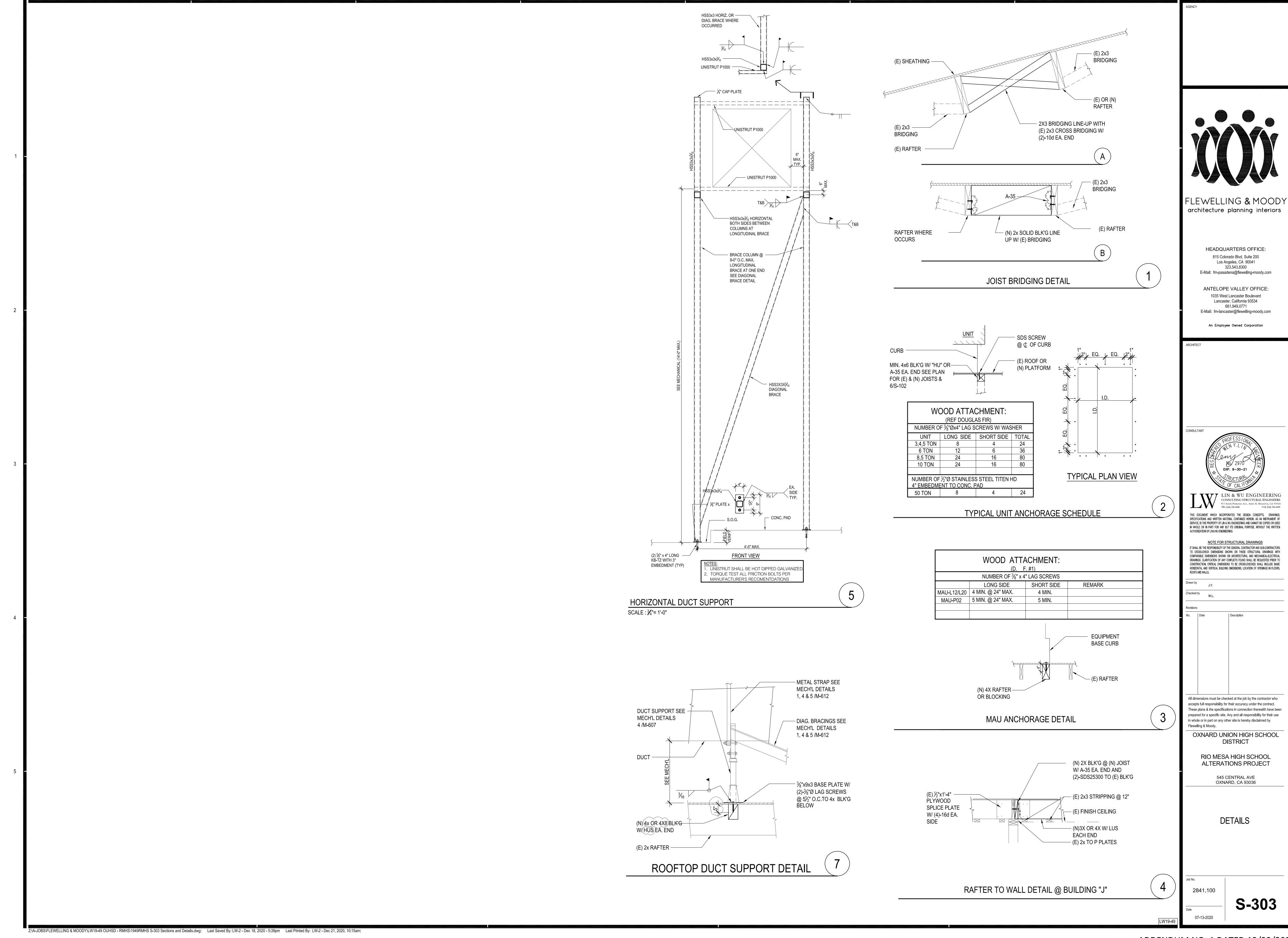
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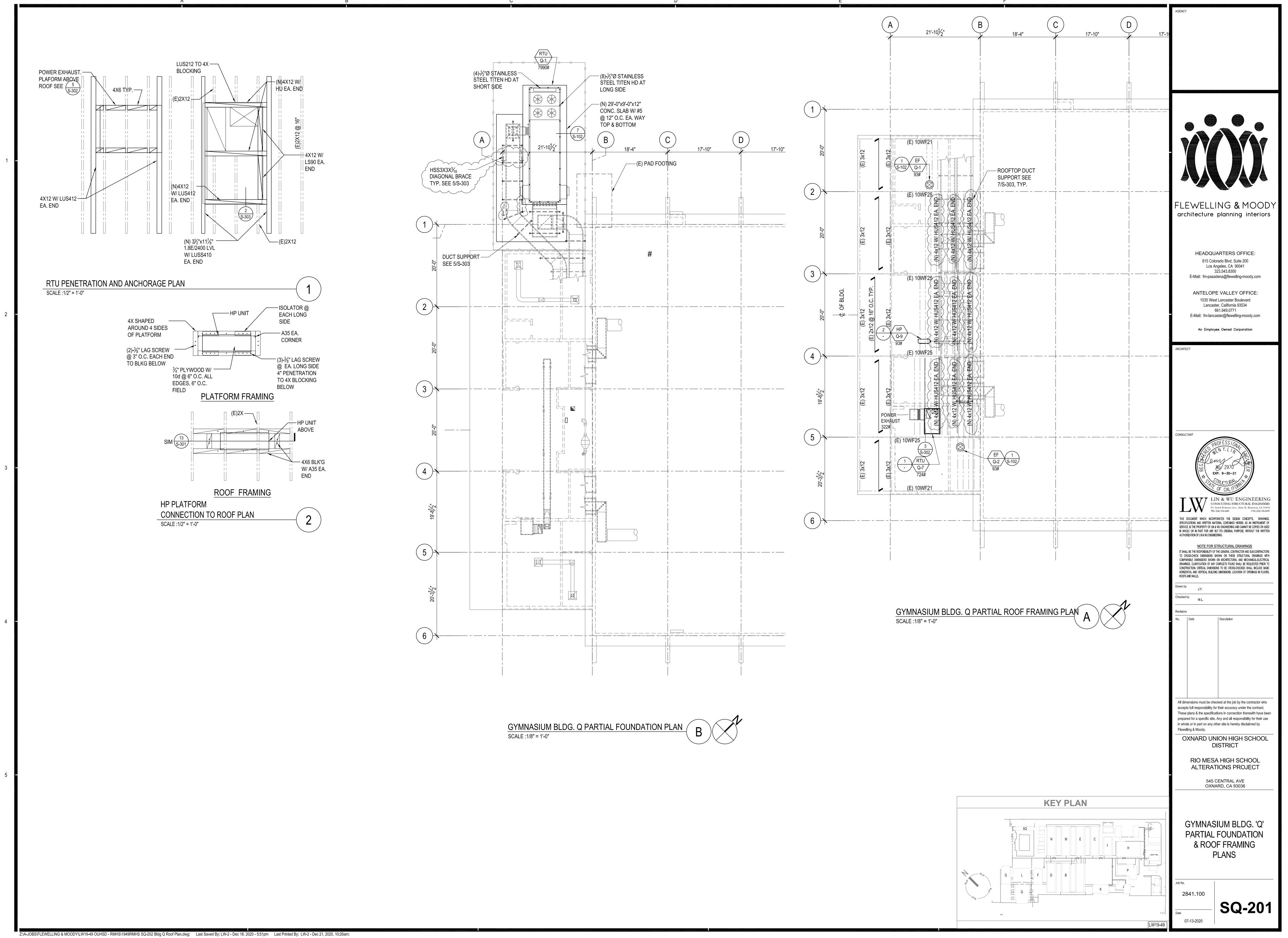
ADDENDUM

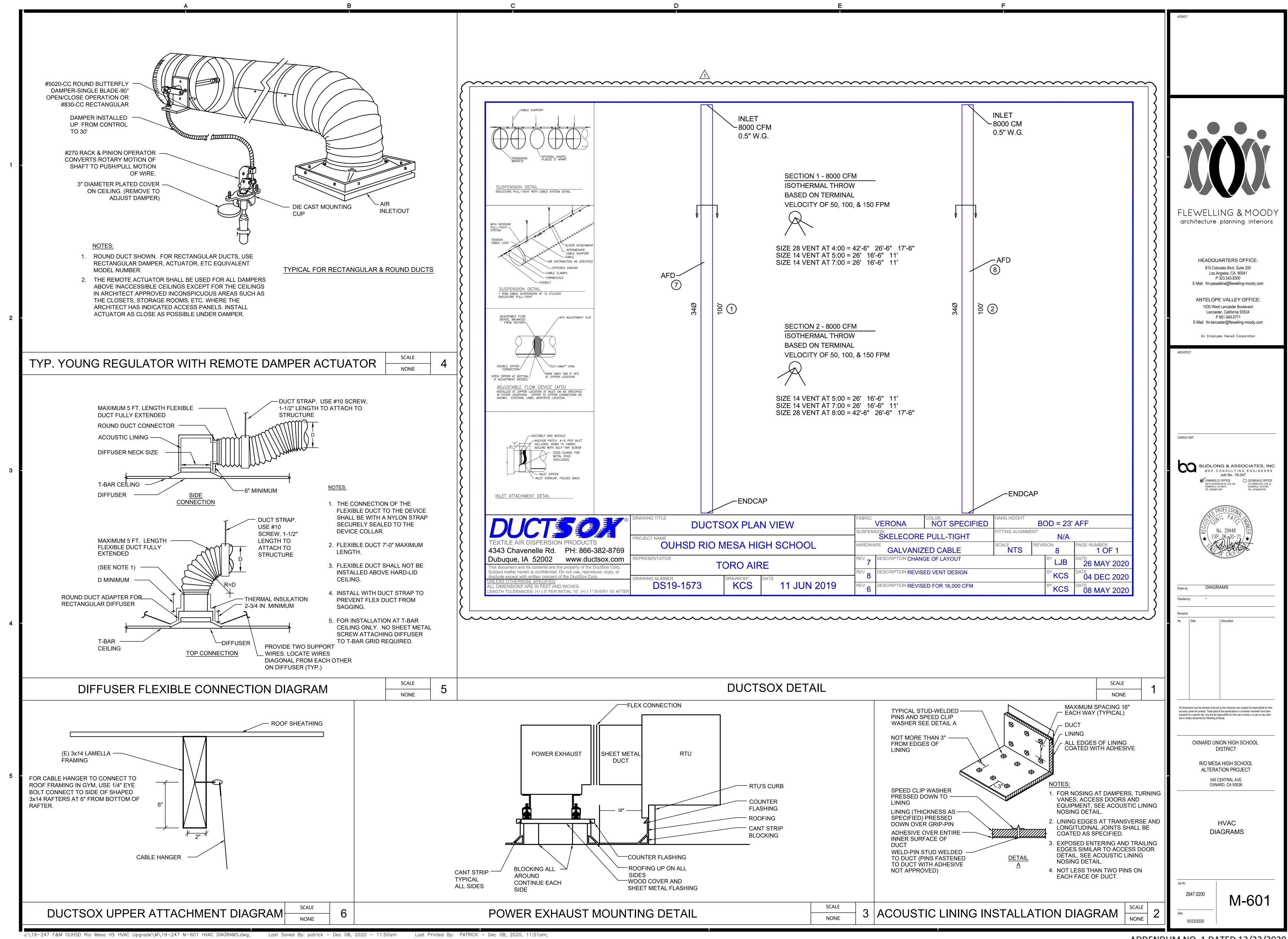
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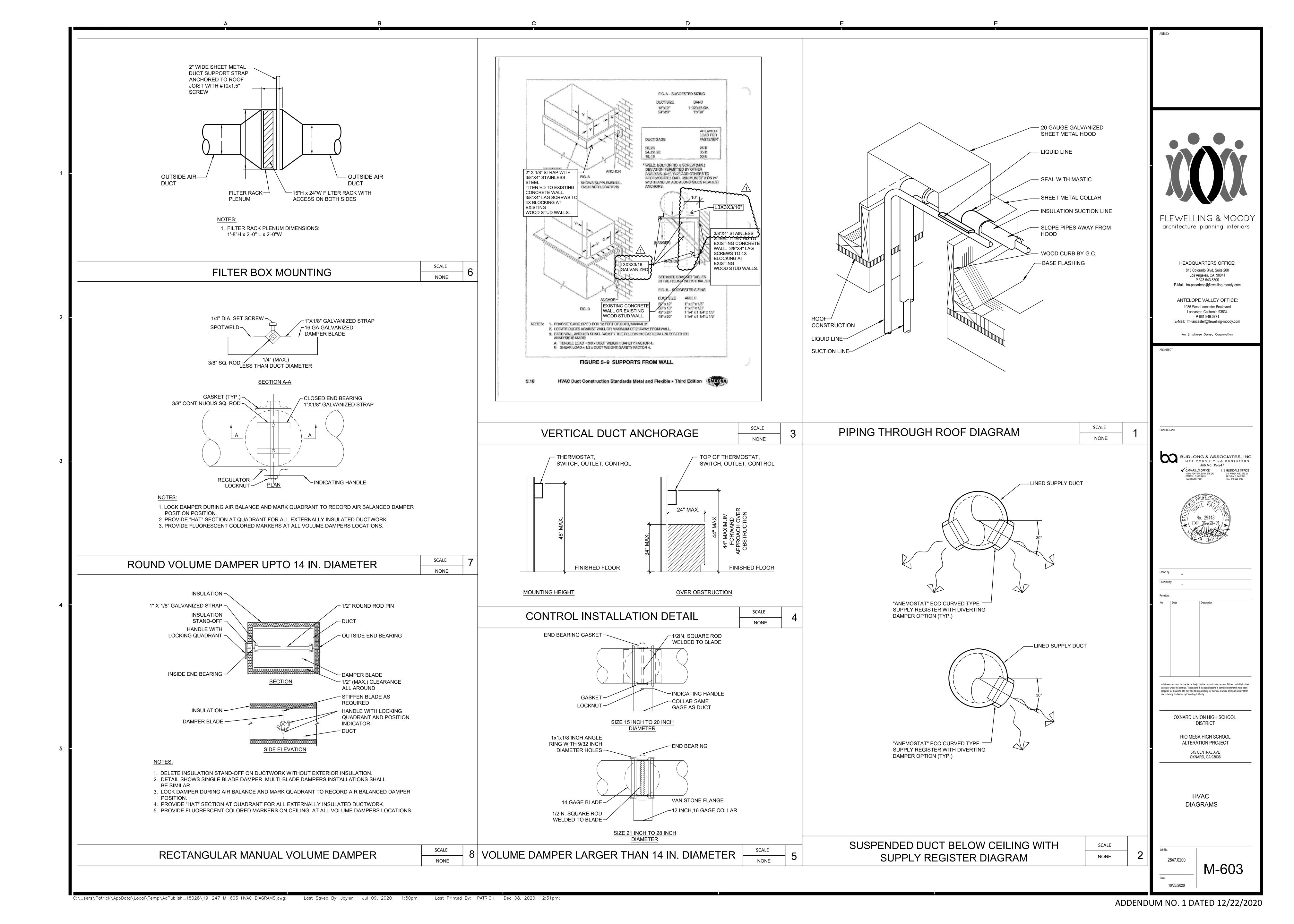
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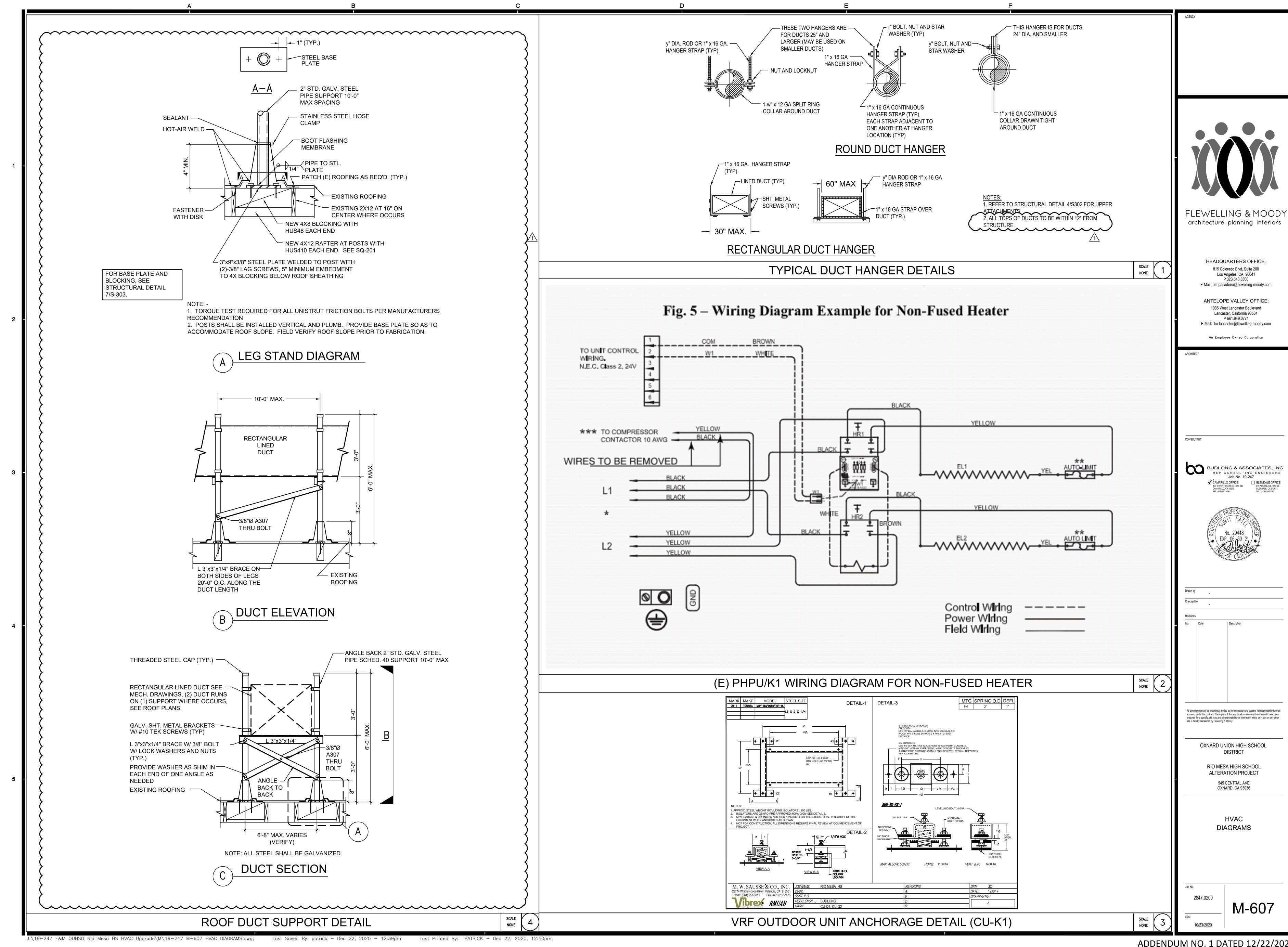
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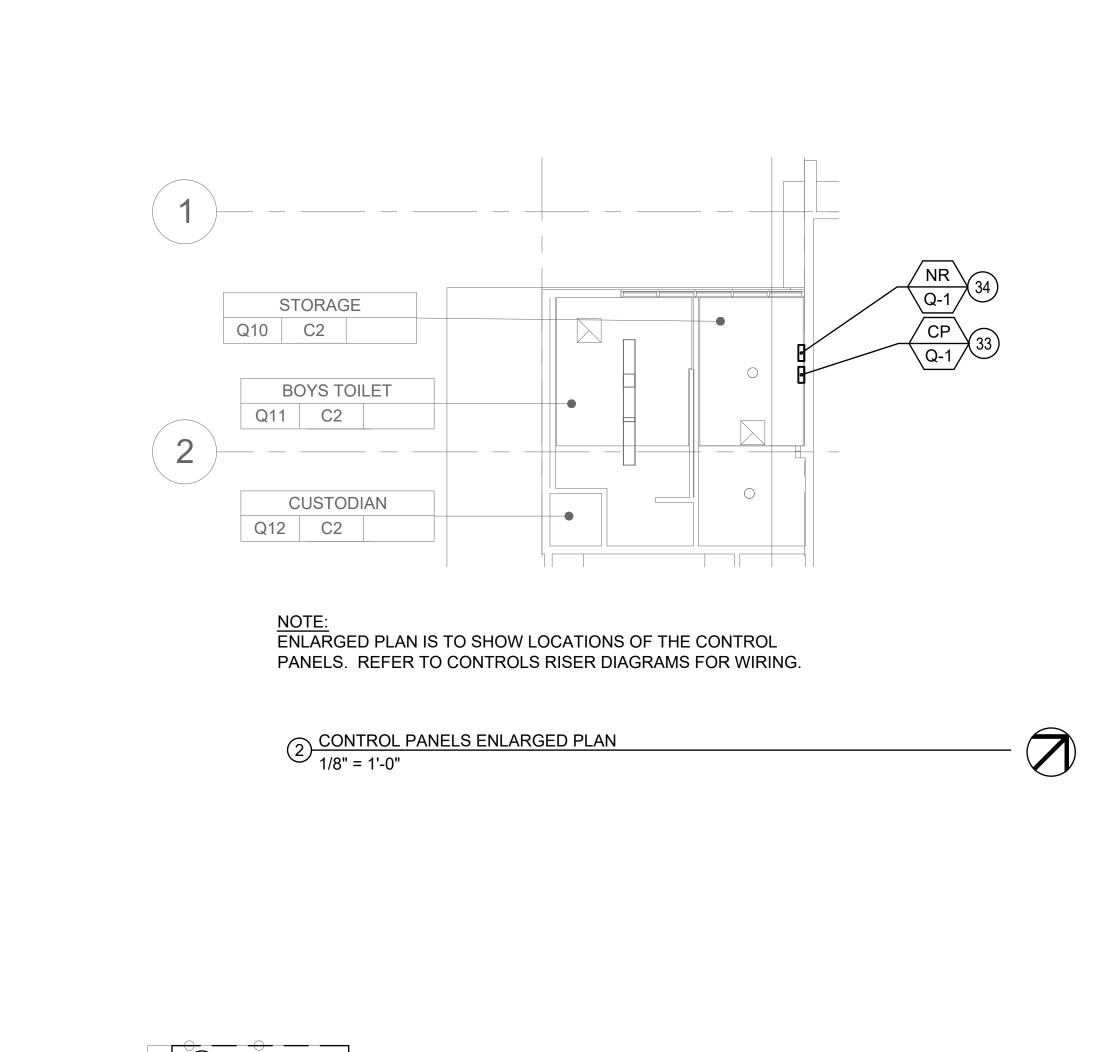


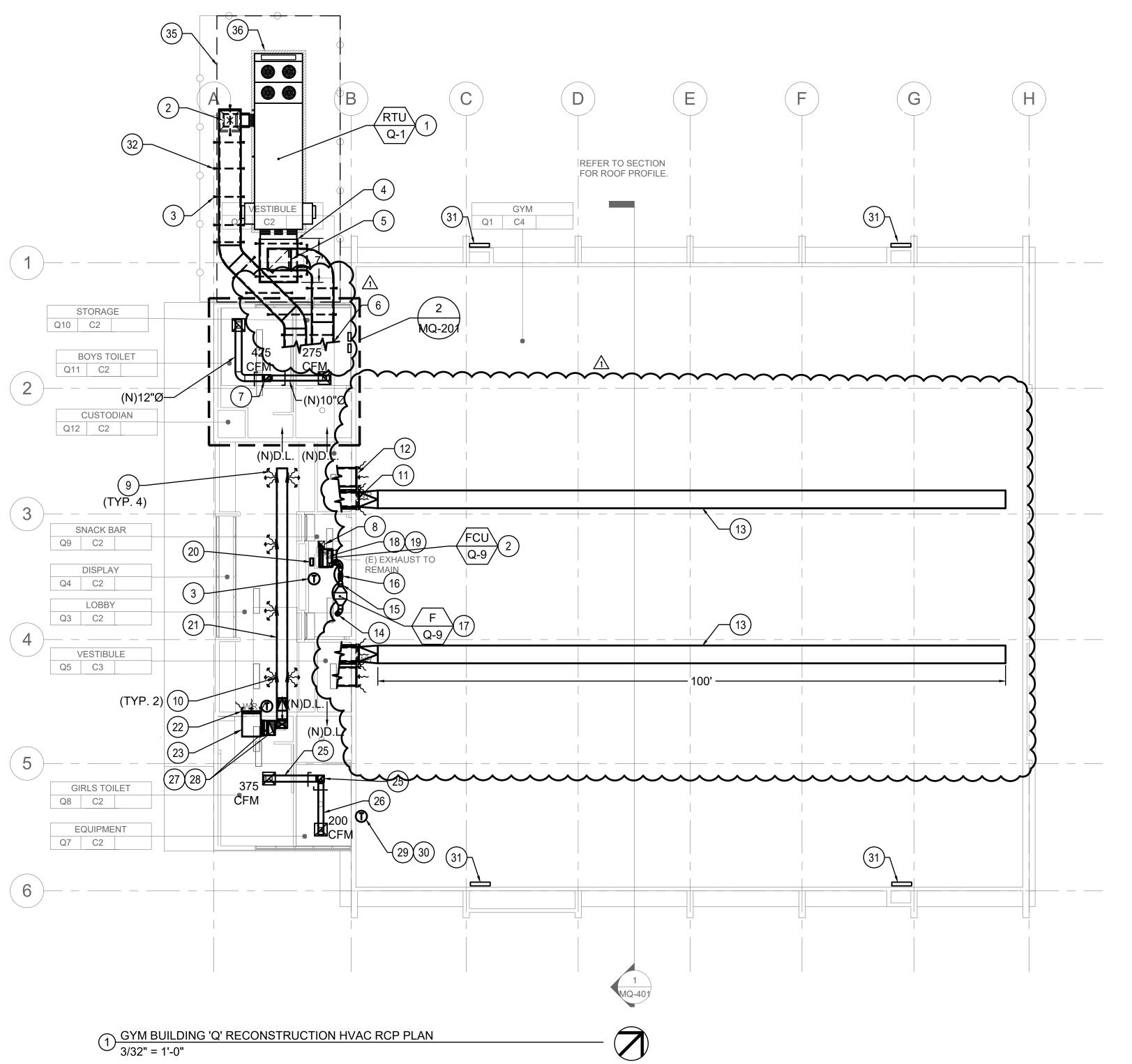


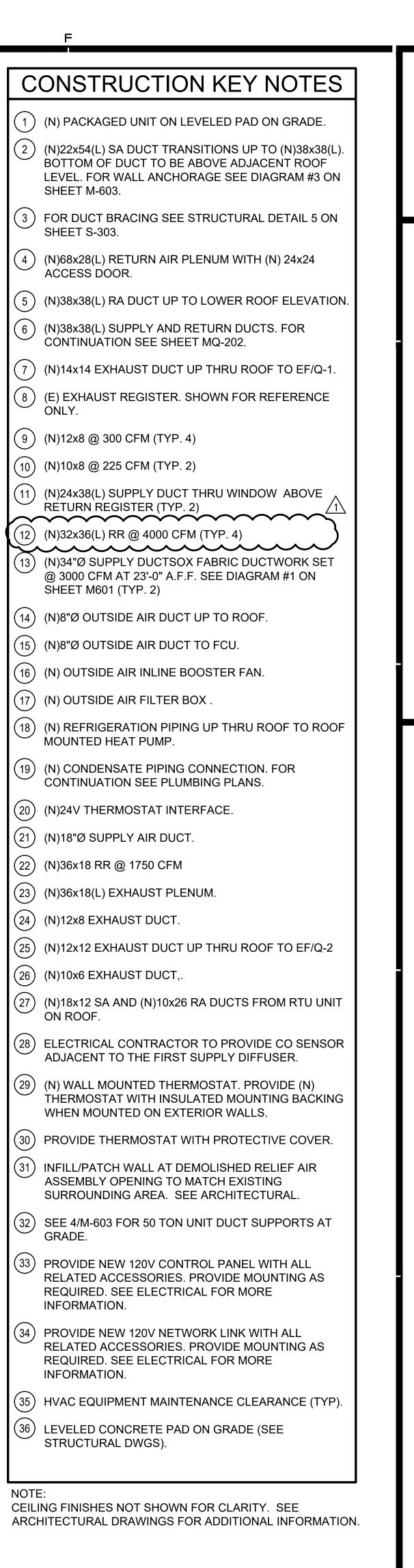


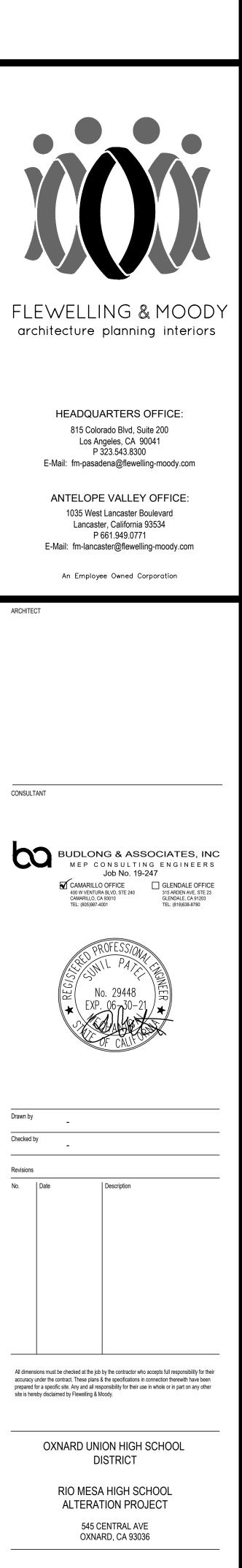








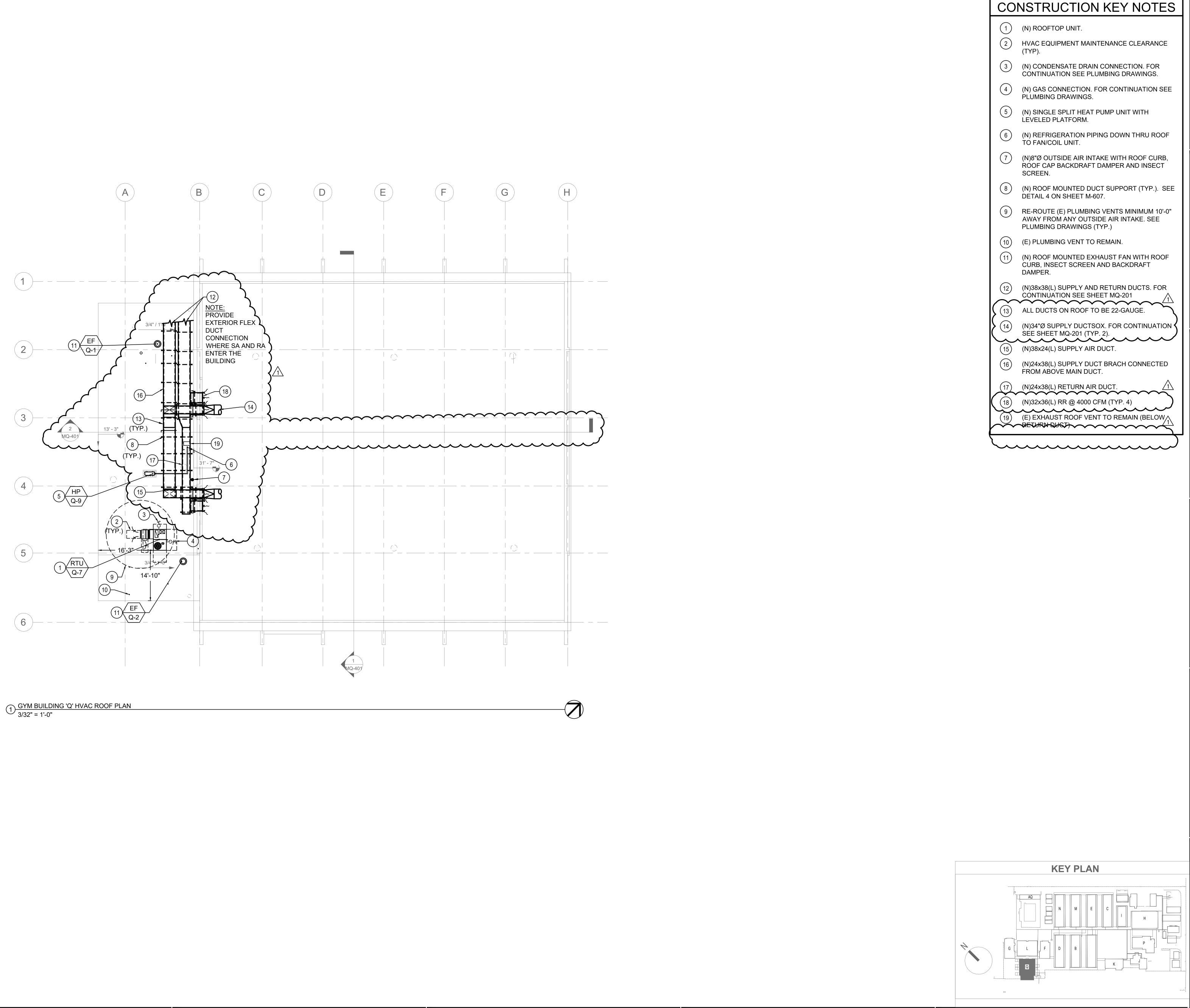




GYM BUILDING 'Q'

RECONSTRUCTION HVAC PLAN

MQ-201



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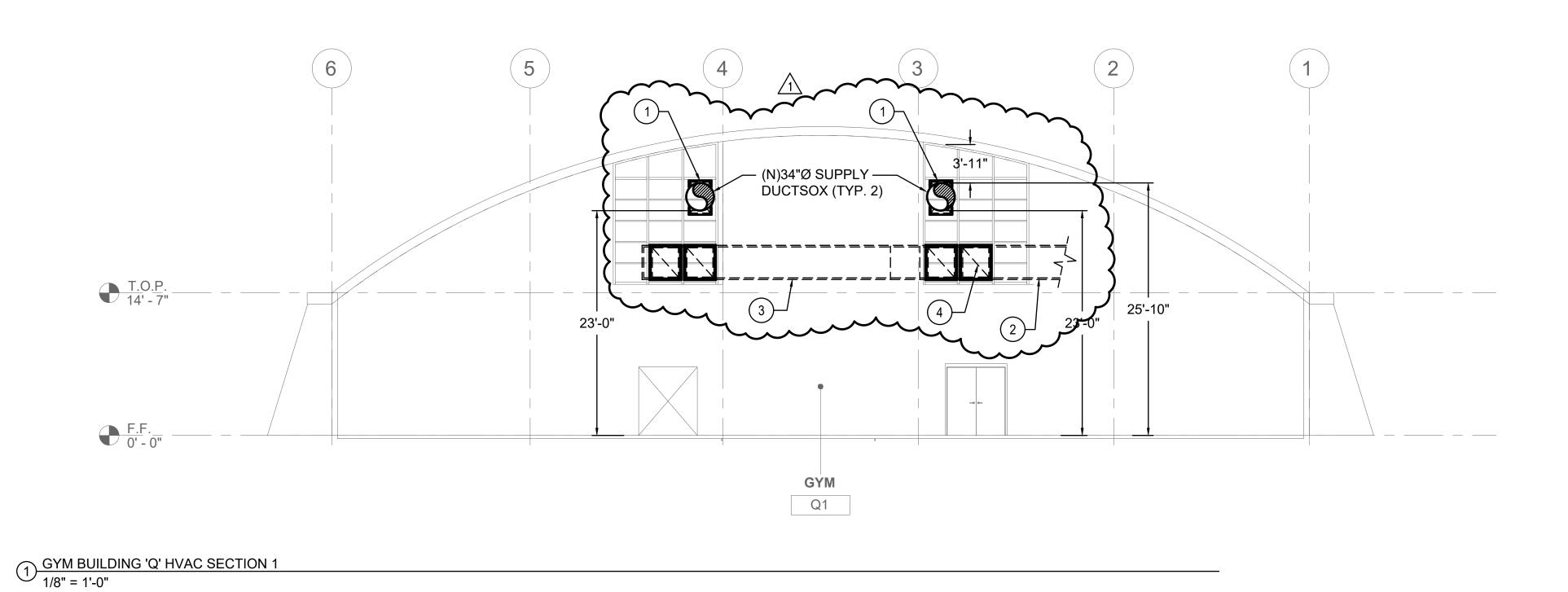
OXNARD UNION HIGH SCHOOL DISTRICT

RIO MESA HIGH SCHOOL ALTERATION PROJECT

545 CENTRAL AVE OXNARD, CA 93036

GYM BUILDING 'Q' HVAC ROOF PLAN

MQ-202



A

B

TOP

ROOF DUCT
SUPPLY

R

CONSTRUCTION KEY NOTES

1 (N)24x38(L) SUPPLY DUCT THRU WINDOW .
(2) (N)38x38(L) RETURN AIR DUCT BEYOND (SEE SHEET MQ-201)

3 (N)38x24(L) RETURN AIR DUCT BEYOND (SEE SHEET MQ-201).

(N)32x36(L) RR @ 4000 CFM (TYP. 4).



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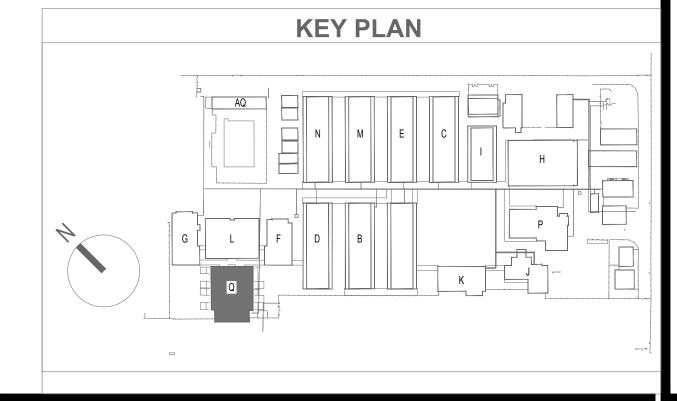
RIO MESA HIGH SCHOOL ALTERATION PROJECT 545 CENTRAL AVE

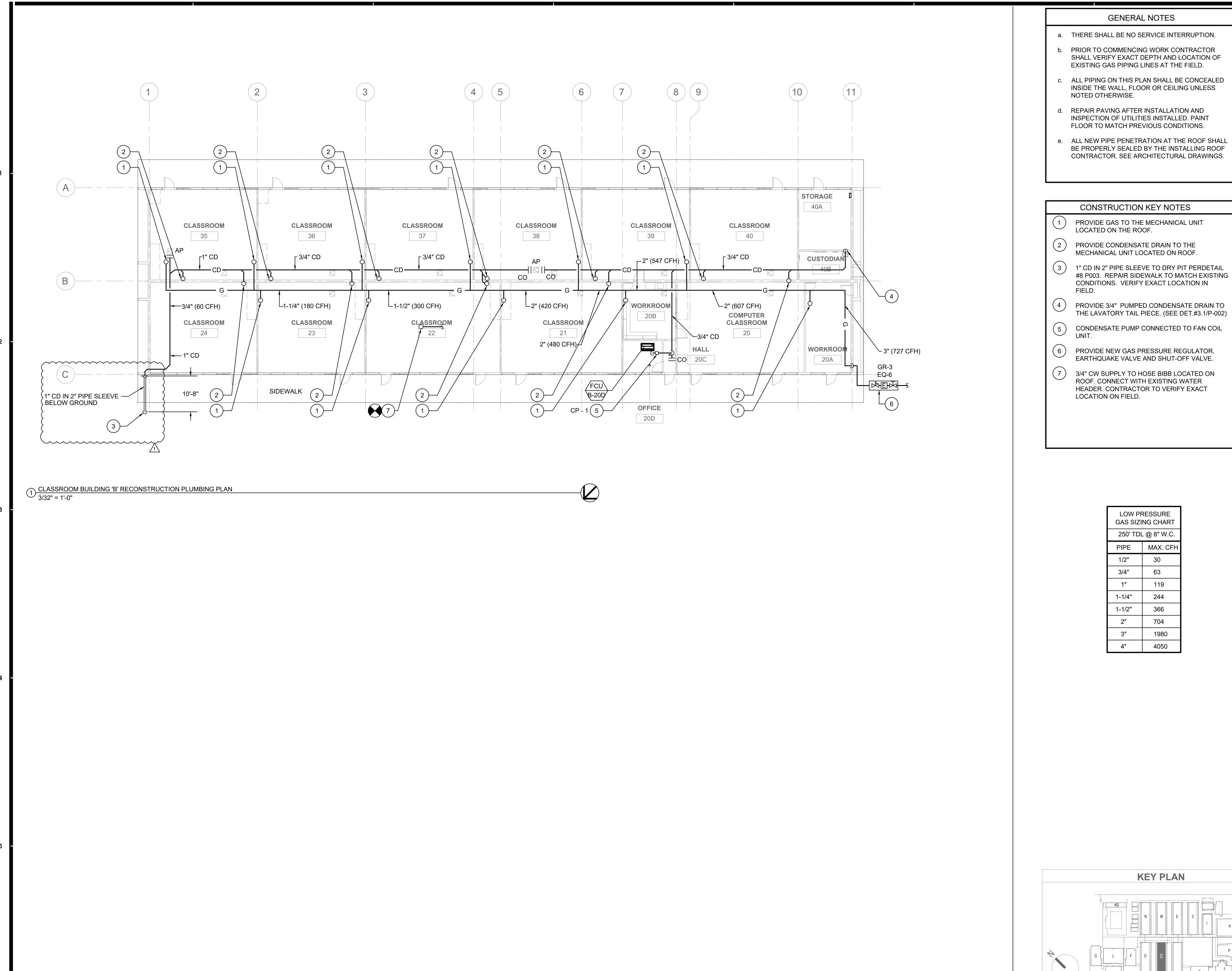
> GYM BUILDING "Q" HVAC SECTIONS

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MQ-401





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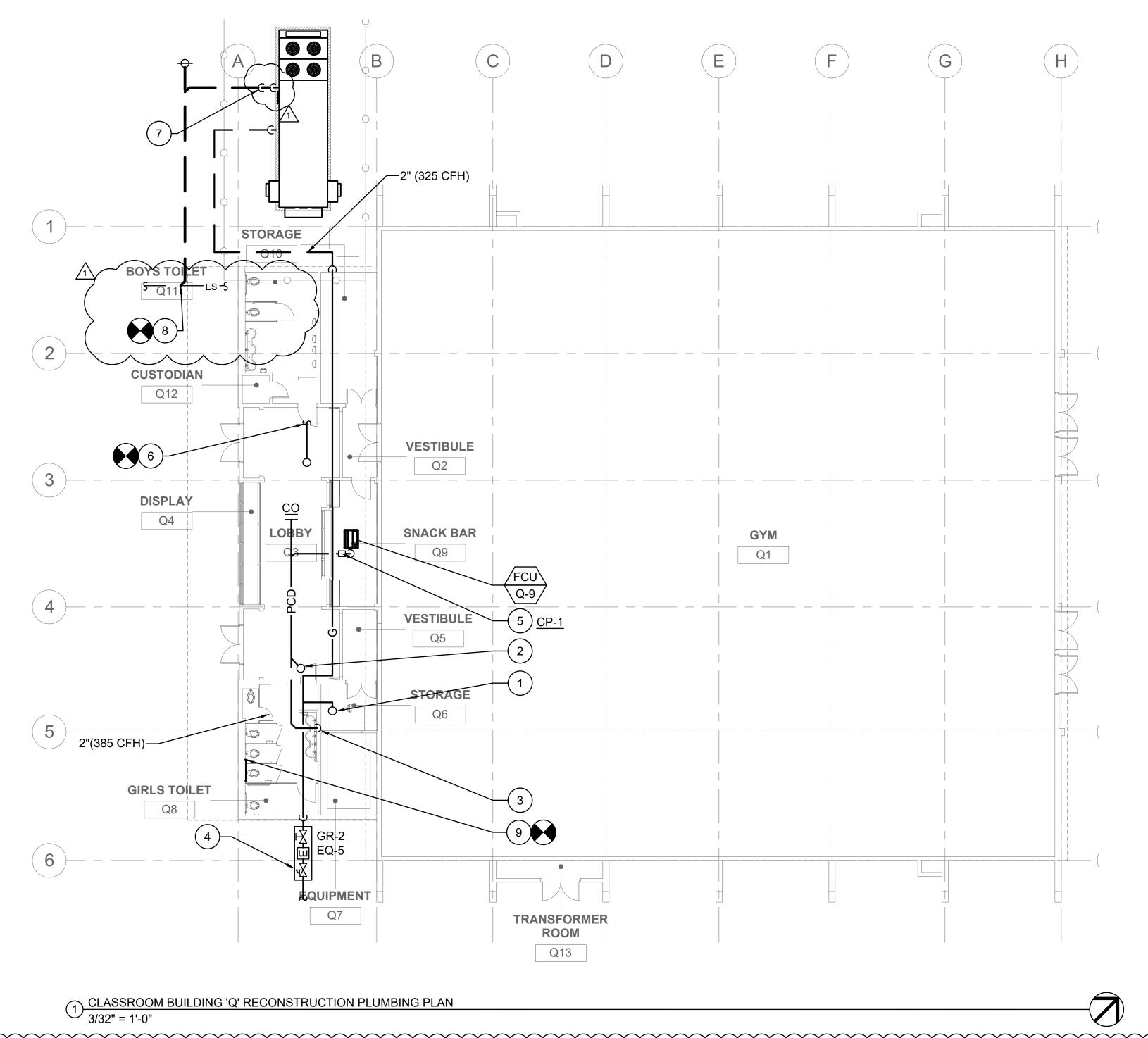
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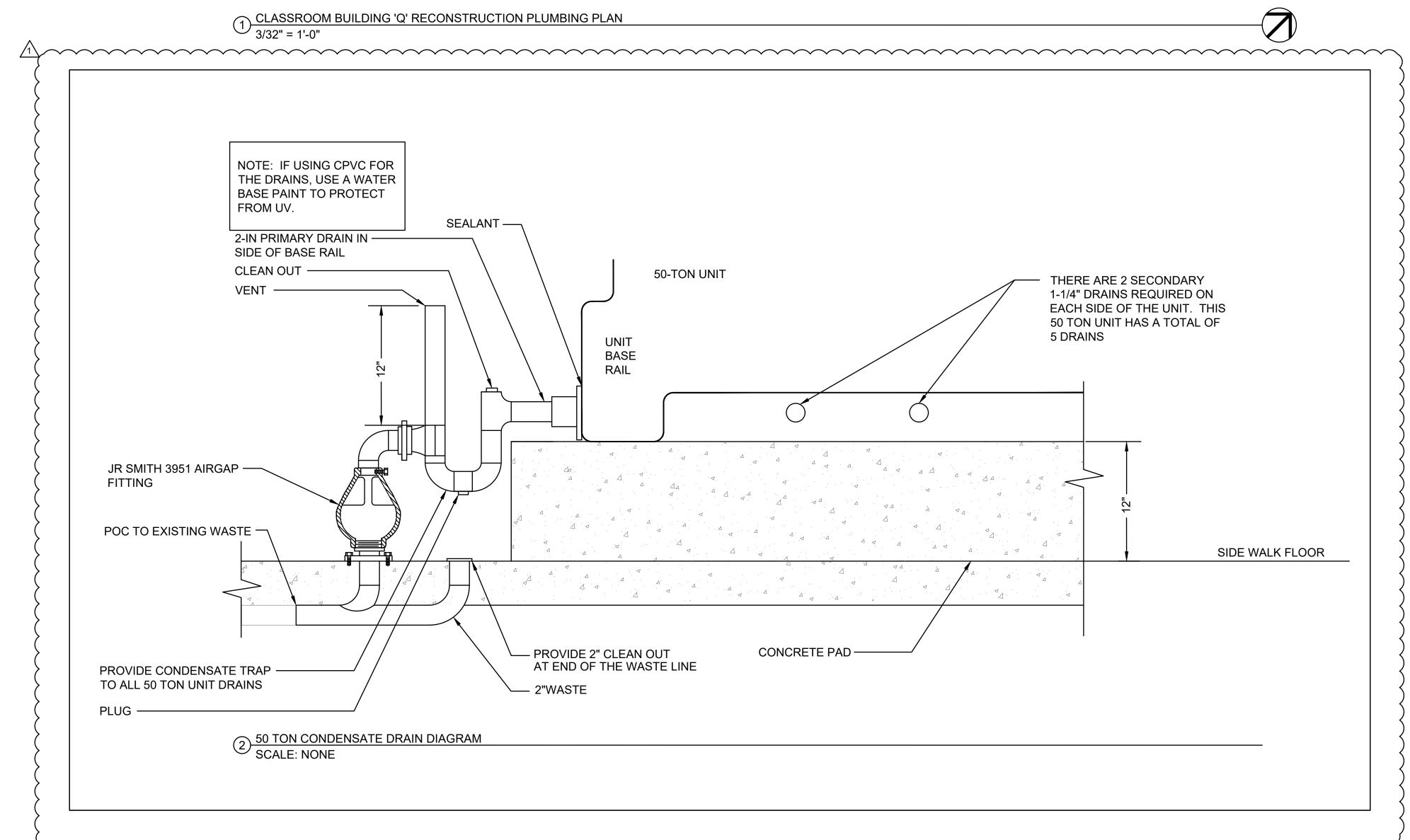
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CLASSROOM BUILDING 'B'

RECONSTRUCTION PLUMBING PLAN

PB-201





ackslash

J:\19—247 F&M OUHSD Rio Mesa HS HVAC Upgrade\P\19—247 42. PQ—201 Classroom Building 'Q' Reconstruction Plumbing Plan.dwg;

GENERAL NOTES

- a. THERE SHALL BE NO SERVICE INTERRUPTION.
- b. PRIOR TO COMMENCING WORK CONTRACTOR SHALL VERIFY EXACT DEPTH AND LOCATION OF EXISTING GAS PIPING LINES AT THE FIELD.
- c. ALL PIPING ON THIS PLAN SHALL BE CONCEALED INSIDE THE WALL, FLOOR OR CEILING UNLESS NOTED OTHERWISE.
- d. REPAIR PAVING AFTER INSTALLATION AND INSPECTION OF UTILITIES INSTALLED. PAINT FLOOR TO MATCH PREVIOUS CONDITIONS.
- e. ALL NEW PIPE PENETRATION AT THE ROOF SHALL BE PROPERLY SEALED BY THE INSTALLING ROOF CONTRACTOR. SEE ARCHITECTURAL DRAWINGS.

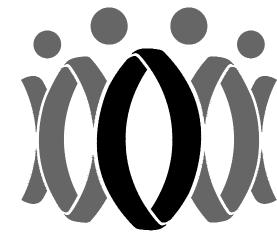
CONSTRUCTION KEY NOTES

- 1 PROVIDE GAS TO THE MECHANICAL UNIT LOCATED ON THE ROOF.
- 2 PROVIDE CONDENSATE DRAIN TO THE MECHANICAL UNIT LOCATED ON ROOF.
- 3 PROVIDE 3/4" PUMPED CONDENSATE DRAIN TO THE LAVATORY TAIL PIECE.
- 4 PROVIDE NEW GAS PRESSURE REGULATOR, EARTHQUAKE VALVE AND SHUT-OFF VALVE.
- 5 CONDENSATE PUMP CONNECTED TO FAN COIL
- 6 3/4" CW SUPPLY TO HOSE BIBB LOCATED ON ROOF. CONNECT WITH EXISTING WATER HEADER. CONTRACTOR TO VERIFY EXACT LOCATION ON FIELD.
- 7 DISCHARGE 2" CD TO AIR GAP FITTING. SEE DETAIL 2 ON THIS SHEET.
- (8) MAKE CONNECTION TO ES LINE. CONTRACTOR TO VERIFY EXACT PIPE SIZE LOCATION IN FIELD.
- 9 NEW VENT THROUGH ROOF LOCATION. VERIFY EXACT LOCATION IN THE FIELD.

_	RESSURE NG CHART
150' TDL	_ @ 8" W.C
PIPE	MAX. CF
1/2"	40
3/4"	83
1"	157
1-1/4"	322
1-1/2"	482
2"	928
3"	2610
4"	5330

KEY PLAN





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GYM BUILDING 'Q' RECONSTRUCTION PLUMBING PLAN

2847.0200

PQ-201

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