

TELEPHONE/DATA

TELEPHONE OUTLET (SINGLE-GANG BOX WITH (1)

DATA OUTLET (DOUBLE-GANG BOX WITH (2) 3/4"

LEPHONE/DATA OUTLET (DOUBLE-GANG BOX WITH

(2) 3/4" CONDUITS TO ABOVE ACCESSIBLE CLG.)

PHONE OUTLET WITH NUMBER OF PHONE JACKS AS

PHONE/DATA OUTLET WITH NUMBER OF PHONE/DATA JACKS AS INDICATED — SEE DETAILS FOR ADD'L INFO.

CONDUITS TO ABOVE ACCESSIBLE CEILING)

INDICATED — SEE DETAILS FOR ADD'L INFO.

DATA OUTLET WITH NUMBER OF PHONE JACKS AS INDICATED — SEE DETAILS FOR ADD'L INFO.

WALL-MOUNTED WIRELESS INTERNET TRANSMITTER

CEILING-MOUNTED WIRELESS INTERNET TRANSMITTER

TELEVISION OUTLET (SINGLE GANG BOX WITH (1)

TEACHER'S DESK CONNECTIONS — RE: DETAILS

CEILING SPEAKER

VOLUME CONTROL

INTERCOM CALL STATION

SOUND SYSTEM AUDIO JACK

INTERCOM MASTER STATION

REMOTE MICROPHONE CONTROL

PUBLIC ADDRESS SYSTEM AMPLIFIER

INTERCOM HANDSET

WALL SPEAKER — HORN TYPE

CEILING SPEAKER — HORN TYPE

CEILING SPEAKER — SUBWOOFER CEILING SPEAKER - SOUND SYSTEM

3/4" CONDUIT TO ABOVE ACCESSIBLE CEILING)

REVERSE TELEVISION OUTLET - CABLE TO HEAD END

3/4" CONDUIT TO ABOVE ACCESSIBLE CEILING) LINE THRU DEVICE INDICATES ABOVE COUNTER

DOOR HOLDER

FIXED CAMERA

 $(D)_{120V}$  SINGLE / MULTI-STATION 120V SMOKE ALARM

INDIVIDUAL ADDRESSABLE MODULE

KITCHEN HOOD REMOTE PULL STATION

AREA OF RESCUE ASSISTANCE STATION

KITCHEN HOOD FIRE SUPPRESSION SYSTEM PANEL

AREA OF RESCUE ASSISTANCE MASTER STATION

ZONE ADDRESSABLE MODULE

PAN/TILT/ZOOM CAMERA

SWIPE CARD READER

KEYPAD / MAG LOCK

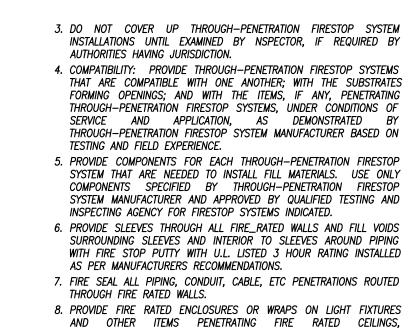
ELECTRIC STRIKE

B BUTTON / MAG LOCK

BREAK GLASS DETECTOR

SECURITY MOTION DETECTOR

PROXIMITY TYPE CARD READER



FLOOR/CEILING/ CEILING/ROOF ASSEMBLIES TO MAINTAIN UL LISTING

AB	<b>BREVIATIONS</b>				
A/E	ARCHITECT / ENGINEER	ELEV	ELEVATION	MLO	MAIN LUGS ONLY
AFF	ABOVE FINISHED FLOOR	ЕМ	EMERGENCY FIXTURE/DEVICE	NFA	NET FREE AREA
AFG	ABOVE FINISHED GRADE	EWT	ENTERING WATER TEMPERATURE	NL	NIGHT LIGHT
AG	ABOVE GRADE	EΧ	EXISTING ITEM	OA	OUTSIDE AIR
AHJ	AUTHORITY HAVING JURISDICTION	FFA	FROM FLOOR ABOVE	ORD	OVERFLOW ROOF DRAIN
AHU	AIR HANDLING UNIT	FFB	FROM FLOOR BELOW	P/C	PLUMBING CONTRACTOR
ARCH	ARCHITECT	FFC0	FINISHED FLOOR CLEAN OUT	PSI	POUNDS PER SQUARE INCH
BFP	BACKFLOW PREVENTER	FGC0	FLUSH GRADE CLEAN OUT	PVC	POLYVINYLCHLORIDE
BG	BELOW GRADE	FL	FLOW LINE	RA	RETURN AIR
BLDG	BUILDING	FLR	FLOOR	RE/REF	REFER / REFERENCE
BMS	BUILDING MANAGEMENT SYSTEM	FP	FIRE PROTECTION	RF	RELIEF FAN
С	CONDUIT	FPM	FEET PER MINUTE	RL	RELOCATED ITEM
CD	CANDELA	<i>FWCO</i>	FLUSH WALL CLEAN OUT	RPZ	REDUCED PRESSURE ZONE
CD	COLD DECK	G	GROUND / GANG	RR	RESTROOM
CLG	COOLING	G/C	GENERAL CONTRACTOR	SA	SUPPLY AIR
CM	COORDINATE MOUNTING HEIGHT	GFCI	GROUND FAULT CIRCUIT INTERUPTER	SPD	SURGE PROTECTIVE DEVICE
CO	CLEAN OUT	GPM	GALLONS PER MINUTE	ST	SHUNT TRIP
CTE	CONNECT TO EXISTING	HD	HOT DECK	TA	TRANSFER AIR
DCVA	DOUBLE CHECK VALVE ASSEMBLY	HTG	HEATING	TFA	TO FLOOR ABOVE
DCW	DOMESTIC COLD WATER	IG	ISOLATED GROUND	TFB	TO FLOOR BELOW
DDC	DIRECT DIGITAL CONTROLS	JB	JUNCTION BOX	ΤP	TAMPERPROOF
DF	DRINKING FOUNTAIN	LED	LIGHT EMITTING DIODE	TYP	TYPICAL
DHW	DOMESTIC HOT WATER	LWT	LEAVING WATER TEMPERATURE	UNO	UNLESS NOTED OTHERWISE
DHWR	DOMESTIC HOT WATER RETURN	M/C	MECHANICAL CONTRACTOR	VRF	VARIABLE REFRIGERANT FLOW
DIA	DIAMETER	MA	MIXED AIR	VTR	VENT THROUGH ROOF
DN	DOWN	MAU	MAKE UP AIR UNIT	WCO	WALL CLEANOUT
E/C	ELECTRICAL CONTRACTOR	мсв	MAIN CIRCUIT BREAKER	WG	WIRE GUARD
ĒΑ	EXHAUST AIR	MECH	MECHANICAL	WP	WEATHERPROOF
EDF	ELECTRIC DRINKING FOUNTAIN	МН	MANHOLE		

CONDENSING

REFRIGERANT LIQUID

& SUCTION PIPING

UNIT

FOR CONSTRUCTION.

## PROVIDED BY THE M/C CONTRACTOR OR SUBS. 3. ALL EQUIPMENT SHALL BE ADEQUATELY AND PROPERLY SUPPORTED AND FASTENED FROM STRUCTURE. 4. ALL FOUIPMENT AND ACCESSORIES INSTALLED IN CONCEALED SPACES REQUIRING ACCESS SHALL BE PROVIDED WITH ACCESS DOORS

- MEETING ANY FIRE REQUIREMENTS OF THE WALL/CEILING THEY ARE 5. EACH AIR HANDLING UNIT OVER 2000CFM SHALL BE PROVIDED WITH A SMOKE DETECTOR TO SHUT DOWN THE UNIT PER IMC 606 AS REQUIRED BY AHJ. COORDINATE WITH OTHER TRADES. 6. START UP AND ADJUST ALL EQUIPMENT AND VERIFY ALL MECHANICAL SYSTEMS IN OPERATE IN ACCORDANCE WITH THEIR INTENDED
  - **GENERAL PLUMBING NOTES**

PURPOSES. SUBMIT BALANCE AND START UP REPORTS TO THE A/E.

REFER TO SPECIFICATIONS FOR ANY ADDITIONAL REQUIREMENTS.

- 1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED VERISION OF THE INTERNATIONAL PLUMBING CODE, LOCAL AND STATE CODES, AND REQUIREMENTS OF THE AHJ. 2. NO PIPING SHALL BE INSTALLED WHERE IT WILL SUBJECT T FREEZING TEMPERATURES. PIPING IN EXTERIOR WALLS SHALL BE INSTALLED ON THE WARM SIDE OF BUILDING INSULATION, INSULATED AND THE CHASE SHALL BE VENTILATED WITH GRILLES ALLOWING INDOOR AMBIENT CONDITIONS TO CIRCULATE THROUGH THE CHASE.
- 3. PROVIDE CLEANOUTS IN THE FOLLOWING LOCATIONS: 3.1. IN ALL HORIZONTAL DRAINS (WITHIN THE BUILDING) NOT MORE THAN 100 FEET APART. 3.2. IN BUILDING SEWERS LOCATED NO MORE THAN 100 FEET APART
- MEASURED FROM THE UPSTREAM ENTRANCE OF THE CLEANOUT. 3.3. EACH CHANGE OF DIRECTION OF THE BUILDING DRAIN OR HORIZONTAL WASTE OR SOIL LINES GREATER THAN 45 DEGREES.WHERE MORE THAN ONE CHANGE OF DIRECTION OCCURS IN A RUN OF PIPING. ONLY ONE CLEANOUT SHALL BE REQUIRED FOR EACH 40 FEET OF DEVELOPED LENGTH OF THE DRAINAGE
- 3.4. AT THE BASE OF EACH WASTE OR SOIL STACK. 3.5. NEAR THE JUNCTION OF THE BUILDING DRAIN AND BUILDING

## **GENERAL ELECTRICAL NOTES** 1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE

LATEST ADOPTED VERSION OF THE NATIONAL ELECTRICAL CODE LOCAL AND STATE CODES, AND REQUIREMENTS OF THE AHJ. 2. COORDINATE LOCATIONS OF RECEPTACLES, SWITCHES, ETC. WITH ARCHITECTURAL CASEWORK AND ELEVATIONS 3. REFER TO MOUNTING HEIGHTS DETAIL FOR MOUNTING HEIGHTS OF ALL DEVICES NOT INDICATED OTHERWISE.

PAINT TO MATCH CONCENTRIC FLUE AND INTAKE TERMINATION

ROOF COLOR

SUPPORT STRAP

PROVIDE PIPING

DX EVAPORATOR

**FURNACE** 

FLEX CONNECTION

**FURNACE AND CONDENSING UNIT DETAIL** 

(TYP.)

\3/4" DRAIN TO

FLOOR DRAIN

PLUG VALVE

3/4" NEOPRENE

NO SCALE

3 1/2" CONCRETE

SUPPORTS

4. PROVIDE ALL EMPTY CONDUITS WITH PULL STRINGS AND BUSHED 5. CONTRACTOR SHALL CONCEAL ALL CONDUIT, FITTINGS, AND DEVICES FROM VIEW WHERE REASONABLY POSSIBLE.

RETURN AIR

BALANCING DAMPER

PROVIDE 2" ANGLED, PLEATED, MERV 13 - FILTERS SIZED FOR 500 FEET PER

MINUTE VELOCITY MAXIMUM

ACCESS DOOR WITH

CAM LATCHES

CONTINUOUS HINGE AND

- SYSTEMS TO CLEAR STRUCTURE, CEILINGS, ETC AND OTHER SYSTEMS IN POTENTIAL CONFLICT WITH ROUTING. 3. COORDINATE WORK WITH OTHER TRADES TO INSTALL SYSTEMS ABOVE CEILING HEIGHTS INDICATED ON ARCHITECTURAL PLANS. 4. CHECK SPACE REQUIREMENTS WITH OTHER TRADES AND
- STRUCTURE/CONSTRUCTION TO INSURE THAT ALL MATERIALS AND EQUIPMENT CAN BE INSTALLED IN THE SPACE ALLOTTED INCLUDING FINISHED SUSPENDED CEILINGS AND OTHER SPACES, CHASES, ETC WITHIN THE BUILDING. MAKE MODIFICATIONS THERETO AS REQUIRED AND APPROVED. TRANSMIT TO OTHER TRADES ALL INFORMATION REQUIRED FOR WORK TO BE PROVIDED UNDER THEIR RESPECTIVE SECTIONS IN AMPLE
- TIME FOR INSTALLATION. 6. WHEREVER WORK INTERCONNECTS WITH WORK OF OTHER TRADES, COORDINATE WITH THOSE TRADES TO INSURE THAT ALL SUBCONTRACTORS HAVE THE INFORMATION NECESSARY SO THAT THEY MAY PROPERLY INSTALL ALL CONNECTIONS AND EQUIPMENT. IDENTIFY ALL ITEMS OF WORK THAT REQUIRE ACCESS SO THAT THE CEILING TRADE WILL KNOW WHERE TO INSTALL ACCESS DOORS AND
- 7. COORDINATE. PROJECT AND SCHEDULE WORK WITH OTHER TRADES IN ACCORDANCE WITH THE CONSTRUCTION SEQUENCE. 8. DRAWINGS SHOW THE GENERAL RUNS OF CONDUITS, PIPING AND DUCTWORK AND APPROXIMATE LOCATION OF OUTLETS. ANY SIGNIFICANT CHANGES IN LOCATION OF ITEMS NECESSARY IN ORDER TO MEET FIELD CONDITIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT/ENGINEER AND RECEIVE HIS APPROVAL BEFORE SUCH ALTERATIONS ARE MADE. ALL SUCH MODIFICATIONS
- SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER. 9. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION AND REPAIR OF SURFACES, AREAS AND PROPERTY THAT MAY BE DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES. 10. ADJUST LOCATION OF PIPING, DUCTWORK, ETC. TO PREVENT INTERFERENCES. BOTH ANTICIPATED AND ENCOUNTERED. DETERMINE
- THE EXACT ROUTE AND LOCATION OF EACH ITEM PRIOR TO FABRICATION. MAKE OFFSETS, TRANSITIONS AND CHANGES I DIRECTION IN SYSTEMS AS REQUIRED TO MAINTAIN ADEQUATE CLEARANCES AND HEADROOM. 11. WHEREVER THE WORK IS OF SUFFICIENT COMPLEXITY, PREPARE ADDITIONAL COORDINATION DRAWINGS AND ORGANIZE ON-SITE MEETINGS WITH ALL RELATED SUBCONTRACOTRS TO COORDINATE TH WORK BETWEEN TRADES . DRAWINGS SHALL CIFARLY SHOW TO WORK AND ITS RELATION TO THE WORK OF OTHER TRADES, AND BE SUBMITTED FOR REVIEW PRIOR TO COMMENCING SHOP FABRICATION
- OR ERECTION IN THE FIELD. 12. COORDINATE WITH LOCAL UTILITY PROVIDERS FOR THEIR REQUIREMENTS FOR SERVICE CONNECTIONS AND PROVIDE ALL NECESSARY PAYMENTS, MATERIALS, LABOR AND TESTING TO ACCOMPLISH THE WORK.

- THE ENGINEER AT THE CONCLUSION OF THE PROJECT ELECTRONICALLY. 3. THESE DRAWINGS ARE DIAGRAMMATIC. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS (NEW AND EXISTING), DIMENSIONS, AND CLEARANCES PRIOR TO THE COMMENCEMENT OF WORK AND SHALL INCLUDE ALL COSTS, EQUIPMENT, MATERIAL, ACCESSORIES, ETC. REQUIRED FOR A FULLY COMPLETE FUNCTIONAL AND CODE COMPLIANT INSTALLATION.
- 4. FINAL LOCATIONS OF ALL DEVICES, LIGHT FIXTURES, EQUIPMENT ETC SHALL BE INDICATED ON THE ARCHITECTURAL DRAWINGS. ALL DIMENSIONAL INFORMATION SHALL BE OBTAINED FROM ARCHITECTURAL PLANS. NO DIMENSIONAL INFORMATION SHALL BE OBTAINED FROM MEP DRAWINGS. 5. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS,
- APPROVALS, LICENSES, ETC. AS NEEDED FOR THE COMPLETE INSTALLATION AND PROJECT. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR ALL FEES AND DATA NEEDED FOR THIS.

## **GEN. RENOVATION NOTES**

- . DISCONNECT AND REMOVE ANY EQUIPMENT, PIPING OR DUCTWORK THAT WAS INSTALLED AS PART OF THE BUILDING SHELL THAT IS NOT NEEDED OR CONFLICTS WITH THIS BUILD OUT. 2. EXISTING UNDERGROUND PIPING LOCATIONS ARE ESTIMATED BASED UPON ANTICIPATED ROUTINGS. FIELD VERIFY EXACT LOCATIONS DURING CONSTRUCTION AND PROVIDE ALL NECESSARY MODIFICATIONS. SAWCUT GRADE FLOOR SLABS TO INSTALL NEW PIPING, MECHANICAL SYSTEMS, ELECTRICAL FLOOR BOXES AND ALL ASSOCIATED CONDUIT, TC. PATCH FLOOR TO MAKE LIKE NEW AFTER INSTALLATION. TAKE CARE TO LOCATE EXISTING CONDUIT, ETC AND AVOID CUTTING EXISTING CONDUITS BY NOT OVERCUTTING SLAB DEPTH.
- 4. SAWCUT AND CORE DRILL OPENINGS AS REQUIRED FOR ABOVE GRADE SLAB PENETRATIONS. XRAY SLABS TO ASCERTAIN STEEL AND EXISTING CONDUIT PENETRATIONS PRIOR TO CUTTING. VERIFY OPENINGS WITH STRUCTURAL ENGINEER PRIOR TO CUTTING. HOMERUN CIRCUITS TO 20 AMP, SINGLE POLE BREAKERS II PANELBOARDS INDICATED. UTILIIZE SPARE BREAKERS MADE
- AVAILABLE BY DEMOLITION, IF NO SPARE BREAKER IS AVAILABLE, PROVIDE NEW BREAKER. 6. EXISTING CIRCUITING MAY BE RE-USED WHERE POSSIBLE. 7. CONCEAL NEW CIRCUITING IN WALLS WHERE POSSIBLE. FOR NEW DEVICES INSTALLED ON EXISTING SOLID WALLS, CONCEAL CIRCUITING IN WIREMOLD. COORDINATE FINISH AND GENERAL ROUTING OF WIREMOLD WITH ARCHITECT TO BE AS CONCEALLED AND/OR ROUTED IN A NEAT AND ORGANIZED CONSISTENT MANNER.



C 9 O S VAL 402 ND 0

DATE

22.175

DESCRIPTION

12/2/22

DRAWN BY:

CHECKED BY:

© PEARSON KENT MCKINLEY RAAF ENGINEERS, LLC

**HVAC SYMBOLS** 

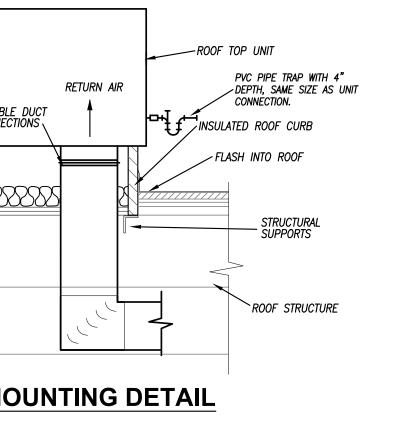
& DETAILS

PEARSON KENT MCKINI EY RAAF ENGINEERS I

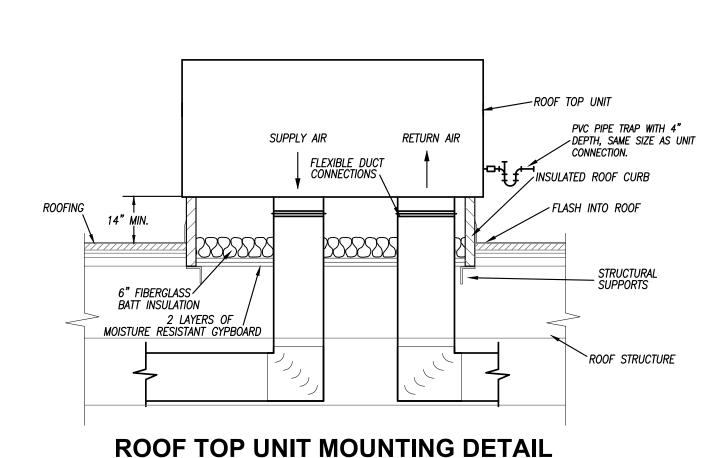
785.273.2447

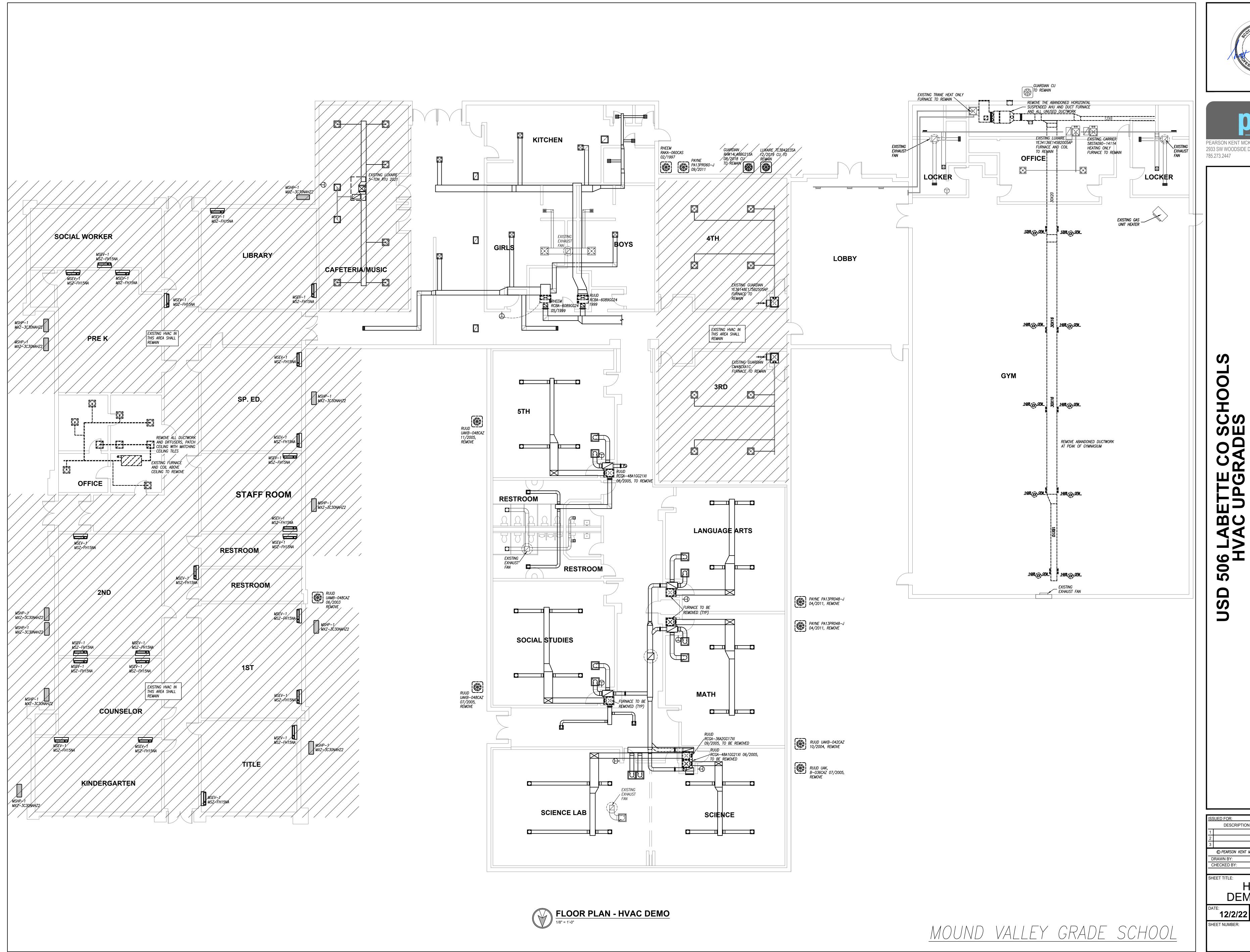
2933 SW WOODSIDE DR., STE 104 TOPEKA, KS 66614

WWW.PKMRENG.COM



**ROOF TOP UNIT MOUNTING DETAIL** 



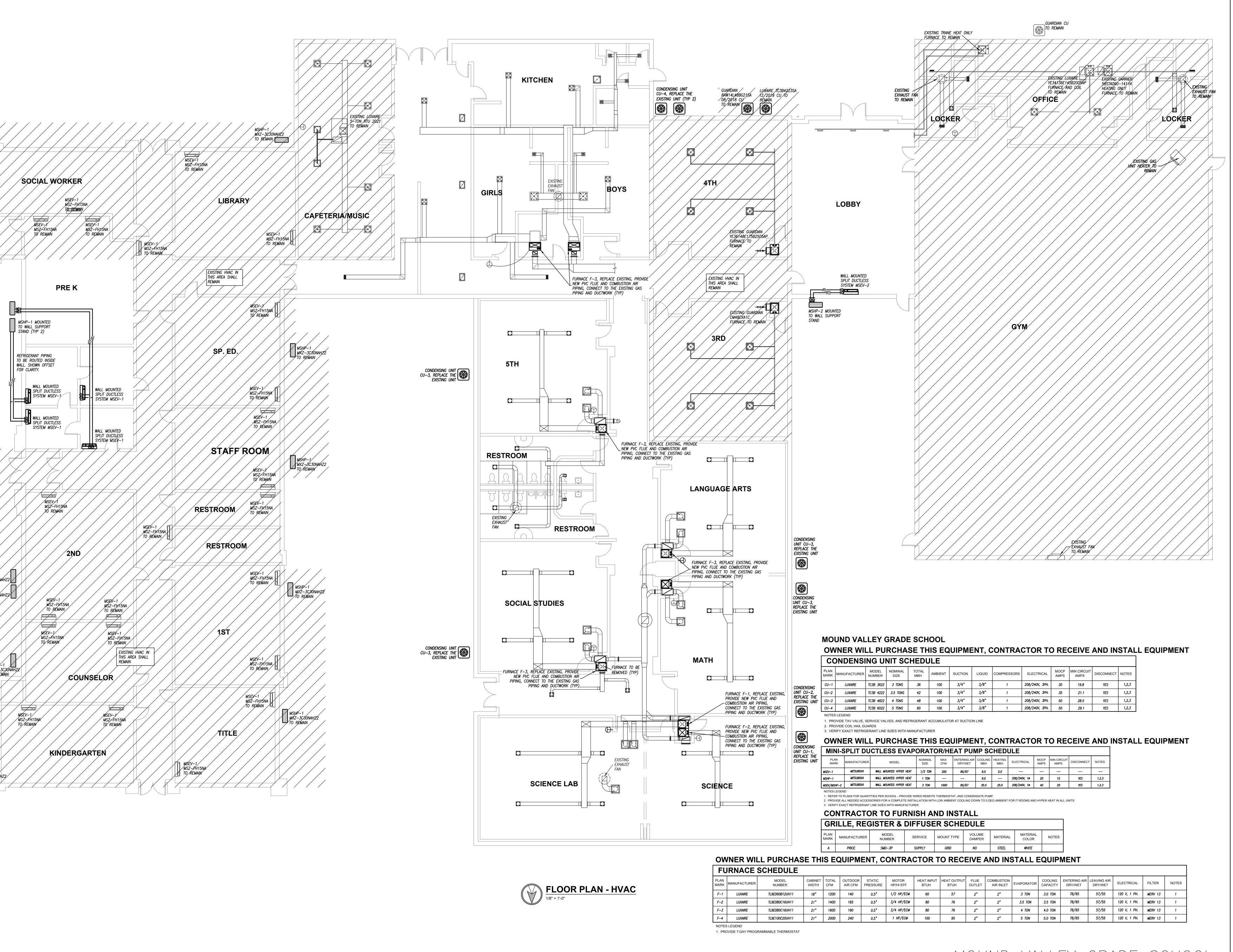


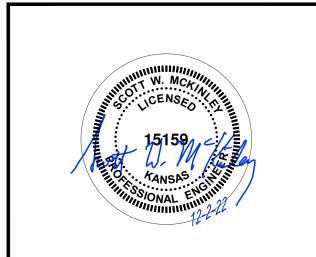




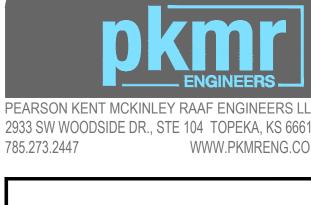
ABE AC U 506 H

HVAC DEMO PLAN









ABE AC L

DATE CHECKED BY: SWM HVAC

**PLAN** 

22.175

12/2/22

MOUND VALLEY GRADE SCHOOL

