PLUMBING LEGEND

SYMBOLS	DESCRIPTION
	SOIL OR WASTE PIPING
	VENT PIPING
	PIPING BURIED OR UNDER FLOOR (SERVICE NOTED)
	DOMESTIC COLD WATER PIPING
	DOMESTIC HOT WATER PIPING
	DOMESTIC HOT WATER CIRCULATION PIPING
G	NATURAL GAS PIPING
	WATER HAMMER ARRESTER
	HOSE BIBB
	WALL HYDRANT
	CLEAN-OUT/PLUG OUTLET
	CLEAN-OUT DECK PLATE OR GRADE PLATE
	"P" TRAP
	BOTTOM PIPE CONNECTION
	TOP PIPE CONNECTION
	ELBOW TURNED DOWN
	ELBOW TURNED UP/CONNECTION TO VERTICAL LINE
	VALVE IN VERTICAL
	GATE OR BALL VALVE
	BALL VALVE
	CHECK VALVE
	OS&Y (OUTSIDE SCREW & YOKE) VALVE
	GAS COCK
	RELIEF VALVE
	UNION
	FLOOR DRAIN
	PUMP
M	METER
	CIRCUIT SETTER ASSEMBLY
BPA	BACKFLOW PREVENTER ASSEMBLY
	REGULATOR

PLUMBING ABBREVIATIONS

AW	ACID WASTE	IE	INVERT ELEVATION
CO	CLEANOUT	LAV	LAVATORY
CODP	CLEANOUT DECK PLATE	OSY	OUTSIDE SCREW & YOKE GATE VALVE
COG	CLEANOUT GRADE		
COWP	CLEANOUT WALL PLATE	PSI	POUNDS PER SQUARE INCH (GAUGE)
CW	COLD WATER		
DN	DOWN (PENETRATES FLOOR SLAB)	SAN	SANITARY
DFU	DRAINAGE FIXTURE UNIT	ST	STORM
EJDIS	EJECTOR DISCHARGE	SF	SQUARE FOOT
EWC	ELECTRIC WATER COOLER	TP	TRAP PRIMER
FPWH	FROST PROOF WALL HYDRANT	TW	TEMPERED WATER
FD	FLOOR DRAIN	UG	UNDERGROUND
FU	FIXTURE UNIT	UP	UP (PENETRATES FLOOR SLAB)
FT	FEET	UR	URINAL
G	GAS	V	VENT
GPM	GALLONS PER MINUTE	VIF	VERIFY IN FIELD
GAL	GALLONS	VTR	VENT THROUGH ROOF
HB	HOSE BIBB	WC	WATER CLOSET
HW	HOT WATER	WFU	WATER FIXTURE UNITS
HWR	HOT WATER RETURN	WHA	WATER HAMMER ARRESTOR
IW	INDIRECT WASTE		

APPLICABLE CODES & STANDARDS:

ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST CODES AND SUBCODES AS ADOPTED BY THE STATE OF NEW JERSEY:

- NEW JERSEY UNIFORM CONSTRUCTION CODE (NJUCC)
- REHABILITATION SUBCODE 5:23-6
- ADMINISTRATIVE CODE: TITLE 6
- 2021 INTERNATIONAL BUILDING CODE - NJ EDITION
- 2023 NATIONAL ELECTRICAL CODE
- 2021 NATIONAL STANDARD PLUMBING CODE
- 2021 INTERNATIONAL MECHANICAL CODE
- 2021 INTERNATIONAL FUEL GAS CODE
- 2019 ASHRAE 90.1 ENERGY STANDARD
- 2022 NFPA STANDARD 13
- REQUIREMENTS OF LOCAL AUTHORITY HAVING JURISDICTION
- ICC A117.1 - 2017 STANDARD FOR BARRIER FREE SUB CODE

PLUMBING GENERAL NOTES

1. DO NOT SCALE FROM THESE DRAWINGS.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE AND ADOPTED REGULATIONS INCLUDING BUT NOT LIMITED TO NATIONAL, CITY, STATE, LOCAL CODES AND ORDINANCES WHICH MAY BE IN EFFECT. ALL PLUMBING MATERIALS, INSTALLATION PROCEDURES AND SYSTEM LAYOUTS SHALL BE APPROVED BY ALL APPLICABLE CODE ENFORCEMENT AUTHORITIES HAVING JURISDICTION. THE PLUMBING CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FOR THIS INSTALLATION.
3. THE DRAWINGS HAVE BEEN PRODUCED ENTIRELY ON FPA CADD SYSTEM. ANY OTHER LETTERING, LINES OR SYMBOLS, OTHER THAN PROFESSIONAL STAMPS AND SIGNATURES, HAVE BEEN MADE WITHOUT THE AUTHORIZATION OF FPA AND ARE INVALID.
4. REPRODUCTION OF ANY PORTION OF THE CONTRACT DRAWINGS FOR RESUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED AND RETURNED.
5. UPON CONTRACT AWARD, CONTRACTOR SHALL CONTACT LOCAL UTILITY COMPANY TO SCHEDULE ANY UTILITY UPGRADES. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL UTILITY UPGRADES, SECURE ALL PERMITS AND INSPECTIONS.
6. ALL CONNECTIONS TO EXISTING BUILDING SERVICES SHALL BE CAREFULLY COORDINATED WITH THE UTILITY CO. AND THE OWNER'S SCHEDULE. SERVICE WORK OF THIS NATURE TO OCCUR DURING UNOCCUPIED BUILDING HOURS. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL EXISTING EQUIPMENT IS OPERATIONAL AFTER ANY SHUTDOWN OCCURS.
7. CHANGES OR SUBSTITUTIONS OF EQUIPMENT WILL NOT BE ALLOWED WITHOUT SPECIFIC WRITTEN APPROVAL FROM THE ARCHITECT OR ENGINEER. ALL COSTS RESULTING FROM THE SELECTION OF OTHER THAN SPECIFIED EQUIPMENT SHALL BE BORNE BY THE CONTRACTOR, INCLUDING, BUT NOT LIMITED TO WORK AFFECTING OTHER CONTRACTORS, THE OWNER, OR RE-DESIGN ISSUES.
8. ALL INDICATED WORK SHALL BE PERFORMED BY THE PLUMBING CONTRACTOR UNLESS OTHERWISE NOTED.
9. DO NOT USE ANY PART OF THE OWNER'S BUILDING AS A SHOP, EXCEPT PARTS DESIGNATED FOR SUCH PURPOSES BY THE OWNER.
10. ALL CONTRACT WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE WRITTEN SPECIFICATIONS FOR THIS PROJECT WHICH ARE CONSIDERED TO BE AN INTEGRAL PART OF THE CONTRACT DOCUMENTS. ALL CONTRACTORS AND SUBCONTRACTORS SHALL MAINTAIN (AT THE JOB SITE) AND REFER TO COPIES OF THE WRITTEN SPECIFICATIONS AS PART OF THESE DRAWINGS. REFER TO THE WRITTEN SPECIFICATIONS IN CONJUNCTION WITH THE PLANS FOR FULL PROJECT SCOPE. IN ALL CASES OF DISCREPANCY BETWEEN PLANS AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN AND WHERE IT IS UNCLEAR, SUCH CASES SHALL BE REFERRED TO THE ENGINEER FOR ADJUDICATION.
11. ANY DISCREPANCIES OR INADEQUACIES WITHIN THESE BID DOCUMENTS OR BETWEEN THESE BID DOCUMENTS AND RELATED HVAC, ELECTRICAL, FIRE PROTECTION, ARCHITECTURAL, INTERIOR DECOR AND FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND/OR ENGINEER PRIOR TO BID SUBMISSION.
12. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING HIS BID FOR THE PROPOSED WORK. HE SHALL BE RESPONSIBLE TO VERIFY FIELD CONDITIONS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO SUBMISSION OF BIDS IN WRITING.
13. THE PLUMBING CONTRACTOR SHALL REVIEW THESE PLANS AND SPECIFICATIONS, AS WELL AS THE RELATED HVAC, ELECTRICAL, ARCHITECTURAL, INTERIOR DECOR AND SITE ENGINEERING DRAWINGS TO BECOME FAMILIAR WITH THE FULL PROJECT SCOPE. DURING THE COURSE OF CONSTRUCTION COORDINATION AND ACTUAL CONSTRUCTION, THE PLUMBING CONTRACTOR SHALL COOPERATE WITH ALL OTHER CONTRACTORS AND TRADES ON THIS PROJECT TO ENSURE A SMOOTH RUNNING AND CAREFULLY COORDINATED INSTALLATION.
14. CONTRACTOR SHALL COORDINATE HIS SCHEDULING WITH THE OWNER AND GENERAL CONTRACTOR TO COMPLY WITH THE OWNERS USAGE OF THE BUILDING.
15. IF ANY UNEXPECTED DISCOVERY OF SUSPECTED HAZARDOUS MATERIALS IS MADE DURING THE COURSE OF WORK, THE CONTRACTOR SHALL REPORT THE DISCOVERY IMMEDIATELY TO THE OWNER. THE CONTRACTOR SHALL STOP ANY WORK THAT MAY DISTURB THE SUSPECTED HAZARDOUS MATERIAL. CONTRACTOR SHALL RESUME WORK AFTER ALL HAZARDOUS MATERIAL HAS BEEN REMEDIATED.
16. CONTRACTOR RESPONSIBLE FOR THE PROPER CARE OF ALL OWNER'S EQUIPMENT AND/OR FURNISHINGS WHICH ARE REQUIRED TO BE TEMPORARILY REMOVED, STORED OR RELOCATED. CONTRACTOR SHALL REPLACE, REPAIR OR REIMBURSE OWNER FOR ALL DAMAGES TO SUCH PROPERTIES AT FULL REPLACEMENT VALUE AND EQUIVALENCY. CONTRACTOR SHALL ADVISE OWNER FOR DISPOSITION OR REMOVED EQUIPMENT AND/OR MATERIALS.
17. CONTRACTOR'S WORK MAY BE REQUIRED OUTSIDE OF DESIGNATED SPACE. ALL SYSTEMS BEING DEMOLISHED AND REMOVED, MODIFIED, AND/OR TERMINATED SHALL BE FIELD VERIFIED TO INSURE NO WORK PERFORMED, INSIDE OR OUTSIDE OF THE DESIGNATED SPACE, SHALL DISRUPT ANY SERVICE OR SYSTEMS OF ANY OTHER AREAS. IF ANY CONDITIONS ARISE THAT ARE NOT IDENTIFIED ON DRAWINGS, IMMEDIATE NOTIFICATION SHALL BE PROVIDED TO THE ENGINEER OR OWNER. NO WORK SHALL PROCEED WITHOUT APPROVALS FROM ENGINEER OR OWNER.
18. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND MAY HAVE TO BE ADAPTED TO COMPLY WITH EXISTING BUILDING CONDITIONS. CONTRACTOR SHALL SUBMIT PLUMBING SHOP DRAWINGS, INDICATING LOCATIONS, AND ROUTING OF DUCTS, PIPING, AND WIRING.
19. PIPING SHOWN ON DRAWINGS SHOW THE GENERAL RUN AND CONNECTIONS AND MAY OR MAY NOT IN ALL PARTS BE SHOWN IN ITS EXACT POSITION. CONTRACTOR SHALL BE RESPONSIBLE FOR ERECTING THE PIPING SUITABLE IN EVERY RESPECT FOR THE WORK. PIPING SHALL BE INSTALLED SO THAT ACCESS, CLEARANCE, HEADROOM AND PITCH ARE MAINTAINED. CONTRACTORS OF THE VARIOUS TRADES SHALL COORDINATE THE INSTALLATION.
20. ALL CONTRACTORS SHALL PROVIDE CUTTING AND PATCHING FOR THEIR RESPECTIVE TRADES.
21. REMOVE AND REINSTALL CEILING SYSTEM AS REQUIRED FOR THE INSTALLATION OF THE PLUMBING WORK AND REPLACE ANY COMPONENTS DAMAGED BY PERSONNEL OR EQUIPMENT DURING PERFORMANCE OF WORK. PATCH AND REPAIR ALL DAMAGE CAUSED BY REMOVAL; MATCH EXISTING ADJACENT SURFACES.
22. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL CONNECTION OF DOMESTIC WATER, GAS, SANITARY AND VENT PIPING INCLUDING VALVES, TRIMS AND EQUIPMENT, TO PLUMBING FIXTURES AT LOCATIONS INDICATED ON THE PLANS.
23. RUN ALL DOMESTIC WATER AND SANITARY WASTE AT LOWEST LEVEL, AND SANITARY VENT AS HIGH AS POSSIBLE THROUGHOUT ENTIRE BUILDING. INSTALL LONG RUNS OF PIPING WITHIN STEEL (JOIST) SPACE AND OTHER PIPING TIGHT TO BOTTOM OF STEEL. COORDINATE AND VERIFY WITH OTHER CONTRACTORS SO AS NOT TO INTERFERE WITH DUCTWORK, LIGHTING SYSTEMS, ETC.
24. ALL EXPOSED HORIZONTAL AND VERTICAL PIPING SHALL BE INSTALLED IN A NEAT ARRANGEMENT IN LOCATIONS WHICH ARE THE MOST INCONSPICUOUS. VERTICAL DROPS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND THEIR FINAL LOCATIONS SHALL BE COORDINATED AND RUN WITHIN CHASES, WALLS, SOFFITS WITH OTHER MECHANICAL/ELECTRICAL FEEDS. PLUMBING CONTRACTOR SHALL REVIEW ARCHITECTURAL DRAWINGS FOR CHASE LOCATIONS TO COORDINATE ALL VERTICAL PIPING ROUTING. ALL SUCH LOCATIONS ARE TO BE REVIEWED WITH ARCHITECT/ENGINEER PRIOR TO INSTALLATION.
25. ALL PLUMBING FIXTURES/APPLIANCES SHALL HAVE THEIR OWN INDEPENDENT SHUT-OFF VALVES, INSTALLED IN AN EASILY ACCESSIBLE AND CONVENIENT LOCATION. EACH DOMESTIC WATER BRANCH LINE SHALL HAVE ITS OWN SHUT-OFF VALVE.
26. CONNECT GAS PIPING TO APPLIANCES USING MANUAL SHUTOFF VALVES AND UNIONS. INSTALL VALVE WITHIN 72 INCHES OF EACH GAS FIRED APPLIANCE AND EQUIPMENT. INSTALL UNION BETWEEN VALVE AND APPLIANCE OR EQUIPMENT.
27. DOMESTIC HOT WATER HEATER TEMPERATURE/PRESSURE RELIEF VALVES SHALL BE PIPED FULL SIZE TO THE NEAREST APPROVED STANDPIPE OR FLOOR DRAIN. THIS REQUIREMENT SHALL BE APPLICABLE TO ALL DOMESTIC WATER HEATERS EXCEPT INSTANTANEOUS WATER HEATERS.
28. THE PLUMBING CONTRACTOR SHALL RUN OUT ALL BUILDING DRAINAGE AND WASTE LINES TO WITHIN 5'-0" OF THE BUILDING FOUNDATION AND MAKE FINAL CONNECTIONS TO SITE SYSTEMS AS INDICATED ON PLANS. COORDINATE WITH SITE ENGINEER.
29. FURNISH AND INSTALL PIPE SLEEVES OR SLEEVE SEAL SYSTEMS AS REQUIRED. SEE SPECIFICATION FOR DETAILS.
30. ALL PIPING SYSTEM PENETRATIONS OF FIRE-RATED WALLS AND FLOORS SHALL BE SEALED WITH UL APPROVED FIRE RESISTANT JOINT SEALER TO MAINTAIN FIRE,SMOKE AND DRAFT INTEGRITY OF STRUCTURE. SPECIFIED TECHNOLOGIES "PENSIL 200" OR EQUAL, TWO-PART FOAMED-IN-PLACE SILICONE SEALANT. FIRE RESISTANT SEALER SHALL BE TESTED IN ACCORDANCE WITH ASTM-814. INSTALL SEALANT, INCLUDING FOAMING, PACKING AND OTHER ACCESSORY MATERIALS TO FILL OPENINGS WHERE FIRE-RATED WALL PENETRATIONS OCCUR. COMPLY WITH INSTALLATION REQUIREMENTS ESTABLISHED BY TESTERS AND INSPECTION AGENCY.
31. ALL PENETRATIONS IN FOUNDATION WALLS AND FLOORS INCLUDING SLAB PENETRATIONS SHALL BE SUBSTANTIALLY SEALED BY UTILIZING A NON-CRACKING POLYURETHANE OR SIMILAR CAULK, OR EQUIVALENT IN ORDER TO CLOSE OFF THE SOIL GAS (RADON) ENTRY ROUTES AS REQUIRED BY CODE.
32. INSULATE ALL NEW HOT WATER AND COLD WATER PIPING SYSTEMS. INSULATION SHALL BE INSTALLED AS A COMPLETE SYSTEM INCLUDING VALVES, FITTINGS, ETC. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
33. INSULATE ROOF DRAIN & OVERFLOW DRAIN BODIES AND ALL INTERIOR STORM PIPING. INSULATION SHALL BE INSTALLED AS A COMPLETE SYSTEM INCLUDING FITTINGS, ETC. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
34. ALL CONTRACTORS REMOVING ANY EQUIPMENT, PIPES, DUCTS, CONDUITS, ETC SHALL PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
35. PROVIDE GAS PIPING SUPPORTS ON ROOF AT ALL DIRECTION CHANGES AND STRAIGHT RUNS WITH SPACING NOT EXCEEDING LENGTHS STATED IN TABLE 415.1 OF IFGC, 2018 FOR MATERIALS AND LISTED PIPE SIZES. SUPPORTS SHALL BE SADDLE BLOCK ROLLER TYPE WITH PIPE SECURED TO STAND WITH CLAMP OR METAL BAND. SUPPORT SHALL NOT BE SECURED TO ROOF SURFACE. BOTTOM OF PIPING SHALL BE MINIMUM 3 1/2" ABOVE ROOF SURFACE.
36. WHERE SLABS ARE CUT FOR UNDERSLAB PIPING OR BEING REPLACED, COORDINATE WITH ARCHITECTURAL DRAWINGS TO PITCH FLOOR TO FLOOR DRAIN.
37. ALL FLOOR DRAIN TRAPS SHALL BE PROVIDED WITH DEEP SEAL TRAPS.
38. THE PLUMBING CONTRACTOR SHALL PROVIDE A COMPLETE SET OF "AS-BUILT" DRAWINGS INDICATING THE PRECISE LOCATION OF ALL SYSTEMS, EQUIPMENT CONCEALED OR EMBEDDED PIPES, PIPE CONNECTIONS AND ACCESS DOORS. THESE PLANS SHALL ALSO INCLUDE ALL CHANGES AND DEVIATIONS FROM BID DOCUMENTS.

PLUMBING EQUIPMENT SCHEDULE

WH-1 WATER HEATER: AO SMITH #BTH-120 (A) CYCLONE MXI MODULATING GAS-FIRED WATER HEATER, ASME, 60 GALLON STORAGE CAPACITY, 154 GPH RECOVERY AT 90°F RISE, 120/1Ø, 120 MBH INPUT. FURNISH & INSTALL CONDENSATE NEUTRALIZING KIT.

WH-2 WATER HEATER: CHRONOMITE "MIGHTY MITE" R-63L/208 MOUNTED BELOW SINK. 60° TEMPERATURE RISE @ 1.5 GPM, 13.1 KW, 208 V SINGLE PHASE. DIMENSIONS: 10 5/8"x4 1/4"x9 7/8"HIGH. PROVIDE WITH OPTIONAL FACTORY SUPPLIED DISCONNECT SWITCH.

ET-1 EXPANSION TANK: AMTROL MODEL ST-12C-DD, 6.4 GALLON TANK, FIXED DIAPHRAGM CONSTRUCTION, ASME, 3/4" CONNECTION AND 1 YEAR WARRANTY.

HWR-1 HOT WATER RETURN PUMP: BELL AND GOSSETT MODEL NBF-22; LEAD-FREE ALL BRONZE CIRCULATING PUMP, 2 GPM @ 13 FT OF HEAD, 92 WATTS AT 115V, 2940 RPM. PROVIDE WITH TIMER AND AQUASTAT WIRED IN SERIES FOR PUMP CONTROL AND WITH 3/4" FLANGES.

MV-1 THERMOSTATIC MIXING VALVE: LEONARD "ECO-MIX" MODEL TM-26-LF-BDT HIGH-LOW, LEAD FREE WITH 3/4" INLETS, 3/4" OUTLET, INLET CHECK STOPS, WALL SUPPORT, OUTLET DIAL THERMOMETER AND BALL VALVE AND ROUGH BRONZE FINISH. ASSE 1017 CERTIFIED. MINIMUM FLOW 1 GPM. VALVE SHALL BE PIPED AND INSTALLED PER MANUFACTURERS REQUIREMENTS.

FPWH FROST PROOF WALL HYDRANT: JR SMITH #5509QT NON-FREEZE WITH INTEGRAL VACUUM BREAKER.

WHA WATER HAMMER ARRESTER: SIOUX CHIEF HYDRA-RESTER OR APPROVED EQUAL. SIZE PER MANUFACTURER'S REQUIREMENTS. SUPPLY WITH JR SMITH 4762-CL 6" X 6" STAINLESS STEEL ACCESS PANEL WITH CYLINDER LOCK.

RPZ-1 CHEMICAL DISPENSER CW MAKE UP BACKFLOW PREVENTION ASSEMBLY: WATTS SERIES LF009 QT, LEAD FREE REDUCED PRESSURE ZONE ASSEMBLY, 3/4" WITH QUARTER TURN BALL VALVES (QT), AND AIR GAP FITTING. PIPE AIR GAP DRAIN TIGHT AGAINST WALL AND TERMINATE 6" ABOVE MOP SINK RIM WITH 45 DEGREE ELBOW. ATTACH TO WALL WITH BRACKETS MAXIMUM 12" ON CENTER.

RPZ-2 MECHANICAL CW MAKE UP BACKFLOW PREVENTION ASSEMBLY: WATTS SERIES LF009 QT, LEAD FREE REDUCED PRESSURE ZONE ASSEMBLY, 1" WITH QUARTER TURN BALL VALVES (QT), AND AIR GAP FITTING. PIPE AIR GAP DRAIN TO FUNNEL FLOOR DRAIN AND SPILL ABOVE GRATE.

HB-1 CHEMICAL DISPENSER HOSE BIB: CHICAGO 998-RCF WITH BUILT IN VACUUM BREAKER, TEE HANDLE, 3/4" HOSE THREAD OUTLET AND ROUGH CHROME FINISH.

DRAIN SCHEDULE

FD-1 FLOOR DRAIN: JR SMITH #2005 SQUARE TOP, FLASHING COLOR, CAST IRON BODY, ADJUSTABLE STRAINER, WITH #2692 QUAD CLOSE TRAP SEAL AND DEEP SEAL P-TRAP. SIZE PER PLAN.

FD-2 FLOOR DRAIN: JR SMITH FIGURE #2110-M 8" DIAMETER TOP, FLASHING COLLAR, CAST IRON BODY, DUCTILE IRON GRATE, WITH 2692 QUAD CLOSE TRAP SEAL AND DEEP SEAL TRAP. SIZE PER PLAN.

FD-3 FUNNEL DRAIN: SAME AS FD-2 EXCEPT WITH FIGURE 9704 8 3/4" X 3 3/4" STAINLESS STEEL OVAL FUNNEL ATTACHED TO GRATE. SIZE PER PLAN.

RD ROOF DRAIN: JR SMITH FIGURE #1015 CAST IRON ROOF DRAIN WITH ADJUSTABLE EXTENSION. PROVIDE WITH UNDERDECK CLAMP, SUMP RECEIVER AND CAST IRON DOME. SIZE PER PLAN.

OD OVERFLOW ROOF DRAIN: OVERFLOW ROOF DRAIN STANDPIPE. SEE DETAIL ON ARCHITECTURAL DRAWINGS. OVERFLOW ROOF DRAIN STANDPIPE SHALL BE SAME DIAMETER AS ROOF DRAIN. SIZE PER PLAN.

CODP CLEAN OUT DECK PLATE: JR SMITH FIGURE 4023, MEDIUM-DUTY CAST IRON CLEANOUT WITH ROUND ADJUSTABLE SCORIATED SECURED NICKEL BRONZE TOP. TAPER THREAD, BRONZE PLUG. SIZE PER PLAN. IN AREAS WITH CARPET, TOP SHALL BE CARPET CLAMPING TYPE

COG CLEAN OUT GRADE: JR SMITH FIGURE 4233L-M, EXTRA HEAVY DUTY CAST IRON CLEANOUT WITH DUCTILE IRON COVER. SIZE PER PLAN.

COWP CLEAN OUT WALL PLATE: JR SMITH FIGURE 4422C, WALL CLEANOUT WITH ACCESS COVER, TAPER THREAD, BRONZE PLUG. SIZE PER PLAN.

PLUMBING FIXTURE ROUGHING SCHEDULE

PLAN NO	FIXTURE	WASTE	TRAP	VENT	CW	HW	NOTES
P-1	WATER CLOSET	4"	-	2"	1 1/2"	-	1
P-1A	WATER CLOSET	4"	-	2"	1 1/2"	-	1, 2
P-1AB	WATER CLOSET	4"	-	2"	1 1/2"	-	1, 2
P-2A	LAVATORY	1 1/2"	1 1/2"	1 1/2"	1/2"	1/2"	1, 3
P-3 P-3A	URINAL	2"	-	2"	3/4"	-	1, 2
P-4	MOP SINK	3"	3"	2"	3/4"	3/4"	-
P-5A	ELECTRIC WATER COOLER	1 1/2"	1 1/2"	1 1/2"	1/2"	1/2"	1
P-6A	CLASSROOM SINK	1 1/2"	1 1/2"	1 1/2"	1/2"	1/2"	1, 4

NOTES

1. INSTALL ACCESSIBLE FIXTURES IN ACCORDANCE WITH STATE AND LOCAL BARRIER FREE REQUIREMENTS. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT TYPE, COUNT, AND MOUNTING HEIGHT OF ACCESIBLE FIXTURES.
2. LOCATE TRIP LEVER ON OPEN SIDE OF COMPARTMENT PER ADA REQUIREMENTS.
3. PROVIDE RIGID PIPE ENCLOSURE BELOW LAVATORIES BY TRUBRO OR EQUAL. SEE FIXTURE SCHEDULE.
4. INSULATE ALL EXPOSED PIPING BELOW HANDICAP SINKS WITH TRUBRO, LAV GUARD INSULATION KIT OR EQUAL.

PLUMBING FIXTURE SCHEDULE

P-1 JUVENILE HEIGHT WATER CLOSET: AMERICAN STANDARD #2599.001 "MADERA YOUTH" 1.28 GPF VITREOUS CHINA ELONGATED FLOOR MOUNTED TOILET, SLOAN MODEL #G2 8111-1.28 BATTERY POWERED SENSOR FLUSH VALVE WITH COURTESY FLUSH OVERRIDE BUTTON AND CHURCH MODEL #9500SSC OPEN FRONT SEAT WITHOUT COVER.

P-1A ACCESSIBLE WATER CLOSET: AMERICAN STANDARD #3461.001 "MADERA" 1.28 GPF VITREOUS CHINA ELONGATED FLOOR MOUNTED TOILET, SLOAN MODEL #G2 8111-1.28 BATTERY POWERED SENSOR FLUSH VALVE WITH COURTESY FLUSH OVERRIDE BUTTON AND CHURCH MODEL #9500SSC OPEN FRONT SEAT WITHOUT COVER. MOUNT FIXTURE TO MEET ADA REQUIREMENTS.

P-1AB ACCESSIBLE JUVENILE WATER CLOSET: SAME AS P-1. MOUNT JUVENILE FIXTURE TO MEET ADA REQUIREMENTS.

P-2A ACCESSIBLE LAVATORY: AMERICAN STANDARD #0356.041 "LUCERNE" WALL-MOUNTED VITREOUS CHINA LAVATORY WITH AMERICAN STANDARD #7755.205 BATTERY POWERED SENSOR 0.5 GPM FAUCET WITH ZURN MODEL ZW1070XL THERMOSTATIC MIXING VALVE, SUPPLIES, STOP VALVES, P-TRAP, GRID DRAIN AND JR SMITH CARRIER FIGURE #0710. PROVIDE WITH TRUBRO 2018ASL1 RIGID ENCLOSURE BENEATH LAVATORY TO CONCEAL PIPING. MOUNT FIXTURE TO MEET ADA REQUIREMENTS. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.

P-2AC ACCESSIBLE CHILDREN'S HEIGHT LAVATORY: SAME AS P-2A EXCEPT HANG AT CHILDREN'S HEIGHT. MOUNT FIXTURE TO MEET ADA REQUIREMENTS.

P-3 URINAL: AMERICAN STANDARD #6590.001 "WASHBROOK" 0.5 GPF VITREOUS CHINA WALL HUNG URINAL, SLOAN MODEL #8186 - 0.5 BATTERY POWERED SENSOR FLUSH VALVE WITH COURTESY FLUSH OVERRIDE BUTTON AND JR SMITH FIXTURE SUPPORT #0616. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.

P-3A ACCESSIBLE URINAL: SAME AS ABOVE EXCEPT MOUNT FIXTURE TO MEET ADA REQUIREMENTS. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.

P-4 MOP SINK: FIAT #TSB100 24" X 24" TERRAZZO WITH STAINLESS STEEL RIM GUARDS, #830-AA FAUCET AND #832-AA HOSE AND HOSE BRACKET, MSG STAINLESS STEEL WALL GUARDS,SUPPLIES, STOP VALVES, P-TRAP AND GRID DRAIN.

P-5A ACCESSIBLE WATER COOLER: ELKAY #LZS8WSLP ENHANCED BOTTLE FILLING STATION WITH SINGLE COOLER, WATER FILTER AND WALL CARRIER, 8 GPH OF 50°F DRINKING WATER @ 90°F ROOM TEMP, 370W, 120/1Ø. PROVIDE SUPPLY, STOP VALVE AND P-TRAP. MOUNT FIXTURE TO MEET ADA REQUIREMENTS.

P-6AC ACCESSIBLE CHILDREN'S HEIGHT CLASSROOM SINK WITH BUBBLER: SINK, FAUCET, BUBBLER, STRAINER & TAILPIECE SHALL BE PROVIDED BY THE EQUIPMENT CONTRACTOR. SEE ARCHITECTURAL DRAWINGS. PLUMBING CONTRACTOR SHALL PROVIDE ZURN MODEL ZW1070XL THERMOSTATIC MIXING VALVE. TRAP, SUPPLIES, STOPS, ETC AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM AND MAKE ALL FINAL CONNECTIONS. PLUMBING CONTRACTOR SHALL PROVIDE ELKAY MODEL # EWF3000 UNDER COUNTER MOUNT LEAD FILTRATION SYSTEM WITH FILTER CARTRIDGE, MOUNTING BRACKET, FILTER HEAD, TUBING, QUICK DISCONNECTS AND MOUNTING SCREWS FOR THE COLD WATER SUPPLY TO THE BUBBLER. ATTACH FILTER TO WALL BELOW COUNTER. INSTALL IN A NEAT MANNER, HIGH AS POSSIBLE, WITH CLEARANCE FOR FILTER REMOVAL. PROVIDE DEDICATED SHUT OFF VALVE FOR FILTER. MOUNT FILTER OUTSIDE OF REQUIRED SINK ADA ACCESSIBILITY CLEARANCE SPACE. COORDINATE ALL WORK WITH THE EQUIPMENT CONTRACTOR. INSULATE TRAP, SUPPLIES AND ANGLE STOPS WITH INSULATION KIT BY TRUBRO LAV GUARD.

P-7AC ACCESSIBLE CHILDREN'S HEIGHT CLASSROOM SINK: SAME AS P-6AC EXCEPT WITHOUT BUBBLER AND FILTER. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT. MOUNT FIXTURE TO MEET ADA REQUIREMENTS.

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NJDCA Electronic Release Stamp

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Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
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Checked By
AHG

Drawn By
JD

Scale
AS NOTED

Drawing Name
PLUMBING SYMBOLS, NOTES, & SCHEDULES

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION
1	11.21.25	NJ DCA RESPONSES

Drawing Number
P1.0

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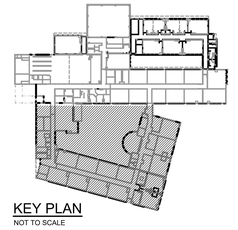
DEMOLITION KEY NOTES

1. DISCONNECT AND REMOVE EXISTING CLASSROOM SINK AND FIXTURE SUPPORTS AND ASSOCIATED HOT AND COLD WATER PIPING. REMOVE EXISTING SANITARY AND VENT BACK TO BEHIND WALL AND PREPARE FOR EXTENSION TO NEW CLASSROOM SINK FIXTURE. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
2. DISCONNECT AND REMOVE EXISTING FLOOR MOUNTED WATER CLOSET AND FLUSH VALVE AND ASSOCIATED COLD WATER PIPING. REMOVE SANITARY PIPING BACK TO BELOW FLOOR AND MAKE READY FOR EXTENSION AND CONNECTION TO NEW WATER CLOSET. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
3. DISCONNECT AND REMOVE EXISTING LAVATORY SINK AND FIXTURE SUPPORTS AND ASSOCIATED HOT AND COLD WATER PIPING. REMOVE EXISTING SANITARY PIPING BACK TO CONNECTION TO MAIN BELOW FLOOR AND CAP WATER TIGHT. FIELD VERIFY EXACT LOCATION OF EXISTING PIPING. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
4. REMOVE EXISTING PIPE ENCLOSURE AND HOT AND COLD WATER PIPING. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
5. REMOVE EXISTING 4" STORM PIPING BACK TO POINT ABOVE CEILING AS INDICATED AND DOWN TO BELOW FLOOR AND PREPARE FOR CONNECTION TO NEW PIPING. REFER TO NEW WORK PLAN FOR ADDITIONAL INFORMATION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
6. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPING.
7. CAREFULLY REMOVE EXISTING CEILING TILE FOR THIS WORK AND REINSTALL IN ORIGINAL CONDITION. CONTRACTOR RESPONSIBLE TO REPLACE ANY CEILING TILE DAMAGED AS PART OF THIS WORK WITH NEW TILE TO MATCH EXISTING.
8. REMOVE EXISTING PIPE ENCLOSURE AND EXISTING 1" HW AND 1 1/4" CW PIPING DOWN TO BELOW FINISHED FLOOR AND PREPARE FOR CONNECTION TO NEW PIPING. REFER TO NEW WORK PLAN FOR ADDITIONAL INFORMATION.
9. REMOVE EXISTING COLD WATER AND HOT WATER PIPING ALONG WALL IN ITS ENTIRETY INCLUDING ALL PIPE HANGERS. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
10. EXISTING FROST PROOF WALL HYDRANT TO REMAIN. DISCONNECT EXISTING COLD WATER PIPING CONNECTION INSIDE AND MAKE READY FOR CONNECTION TO NEW PIPING. REFER TO NEW WORK PLAN FOR ADDITIONAL INFORMATION.

DEMOLITION PLAN - BLOCK C

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



KEY PLAN

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Pennsylvania: 140 Whitaker Avenue, Mont Clare - Pennsylvania 19453
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Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	AHG
Drawn By	JD
Scale	AS NOTED

Drawing Name

PLUMBING DEMOLITON PLAN - BLOCK C

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

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Drawing Number

P2.0

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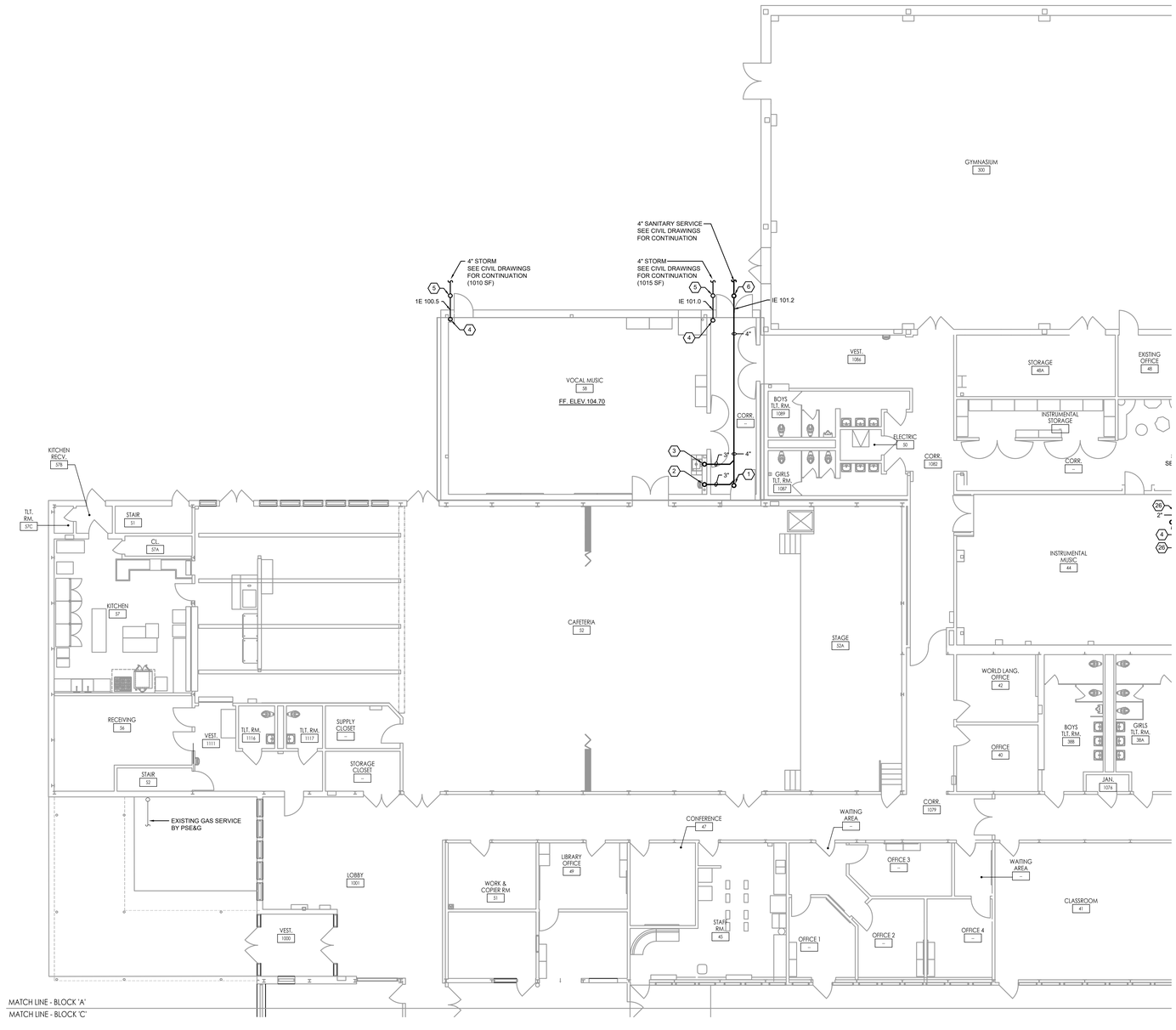
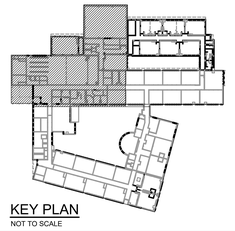
KEY NOTES

1. 4" SANITARY UP TO CODP.
2. 2" SANITARY UP TO P-5A.
3. 2" SANITARY UP TO P-7AC.
4. 4" STORM UP
5. 4" STORM UP TO COG
6. 4" SANITARY UP TO COG.



UNDERSLAB PIPING PLAN - BLOCK A

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



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Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	AHG
Drawn By	JD
Scale	AS NOTED

Drawing Name

PLUMBING UNDERSLAB PIPING PLAN - BLOCK A

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number

P3.0

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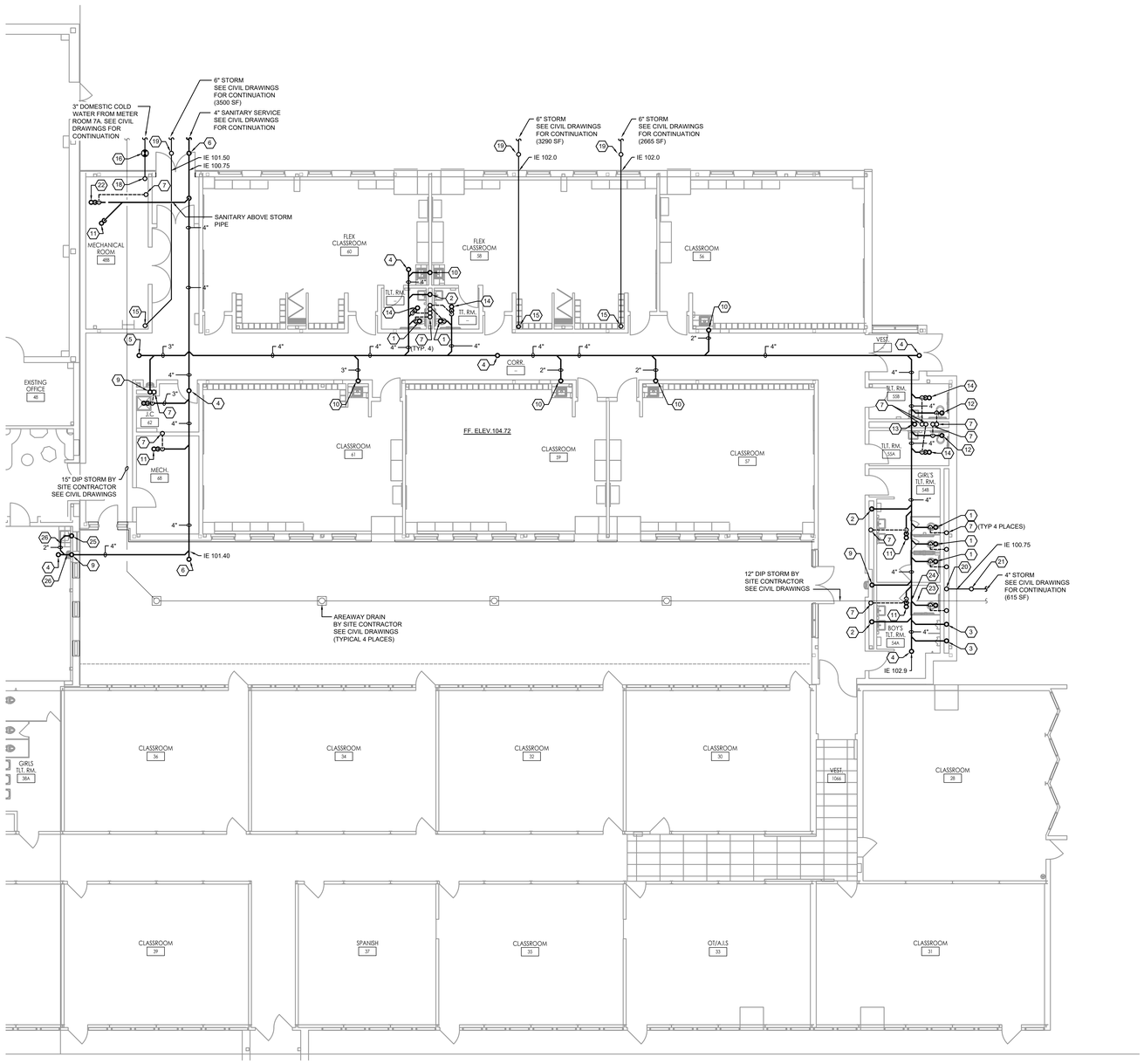
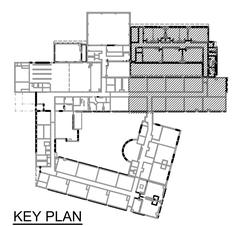


UNDERSLAB PIPING PLAN - BLOCK B

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

KEY NOTES

1. 4" SANITARY UP TO P-1AB.
2. 2" SANITARY UP TO P-2AC.
3. 2" SANITARY UP TO P-3AC.
4. 4" SANITARY UP TO CODP.
5. 3" SANITARY UP TO CODP.
6. 4" SANITARY UP TO COG.
7. 2" VENT UP.
8. 3" VENT UP.
9. 2" SANITARY UP TO P-5A.
10. 2" SANITARY UP TO P-6AC.
11. 3" SANITARY UP TO FD-2.
12. 4" SANITARY UP TO P-1A.
13. 2" SANITARY UP TO P-2A.
14. 3" SANITARY UP TO FD-1.
15. 6" STORM UP.
16. PROVIDE SHUT OFF VALVE IN CURB BOX. SET IN 24" X 24" CONCRETE PAD.
17. 6" FIRE SERVICE UP.
18. 3" DOMESTIC WATER SERVICE UP.
19. 6" STORM UP TO COG.
20. 4" STORM UP.
21. 4" STORM UP TO COG.
22. 3" SANITARY UP TO FD-3.
23. 12" STORM DRAIN PIPING. INVERT ELEVATION APPROXIMATELY 99.44. TOP OF PIPE APPROXIMATELY 100.44.
24. 4" SANITARY. INVERT ELEVATION 102.8.
25. 2" SANITARY UP TO P-7AC.
26. SAW CUT FLOOR AS REQUIRED TO INSTALL NEW UNDERSLAB PIPING. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.



KEY PLAN
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Date 10.10.25
Architect

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Pennsylvania: 140 Whitaker Avenue, Mont Clare - Pennsylvania 19453

Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	AHG
Drawn By	JD
Scale	AS NOTED

Drawing Name
PLUMBING UNDERSLAB PIPING PLAN - BLOCK B

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION
1	11.21.25	NJ DCA RESPONSES

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Drawing Number
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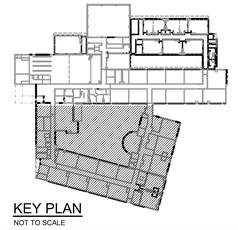
KEY NOTES

1. 1 1/2" VENT UP INSIDE CONCRETE MASONRY UNIT (CMU) BLOCK CORES.
2. 2" SANITARY UP TO P-2AC.
3. 3" SANITARY UP TO CODP.
4. 2" VENT UP.
5. 3/4" HOT AND COLD WATER UP.
6. DURING DEMOLITION AND PRIOR TO NEW CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF EXISTING UNDER SLAB PIPING WITH UNDERGROUND UTILITY LOCATOR APPARATUS AND/OR GROUND PENETRATING RADAR. AFTER THE LOCATION OF THE EXISTING PIPING IS VERIFIED, CONTRACTOR SHALL SAW CUT FLOOR, EXCAVATE, AND VERIFY THE DEPTH AND SIZE AND DIRECTION OF FLOW OF THE EXISTING SANITARY PIPING AND MAKE CONNECTION TO EXISTING SANITARY PIPING AS INDICATED. EXTEND, OFFSET, MODIFY AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTIONS. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
7. EXISTING 4" DOMESTIC WATER SERVICE TO REMAIN. SEE CIVIL DRAWINGS FOR CONTINUATION.
8. EXISTING 4" CW UP.
9. NEW 3" CW UP.
10. NEW 3" COLD WATER TO MECHANICAL ROOM 48B. SEE CIVIL DRAWINGS FOR CONTINUATION
11. 3" SANITARY UP TO FD-1.
12. 4" STORM UP.
13. 4" STORM UP TO CODP.
14. CONNECT NEW 4" STORM TO EXISTING STORM PIPING FROM REMOVED RISER. EXTEND, OFFSET, MODIFY, AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTION.
15. DURING DEMOLITION AND PRIOR TO NEW CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF EXISTING UNDER SLAB PIPING WITH UNDERGROUND UTILITY LOCATOR APPARATUS AND/OR GROUND PENETRATING RADAR. AFTER THE LOCATION OF THE EXISTING PIPING IS VERIFIED, CONTRACTOR SHALL SAW CUT FLOOR, EXCAVATE, AND VERIFY THE DEPTH AND SIZE AND DIRECTION OF FLOW OF THE EXISTING STORM PIPING AND MAKE CONNECTION TO EXISTING STORM PIPING AS INDICATED. EXTEND, OFFSET, MODIFY AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTIONS. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
16. PIPING UP THROUGH FLOOR INSIDE PVC PIPE SLEEVE. SEAL ANNULAR SPACE BETWEEN PIPE AND SLEEVE WATER TIGHT WITH SILICON CAULK AND PIPE CAP.
17. 1 1/2" COLD WATER AND 3/4" HOT WATER UP.
18. CONNECT NEW 1 1/2" CW AND 1" HW TO EXISTING 1 1/4" CW AND 1" HW PIPING. EXTEND, OFFSET, MODIFY, AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTION. FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PIPING.
19. EACH PIPE SHALL BE TYPE "K" SOFT COPPER BELOW FLOOR INSIDE SCHEDULE PVC PIPE SLEEVES. SAW CUT FLOOR AS REQUIRED TO INSTALL NEW PIPING AND PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.

UNDERSLAB PIPING PLAN - BLOCK C

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



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Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number
5516D

Project Date
10.10.2025

Checked By
AHG

Drawn By
JD

Scale
AS NOTED

Drawing Name
PLUMBING UNDERSLAB PIPING PLAN - BLOCK C

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION
1	11.21.25	NJ DCA RESPONSES

Drawing Number
P3.2

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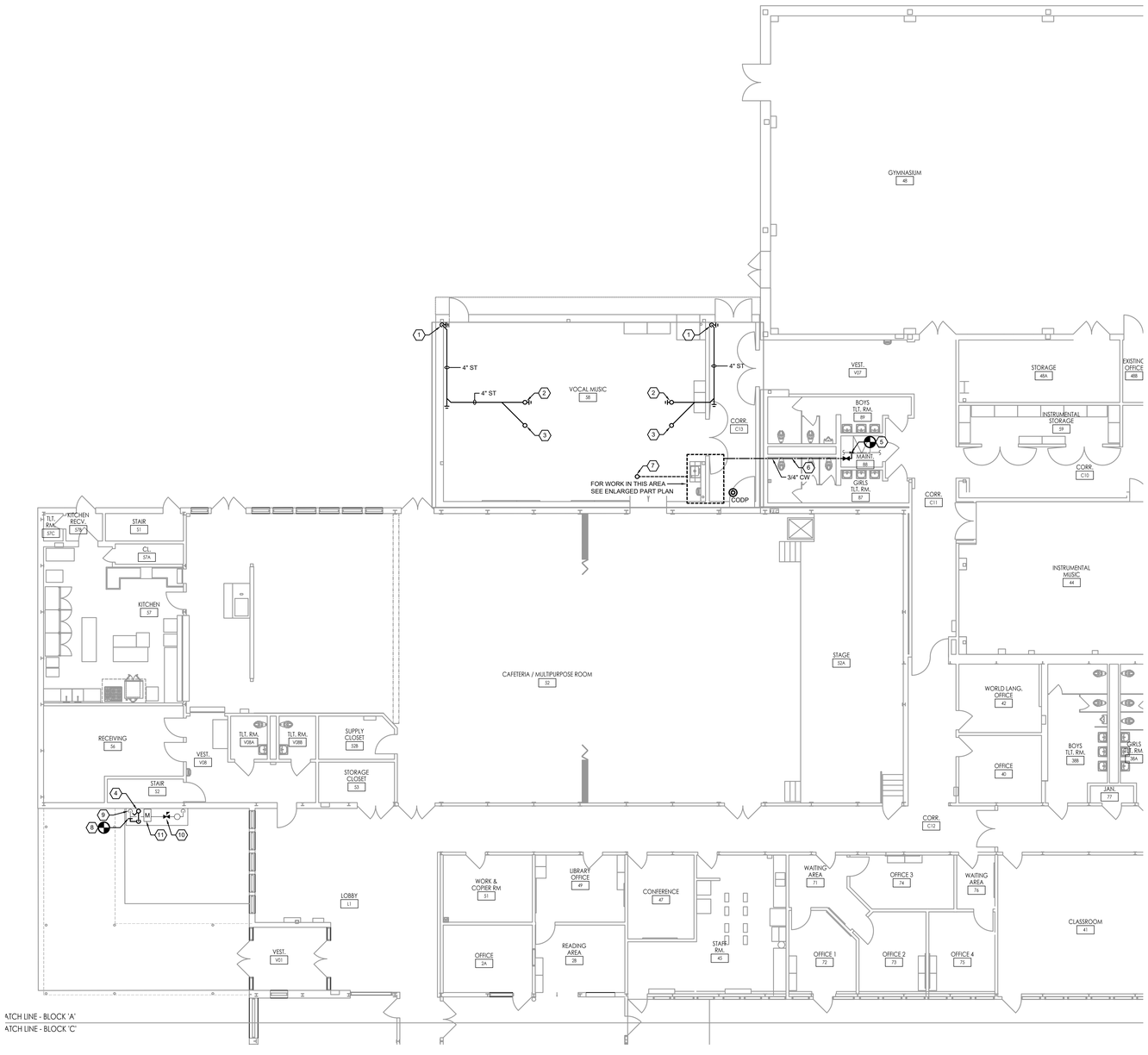
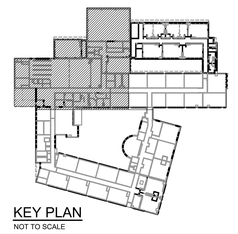
KEY NOTES

1. 4" STORM DOWN (COWP AT BASE).
2. 4" STORM UP TO ROOF DRAIN.
3. 4" STORM UP TO OVERFLOW DRAIN.
4. REMOVE EXISTING 1 1/2" GAS PIPING AND RELATED PIPE SUPPORTS UP TO ROOF AND REPLACE WITH NEW 4" GAS PIPNG AND SUPPORTS. PROVIDE DEDICATED SHUT OFF VALVE AT BASE OF NEW RISER. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPING. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
5. CONNECT NEW 3/4" COLD WATER PIPING TO EXISTING COLD WATER PIPING. MODIFY EXISTING PIPING AS REQUIRED TO MAKE CONNECTION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
6. CAREFULLY REMOVE EXISTING CEILING TILE FOR THIS WORK AND REINSTALL IN ORIGINAL CONDITION. CONTRACTOR RESPONSIBLE TO REPLACE ANY CEILING TILE DAMAGED AS PART OF THIS WORK WITH NEW TILE TO MATCH EXISTING.
7. 2" VENT UP TO 4" VENT THRU ROOF.
8. REMOVE EXISTING PIPE HEADER DOWNSTREAM OF METER AND CONSTRUCT NEW 4" HEADER. EXTEND NEW 4" HEADER AS REQUIRED TO PSE&G TIE IN POINT. CONTRACTOR SHALL MEET WITH PSE&G ON SITE TO REVIEW REQUIREMENTS AND TIE IN POINT LOCATION AND ADJUST NEW HEADER AS REQUIRED. SEE GAS RISER DIAGRAM.
9. CONNECT NEW 4" GAS PIPING TO EXISTING 4" GAS PIPING DROPPING DOWN INTO EXISTING BOILER ROOM. PROVIDE NEW 4" SHUT OFF VALVE TO ISOLATE EXISTING BOILER ROOM PIPING. EXTEND, OFFSET, ADJUST, AND MODIFY EXISTING PIPING AS REQUIRED TO MAKE CONNECTION. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPING.
10. PSE&G SHALL REMOVE EXISTING SERVICE REGULATOR AND REPLACE WITH NEW LARGER CAPACITY SERVICE REGULATOR. CONTRACTOR SHALL CONFIRM WITH PSE&G NEW REGULATOR OUTLET PRESSURE WILL BE SET TO 1 PSI TO MATCH EXISTING PRESSURE SET POINT.
11. PSE&G SHALL REMOVE EXISTING GAS METER AND REPLACE WITH NEW LARGER CAPACITY METER. CONFIRM WITH PSE&G NEW TIE IN POINT AND ADJUST PIPING ARRANGEMENT AS REQUIRED TO ACCOMMODATE ACTUAL NEW METER LOCATION. PROVIDE NEW CONCRETE PAD AS REQUIRED TO MEET PSE&G REQUIREMENTS.



FLOOR PLAN - BLOCK A

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



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10.10.25
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Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number

5516D

Project Date

10.10.2025

Checked By

AHG

Drawn By

JD

Scale

AS NOTED

Drawing Name

PLUMBING FLOOR PLAN - BLOCK A

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number

P4.0

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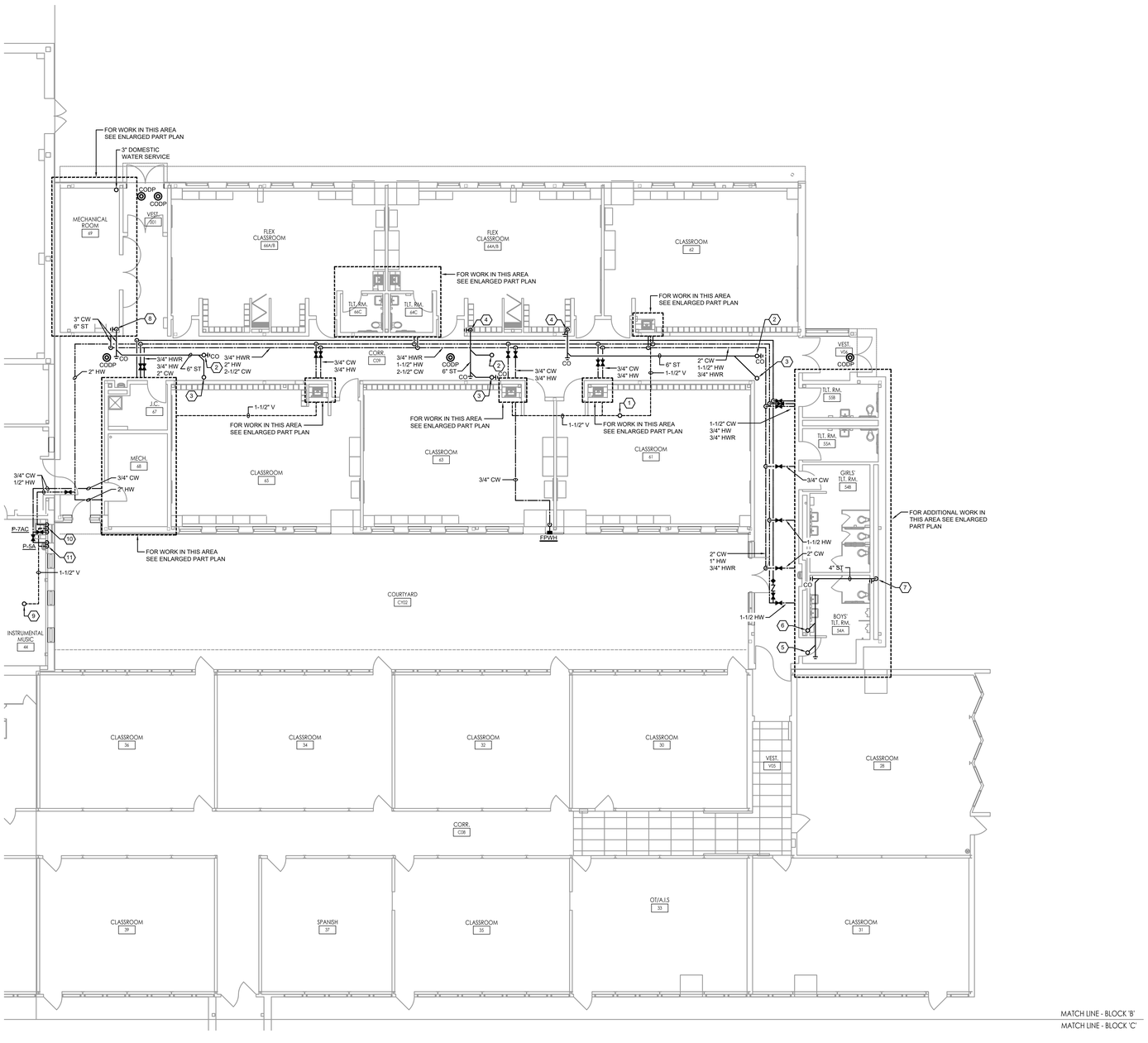
KEY NOTES

1. 3" VENT UP TO 3" VENT THRU ROOF.
2. 6" STORM UP TO ROOF DRAIN.
3. 6" STORM UP TO OVERFLOW ROOF DRAIN.
4. 6" STORM DOWN (COWP AT BASE).
5. 4" STORM UP TO ROOF DRAIN.
6. 4" STORM UP TO OVERFLOW DRAIN.
7. 4" STORM DOWN (COWP AT BASE).
8. 6" STORM DOWN (CO AT BASE).
9. 1 1/2" VENT UP TO 3" VTR.
10. 1/2" HW AND CW DROP, 1 1/2" VENT RISE, 2" SANITARY DN.
11. 1/2" CW DROP, 1 1/2" VENT RISE, 2" SANITARY DN.



FLOOR PLAN - BLOCK B

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

KEY PLAN

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10.10.25
Date
Architect

FVHD Architecture + Interiors
Fraytak Veisz Hopkins Duthie P.C.

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Mont Clare - Pennsylvania 19453

F V H D P C . C O M

Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	AHG
Drawn By	JD
Scale	AS NOTED

Drawing Name

PLUMBING FLOOR PLAN - BLOCK B

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION
1	11.21.25	NJ DCA RESPONSES

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AMIN H. GOMAA, PE
PROFESSIONAL ENGINEER, NJ LIC. No. 24GE04842100

Drawing Number

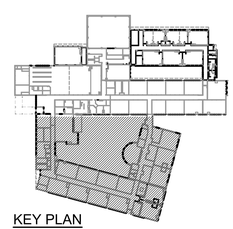
P4.1

KEY NOTES

1. 4" STORM DOWN (COWP AT BASE).
2. EXISTING 4" DOMESTIC WATER SERVICE DN AND TWO (2) 2" WATER METERS TO REMAIN.
3. CONNECT NEW 3" COLD WATER FOR NEW BUILDING ADDITION TO TOP OF EXISTING 4" MANIFOLD. EXTEND, OFFSET, MODIFY, AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTION.
4. 3" CW DN.
5. EXISTING GAS METER TO REMAIN.

FLOOR PLAN - BLOCK C

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



KEY PLAN

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WILLIAM D. HOPKINS III, AIA, LEED AP
NJ - 21A01706000 | PA - RA012520X

GEORGE R. DUTHIE JR., AIA, PP
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Date 11.14.25

Architect

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Corporate: 1515 Lower Ferry Road, Trenton - New Jersey 08628

Pennsylvania: 140 Whitaker Avenue, Mont Clare - Pennsylvania 19453

Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	AHG
Drawn By	JD
Scale	AS NOTED

Drawing Name

PLUMBING FLOOR PLAN - BLOCK C

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION
1	11.21.25	NJ DCA RESPONSES

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Drawing Number

P4.2

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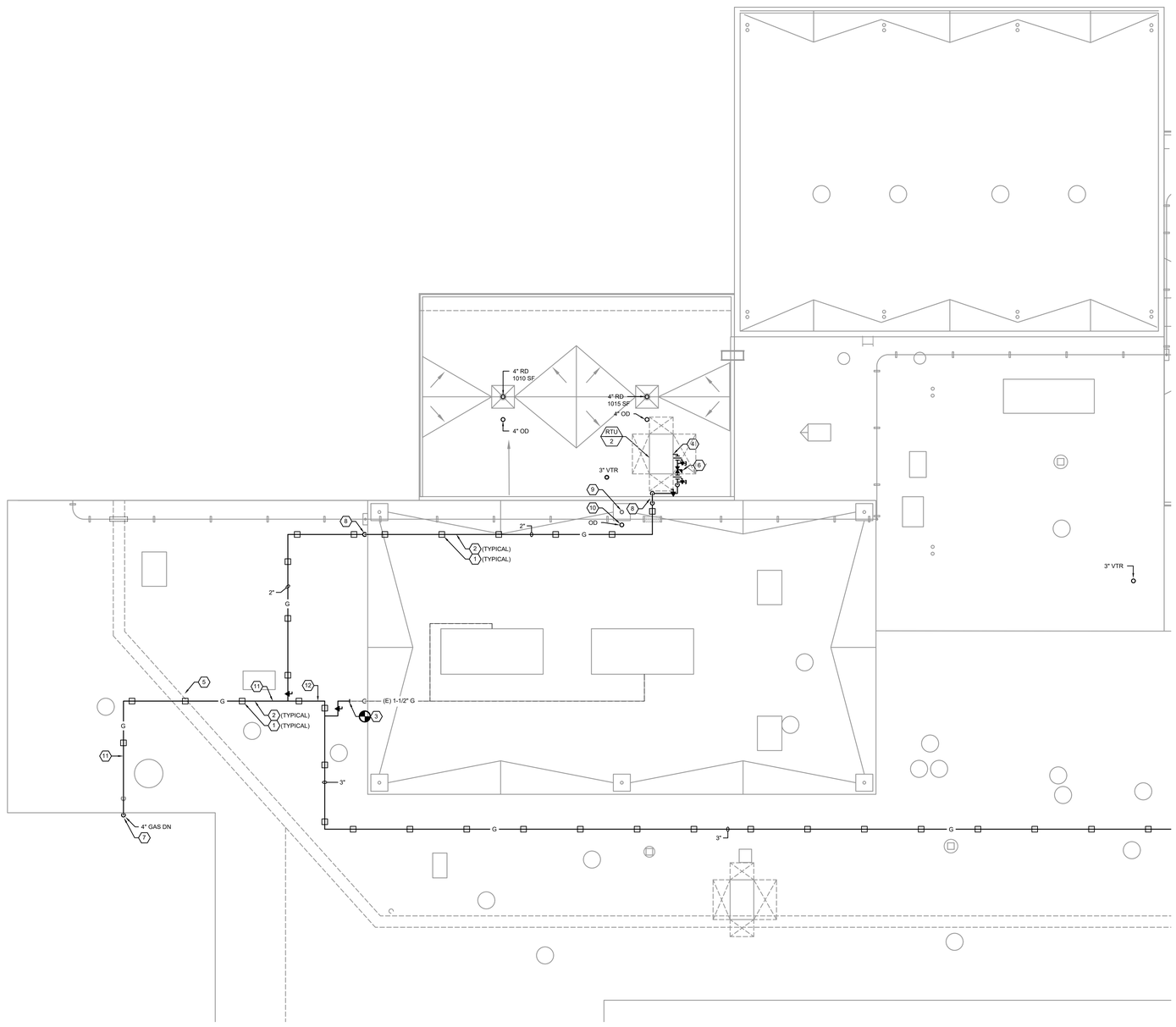
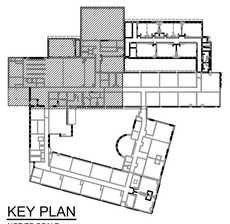
\\fpa-fileserver\DATA\DOCS\P\2345\02345 Princeton Boro\02485.004 - Littlebrook ES\CAD\DWG\02485.004 - P4.0.dwg

KEY NOTES

1. PROVIDE PIPE SUPPORTS AT ALL DIRECTION CHANGES AND STRAIGHT RUNS WITH SPACING NOT EXCEEDING LENGTHS STATED IN TABLE 415.1 OF IFGC, LATEST ADOPTED EDITION, FOR MATERIALS AND LISTED PIPE SIZES. SUPPORTS SHALL BE SADDLE BLOCK ROLLER TYPE WITH PIPE SECURED TO STAND WITH CLAMP OR METAL BAND. SUPPORT IS NOT SECURED TO ROOF SURFACE. BOTTOM OF PIPING SHALL BE MINIMUM 3 1/2" ABOVE ROOF SURFACE.
2. CLEAN, PRIME AND PAINT ALL EXTERIOR GAS PIPING WITH TWO COATS MARINE GRADE RUST RESISTANT PAINT. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. CONNECT NEW 3" GAS TO EXISTING 1 1/2" GAS. EXTEND, OFFSET, MODIFY, AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE RECONNECTION. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPING.
4. FIELD VERIFY SIZE AND LOCATION OF UNIT GAS CONNECTION AND PROVIDE TRANSITION FITTINGS AS REQUIRED.
5. COORDINATE ROUTING OF GAS PIPING IN THIS AREA WITH EXISTING ELECTRIC CONDUIT.
6. PROVIDE PRESSURE REGULATOR. CONTRACTOR SHALL TAKE PRESSURE READING FOR GAS PRESSURE TO PROPERLY SELECT REGULATOR SPRING RATES. REGULATORS SHALL BE ANSI Z21.80 COMPLIANT LOCK UP TYPE. PROVIDE WITH VENT CAP POINTED DOWNWARD WITH BUILT IN INSECT SCREEN. VENTS TO BE LOCATED MINIMUM 10'-0" AWAY FROM ALL OUTSIDE AIR INTAKES. REFER TO MECHANICAL DRAWINGS FOR ROOFTOP HVAC EQUIPMENT GAS PRESSURE REQUIREMENTS. PROVIDE VALVED AND CAPPED TEE FITTING WITH THREADED TAPPING FOR CONNECTION OF PRESSURE MEASURING DEVICE UPSTREAM AND DOWNSTREAM OF REGULATOR IN COMPLIANCE WITH THE IFGC SECTION 410.2, LATEST ADOPTED EDITION.
7. REMOVE EXISTING 1 1/2" GAS PIPING DROPPING DOWN TO EXISTING GAS METER ASSEMBLY AND RELATED PIPE SUPPORTS AND REPLACE WITH NEW 4" GAS PIPING AND SUPPORTS. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPING. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
8. PROVIDE PIPE SUPPORTS ATTACHED TO WALL AT TOP AND BOTTOM OF RISE.
9. EXISTING ROOF DRAIN TO REMAIN
10. PROVIDE NEW OVERFLOW DRAIN TO MATCH SIZE OF EXISTING ROOF DRAIN. CONNECT OVERFLOW DRAIN TO EXISTING STORM LEADER BELOW ROOF. MODIFY, EXTEND, AND/OR ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTION. FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING ROOF DRAIN AND PIPING.
11. REMOVE EXISTING 1 1/2" GAS PIPING AND RELATED PIPE SUPPORTS AND REPLACE WITH NEW 4" GAS PIPING AND SUPPORTS. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPING.
12. REMOVE EXISTING 1 1/2" GAS PIPING AND RELATED PIPE SUPPORTS AND REPLACE WITH NEW 3" GAS PIPING AND SUPPORTS. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPING.



ROOF PLAN - BLOCK A
SCALE: 1/8" = 1'-0"



KEY PLAN
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JASON J. DUBOWITCH, AIA
NJ - 21A019798(R) | PA - RA406(R)
STEPHEN W. SCHRETER JR., AIA, LEED AP BD+C
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FVHD architecture interiors
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F V H D P C . C O M

Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	AHG
Drawn By	JD
Scale	AS NOTED

Drawing Name
PLUMBING ROOF PLAN - BLOCK A

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION
1	11.21.25	NJ DCA RESPONSES

Drawing Number
P5.0

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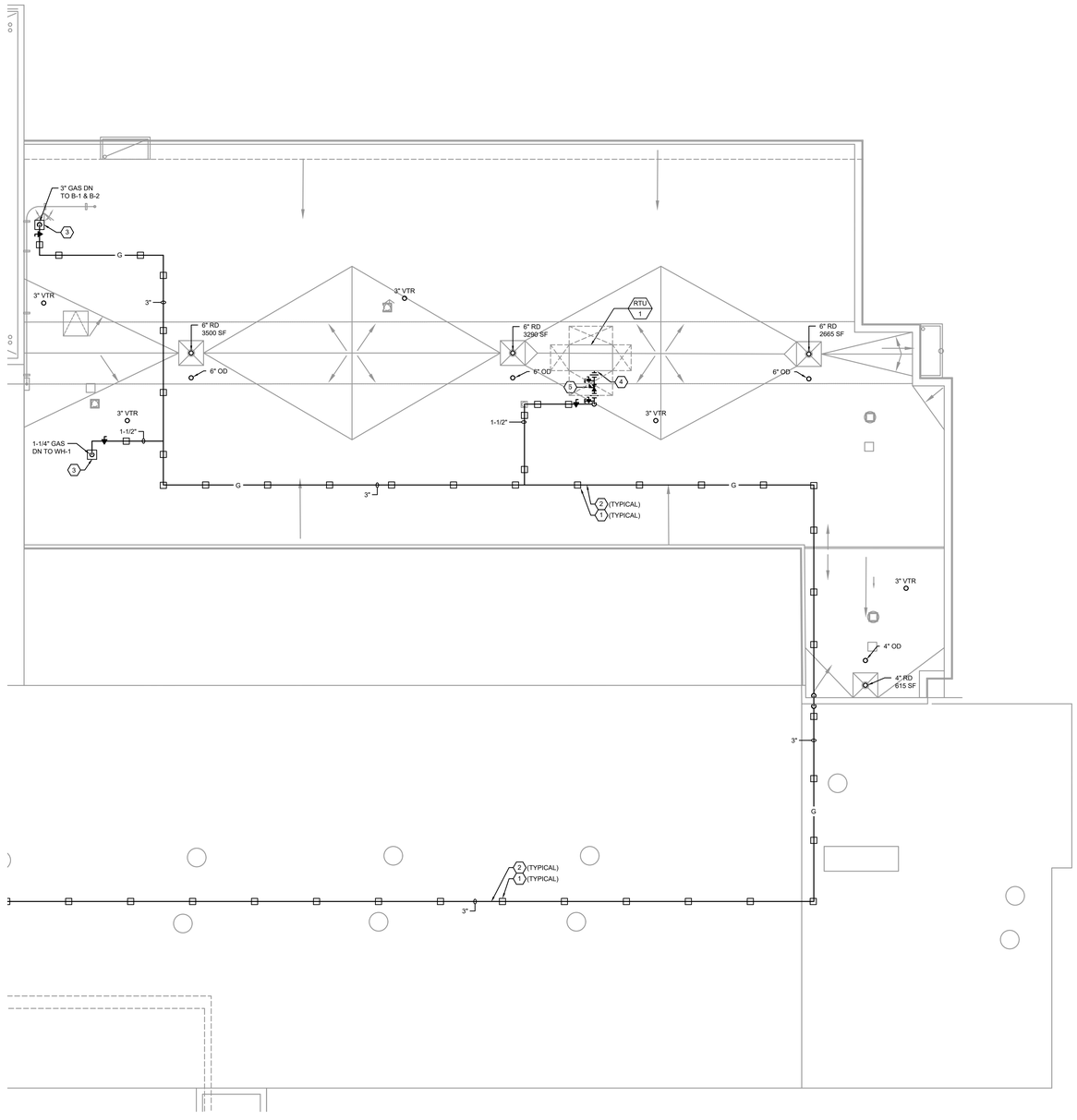
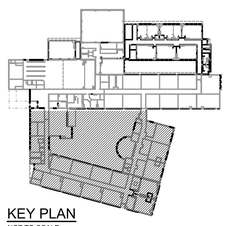
KEY NOTES

1. PROVIDE PIPE SUPPORTS AT ALL DIRECTION CHANGES AND STRAIGHT RUNS WITH SPACING NOT EXCEEDING LENGTHS STATED IN TABLE 415.1 OF IFGC, LATEST ADOPTED EDITION, FOR MATERIALS AND LISTED PIPE SIZES. SUPPORTS SHALL BE SADDLE BLOCK ROLLER TYPE WITH PIPE SECURED TO STAND WITH CLAMP OR METAL BAND. SUPPORT IS NOT SECURED TO ROOF SURFACE. BOTTOM OF PIPING SHALL BE MINIMUM 3 1/2" ABOVE ROOF SURFACE.
2. CLEAN, PRIME AND PAINT ALL EXTERIOR GAS PIPING WITH TWO COATS MARINE GRADE RUST RESISTANT PAINT. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. PROVIDE & INSTALL ROOF PORTAL PATE CO OR EQUAL. PROVIDE SEPARATE BOOT FOR EACH PIPE. DO NOT PASS MORE THAN (1) PIPE THRU EACH NIPPLE TO FACILITATE PROPER SEALING.
4. FIELD VERIFY SIZE AND LOCATION OF UNIT GAS CONNECTION AND PROVIDE TRANSITION FITTINGS AS REQUIRED.
5. PROVIDE PRESSURE REGULATOR. CONTRACTOR SHALL TAKE PRESSURE READING FOR GAS PRESSURE TO PROPERLY SELECT REGULATOR SPRING RATES. REGULATORS SHALL BE ANSI Z21.80 COMPLIANT LOCK UP TYPE. PROVIDE WITH VENT CAP POINTED DOWNWARD WITH BUILT IN INSECT SCREEN. VENTS TO BE LOCATED MINIMUM 10'-0" AWAY FROM ALL OUTSIDE AIR INTAKES. REFER TO MECHANICAL DRAWINGS FOR ROOFTOP HVAC EQUIPMENT GAS PRESSURE REQUIREMENTS. PROVIDE VALVED AND CAPPED TEE FITTING WITH THREADED TAPPING FOR CONNECTION OF PRESSURE MEASURING DEVICE UPSTREAM AND DOWNSTREAM OF REGULATOR IN COMPLIANCE WITH THE IFGC SECTION 410.2, LATEST ADOPTED EDITION.



ROOF PLAN - BLOCK B
SCALE: 1/8" = 1'-0"



KEY PLAN
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NJDCA Electronic Release Stamp

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NJ - 21AI01979800 | PA - RA406069
STEPHEN W. SCHREYER JR., AIA, LEED AP BD+C
NJ - 21AI00031001 | PA - RA415455
Date 2/12/26
Architect
FVHD architecture interiors
Fravtak Veisz Hopkins Duthie PC
Corporate: 1515 Lower Ferry Road Trenton - New Jersey 08628
Pennsylvania: 140 Whitaker Avenue Mont Clare - Pennsylvania 19453
F V H D P C . C O M

Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	AHG
Drawn By	JD
Scale	AS NOTED

Drawing Name
PLUMBING ROOF PLAN - BLOCK B

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number
P5.1

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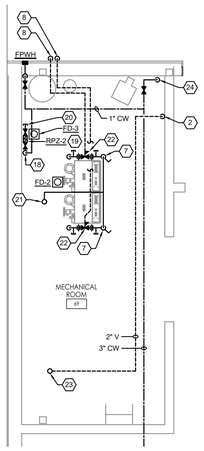
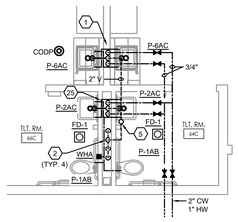


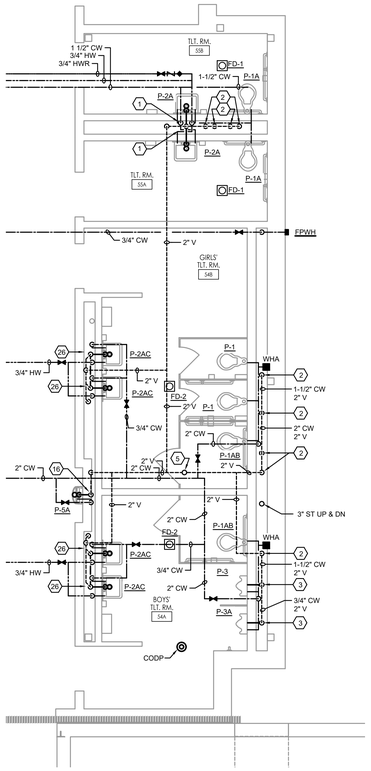
PART PLAN - MECHANICAL ROOM 48B

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



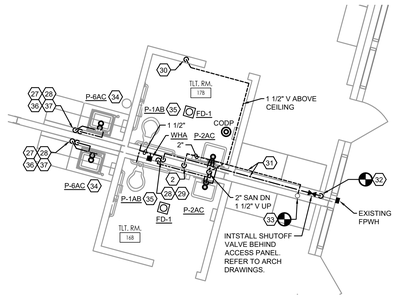
PART PLAN - TLT RM.

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



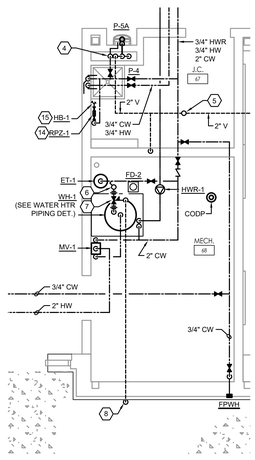
PART PLAN - 54A, 54B, 55A, 55B

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



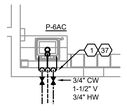
PART PLAN - TLT RM. 1038,1040

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



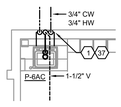
PART PLAN - MECH 63, JC 62

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



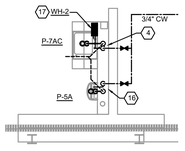
PART PLAN - CLASSROOM 62

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



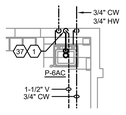
PART PLAN - CLASSROOM 61

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



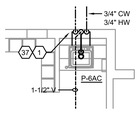
PART PLAN - VOCAL MUSIC 58

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



PART PLAN - CLASSROOM 63

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



PART PLAN - CLASSROOM 65

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

KEY NOTES

1. 3/4" CW DROP, 3/4" HW DROP, 1-1/2" VENT RISE, 2" SANITARY DOWN.
2. 2" VENT DOWN.
3. 2" VENT RISE, 2" SANITARY DOWN.
4. 3/4" CW DROP, 1-1/2" VENT RISE, 2" SANITARY DOWN.
5. 3" VENT UP TO 3" VENT THRU ROOF.
6. 1 1/2" GAS UP TO ROOF. PROVIDE SHUT OFF VALVE AND DIRT LEG IN PIPE DROP. SHUT OFF VALVE SHALL BE WITHIN 6'-0" FROM WATER HEATER CONNECTION.
7. 3" GAS DROP. PROVIDE SHUT OFF VALVE AND SEDIMENT TRAP IN PIPE DROP. SEE RISER DIAGRAM.
8. GAS PRESSURE REGULATOR VENT THROUGH EXTERIOR WALL. TERMINATE AS PER IFGC 2018 AND GAS COMPANY REQUIREMENTS. PROVIDE TURN DOWN ELBOW AND VENT CAP WITH BUILT IN INSECT SCREEN. MAINTAIN A MINIMUM 10 FEET FROM ALL BUILDING AND OUTSIDE AIR INTAKE OPENINGS.
9. INSTALL ON 4" HIGH CONCRETE PAD.
10. PROVIDE FULL SIZE PUMP BYPASS.
11. MOUNT 48" ABOVE FINISHED FLOOR. PROVIDE WALL SUPPORTS FOR MOUNTING RPZ. PROVIDE CHROME PLATED BRASS PIPE ESCUTCHEON AT WALL PENETRATION.
12. HOSE BIB FOR ATTACHMENT OF CHEMICAL DISPENSER. CHEMICAL DISPENSER SHALL BE SUPPLIED AND INSTALLED BY OWNER.
13. 3" DOMESTIC WATER SUPPLIED AND INSTALLED BY THE PLUMBING CONTRACTOR. THE PLUMBING CONTRACTOR SHALL PURCHASE METER AT THE WOODBURY WATER AND SEWER DEPARTMENT AND INSTALL PER WATER AND SEWER DEPARTMENT REQUIREMENTS.
14. MOUNT 48" ABOVE FINISHED FLOOR. PROVIDE WALL SUPPORTS FOR MOUNTING RPZ. PROVIDE CHROME PLATED BRASS PIPE ESCUTCHEON AT WALL PENETRATION.
15. HOSE BIB FOR ATTACHMENT OF CHEMICAL DISPENSER. CHEMICAL DISPENSER SHALL BE SUPPLIED AND INSTALLED BY OWNER.
16. 1/2" CW DROP, 2" VENT RISE, 2" SANITARY DOWN.
17. INSTALL TANKLESS WATER HEATER BELOW SINK INSIDE SINK CABINET. EXTEND HOT WATER FROM HEATER TO SINK FAUCET. PROVIDE SUPPLY STOP VALVE ON COLD WATER SUPPLY TO WATER HEATER.
18. 1" CW DROP
19. PROVIDE WALL SUPPORTS AS REQUIRED AND MOUNT 2'-6" ABOVE FINISHED FLOOR. PROVIDE FIXED AIR GAP AND EXTEND RELIEF TO FUNNEL FLOOR DRAIN.
20. 1" CW VALVED AND CAPPED FOR CONTINUATION BY MECHANICAL CONTRACTOR FOR BOILER COLD WATER MAKE UP CONNECTION.
21. 3" GAS UP TO ROOF.
22. PROVIDE PRESSURE REGULATOR. CONTRACTOR SHALL TAKE PRESSURE READING FOR GAS PRESSURE TO PROPERLY SELECT REGULATOR SPRING RATES. REGULATORS SHALL BE AND ZZ1.80 COMPLIANT LOCK UP TYPE. REFER TO MECHANICAL DRAWINGS FOR BOILER GAS PRESSURE REQUIREMENTS. PROVIDE VALVED AND CAPPED TEE FITTING WITH THREADED TAPPING FOR CONNECTION OF PRESSURE MEASURING DEVICE UPSTREAM AND DOWNSTREAM OF REGULATOR IN COMPLIANCE WITH THE IFGC SECTION 410.2, LATEST ADOPTED EDITION.
23. 2" VENT UP TO 3" VTR.
24. 3" COLD WATER DOWN. PROVIDE SHUTOFF VALVE 48" ABOVE FINISHED FLOOR.
25. 1 1/2" CW DROP, 1/2" HW DROP, 1 1/2" VENT RISE, 2" SANITARY DOWN.
26. 1/2" CW DROP, 1/2" HW DROP, 1 1/2" VENT RISE, 2" SANITARY DOWN.
27. 3/4" HW & CW DOWN TO BELOW FLOOR.
28. PROVIDE SHUTOFF VALVES APPROX. 12" A.F.F. PROVIDE JR SMITH OR APPROVED EQUAL MODEL #4760 8"X12" ACCESS PANEL WITH SCREWDRIVER OPERATED LATCH FOR VALVE ACCESS.
29. 1 1/2" CW & 3/4" HW DOWN.
30. 1 1/2" VENT DOWN INSIDE CMU CORES.
31. INSTALL PIPING THRU NEW STUD WALL.
32. 3/4" COLD WATER DOWN. CONNECT TO EXISTING 3/4" CW TO EXISTING FPWH. EXTEND, MODIFY, OFFSET, AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTION.
33. CONNECT NEW 2" VENT TO EXISTING 3" VTR. EXTEND, MODIFY, OFFSET, AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTION. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPING. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
34. CONNECT NEW 1 1/2" SANITARY PIPING TO EXISTING SANITARY PIPING FROM REMOVED SINK. EXTEND, MODIFY, OFFSET, AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
35. CONNECT NEW 4" SANITARY PIPING TO EXISTING SANITARY PIPING FROM REMOVED WATER CLOSET. EXTEND, MODIFY, OFFSET, AND ADJUST EXISTING PIPING AS REQUIRED TO MAKE CONNECTION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
36. ROUTE HOT & COLD WATER PIPING BELOW COUNTER TOP TO SINK FAUCET AND COLD WATER PIPING TO FILTER AND FILTERED WATER BUBBLER.
37. PRIOR TO CONNECTION TO SINK BUBBLER, PROVIDE UNDER COUNTER WATER FILTER ON CW SUPPLY LINE. PROVIDE SUPPORTS AND ATTACH FILTER TO WALL BELOW COUNTER. INSTALL IN A NEAT MANNER, HIGH AS POSSIBLE, WITH CLEARANCE FOR FILTER REMOVAL. PROVIDE SHUT OFF VALVE UPSTREAM OF FILTER. MOUNT FILTER OUTSIDE OF REQUIRED SINK ADA ACCESSIBILITY CLEARANCE SPACE.

KEY PLAN

NOT TO SCALE

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NJDCA Electronic Release Stamp

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NJ - 21A01706000 | PA - RA012520X
GEORGE R. DUTHIE JR., AIA, PP
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10/10/25
Date
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Architect
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Pennsylvania: 140 Whitaker Avenue Mont Clare - Pennsylvania 19453
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Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	AHG
Drawn By	JD
Scale	AS NOTED

Drawing Name

PLUMBING PART PLANS

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number

P6.0

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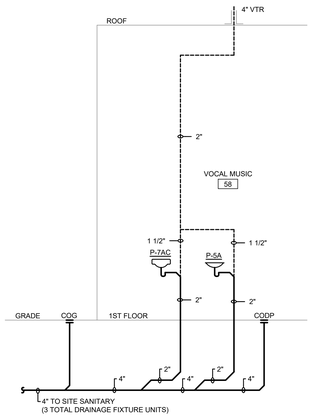
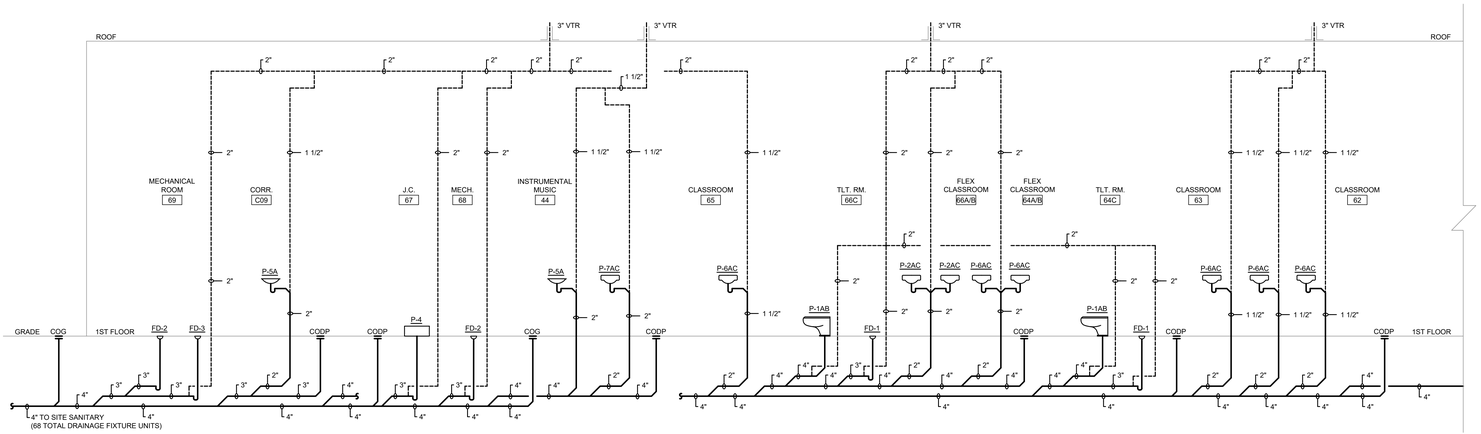


SANITARY RISER DIAGRAM - BLOCK A

NOT TO SCALE

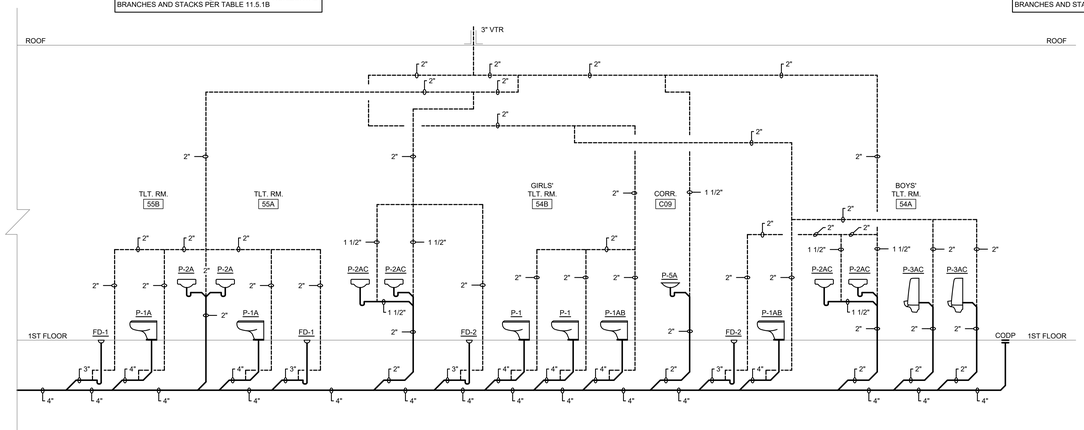
SANITARY BUILDING DRAIN PIPE SIZES ARE BASED UPON 2021 NSPC TABLE 11.5.1A @ 1/8" SLOPE AND HORIZONTAL BRANCHES AND STACKS PER TABLE 11.5.1B



SANITARY RISER DIAGRAM - BLOCK B

NOT TO SCALE

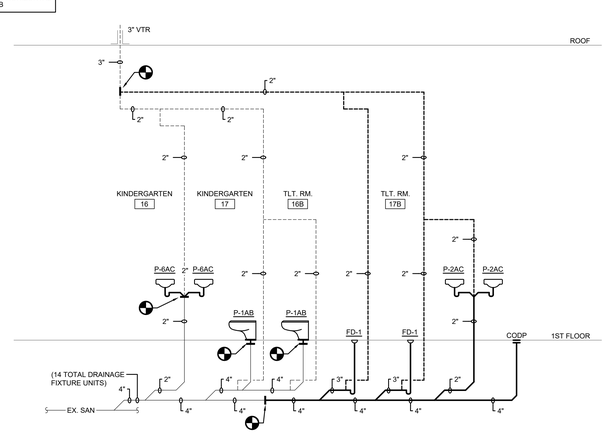
SANITARY BUILDING DRAIN PIPE SIZES ARE BASED UPON 2021 NSPC TABLE 11.5.1A @ 1/8" SLOPE AND HORIZONTAL BRANCHES AND STACKS PER TABLE 11.5.1B



SANITARY RISER DIAGRAM - BLOCK B

NOT TO SCALE

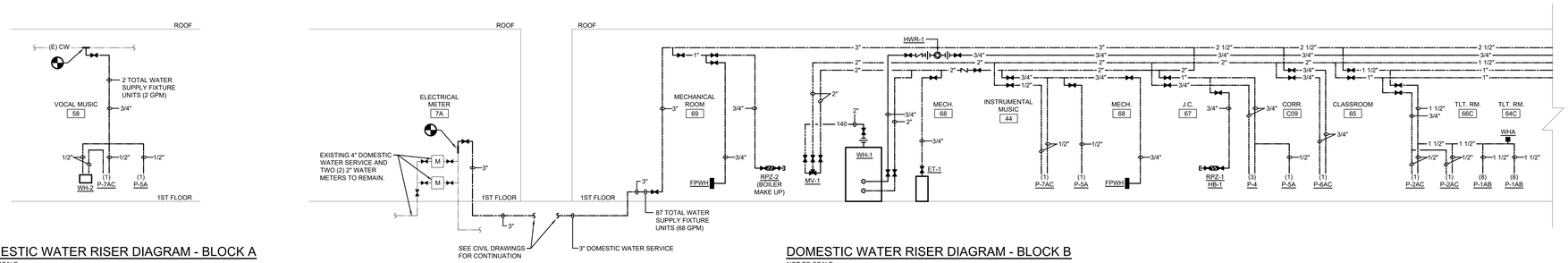
SANITARY BUILDING DRAIN PIPE SIZES ARE BASED UPON 2021 NSPC TABLE 11.5.1A @ 1/8" SLOPE AND HORIZONTAL BRANCHES AND STACKS PER TABLE 11.5.1B



SANITARY RISER DIAGRAM - BLOCK C

NOT TO SCALE

SANITARY BUILDING DRAIN PIPE SIZES ARE BASED UPON 2021 NSPC TABLE 11.5.1A @ 1/8" SLOPE AND HORIZONTAL BRANCHES AND STACKS PER TABLE 11.5.1B



DOMESTIC WATER RISER DIAGRAM - BLOCK A

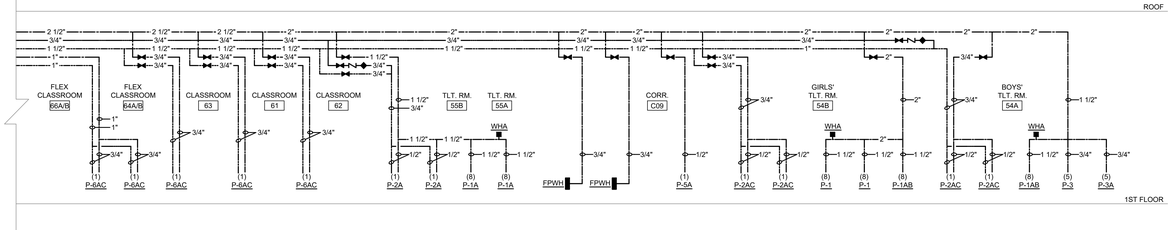
NOT TO SCALE

FAUCETS SHALL BE INSTALLED WITH AIR GAPS PER NSPC 10.5.1, FROST PROOF WALL HYDRANTS SHALL BE SUPPLIED WITH BUILT IN VACUUM BREAKERS AND FLUSHOMETERS SHALL BE SUPPLIED WITH BUILT IN VACUUM BREAKERS INSTALLED IN COMPLIANCE WITH NSPC 10.5.5

DOMESTIC WATER RISER DIAGRAM - BLOCK B

NOT TO SCALE

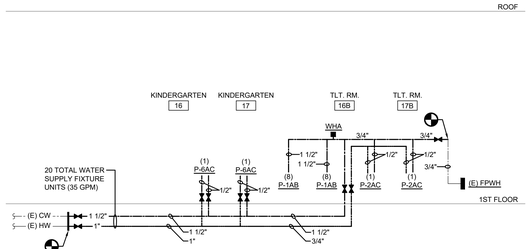
FAUCETS SHALL BE INSTALLED WITH AIR GAPS PER NSPC 10.5.1, FROST PROOF WALL HYDRANTS SHALL BE SUPPLIED WITH BUILT IN VACUUM BREAKERS AND FLUSHOMETERS SHALL BE SUPPLIED WITH BUILT IN VACUUM BREAKERS INSTALLED IN COMPLIANCE WITH NSPC 10.5.5



DOMESTIC WATER RISER DIAGRAM - BLOCK B

NOT TO SCALE

FAUCETS SHALL BE INSTALLED WITH AIR GAPS PER NSPC 10.5.1, FROST PROOF WALL HYDRANTS SHALL BE SUPPLIED WITH BUILT IN VACUUM BREAKERS AND FLUSHOMETERS SHALL BE SUPPLIED WITH BUILT IN VACUUM BREAKERS INSTALLED IN COMPLIANCE WITH NSPC 10.5.5



DOMESTIC WATER RISER DIAGRAM - BLOCK C

NOT TO SCALE

FAUCETS SHALL BE INSTALLED WITH AIR GAPS PER NSPC 10.5.1, FROST PROOF WALL HYDRANTS SHALL BE SUPPLIED WITH BUILT IN VACUUM BREAKERS AND FLUSHOMETERS SHALL BE SUPPLIED WITH BUILT IN VACUUM BREAKERS INSTALLED IN COMPLIANCE WITH NSPC 10.5.5

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10.10.25
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Architect

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Pennsylvania: 140 Whitaker Avenue Mont Clare - Pennsylvania 19453
F V H D P C . C O M

Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number

5516D

Project Date

10.10.2025

Checked By

AHG

Drawn By

JD

Scale

AS NOTED

Drawing Name

PLUMBING SANITARY AND DOMESTIC WATER RISER DIAGRAMS

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION
1	11.21.25	NJ DCA RESPONSES

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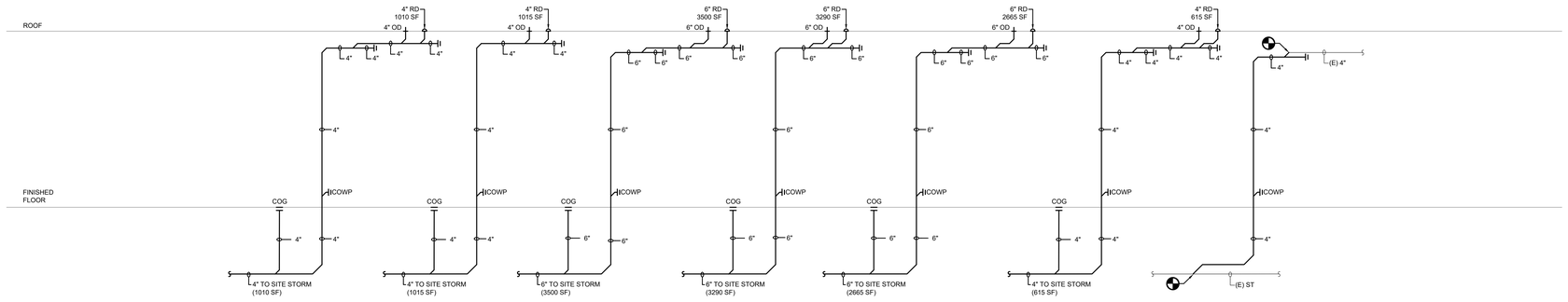
Drawing Number

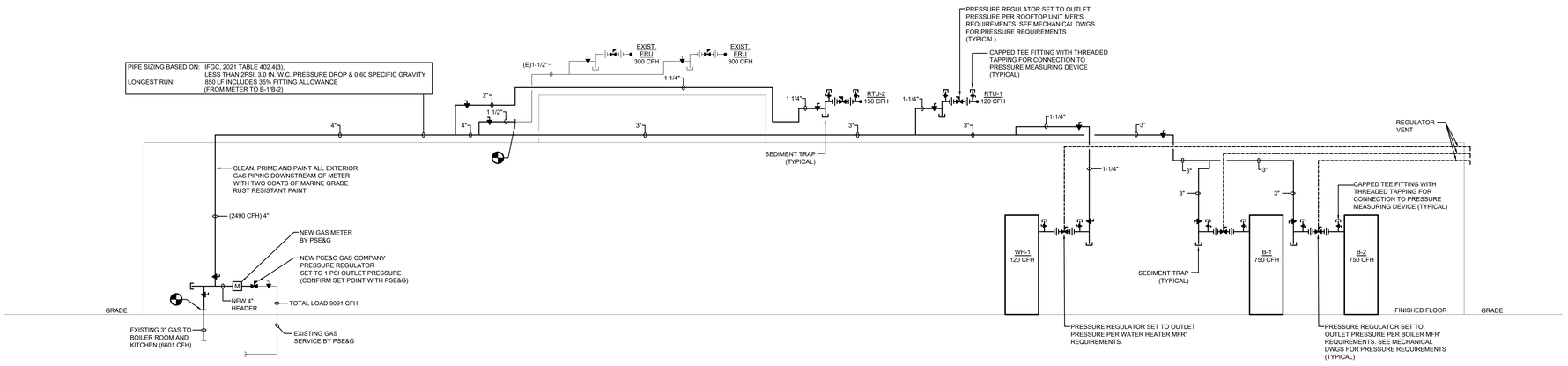
P7.0



STORM RISER DIAGRAM

NOT TO SCALE

PIPE SIZES ARE BASED UPON 2021 NSPC TABLE 13.6.2
5" PER HOUR RAINFAL RATE @ 1/8" PER FOOT SLOPE



GAS RISER DIAGRAM

NOT TO SCALE

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GEORGE R. DUTHIE JR., AIA, PP
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NJDCA Electronic Release Stamp

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Drawn By
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Scale
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Drawing Name
PLUMBING STORM AND GAS RISER DIAGRAM

Revisions

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1	11.21.25	NJ DCA RESPONSES

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Drawing Number
P7.1

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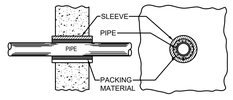
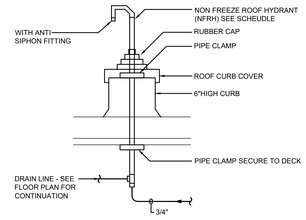


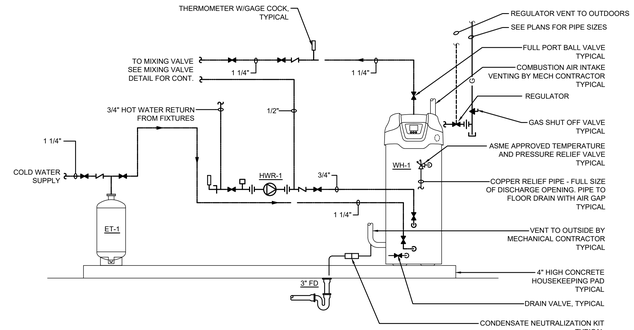
(CONCRETE AND FOUNDATION WALLS)

NOTE:
NO STRUCTURAL STRAIN SHOULD BE TRANSMITTED FROM ANY WALL TO THE PIPING SYSTEM THE SLEEVING, RELIEVING ARCH, OR STRUCTURAL BEAM SUPPORT METHODS PROTECT THE PIPING FROM SUPERIMPOSED LOADS THE "PACKING" MATERIAL AROUND THE PIPE IS FLEXIBLE ENOUGH TO RESPOND TO SETTLING IN THE STRUCTURE OR PIPING

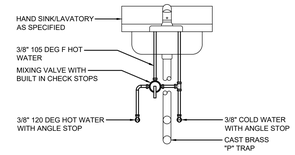
WALL PENETRATION PIPE SLEEVE DETAIL
NOT TO SCALE



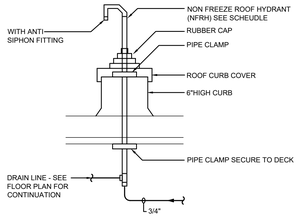
ROOF HYDRANT DETAIL
NOT TO SCALE



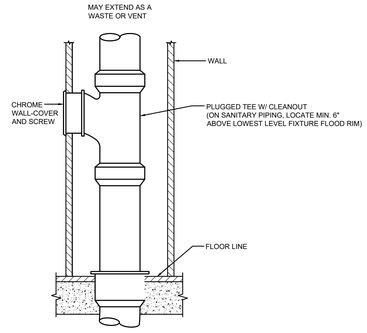
WATER HEATER PIPING DETAIL
NOT TO SCALE



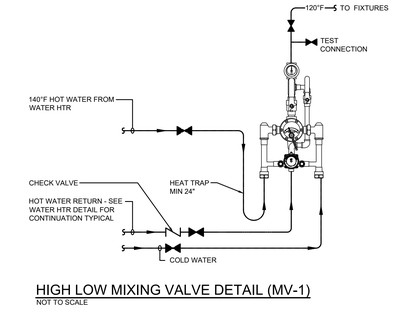
MIXING VALVE AT HAND SINKS AND LAVATORIES
NOT TO SCALE



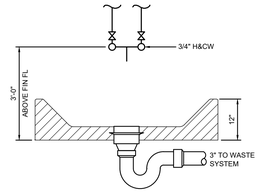
ROOF HYDRANT DETAIL
NOT TO SCALE



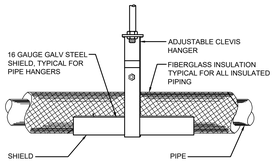
WALL CLEANOUT/ CLEANOUT AT BASE OF STACK DETAIL
NOT TO SCALE



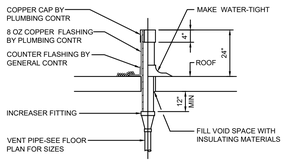
HIGH LOW MIXING VALVE DETAIL (MV-1)
NOT TO SCALE



SERVICE SINK DETAIL
NOT TO SCALE

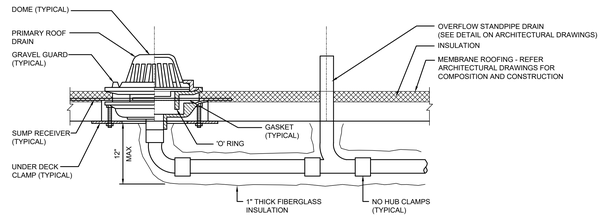


TYPICAL PIPE HANGER DETAIL
NOT TO SCALE

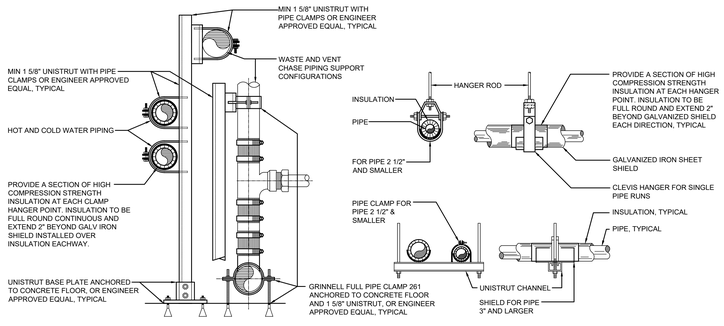


NOTES:
1. MINIMUM SIZE OF VENT EXTENSION THROUGH ROOF TO BE 3".
2. CHANGE OF DIAMETER TO BE MADE AT LEAST 12" BELOW ROOF.
3. VENT PIPE TO EXTEND 24" ABOVE ROOF AND TO BE SEALED WATERTIGHT BY PROPER FLASHING.
4. ALL VENT RISERS SHALL BE OFFSET AS REQUIRED TO CLEAR ROOF STRUCTURE. DUCTWORK OR MECH ROOFTOP UNITS. PLUMBING CONTRACTOR TO COORDINATE WITH OTHER TRADES.
5. ROOFING CONTRACTOR SHALL SUPPLY BOOT FLASHING FOR RUBBER ROOF SYSTEMS.

VENT INCREASER DETAIL
NOT TO SCALE

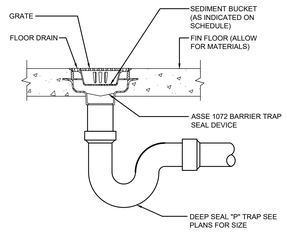


ROOF DRAIN AND OVERFLOW DRAIN DETAIL
NOT TO SCALE

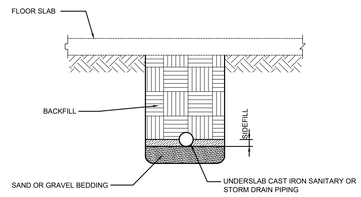


NOTE: FOR 4" AND SMALLER PIPING: SNAP N SHIELD BY EATON OR ENGINEER APPROVED EQUAL CLEVIS AND PIPE SUPPORTS SHALL BE PERMITTED.

PIPE HANGERS & SUPPORT DETAIL - WATER, WASTE & VENT
NOT TO SCALE



TYPICAL FLOOR DRAIN DETAIL
NOT TO SCALE



UNDERSLAB PIPE BEDDING DETAIL
NOT TO SCALE

NOTES:
1. PIPE BEDDING SHALL BE IN COMPLIANCE WITH NSPC SECTION 2.6

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P8.0

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MECHANICAL LEGEND

SYMBOLS	DESCRIPTION	SYMBOLS	DESCRIPTION
	NEW DUCT OR PIPE	X	KEY NOTE DESIGNATION
	EXISTING DUCT OR PIPE	X / X	TOP: EQUIPMENT DESIGNATION BOTTOM: UNIT NUMBER (E-SIGNIFIES EXISTING)
	TO BE REMOVED	CW	COLD WATER PIPING
	FLEX TO DIFFUSER (5'-0" MAXIMUM)	HWS	HOT WATER SUPPLY PIPING
R	RISE IN DUCT	HWR	HOT WATER RETURN PIPING
D	DROP IN DUCT	RS	REFRIGERANT SUCTION PIPING
FC	FLEXIBLE DUCT CONNECTION	RL	REFRIGERANT LIQUID PIPING
	CEILING DIFFUSER 4 WAY BLOW	PC	PUMPED CONDENSATE PIPING
	CEILING DIFFUSER 3 WAY BLOW	CD	CONDENSATE DRAIN PIPING
	CEILING DIFFUSER 2 WAY BLOW		SHUT-OFF VALVE
	CEILING DIFFUSER 1 WAY BLOW		BALANCE VALVE
	RETURN OR EXHAUST REGISTER		THROTTLING VALVE
VD	VOLUME DAMPER	3	MOTOR OPERATED VALVE, THREE WAY
FD	FIRE DAMPER AND ACCESS DOOR	2	MOTOR OPERATED VALVE, TWO WAY
M	MOTOR OPERATED DAMPER		CHECK VALVE
U	UNDERCUT DOOR		GAS COCK
L	LOUVERED DOOR		UNION
T	THERMOSTAT		STRAINER WITH BLOWDOWN
S	SENSOR		RELIEF VALVE
H	HUMIDISTAT		PRESSURE GAUGE
SD	DUCT SMOKE DETECTOR		THERMOMETER
CO2	CO2 DETECTOR		AUTOMATIC FLOW CONTROL VALVE - B&G CIRCUIT SETTER OR EQUAL
	CONNECT TO EXISTING		
	POINT OF DISCONNECTION		

MECHANICAL ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	MC	MECHANICAL CONTRACTOR
AD	ACCESS DOOR	MOD	MOTOR OPERATED DAMPER
ATC	AUTOMATIC TEMPERATURE CONTROLS	OA	OUTDOOR AIR
BDD	BACKDRAFT DAMPER	OAI	OUTDOOR AIR INTAKE
BMS	BUILDING MANAGEMENT SYSTEM	OC	ON CENTER
BOD	BOTTOM OF DUCT	OED	OPEN ENDED DUCT
BOP	BOTTOM OF PIPE	PC	PLUMBING CONTRACTOR
CD	CEILING DIFFUSER	RA	RETURN AIR
CO	CLEANOUT	RP	RADIANT PANEL
CFM	CUBIC FEET PER MINUTE	RR	RETURN GRILLE
D	DIAMETER	RR	RETURN REGISTER
DTS/R	DUAL TEMPERATURE WATER SUPPLY AND RETURN	SA	SUPPLY AIR
E	EXISTING	SG	SUPPLY GRILLE
EA	EXHAUST AIR	SR	SUPPLY REGISTER
EC	ELECTRICAL CONTRACTOR	TD	TRANSFER DUCT
EG	EXHAUST GRILLE	TG	TRANSFER GRILLE
ER	EXHAUST REGISTER	WMS	WIRE MESH SCREEN
FO	FLAT OVAL	WR	WALL REGISTER
IOM	INSTALLATION AND OPERATION MANUAL		

APPLICABLE CODES:

ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST CODES AND SUBCODES AS ADOPTED BY THE STATE OF NEW JERSEY:

- NEW JERSEY UNIFORM CONSTRUCTION CODE (NJUCC)
- REHABILITATION SUBCODE 5:23-6
- ADMINISTRATIVE CODE: TITLE 6
- 2021 INTERNATIONAL BUILDING CODE - NJ EDITION
- 2020 NATIONAL ELECTRICAL CODE
- 2021 NATIONAL STANDARD PLUMBING CODE
- 2021 INTERNATIONAL MECHANICAL CODE
- 2021 INTERNATIONAL FUEL GAS CODE
- 2019 ASHRAE 90.1 ENERGY CONSERVATION CODE
- 2019 NFPA 13
- REQUIREMENTS OF LOCAL AUTHORITY HAVING JURISDICTION

MECHANICAL GENERAL NOTES:

1. DO NOT SCALE FROM THESE DRAWINGS.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE AND ADOPTED REGULATIONS INCLUDING BUT NOT LIMITED TO NATIONAL, CITY, STATE, LOCAL CODES AND ORDINANCES WHICH MAY BE IN EFFECT. ALL MECHANICAL MATERIALS, INSTALLATION PROCEDURES AND SYSTEM LAYOUTS SHALL BE APPROVED BY ALL APPLICABLE CODE ENFORCEMENT AUTHORITIES HAVING JURISDICTION. THE MECHANICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FOR THIS INSTALLATION.
3. THE DRAWINGS HAVE BEEN PRODUCED ENTIRELY ON FPA CADD SYSTEM. ANY OTHER LETTERING, LINES OR SYMBOLS, OTHER THAN PROFESSIONAL STAMPS AND SIGNATURES, HAVE BEEN MADE WITHOUT THE AUTHORIZATION OF FPA AND ARE INVALID.
4. REPRODUCTION OF ANY PORTION OF THE CONTRACT DRAWINGS FOR RESUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED AND RETURNED.
5. UPON CONTRACT AWARD, CONTRACTOR SHALL CONTACT LOCAL UTILITY COMPANY TO SCHEDULE ANY UTILITY UPGRADES. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL UTILITY UPGRADES, SECURE ALL PERMITS AND INSPECTIONS.
6. ALL CONNECTIONS TO EXISTING BUILDING SERVICES SHALL BE CAREFULLY COORDINATED WITH THE UTILITY CO AND THE OWNER'S SCHEDULE. SERVICE WORK OF THIS NATURE TO OCCUR DURING UNOCCUPIED BUILDING HOURS. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL EXISTING EQUIPMENT IS OPERATIONAL AFTER ANY SHUTDOWN OCCURS.
7. CHANGES OR SUBSTITUTIONS OF EQUIPMENT WILL NOT BE ALLOWED WITHOUT SPECIFIC WRITTEN APPROVAL FROM THE ARCHITECT OR ENGINEER. ALL COSTS RESULTING FROM THE SELECTION OF OTHER THAN SPECIFIED EQUIPMENT SHALL BE BORNE BY THE CONTRACTOR, INCLUDING, BUT NOT LIMITED TO WORK AFFECTING OTHER CONTRACTORS, THE OWNER, OR RE-DESIGN ISSUES.
8. ALL INDICATED WORK SHALL BE PERFORMED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.
9. DO NOT USE ANY PART OF THE OWNER'S BUILDING AS A SHOP, EXCEPT PARTS DESIGNATED FOR SUCH PURPOSES BY THE OWNER.
10. ALL CONTRACT WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE WRITTEN SPECIFICATIONS FOR THIS PROJECT WHICH ARE CONSIDERED TO BE AN INTEGRAL PART OF THE CONTRACT DOCUMENTS. ALL CONTRACTORS AND SUBCONTRACTORS SHALL MAINTAIN (AT THE JOB SITE) AND REFER TO COPIES OF THE WRITTEN SPECIFICATIONS AS PART OF THESE DRAWINGS. REFER TO THE WRITTEN SPECIFICATIONS IN CONJUNCTION WITH THE PLANS FOR FULL PROJECT SCOPE. IN ALL CASES OF DISCREPANCY BETWEEN PLANS AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN AND WHERE IT IS UNCLEAR, SUCH CASES SHALL BE REFERRED TO THE ENGINEER FOR ADJUDICATION.
11. ANY DISCREPANCIES OR INADEQUACIES WITHIN THESE BID DOCUMENTS OR BETWEEN THESE BID DOCUMENTS AND RELATED PLUMBING, ELECTRICAL, FIRE PROTECTION, ARCHITECTURAL, INTERIOR DECOR AND FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND/OR ENGINEER PRIOR TO BID SUBMISSION.
12. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING HIS BID FOR THE PROPOSED WORK. HE SHALL BE RESPONSIBLE TO VERIFY FIELD CONDITIONS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO SUBMISSION OF BIDS IN WRITING.
13. THE MECHANICAL CONTRACTOR SHALL REVIEW THESE PLANS AND SPECIFICATIONS, AS WELL AS THE RELATED PLUMBING, ELECTRICAL, ARCHITECTURAL, INTERIOR DECOR AND SITE ENGINEERING DRAWINGS TO BECOME FAMILIAR WITH THE FULL PROJECT SCOPE. DURING THE COURSE OF CONSTRUCTION COORDINATION AND ACTUAL CONSTRUCTION, THE MECHANICAL CONTRACTOR SHALL COOPERATE WITH ALL OTHER CONTRACTORS AND TRADES ON THIS PROJECT TO ENSURE A SMOOTH RUNNING AND CAREFULLY COORDINATED INSTALLATION.
14. THE MECHANICAL CONTRACTOR SHALL REVIEW ALL CONTRACT DOCUMENTS, EXISTING CONDITIONS, AND AS-BUILT CONDITIONS PERTAINING TO THE HVAC SYSTEMS. MECHANICAL CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, MATERIAL, PARTS, SUPPLIES AND LABOR TO BALANCE ALL HVAC EQUIPMENT TO OWNER'S SATISFACTION.
15. CONTRACTOR SHALL COORDINATE HIS SCHEDULING WITH THE OWNER AND GENERAL CONTRACTOR TO COMPLY WITH THE OWNER'S USAGE OF THE BUILDING.
16. IF ANY UNEXPECTED DISCOVERY OF SUSPECTED HAZARDOUS MATERIALS IS MADE DURING THE COURSE OF WORK, THE CONTRACTOR SHALL REPORT THE DISCOVERY IMMEDIATELY TO THE OWNER. THE CONTRACTOR SHALL STOP ANY WORK THAT MAY DISTURB THE SUSPECTED HAZARDOUS MATERIAL. CONTRACTOR SHALL RESUME WORK AFTER ALL HAZARDOUS MATERIAL HAS BEEN REMEDIATED.
17. CONTRACTOR RESPONSIBLE FOR THE PROPER CARE OF ALL OWNER'S EQUIPMENT AND/OR FURNISHINGS WHICH ARE REQUIRED TO BE TEMPORARILY REMOVED, STORED OR RELOCATED. CONTRACTOR SHALL REPLACE, REPAIR OR REIMBURSE OWNER FOR ALL DAMAGES TO SUCH PROPERTIES AT FULL REPLACEMENT VALUE AND EQUIVALENCY. CONTRACTOR SHALL ADVISE OWNER FOR DISPOSITION OF REMOVED EQUIPMENT AND/OR MATERIALS.
18. CONTRACTOR'S WORK MAY BE REQUIRED OUTSIDE OF DESIGNATED SPACE. ALL SYSTEMS BEING DEMOLISHED AND REMOVED, MODIFIED, AND/OR TERMINATED SHALL BE FIELD VERIFIED TO INSURE NO WORK PERFORMED, INSIDE OR OUTSIDE OF THE DESIGNATED SPACE, SHALL DISRUPT ANY SERVICE OR SYSTEMS OF ANY OTHER AREAS. IF ANY CONDITIONS ARISE THAT ARE NOT IDENTIFIED ON DRAWINGS, IMMEDIATE NOTIFICATION SHALL BE PROVIDED TO THE ENGINEER OR OWNER. NO WORK SHALL PROCEED WITHOUT APPROVALS FROM ENGINEER OR OWNER.
19. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND MAY HAVE TO BE ADAPTED TO COMPLY WITH EXISTING BUILDING CONDITIONS. CONTRACTOR SHALL SUBMIT HVAC SHOP DRAWINGS, INDICATING LOCATIONS, AND ROUTING OF DUCTS, PIPING, AND WIRING.
20. DUCTING AND PIPING SHOWN ON DRAWINGS SHOW THE GENERAL RUN AND CONNECTIONS AND MAY OR MAY NOT IN ALL PARTS BE SHOWN IN ITS EXACT POSITION. CONTRACTOR SHALL BE RESPONSIBLE FOR ERECTING THE DUCTING/PIPING SUITABLE IN EVERY RESPECT FOR THE WORK. DUCTWORK/PIPING SHALL BE INSTALLED SO THAT ACCESS, CLEARANCE, HEADROOM AND PITCH ARE MAINTAINED. CONTRACTORS OF THE VARIOUS TRADES SHALL COORDINATE THE INSTALLATION. MECHANICAL CONTRACTOR SHALL REVIEW ARCHITECTURAL DRAWINGS FOR CHASE AND SOFFIT LOCATIONS TO COORDINATE ALL EXPOSED DUCTWORK & PIPE ROUTING.
21. ALL CONTRACTORS SHALL PROVIDE CUTTING AND PATCHING FOR THEIR RESPECTIVE TRADES.
22. REMOVE AND REINSTALL CEILING SYSTEM AS REQUIRED FOR THE INSTALLATION OF MECHANICAL WORK AND REPLACE IN KIND ANY COMPONENTS DAMAGED BY PERSONNEL OR EQUIPMENT DURING PERFORMANCE OF THE WORK. PATCH AND REPAIR ALL DAMAGE CAUSED BY REMOVAL, MATCH EXISTING ADJACENT SURFACES.
23. ALL MECHANICAL EQUIPMENT AND APPLIANCES SHALL BEAR THE LABEL OF AN APPROVING AGENCY. LISTING AND LABELING AGENCY QUALIFICATIONS: A "NATIONALLY RECOGNIZED TESTING LABORATORY" AS DEFINED IN THE INTERNATIONAL MECHANICAL CODE, LATEST ADOPTED EDITION.
24. ALL PENETRATIONS THRU FIRE RATED WALLS, FLOORS, AND CEILINGS SHALL BE SEALED WITH A UL APPROVED FIRESTOP MATERIAL SUITABLE FOR CONSTRUCTION MATERIAL TO MAINTAIN FIRE, SMOKE, AND DRAFT INTEGRITY OF STRUCTURE. FIRE RESISTANT SEALER SHALL BE TESTED IN ACCORDANCE WITH ASTM E84. INSTALL SEALANT, INCLUDING FOAMING, PACKING AND OTHER ACCESSORY MATERIALS TO FILL OPENINGS WHERE FIRE-RATED WALL PENETRATIONS OCCUR. COMPLY WITH INSTALLATION REQUIREMENTS ESTABLISHED BY TESTERS AND INSPECTION AGENCY.
25. ALL CONTRACTORS REMOVING OR RELOCATING ANY EQUIPMENT, PIPES, DUCTS, CONDUITS, ETC SHALL PATCH ALL SURFACES DISTURBED BY THIS WORK TO MATCH ADJACENT SURFACES.
26. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER HANDLING, DISPOSAL & ASSOCIATED COSTS OF ALL REFRIGERANT MATERIAL DURING THIS CONTRACT, IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES AND/OR REGULATIONS.
27. UPON AWARD OF CONTRACT AND SUBSEQUENT REVIEW & RELEASE OF BOILER SHOP DRAWINGS BY ENGINEER OF RECORD, THE CONTRACTOR SHALL FILL OUT AND FILE AIR PERMIT APPLICATIONS REPORT IN A TIMELY MANNER FOR ALL BOILERS. THE CONTRACTOR SHALL ALSO FILL OUT AND FILE INSTALLER/SERVICE VERIFICATION OF FUNCTION TESTING AND OPERATION OF CONTROLS AND SAFETY DEVICES FOR ALL BOILERS. THE CONTRACTOR SHALL PAY ALL FEES FOR THE PERMITS AND INSPECTIONS. PROVIDE THE OWNER AND ENGINEER EACH WITH A COPY OF FILLED OUT FORMS PRIOR TO MAILING. CONTRACTOR MUST SECURE PERMIT PRIOR TO PROJECT CLOSEOUT. SEND FORMS ALONG WITH NJDEP'S REQUIRED FEE TO: NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY BUREAU OF SOURCE REVIEW, CN-27, TRENTON, NEW JERSEY 08625-0027.
28. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL A LOCKABLE DISCONNECT SWITCH AT BOILER BURNER/BURNER.
29. THE MECHANICAL CONTRACTOR SHALL MOUNT THE DUCT SMOKE DETECTOR. THE ELECTRICAL CONTRACTOR TO PROVIDE AND WIRE DUCT MOUNTED SMOKE DETECTOR. ELECTRIC CONTRACTOR SHALL ALSO PROVIDE AND WIRE A REMOTE MONITORING KEY OPERATED TEST AND ALARM STATION FOR EACH DUCT SMOKE DETECTOR. THE REMOTE TEST ALARM STATION SHALL BE MOUNTED AS DIRECTED IN THE AREA OF THE SMOKE DETECTOR.
30. THE MECHANICAL CONTRACTOR TO PROVIDE ALL ROOF CURBS, EQUIPMENT RAILS, SUPPORTS, ROOF PORTALS, AND ASSOCIATED EQUIPMENT TO ENSURE A COMPLETE INSTALLATION FOR NEW HVAC EQUIPMENT. MECHANICAL CONTRACTOR RESPONSIBLE TO PROVIDE EXACT LOCATIONS AND REVIEW AND RELEASED EQUIPMENT SUBMITTALS, OF ROOF CURBS, EQUIPMENT SUPPORTS, ROOF PORTALS, AND ASSOCIATED EQUIPMENT TO THE ARCHITECT. ALL ROOF PENETRATIONS, EQUIPMENT SUPPORTS, ROOF PORTALS AND ASSOCIATED EQUIPMENT SHALL BE INSTALLED BY ROOFING SUB-CONTRACTOR. ROOFING CONTRACTOR SHALL BE BONDED AND ALL WORK SHALL BE DONE SO AS NOT TO VOID ROOF WARRANTY. ROOFING CONTRACTOR SHALL PROVIDE BASE FLASHING, AND PROVIDE TEMPORARY WEATHER-PROOF COVERS UNTIL MECHANICAL CONTRACTOR INSTALLS NEW HVAC UNITS. MECHANICAL CONTRACTOR TO PROVIDE COUNTER FLASHING.
31. FURNISH TO THE ELECTRICAL CONTRACTOR ALL MOTOR STARTERS AND CONTROL DEVICES FOR MECHANICAL EQUIPMENT. ELECTRICAL CONTRACTOR SHALL INSTALL AND WIRE STARTER AND CONTROL EQUIPMENT FOR ALL MOTORS. CONTRACTOR SHALL ENGAGE CONTROL VENDOR AND EQUIPMENT MANUFACTURERS CONTROLS TECHNICIAN TO PROVIDE ACCESS AND INTEGRATION OF ALL AVAILABLE CONTROLS POINTS INTO THE BUILDING MANAGEMENT SYSTEM.
32. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL CONTROLLERS, ACTUATORS, TRANSFORMERS, SENSORS, RELAYS, CONTACTS, PANELS, CONDUIT, WIRING, ETC AS REQUIRED TO ACHIEVE SPECIFIED CONTROL SEQUENCE. WHERE LOCATING DEVICES ON EXISTING SURFACES, IF RECESSED WIRING CANNOT BE ACCOMMODATED (I.E. PRECAST, PRE-FAB PANELS, ETC.) INCLUDE WIRE MOLD AS NECESSARY TO PROVIDE CONCEALED INSTALLATION. CONNECT TO EXISTING CM3 BUILDING SOLUTION HONEYWELL SPIDER BUILDING CONTROL SYSTEM. BMS CONTROL VENDOR: PETE GREGORY CM3 BUILDING SOLUTION (PHONE: 215-322-8400); HONEYWELL NIAGARA 4 PLATFORM BUILDING SOLUTIONS AUTOMATION SYSTEM, AND PROVIDE CONTROLLABILITY OF ALL MECHANICAL EQUIPMENT WITH ASSOCIATED GRAPHICS AND PROVIDE SECURE REMOTE WEB ACCESS FOR SETPOINTS AND SCHEDULING ADJUSTMENT FOR OCCUPIED AND UNOCCUPIED MODES OF HEATING AND COOLING.
33. ALL HVAC EQUIPMENT CONTAINING COOLING (EVAPORATOR) COILS SHALL HAVE CONDENSATE MONITORING FOR OVERFLOW PROTECTION FOR PRIMARY OR SECONDARY DRAIN PANS AS APPLICABLE. SUCH DEVICES SHALL BE LABELED TO COMPLY WITH UL #508, AND SHALL SHUT DOWN COOLING SYSTEM AND SIGNAL BMS SYSTEM IF APPLICABLE.
34. ALL FAN POWERED HEATING OR COOLING AIR SYSTEMS SHALL INCLUDE ACCESSIBLE RETURN AIR FILTRATION TO PROTECT FAN COMPONENTS. MINIMUM MERV-13 PLEATED FILTERS TYPICAL.
35. ALL SPACE SENSORS; IE. TEMPERATURE, CARBON DIOXIDE, HUMIDITY, ETC., SHALL BE MOUNTED AT 48" AFF TO MEET ADA REQUIREMENTS. COORDINATE THE LOCATION OF THERMOSTAT WITH OTHER TRADE.
36. PROVIDE TAMPER PROOF COVERS FOR ALL TEMPERATURE SENSORS. PROVIDE TG500 SERIES VENTED GUARD, CLEAR, OR ENGINEER APPROVED EQUAL, ON ALL TEMPERATURE SENSORS. AVAILABLE FROM WWW.KELE.COM, 888-397-5353.
37. PROVIDE WIRE GUARD COVERS ON ALL SPACE SENSORS. BASIS-OF-DESIGN AMERICAN TIME INTEGRATED SOLUTIONS; OR ENGINEERED APPROVED EQUAL. AVAILABLE FROM WWW.AMERICAN-TIME.COM, 800-328-8996.
38. PROVIDE GAS PIPING SUPPORTS ON ROOF AT ALL DIRECTION CHANGES AND STRAIGHT RUNS WITH SPACING NOT EXCEEDING LENGTHS STATED IN TABLE 415.1 OF IFGC, LATEST ADOPTED EDITION. FOR MATERIALS AND LISTED PIPE SIZES. SUPPORTS SHALL BE SADDLE BLOCK ROLLER TYPE WITH PIPE SECURED TO STAND WITH CLAMP OR METAL BAND. SUPPORT SHALL NOT BE SECURED TO ROOF SURFACE. BOTTOM OF PIPING SHALL BE MINIMUM 3 1/2" ABOVE ROOF SURFACE.
39. ALL EXPOSED HORIZONTAL AND VERTICAL PIPING SHALL BE INSTALLED IN A NEAT ARRANGEMENT IN LOCATIONS WHICH ARE THE MOST INCONSPICUOUS. VERTICAL DROPS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND THEIR FINAL LOCATIONS SHALL BE COORDINATED AND RUN WITHIN CHASES, WALLS OR SOFFITS WITH OTHER PLUMBING/ ELECTRICAL FEEDS. MECHANICAL CONTRACTOR SHALL REVIEW ARCHITECTURAL DRAWINGS FOR CHASE & SOFFIT LOCATIONS TO COORDINATE ALL EXPOSED PIPING ROUTING. PROVIDE PIPE ENCLOSURE FOR ALL EXPOSED PIPING LOCATED OUTSIDE THE MECHANICAL ROOM. ALL SUCH LOCATIONS SHALL BE REVIEWED WITH ARCHITECT/ENGINEER PRIOR TO INSTALLATION. PROVIDE MINIMUM 2 COATS MARINE GRADE EPOXY PRIMER AND 2 COATS OF INTERIOR/EXTERIOR GRADE PAINT. COORDINATE WITH ARCHITECT FOR COLOR SELECTION. SEE SPECIFICATION FOR ADDITIONAL INFORMATION.
40. ALL PIPING SHALL BE ORGANIZED NEATLY AND KEPT TIGHT TO WALLS AND CEILINGS.
41. FURNISH AND INSTALL PIPE SLEEVES OR SLEEVE SEAL SYSTEMS AS REQUIRED. SEE SPECIFICATION FOR DETAILS.
42. GRAVITY CONDENSATE PIPING SHALL BE PITCHED MINIMUM 1/8" PER FOOT.
43. ALL CONDENSATE DRAIN PIPING CONNECTION TO CONDENSATE DRAIN RISERS SHALL BE PROVIDED WITH WYE TYPE FITTINGS.
44. ALL DUCTWORK SHALL BE CONNECTED TO MOTORIZED EQUIPMENT WITH FLEXIBLE DUCT CONNECTORS.
45. ALL RIGID DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET STEEL. FABRICATION OF DUCTWORK AND INSTALLATION SHALL BE IN ACCORDANCE WITH SMACNA STANDARDS AND RECOMMENDATIONS.
46. ALL DUCTWORK SIZES SHOWN ON DRAWINGS ARE CLEAR INTERNAL DIMENSIONS.
47. ALL INTERIOR DUCTWORK SHALL HAVE DUCT LINER. SEE SPECIFICATION FOR DETAILS.
48. ALL INTERIOR DUCTWORK EXPOSED WITHIN FINISHED SPACES SHALL BE FACTORY FABRICATED DOUBLE WALLED SPIRAL SEAM WITH INTERSTITIAL INSULATION. SEE SPECIFICATION FOR DETAILS. ALL EXPOSED DUCTWORK SHALL HAVE STICKERS AND LABELS REMOVE AND PREPARED FOR PAINT. PAINT ALL EXPOSED INDOOR DUCTWORK, REGISTERS/DIFFUSERS, HANGER AND SUPPORTS. PROVIDE MINIMUM 2 COATS PRIMER AND 2 COATS OF INTERIOR GRADE PAINT. COORDINATE WITH ARCHITECT FOR COLOR SELECTION.
49. ALL INTERIOR DUCTWORK CONCEALED OR EXPOSED IN NON-FINISHED AREA, EG ATTIC, ABOVE CEILING, ETC. SHALL BE SINGLE WALLED SPIRAL SEAM EXTERNALLY INSULATED WITH FLEXIBLE DUCTWRAP AND VAPOR BARRIER. SEE SPECIFICATIONS FOR DETAILS.
50. ALL FLEXIBLE DUCTWORK SHALL BE CLASS I, LABELED UL 181. SEE SPECIFICATIONS FOR DETAILS. FLEXIBLE DUCTWORK SHALL NOT BE ACCEPTABLE FOR NEGATIVE PRESSURE APPLICATIONS. FLEXIBLE DUCTWORK SHALL NOT BE ACCEPTABLE FOR NEGATIVE PRESSURE APPLICATION. FLEXIBLE DUCTWORK SHALL BE LIMITED TO 5'-0".
51. ALL EXTERIOR DUCTWORK SHALL HAVE DUCT LINER AND EXTERNAL RIGID INSULATION AND BE COVERED WITH SELF ADHERING PREFABRICATED PROTECTIVE MEMBRANE THAT IS UV AND OZONE RESISTANT. THIS JACKETING SHALL BE FIELD APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. SEE SPECIFICATION FOR DETAILS.
52. DURING THE INSTALLATION OF MECHANICAL EQUIPMENT AND ASSOCIATED SYSTEMS, THE CONTRACTOR SHALL IDENTIFY ANY DAMAGE TO FIREPROOFING MATERIAL CAUSED BY WORK OF THE TRADE. THE CONTRACTOR SHALL PROVIDE WRITTEN REPORT DESIGNATION LOCATIONS, TO GENERAL CONTRACTOR, BEFORE FIREPROOFING IS COVERED BY SUBSEQUENT CONSTRUCTION.
53. THE MECHANICAL CONTRACTOR SHALL PROVIDE A COMPLETE SET OF "AS-BUILT" DRAWINGS INDICATING THE PRECISE LOCATION OF ALL SYSTEMS, EQUIPMENT, DUCTWORK, PIPING AND ACCESS DOORS. THESE PLANS SHALL ALSO INCLUDE ALL CHANGES AND DEVIATIONS FROM BID DOCUMENTS.
54. ALL ROOFTOP EQUIPMENT THAT REQUIRES SERVICE SHALL BE LOCATED AT A MINIMUM OF 10'-0" FROM ROOF'S EDGE. GUARDS SHALL BE PROVIDED FOR EQUIPMENT LOCATED WITHIN 10'-0" OF ROOF EDGE. THE GUARDS SHALL BE NOT LESS THAN 42 INCHES IN HEIGHT AND SHALL EXTEND NOT LESS THAN 10'-0" BEYOND EACH END COMPONENT OF EQUIPMENT THAT REQUIRES SERVICE.
55. ALL HVAC EQUIPMENT SHALL BE PROVIDED WITH MERV 13 FILTERS. EQUIPMENT THAT REQUIRES MERV 13 FILTERING INCLUDE BUT NOT LIMITED TO: PACKAGED ROOF TOP UNITS, ENERGY RECOVERY UNITS, CASSETTE TYPE HEAT PUMPS, AND FAN POWERED VARIABLE AIR VOLUME TERMINAL UNITS.
56. AFTER COMPLETING SYSTEM INSTALLATION, TESTING, ADJUSTING, AND BALANCING UNIT AND AIR-DISTRIBUTION SYSTEMS, CLEAN FILTER HOUSINGS AND PROVIDE NEW FILTERS FOR ALL HVAC EQUIPMENT. EQUIPMENT THAT REQUIRE FILTER CHANGE INCLUDE BUT NOT LIMITED TO: PACKAGED ROOF TOP UNITS, ENERGY RECOVERY UNITS, ENERGY RECOVERY VENTILATORS, DUCTED INDOOR HEAT PUMPS, FAN COIL UNITS, CASSETTE TYPE HEAT PUMPS, AIR HANDLING UNITS, UNIT VENTILATORS AND FAN POWERED VARIABLE AIR VOLUME TERMINAL UNITS.

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Architect — Date

NJDCA Electronic Release Stamp

Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number
5516D

Project Date
10.10.2025

Checked By
MV

Drawn By
VA

Scale
AS NOTED

Drawing Name
MECHANICAL SYMBOLS, NOTES, & ABBREVIATIONS

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

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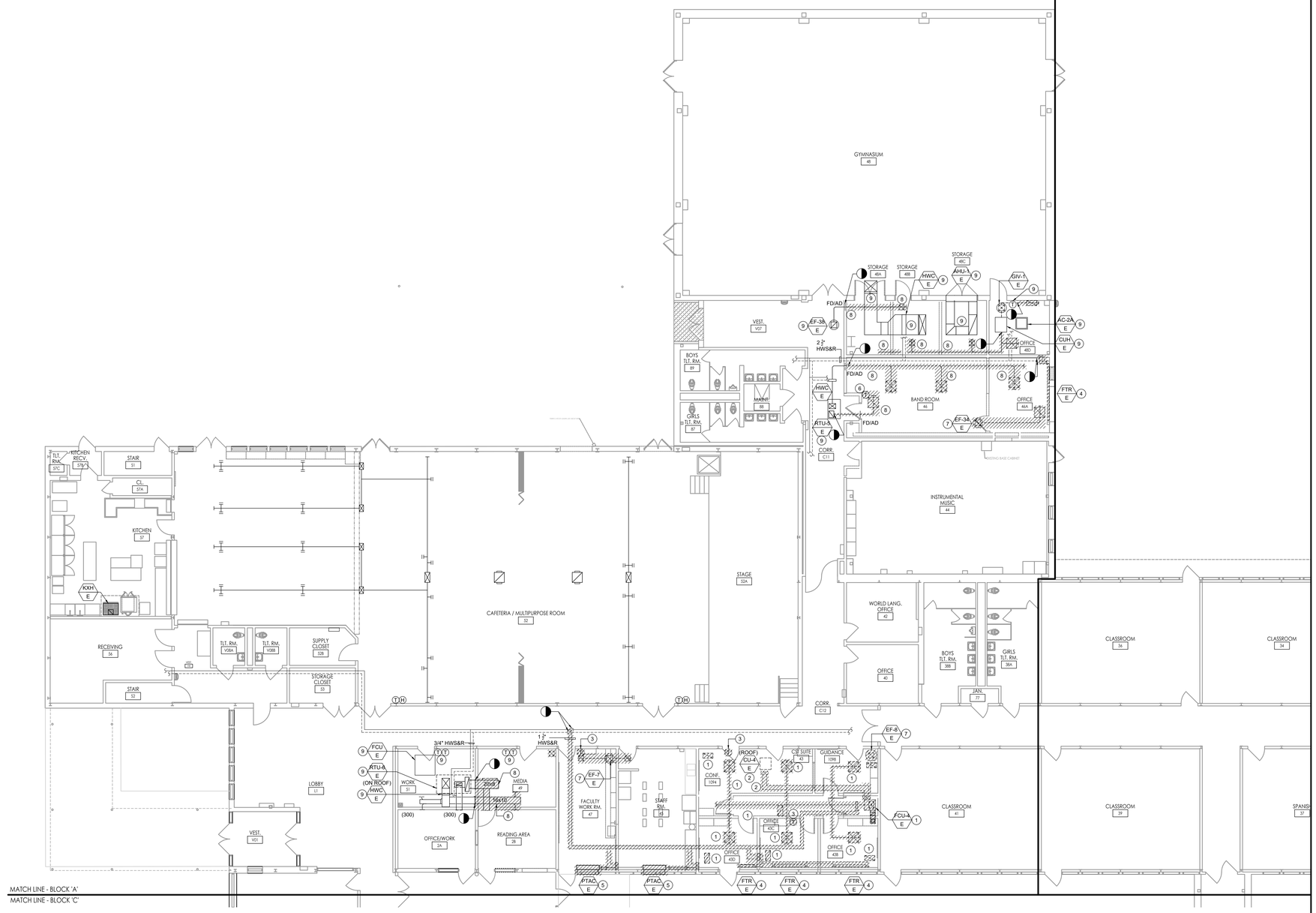


DEMOLITION PLAN - BLOCK A

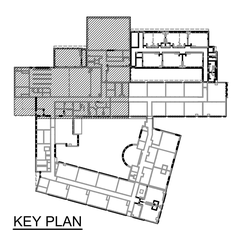
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR NOTES AND DETAILS PERTAINING TO ROOFING, STRUCTURAL, GENERAL CONSTRUCTION, ETC.
2. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES . AVOID CONFLICTS WITH OTHER TRADES AND EXISTING CONDITIONS. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES AND MARK OUT THEIR LOCATIONS PRIOR TO COMMENCING WORK. CONTRACTOR SHALL CONTRACT THE SERVICES OF A PRIVATE UTILITY LOCATOR COMPANY TO MARK OUT ALL EXISTING UNDERGROUND UTILITIES IN THE PROJECT AREA PRIOR TO COMMENCING ANY WORK AND PROVIDE EXISTING CONDITIONS PLAN TO THE OWNER AND ENGINEER.
3. REMOVE AND REINSTALL CEILING SYSTEM AS REQUIRED FOR THE INSTALLATION OF MECHANICAL WORK AND REPLACE IN KIND ANY COMPONENTS DAMAGED BY PERSONNEL OR EQUIPMENT DURING PERFORMANCE OF THE WORK. PATCH AND REPAIR ALL DAMAGE CAUSED BY REMOVAL, MATCH EXISTING ADJACENT SURFACES.
4. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE PROTECTED THROUGH ALL PHASES OF CONSTRUCTION. UPON COMPLETION OF ALL PHASES OF CONSTRUCTION, CONTRACTOR SHALL CLEAN UNIT, ALL COILS AND REPLACE FILTERS.
5. IF UNITS ARE RUNNING DURING ANY PHASE OF CONSTRUCTION CONTRACTOR SHALL REPLACE FILTERS WEEKLY.

DEMOLITION KEY NOTES

1. REMOVE AND DISCARD EXISTING UNIT, CONDENSING UNIT, CONTROLS, DUCTWORK, HOT WATER COIL, DAMPERS, REGISTERS/DIFFUSERS, SUPPORTS, GRAVITY ROOF, INTAKE VENT AND ALL ASSOCIATED ACCESSORIES. REMOVE HOT WATER SUPPLY AND RETURN PIPING WITH ASSOCIATED VALVES, CONTROLS, ETC BACK TO RESPECTIVE MAIN AND CAP. PROVIDE TEMPORARY WEATHERPROOFING AT EXISTING OPENINGS. PATCH AND INFILL ALL OPENINGS AND SURFACES DISTURBED BY THIS WORK TO MATCH ADJACENT SURFACES. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
2. REMOVE AND DISCARD THE EXISTING CONDENSING UNIT, SUPPORTS, CONTROLS AND ALL ASSOCIATED ACCESSORIES. REMOVE AND DISCARD THE REFRIGERANT PIPING, SUPPORT, & ALL ASSOCIATED ACCESSORIES. PROVIDE THE CURB CAP ON EXISTING PIPE PORTAL. REFER TO DETAIL FOR ADDITIONAL INFORMATION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. REMOVE AND DISCARD EXISTING THERMOSTAT, CONTROL WIRING/TUBING, ETC. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
4. REMOVE AND DISCARD EXISTING FIN TUBE, FIN TUBE COVER, SUPPORTS AND ALL ASSOCIATED ACCESSORIES. EXISTING HOT WATER PIPING, VALVES, SUPPORTS, ETC. TO BE REMOVED BACK TO MAIN AND CAPPED. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
5. REMOVE AND DISCARD EXISTING UNIT, LOUVER, THERMOSTAT, WIRING AND CONTROLS, SUPPORTS AND ALL ASSOCIATED ACCESSORIES. REMOVE AND DISCARD THE EXISTING HWS/R PIPING TO RESPECTIVE MAIN & CAP. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
6. REMOVE AND RELOCATE THE EXISTING THERMOSTATS TO NEW LOCATION. MODIFY AND EXTEND THE EXISTING CONTROL WIRING, CONDUIT ETC. AS REQUIRED TO NEW LOCATION. SEE NEW WORK PLAN FOR ADDITIONAL INFORMATION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
7. REMOVE AND DISCARD EXISTING EXHAUST FAN, DUCTWORK, DAMPERS, REGISTERS/DIFFUSERS, SUPPORTS AND ALL ASSOCIATED ACCESSORIES. PATCH THE EXISTING ROOF PENETRATION TO MATCH EXISTING SURFACES. PROVIDE TEMPORARY WEATHERPROOFING AT EXISTING OPENING. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
8. REMOVE AND DISCARD THAT PORTION OF EXISTING DUCTWORK INCLUDING DAMPERS, SUPPORTS AND ALL ASSOCIATED ACCESSORIES AS SHOWN. MAKE REMAINING DUCTWORK READY FOR CONNECTION TO NEW. SEE FLOOR PLAN FOR ADDITIONAL INFORMATION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
9. EXISTING UNIT TO REMAIN & ASSOCIATED CONTROLS.



KEY PLAN
NOT TO SCALE

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Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number
5516D

Project Date
10.10.2025

Checked By
MV

Drawn By
VA

Scale
AS NOTED

Drawing Name
MECHANICAL DEMOLITION PLAN - BLOCK A

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number
M2.0

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BLOCK C

DEMOLITION PLAN - BLOCK C

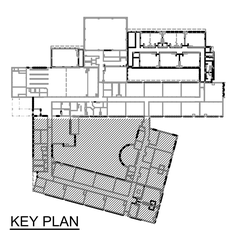
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR NOTES AND DETAILS PERTAINING TO ROOFING, STRUCTURAL, GENERAL CONSTRUCTION, ETC.
2. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES . AVOID CONFLICTS WITH OTHER TRADES AND EXISTING CONDITIONS. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES AND MARK OUT THEIR LOCATIONS PRIOR TO COMMENCING WORK. CONTRACTOR SHALL CONTRACT THE SERVICES OF A PRIVATE UTILITY LOCATOR COMPANY TO MARK OUT ALL EXISTING UNDERGROUND UTILITIES IN THE PROJECT AREA PRIOR TO COMMENCING ANY WORK AND PROVIDE EXISTING CONDITIONS PLAN TO THE OWNER AND ENGINEER.
3. REMOVE AND REINSTALL CEILING SYSTEM AS REQUIRED FOR THE INSTALLATION OF MECHANICAL WORK AND REPLACE IN KIND ANY COMPONENTS DAMAGED BY PERSONNEL OR EQUIPMENT DURING PERFORMANCE OF THE WORK. PATCH AND REPAIR ALL DAMAGE CAUSED BY REMOVAL, MATCH EXISTING ADJACENT SURFACES.
4. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE PROTECTED THROUGH ALL PHASES OF CONSTRUCTION. UPON COMPLETION OF ALL PHASES OF CONSTRUCTION, CONTRACTOR SHALL CLEAN UNIT, ALL COILS AND REPLACE FILTERS.
5. IF UNITS ARE RUNNING DURING ANY PHASE OF CONSTRUCTION CONTRACTOR SHALL REPLACE FILTERS WEEKLY.

DEMOLITION KEY NOTES

1. REMOVE AND DISCARD EXISTING EXHAUST FAN, DUCTWORK, DAMPERS, REGISTERS/DIFFUSERS, SUPPORTS AND ALL ASSOCIATED ACCESSORIES. REFER TO ROOF DEMO PLAN FOR ADDITIONAL INFORMATION. PROVIDE TEMPORARY WEATHERPROOFING AT EXISTING OPENING. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
2. REMOVE AND DISCARD THAT PORTION OF EXISTING DUCTWORK INCLUDING DAMPERS, SUPPORTS AND ALL ASSOCIATED ACCESSORIES AS SHOWN AND CAP AIRTIGHT. SEE FLOOR PLAN FOR ADDITIONAL INFORMATION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
3. REMOVE AND DISCARD THAT PORTION OF EXISTING REGISTERS, DUCTWORK INCLUDING DAMPERS, SUPPORTS AND ALL ASSOCIATED ACCESSORIES AS SHOWN. SEAL THE REMAINING DUCTWORK AIRTIGHT . PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
4. EXISTING UNIT TO REMAIN.



KEY PLAN

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Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	MV
Drawn By	VA
Scale	AS NOTED

Drawing Name

MECHANICAL DEMOLITION PLAN - BLOCK C

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

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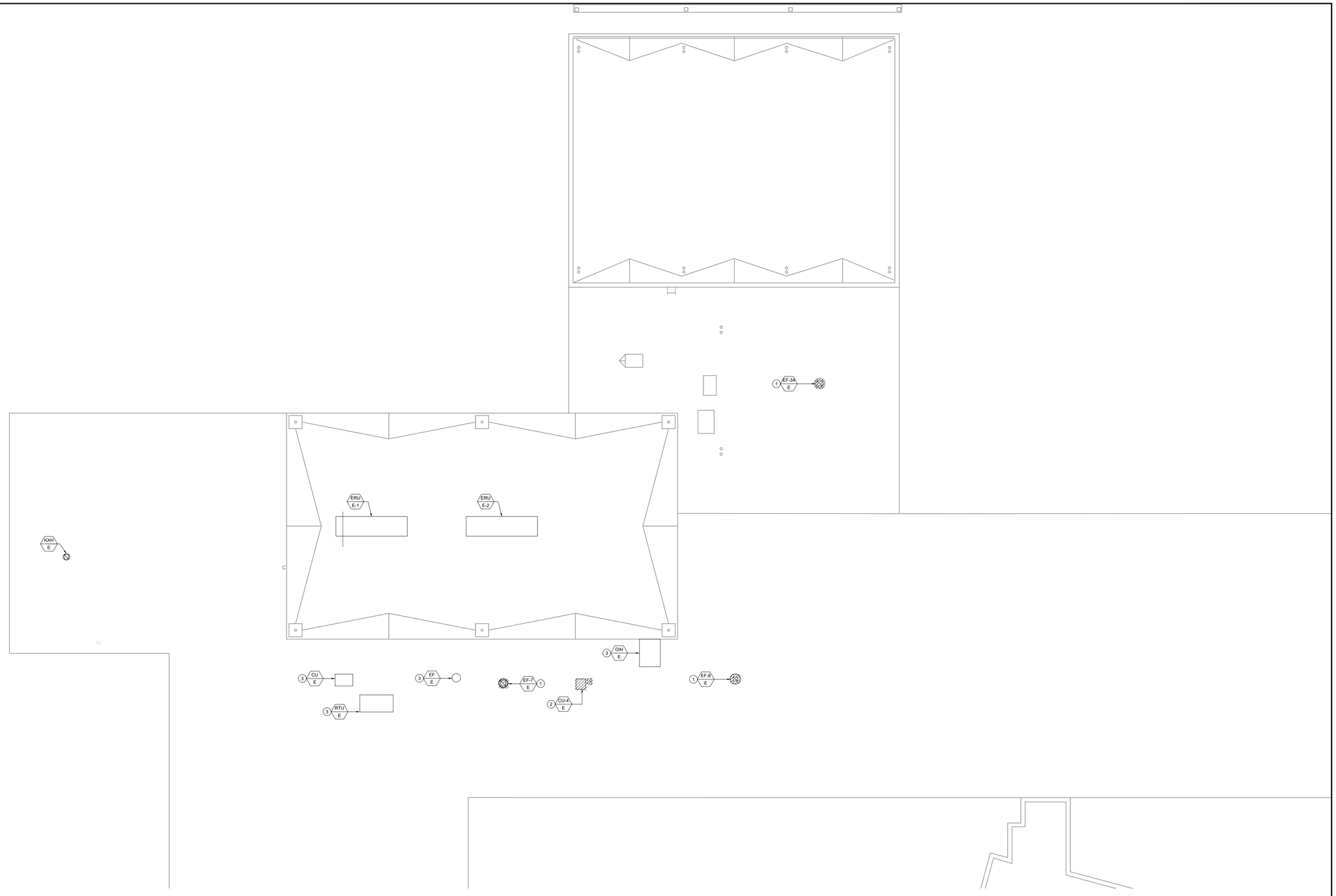
Drawing Number

M2.1



DEMOLITION PLAN - BLOCK A

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

SHEET NOTES

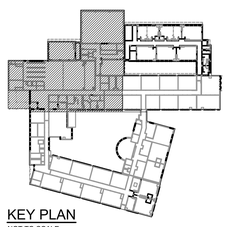
1. REFER TO ARCHITECTURAL DRAWINGS FOR NOTES AND DETAILS PERTAINING TO ROOFING, STRUCTURAL, GENERAL CONSTRUCTION, ETC.
2. REMOVE AND REINSTALL CEILING SYSTEM AS REQUIRED FOR THE INSTALLATION OF MECHANICAL WORK AND REPLACE IN KIND ANY COMPONENTS DAMAGED BY PERSONNEL OR EQUIPMENT DURING PERFORMANCE OF THE WORK. PATCH AND REPAIR ALL DAMAGE CAUSED BY REMOVAL, MATCH EXISTING ADJACENT SURFACES.
3. PROVIDE AND INSTALL METAL PIPE ENCLOSURE SYSTEM ON ALL EXPOSED PIPING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE PROTECTED THROUGH ALL PHASES OF CONSTRUCTION. UPON COMPLETION OF ALL PHASES OF CONSTRUCTION, CONTRACTOR SHALL CLEAN UNIT, ALL COILS AND REPLACE FILTERS.
5. IF UNITS ARE RUNNING DURING ANY PHASE OF CONSTRUCTION CONTRACTOR SHALL REPLACE FILTERS WEEKLY.

DEMOLITION KEY NOTES

(1) REMOVE AND DISCARD EXISTING EXHAUST FAN. EXISTING CURB TO REMAIN. PROVIDE AND INSTALL NEW WEATHER TIGHT CAP ON EXISTING CURB. SEE DETAIL FOR ADDITIONAL INFORMATION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

(2) REMOVE AND DISCARD THE EXISTING CONDENSING UNIT, REFRIGERANT PIPING, SUPPORTS, CONTROLS AND ALL ASSOCIATED ACCESSORIES. PROVIDE CURB CAP ON EXISTING PIPE PORTAL. REFER TO DETAIL FOR ADDITIONAL INFORMATION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.

(3) EXISTING TO REMAIN.



KEY PLAN

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Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number
5516D

Project Date
10.10.2025

Checked By
MV

Drawn By
VA

Scale
AS NOTED

Drawing Name
MECHANICAL ROOF DEMOLITION PLAN - BLOCK A

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number
M2.2

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DEMOLITION PLAN - BLOCK C

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

SHEET NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR NOTES AND DETAILS PERTAINING TO ROOFING, STRUCTURAL, GENERAL CONSTRUCTION, ETC.
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DEMOLITION KEY NOTES

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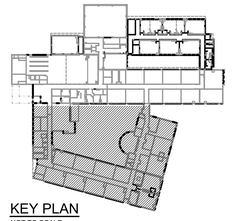

KEY PLAN

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William D. Hopkins 2/12/26
Architect Date

Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number

5516D

Project Date

10.10.2025

Checked By

MV

Drawn By

VA

Scale

AS NOTED

Drawing Name

MECHANICAL ROOF DEMOLITION PLAN - BLOCK C

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number

M2.3

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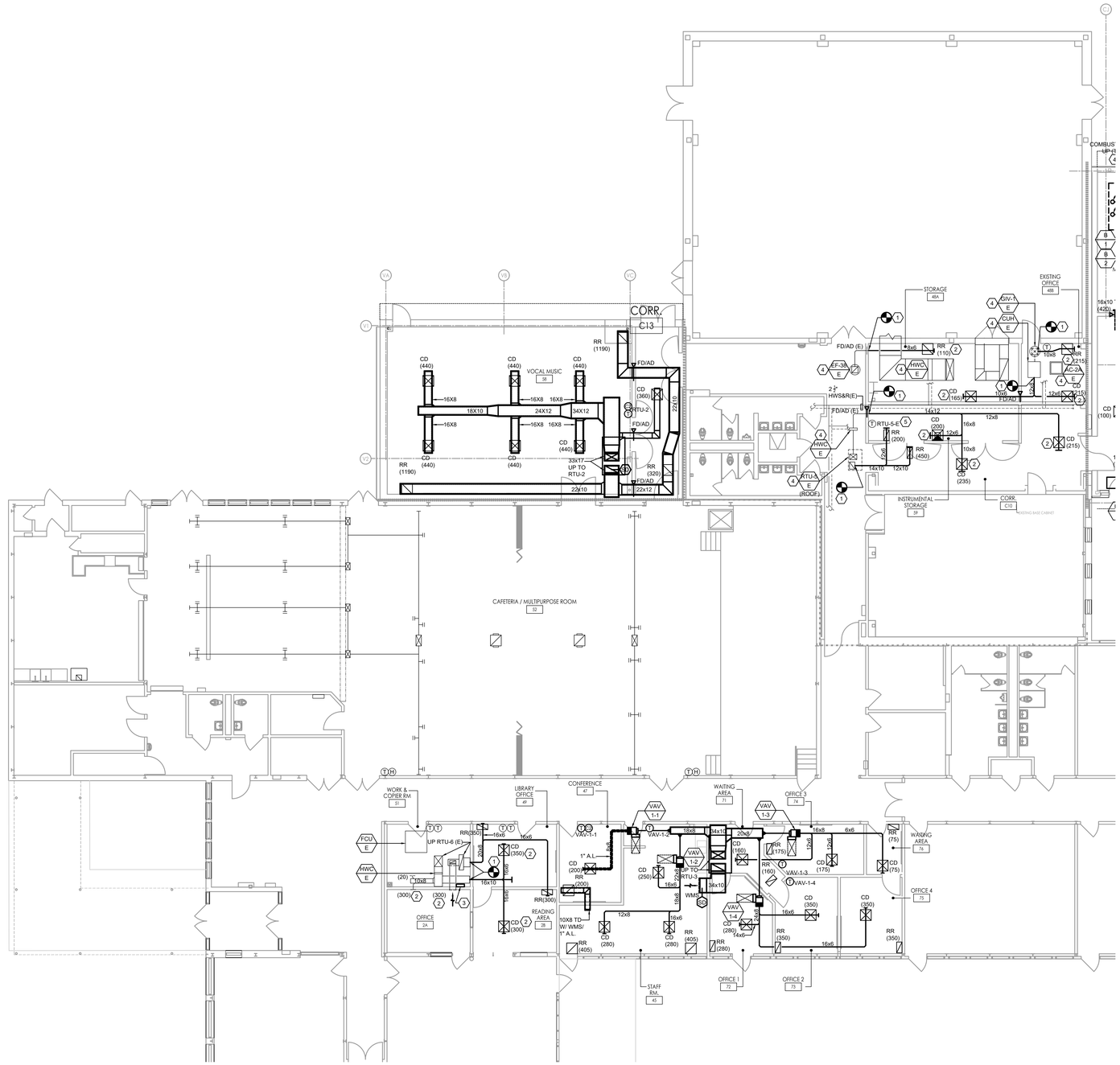


GENERAL NOTES

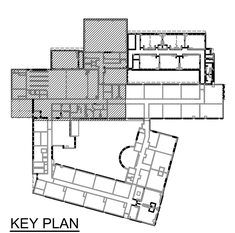
1. REFER TO ARCH AND STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
2. REMOVE AND REINSTALL CEILING SYSTEM AS REQUIRED FOR THE INSTALLATION OF MECHANICAL WORK AND REPLACE IN KIND ANY COMPONENTS DAMAGED BY PERSONNEL OR EQUIPMENT DURING PERFORMANCE OF THE WORK. PATCH AND REPAIR ALL DAMAGE CAUSED BY REMOVAL, MATCH EXISTING ADJACENT SURFACES.
3. PROVIDE AND INSTALL METAL PIPE ENCLOSURE SYSTEM ON ALL EXPOSED PIPING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. PROVIDE NEW DAMPER IN EXISTING DUCTWORK FOR BALANCING. IF DAMPER ALREADY EXIST, REPLACE WITH NEW. SEAL DUCTWORK AIRTIGHT.
5. PROVIDE VOLUME DAMPERS AT EACH BRANCH FOR BALANCING ALL SUPPLY, RETURN AND EXHAUST AIRFLOW DEVICES FOR NEW AND EXISTING. PROVIDE REMOTE CABLE OPERATED VOLUME DAMPERS AS NEEDED FOR BALANCING IN INACCESSIBLE CEILING. REFER TO MECHANICAL DETAILS FOR ADDITIONAL INFORMATION.
6. FINAL MECHANICAL EQUIPMENT LOCATIONS, EQUIPMENT CLEARANCES AND SERVICE ACCESS CLEARANCES TO BE COORDINATED WITH CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL COORDINATION BETWEEN TRADES. COORDINATE FINAL UNIT ORIENTATION TO ENSURE EQUIPMENT SERVICE ACCESS IS PROVIDED.
7. ALL SPACE SENSORS; IE. TEMPERATURE, CARBON DIOXIDE, HUMIDITY, ETC., SHALL BE MOUNTED AT 48" AFF TO MEET ADA REQUIREMENTS. COORDINATE THE FINAL LOCATION OF ALL SPACE SENSORS WITH OTHER TRADE. PROVIDE TAMPER PROOF COVERS FOR ALL TEMPERATURE SENSORS. PROVIDE TG500 SERIES VENTED GUARD, CLEAR; OR ENGINEER APPROVED EQUAL, ON ALL SPACE SENSORS.
8. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE PROTECTED THROUGH ALL PHASES OF CONSTRUCTION. UPON COMPLETION OF ALL PHASES OF CONSTRUCTION CONTRACTOR SHALL CLEAN UNIT, ALL COILS AND REPLACE FILTERS.
9. IF UNITS ARE RUNNING DURING ANY PHASE OF CONSTRUCTION, CONTRACTOR SHALL REPLACE FILTERS WEEKLY.
10. EACH BRANCH DUCTWORK SHALL BE PROVIDED WITH VOLUME DAMPER FOR BALANCING.
11. PROVIDE 1/4" UNDER CUT FOR ALL RESTROOMS, JANITOR CLOSETS, AND TOILETS DOOR FOR AIR TRANSFER.

KEY NOTES

1. CONNECT TO EXISTING MAIN DUCTWORK. FIELD VERIFY THE EXACT LOCATION. PROVIDE TRANSITIONS AS REQUIRED TO MAKE CONNECTION. CONTRACTOR TO SEAL DUCTWORK AIRTIGHT. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
2. REBALANCE THE EXISTING/NEW DIFFUSERS/GRILLES TO CFM NOTED ON PLAN.
3. ATC PANEL LOCATION. COORDINATE THE EXACT LOCATION IN FIELD WITH OWNER. REFER TO ELECTRICAL DRAWINGS FOR TELE-DATA REQUIREMENT.
4. EXISTING TO REMAIN.
5. NEW LOCATION OF EXISTING THERMOSTAT. MOUNT AS REQUIRED TO MEET ADA REQUIREMENTS. INTERLOCK WITH EQUIPMENT INDICATED. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES. PROVIDE TAMPER PROOF ENCLOSURE LOCATED IN CORRIDORS AND COMMON AREAS.

NEW DUCTWORK PLAN - BLOCK A

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



KEY PLAN

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Architect
10/10/25
Date

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Pennsylvania: 140 Whitaker Avenue, Mont Clare - Pennsylvania 19453
F V H D P C . C O M

Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number

5516D

Project Date

10.10.2025

Checked By

MV

Drawn By

VA

Scale

AS NOTED

Drawing Name

MECHANICAL NEW DUCTWORK PLAN - BLOCK A

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number

M3.0

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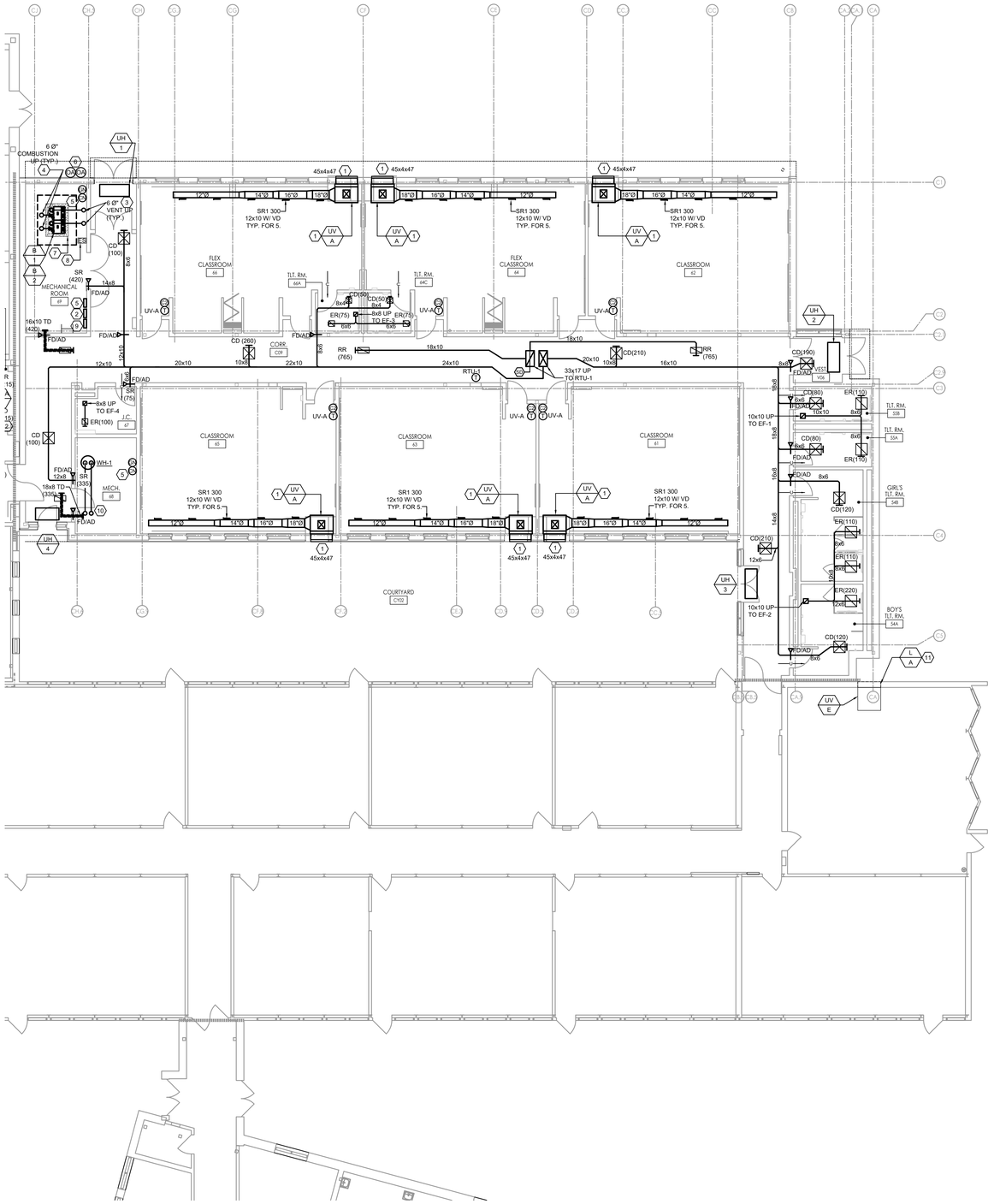


GENERAL NOTES

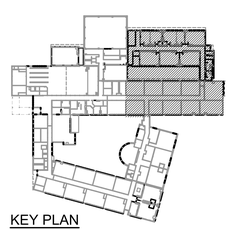
1. REFER TO ARCH AND STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
2. REMOVE AND REINSTALL CEILING SYSTEM AS REQUIRED FOR THE INSTALLATION OF MECHANICAL WORK AND REPLACE IN KIND ANY COMPONENTS DAMAGED BY PERSONNEL OR EQUIPMENT DURING PERFORMANCE OF THE WORK. PATCH AND REPAIR ALL DAMAGE CAUSED BY REMOVAL, MATCH EXISTING ADJACENT SURFACES.
3. PROVIDE AND INSTALL METAL PIPE ENCLOSURE SYSTEM ON ALL EXPOSED PIPING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. PROVIDE NEW DAMPER IN EXISTING DUCTWORK FOR BALANCING. IF DAMPER ALREADY EXIST, REPLACE WITH NEW. SEAL DUCTWORK AIRTIGHT.
5. PROVIDE VOLUME DAMPERS AT EACH BRANCH FOR BALANCING ALL SUPPLY, RETURN AND EXHAUST AIRFLOW DEVICES FOR NEW AND EXISTING. PROVIDE REMOTE CABLE OPERATED VOLUME DAMPERS AS NEEDED FOR BALANCING IN INACCESSIBLE CEILING. REFER TO MECHANICAL DETAILS FOR ADDITIONAL INFORMATION.
6. FINAL MECHANICAL EQUIPMENT LOCATIONS, EQUIPMENT CLEARANCES AND SERVICE ACCESS CLEARANCES TO BE COORDINATED WITH CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL COORDINATION BETWEEN TRADES. COORDINATE FINAL UNIT ORIENTATION TO ENSURE EQUIPMENT SERVICE ACCESS IS PROVIDED.
7. ALL SPACE SENSORS; IE. TEMPERATURE, CARBON DIOXIDE, HUMIDITY, ETC., SHALL BE MOUNTED AT 48" AFF TO MEET ADA REQUIREMENTS. COORDINATE THE FINAL LOCATION OF ALL SPACE SENSORS WITH OTHER TRADE. PROVIDE TAMPER PROOF COVERS FOR ALL TEMPERATURE SENSORS. PROVIDE T0500 SERIES VENTED GUARD, CLEAR, OR ENGINEER APPROVED EQUAL, ON ALL SPACE SENSORS.
8. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE PROTECTED THROUGH ALL PHASES OF CONSTRUCTION. UPON COMPLETION OF ALL PHASES OF CONSTRUCTION CONTRACTOR SHALL CLEAN UNIT, ALL COILS AND REPLACE FILTERS.
9. IF UNITS ARE RUNNING DURING ANY PHASE OF CONSTRUCTION, CONTRACTOR SHALL REPLACE FILTERS WEEKLY.
10. EACH BRANCH DUCTWORK SHALL BE PROVIDED WITH VOLUME DAMPER FOR BALANCING.
11. PROVIDE 1/4" UNDER CUT FOR ALL RESTROOMS, JANITOR CLOSETS, AND TOILETS DOOR FOR AIR TRANSFER.

KEY NOTES

1. PROVIDE NEW UNIT VENTILATOR WITH FACTORY PAINTED 6" REAR EXTENSION, WALL SLEEVE, LOUVER AND SUPPLY DISCHARGE PLENUM FOR TOP SUPPLY AND ALL ASSOCIATED ACCESSORIES. PROVIDE FACTORY SUPPLIED LOUVERS (45AX47" (H)) WITH ALUMINUM CLEAR COAT FINISH AND BIRDSCREEN. INSTALL PER MANUFACTURER RECOMMENDATION. REFER TO SCHEDULE AND SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
2. ATC PANEL LOCATION. COORDINATE THE EXACT LOCATION IN FIELD WITH OWNER. REFER TO ELECTRICAL DRAWINGS FOR TELE-DATA REQUIREMENT.
3. 6" CONDENSING APPLIANCE EXHAUST VENT WITH AERCO EXHAUST MUFFLER UP THRU ROOF. HEATFAB SAF-T VENT CI PLUS; TERMINATE MIN. 72" ABOVE ROOF WITH VELOCITY CONE AND LATERAL SUPPORTS (TYP. 4). PROVIDE AND INSTALL AS PER MANUFACTURER'S RECOMMENDATION AND PER THE LATEST INTERNATIONAL FUEL GAS CODE.
4. 6" COMBUSTION AIR INTAKE UP TO ROOF. TERMINATE DUCT 30 INCHES ABOVE ROOF WITH TEE FITTING AND WIRE MESH SCREEN. PROVIDE AND INSTALL AS PER MANUFACTURER'S RECOMMENDATION AND PER THE LATEST INTERNATIONAL FUEL GAS CODE.
5. PROVIDE GAS DETECTION PANEL AND SENSORS FOR NATURAL GAS AND CO GAS DETECTION. SEE SPECIFICATION FOR MORE INFORMATION.
6. PROVIDE NEW OUTSIDE AIR TEMPERATURE SENSOR FOR EACH NEW BOILER. CONNECT TO NEW BOILERS (B-1, B-2) CONTROL PANEL AS PER MANUFACTURER'S RECOMMENDATION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
7. PROVIDE NEW 6" HIGH CONCRETE HOUSEKEEPING PAD AND 6" LARGER THAN EQUIPMENT FOOTPRINT. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
8. PROVIDE EMERGENCY BOILER/BURNER LOCKABLE SHUTDOWN SWITCH WITH BREAK GLASS COVER SERVING BOILERS, B-1 AND B-2.
9. NEW BOILERS (B-1, B-2) CONTROL PANEL.
10. PROVIDE 4" AL29-4C INTAKE AND EXHAUST VENT UP TO ROOF AND TERMINATE AS PER MANUFACTURERS RECOMMENDATION. VERTICAL VENT AND FLUE TERMINATION (GOOSENECK CONNECTION) SHALL BE 3'-0" ABOVE THE HIGHEST PORTION OF THE ROOF WITHIN 10'-0" HORIZONTAL RADIUS. THE DISTANCE BETWEEN THE CLOSET VENT AND INTAKE AIR FOR WATER HEATER TERMINATION MUST BE A MINIMUM OF 48" IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. PROVIDE AIR INTAKE MOISTURE DRAIN TRAP AND INSTALL AS PER MANUFACTURER'S RECOMMENDATION. INTAKE AIR TERMINAL SHALL BE SLOPED DOWNWARD 1/8 INCH PER FOOT TOWARD THE WATER HEATER FOR THE MOISTURE REMOVAL FROM INLET AIR THROUGH THE AIR INTAKE MOISTURE DRAIN TRAP. EXHAUST VENT SHALL BE PITCHED A MINIMUM OF A 1/4 INCH PER FOOT BACK TO WATER HEATER FOR PROPER CONDENSATE REMOVAL THROUGH THE CONDENSATE TRAP. INSTALL ALL VENT PIPING IN ACCORDANCE WITH LATEST INTERNATIONAL FUEL GAS CODE.
11. CONTRACTOR TO REMOVE EXISTING LOUVER AND EXTEND OR REPLACE SLEEVE AND REINSTALL EXISTING LOUVER DUE TO FIREWALL EXTENSION.CONTRACTOR TO VERIFY IN FIELD FOR EXACT SLEEVE DIMENSIONS. REINSTALL PER MANUFACTURER'S RECOMMENDATION AND GUIDELINES.

NEW DUCTWORK PLAN - BLOCK B

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



KEY PLAN
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Architect
FVHDPC.COM
Frayzak Velez Hopkins Duthie P.C
Corporate: 1515 Lower Ferry Road, Trenton - New Jersey 08628
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Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number
5516D

Project Date
10.10.2025

Checked By
MV

Drawn By
VA

Scale
AS NOTED

Drawing Name
MECHANICAL NEW DUCTWORK PLAN - BLOCK B

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

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PROFESSIONAL ENGINEER, NJ LIC. No. 24GE04842100

Drawing Number
M3.1

GENERAL NOTES

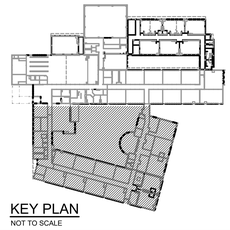
1. REFER TO ARCH AND STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
2. REMOVE AND REINSTALL CEILING SYSTEM AS REQUIRED FOR THE INSTALLATION OF MECHANICAL WORK AND REPLACE IN KIND ANY COMPONENTS DAMAGED BY PERSONNEL OR EQUIPMENT DURING PERFORMANCE OF THE WORK. PATCH AND REPAIR ALL DAMAGE CAUSED BY REMOVAL, MATCH EXISTING ADJACENT SURFACES.
3. PROVIDE AND INSTALL METAL PIPE ENCLOSURE SYSTEM ON ALL EXPOSED PIPING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. PROVIDE NEW DAMPER IN EXISTING DUCTWORK FOR BALANCING. IF DAMPER ALREADY EXIST, REPLACE WITH NEW. SEAL DUCTWORK AIRTIGHT.
5. PROVIDE VOLUME DAMPERS AT EACH BRANCH FOR BALANCING ALL SUPPLY, RETURN AND EXHAUST AIRFLOW DEVICES FOR NEW AND EXISTING. PROVIDE REMOTE CABLE OPERATED VOLUME DAMPERS AS NEEDED FOR BALANCING IN INACCESSIBLE CEILING. REFER TO MECHANICAL DETAILS FOR ADDITIONAL INFORMATION.
6. FINAL MECHANICAL EQUIPMENT LOCATIONS, EQUIPMENT CLEARANCES AND SERVICE ACCESS CLEARANCES TO BE COORDINATED WITH CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL COORDINATION BETWEEN TRADES. COORDINATE FINAL UNIT ORIENTATION TO ENSURE EQUIPMENT SERVICE ACCESS IS PROVIDED.
7. ALL SPACE SENSORS; IE. TEMPERATURE, CARBON DIOXIDE, HUMIDITY, ETC., SHALL BE MOUNTED AT 48" AFF TO MEET ADA REQUIREMENTS. COORDINATE THE FINAL LOCATION OF ALL SPACE SENSORS WITH OTHER TRADE. PROVIDE TAMPER PROOF COVERS FOR ALL TEMPERATURE SENSORS. PROVIDE TG500 SERIES VENTED GUARD, CLEAR; OR ENGINEER APPROVED EQUAL, ON ALL SPACE SENSORS.
8. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE PROTECTED THROUGH ALL PHASES OF CONSTRUCTION. UPON COMPLETION OF ALL PHASES OF CONSTRUCTION CONTRACTOR SHALL CLEAN UNIT, ALL COILS AND REPLACE FILTERS.
9. IF UNITS ARE RUNNING DURING ANY PHASE OF CONSTRUCTION, CONTRACTOR SHALL REPLACE FILTERS WEEKLY.
10. EACH BRANCH DUCTWORK SHALL BE PROVIDED WITH VOLUME DAMPER FOR BALANCING.
11. PROVIDE 1/4" UNDER CUT FOR ALL RESTROOMS, JANITOR CLOSETS, AND TOILETS DOOR FOR AIR TRANSFER.

KEY NOTES

1. REBALANCE THE EXISTING GRILLES/DIFFUSERS TO CFM NOTED ON PLAN.
2. PROVIDE CUSTOM FACTORY PAINTED REAR EXTENSION TO ACCOMMODATE LOUVERS AND WALL SLEEVES. COORDINATE REQUIREMENTS WITH MANUFACTURER. VERIFY AND MEASURE IN FIELD ALL REQUIREMENTS BEFORE ORDERING CUSTOM REAR EXTENSIONS. PROVIDE ALL ACCESSORIES REQUIRED.
3. ATC PANEL LOCATION. COORDINATE THE EXACT LOCATION IN FIELD WITH OWNER. REFER TO ELECTRICAL DRAWINGS FOR TELE-DATA REQUIREMENT.
4. EXISTING TO REMAIN.
5. ALL INDOOR DUCT SHALL HAVE STICKERS AND LABELS REMOVE AND PREPARED FOR PAINT. PAINT ALL EXPOSED INDOOR DUCTWORK, REGISTERS/DIFFUSERS, HANGER AND SUPPORTS. PROVIDE MINIMUM 2 COATS PRIMER AND 2 COATS OF INTERIOR GRADE PAINT. COORDINATE WITH ARCHITECT FOR COLOR SELECTION.
6. PROVIDE AND INSTALL NEW SUPPLY REGISTER IN EXISTING DUCTOWORK. SEAL DUCTWORK AIRTIGHT. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.

NEW DUCTWORK PLAN - BLOCK C

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



KEY PLAN
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Architect
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F V H D P C . C O M

Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number
5516D

Project Date
10.10.2025

Checked By
MV

Drawn By
VA

Scale
AS NOTED

Drawing Name
MECHANICAL NEW DUCTWORK PLAN - BLOCK C

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

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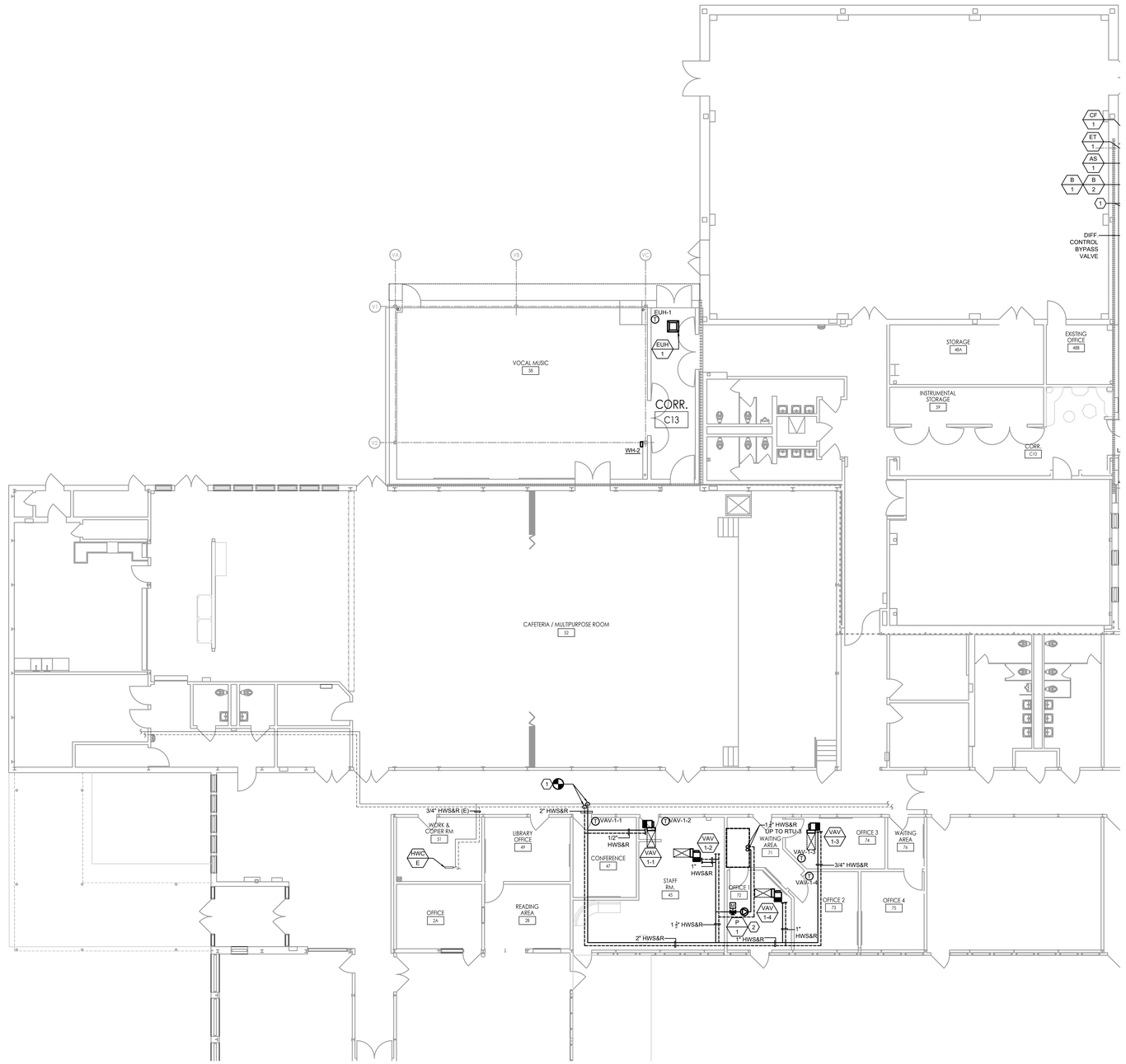
Drawing Number
M3.2



NEW PIPING PLAN - BLOCK A

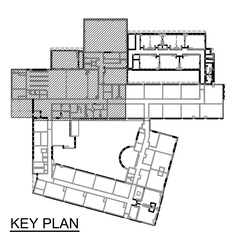
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR NOTES AND DETAILS PERTAINING TO ROOFING, STRUCTURAL, GENERAL CONSTRUCTION, ETC.
2. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES . AVOID CONFLICTS WITH OTHER TRADES AND EXISTING CONDITIONS. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES AND MARK OUT THEIR LOCATIONS PRIOR TO COMMENCING WORK. CONTRACTOR SHALL CONTRACT THE SERVICES OF A PRIVATE UTILITY LOCATOR COMPANY TO MARK OUT ALL EXISTING UNDERGROUND UTILITIES IN THE PROJECT AREA PRIOR TO COMMENCING ANY WORK AND PROVIDE EXISTING CONDITIONS PLAN TO THE OWNER AND ENGINEER.
3. REMOVE AND REINSTALL CEILING SYSTEM AS REQUIRED FOR THE INSTALLATION OF MECHANICAL WORK AND REPLACE IN KIND ANY COMPONENTS DAMAGED BY PERSONNEL OR EQUIPMENT DURING PERFORMANCE OF THE WORK. PATCH AND REPAIR ALL DAMAGE CAUSED BY REMOVAL, MATCH EXISTING ADJACENT SURFACES.
4. PROVIDE AND INSTALL METAL PIPE ENCLOSURE SYSTEM ON ALL EXPOSED PIPING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. ALL SPACE SENSORS; IE. TEMPERATURE, CARBON DIOXIDE, HUMIDITY, ETC., SHALL BE MOUNTED AT 48" AFF TO MEET ADA REQUIREMENTS. COORDINATE THE FINAL LOCATION OF ALL SPACE SENSORS WITH OTHER TRADE. PROVIDE TAMPER PROOF COVERS FOR ALL TEMPERATURE SENSORS. PROVIDE TG500 SERIES VENTED GUARD, CLEAR; OR ENGINEER APPROVED EQUAL, ON ALL SPACE SENSORS.
6. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE PROTECTED THROUGH ALL PHASES OF CONSTRUCTION. UPON COMPLETION OF ALL PHASES OF CONSTRUCTION, CONTRACTOR SHALL CLEAN UNIT, ALL COILS AND REPLACE FILTERS.
7. IF UNITS ARE RUNNING DURING ANY PHASE OF CONSTRUCTION, CONTRACTOR SHALL REPLACE FILTERS WEEKLY.
8. ALL BRANCH PIPING CONNECTED TO TWO OR MORE UNIT VENTILATOR INTERNAL CONDENSATE PUMPS SHALL BE MINIMUM 1" PUMPED CONDENSATE UNLESS OTHERWISE NOTED.
9. PROVIDE PIPE ANCHOR, GUIDE & EXPANSION LOOP SERVING EACH HVAC PIPING AS REQUIRED PER SPECIFICATION. SEE SPECIFICATION AND DETAILS FOR ADDITIONAL INFORMATION.
10. EACH BRANCH DUCTWORK SHALL BE PROVIDED WITH VOLUME DAMPER FOR BALANCING.
11. PROVIDE 1/4" UNDER CUT FOR ALL RESTROOMS, JANITOR CLOSETS, AND TOILETS DOOR FOR AIR TRANSFER.
12. PROVIDE SHUTOFF VALVES AT EACH BRANCH TAKE OFF PIPING SERVING THE UNIT VENTILATOR AND FIN TUBE RADIATOR.

KEY NOTES

1. CONNECT NEW HWS/R TO EXISTING HWS/R PIPING. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPING. VALVING NOT SHOWN FOR CLARITY. SEE PIPING DETAILS FOR ADDITIONAL INFORMATION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
2. PROVIDE FREEZE PROTECTION PUMP AND 3-WAY VALVE ASSEMBLY AS PER PLAN, SCHEDULE AND DETAIL. INTERLOCK THE FREEZE PROTECTION PUMP WITH ASSOCIATED RTU. REFER TO ATC DIAGRAMS & SPECIFICATION FOR ADDITIONAL INFORMATION.



KEY PLAN

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Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number

5516D

Project Date

10.10.2025

Checked By

MV

Drawn By

VA

Scale

AS NOTED

Drawing Name

MECHANICAL NEW PIPING PLAN - BLOCK A

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number

M4.0

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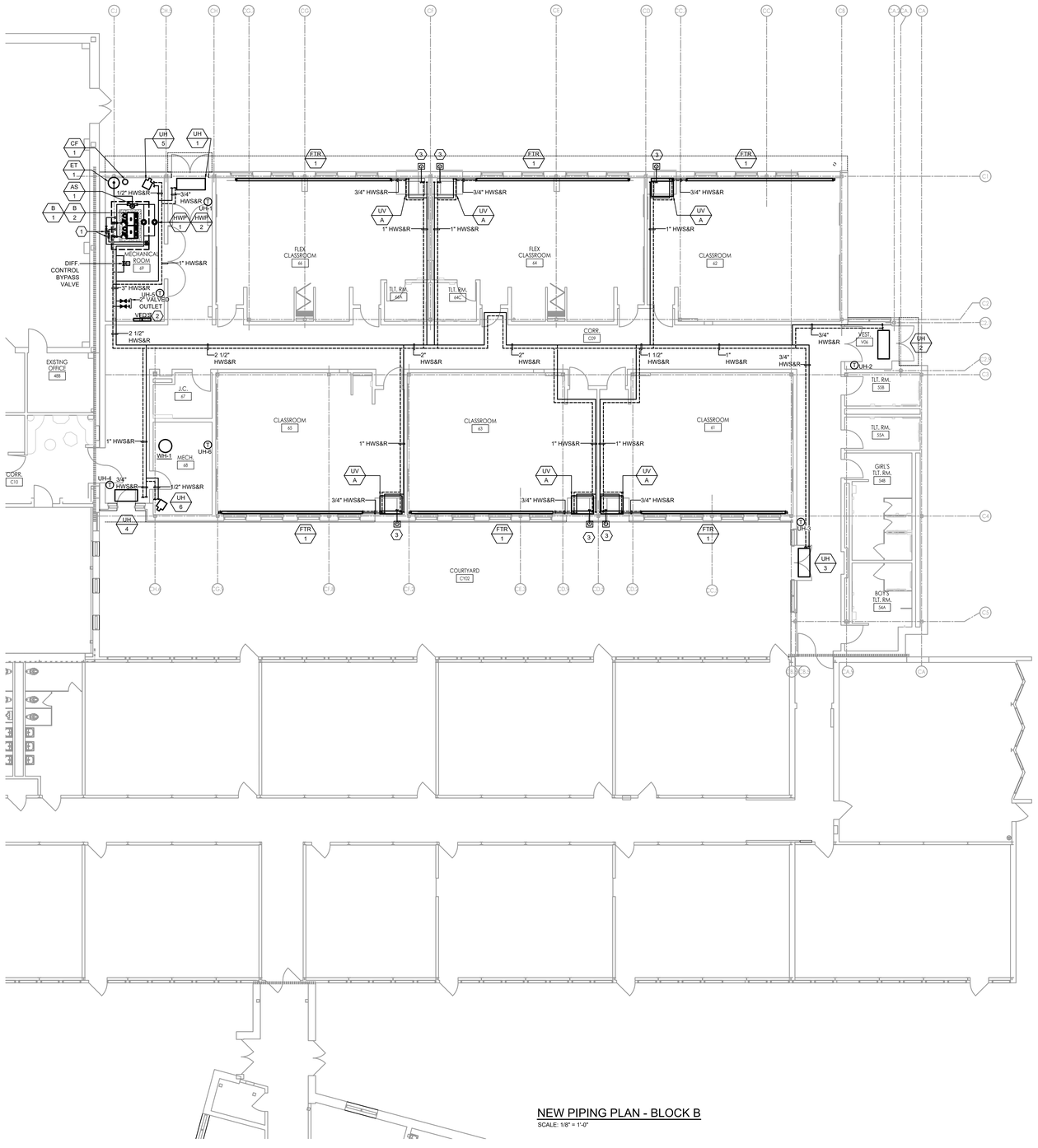

NEW PIPING PLAN - BLOCK B

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

SHEET NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR NOTES AND DETAILS PERTAINING TO ROOFING, STRUCTURAL, GENERAL CONSTRUCTION, ETC.
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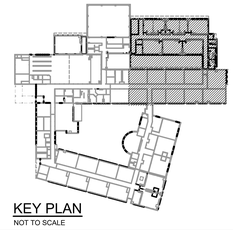
4. PROVIDE AND INSTALL METAL PIPE ENCLOSURE SYSTEM ON ALL EXPOSED PIPING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. ALL SPACE SENSORS; IE. TEMPERATURE, CARBON DIOXIDE, HUMIDITY, ETC., SHALL BE MOUNTED AT 48" AFF TO MEET ADA REQUIREMENTS. COORDINATE THE FINAL LOCATION OF ALL SPACE SENSORS WITH OTHER TRADE. PROVIDE TAMPER PROOF COVERS FOR ALL TEMPERATURE SENSORS. PROVIDE TG500 SERIES VENTED GUARD, CLEAR, OR ENGINEER APPROVED EQUAL, ON ALL SPACE SENSORS.
6. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE PROTECTED THROUGH ALL PHASES OF CONSTRUCTION. UPON COMPLETION OF ALL PHASES OF CONSTRUCTION, CONTRACTOR SHALL CLEAN UNIT, ALL COILS AND REPLACE FILTERS.
7. IF UNITS ARE RUNNING DURING ANY PHASE OF CONSTRUCTION, CONTRACTOR SHALL REPLACE FILTERS WEEKLY.
8. ALL BRANCH PIPING CONNECTED TO TWO OR MORE UNIT VENTILATOR INTERNAL CONDENSATE PUMPS SHALL BE MINIMUM 1" PUMPED CONDENSATE UNLESS OTHERWISE NOTED.
9. PROVIDE PIPE ANCHOR, GUIDE & EXPANSION LOOP SERVING EACH HVAC PIPING AS REQUIRED PER SPECIFICATION. SEE SPECIFICATION AND DETAILS FOR ADDITIONAL INFORMATION.
10. EACH BRANCH DUCTWORK SHALL BE PROVIDED WITH VOLUME DAMPER FOR BALANCING.
11. PROVIDE 1/4" UNDER CUT FOR ALL RESTROOMS, JANITOR CLOSETS, AND TOILETS DOOR FOR AIR TRANSFER.
12. PROVIDE SHUTOFF VALVES AT EACH BRANCH TAKE OFF PIPING SERVING THE UNIT VENTILATOR AND FIN TUBE RADIATOR.

KEY NOTES

1. PROVIDE BOILER DRAIN PIPING TO FLOOR DRAIN WITH NEUTRALIZING KIT. INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS.
2. WALL MOUNTED REMOTE VFD. COORDINATE WITH ELECTRICAL CONTRACTOR FOR FINAL CONNECTIONS.
3. 3/4" CONDENSATE DRAIN PIPING THRU WALL 6" ABOVE FINISHED GRADE WITH PIPE SLEEVE. DISCHARGE TO 24x11 CONCRETE SPLASH BLOCK, MANUFACTURED BY MERSHONE CONCRETE OR ENGINEER APPROVED EQUAL AND EPDM SLIP SHEET. MAINTAIN MINIMUM PITCH. CORE DRILL WALL AND SEAL PIPE AND ANNULAR SPACE WATERTIGHT.



KEY PLAN
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Architect
10.10.25
Date
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Corporate: 1515 Lower Ferry Road Trenton - New Jersey 08628
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F V H D P C . C O M

Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	MV
Drawn By	VA
Scale	AS NOTED

Drawing Name
MECHANICAL NEW PIPING PLAN - BLOCK B

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number
M4.1

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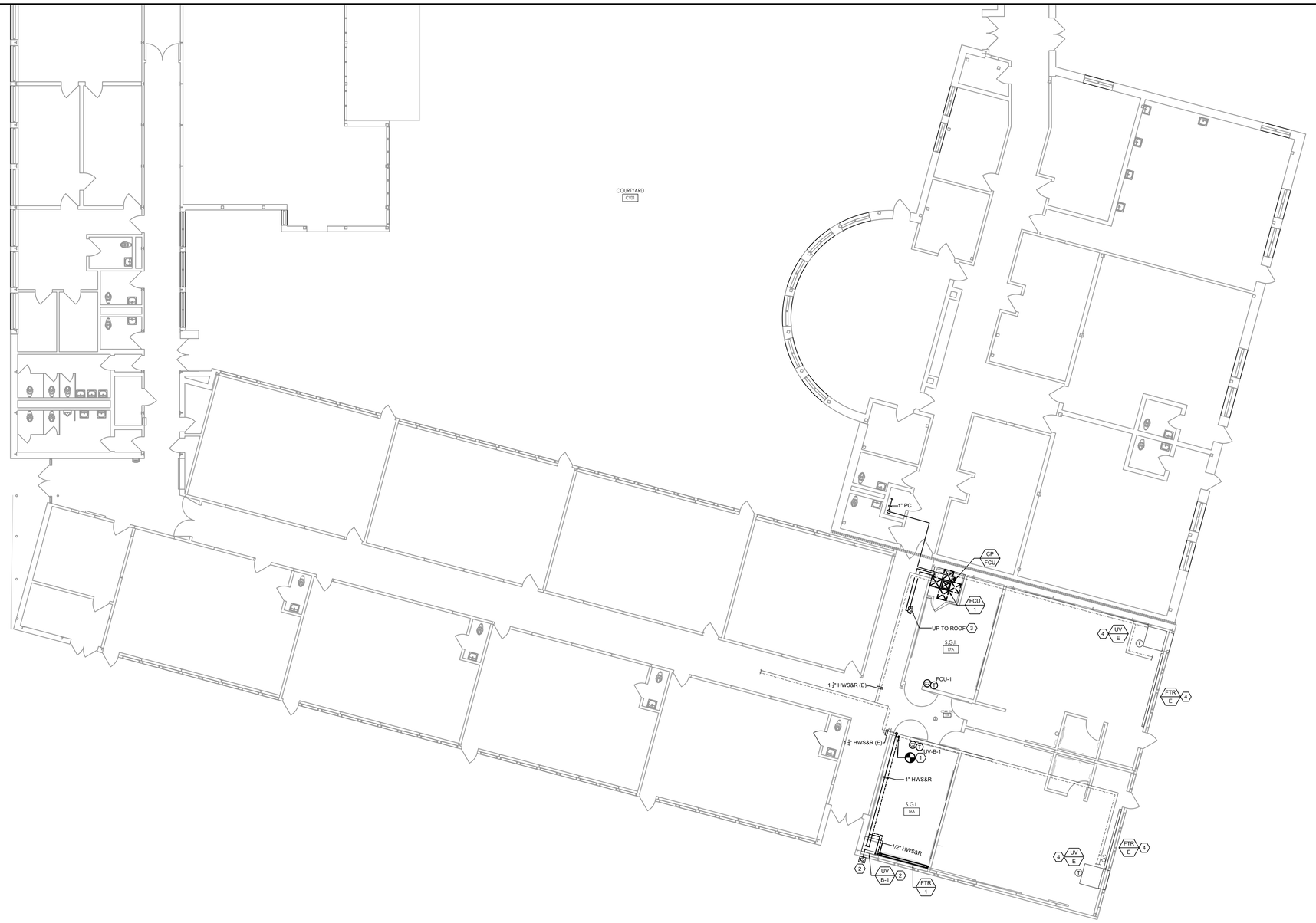

NEW PIPING PLAN - BLOCK C

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

SHEET NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR NOTES AND DETAILS PERTAINING TO ROOFING, STRUCTURAL, GENERAL CONSTRUCTION, ETC.
2. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES . AVOID CONFLICTS WITH OTHER TRADES AND EXISTING CONDITIONS. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES AND MARK OUT THEIR LOCATIONS PRIOR TO COMMENCING WORK. CONTRACTOR SHALL CONTRACT THE SERVICES OF A PRIVATE UTILITY LOCATOR COMPANY TO MARK OUT ALL EXISTING UNDERGROUND UTILITIES IN THE PROJECT AREA PRIOR TO COMMENCING ANY WORK AND PROVIDE EXISTING CONDITIONS PLAN TO THE OWNER AND ENGINEER.
3. REMOVE AND REINSTALL CEILING SYSTEM AS REQUIRED FOR THE INSTALLATION OF MECHANICAL WORK AND REPLACE IN KIND ANY COMPONENTS DAMAGED BY PERSONNEL OR EQUIPMENT DURING PERFORMANCE OF THE WORK. PATCH AND REPAIR ALL DAMAGE CAUSED BY REMOVAL, MATCH EXISTING ADJACENT SURFACES.
4. PROVIDE AND INSTALL METAL PIPE ENCLOSURE SYSTEM ON ALL EXPOSED PIPING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. ALL SPACE SENSORS, IE, TEMPERATURE, CARBON DIOXIDE, HUMIDITY, ETC., SHALL BE MOUNTED AT 48" AFF TO MEET ADA REQUIREMENTS. COORDINATE THE FINAL LOCATION OF ALL SPACE SENSORS WITH OTHER TRADE. PROVIDE TAMPER PROOF COVERS FOR ALL TEMPERATURE SENSORS. PROVIDE TG500 SERIES VENTED GUARD, CLEAR; OR ENGINEER APPROVED EQUAL, ON ALL SPACE SENSORS.
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8. ALL BRANCH PIPING CONNECTED TO TWO OR MORE UNIT VENTILATOR INTERNAL CONDENSATE PUMPS SHALL BE MINIMUM 1" PUMPED CONDENSATE UNLESS OTHERWISE NOTED.
9. PROVIDE PIPE ANCHOR, GUIDE & EXPANSION LOOP SERVING EACH HVAC PIPING AS REQUIRED PER SPECIFICATION. SEE SPECIFICATION AND DETAILS FOR ADDITIONAL INFORMATION.
10. EACH BRANCH DUCTWORK SHALL BE PROVIDED WITH VOLUME DAMPER FOR BALANCING.
11. PROVIDE 1/4" UNDER CUT FOR ALL RESTROOMS, JANITOR CLOSETS, AND TOILETS DOOR FOR AIR TRANSFER.
12. PROVIDE SHUTOFF VALVES AT EACH BRANCH TAKE OFF PIPING SERVING THE UNIT VENTILATOR AND FIN TUBE RADIATOR.

KEY NOTES

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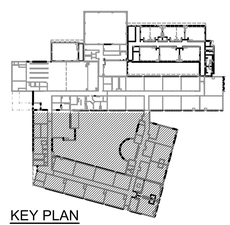
2. CONTRACTOR SHALL PROVIDE AND MOUNT CONDENSATE PUMP WITHIN UNIT VENTILATOR. PROVIDE 1" CONDENSATE PIPING THRU WALL 6" ABOVE FINISHED GRADE WITH PIPE SLEEVE. DISCHARGE TO 24x11 CONCRETE SPLASH BLOCK, MANUFACTURED BY MERSHONE CONCRETE OR ENGINEER APPROVED EQUAL AND EPDM SLIP SHEET. CORE DRILL WALL AND SEAL PIPE AND ANNULAR SPACE WATERTIGHT.
3. REFRIGERANT PIPING - SUCTION & LIQUID UP. SIZE AND ROUTING AS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE SUPPORTS AS REQUIRED. PROVIDE REFRIGERANT ISOLATION VALVES ON REFRIGERANT PIPING. VALVES NOT SHOWN FOR CLARITY.SEE SPECIFICATION FOR ADDITIONAL INFORMATION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.
4. EXISTING TO REMAIN



KEY PLAN

NOT TO SCALE

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NJDCA Electronic Release Stamp

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Date
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Pennsylvania: 140 Whitaker Avenue, Mont Clare - Pennsylvania 19453
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Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	MV
Drawn By	VA
Scale	AS NOTED

Drawing Name

MECHANICAL NEW PIPING PLAN - BLOCK C

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number

M4.2

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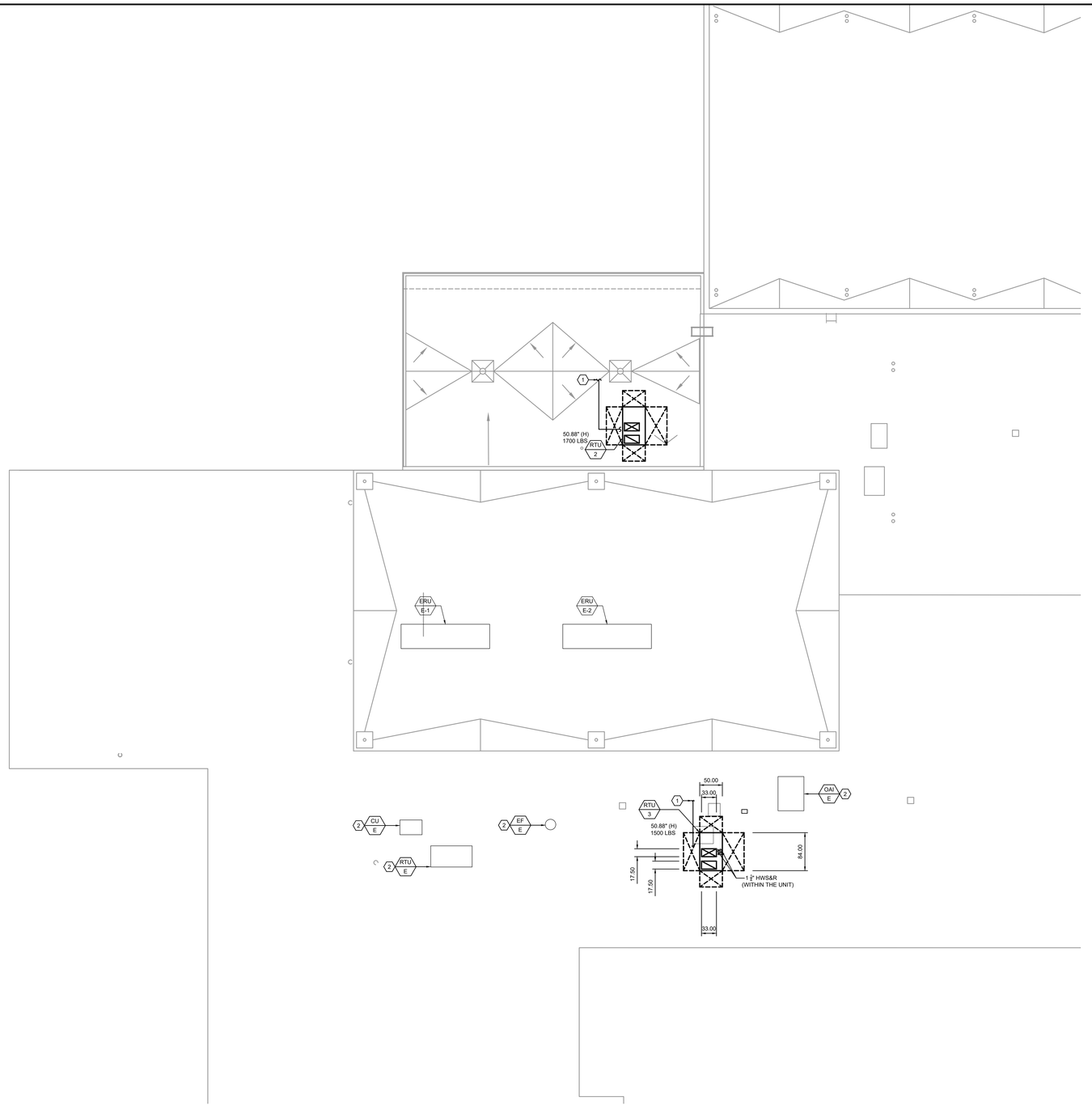


ROOF PLAN - BLOCK A

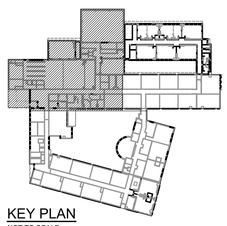
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE PROTECTED THROUGH ALL PHASES OF CONSTRUCTION. UPON COMPLETION OF ALL PHASES OF CONSTRUCTION, CONTRACTOR SHALL CLEAN UNIT, ALL COILS AND REPLACE FILTERS.
2. IF UNITS ARE RUNNING DURING ANY PHASE OF CONSTRUCTION CONTRACTOR SHALL REPLACE FILTERS WEEKLY.

KEY NOTES

1. 1 1/2" CONDENSATE DRAIN WITH MINIMUM 4" DEEP TRAP. DISCHARGE TO 24x11 CONCRETE SPLASH BLOCK, MANUFACTURED BY MERSHONE CONCRETE OR ENGINEER APPROVED EQUAL AND EPDM SLIP SHEET. MAINTAIN MINIMUM PITCH.
2. EXISTING EQUIPMENT TO REMAIN.



KEY PLAN

NOT TO SCALE

NJDCA Electronic Release Stamp

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Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	MV
Drawn By	VA
Scale	AS NOTED

Drawing Name

MECHANICAL ROOF PLAN - BLOCK A

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number

M5.0

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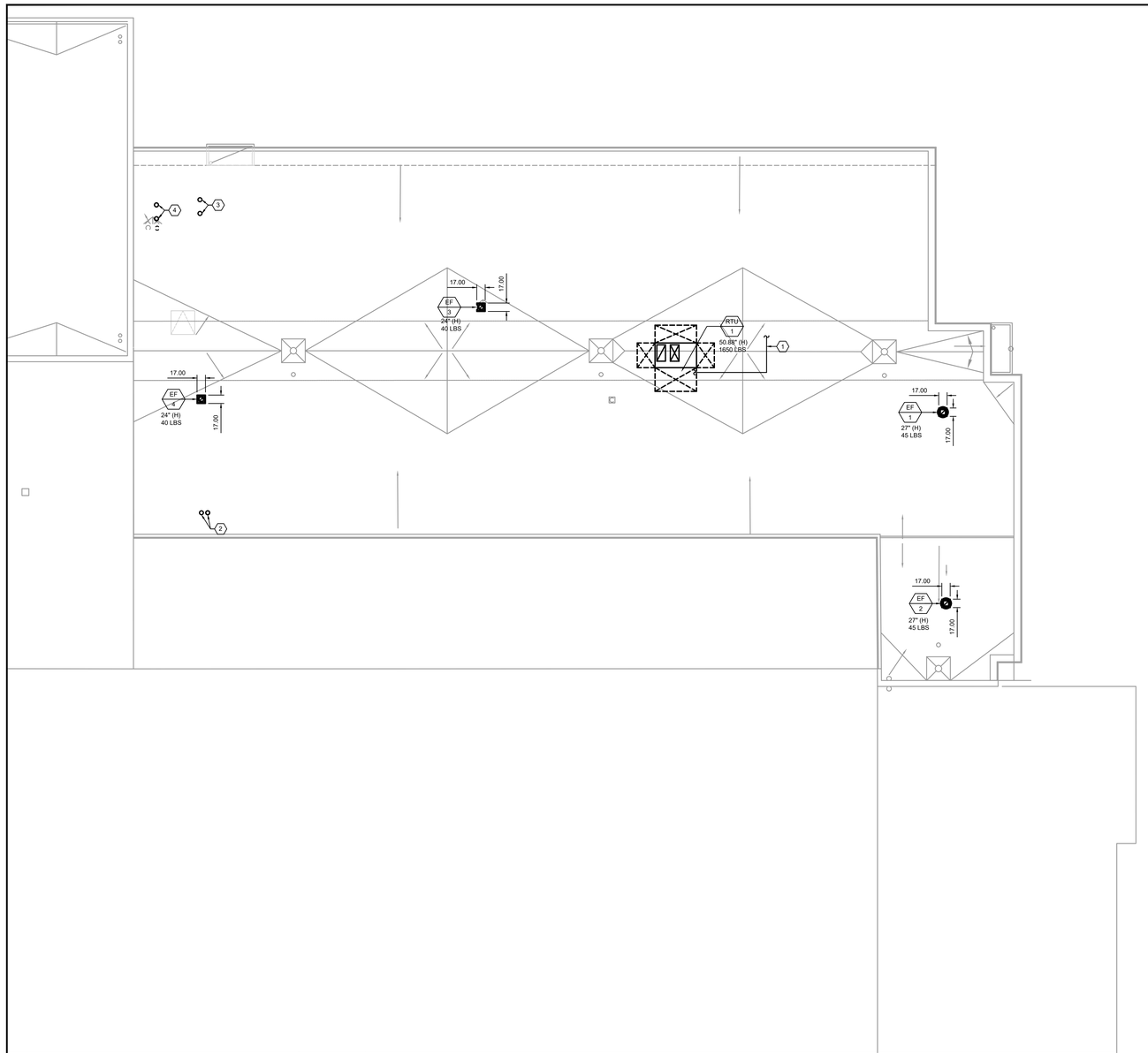
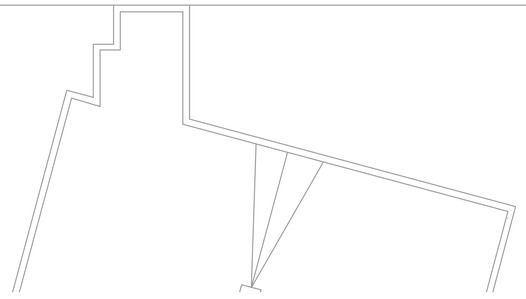




ROOF PLAN - BLOCK B

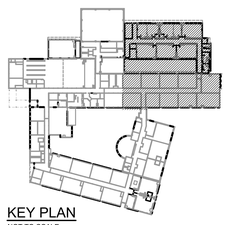
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE PROTECTED THROUGH ALL PHASES OF CONSTRUCTION. UPON COMPLETION OF ALL PHASES OF CONSTRUCTION, CONTRACTOR SHALL CLEAN UNIT, ALL COILS AND REPLACE FILTERS.
2. IF UNITS ARE RUNNING DURING ANY PHASE OF CONSTRUCTION CONTRACTOR SHALL REPLACE FILTERS WEEKLY.

KEY NOTES

1. 1 1/2" CONDENSATE DRAIN WITH MINIMUM 4" DEEP TRAP. DISCHARGE TO 24x11 CONCRETE SPLASH BLOCK, MANUFACTURED BY MERSHONE CONCRETE OR ENGINEER APPROVED EQUAL AND EPDM SLIP SHEET. MAINTAIN MINIMUM PITCH.
2. PROVIDE 4" DIA AL29-4C WATER HEATER INTAKE AND EXHAUST VENT AND TERMINATE WITH GOOSENECK CONNECTION IN ACCORDANCE WITH DETAIL AND AS PER MANUFACTURER'S RECOMMENDATION. VERTICAL INTAKE AND VENT EXTENSION SHALL BE 2'-0" ABOVE THE HIGHEST PORTION OF THE ROOF WITHIN 10'-0" HORIZONTAL RADIUS. THE DISTANCE BETWEEN THE CLOSET VENT AND INTAKE AIR FOR WATER HEATER TERMINATION MUST BE MINIMUM OF 48" IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.
3. PROVIDE 6" EXHAUST VENT WITH AERCO EXHAUST MUFFLER UP THRU ROOF, HEATFAB SAF-T VENT CI PLUS, TERMINATE MIN. 72" ABOVE ROOF WITH VELOCITY CONE, RAIN CAP AND LATERAL SUPPORTS (TYP.-2).
4. PROVIDE 6" COMBUSTION AIR INTAKE UP TO ROOF. TERMINATE DUCT 30" ABOVE ROOF WITH TEE FITTING AND WIRE MESH SCREEN.



KEY PLAN

NOT TO SCALE

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Pennsylvania: 140 Whitaker Avenue, Mont Clare - Pennsylvania 19453
F V H D P C . C O M

William D. Hopkins — 2/12/26
Architect — Date

Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number

5516D

Project Date

10.10.2025

Checked By

MV

Drawn By

VA

Scale

AS NOTED

Drawing Name

MECHANICAL ROOF PLAN - BLOCK B

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number

M5.1

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ROOF PLAN - BLOCK C

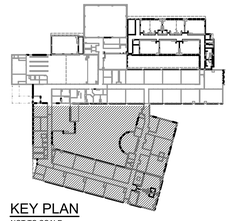
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. ALL EXISTING EQUIPMENT TO REMAIN SHALL BE PROTECTED THROUGH ALL PHASES OF CONSTRUCTION. UPON COMPLETION OF ALL PHASES OF CONSTRUCTION, CONTRACTOR SHALL CLEAN UNIT, ALL COILS AND REPLACE FILTERS.
2. IF UNITS ARE RUNNING DURING ANY PHASE OF CONSTRUCTION CONTRACTOR SHALL REPLACE FILTERS WEEKLY.

KEY NOTES

1. PROVIDE & INSTALL ROOF PORTAL. PATE CO OR EQUAL. PROVIDE SEPARATE BOOT FOR EACH PIPE. PROVIDE ADDITIONAL BOOTS FOR ELECTRICAL POWER AND CONTROL CONDUITS. DO NOT PASS MORE THAN (1) PIPE THRU EACH NIPPLE TO FACILITATE PROPER SEALING.
2. 18" EQUIPMENT MOUNTING RAILS WITH RUST RESISTANT UNISTRUT CRADLE FRAMING AROUND ENTIRE PERIMETER. SEE DETAILS FOR ADDITIONAL INFORMATION.
3. REFRIGERANT PIPING - LIQUID & HOT GAS. SIZE AND ROUTING AS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE SUPPORTS AS REQUIRED. SEE SPECIFICATION FOR ADDITIONAL INFORMATION.
4. PROVIDE REFRIGERANT ISOLATION VALVES ON REFRIGERANT PIPING. VALVES NOT SHOWN FOR CLARITY.



KEY PLAN

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William D. Hopkins 2/12/26

Architect — Date

Project Name

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Project Location

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Project Number	5516D
Project Date	10.10.2025
Checked By	MV
Drawn By	VA
Scale	AS NOTED

Drawing Name

MECHANICAL ROOF PLAN - BLOCK C

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

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Drawing Number

M5.2

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SELF CONTAINED UNIT VENTILATOR SCHEDULE

UV X

PLAN NO	MANUFACTURER MODEL	SUPPLY FAN DATA						EXHAUST FAN DATA			DX COOLING DATA					HOT WATER HEATING DATA								ENERGY WHEEL PERFORMANCE DATA								FILTER DATA		ELECTRICAL DATA				WEIGHT LBS	REMARKS
		TOTAL AIR FLOW	OA & EA FLOW MIN CFM	ESP IN. WC	FAN SPEED RPM	MOTOR TYPE	MOTOR SIZE HP	AIR FLOW CFM	ESP IN. WC	MOTOR SIZE HP	TOTAL MBH	SENS MBH	EAT DB/WB	LAT DB/WB	EER	MBH	MBH W/ WHEEL	EAT	LAT	GPM	EWT	LWT	HEATING COIL PD PSI	HEATING COIL NO. ROWS	WINTER DESIGN CONDITION OUTSIDE AIR DB/WB	WINTER DESIGN CONDITION ROOM EXHAUST AIR DB/WB	WINTER DESIGN CONDITION SUPPLY AIR DB/WB	WINTER DESIGN CONDITION TOTAL RECOVERED MBH	SUMMER DESIGN CONDITION OUTSIDE AIR DB/WB	SUMMER DESIGN CONDITION ROOM EXHAUST AIR DB/WB	SUMMER DESIGN CONDITION SUPPLY AIR DB/WB	SUMMER DESIGN CONDITION TOTAL RECOVERED MBH	TYPE	MIN MERV	VOLTS/Ø	FLA	MCA	MOP		
UV-A	AIREDALE CMD48BDCECSNNB92N1	1500	410	0.5	-	DIRECT DRIVE	3/4	1500	0.5	1.07	48.9	33.8	80/67	59.5/56.7	11.8	68.1	94.9	64.2	105.8	2.8	160	129	0.3	1	0.0 / -1.4	70 / 53	48.8 / 39.2	26.8	95 / 75	75 / 63	80.5 / 67.3	11.5	PLEATED THROWAWAY	13	208 / 1	32.3	36.9	50	1,350	SEE NOTES 2, 5-18
UV-B-1	AIREDALE CMD24BDCECSNNB92N1	800	160	0.5	-	DIRECT DRIVE	3/4	800	0.5	1.07	24.9	17.2	80/67	60.5/57.2	12.0	51.2	63.7	67.5	126.4	2.8	160	142	0.3	1	0.0 / -1.4	70 / 53	57.5 / 45.3	12.5	95 / 75	75 / 63	78.2 / 65.5	5.5	PLEATED THROWAWAY	13	208 / 1	21.0	23.6	30	1,080	PROVIDE FRONT RETURN GRILLES

NOTES:

1. PROVIDE 2-WAY HW MODULATING VALVE PACKAGE. ATC CONTROL VALVE BY ATC CONTRACTOR, OTHER VALVE PACKAGE FITTINGS TO BE PROVIDED BY UNIT MANUFACTURER.
2. PROVIDE FACTORY INSTALLED HUMIDITY SENSOR FOR DEHUMIDIFICATION MODE. RETURN AIR HUMIDITY SENSOR BY ATC CONTRACTOR.
3. PROVIDE FACTORY INSTALLED FREEZE PROTECTION SENSOR. LOW LIMIT SWITCH TO BE PROVIDED BY ATC CONTRACTOR.
4. PROVIDE OUTSIDE AIR AND EXHAUST AIR MOTORIZED DAMPERS.
5. PROVIDE FACTORY INSTALLED CONDENSER COIL FILTER.
6. PROVIDE UNIT WITH SALT RESISTANT COIL PACKAGE INCLUDING ELECTOFIN COATING ON ALL CONDENSER COIL.
7. PROVIDE 100% OA ECONOMIZER.
8. PROVIDE ELECTRICAL DISCONNECT SWITCH.
9. PROVIDE FACTORY INSTALLED COMPRESSOR SOUND JACKET WITH ACOUSTICALLY LINED DOOR FOR REDUCED SOUND LEVELS.
10. PROVIDE FACTORY INSTALLED CONDENSATE PAN OVERFLOW SENSOR, UL #508 APPROVED, FOR SYSTEM SHUTDOWN, WIRED BY THE ATC CONTRACTOR. LEAK DETECTOR IS PROVIDED, FIELD MOUNTED AND WIRED BY ATC CONTRACTOR.
11. PROVIDE FIELD MOUNTED TEMPERATURE CONTROLS FROM ATC CONTRACTOR.
12. PROVIDE UNIT WITH INTERNAL CONDENSATE PUMP AND HOT GAS REHEAT COIL FOR DEHUMIDIFICATION.
13. PROVIDE WITH DDC BACNET MTSP CONTROLS FOR INTERFACE WITH ATC CONTROL SYSTEM. ATC PANEL SHALL BE BACNET BASED AND PROVIDE CONTROLLABILITY OF ALL MECHANICAL EQUIPMENT WITH ASSOCIATED PROGRAMMING, GRAPHICS AND PROVIDE SECURE REMOTE WEB ACCESS FOR SETPOINTS AND SCHEDULING ADJUSTMENT FOR OCCUPIED AND UNOCCUPIED MODES OF HEATING AND COOLING.
14. PROVIDE FULL ADAPTER BACK WITH CLOSED PIPE TUNNEL, END PANELS, FILLER PANEL SECTIONS AND SUB BASE FOR FLOOR MOUNTED UNITS.
15. PROVIDE UNIT WITH INTERNAL CONDENSATE PUMP, WALL SLEEVE, LOUVER, OUTSIDE AIR REAR EXTENSION, AND TOP SUPPLY PLENUM.
17. PROVIDE FACTORY SUPPLIED DISCHARGE SUPPLY PLENUM TO EXTEND 6" ABOVE THE ARCHITECTURE DROP CEILING FOR ALL UNITS. FIELD VERIFY THE EXACT HEIGHT OF DISCHARGE PLENUM AND COORDINATE THE DISCHARGE PLENUM HEIGHT WITH ARCHITECT CEILING HEIGHT.
18. PROVIDE EQUIPMENT START UP BY MANUFACTURER'S CERTIFIED TECHNICIAN. MECHANICAL CONTRACTOR, ELECTRICAL CONTRACTOR, ATC CONTRACTOR AND TESTING AND BALANCING AGENT SHALL BE PRESENT DURING START UP; PROVIDE ASSOCIATED STARTUP REPORT ACCORDINGLY.

FAN SCHEDULE

EF X

PLAN NO	MANUFACTURER MODEL	LOCATION	AREA SERVED	FAN TYPE	FAN PERFORMANCE CFM	FAN PERFORMANCE TOTAL SP IN WC	ELECTRICAL DATA FAN RPM	ELECTRICAL DATA HP	ELECTRICAL DATA RPM	ELECTRICAL DATA VOLTS/Ø	ELECTRICAL DATA DRIVE	dBA	WEIGHT LBS	REMARKS
EF-1	GREENHECK G-095-VG	BLOCK B ROOF	TLT RM 55A/55B	ROOF EXH	220	0.13	701	1/6	-	115/1	DIRECT	32	43	SEE NOTES
EF-2	GREENHECK G-095-VG	BLOCK B ROOF	TLT RM 54A/54B	ROOF EXH	440	0.13	915	1/6	-	115/1	DIRECT	41	43	SEE NOTES
EF-3	GREENHECK G-070-VG	BLOCK B ROOF	TLT RM 58A/60A	ROOF EXH	150	0.13	985	1/15	-	115/1	DIRECT	33	36	SEE NOTES
EF-4	GREENHECK G-060-VG	BLOCK B ROOF	JC 62	ROOF EXH	100	0.13	1173	1/15	-	115/1	DIRECT	39	35	SEE NOTES
EF-5	GREENHECK G-070-VG	BLOCK C ROOF	TLT RM 58A/60A	ROOF EXH	150	0.13	985	1/15	-	115/1	DIRECT	33	36	SEE NOTES

NOTES:

1. MOUNT FAN ON MINIMUM 12" HIGH ROOF CURB.
2. PROVIDE SOLID STATE SPEED CONTROL, NEMA-1 TOGGLE SWITCH, BIRDSCREEN & BACKDRAFT DAMPER.
3. PROVIDE ELECTRICAL DISCONNECT, VIBRATION ISOLATION SUPPORT RODS WITH MOUNTING BRACKETS, SPEED CONTROLLER AND ROUND DUCT CONNECTION.
4. PROVIDE CONTROLS FROM ATC CONTRACTOR.

PACKAGED ROOF TOP UNIT SCHEDULE W/ HOT WATER HEATING COIL

RTU X

PLAN NO.	MANUFACTURER MODEL	AREA SERVED	GENERAL DATA: TOTAL AIR CFM	SUPPLY FAN: TOTAL STATIC PRESS IN. WC	SUPPLY FAN: ESP IN. WC	SUPPLY FAN: FAN SPEED RPM	SUPPLY FAN: FAN HP	SUPPLY FAN: MIN OA CFM	EXHAUST/RETURN FAN: MIN EXH FAN CFM	EXHAUST/RETURN FAN: NO. OF FAN	EXHAUST/RETURN FAN: FAN FLA	COOLING (DX EVAPORATOR COIL): NOM TONS	EER	IEER	TOTAL MBH	SENS MBH	HOT GAS REHEAT: EAT DB °F	EAT WB °F	LAT DB °F	LAT WB °F	HOT WATER HEATING: EAT DB °F	LAT DB °F	SENS CAP MBH	HOT WATER HEATING: TOTAL CAP MBH	EWT	LWT	FLOW GPM	FILTERS: WATER ΔP FT H2O	AIR ΔP IN H2O	EAT DB °F	LAT DB °F	FILTERS: TYPE	FILTERS: MIN MERV RATING	ELECTRICAL DATA: VOLTS/Ø	ELECTRICAL DATA: MCA	ELECTRICAL DATA: MOP	WEIGHT LBS W/CURB & ACCESS.	REMARKS
RTU-3	TRANE THK072A3S00	OFFICES/CONF. ROOMS	2400	0.911	0.750	1030	3.0	330	-	-	-	6	12.40	17.80	77.55	60.79	77.8	64.7	53.32	53.21	-	-	-	91.0	180.0	160	9.3	3.97	0.02	60.2	95.0	PLEATED THROWA WAY	13	208 / 3	44	50	1200	SEE NOTES

NOTES:

1. UNIT TO BE MOUNTED ON WIND ISOLATION CURB BASIS-OF-DESIGN: THE VMC GROUP
   A. LESS THAN 10 TON - MODEL #P6200 WITH SOUND PACKAGE #1 - RPFMA
   B. 10 TON AND ABOVE - MODEL #P6300 WITH SOUND PACKAGE #1 - RPFMA
2. PROVIDE DRAIN PAN WITH UL #508 APPROVED WATER DETECTION SENSOR FOR UNIT SHUTDOWN. WIRE CONTROL CIRCUIT THROUGH NC CONTACT.
3. PROVIDE UNIT WITH VFD FOR VAV OPERATION.
4. PROVIDE WITH COMPARATIVE ENTHALPY ECONOMIZER.
5. PROVIDE WITH POWER EXHAUST.
6. PROVIDE THRU BASE ELECTRIC AND HOT WATER SUPPLY & RETURN PIPING. PROVIDE SINGLE POINT POWER CONNECTION.
7. PROVIDE UNIT MOUNTED NON-FUSED DISCONNECT SWITCH.
8. PROVIDE CONVENIENCE RECEPTACLE. REFER TO ELECTRICAL PLANS.
9. PROVIDE HINGED ACCESS DOORS.
10. PROVIDE HAIL GUARDS.
11. PROVIDE UNIT WITH BACNET INTERFACE TO INCLUDE CONTROL OF HOT WATER 3-WAY VALVE AND FREEZE PROTECTION PUMP. REFER TO ATC DIAGRAM AND SPECIFICATIONS.
12. PROVIDE BACNET INTERFACE AND CONNECT TO EXISTING BMS SYSTEM. PROVIDE CONTROLLABILITY OF ALL MECHANICAL EQUIPMENT WITH ASSOCIATED GRAPHICS AND PROVIDE SECURE REMOTE WEB ACCESS FOR SETPOINT AND SCHEDULING ADJUSTMENT FOR OCCUPIED AND UNOCCUPIED MODES OF HEATING AND COOLING.
13. DUCT SMOKE DETECTOR TO BE FURNISHED BY THE ELECTRICAL CONTRACTOR, INSTALLED BY THE MECHANICAL CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR. REFER TO ELECTRICAL PLANS.
14. PROVIDE SHUT OFF VALVES FOR HOT WATER SUPPLY & RETURN COIL PIPING AT UNIT AND DRAIN VALVE WITH DRAIN PIPE AT UNIT.
15. ALL UNITS PURCHASED/SHIPPED AFTER JANUARY 2025 TO HAVE R454B REFRIGERANT AND PROVIDE FACTORY INSTALLED UL APPROVED REFRIGERANT LEAK DETECTION SYSTEM.

ELECTRIC CABINET/UNIT HEATER SCHEDULE

EUH 1

PLAN NO	MANUFACTURER MODEL	LOCATION	HTG CAP KW	MBH	CFM	ELECTRICAL DATA VOLTS/Ø	ELECTRICAL DATA MCA	ELECTRICAL DATA MOP	DIMENSION (IN.) LENGTH	DIMENSION (IN.) WIDTH	DIMENSION (IN.) HEIGHT	WEIGHT LBS	REMARKS
EUH-1	INDEECO CDIRE	VOCAL MUSIC CORR. C13	5	17.10	310	208/1	18.10	30	23 5/8	23 5/8	8 3/4	40	SEE NOTES

NOTES:

1. MOUNT UNIT FROM STRUCTURE VIA 4 POINTS WITH VIBRATION ISOLATION SUPPORT RODS AND MOUNTING BRACKETS AS PER MANUFACTURER'S RECOMMENDATIONS.
2. PROVIDE REMOTE WALL THERMOSTAT WITH TAMPER RESISTANT COVER.
3. PROVIDE INTEGRAL DISCONNECT SWITCH.
4. COLOR AS SELECTED BY ARCHITECT FROM ALL AVAILABLE COLORS.

PACKAGED GAS-FIRED ROOF TOP UNIT SCHEDULE

RTU X

PLAN NO.	MANUFACTURER MODEL	AREA SERVED	GENERAL DATA: TOTAL AIR CFM	SUPPLY FAN: EXT STATIC PRESS IN. WC	SUPPLY FAN: FAN SPEED RPM	SUPPLY FAN: FAN HP	SUPPLY FAN: MIN OA CFM	EXH FAN CFM	COOLING (EVAPORATOR COIL): NOM TONS	EER	TOTAL MBH	SENS MBH	EAT DB °F	EAT WB °F	LAT DB °F	LAT WB °F	HOT GAS REHEAT: EAT DB °F	HOT GAS REHEAT: LAT DB °F	HOT GAS REHEAT: SENS CAP MBH	NATURAL GAS BURNER: INPUT MBH	NATURAL GAS BURNER: OUTPUT MBH	NATURAL GAS BURNER: AFUE %	NATURAL GAS BURNER: STAGES	NATURAL GAS BURNER: EAT DB °F	NATURAL GAS BURNER: LAT DB °F	FILTERS: TYPE	FILTERS: MIN MERV RATING	ELECTRICAL DATA: VOLTS/Ø	ELECTRICAL DATA: MCA	ELECTRICAL DATA: MOP	WEIGHT LBS W/CURB & ACCESS.	REMARKS
RTU-1	TRANE YHK072A3S0M	ADDITION BLDG COMMON AREAS	2400	0.972	1063	3.0	250	-	6	12.2	76.9	60.0	77.0	64.2	52.8	52.7	56.3	71.1	38.7	120	97.2	-	2	63.0	99.7	PLEATED THROWAWAY	13	208 / 3	44	50	1277	SEE NOTES
RTU-2	TRANE YHK090A3S0M	VOCAL/MUSIC 53	3000	1.173	1238	3.0	500	-	7.5	12.1	87.2	71.1	78.4	65.1	55.3	54.8	56.4	71.2	48.5	150	121.5	-	2	58.1	95.1	PLEATED THROWAWAY	13	208 / 3	49	60	1321	SEE NOTES

NOTES:

1. UNIT TO BE MOUNTED ON WIND/SEISMIC ISOLATION CURB BASIS-OF-DESIGN: THE VMC GROUP
   A. LESS THAN 10 TON - MODEL #P6200 WITH SOUND PACKAGE #1 - RPFMA
   B. 10 TON AND ABOVE - MODEL #P6300 WITH SOUND PACKAGE #1 - RPFMA
2. STEEL DUNNAGE USING VMC TYPE "MS" VIBRATION ISOLATION HOT DIPPED GALVANIZED BASE MOUNTED BETWEEN VIBRATION ISOLATORS AND ERU FRAME.
3. REQUIRED TO MOUNT THE NEW UNIT ON EXISTING CURB. FIELD MEASURE THE EXISTING CURB AND PROVIDE CURB ADAPTOR.
4. PROVIDE DRAIN PAN WITH UL #508 APPROVED WATER DETECTION SENSOR FOR UNIT SHUTDOWN. WIRE CONTROL CIRCUIT THROUGH NC CONTACT.
5. PROVIDE UNIT WITH SINGLE ZONE OPERATION.
6. PROVIDE WITH BAROMETRIC RELIEF.
7. PROVIDE THRU BASE ELECTRIC.
8. PROVIDE UNIT MOUNTED NON-FUSED DISCONNECT SWITCH.
9. PROVIDE 120V CONVENIENCE RECEPTACLE (ALWAYS HOT) WITH CIRCUIT PROTECTION BY EC.
10. PROVIDE HINGED ACCESS DOORS.
11. PROVIDE HAIL GUARDS.
12. PROVIDE BACNET INTERFACE AND CONNECT TO EXISTING BMS SYSTEM. PROVIDE CONTROLLABILITY OF ALL MECHANICAL EQUIPMENT WITH ASSOCIATED GRAPHICS AND PROVIDE SECURE REMOTE WEB ACCESS FOR SETPOINT AND SCHEDULING ADJUSTMENT FOR OCCUPIED AND UNOCCUPIED MODES OF HEATING AND COOLING.
13. UNIT FURNISHED WITH 4" PLEATED THROWAWAY FILTERS, MINIMUM MERV-13 FOR BOTH AIR STREAM.
14. DUCT SMOKE DETECTOR TO BE FURNISHED BY THE ELECTRICAL CONTRACTOR, INSTALLED BY THE MECHANICAL CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR. REFER TO ELECTRICAL PLANS.
15. PROVIDE RETURN AIR SMOKE DETECTOR WIRED TO SHUT DOWN UNIT EITHER ACCESSORY REMOTE KEY OPERATED TEST STATION. LOCATE TEST STATION NEAR THERMOSTAT.
16. AFTER COMPLETING SYSTEM INSTALLATION AND TESTING, ADJUSTING, AND BALANCING RTU AND AIR-DISTRIBUTION SYSTEMS, CLEAN FILTER HOUSING AND PROVIDE NEW FILTERS.
17. PROVIDE MODULATING OUTDOOR AND RETURN AIR DAMPERS FOR ECONOMIZER WITH FAULT DETECTION AS PER ASHRAE 90.1 LATEST EDITION.
18. PROVIDE UNIT WITH MODULATING CONTROL WITH VARIABLE SPEED COMPRESSORS.
19. PROVIDE EQUIPMENT START UP BY MANUFACTURER'S CERTIFIED TECHNICIAN. MECHANICAL CONTRACTOR, ELECTRICAL CONTRACTOR, ATC CONTRACTOR AND TESTING AND BALANCING AGENT SHALL BE PRESENT DURING START UP; PROVIDE ASSOCIATED STARTUP REPORT ACCORDINGLY.
20. ALL UNITS PURCHASED/SHIPPED AFTER JANUARY 2025 TO HAVE R454B REFRIGERANT AND PROVIDE FACTORY INSTALLED UL APPROVED REFRIGERANT LEAK DETECTION SYSTEM.

EXPANSION TANK SCHEDULE

ET X

PLAN NO	MANUFACTURER MODEL	LOCATION	SYSTEM VOLUME GAL	ACCEPT VOLUME GAL	FILL CHARGE PRESS PSI	SYSTEM CONN INCH	MAX OPER TEMP °F	MAX OPER PRESS PSI	DIMENSIONS (IN.) HEIGHT	DIMENSIONS (IN.) DIA	DRY WEIGHT LBS	MAX OPER WEIGHT LBS	REMARKS
ET-1	BELL & GOSSETT B50	BOILER RM	400	13	12	1	160	125	24	14	50	158	SEE NOTES BELOW.

NOTES:

1. PROVIDE 4" THICK CONCRETE HOUSEKEEPING PAD EXTENDING MINIMUM 6" BEYOND EQUIPMENT FOOTPRINT ON ALL SIDES.
2. PROVIDE B&G ATFL AIRTROL TANK FITTING.

AIR AND DIRT SEPARATOR SCHEDULE

AS X

PLAN NO.	MANUFACTURER MODEL	SERVICE	SYSTEM MAX FLOW GPM	TANK DIAMETER IN	PIPE DIA IN.	HEIGHT IN.	VENT CONN IN.	BLOW DN CONN IN.	MAX OPER TEMP °F	MAX OPER PRESS PSI	DRY WEIGHT LBS	REMARKS
AS-1	XYLEM RL-3F	HOT WATER	190	14	3	26.88	-	-	350	125	115	SEE NOTES BELOW.

NOTES:

1. SUPPORT INDEPENDENTLY FROM STRUCTURE.
2. PROVIDE HIGH CAPACITY AUTOMATIC AIR VENT.
3. UNIT SHALL HAVE REMOVABLE STRAINER BASKET.

DUCTED VERTICAL SPLIT / HEAT PUMP SYSTEM SCHEDULE

FCU X HP X

VERTICAL INDOOR UNIT

PLAN NO	AREA SERVED	MANUFACTURER MODEL	TOTAL CFM	EXT SP	OA CFM	HP/ WATTS	ELECTRICAL DATA VOLTS/Ø	ELECTRICAL DATA MCA	ELECTRICAL DATA MOP	DIMENSIONS LENGTH	DIMENSIONS WIDTH	DIMENSIONS HEIGHT	WEIGHT LBS	REMARKS
FCU-1	SGI-17A	MITSUBISHI PVA-A42AN6	875	0.8	130	244 WATTS	SEE OUTDOOR UNIT			21	21 5/8	54 1/4	150	SEE NOTES

NOTES:
1. MOUNT OUTDOOR UNIT ON MINIMUM 18" HIGH NONISOLATED WIND AND SEISMIC RESTRAINT RAILS. BASIS OF DESIGN: THE VMC GROUP MODEL #R-7000.
2. PROVIDE A FLOOR STAND FOR THE INDOOR UNIT FOR A BOTTOM RETURN ARRANGEMENT.
3. PROVIDE WITH LOW AMBIENT WIND BAFFLE KIT FOR COOLING DOWN TO 0°F.
4. PROVIDE WITH INTEGRAL CONDENSATE PUMP.
5. PROVIDE ELECTRICAL DISCONNECT.
6. PROVIDE THERMOSTAT INTERFACE FOR CONNECTION TO BMS SYSTEM.
7. PROVIDE DRAIN PAN WITH UL #508 APPROVED WATER DETECTION SENSOR FOR UNIT SHUTDOWN. WIRE CONTROL CIRCUIT THROUGH NC CONTACT.
8. PROVIDE 24"X12" HINGED FILTER FOR PLENUM RETURN.
9. PROVIDE WITH MERV-13 FILTERS.
10. PROVIDE WITH R-454B REFRIGERANT WITH FACTORY INSTALLED LEAK DETECTOR.
11. PROVIDE WITH HYPER HEATING INVERTER.

OUTDOOR UNIT

PLAN NO	MANUFACURER MODEL	TOTAL COOL CAP MBH	SENS COOL CAP MBH	HTG MBH	HSPF	SEER	ELECTRICAL DATA COP @ 17°F	ELECTRICAL DATA VOLTS/Ø	ELECTRICAL DATA MCA	ELECTRICAL DATA MOP	DIMENSIONS HEIGHT	DIMENSIONS WIDTH	DIMENSIONS DEPTH	WEIGHT LBS	REMARKS
HP-1	MITSUBISHI PUZ-AKXNLKZ	24	16.80	28	8.8	19.7	2	208 / 1	24	40	52 43/64	41 11/32	13 31/32	240	SEE NOTES

1. MOUNT UNIT ON MINIMUM 18" HIGH NONISOLATED WIND AND SEISMIC RESTRAINT RAILS. BASIS-OF-DESIGN: THE VMC GROUP MODEL #R-7000.
2. PROVIDE UNIT MOUNTED DISCONNECT SWITCH, LOW AMBIENT CONTROL, HAIL GUARDS AND SNOWHOOD.
3. PROVIDE EXPANSION VALVE KIT FROM THE UNIT MANUFACTURER AND ELECTRICAL DISCONNECT.
4. PROVIDE FREEZESTAT WITH REFRIGERANT LINE KIT FROM THE UNIT MANUFACTURER WITH INSULATION ON BOTH LINES.
5. PROVIDE CRANK CASE HEATER, COMPRESSOR HARD START KIT AND LOW AMBIENT CUT-OFF SWITCH FROM THE UNIT MANUFACTURER.
6. PROVIDE WITH DDC BACNET CONTROLS FOR INTERFACE WITH EXISTING HONEYWELL NIAGARA 4 PLATFORM ATC CONTROL SYSTEM. ATC PANEL SHALL BE BACNET BASED AND PROVIDE CONTROLLABILITY OF ALL MECHANICAL EQUIPMENT WITH ASSOCIATED PROGRAMMING, GRAPHICS AND PROVIDE SECURE REMOTE WEB ACCESS FOR SETPOINTS AND SCHEDULING ADJUSTMENT FOR OCCUPIED AND UNOCCUPIED MODES OF HEATING AND COOLING.

HOT WATER UNIT HEATER SCHEDULE

UH X

PLAN NO	MANUFACTURER, MODEL, SIZE	TYPE	LOCATION	HEATING CAP MBH	GPM	PD FT H20	CFM	EAT DEG F	LAT DEG F	HOT WATER EWT	HOT WATER LWT	ELECTRICAL VOLTS/Ø	ELECTRICAL HP	ELECTRICAL RPM	DIMENSIONS (INCHES) DEPTH	DIMENSIONS (INCHES) WIDTH	DIMENSIONS (INCHES) HEIGHT	WEIGHT LBS	REMARKS
UH-1	MODINE CW-006 ARRANGEMENT 58	HORIZONTAL RECESSED CABINET	CORR. ENTRY	49.6	2.48	2.8	620	40	114	160	120	120 / 1	0.05	951	9.75	61.75	25	140	SEE NOTES
UH-2	MODINE CW-006 ARRANGEMENT 58	HORIZONTAL RECESSED CABINET	CORR. ENTRY	49.6	2.48	2.8	620	40	114	160	120	120 / 1	0.05	951	9.75	61.75	25	140	SEE NOTES
UH-3	MODINE CW-006 ARRANGEMENT 58	HORIZONTAL RECESSED CABINET	CORR. ENTRY	49.6	2.48	2.8	620	40	114	160	120	120 / 1	0.05	951	9.75	61.75	25	140	SEE NOTES
UH-4	MODINE CW-006 ARRANGEMENT 58	HORIZONTAL RECESSED CABINET	CORR. ENTRY	49.6	2.48	2.8	620	40	114	160	120	120 / 1	0.05	951	9.75	61.75	25	140	SEE NOTES
UH-5	MODINE HSB-33	VERTICAL CEILING HUNG	MECH. RM. 69	21.7	1.1	0.2	630	60	92	160	120	120 / 1	1/4	1550	15	17.5	16.4	40	SEE NOTES
UH-6	MODINE HSB-33	VERTICAL CEILING HUNG	MECH. RM. 68	21.7	1.1	0.2	630	60	92	160	120	120 / 1	1/4	1550	15	17.5	16.4	40	SEE NOTES

NOTES:

1. HANG VIA (4) POINTS FROM CONSTRUCTION ABOVE.
2. PROVIDE REMOTE THERMOSTAT WITH TAMPER COVER AND 2-WAY CONTROL VALVE. INTEGRATE WITH ATC.
3. PROVIDE AQUASTAT TO PROVE HW FLOW.
4. PROVIDE INTEGRAL DISCONNECT SWITCH DPST. DISCONNECTS BOTH HOT AND NEUTRAL POWER LINES.
5. FOR UH-1 THRU UH-4, PROVIDE WITH A 1" THROWAWAY FILTER (MERV 8). BOTTOM RETURN BOTTOM DISCHARGE WITH ADJUSTABLE LOUVERS.
6. PROVIDE FULL ADAPTER BACK WITH CLOSED PIPE TUNNEL, END PANELS, AND FILLER PANEL SECTIONS FOR FLOOR MOUNTED UNITS.

CONDENSING HOT WATER BOILER SCHEDULE

B X

PLAN NO.	MANUFACTURER MODEL	AGA INPUT CFH	GROSS HEATING CAP MBH OUTPUT	MAX % EFF	WORKING GAS PRESS RATING PSI	MAX GAS PRESSURE WC	GAS TURNDOWN RATIO	EWT °F	LWT °F	FLOWRATE GPM	MAX WATER PD PSIG	ELECTRICAL DATA VOLTS/Ø	ELECTRICAL DATA FLA	VENT SIZE INCH DIA INLET	VENT SIZE INCH DIA OUTLET	OPER WEIGHT LBS	REMARKS
B-1 / B-2	AERCO BMK750	750	720	98	160	14"	15:1	120	160	38	3.0	120/1	13	6	6	870	SEE NOTES

NOTES:

1. PROVIDE SAFETY/RELIEF VALVES (50 PSI) PIPED FULL SIZE OF BOILER CONNECTION DOWN TO TERMINATION 6" ABOVE FLOOR.
2. VERIFY EXISTING INLET GAS PRESSURE. IF IN ACCESS OF 14" WC PROVIDE LOCKUP REDUCING REGULATOR AND EXTERIOR VENT PIPING AS REQUIRED BY THE IFGC AND MANUFACTURER'S RECOMMENDATIONS.
3. TERMINATE VENT MINIMUM 10'-0" FROM ANY MECHANICAL OUTSIDE AIR INTAKE & ANY OPENING INTO BUILDING
4. INTERFACE BOILER CONTROL/SEQUENCING SYSTEM/PANEL (WALL-MOUNTED ACS) WITH EXISTING HONEYWELL NIAGARA 4 PLATFORM BMS SYSTEM. PROVIDE BACNET INTERFACE. PROVIDE CONTROLLABILITY OF ALL MECHANICAL EQUIPMENT WITH ASSOCIATED GRAPHICS AND PROVIDE SECURE REMOTE WEB ACCESS FOR SETPOINTS AND SCHEDULING ADJUSTMENT FOR OCCUPIED AND UNOCCUPIED MODES OF HEATING AND COOLING SET POINTS.
5. PROVIDE ALL REQUIRED PIPE WELLS AND EXTERIOR SENSORS.
6. PROVIDE CONDENSATE NEUTRALIZATION KIT AND ASSOCIATED DRAIN PIPING.
7. PROVIDE MUFFLER AS PER MANUFACTURER'S RECOMMENDATIONS.
8. PROVIDE GAS VENTING AND SEALED COMBUSTION AIR INTAKE DUCTS TO THE OUTDOORS AS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS & RECOMMENDATIONS. PROVIDE MANUFACTURER'S WARRANTY AS PER SPECIFICATIONS.
9. PROVIDE SHUT-OFF VALVES AND AUTOMATIC ISOLATION VALVES AT HWS&R CONNECTIONS AT EACH BOILER.
10. MOUNT ON 4" REINFORCED CONCRETE PAD 6" LARGER THAN EQUIPMENT FOOTPRINT.
11. PROVIDE BOILER MANUFACTURER'S STANDARD/INTEGRAL LOW-WATER CUT-OFF.
12. PROVIDE ASME CSD-1 GAS TRAIN & SAFETY CONTROLS.
13. PROVIDE BOILER CONTROL PANEL.
14. PROVIDE EQUIPMENT START UP BY MANUFACTURER'S CERTIFIED TECHNICIAN. MECHANICAL CONTRACTOR, ELECTRICAL CONTRACTOR, ATC CONTRACTOR AND TESTING AND BALANCING AGENT SHALL BE PRESENT DURING START UP; PROVIDE ASSOCIATED STARTUP REPORT ACCORDINGLY.

NJDCA Electronic Release Stamp

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Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number
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10.10.2025

Checked By
MV

Drawn By
VA

Scale
AS NOTED

Drawing Name
MECHANICAL SCHEDULES

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VENTILATION SCHEDULE

ROOM NO	ROOM NAME	AREA SQ FT	PROGRAM OCCUPANT LOAD	OUTSIDE AIR PER PERSON REQUIRED	OUTSIDE AIR PER SF REQUIRED	OUTSIDE AIR REQUIRED CFM	SPACE VENT EFFECT	REQUIRED OUTDOOR AIR CFM	EXHAUST AIR				ACTUAL CFM					EQUIPMENT SERVING SPACE
									NO. OF FIXTURE	CFM/FIXTURE	CFM/SF	REQUIRED CFM	OUTSIDE AIR	SUPPLY AIR	RETURN AIR	EXH AIR	TRANSF AIR	
45	STAFF ROOM	480	3	5	0.06	43.80	0.8	54.75	N/A	N/A	N/A	N/A	115	810	810	115	-	RTU-3
47	CONFERENCE ROOM	166	3	5	0.06	24.96	0.8	31.20	N/A	N/A	N/A	N/A	30	200	200	30	-	RTU-3
49	LIBRARY OFFICE	180	3	5	0.06	25.80	0.8	32.25	N/A	N/A	N/A	N/A	85	350	350	85	-	RTU-6
2B	READING AREA	180	2	5	0.06	20.80	0.8	26.00	N/A	N/A	N/A	N/A	26	300	300	-	-	RTU-6
52	CAFETERIA/MULTI PURPOSE ROOM	4770	137	7.5	0.06	1313.70	0.8	1642.13	N/A	N/A	N/A	N/A	1650	13600	13600	-	-	ERU-E-1,ERU-E-2
71	WAITING AREA	112	3	5	0.06	21.72	0.8	27.15	N/A	N/A	N/A	N/A	30	160	160	30	-	RTU-3
72	OFFICE 1	156	2	5	0.06	19.36	0.8	24.20	N/A	N/A	N/A	N/A	40	280	280	40	-	RTU-3
73	OFFICE 2	162	2	5	0.06	19.72	0.8	24.65	N/A	N/A	N/A	N/A	50	350	350	50	-	RTU-3
74	OFFICE 3	161	2	5	0.06	19.66	0.8	24.58	N/A	N/A	N/A	N/A	25	175	175	25	-	RTU-3
75	OFFICE 4	162	2	5	0.06	19.72	0.8	24.65	N/A	N/A	N/A	N/A	50	350	350	50	-	RTU-3
76	WAITING AREA	62	3	5	0.06	18.72	0.8	23.40	N/A	N/A	N/A	N/A	20	75	75	-	-	RTU-3
C13	CORRIDOR	237	0	0	0.06	14.22	0.8	17.78	N/A	N/A	N/A	N/A	20	360	320	20	-	RTU-2
58	VOCAL MUSIC	1424	32	10	0.06	405.44	0.8	506.80	N/A	N/A	N/A	N/A	500	2640	2640	500	-	RTU-2
C10	CORRIDOR	409	0	0	0.06	24.54	0.8	30.68	N/A	N/A	N/A	N/A	35	450	450	-	-	RTU-5-E
48A	STORAGE	301	0	0	0.12	36.12	0.8	45.15	N/A	N/A	N/A	N/A	50	165	-	110	55	CUH-10
48B	EXISTING OFFICE	128	2	5	0.06	17.68	0.8	22.10	N/A	N/A	N/A	N/A	65	215	215	65	-	CUH-10
59	INSTRUMENTAL STORAGE	186	0	0	0.12	22.32	0.8	27.90	N/A	N/A	N/A	N/A	65	200	200	65	-	RTU-5
16	KINDERGARTEN	893	22	10	0.12	327.16	1	327.16	N/A	N/A	N/A	N/A	330	1800	1800	330	-	UV-E
16A	S.G.I.	319	9	10	0.12	128.28	1	128.28	N/A	N/A	N/A	N/A	160	795	795	160	-	UV-B
17	KINDERGARTEN	877	22	10	0.12	325.24	1	325.24	N/A	N/A	N/A	N/A	330	1800	1800	330	-	UV-E
17A	S.G.I.	322	9	10	0.12	128.64	1	128.64	N/A	N/A	N/A	N/A	130	870	870	130		FCU-1
61	CLASSROOM	876	22	10	0.12	325.12	1	325.12	N/A	N/A	N/A	N/A	410	1500	1500	410	-	UV-A
63	CLASSROOM	851	22	10	0.12	322.12	1	322.12	N/A	N/A	N/A	N/A	410	1500	1500	410	-	UV-A
65	CLASSROOM	852	22	10	0.12	322.24	1	322.24	N/A	N/A	N/A	N/A	410	1500	1500	410	-	UV-A
62	CLASSROOM	881	22	10	0.12	325.72	1	325.72	N/A	N/A	N/A	N/A	410	1500	1500	410	-	UV-A
64	FLEX CLASSROOM	888	22	10	0.12	326.56	1	326.56	N/A	N/A	N/A	N/A	410	1500	1500	410	-	UV-A
64C	TLT. RM.	53	1	0	0	0.00	0.8	0.00	1	70	N/A	70	-	50	-	75	25	UV-A
66A	TLT. RM.	52	1	0	0	0.00	0.8	0.00	1	70	N/A	70	-	50	-	75	25	UV-A
66	FLEX CLASSROOM	877	22	10	0.12	325.24	1	325.24	N/A	N/A	N/A	N/A	410	1500	1500	410	-	UV-A
67	JC	92	1	0	0	0.00	0.8	0.00	N/A	N/A	1	92	-	75	-	100	25	RTU-1
68	MECH	190	1	0	0	0.00	0.8	0.00	N/A	N/A	N/A	N/A	-	335	-	-	335	RTU-1
69	MECHANICAL ROOM	328	1	0	0	0.00	0.8	0.00	N/A	N/A	N/A	N/A	-	420	-	-	420	RTU-1
V06	VEST.	75	0	0	0	0.00	0.8	0.00	N/A	N/A	N/A	N/A	-	190	-	190	-	RTU-1
55B	TLT. RM.	83	0	0	0	0.00	0.8	0.00	1	70	N/A	70	-	80	-	110	30	RTU-1
55A	TLT. RM.	84	0	0	0	0.00	0.8	0.00	1	70	N/A	70	-	80	-	110	30	RTU-1
54B	GIRLS TLT. RM.	221	0	0	0	0.00	0.8	0.00	3	70	N/A	210	-	120	-	220	100	RTU-1
54A	BOYS TLT. RM.	173	0	0	0	0.00	0.8	0.00	3	70	N/A	210	-	120	-	220	100	RTU-1
C09	CORRIDOR	2004	0	0	0.12	240.48	0.8	300.60	N/A	N/A	N/A	N/A	300	880	880	-	1520	RTU-1
16B	TLT. RM.	53	0	0	0	0.00	0.8	0.00	1	70	N/A	70	-	-	-	75	75	UV-E (EX) / EF-5
17B	TLT. RM.	54	0	0	0	0.00	0.8	0.00	1	70	N/A	70	-	-	-	75	75	UV-E (EX) / EF-5

NOTES:

1. BASED ON 2021 INTERNATIONAL MECHANICAL CODE (IMC), TABLE 403.3, MINIMUM VENTILATION RATES.
2. ASHRAE VENTILATION STANDARD STANDARD 62.1 IS USED AS A SECONDARY REFERENCE SOURCE IF A PARTICULAR ROOM IS NOT INCLUDED IN THE IMC.

AIR DEVICES SCHEDULE

BASED ON TITUS CO

PLAN NO.	CFM RANGE	NECK SIZE	OVERALL SIZE	MANUFACTURER MODEL	REMARKS
CD	0-100	6" DIA	12x12	OMNI	SEE NOTES 1,6,7
CD	101-225	8" DIA	12x12	OMNI	SEE NOTES 1,6,7
CD	0-100	6" DIA	24x24	OMNI	SEE NOTES 1,6,7
CD	101-225	8" DIA	24x24	OMNI	SEE NOTES 1,6,7
CD	226-360	10" DIA	24x24	OMNI	SEE NOTES 1,6,7
CD	361-550	12" DIA	24x24	OMNI	SEE NOTES 1,6,7
CD	551-750	14" DIA	24x24	OMNI	SEE NOTES 1,6,7
CD	751-900	15" DIA	24x24	OMNI	SEE NOTES 1,6,7
SR	SEE PLANS	-	SEE PLANS	300RL	SEE NOTES 3,6,7
SR1	SEE PLANS	-	SEE PLANS	S300FS	SEE NOTES 5,6,7

PLAN NO.	CFM RANGE	NECK SIZE	OVERALL SIZE	MANUFACTURER MODEL	REMARKS
RR/ER	0-100	-	24x12	355RL	SEE NOTES 2,6,7
RR/ER	101-200	-	24x12	355RL	SEE NOTES 2,6,7
RR/ER	0-1000	-	24x12	355RL	SEE NOTES 2,6,7
RR/ER	0-1000	-	24x24	355RL	SEE NOTES 2,6,7
RR1/ER1	SEE PLANS	-	SEE PLANS	350RL	SEE NOTES 4,6,7

NOTES:

1. PROVIDE FRAME WITH ACCESSORIES FOR T-BAR LAY-IN DROPPED CEILING GRID OR SURFACE MOUNTED BORDER FOR GYPSUM CEILING APPLICATION. SEE DRAWINGS FOR MOUNTING LOCATION. PROVIDE ACCESSORY ROUND BACK ADAPTER (SIZE AS INDICATED IN SCHEDULE) AND EQUALIZING GRID PROVIDE OPTIONAL DIRECTIONAL BLOW CLIPS WHERE INDICATED ON DRAWINGS. PROVIDE AND INSTALL R-6 FOIL-BACKED INSULATION ON 12x12 MODULE. PROVIDE FACTORY INSTALLED R-6 FOIL-BACKED INSULATION ON 24x24 MODULE.
2. PROVIDE WITH 35° DEFLECTION AT 1/2" BLADE SPACING WITH FRONT BLADE PARALLEL TO LONG DIMENSION. PROVIDE FRAME WITH ACCESSORIES FOR T-BAR LAY-IN CEILING GRID OR SURFACE MOUNTED BORDER FOR GYPSUM CEILING APPLICATION. SEE DRAWINGS FOR MOUNTING LOCATION. PROVIDE SQUARE TO ROUND TRANSITION AS REQUIRED. PROVIDE OPTIONAL OPPOSED BLADE DAMPER.
3. PROVIDE SUPPLY REGISTER WITH DOUBLE DEFLECTION AT 3/4" BLADE SPACING WITH FRONT BLADES PARALLEL TO LONG DIMENSION, OPTIONAL DAMPER AND SURFACE MOUNT BORDER MOUNTING FRAME.
4. PROVIDE RETURN REGISTER WITH SINGLE DEFLECTION AT 3/4" BLADE SPACING WITH BLADES PARALLEL TO LONG DIMENSION, OPTIONAL DAMPER AND SURFACE MOUNT BORDER MOUNTING FRAME.
5. PROVIDE WITH DOUBLE DEFLECTION AT 3/4" BLADE SPACING WITH FRONT BLADES PARALLEL TO SHORT DIMENSION AND ASD (AIR SCOOP DAMPER/EXTRACTOR).
6. PROVIDE STANDARD FINISH - #26 WHITE.
7. PROVIDE REMOTE CABLE OPERATED VOLUME DAMPERS LOCATED IN INACCESSIBLE CONSTRUCTION.

PUMP SCHEDULE

BP X, HWP X

PLAN NO	MANUFACTURER MODEL	LOCATION	SYSTEM SERVED	TYPE	GPM	HEAD FT	NET POS SUCT HD	MOTOR SPEED	RPM @ DUTY POINT	EFF %	MOTOR HP	DUTY POINT POWER HP	ELECTRICAL DATA VOLTS / Ø	WEIGHT LBS	SUCTION DIA	DISCHARGE DIA	REMARKS
HWP-1	BELL & GOSSETT E-80 1.5x1.5x7C	MECH ROOM	HEATING HW	INLINE	38	44	5.2	1800	1599	57.8	1.5	0.712	208/3	180	1.5	1.5	SEE NOTES
HWP-2	BELL & GOSSETT E-80 1.5x1.5x7C	MECH ROOM	HEATING HW	INLINE	38	44	5.2	1800	1599	57.8	1.5	0.712	208/3	180	1.5	1.5	SEE NOTES
P-1	BELL & GOSSETT E-90-ECM	SEE PLAN	SEE PLAN	INLINE	10	25	7.5	1717	-	28.9	0.5	-	208/1	70	-	-	SEE NOTES

NOTES:

1. PROVIDE MOTOR MOUNTED VARIABLE FREQUENCY DRIVE, LCD KEYPAD, AND BACNET INTERFACE.
2. PROVIDE NEMA PREMIUM EFFICIENCY MOTOR SUITABLE FOR VFD OPERATION.
3. INTERFACE WITH DIRECT DIGITAL CONTROL (DDC) SYSTEM. PROVIDE WITH DDC BACNET CONTROLS FOR INTERFACE WITH AME BMS. PROVIDE CONTROLLABILITY OF ALL MECHANICAL EQUIPMENT WITH ASSOCIATED GRAPHICS AND PROVIDE SECURE REMOTE WEB ACCESS FOR SETPOINTS AND SCHEDULING ADJUSTMENT FOR OCCUPIED AND UNOCCUPIED MODES OF HEATING AND COOLING SET POINTS.CONTROLS BY ATC.
4. PROVIDE VERTICAL PIPE SUPPORTS FROM STRUCTURAL ABOVE.
5. PROVIDE ANSI-125 ANGLE FLANGED, MAX PRESS: 175 PSI, MAX TEMP: 230°F.
6. PROVIDE EQUIPMENT START UP BY MANUFACTURER'S CERTIFIED TECHNICIAN. MECHANICAL CONTRACTOR, ELECTRICAL CONTRACTOR, ATC CONTRACTOR AND TESTING AND BALANCING AGENT SHALL BE PRESENT DURING START UP; PROVIDE ASSOCIATED STARTUP REPORT ACCORDINGLY.
7. BALANCE P-1 TO MEET THE RTU-3 HOT WATER COIL FLOW RATE.

VARIABLE AIR VOLUME UNIT (W/ HOT WATER COIL) SCHEDULE

VAV X

PLAN NO	MANUFACTURER MODEL	TYPE	BOX SIZE	COOLING CFM	MIN CFM	HOT WATER COIL							CONTROLS	REMARKS
						HEATING (MBH)	NO. OF ROWS	EAT °F	LAT °F	APd (IN WC)	EWT/LWT °F	WPd (FT WG)	GPM	
VAV 1-1	TITUS DESV	SINGLE DUCT	6	200	100	10.1	2	55	115.8	0.07	180 / 160	0.14	1	DDC	SEE NOTES
VAV 1-2	TITUS DESV	SINGLE DUCT	12	810	405	37.7	2	55	110.7	0.13	180 / 160	1.01	3.7	DDC	SEE NOTES
VAV 1-3	TITUS DESV	SINGLE DUCT	8	410	205	18.5	2	55	109	0.13	180 / 160	0.48	1.8	DDC	SEE NOTES
VAV 1-4	TITUS DESV	SINGLE DUCT	14	980	490	49	2	55	114.9	0.1	180 / 160	0.95	4.8	DDC	SEE NOTES

NOTES:

1. PROVIDE REMOTE ROOM SENSORS.
2. PROVIDE INDIVIDUAL CONTROL SYSTEMS FOR EACH.
3. PROVIDE NETWORK CONTROL PANELS WHERE INDICATED ON DRAWINGS.
4. PROVIDE A 120V JUNCTION BOX AND DISCONNECT IN CLOSE PROXIMITY TO THE ASSOCIATED CONTROL PANEL AND EACH VAV TERMINAL.
5. PROVIDE ALL CONTROL WIRING BETWEEN CONTROL PANEL AND DAMPERS, SENSORS, ETC., IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES, PROVIDE 120V/24V CONTROL TRANSFORMER SERVING EACH VAV TERMINAL.
6. PROVIDE AUTOMATIC HEATING/COOLING CHANGE OVER FOR ALL VAV TERMINALS.
7. PROVIDE 1/2" LINER WITH FOIL COVER.

FIN-TUBE RADIATION SCHEDULE

FTR X

PLAN NO	MANUFACTURER MODEL	BTU/HR PER LF	AVG WATER TEMP	HEATING ELEMENT				REMARKS
				TUBE	FINS PER FT	ACTIVE LENGTH	ROWS	
FTR-A	JVB-S-20	1130	140	3/4	50	SEE PLANS	2	SEE NOTES BELOW

NOTES:

1. PROVIDE DOUBLE SIDED TRIM PIECES AND CORNER PIECES FOR CONTINUOUS LOOK AND WALL MOUNTING KIT.
2. PROVIDE TOP SUPPLY AND RETURN TO WALL LOUVERED INLET FOR ALL RADIATORS.
3. MANUFACTURER TO PROVIDE RETURN PIPE HANGERS.
4. COLOR TO BE SELECTED FROM STANDARD OR OPTIONAL COLOR CHART BY ARCHITECT.
5. INTEGRATE INTO BMS WITH 2-WAY CONTROL VALVE. CONTROLS BY ATC.
6. CONTRACTOR TO FIELD MEASURE PER MANUFACTURER'S RECOMMENDATIONS PRIOR TO ORDERING.
7. SEE FLOOR PLAN FOR PIPING CONNECTION LOCATION.
8. PROVIDE WITH DDC BACNET CONTROLS FOR INTERFACE WITH HONEYWELL COMFORTPOINT NIAGARA 4 BMS CONTROL SYSTEM. PROVIDE CONTROLLABILITY OF ALL MECHANICAL EQUIPMENT WITH ASSOCIATED GRAPHICS AND PROVIDE SECURE REMOTE WEB ACCESS FOR SET POINTS AND SCHEDULING ADJUSTMENT FOR OCCUPIED AND UNOCCUPIED MODES OF HEATING AND COOLING SET POINTS.

OUTSIDE AIR INTAKE HOOD SCHEDULE

OAI X

PLAN NO	MANUFACTURER MODEL	LOCATION	MAX CFM	AREA SF	VELOCITY	AIR PRESS DROP	SERVICE	REMARKS
OAI-1	GREENHECK GRSI-8	ROOF	130	-	351	0.021	INTAKE	SEE NOTES

NOTES:

1. PROVIDE MINIMUM 18" HIGH CURB WITH INTERNAL MOTORIZED DAMPER AND INSECT SCREEN.

CONDENSATE PUMP SCHEDULE

CP X

PLAN NO	EQUIPMENT SERVED	MANUFACTURER MODEL	GPH	HEAD FT	SHUT OFF HEAD FT	MOTOR	ELECTRICAL DATA			REMARKS
							VOLTS/Ø	FLA	MOP	
CP-FCU	SEE PLAN	LITTLE GIANT VCCA-20-P	10	18	20	1/30	115/1	1.5	15	SEE NOTES

NOTES:

1. PROVIDE BUILT-IN CHECK VALVE.
2. PROVIDE DRAIN PAN WITH UL #508 APPROVED WATER DETECTION SENSOR FOR UNIT SHUTDOWN. WIRE CONTROL CIRCUIT THROUGH NC CONTACT.
3. PROVIDE SAFETY SWITCH AND CONNECT TO ASSOCIATED MECHANICAL EQUIPMENT TO SHUTDOWN ON HIGH LEVEL.
4. PROVIDE HARD WIRED FOR ALL UNITS.
5. ALL PUMP SHALL BE UL 2043 AND LABLED "FOR PLENUM APPLICATION".

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Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number
5516D

Project Date
10.10.2025

Checked By
MV

Drawn By
VA

Scale
AS NOTED

Drawing Name
MECHANICAL SCHEDULES

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number
M6.1

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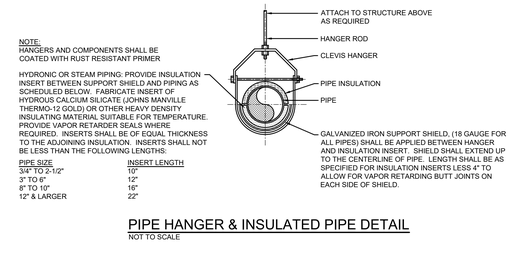
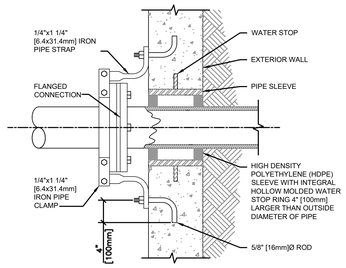


NOTE:
HANGERS AND COMPONENTS SHALL BE COATED WITH RUST RESISTANT PRIMER

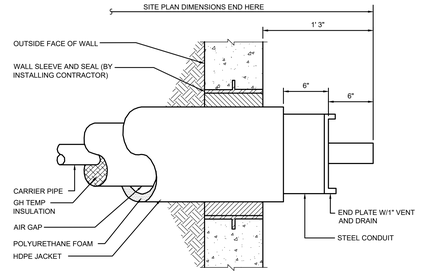
HYDRONIC OR STEAM PIPING: PROVIDE INSULATION INSERT BETWEEN SUPPORT SHIELD AND PIPING AS SCHEDULED BELOW. FABRICATE INSERT OF HYDROUS CALCIUM SILICATE (JOHNS MANVILLE THERMO-12 GOLD) OR OTHER HEAVY DENSITY INSULATING MATERIAL SUITABLE FOR TEMPERATURE. PROVIDE VAPOR RETARDER SEALS WHERE REQUIRED. INSERTS SHALL BE OF EQUAL THICKNESS TO THE ADJOINING INSULATION. INSERTS SHALL NOT BE LESS THAN THE FOLLOWING LENGTHS:

PIPE SIZE	INSERT LENGTH
3/4" TO 2-1/2"	10"
3" TO 6"	12"
8" TO 10"	16"
12" & LARGER	22"

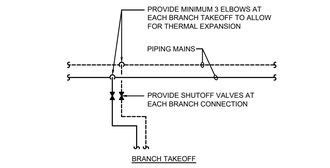
PIPE HANGER & INSULATED PIPE DETAIL
NOT TO SCALE



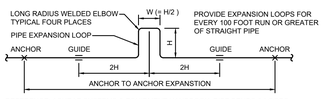
WATER PIPING SUPPORT ANCHOR DETAIL
NOT TO SCALE



WALL PENETRATION DETAIL
NOT TO SCALE



BRANCH TAKEOFF

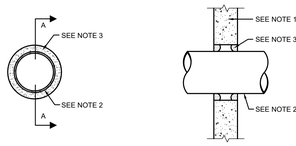


REFERENCE: ASHRAE SYSTEMS & EQUIPMENT HANDBOOK, PIPE BENDS & LOOPS

L = 6.225 x SQUARE ROOT (AAE x D) = 2H + W
AAE = ANCHOR-TO-ANCHOR EXPANSION IN INCHES
D = PIPE OUTSIDE DIAMETER IN INCHES
AAE = UTE x AAD
UTE = UNIT THERMAL EXPANSION IN INCHES PER 100 FEET FOR STEEL AND/OR COPPER PIPE
AAD = ANCHOR-TO-ANCHOR DISTANCE IN FEET
H = EXPANSION LOOP HEIGHT IN FEET
W = EXPANSION LOOP WIDTH IN FEET

EXPANSION LOOP

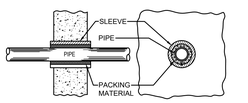
PIPE EXPANSION DETAIL
NOT TO SCALE



SECTION A-A

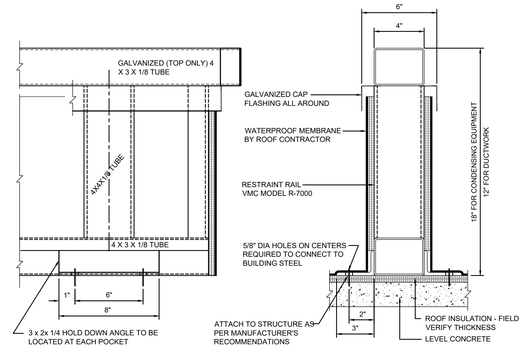
NOTES:
1. FLOOR OR WALL ASSEMBLY - MIN 4 1/2 INCH THICK LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS. MAX DIAMETER OF THROUGH OPENING IS 12 1/4 INCH. SEE CONCRETE BLOCKS (CAZT) CATEGORY IN FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
2. PIPE OR CONDUIT - NOMINAL 10 INCH DIAMETER (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE, NOMINAL 6 INCH DIAMETER (OR SMALLER) RIGID STEEL CONDUIT, NOMINAL 4 INCH DIAMETER (OR SMALLER) STEEL EMT OR NOMINAL 3 INCH DIAMETER (OR SMALLER) TYPE L (OR HEAVIER) COPPER PIPE. MAXIMUM ONE PIPE OR CONDUIT PER THROUGH OPENING. MAXIMUM ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND EDGE OF OPENING IS 3/4 INCH MINIMUM ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND EDGE OF OPENING IS 0 INCH (POINT CONTACT). PIPE OR CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL.
3. FILL, VOID OR CAVITY MATERIALS* - PUTTY: MOLDABLE PUTTY MATERIAL KNEADED BY HAND AND APPLIED TO FILL ANNULAR SPACE TO A MINIMUM DEPTH OF 1 INCH, FLUSH WITH TOP SURFACE OF FLOOR. IN WALL ASSEMBLIES, REQUIRED PUTTY THICKNESS TO BE INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL. MINNESOTA MINING & MFG. CO. - CP 25WB+. *BEARING THE UL CLASSIFICATION MARKING

PIPE PENETRATION FIRE STOPPING DETAIL AT FIRE RATED MASONRY
NOT TO SCALE

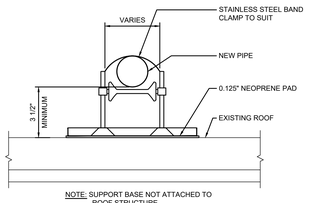


(CONCRETE AND FOUNDATION WALLS)

NOTE:
NO STRUCTURAL STRAIN SHOULD BE TRANSMITTED FROM ANY WALL TO THE PIPING SYSTEM THE SLEEVING, RELIEVING ARCH, OR STRUCTURAL BEAM SUPPORT METHODS PROTECT THE PIPING FROM SUPERIMPOSED LOADS THE "PACKING" MATERIAL AROUND THE PIPE IS FLEXIBLE ENOUGH TO RESPOND TO SETTLING IN THE STRUCTURE OR PIPING

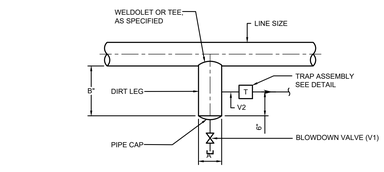


NON-ISOLATED WIND AND SEISMIC RESTRAINT RAIL ON CONCRETE DETAIL
NOT TO SCALE



NOTE: SUPPORT BASE NOT ATTACHED TO ROOF STRUCTURE

GAS PIPE SUPPORT DETAIL
NO SCALE

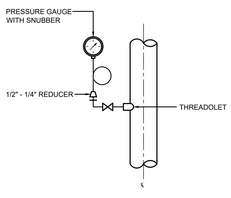


DIMENSIONS AND SIZES IN INCHES

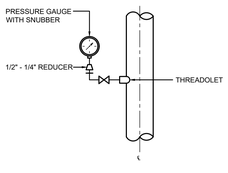
LINE SIZE	3	4	6	8	10	12	14	16	18	20	24
DIMENSION A	3	4	4	4	6	8	10	10	10	12	12
DIMENSION B	18	18	18	18	18	18	18	20	21	22	24
SIZE OF V1	3/4	3/4	3/4	3/4	3/4	3/4	1	1	1	1	1
SIZE OF V2	3/4	3/4	3/4	3/4	3/4	1	1	1	1	1	1

NOTES:
1. FOR LINES 2 1/2" AND SMALLER, USE 3/4" PIPE, VALVES, AND FITTINGS, AND USE DIMENSION "B" EQUAL TO 12" WITH 6" DIRT LEG.
2. PROVIDE TRAP ASSEMBLIES AS SHOWN ON DRAWINGS AND SPECIFICATIONS, OR AS A MINIMUM AS FOLLOWS:
   a. BASE OF RISERS.
   b. CHANGES IN ELEVATION.
   c. ENDS OF MAINS.
   d. AT INTERVALS OF 100 FEET ON MAINS W/PRESSURES OF 100 PSI AND BELOW.
   e. AT INTERVALS OF 250 FEET ON MAINS W/PRESSURES ABOVE 100 PSI.

TYPICAL DRIP LEG DETAIL (FOR LARGE PIPING)
NOT TO SCALE

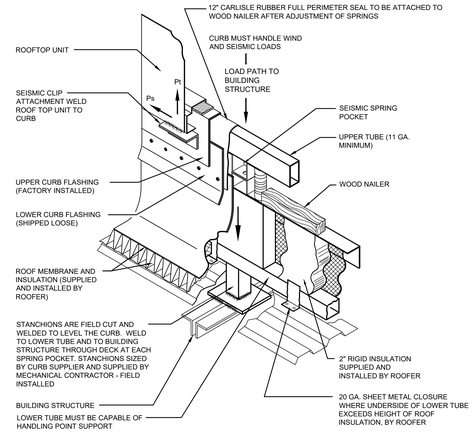


PRESSURE GAUGE FOR STEAM SERVICE

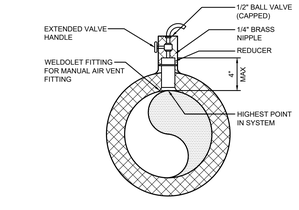


PRESSURE GAUGE FOR WATER, GAS OR OIL SERVICE

PRESSURE GAUGE DETAIL
NOT TO SCALE

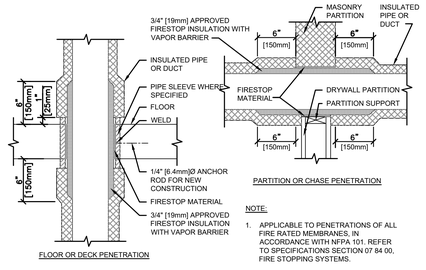


ATTACHMENT OF ISOLATED WIND AND SEISMIC ROOF CURB ON LEVEL OR PITCHED BAR JOIST-SUPPORTED ROOF
NOT TO SCALE



INSTALL MANUAL AIR VENTS AT HIGH POINTS IN PIPING, AT HEAT TRANSFER COILS, AND ELSEWHERE AS REQUIRED FOR SYSTEM AIR VENTING.

MANUAL AIR VENT ASSEMBLY DETAIL
NOT TO SCALE

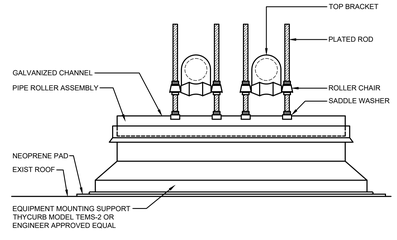


PARTITION OR CHASE PENETRATION

NOTE:
1. APPLICABLE TO PENETRATIONS OF ALL FIRE RATED MEMBRANES, IN ACCORDANCE WITH NFPA 101. REFER TO SPECIFICATIONS SECTION 07 84 00, FIRE STOPPING SYSTEMS.

FLOOR OR DECK PENETRATION

PIPE/DUCT PENETRATION OF SMOKE/FIRE BARRIERS
NOT TO SCALE



ROOF PIPE SUPPORT
NOT TO SCALE

C:\Bim Resevrvation\2025\25030\25030\25465\Princeton Boro\25465 004 - Littlebrook ES\25D\SYS\M\25465004_M7.0.rvtx

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Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number
5516D

Project Date
10.10.2025

Checked By
MV

Drawn By
VA

Scale
AS NOTED

Drawing Name
MECHANICAL DETAILS

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

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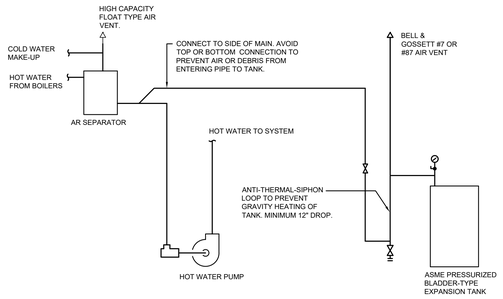
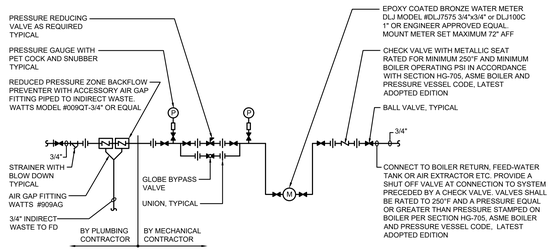
Drawing Number
M7.0



HOT WATER AIR SEPARATOR & EXPANSION TANK PIPING DETAIL
NOT TO SCALE



MAKE UP WATER PIPING DETAIL
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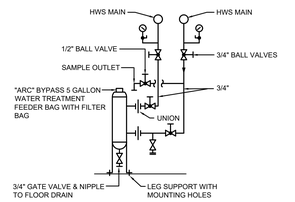
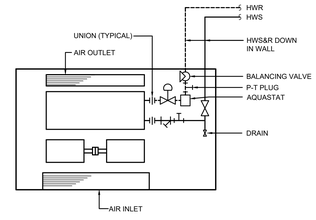
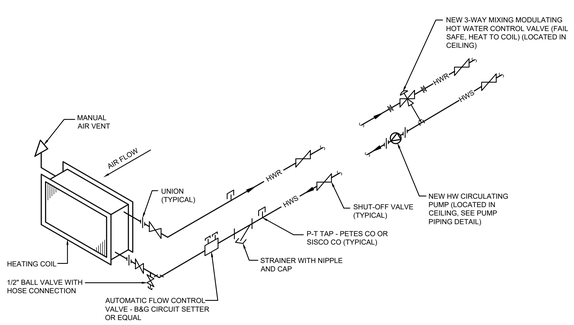


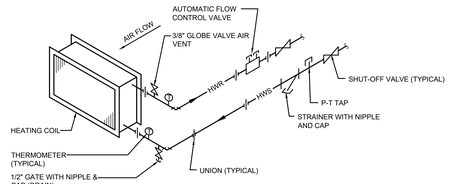
CHEMICAL FEED DETAIL
NOT TO SCALE



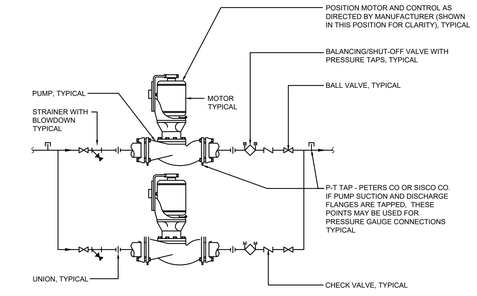
CABINET HEATER DETAIL
NOT TO SCALE



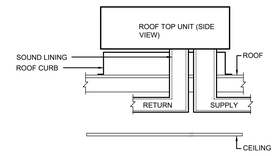
HOT WATER HEATING COIL DETAIL
NOT TO SCALE



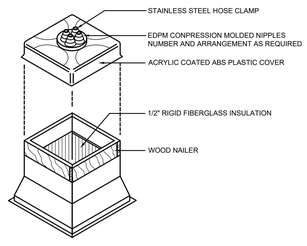
2-WAY VALVE HOT WATER HEATING COIL DETAIL
NOT TO SCALE



INLINE PUMP DETAIL
NOT TO SCALE

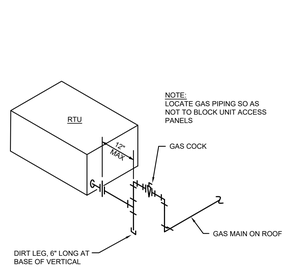


ROOFTOP UNIT DETAIL
NOT TO SCALE

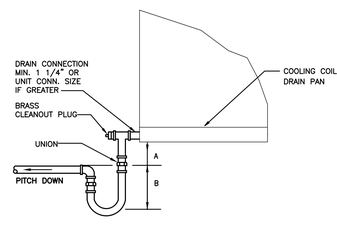


NOTE: PROVIDE SEPARATE BOOT FOR EACH PIPE. PROVIDE ADDITIONAL BOOTS FOR ELECTRICAL POWER AND CONTROL CONDUITS. DO NOT PASS MORE THAN (1) PIPE THRU EACH NIPPLE TO FACILITATE PROPER SEALING. COORDINATE WITH ELECTRICAL AND PLUMBING CONTRACTOR FOR NUMBER AND ARRANGEMENT OF BOOTS.

PIPE PORTAL DETAIL
NOT TO SCALE



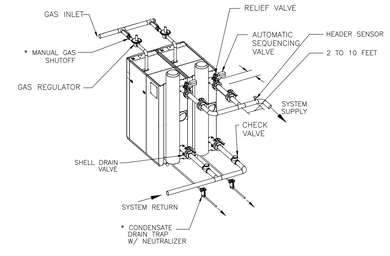
GAS CONNECTION TO ROOFTOP DETAIL
NOT TO SCALE



UNIT TYPE	A	B
DRAIN THRU	$1.5H_1$	$3H_1$
BLOW THRU	2" (MIN.)	$2H_1$

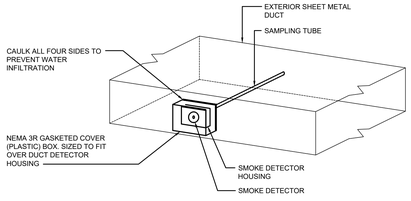
H_1 = FAN SUCTION PRESSURE
H_2 = FAN DISCHARGE PRESSURE
H= 150% 1"(MIN.) NEGATIVE STATIC PRESSURE AT FAN INLET

CONDENSATE TRAP DETAIL
NOT TO SCALE



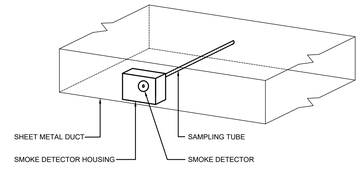
NOTES:
1. FOR ACTUAL QUANTITIES, SIZES AND LOCATIONS OF PIPING AND OTHER CONNECTIONS TO THE HEATER, SEE MANUFACTURER DIMENSIONAL DRAWING.
2. SHELL DRAIN VALVE AND CONDENSATE HOSE SHOULD BE ARRANGED TO PERMIT THE FLUIDS TO DRAIN FREELY, BY GRAVITY, TO A FLOOR DRAIN. RELIEF VALVE DISCHARGE SHOULD BE PIPED TO THE NEAREST FLOOR DRAIN. WHEN NO FLOOR DRAIN IS AVAILABLE, THE RELIEF VALVE DISCHARGE SHOULD BE PIPED VERTICALLY TO A HEIGHT 18" ABOVE THE FLOOR.
3. LOCATE WATER INLET AND OUTLET FITTINGS (i.e.UNIONS, ELBOWS, ETC.) A MINIMUM OF 6" FROM HEATER FITTINGS, TO PREVENT INTERFERENCE WITH REMOVAL OF BOILER PANELS AND COVERS. ALL PIPING AND ELECTRIC CONNECTIONS (SERVICE SWITCHES, CONDUIT BOXES) SHOULD LIKEWISE BE 6" AWAY FROM SIDE PANELS.
4. PROVIDE AERCO CONDENSATE NEUTRALIZER TANK, FOR PROPER CONDENSATE DRAINAGE. THE BOILER AND THE AERCO CONDENSATE TRAP MUST BE ELEVATED 4" OR HIGHER ABOVE THE FLOOR. SEE CONDENSATE TANK INSTRUCTIONS TID-0074 FOR DETAILS.
5. REVIEW BENCHMARK GAS SUPPLY DESIGN GUIDE GF-2030 FOR GAS PIPING INSTALLATION INSTRUCTIONS.
6. HEADER SENSOR MUST BE INSTALLED BETWEEN 2 TO 10 FEET FROM JUNCTION AND FROM LAST UNIT.
7. CONSULT AERCO FOR ADDITIONAL INFORMATION OR DIFFERENT DESIGN CONDITIONS.
8. PROVIDE AUTOMATIC ISOLATION VALVES SERVING THE SUPPLY AND RETURN OF EACH BOILER.
9. WHEN INSTALLING MULTIPLE BOILERS IN FIXED OR VARIABLE FLOW PRIMARY APPLICATIONS, UTILIZE A REVERSE-RETURN METHOD TO ENSURE BALANCED FLOW THROUGH EACH BOILER.
10. THIS DETAIL FROM BOILER MANUFACTURER IS FOR MULTIPLE BOILERS - COMMON HEADER - VARIABLE FLOW PRIMARY.
11. PIPE RELIEF VALVE FULL SIZE TO TERMINATE AT FLOOR DRAIN.
12. PROVIDE FULL SIZE RETURN SYSTEM Y-STRAINER (NOT SHOWN) TO EACH BOILER (TYP).

BOILER PIPING DIAGRAM
NOT TO SCALE



DETECTORS TO BE INSTALLED BY MECHANICAL CONTRACTOR

EXTERIOR DUCT DETECTOR INSTALLATION DETAIL
NOT TO SCALE



DETECTORS TO BE INSTALLED BY MECHANICAL CONTRACTOR

HORIZONTAL DUCT DETECTOR INSTALLATION DETAIL
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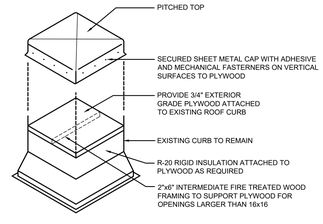

ROOF CURB CAP DETAIL
NOT TO SCALE

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Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number
5516D

Project Date
10.10.2025

Checked By
MV

Drawn By
VA

Scale
AS NOTED

Drawing Name
MECHANICAL DETAILS

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

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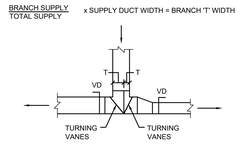
Drawing Number
M7.1



SPLITTER DAMPER DETAIL
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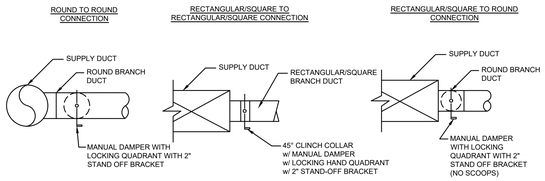

BRANCH DUCT CONNECTION DETAIL
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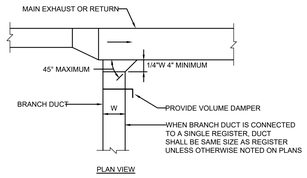

EXHAUST AND/OR RETURN BRANCH DUCT DETAIL
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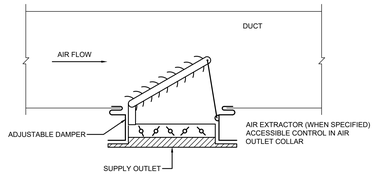

GRILLE AND REGISTER CONNECTION DETAIL
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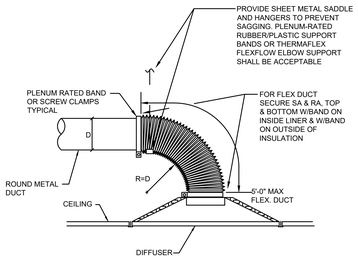

DIFFUSER CONNECTION DETAIL
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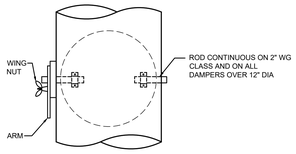


FIG. B
ROUND DAMPER

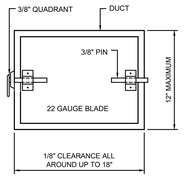
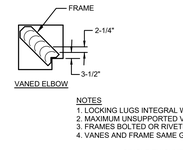


FIG. A
RECTANGULAR DAMPER

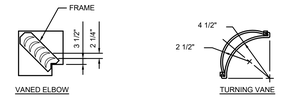
RECTANGULAR VOLUME DAMPERS EXCEEDING 1.5 SF SHALL BE OPPOSED BLADE DAMPER TYPE

VOLUME DAMPERS - SINGLE BLADE TYPE
NOT TO SCALE



NOTES
1. LOCKING LUGS INTEGRAL WITH VANE.
2. MAXIMUM UNSUPPORTED VANE LENGTH 36".
3. FRAMES BOLTED OR RIVETED TO ELBOW.
4. VANES AND FRAME SAME GAUGE AS ELBOW.

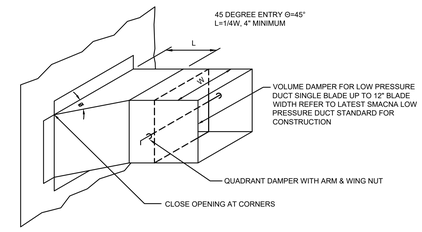
SINGLE THICKNESS
DUCTWORK UNDER 1200 FPM



DOUBLE THICKNESS
DUCTWORK OVER 1200 FPM

NOTES:
1. LOCKING LUGS INTEGRAL WITH VANES.
2. MAXIMUM UNSUPPORTED VANE LENGTH 48".
3. FRAMES BOLTED OR RIVETED TO ELBOW.
4. VANES AND FRAME SAME GAUGE AS ELBOW.

TURNING VANES FOR SQUARE ELBOWS
NOT TO SCALE



BRANCH CONNECTION DETAIL
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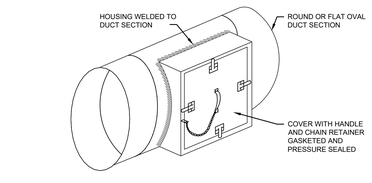
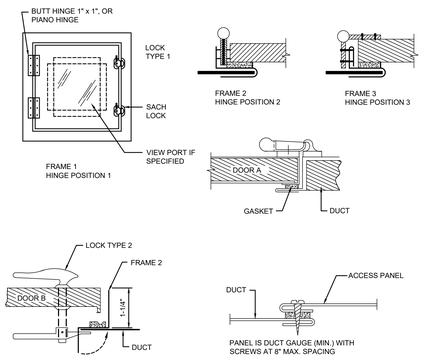
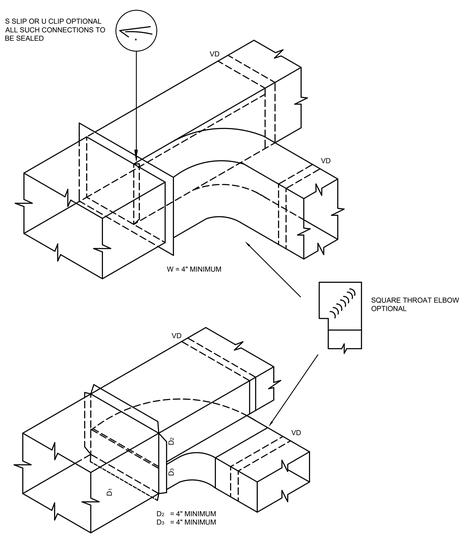


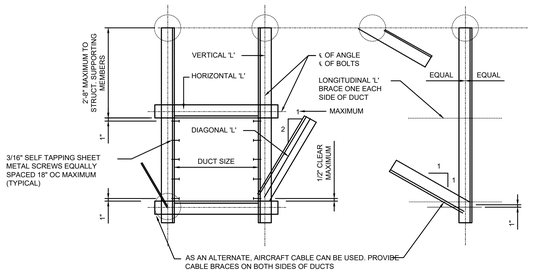


DUCT ACESS DOORS
NOT TO SCALE

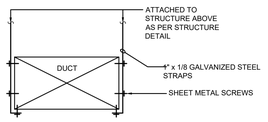


VOLUME CONTROL SHOULD BE BY BRANCH DAMPERS. IF A SPLITTER IS SHOWN ON THE DESIGN ITS LENGTH SHOULD BE 1.5W OR 1.5 D_3

PARALLEL FLOW BRANCHES DETAIL
NOT TO SCALE



TYPICAL SIDE BRACING FOR RECTANGULAR DUCTS
NOT TO SCALE



CROSS SECTIONAL AREA	SPACING MAXIMUM
4 SF OR LESS	8'-0" OC
4 SF TO 10 SF	6'-0" OC
10 SF OR GREATER	4'-0" OC

DUCT HANGER DETAIL
NOT TO SCALE

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10/14/25
Date
Architect
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Corporate: 1515 Lower Ferry Road Trenton - New Jersey 08628
Pennsylvania: 140 Whitaker Avenue Mont Clare - Pennsylvania 19453

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Drawing Number
M7.2

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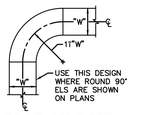
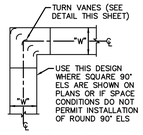
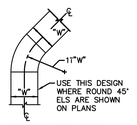


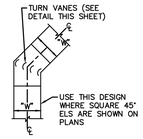
ROUND 90° ELBOW



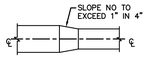
SQUARE 90° ELBOW



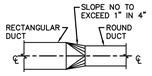
ROUND 45° ELBOW



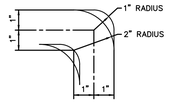
SQUARE 45° ELBOW



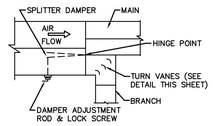
TYPICAL RECTANGULAR TRANSITION



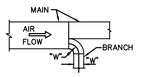
TYPICAL RECTANGULAR TO ROUND TRANSITION



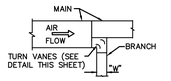
DETAIL OF TURN VANES



TYPICAL SPLITTER DAMPER

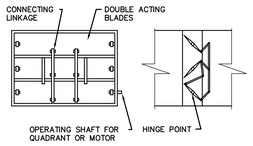


ROUND BRANCH TAKEOFF



SQUARE BRANCH TAKEOFF

CONSTRUCTION OF BRANCH TAKEOFF FROM MAIN

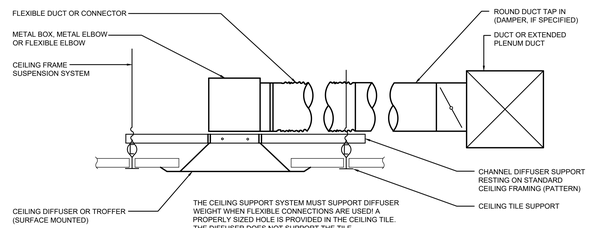


TYPICAL VOLUME DAMPER

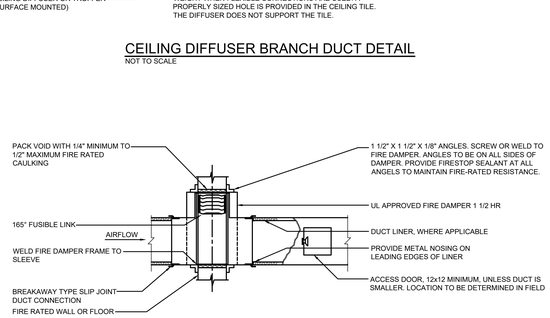
INSTALLATION NOTES

1. ALL DUCTS SHALL BE CONSTRUCTED AND ERECTED IN A NEAT AND WORKMANLIKE MANNER.
2. DUCTS SHALL BE CONSTRUCTED OF THE WEIGHTS GAGES AND MATERIAL SHOWN IN THE SPECIFICATIONS ON THESE DRAWINGS.
3. THE DIMENSIONS SHOWN FOR ALL DUCTS SHOWN IN PLAN GIVE THE WIDTH FIRST AND THEN THE HEIGHT.
4. DUCT RISERS SHOULD BE SUPPORTED BY ANGLES AT EVERY FLOOR.
5. AIR TURN VANES SHALL BE INSTALLED IN ALL ABRUPT ELBOWS TO PREVENT TURBULANCE.
6. DUCTS SHALL BE SECURELY ATTACHED TO THE BUILDING CONSTRUCTION IN AN APPROVED MANNER.
7. DIVERTING TRANSITION PIECES SHALL BE MADE AS GRADUAL AS POSSIBLE.
8. INSTALL PIPE DAMPER AS REQUIRED BY N.F.P.A. PAMPHLET No.90A OR THE LOCAL CODES.
9. ACCESS PANELS SHOULD BE PLACED BEFORE AND/OR AFTER EQUIPMENT INSTALLED IN THE DUCT.
10. WHEN OBSTRUCTION CANNOT BE AVOIDED DUCT AREA SHOULD NOT BE DECREASED MORE THAN 10 PERCEN, AND A STREAMLINED FITTING SHOULD BE USED.
11. FLEXIBLE CONNECTIONS SHOULD BE USED ON BOTH THE INLET AND OUTLET TO ALL FANS.
12. JOINTS AND SEAMS OF SUPPLY DUCTS SHALL BE FASTENED SECURELY AND MADE AIR TIGHT.

LOW VELOCITY DUCT LAYOUT DETAILS
NOT TO SCALE



CEILING DIFFUSER BRANCH DUCT DETAIL
NOT TO SCALE



NOTES:
1. FIRE DAMPER SHALL BE DYNAMIC RATED WITH NEGATOR SPRING FOR CLOSURE FORCE.
2. SEE ARCHITECTURAL DRAWINGS FOR WALL RATINGS.
3. FIRE DAMPER TO BE TYPE B.

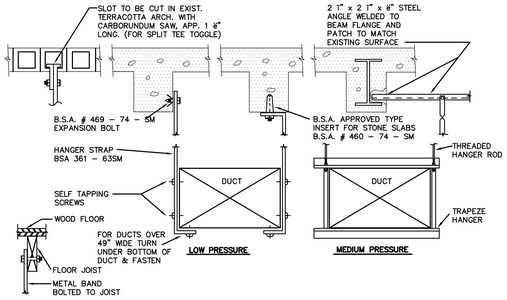
FIRE DAMPER DETAIL
NOT TO SCALE

FIRE DAMPER RATING SCHEDULE

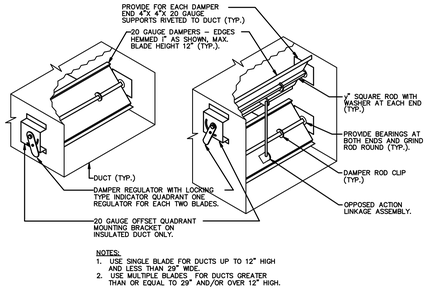
BASED ON INTERNATIONAL BUILDING CODE, LATEST ADOPTED EDITION, TABLE 716.3.1.
AND INTERNATIONAL MECHANICAL CODE, LATEST ADOPTED EDITION, TABLE 607.3.1.

TYPE OF PENETRATION	MINIMUM DAMPER RATING (HOUR)
LESS THAN 3-HOUR FIRE-RESISTANCE-RATED ASSEMBLIES	1 1/2
3-HOUR OR GREATER FIRE-RESISTANCE-RATED ASSEMBLIES	3

NOTES:
1. FIRE DAMPERS SHALL BE REQUIRED IN PENETRATIONS AS LISTED ABOVE, WHICH INCLUDE, BUT ARE NOT LIMITED TO, FIRE-RESISTANCE RATED SHAFT WALLS, FLOOR ASSEMBLIES, CEILING ASSEMBLIES, AND SMOKE BARRIERS.
2. FIRE DAMPERS SHALL HAVE THE MINIMUM FIRE PROTECTION RATING SPECIFIED IN TABLE 607.3.1 OF THE INTERNATIONAL MECHANICAL CODE, LATEST ADOPTED EDITION.
3. TWO HOUR FIRE-RESISTANCE RATED FIRE WALLS INCLUDE, BUT ARE NOT LIMITED TO, BOILER ROOM, ELEVATOR MACHINE ROOM, FIRE PUMP ROOM, SHAFTS, FLOOR PENETRATIONS, AND WHERE NEW ADDITIONS CONNECT TO EXISTING BUILDING.
4. PROVIDE ACCESS DOORS AT ALL FIRE DAMPERS. ACCESS DOOR LOCATIONS SHALL BE PERMANENTLY IDENTIFIED ON THE EXTERIOR BY A LABEL HAVING MINIMUM 1/2 INCH HEIGHT LETTERING READING "FIRE DAMPER" IN ACCORDANCE WITH IBC, LATEST ADOPTED EDITION 717.4 AND IMC, LATEST ADOPTED EDITION, 607.4.
5. IBC, LATEST ADOPTED EDITION, 717.5.2, "FIRE BARRIERS", EXCEPTION 3, & IMC, LATEST ADOPTED EDITION, 607.5.2 "FIRE BARRIERS", EXCEPTION 3: FIRE DAMPERS ARE NOT REQUIRED AT HVAC DUCT PENETRATIONS OF FIRE BARRIERS WITH A REQUIRED 1-HOUR OR LESS FIRE-RESISTANCE RATING WHERE BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM.
6. IBC, LATEST ADOPTED EDITION, 717.5.4, "FIRE PARTITIONS", EXCEPTION 1, & IMC, LATEST ADOPTED EDITION, 607.5.3 "FIRE PARTITIONS", EXCEPTION 1: FIRE DAMPERS ARE NOT REQUIRED AT HVAC DUCT PENETRATIONS OF FIRE PARTITIONS WHERE PARTITIONS ARE TENANT SEPARATION AND CORRIDOR WALLS IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM.
7. IBC, LATEST ADOPTED EDITION, 717.5.4, "FIRE PARTITIONS", EXCEPTION 3, & IMC, LATEST ADOPTED EDITION 607.5.3 "FIRE PARTITIONS", EXCEPTION 3: FIRE DAMPERS ARE NOT REQUIRED AT HVAC DUCT PENETRATIONS OF FIRE PARTITIONS WHERE DUCT SYSTEM IS CONSTRUCTED OF APPROVED MATERIALS PER IMC, LATEST ADOPTED EDITION, AND THE DUCT PENETRATING THE PARTITION MEETS ALL OF THE SIX FOLLOWING MINIMUM REQUIREMENTS:
   - A. THE DUCT SHALL NOT EXCEED 100 SQUARE INCHES.
   - B. THE DUCT SHALL BE CONSTRUCTED OF STEEL A MINIMUM OF 0.0217 INCH THICKNESS.
   - C. THE DUCT SHALL NOT HAVE OPENINGS THAT COMMUNICATE THE CORRIDOR WITH ADJACENT SPACES OR ROOMS.
   - D. THE DUCT SHALL BE INSTALLED ABOVE A CEILING.
   - E. THE DUCT SHALL NOT TERMINATE AT A WALL REGISTER IN THE FIRE-RESISTANCE-RATED WALL.
   - F. A MINIMUM 12 INCH LONG BY 0.060 INCH THICK STEEL SLEEVE SHALL BE CENTERED IN EACH DUCT OPENING. THE SLEEVE SHALL BE SECURED TO BOTH SIDES OF THE WALL AND ALL FOUR SIDES OF THE SLEEVE WITH MINIMUM 1 1/2 INCH BY 1 1/2 INC BY 0.060 INCH STEEL RETAINING ANGLES. THE RETAINING ANGLES SHALL BE SECURED TO THE SLEEVE AND WALL WITH NO. 10 SCREWS. THE ANNULAR SPACE BETWEEN THE STEEL SLEEVE AND THE WALL OPENING SHALL BE FILLED WITH ROCK (MINERAL) WOOL BATTING ON ALL SIDES.

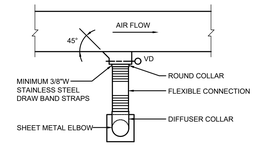


METHOD OF HANGING DUCTWORK
NOT TO SCALE

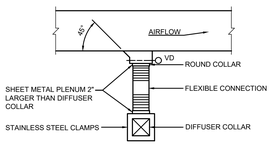


NOTES:
1. USE SINGLE BLADE FOR DUCTS UP TO 12" HIGH AND LESS THAN 29" WIDE.
2. USE MULTIPLE BLADES FOR DUCTS GREATER THAN OR EQUAL TO 29" AND/OR OVER 12" HIGH.

LOW PRESSURE BALANCING DAMPER
NOT TO SCALE



BRANCH DUCT CONNECTION DETAIL
NOT TO SCALE



BRANCH DUCT CONNECTION DETAIL
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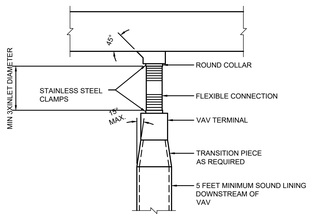
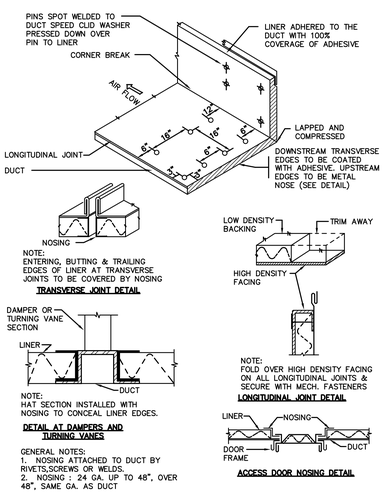


BRANCH CONNECTION TO VAV TERMINAL DETAIL
NOT TO SCALE



ACOUTICAL DUCT LINER DETAIL
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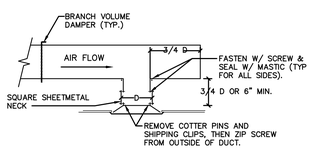
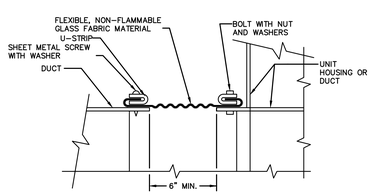


TYPICAL DIFFUSER INSTALLATION
NOT TO SCALE



FLEXIBLE CONNECTION DETAIL
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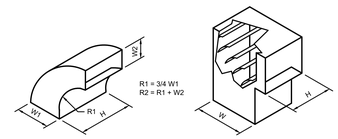
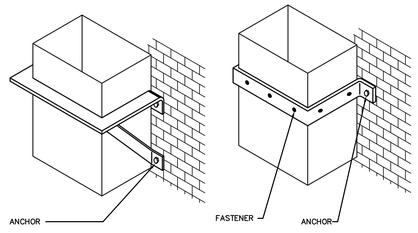


DUAL RADIUS ELBOW

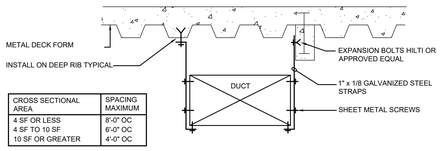
SQUARE THROAT ELBOW WITH VANES

RECTANGULAR ELBOWS DETAIL
NOT TO SCALE



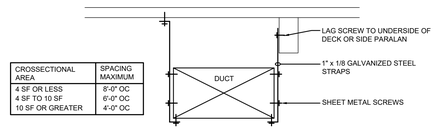
NOTE:
DISTANCE BETWEEN DUCT HUNGERS SHALL BE IN ACCORDANCE WITH RS-13-1 OF NEW YORK CITY BUILDING CODE.

DUCTWORK RISER SUPPORTS FROM WALL
NOT TO SCALE



CROSS SECTIONAL AREA	SPACING MAXIMUM
4 SF OR LESS	8'-0" OC
4 SF TO 10 SF	6'-0" OC
10 SF OR GREATER	4'-0" OC

DUCT HANGER DETAIL
NOT TO SCALE



CROSSECTIONAL AREA	SPACING MAXIMUM
4 SF OR LESS	8'-0" OC
4 SF TO 10 SF	6'-0" OC
10 SF OR GREATER	4'-0" OC

DUCT HANGER DETAIL
NOT TO SCALE

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Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number
5516D

Project Date
10.10.2025

Checked By
MV

Drawn By
VA

Scale
AS NOTED

Drawing Name
MECHANICAL DETAILS

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

FRENCH & PARRELLO ASSOCIATES
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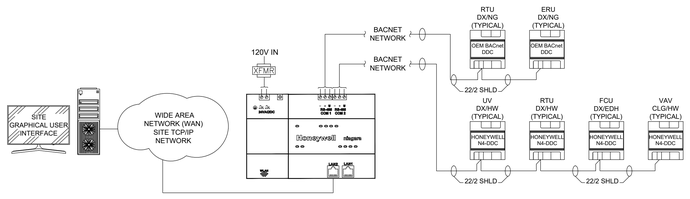
AMIN H. GOMAA, PE
PROFESSIONAL ENGINEER, NJ LIC. No. 24GE04842100

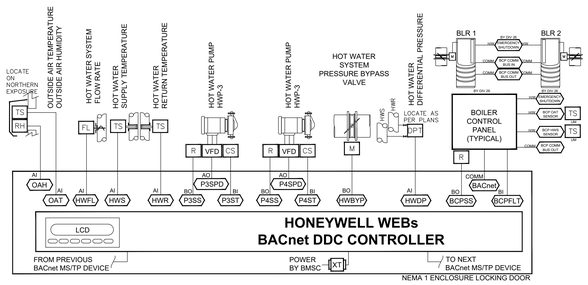
Drawing Number
M7.3

1. THE ATC CONTRACTOR SHALL PROVIDE A INTERGRATION NETWORK TO THE NEW HONEYWELL AND OEM BACnet DDC CONTROLLERS ON THE EXISTING HONEYWELL NIAGARA 4 PLATFORM.
2. THE ATC CONTRACTOR SHALL PROVIDE AN ADDITIONAL HONEYWELL NETWORK CONTROLLER CAPACITY FOR THE ADDITIONAL EQUIPMENT.
3. THE BUILDING MANAGEMENT SYSTEM SHALL BE ACCESSIBLE VIA A TCP/IP NETWORK CONNECTION.
4. THE ATC CONTRACTOR SHALL PROVIDE NEW NETWORK COMMUNICATIONS WIRING AND INTEGRATION.
5. THE ATC CONTRACTOR SHALL PROVIDE ALL NEW CUSTOMIZED 3-D WEB-BASED GRAPHICS ON A SINGLE WEB BASED GRAPHIC USER INTERFACE.
6. THE ATC CONTRACTOR SHALL PROVIDE NEW NETWORK COMMUNICATIONS WIRING AND INTEGRATION.
7. EXTEND THE EXISTING HONEYWELL GRAPHICAL USER INTERFACE FOR THE NEW UNITS INTO ONE SEAMLESS AND COMPLETELY FUNCTIONAL SYSTEM.
8. THE OEM DDC CONTROLLERS SHALL BE PROVIDED WITH ALL POINTS REQUIRED FOR THE BMS TO CONTROL AND MONITOR THE RESPECTIVE EQUIPMENT.



EXTENSION OF EXISTING BMS

NOT TO SCALE



HOT WATER SYSTEM

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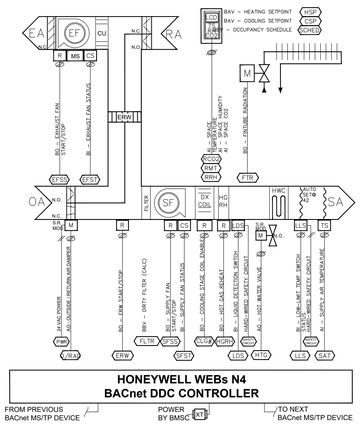

UNIT VENTILATOR

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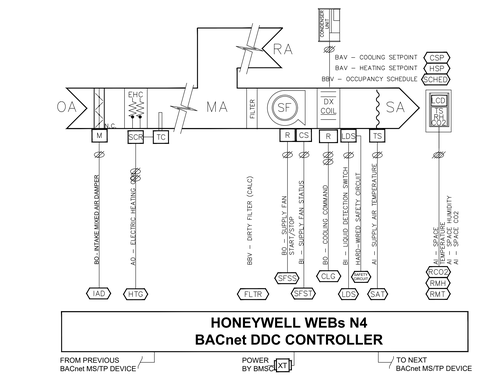
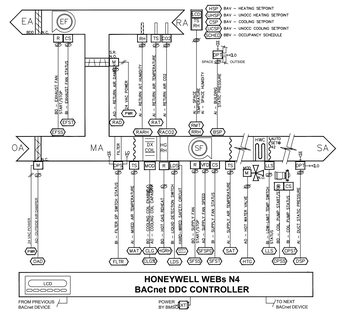


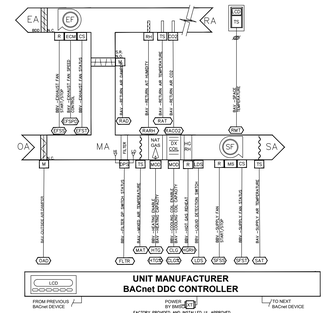
FCU-1/EDH-1/CU-1/OAI-1

NOT TO SCALE ELECTRICAL HEATING - COOLING



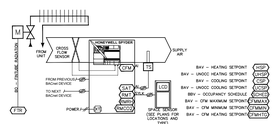
RTU - DX COOLING AND HOT WATER HEATING

NOT TO SCALE DX COOLING w/ HGRH & HW WATER HEATING



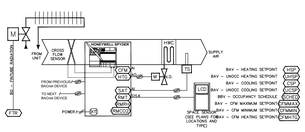
RTU - DX COOLING & GAS FURNACE

NOT TO SCALE NAT. GAS HEATING - DX COOLING



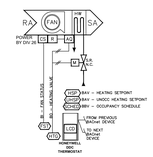
VARIABLE AIR VOLUME BOX

NOT TO SCALE COOLING ONLY



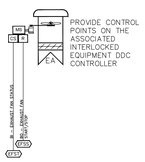
VARIABLE AIR VOLUME BOX

NOT TO SCALE WITH HOT WATER RETREAT



UNIT HEATER

NOT TO SCALE DDC



EXHAUST FAN

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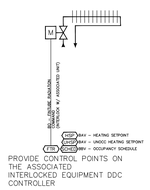
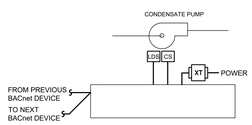


FINTUBE HEATING RADIATION

NOT TO SCALE DDC - INTERLOCKED

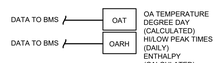
TEMPERATURE SENSOR - ATC DIAGRAM

NOT TO SCALE SINGLE POINT MONITORING



CONDENSATE PUMP - ATC DIAGRAM

MONITORING AND ALARM
NOT TO SCALE



OUTSIDE AIR TEMP/HUMIDITY - ATC DIAGRAM

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Architect
Date
11/14/25
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Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number
5516D

Project Date
10.10.2025

Checked By
MV

Drawn By
VA

Scale
AS NOTED

Drawing Name
MECHANICAL DETAILS

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

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Drawing Number
M7.4

ELECTRICAL GENERAL NOTES

1. DRAWINGS ARE DIAGRAMMATIC AND DEFINE THE INTENT OF THE WORK. LOCATIONS OF EQUIPMENT, FIXTURES, DEVICES, PANELBOARDS, DUCTS, PIPING, DIFFUSERS, PARTITIONS, OPENINGS, ETC. ARE APPROXIMATE AND ARE SUBJECT TO MODIFICATIONS CAUSED BY STRUCTURAL CONDITIONS AND EQUIPMENT PROVIDED BY OTHER CONTRACTORS. SUBCONTRACTORS OR THE OWNER. COORDINATE ALL WORK WITH THE WORK OF OTHER TRADES. DETERMINE ROUGHING LOCATIONS FROM APPROVED SHOP DRAWINGS. MINOR MODIFICATIONS OF LOCATIONS REQUIRED TO EFFECT SUCH COORDINATION SHALL BE MADE AT NO COST TO THE OWNER.
2. THE DRAWINGS HAVE BEEN PRODUCED ENTIRELY ON FPA CADD SYSTEM. ANY OTHER LETTERING, LINES OR SYMBOLS, OTHER THAN PROFESSIONAL STAMPS AND SIGNATURES, HAVE BEEN MADE WITHOUT THE AUTHORIZATION OF FPA AND ARE INVALID.
3. REPRODUCTION OF ANY PORTION OF THE CONTRACT DRAWINGS FOR RESUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED AND RETURNED.
4. SPECIFICATIONS MAY REQUIRE WORK, EQUIPMENT, SYSTEMS, METHODS, ETC. THAT IS NOT INDICATED ON THE DRAWINGS.
5. DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE COMPLEMENTARY TO EACH OTHER. WHERE DISCREPANCIES OR CONFLICTS OCCUR, THE CONTRACTOR SHALL INCLUDE THE MORE COSTLY METHOD IN HIS PROPOSAL UNLESS CLARIFIED BY BULLETIN OR ADDENDUM ACKNOWLEDGED PRIOR TO RECEIPT OF BIDS.
6. DRAWINGS SHALL NOT BE SCALED. DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND REQUIREMENTS OF THE WORK. ALTHOUGH SIZE AND LOCATION OF EQUIPMENT IS DRAWN TO SCALE WHEREVER POSSIBLE, CONTRACTOR SHALL MAKE USE OF ALL DATA IN ALL OF THE CONTRACT DOCUMENTS AND VERIFY INFORMATION AT THE PROJECT SITE.
7. THE OWNER WILL OCCUPY THE SITE AND EXISTING BUILDING DURING THE ENTIRE CONSTRUCTION PERIOD, COOPERATE WITH THE OWNER DURING CONSTRUCTION OPERATIONS TO AVOID ANY CONFLICTS. PERFORM THE WORK SO AS NOT TO INTERFERE WITH THE OWNER'S OPERATIONS. SCHEDULE ALL POWER OUTAGES FOR OVERTIME ON SUNDAYS AND HOLIDAYS AT NO ADDITIONAL COST TO THE OWNER.
8. EXISTING PROJECT CONDITIONS INDICATED ARE BASED ON FIELD OBSERVATION, EXISTING DESIGN / CONSTRUCTION DOCUMENTS AND EXISTING RECORD DOCUMENTS AND ARE INTENDED TO INDICATE THE SCOPE OF THE WORK AFFECTED BY THIS PROJECT.
9. THE TERM "OTHERS" SHALL BE UNDERSTOOD TO MEAN CONTRACTORS, SUBCONTRACTORS OR TRADESMEN ON THE PROJECT PERFORMING WORK ON THIS PROJECT UNDER SECTIONS OR DIVISIONS OTHER THAN ELECTRICAL WORK.
10. VERIFY THAT FIELD MEASUREMENTS AND CIRCUITING ARRANGEMENTS ARE AS INDICATED.
11. PRIOR TO BIDDING VISIT THE PROJECT SITE TO DETERMINE THE CONDITIONS UNDER WHICH THE WORK IS TO BE DONE. SCHEDULE SITE VISIT WITH OWNER.
12. PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR THE INSTALLATION, RELOCATION AND CONNECTION OF THE ELECTRICAL WORK.
13. ALL MATERIAL SHALL BE UNDERWRITERS' LABORATORIES LISTED FOR ITS APPLICATION WHERE SUCH LISTING IS APPLICABLE.
14. ALL EQUIPMENT SHALL BE AS INDICATED OR AS APPROVED BY THE ENGINEER.
15. SUBMIT SHOP DRAWINGS, PRODUCT DATA SHEETS AND WIRING DIAGRAMS FOR ALL ELECTRICAL CONSTRUCTION MATERIALS, DEVICES, EQUIPMENT, PANELBOARDS AND SYSTEMS.
16. OBTAIN SHOP DRAWINGS AND WIRING DIAGRAMS FROM OWNER AND OTHER CONTRACTORS FOR THE PROPER INSTALLATION OF RELATED ELECTRICAL WORK AND, UNLESS OTHERWISE NOTED, WIRE ALL CONTROL DEVICES, VALVES, THERMOSTATS, ETC. REQUIRED FOR THE PROPER OPERATION OF THEIR SYSTEMS.
17. OBTAIN ALL PERMITS REQUIRED, HAVE THE WORK INSPECTED FOR CODE COMPLIANCE AND PAY ALL FEES FOR INSPECTION AND CERTIFICATION.
18. MAKE THE NECESSARY ARRANGEMENTS, AND PAY ALL COSTS, FOR TEMPORARY AND/OR PERMANENT ELECTRIC SERVICE FOR THE PROJECT.
19. PROVIDE ADEQUATE TEMPORARY ELECTRICAL LIGHT AND POWER FOR THE PROJECT WORK OF ALL TRADES.
20. MAINTAIN CONTINUITY OF EXISTING CIRCUITS AFFECTED BY THIS WORK WHICH MUST REMAIN IN SERVICE.
21. MAKE ALL MODIFICATIONS NECESSARY TO EXISTING PANELBOARDS AND SWITCHBOARDS TO ACCEPT NEW CIRCUITS.
22. WHERE ELECTRICAL EQUIPMENT (I.E. SWITCHBOARDS, PANELBOARDS, BUS DUCTS, TRANSFORMERS, DISCONNECTS, ETC.) OR SYSTEMS (I.E. FIRE ALARM, SOUND, INTERCOMMUNICATIONS, ALARM, ETC.) IS INDICATED TO BE MODIFIED TO ACCEPT NEW WORK SAID MODIFICATIONS SHALL BE PERFORMED BY ELECTRICAL EQUIPMENT FABRICATORS OR MANUFACTURER'S REPRESENTATIVES WHO CAN AFFECT SUCH MODIFICATIONS WITHOUT VOIDING THE UL LABEL OR MANUFACTURER'S WARRANTIES.
23. WHERE NEW EQUIPMENT IS INDICATED TO BE "RECONNECTED" TO EXISTING WIRING, CONDUIT OR OTHER PART OF AN EXISTING ELECTRICAL SYSTEM, THE CONTRACTOR SHALL MODIFY OR EXTEND THE EXISTING SYSTEM COMPONENTS AS REQUIRED TO MEET THE CONNECTION POINT OF THE NEW ITEM. THE CONTRACTOR SHALL USE MATERIALS AND METHODS THAT MATCH THE EXISTING SYSTEM, OR AS SPECIFIED FOR NEW WORK, WHICHEVER IS MORE SUITABLE FOR THE APPLICATION.
24. WHERE EXISTING EQUIPMENT IS INDICATED TO BE "CONNECTED" OR "RECONNECTED" TO NEW WIRING, CONDUIT, ETC. THE CONTRACTOR SHALL FABRICATE AND INSTALL THE NEW SYSTEM CONNECTIONS TO MATCH THE CONNECTION POINTS AND OTHER REQUIREMENTS OF THE EXISTING EQUIPMENT. WHERE THE EXISTING EQUIPMENT MUST BE REMOVED AND REINSTALLED TO FACILITATE THE REMOVAL OF THE OLD CONNECTIONS AND/OR THE CONNECTION OF THE NEW MATERIAL, THAT WORK SHALL BE A PART OF THIS CONTRACT.
25. EXACT LOCATION OF EQUIPMENT SHALL BE COORDINATED IN THE FIELD.
26. REFER TO APPROVED REFLECTED CEILING PLANS FOR EXACT LIGHTING LAYOUTS.
27. REFER TO DRAWINGS AND SPECIFICATIONS OF OTHER TRADES FOR EQUIPMENT LOCATIONS AND CONTROLS.
28. GROUNDING AND BONDING SHALL MEET NEC AND EQUIPMENT / SYSTEM MANUFACTURER'S REQUIREMENTS.
29. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF DEBRIS GENERATED BY HIS WORK AND WORKERS AT THE END OF EACH WORKING DAY AND FOR GENERAL GOOD HOUSEKEEPING BY HIS WORKERS. CONTRACTOR SHALL PROVIDE REQUIRED REFUSE CONTAINERS.
30. DISCONNECT AND REMOVE FROM THE PREMISES, OR STORE ON THE PREMISES IF REQUESTED BY THE OWNER, ALL EQUIPMENT FIXTURES, DEVICES, RACEWAY, WIRING, CABLE, SUPPORTING DEVICES, ETC. REMOVED OR ABANDONED AS A RESULT OF THIS WORK. MAKE SAFE ALL WIRING AND CABLE WHICH MUST REMAIN IN SERVICE.
31. REMOVE AND RELOCATE EXISTING EQUIPMENT, FIXTURES, DEVICES, ETC. AS INDICATED AND AS REQUIRED TO CLEAR NEW WORK. EXTEND AND CONNECT NEW WIRING TO EXISTING.
32. DISCONNECT AND REMOVE, OR TEMPORARILY RELOCATE, EXISTING LIGHTING FIXTURES, LOUDSPEAKERS, ETC. TO CLEAR THE INSTALLATION OF NEW DUCTWORK, PIPING, EQUIPMENT, ETC. THROUGHOUT THE ENTIRE RENOVATED AREAS AND REINSTALL WHEN WORK IS COMPLETE. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL PLANS AND SPECIFICATIONS FOR THE EXTENT OF THE WORK. PROVIDE TEMPORARY NORMAL AND EMERGENCY LIGHTING, AND TEMPORARILY RECONNECT LOUDSPEAKERS, ETC. UNTIL THE CEILING IS REINSTALLED. EXTEND EXISTING WIRING TO NEW LOCATIONS AS REQUIRED.
33. TEMPORARILY RELOCATE, EXISTING FIRE ALARM DEVICES, HEAT/SMOKE DETECTORS, ETC. TO CLEAR THE INSTALLATION OF NEW DUCTWORK, PIPING, EQUIPMENT, ETC. THROUGHOUT THE ENTIRE RENOVATED AREA. PROVIDE TEMPORARY SUPPORT OF EXISTING DEVICES AND REINSTALL WHEN WORK IS COMPLETED. RE-TEST THE FIRE ALARM SYSTEM PER NFPA 72 REQUIREMENTS. EXISTING FIRE ALARM DEVICES SHALL NOT BE DISABLED OR REMOVED FROM SERVICE. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL PLANS AND SPECIFICATIONS FOR THE EXTENT OF THIS WORK.
34. REMOVE AND REINSTALL CEILING SYSTEM AS REQUIRED FOR THE INSTALLATION OF ELECTRICAL WORK AND REPLACE IN KIND ANY COMPONENTS DAMAGED BY PERSONNEL OR EQUIPMENT DURING PERFORMANCE OF THE WORK. COORDINATE WITH ARCHITECT.
35. PERFORM ALL CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF THE WORK. CUT NO STRUCTURAL MEMBER WITHOUT WRITTEN PERMISSION FROM THE ENGINEER. FINISH AND PAINT ALL PATCHED SURFACES WITH TWO COATS OF PAINT TO MATCH EXISTING SURFACES AS CLOSELY AS POSSIBLE. SEAL OPENINGS VERMIN AND WATER PROOF AND MAINTAIN FIRE RATING. USE SPECIFIED TECHNOLOGIES, INC. "SPECSEAL" SERIES LCI FOR PENETRATIONS
36. ALL PENETRATIONS IN FOUNDATION WALLS AND FLOORS INCLUDING SLAB PENETRATIONS SHALL BE SUBSTANTIALLY SEALED BY UTILIZING A NON-CRACKING POLYURETHANE OR SIMILAR CAULK OR EQUIVALENT TO CLOSE OFF THE SOIL GAS ENTRY ROUTES. ALL CONDUITS IN THE SPACE BELOW THE FOUNDATION FLOOR WHICH PENETRATE THESE BARRIERS SHALL HAVE THREADED OR SOLVENTED FITTINGS.
37. ALL NEW RACEWAY, WIRING AND CABLE IN NEW AND EXISTING FINISHED SPACES SHALL BE RUN CONCEALED IN NEW AND EXISTING CONSTRUCTION UNLESS OTHERWISE INDICATED. CUT AND PATCH AS REQUIRED. PROVIDE PULLBOXES, SIZE AND TYPE AS REQUIRED.
38. EXPOSED RACEWAY, WHERE PERMITTED BY THE ARCHITECT AND ENGINEER, SHALL BE RUN TRUE, PLUMB AND PARALLEL OR PERPENDICULAR TO BUILDING LINES. RIGID METAL CONDUIT, 3/4 INCH MINIMUM, SHALL BE USED OUTDOORS; ELECTRICAL METALLIC TUBING, 3/4 INCH MINIMUM, SHALL BE USED IN INDOOR UNFINISHED SPACES; SURFACE METAL RACEWAY (WIREMOLD) SHALL BE USED IN INDOOR FINISHED SPACES.
39. ALL WIRING SHALL BE COPPER CONDUCTOR WITH 600 VOLTS INSULATION IN METAL RACEWAY WITH APPROVED FITTINGS UNLESS OTHERWISE INDICATED.
40. FEEDERS AND BRANCH CIRCUITS UNDERGROUND IN RACEWAY: TYPE THWN-THWN 90 DEGREE C
41. INTERIOR FEEDERS AND BRANCH CIRCUITS IN RACEWAY: TYPE THHN 90 DEGREE C.
42. BRANCH CIRCUIT HOMERUNS TO FIRST OUTLET: TYPE THHN IN RACEWAY. AFTER THE FIRST OUTLET BOX, APPROVED CABLE MAY BE USED.
43. FEEDERS SHALL BE MINIMUM #8 AWG; BRANCH CIRCUIT WIRING MINIMUM #12 AWG; CONTROL WIRING MINIMUM #14 AWG; UNLESS OTHERWISE INDICATED. FEEDER AND BRANCH CIRCUIT WIRING LARGER THAN #10 AWG SHALL BE STRANDED CONDUCTOR; #10 AWG AND SMALLER, STRANDED CONDUCTOR OR SOLID CONDUCTOR; CONTROL WIRING, STRANDED CONDUCTOR.
44. METAL CLAD CABLE TYPE MC WITH 600 VOLT THHN INSULATION AND INSULATED GROUND CONDUCTOR MAY BE USED FOR BRANCH CIRCUITS RUN IN HOLLOW SPACES, FISHED ABOVE EXISTING HUNG CEILINGS, FIXTURE CONNECTIONS AND ELSEWHERE AS PERMITTED BY THE NEC AND THE ENGINEER.
45. METAL CLAD CABLE TYPE MC/IG WITH 600 VOLT THHN INSULATION AND INSULATED GROUND CONDUCTOR MAY BE USED FOR COMPUTER POWER BRANCH CIRCUITS RUN IN HOLLOW SPACES, FISHED ABOVE EXISTING HUNG CEILINGS, AND ELSEWHERE AS PERMITTED BY THE NEC AND THE ENGINEER.
46. FIRE ALARM WIRING SHALL BE APPROVED FOR ITS APPLICATION: #14 AWG IN RACEWAY OR #14 AWG METAL CLAD CABLE FOR 120 VOLT CIRCUITS; #16 AWG FPLR OR FPLP FOR LOW VOLTAGE CIRCUITS IN NON AIR-HANDLING SPACES; AND #14 AWG FPLP FOR LOW VOLTAGE CIRCUITS IN AIR-HANDLING APPLICATIONS.
47. DO NOT INSTALL CONDUCTORS, WIRES OR CABLES OF ANY OTHER SYSTEM IN THE SAME RACEWAY OR CABLE WITH FIRE ALARM POWER SUPPLY CIRCUITS, NON-POWER LIMITED FIRE ALARM CIRCUITS OR POWER LIMITED FIRE ALARM CIRCUITS.
48. MAKE FLEXIBLE CONNECTIONS TO MOTORS AND OTHER ROTATING / VIBRATING EQUIPMENT.
49. TAPS AND SPLICES FOR BRANCH CIRCUITS AND FEEDERS SHALL BE MADE WITH AN INSULATED TERMINAL BY ILSCO, OR APPROVED EQUAL.
50. BRANCH CIRCUIT AND FEEDER TAPS SHALL BE FULL CIRCUIT SIZE UP TO THEIR OVERCURRENT PROTECTION DEVICE.
51. CONNECTIONS TO FIXTURE AND MOTOR LEADS #10 AWG AND SMALLER SHALL BE MADE WITH 3M "SCOTCHLOK" PRE-INSULATED SPRING PRESSURE CONNECTORS TYPES Y, R OR G OR APPROVED EQUAL.
52. STRANDED WIRING CONDUCTORS SHALL BE MADE UP TO SCREW TERMINALS WITH 3M, T&B OR PANDUIT LOCKING FORK CRIMP TERMINALS WITH NYLON INSULATED GRIPS.
53. UNLESS OTHERWISE INDICATED; ALL CONTROL, INTERLOCK AND TEMPERATURE CONTROL WIRING FOR HVAC EQUIPMENT AND SYSTEMS SHALL BE FURNISHED, INSTALLED AND CONNECTED BY THE MECHANICAL OR AUTOMATIC TEMPERATURE CONTROL CONTRACTOR; ALL CONTROL AND INTERLOCK WIRING FOR PLUMBING EQUIPMENT AND SYSTEMS SHALL BE FURNISHED, INSTALLED AND CONNECTED BY THE ELECTRICAL CONTRACTOR; ALL ELECTRICAL POWER WIRING TO CONTROL PANELS, MOTOR OPERATED DAMPERS, MOTOR STARTERS, MOTORS AND ALL MECHANICAL DEVICES THAT REQUIRE LINE VOLTAGE POWER SHALL BE FURNISHED, INSTALLED AND CONNECTED BY THE ELECTRICAL CONTRACTOR; ALL CONTROL AND INTERLOCK WIRING FROM AUTOMATIC TEMPERATURE CONTROL PANELS TO CONTROLLED OR INTERLOCKED DEVICES SHALL BE FURNISHED, INSTALLED AND CONNECTED BY THE MECHANICAL OR AUTOMATIC TEMPERATURE CONTROL CONTRACTOR; REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS FOR REQUIREMENTS.
54. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL 120V CONTROL POWER WIRING FEEDERS AND CIRCUIT BREAKERS REQUIRED FOR THE INSTALLATION OF MECHANICAL EQUIPMENT. STARTERS AND POWER DISCONNECT SWITCHES SHALL BE BY THE MECHANICAL CONTRACTOR. REFER TO SPECIFICATION SECTIONS AND COORDINATE WITH THE MECHANICAL CONTRACTOR FOR EXTENT OF WORK REQUIRED.
55. WIRE EXIT SIGNS AND EMERGENCY LIGHTING FIXTURES (UNIT EQUIPMENT) TO LOCAL AREA LIGHTING CIRCUIT SERVING THE RESPECTIVE AREA AHEAD OF SWITCH / DIMMER CONTROL.
56. WIRE ELECTRONIC TRAP PRIMERS TO NEAREST AVAILABLE 1P20A 120 VAC CIRCUIT UNLESS OTHERWISE INDICATED. REFER TO PLUMBING FLOOR PLANS FOR LOCATIONS.
57. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION AND INSTALLATION DETAILS AND VERIFY ALL MANUFACTURER'S REQUESTS PRIOR TO ANY SUBMISSION FOR CONSIDERATION BY THE ARCHITECT, ENGINEER OR OWNER.
58. WIRING RUNS INDICATED ON THE DRAWINGS EXPRESS THE INTENT OF CIRCUIT ASSIGNMENT AND SWITCH CONTROL. ACTUAL WIRING METHODS USED SHALL BE SUITED FOR THE CONSTRUCTION OF THE BUILDING. REFER TO DRAWINGS OF OTHER TRADES AND EXISTING CONDITIONS. SEE ARCHITECTURAL DRAWINGS FOR DETAILS. NUMBER OF CONDUCTORS IS NOT ALWAYS INDICATED
59. PROVIDE DISCONNECTS FOR ALL APPLIANCES, EQUIPMENT, MOTORS AND CONTROLLERS.
60. PROVIDE UN-SWITCHED 125 VOLT 20 AMP RECEPTACLE OUTLETS LOCATED ON THE SAME LEVEL AND WITHIN 25 FEET OF ALL HEATING, AIR-CONDITIONING AND REFRIGERATION EQUIPMENT UNLESS OTHERWISE NOTED.
61. ROUTE RACEWAYS THROUGH ROOF USING DEDICATED ROOF JACKS OR PITCH POCKETS. RUN RACEWAY ON ROOF ON DEDICATED ROOF SUPPORTS EIGHT INCHES HIGH MINIMUM.
62. PROVIDE SEISMIC RESTRAINTS AND ANCHORS FOR EQUIPMENT, FIXTURES, RACEWAY, ETC. AS REQUIRED BY INTERNATIONAL BUILDING CODE CHAPTER 16 - STRUCTURAL DESIGN AND CHAPTER 17 - STRUCTURAL TESTING AND INSPECTIONS AND AS SPECIFIED IN SPECIFICATION SECTION "SEISMIC CONTROLS".
63. ALL 125 VOLT, SINGLE PHASE, 15- AND 20-AMPERE SINGLE AND DUPLEX RECEPTACLES WHICH DO NOT SERVE A DEDICATED APPLIANCE AND ARE WITHIN A 6 FOOT RADIUS OF A SINK, ARE INSTALLED IN WET LOCATIONS, ARE INSTALLED IN BATHROOMS, ON ROOFS, OR OUTDOORS WITH DIRECT GRADE ACCESS, SHALL BE GROUND FAULT CIRCUIT INTERRUPTING TYPE WHERE AVAILABLE OR SHALL BE PROTECTED BY GROUND FAULT CIRCUIT INTERRUPTING CIRCUIT BREAKERS.
64. DO NOT INSTALL EXPOSED WIRING, OR CABLE NOT UL LISTED FOR THE PURPOSE; WOOD SUPPORTS OR ANCHORAGES; NONMETALLIC CONDUIT, BOXES OR FITTINGS; OR VINYL, PLASTIC, NYLON, OR OTHER COMBUSTIBLE OR SMOKE PRODUCING IDENTIFICATION OR CONSTRUCTION MATERIALS IN THE SPACE ABOVE HUNG CEILINGS USED AS A PLENUM FOR THE RETURN OF ENVIRONMENTAL AIR.
65. TEST SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, CABLES, BUS DUCTS, SWITCHES, CIRCUIT BREAKERS, GROUNDING SYSTEM, GROUND FAULT PROTECTION SYSTEM, SURGE ARRESTORS AND TVSS DEVICES IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE CURRENT EDITION OF THE INTERNATIONAL ELECTRICAL TESTING ASSOCIATION ACCEPTANCE TESTING SPECIFICATIONS FOR ELECTRIC POWER DISTRIBUTION EQUIPMENT AND SYSTEMS (NETA ATS). PERFORM EACH VISUAL AND MECHANICAL INSPECTION AND ELECTRICAL TEST LISTED.
66. PROVIDE TWO SETS OF OPERATION AND MAINTENANCE MANUALS, BOUND AND INDEXED, WITH INSTRUCTIONS FOR ALL ELECTRICAL DEVICES, EQUIPMENT, APPLIANCES AND SYSTEMS.
67. PROVIDE ONE SET OF REPRODUCIBLE CONTRACT DRAWINGS, OR DIGITAL DATA FILES USING SAME SOFTWARE PROGRAM, VERSION, AND OPERATING SYSTEM AS CONTRACT DOCUMENTS, THAT HAVE BEEN REVISED AND ANNOTATED TO REFLECT THE AS-BUILT CONDITIONS OF THE PROJECT.
68. DELIVER CERTIFICATES OF ELECTRICAL AND OTHER INSPECTIONS, OR COPIES THEREOF, TO THE OWNER AT THE COMPLETION OF THE PROJECT WITH COPIES TO THE ENGINEER.
69. GUARANTEE ALL WORK IN WRITING TO THE OWNER AGAINST ANY AND ALL DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE AND PERFORM ALL CORRECTIVE WORK AT NO COST TO THE OWNER.
70. A CONTRACTOR MAKING A BID FOR WORK ON THIS PROJECT IS MADE AWARE BY THIS NOTE THAT IT IS THE INTENT OF THE OWNER TO HAVE A COMPLETELY INSTALLED JOB. THE CONTRACTOR MAKING A BID FOR THIS WORK WARRANTS THAT HE WILL COMPLETE AND WIRE, PROVIDING ALL NECESSARY ELECTRICAL WORK FOR EQUIPMENT SHOWN AND / OR DETAILED ON ANY PROJECT DRAWINGS OR SPECIFICATIONS AND NOT JUST THOSE COMMONLY REFERRED TO AS A SINGLE TRADE DRAWING UNLESS SPECIFICALLY IDENTIFIED ELSEWHERE AS WORK OF OTHER TRADES. WHERE EQUIPMENT REQUIRING WIRING IS SPECIFIED OR SHOWN ON DRAWINGS OTHER THAN ELECTRICAL DRAWINGS, OR INDICATED, OR IMPLIED, SUCH AS ON SHOP DRAWINGS SUBMITTED LATER, THE CONTRACTOR CAN AND SHALL REQUEST DIRECTION REGARDING CIRCUIT SIZING PROTECTION AND ROUTING WHERE NECESSARY BUT SHALL UNDERSTAND ALL NECESSARY WORK TO COMPLETE THE INSTALLATION SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER OR PROJECT.
71. THE INSTALLATION OF ALL ELECTRICAL WORK INDICATED ON ALL ELECTRICAL DRAWINGS AND IN THE SPECIFICATIONS AND ANY SUBSEQUENT BULLETINS OR ADDENDA SHALL COMPLY WITH NEW JERSEY ADMINISTRATIVE CODE TITLE 5A.
72. THE SPACE ABOVE THE HUNG CEILING(S) IS USED AS A PLENUM FOR THE RETURN OF ENVIRONMENTAL AIR. DO NOT INSTALL EXPOSED WIRING, OR CABLE NOT UL LISTED FOR THE PURPOSE; WOOD SUPPORTS OR ANCHORAGES; NONMETALLIC CONDUIT, BOXES OR FITTINGS; OR VINYL, PLASTIC, NYLON, OR OTHER COMBUSTIBLE OR SMOKE PRODUCING IDENTIFICATION OR CONSTRUCTION MATERIALS IN THIS SPACE.
73. PRE-EXISTING CONDITIONS ARE EXEMPT PER NJAC 5:23-6.8(D)10. "EXISTING WORKING CLEARANCES, CLEAR SPACE, ACCESS AND ENTRANCE DIMENSIONS TO WORKING SPACES, ILLUMINATION, HEADROOM CLEARANCES, AND LOCATION OF OVERCURRENT PROTECTION DEVICES SHALL BE ALLOWED TO REMAIN WITHOUT MODIFICATION."
74. A FIRE ALARM SYSTEM MEETING CURRENT CODES IS NOT REQUIRED TO BE INSTALLED IN THE PORTIONS OF THE EXISTING BUILDING THAT ARE NOT BEING RENOVATED, ALTERED OR REMODELED. NJAC 5:23-6.8(B)4.
75. THE EXISTING FIRE ALARM CONTROL PANEL IS BEING UPGRADED AND THE ADDITION OF FIRE ALARM DEVICES IN THE NEW ADDITION AND RENOVATED AREAS OF THE EXISTING BUILDING WILL NOT INCREASE THE LOAD ON THE EXISTING FIRE ALARM SYSTEM. NJAC 5:23-6.5(C) AND 5:23-6.6(C).
76. PROVIDE HEAVY GAUGE WELDED WIRE MESH PROTECTIVE GUARDS ON ALL FIRE ALARM DEVICES, CLOCKS, LOUDSPEAKERS, CALL INITIATING DEVICES, EXIT LIGHTS, EMERGENCY LIGHTING UNITS AND BATTERY PACKS IN CAFETERIAS, MULTIPURPOSE ROOMS, GYMNASIUMS, WEIGHT ROOMS, LOCKER ROOMS, BOILER ROOMS, MECHANICAL ROOMS, LOADING DOCKS, RECEIVING AREAS, PIPE SPACES, PIPE TUNNELS, STAGES, STORAGE ROOMS, SHOPS AND SHAFTS, ON THE BUILDING EXTERIOR, AND OTHER SPACES AND AREAS WHERE [DEVICES ARE] SUBJECT TO DAMAGE OR ACCIDENTAL OPERATION FROM SPORTS, PHYSICAL ACTIVITIES, GENERAL HOUSEKEEPING, MAINTENANCE, OR THE MOVEMENT OF SUPPLIES, MATERIALS, FURNITURE AND EQUIPMENT.
77. ALL NEW CONSTRUCTION AND RENOVATION WORK SHOWN ON THE DRAWINGS AND CONTAINED IN THE SPECIFICATIONS (UNLESS OTHERWISE NOTED AS "NOT IN CONTRACT" OR "N.I.C.") IS THE RESPONSIBILITY OF THE SINGLE PRIME GENERAL CONTRACTOR. REFERENCES TO SPECIFIC TRADE SUBCONTRACTORS (PLUMBING, MECHANICAL, ELECTRICAL, ETC.) ARE PROVIDED TO ASSIST THE SINGLE PRIME GENERAL CONTRACTOR IN THE DELINEATION OF SUBCONTRACTOR WORK. THE SINGLE PRIME GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DELINEATION OF ITS SUBCONTRACTORS' WORK AND THEREFORE SHALL NOT RELY ON SPECIFIC TRADE REFERENCES SHOWN ON THE CONTRACT DOCUMENTS.
78. ELECTRICAL CONTRACTOR TO CAREFULLY REMOVE AND STORE EXISTING HUNG CEILING TILES INCLUDING "THE LAY-IN ACOUSTIC CEILING TILES, SUPPORT GRID AND HANGERS' AS REQUIRED TO FACILITATE INSTALLATION OF THE NEW WORK IN THE AFFECTED AREAS. PRIOR TO CEILING REMOVALS THE ELECTRICAL CONTRACTOR SHALL TEMPORARILY SUPPORT ALL EXISTING LIGHT FIXTURES, SENSORS OR OTHER EXISTING WIRED COMPONENTS AS MAY BE REQUIRED TO FACILITATE CEILING REMOVAL. AFTER WORK IS COMPLETED, CONTRACTOR SHALL RE-INSTALL THE EXISTING CEILING GRID AND EXISTING ACOUSTICAL TILES. CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY DAMAGED GRID, TILE AND/OR FIXTURE THAT MIGHT OCCUR DURING DEMOLITION AND/OR RE-INSTALLATION OF THE EXISTING CEILING. NEW GRID/TILES AND FIXTURE TO MATCH EXISTING. PATCH AND REPAIR ALL SURFACES DAMAGED TO MATCH EXISTING ADJACENT FINISH.
79. CONTRACTOR SHALL PROVIDE AND INSTALL A LOCAL LOCKABLE DISCONNECT SWITCH BY EACH PIECE OF MOTORIZED OR PACKAGED EQUIPMENT. DISCONNECT AMPACITY RATING SHALL AT LEAST MATCH THAT OF THE UPSTREAM CIRCUIT BREAKER PROTECTING THE EQUIPMENT. INDOOR DISCONNECTS SHALL BE NEMA 1 TYPE AND OUTDOOR DISCONNECTS SHALL BE BE NEMA 3R TYPE.
80. IN ALL AREAS WHERE WORK IS BEING PERFORMED UNDER THIS CONTRACT, CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTING ALL EXISTING ELECTRICAL DEVICES AND WIRING/CONDUIT ABOVE THE EXISTING CEILINGS, PER NEC. ALL TELE / DATA AND FIRE ALARM WIRING SHALL BE INDEPENDENTLY SUPPORTED FROM THE STRUCTURE WITH J-HOOKS AND NOT TIE-WRAPPED TO CONDUITS OR MECHANICAL PIPING.. ALL EXISTING POWER WIRING/CONDUIT AND JUNCTION BOXES SHALL BE INDEPENDENTLY SUPPORTED TO THE STRUCTURE AND NOT TO THE CEILING GUIDE WIRES, HVAC DUCTS, PIPING, ETC. PROVIDE ALL REQUIRED SUPPORTS AND ACCESSORIES AS REQUIRED PER NEC.
81. CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY CONFLICT DISCOVERED BEFORE PERFORMING ANY WORK RELATED TO SUCH CONFLICT.
82. LIGHTING CONTROLS NOTE: ALL LIGHTING CONTROLS PLANS AND DIAGRAMS ARE TO SHOW DESIGN INTENT. FINAL BILL OF MATERIALS TO BE PROVIDED DURING SUBMITTAL PHASE BY THE CONTRACTOR AND MANUFACTURERS REPRESENTATIVE.
83. OWNER LOW VOLTAGE SYSTEMS VENDOR:
INSTRATA - MR. MIKE SCHAFFER
MIKE.SCHAFFER@INSTRATA.COM
609-586-8800 (OFFICE)
856-430-1409 (MOBILE)
572 WHITEHEAD ROAD, SUITE 201
TRENTON, NEW JERSEY 08619
84. OWNER ACCESS CONTROL & SECURITY VENDOR:
DYNSECURITYPRO.COM - MR. BRUCE PULLEN
BPULLEN@DYNSECURITYPRO.COM
609-610-9654 (MOBILE)
8 DOWNING COURT
MIDDLETOWN, NEW JERSEY 07748
85. FIRE ALARM VENDOR:
SAL ELECTRIC - MR. MIKE QUCHUKASHVILI
201-798-4406
83 FLEET STREET
JERSEY CITY, NEW JERSEY 07306

DEMOLITION NOTES:

1. DEMOLITION SHALL INCLUDE THE REMOVAL OF ALL ASSOCIATED WIRING, CONDUIT, DISCONNECT SWITCHES, ETC UNLESS SPECIFICALLY NOTED OTHERWISE.
2. WHERE WIRING/CONDUIT SERVING AN EXISTING PIECE OF EQUIPMENT RUNS BELOW GRADE, CONTRACTOR SHALL REMOVE ALL WIRING BACK TO THE SOURCE AND CUT CONDUIT FLUSH WITH EXISTING FLOOR. PROVIDE A WATERPROOF SEAL AROUND ALL OPENINGS
3. THE CONTRACTOR SHALL PERFORM DEMOLITION AND REMOVAL WORK WITH MINIMUM INTERFERENCE WITH FUNCTIONING ELECTRICAL SYSTEMS. ALL AFFECTED SYSTEMS SHALL BE RECONNECTED AND RESTORED.
4. DEMOLITION AND REMOVAL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. THE CONTRACTOR SHALL PATCH, REPAIR OR OTHERWISE RESTORE ANY DAMAGED INTERIOR OR EXTERIOR BUILDING SURFACE TO ITS ORIGINAL CONDITION.
5. THE CONTRACTOR SHALL REMOVE ALL ELECTRICAL LIGHT FIXTURES COMPLETE WITH ASSOCIATED WIRING, CONDUITS, ETC. WHERE THE REMOVAL OF THESE ITEMS DISRUPTS EXISTING WIRING THAT IS TO REMAIN, THE CONTRACTOR SHALL INSTALL JUNCTION BOXES AND OTHER DEVICES AND PROVIDE BYPASS CONNECTIONS NECESSARY TO MAKE CIRCUITS AFFECTED CONTINUOUS AND READY FOR OPERATION. OTHERWISE, WIRING SHALL BE REMOVED BACK TO THE NEAREST ELECTRICAL JUNCTION BOX THAT IS TO REMAIN OR TO PANELBOARD.
6. ALL UNUSED OUTLET BOXES OR CAPPED FLOOR OUTLETS SHALL BE PROVIDED WITH MATCHING BLANK COVERS.
7. EXISTING PANEL DIRECTORIES AFFECTED BY THE WORK SHALL BE MODIFIED TO REFLECT THE BRANCH CIRCUIT WIRING CHANGES.
8. PORTIONS OF FEEDER RUNS TO BE REMOVED OR ABANDONED AS A RESULT OF DEMOLITION WORK, BUT WHICH ARE REQUIRED TO REMAIN ENERGIZED, SHALL BE CUT AT CONVENIENT LOCATIONS, REROUTED AND RECONNECTED. NEW FEEDER EXTENSIONS SHALL MATCH EXISTING ONES IN ALL RESPECTS, CABLE TYPE, CONDUCTOR AMPACITY, CONDUIT SIZES, ETC.
9.

LIGHT FIXTURE SCHEDULE

TYPE	SYMBOL	DESCRIPTION	MANUFACTURER	CATALOG NO.	LAMPS	DRIVER TYPE	DRIVER QTY	VOLTS	TOTAL WATTAGE	MOUNTING
A		2X4 RECESSED LED HIGH PERFORMANCE RECESSED FIXTURE WITH WHITE HOUSING, ANGLED NARROW RAIL, DIFFUSE CENTER, AND 0-10V DIMMING.	FINELITE	HPR-SL-ANR-2X4-B-835-DCO-96LG-UNV-SC-FC-10%-CX-96LG	INCLUDED	LD	1	UNV	30.6	RECESSED
A1		2X4 RECESSED LED HIGH PERFORMANCE RECESSED FIXTURE WITH WHITE HOUSING, ANGLED NARROW RAIL, DIFFUSE CENTER, AND 0-10V DIMMING. PROVIDE EMERGENCY BATTERY PACK.	FINELITE	HPR-SL-ANR-2X4-B-835-DCO-96LG-UNV-SC-FC-10%-CX-96LG-EM	INCLUDED	LD	1	UNV	30.6	RECESSED
A2		2X2 RECESSED LED HIGH PERFORMANCE RECESSED FIXTURE WITH WHITE HOUSING, ANGLED NARROW RAIL, DIFFUSE CENTER, AND 0-10V DIMMING.	FINELITE	HPR-SL-ANR-2X2-S-835-DCO-96LG-UNV-SC-FC-10%-CX-96LG	INCLUDED	LD	1	UNV	23.7	RECESSED
A3		2X2 RECESSED LED HIGH PERFORMANCE RECESSED FIXTURE WITH WHITE HOUSING, ANGLED NARROW RAIL, DIFFUSE CENTER, AND 0-10V DIMMING. PROVIDE EMERGENCY BATTERY PACK.	FINELITE	HPR-SL-ANR-2X2-S-835 DCO-96LG-UNV-SC-FC-10%-CX-96LG-EM	INCLUDED	LD	1	UNV	23.7	RECESSED
A4		2X4 RECESSED LED HIGH PERFORMANCE RECESSED FIXTURE WITH WHITE HOUSING, ANGLED NARROW RAIL, DIFFUSE CENTER, AND 0-10V DIMMING.	FINELITE	HPR-SL-ANR-2X4-H-835-DCO-96LG-UNV-SC-FC-10%-CX-96LG	INCLUDED	LD	1	UNV	35.2	RECESSED
A5		2X4 RECESSED LED HIGH PERFORMANCE RECESSED FIXTURE WITH WHITE HOUSING, ANGLED NARROW RAIL, DIFFUSE CENTER, AND 0-10V DIMMING. PROVIDE EMERGENCY BATTERY PACK.	FINELITE	HPR-SL-ANR-2X4-H-835-DCO-96LG-UNV-SC-FC-10%-CX-96LG	INCLUDED	LD	1	UNV	35.2	RECESSED
A6		2X4 RECESSED LED HIGH PERFORMANCE RECESSED FIXTURE WITH WHITE HOUSING, ANGLED NARROW RAIL, DIFFUSE CENTER, AND 0-10V DIMMING.	FINELITE	HPR-SL-ANR-2X4-V-835-DCO-96LG-UNV-SC-FC-10%-CX-96LG	INCLUDED	LD	1	UNV	45.7	RECESSED
A7		2X4 RECESSED LED HIGH PERFORMANCE RECESSED FIXTURE WITH WHITE HOUSING, ANGLED NARROW RAIL, DIFFUSE CENTER, AND 0-10V DIMMING. PROVIDE EMERGENCY BATTERY PACK.	FINELITE	HPR-SL-ANR-2X4-V-835-DCO-96LG-UNV-SC-FC-10%-CX-96LG	INCLUDED	LD	1	UNV	45.7	RECESSED
C		CURVE 2.5" WIDE LED DIRECT AIRCRAFT CABLE MOUNTED LIGHTING FIXTURE WITH CUSTOM PATTERN AND LENGTHS, SOFT DIFFUSE LENS, CUSTOM COLOR HOUSING, AND 0-10V DIMMING. LENGTH AND SHAPE OF ROWS AS SHOWN ON PLANS.	CORONET	LS2.CURVE-X-35-HIGH-UNV-DB-CC-AC-FL-OTHER-XX-STD	INCLUDED	LD	1	UNV	7.5 W / FOOT	AIRCRAFT CABLE
D		4" ROUND OPEN REFLECTOR DOWNLIGHT WITH SPECULAR CLEAR REFLECTOR, WHITE TRIM, AND 0-10V DIMMING. PROVIDE EMERGENCY BATTERY PACK.	HE WILLIAMS	4DR-TL-L20/835-XX-XX-DIM-UNV RW-OF-CS-WW-MWT-MM-N-XX	INCLUDED	LD	1	UNV	19.8	RECESSED
D1		4'-0" DIAMETER PENDANT MOUNTED LED FIXTURE WITH CUSTOM COLOR FINISH AND 0-10V DIMMING. CONFIRM COLOR AND MOUNTING WITH THE ARCHITECT. PROVIDE REMOTE EMERGENCY BATTERY PACK.	FINELITE	HP2C-P-D-4'-B-835-F-96LG-120-SC-FC10%-EM	INCLUDED	LD	1	UNV	55.3	PENDANT
L1		4'-0" LINEAR LED LIGHTING FIXTURE WITH WHITE HOUSING PAINTED AFTER FABRICATION, CURVED FROSTED ACRYLIC LENS, SURFACE, WALL OR PENDANT MOUNTED AS SHOWN ON THE PLANS.	COLUMBIA	MPS480-35MW-C-W-ED-U-PAF	INCLUDED	LD	1	UNV	23	WALL
P		3'-0" DIAMETER PENDANT MOUNTED DIRECT LED FIXTURE WITH CUSTOM COLOR HOUSING AND FELT FINISHES AND 0-10V DIMMING. CONFIRM COLORS AND MOUNTING CONFIGURATION WITH THE ARCHITECT.	CORONET	LOOPITA.STFU-36-35K-LOW-UNV-DB-(HOUSING)-(FELT)-(MTG)-SD-NA-NA-(OPTIONS)	INCLUDED	LD	1	UNV	34	PENDANT
P1	EM	3'-0" DIAMETER PENDANT MOUNTED DIRECT LED FIXTURE WITH CUSTOM COLOR HOUSING AND FELT FINISHES AND 0-10V DIMMING. CONFIRM COLORS AND MOUNTING CONFIGURATION WITH THE ARCHITECT. PROVIDE EMERGENCY BATTERY PACK.	CORONET	LOOPITA.STFU-36-35K-LOW-UNV-DB-(HOUSING)-(FELT)-(MTG)-SD-NA-EMPCK-(OPTIONS)	INCLUDED	LD	1	UNV	34	PENDANT
P2		18" DIAMETER PENDANT MOUNTED DIRECT LED FIXTURE WITH CUSTOM COLOR HOUSING AND FELT FINISHES AND 0-10V DIMMING. CONFIRM COLORS AND MOUNTING CONFIGURATION WITH THE ARCHITECT.	CORONET	LOOPITA.STFU-18-35K-LOW-UNV-DB-(HOUSING)-(FELT)-(MTG)-SD-NA-NA-(OPTIONS)	INCLUDED	LD	1	UNV	17	PENDANT
P2	EM	18" DIAMETER PENDANT MOUNTED DIRECT LED FIXTURE WITH CUSTOM COLOR HOUSING AND FELT FINISHES AND 0-10V DIMMING. CONFIRM COLORS AND MOUNTING CONFIGURATION WITH THE ARCHITECT. PROVIDE EMERGENCY BATTERY PACK.	CORONET	LOOPITA.STFU-18-35K-LOW-UNV-DB-(HOUSING)-(FELT)-(MTG)-SD-NA-EMPCK-(OPTIONS)	INCLUDED	LD	1	UNV	17	PENDANT
S		INTEGRATED LED LIGHTING FIXTURE WITHIN TRUSS BAFFLES. LENGHT AS SHOWN ON PLANS. PROVIDE 120V-24V TRANSFORMER.	ACOUFELT	UNI-WL-I-300-35K-24V	INCLUDED	LD	1	UNV	2.2W / FOOT	RECESSED IN BAFFLES
W		14" DIAMETER SURFACE MOUNTED CANOPY DOWNLIGHT WITH WHITE HOUSING, WET LOCATION, POLYCARBONATE LENS, AND INTEGRAL EMERGENCY BATTERY PACK.	KENALL	HAFS14-MW-PP-16L-35K8-DIM1-DV-LEL	INCLUDED	CW	1	UNV	16	SURFACE CANOPY
W1		4" ROUND DOWNLIGHT, EXTERIOR WET RATED, SHALLOW PLENUM WITH 0-10 VOLT DIMMING DRIVER AND REMOTE EMERGENCY BATTERY PACK.	KIRLIN	LRC-04CDN-1500L-UNV-RND-MFL 35K-ERH	INCLUDED	CW	1	UNV	14.4	RECESSED SOFFIT
W2		EXTERIOR WALL SCONCE WITH VISUAL COMFORT OPTICS WITH 0-10 VOLT DIMMING DRIVER AND COLOR AS SELECTED BY ARCHITECT.	LSI LIGHTING	XWS-LED-1L-MTD-UNV-DIM-35-80-FINISH	INCLUDED	CW	1	UNV	10	WALL
W3		EXTERIOR WALL SCONCE WITH VISUAL COMFORT OPTICS WITH 0-10 VOLT DIMMING DRIVER AND COLOR AS SELECTED BY ARCHITECT. PROVIDE EMERGENCY BATTERY PACK.	LSI LIGHTING	XWS-LED-1L-MTD-UNV-DIM-35-80-FINISH-CWBB	INCLUDED	CW	1	UNV	10	WALL
X		UNIVERSAL RECESSED EDGE LIT EXIT SIGN WITH INTEGRAL BATTERY PACK, SELF-DIAGNOSTICS, RED LETTERS, SATIN ALUMINUM TRIM, CEILING OR WALL MOUNTED, WITH OR WITHOUT DIRECTIONAL ARROWS AS SHOWN ON THE PLANS.	COMPASS	CELUNE	INCLUDED	L	1	UNV	3.4	CEILING OR WALL MOUNTED
X1		UNIVERSAL SURFACE MOUNTED EDGE LIT EXIT SIGN WITH INTEGRAL BATTERY PACK, SELF- DIAGNOSTICS, RED LETTERS, SATIN ALUMINUM TRIM, CEILING OR WALL MOUNTED, WITH OR WITHOUT DIRECTIONAL ARROWS AS SHOWN ON THE PLANS.	COMPASS	CELSNE	INCLUDED	L	1	UNV	3.4	CEILING OR WALL MOUNTED

NOTES:

1. VERIFY ALL CEILING TYPES AND OPERATING VOLTAGES PRIOR TO ORDERING FIXTURES.
2. ALL FIXTURE FINISHES AND COLOR SELECTIONS SHALL BE AS SELECTED BY THE ARCHITECT.
3. COORDINATE THE HEIGHT OF ALL SUSPENDED FIXTURES WITH THE OWNER, ARCHITECT, AND ENGINEER PRIOR TO INSTALLATION.
4. COORDINATE LAMP COLORS (30K, 35K OR 40K) WITH THE ARCHITECT PRIOR TO ORDERING FIXTURES.
5. ALL FIXTURE FINISHES AND COLOR SELECTIONS SHALL BE AS SELECTED BY THE ARCHITECT.

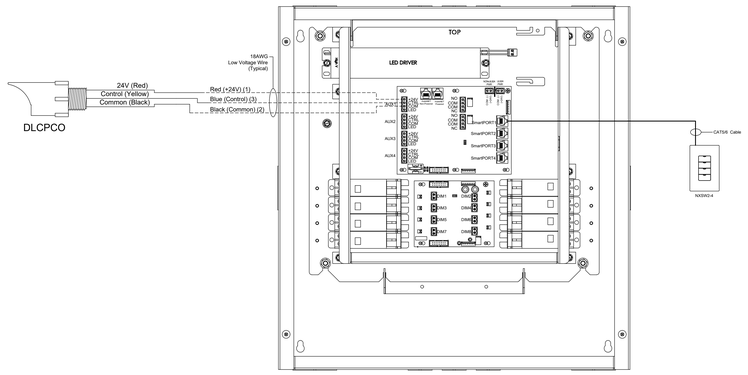
DRIVER TYPES

CW COLD WEATHER
L LED DRIVER
LD LED DIMMING DRIVER

EMERGENCY FIXTURES:

FIXTURES DESIGNATED WITH "EM", A "1/2 SHADE" OR "FULL SHADE" SHALL BE PROVIDED WITH AN EMERGENCY BATTERY PACK SUITABLE TO POWER THE ENTIRE FIXTURE (OR MINIMUM 1300 LUMENS) FOR 90 MINUTES.

ALL EXIT SIGNS SHALL BE PROVIDED WITH AN INTEGRAL EMERGENCY BATTERY PACK TO POWER THE FIXTURE FOR 90 MINUTES MINIMUM.



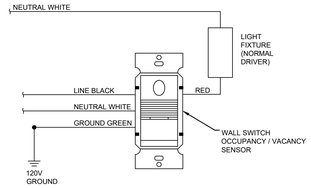
NXP2 PANEL

NORMAL POWER LIGHTING CONTROL PANEL WIRING SCHEMATIC

NOT TO SCALE

LIGHTING CONTROL SEQUENCE OF OPERATION:

1. CORRIDOR AND COMMON AREA LIGHTING: TIMECLOCK ON AND OFF WITH AFTER HOURS OCCUPANCY SENSOR OVERRIDE ON/OFF.
2. EXTERIOR LIGHTING: PHOTOCELL "ON" AND TIMER CONTROL "OFF".
3. WATTSTOPPER OR APPROVED EQUAL.



WALL SWITCH VACANCY SENSOR DETAIL

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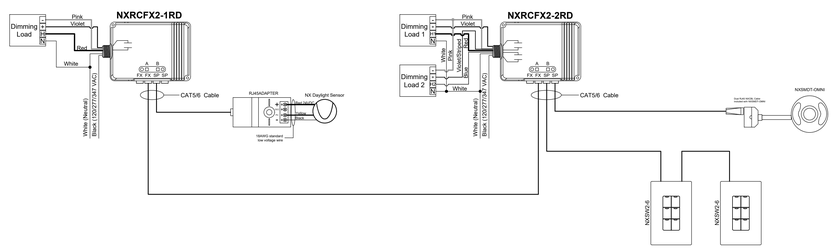
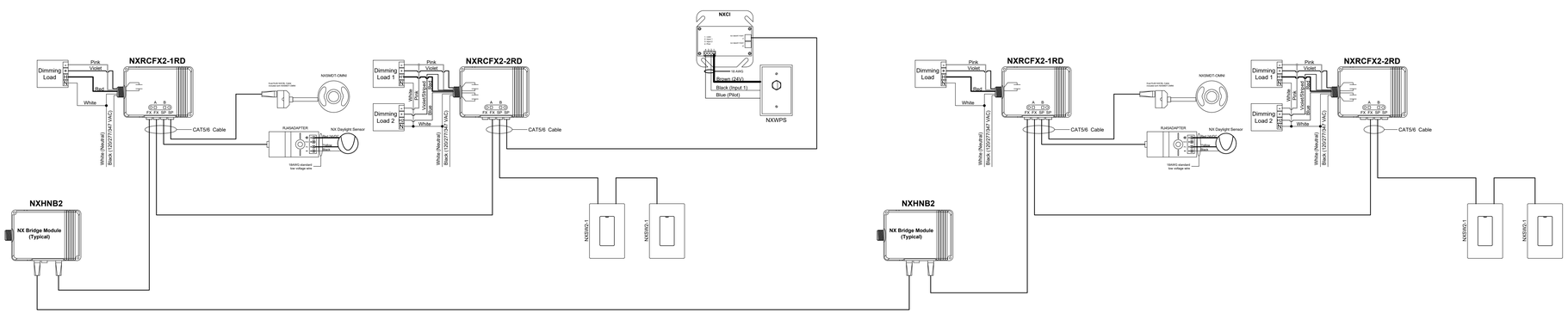


TYPICAL NX LIGHTING CONTROL DETAIL

NOT TO SCALE
REFER TO FLOOR PLANS FOR QUANTITIES AND TYPES



TYPICAL NX LIGHTING CONTROL WITH PARTITION SENSOR DETAIL

NOT TO SCALE
REFER TO FLOOR PLANS FOR QUANTITIES AND TYPES

NJDCA Electronic Release Stamp

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Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	AHG
Drawn By	AMP
Scale	AS NOTED

Drawing Name

ELECTRICAL LIGHTING FIXTURE SCHEDULE & DETAILS

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

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Drawing Number

E1.1

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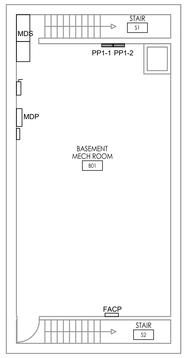
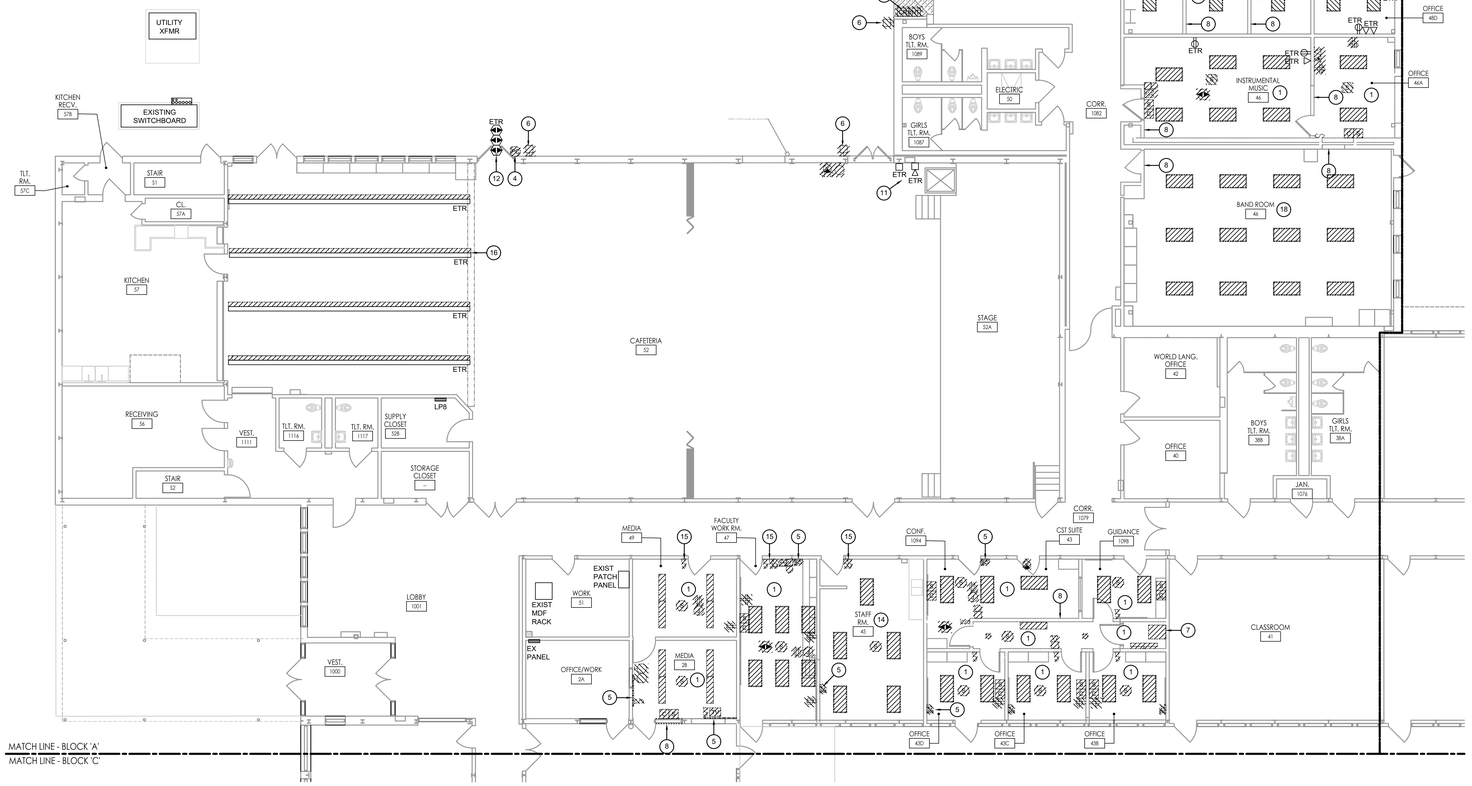


BASEMENT PLAN
SHOWN FOR REFERENCE ONLY
SCALE: 1/8" = 1'-0"



DEMOLITION PLAN - BLOCK A
SCALE: 1/8" = 1'-0"

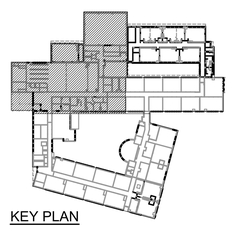
SHEET NOTES

1. ALL EXISTING WIRING DEVICES AND LIGHTING FIXTURES SHALL BE EXISTING TO REMAIN UNLESS SHOWN FOR DEMOLITION OR INDICATED TO BE RELOCATED ON THE THIS DRAWING AND ARCHITECTURAL DRAWINGS. REFER TO ARCHITECTURAL DEMOLITION PLANS FOR FULL EXTENT OF DEMOLITION AREAS.
2. REFER TO NEW WORK PLANS FOR NEW LOCATIONS OF RELOCATED WIRING DEVICES, LIGHTING FIXTURES, COMMUNICATIONS DEVICES AND FIRE ALARM DEVICES, ETC.
3. MAINTAIN CONTINUITY OF ALL BRANCH CIRCUITS TO EXISTING WIRING DEVICES AND LIGHTING TO REMAIN.
4. MAINTAIN CONTINUITY OF ALL FIRE ALARM CIRCUITS AND TEMPORARILY SUPPORT SMOKE DETECTORS FROM STRUCTURAL CEILING DURING DEMOLITION FOR REINSTALLATION TO CEILINGS AS REQUIRED.
5. DISCONNECT AND REMOVE ALL DEVICES IN WALLS INDICATED FOR DEMOLITION BACK TO SOURCE OR LAST DEVICE TO REMAIN. REFER TO ARCHITECTURAL DEMOLITION PLANS FOR FULL EXTENT OF DEMOLITION AREAS.
6. TURN OVER ALL SECURITY SYSTEM DEVICES, MOTION SENSORS, CARD READERS, PROJECTORS, SPECIALTY SPEAKERS, ETC. TO THE OWNER AFTER DEMOLITION UNLESS SPECIFICALLY DIRECTED TO BE DISCARDED BY THE OWNER.

DEMOLITION KEY NOTES

1. DISCONNECT AND REMOVE ALL WIRING DEVICES AND LIGHTING FIXTURES THIS ROOM BACK TO SOURCE OR LAST DEVICE TO REMAIN UNLESS NOTED OTHERWISE.
2. EXISTING SURFACE MOUNTED JUNCTION BOX TO BE DISCONNECTED AND REMOVED. MAINTAIN CONTINUITY OF ANY DEVICES TO REMAIN ASSOCIATED WITH THE JUNCTION BOX.
3. EXISTING INTERCOM STATION AND CARD READER TO BE DISCONNECTED AND REMOVED BACK TO SOURCE OR LAST DEVICE TO REMAIN.
4. EXISTING EXTERIOR LIGHTING PHOTOCELL TO BE DISCONNECTED, REMOVED, AND RELOCATED TO ACCOMMODATE NEW CONSTRUCTION. FIELD VERIFY NEW LOCATION.
5. EXISTING WIREMOLD TO BE DISCONNECTED AND REMOVED BACK TO SOURCE. TYPICAL FOR ALL THIS ROOM UNLESS NOTED OTHERWISE.
6. EXISTING EXTERIOR LIGHTING FIXTURE TO BE DISCONNECTED AND REMOVED BACK TO SOURCE OR LAST LIGHTING FIXTURE TO REMAIN.
7. EXISTING HVAC EQUIPMENT AND ALL ASSOCIATED DISCONNECT SWITCHES, CONDUIT, AND WIRING TO BE DISCONNECTED AND REMOVED BACK TO SOURCE.
8. EXISTING WALL OR PORTION OF WALL TO BE REMOVED. REFER TO SHEET NOTE #5. TYPICAL FOR ALL DEMOLISHED WALLS.
9. EXISTING EXTERIOR WALL MOUNTED WATER COOLER TO BE REMOVED. DISCONNECT AND REMOVE POWER WIRING AND CONDUIT BACK TO SOURCE OR LAST DEVICE TO REMAIN.
10. EXISTING EXTERIOR LIGHTING FIXTURE TO BE DISCONNECTED, REMOVED, AND REPLACED WITH NEW LIGHTING FIXTURE. REFER TO LIGHTING PLAN FOR NEW FIXTURES.
11. EXISTING FIRE ALARM PULL STATION AND HORN/STROBE TO REMAIN. DISCONNECT, REMOVE AND RELOCATE AS REQUIRED TO ACCOMMODATE THE DEMOLITION OF DOORWAY AND NEW WALL CONSTRUCTION.
12. EXISTING WI-FI DEVICES TO REMAIN. DISCONNECT, REMOVE AND RELOCATE AS REQUIRED TO ACCOMMODATE THE NEW ADDITION CONSTRUCTION.
13. EXISTING CCTV CAMERA TO REMAIN. DISCONNECT, REMOVE AND RELOCATE AS REQUIRED TO ACCOMMODATE THE NEW ADDITION CONSTRUCTION.
14. ALL EXISTING STAFF ROOM WIRING DEVICES AND FIRE ALARM DEVICES SHALL REMAIN UNLESS SHOWN AS DEMOLITION.
15. EXISTING LIGHTING SWITCH LOCATION TO REMAIN AND WIRING DEVICES REPLACED WITH NEW. REFER TO LIGHTING CONTROLS PLAN FOR NEW DEVICE INFORMATION AND WIRING.
16. BASE BID: EXISTING LIGHTING FIXTURES TO REMAIN.

    ALTERNATE BID:
    EXISTING CAFETERIAL LIGHTING FIXTURES TO BE DISCONNECTED, REMOVED AND REPLACED WITH NEW. COIL WIRING FOR CONNECTION TO NEW FIXTURES. REFER TO LIGHTING ALTERNATE BID PLAN.
17. EXISTING BOGEN GYMNASIUM SOUND SYSTEM TO REMAIN.
18. EXISTING LIGHTING THIS ROOM TO BE DISCONNECTED, REMOVED AND REPLACED WITH NEW. COIL WIRING FOR CONNECTION TO NEW FIXTURES. REFER TO LIGHTING PLAN.



KEY PLAN
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NJDCA Electronic Release Stamp

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Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	AHG
Drawn By	AMP
Scale	AS NOTED

Drawing Name
ELECTRICAL DEMOLITON PLAN - BLOCK A

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number
E2.0

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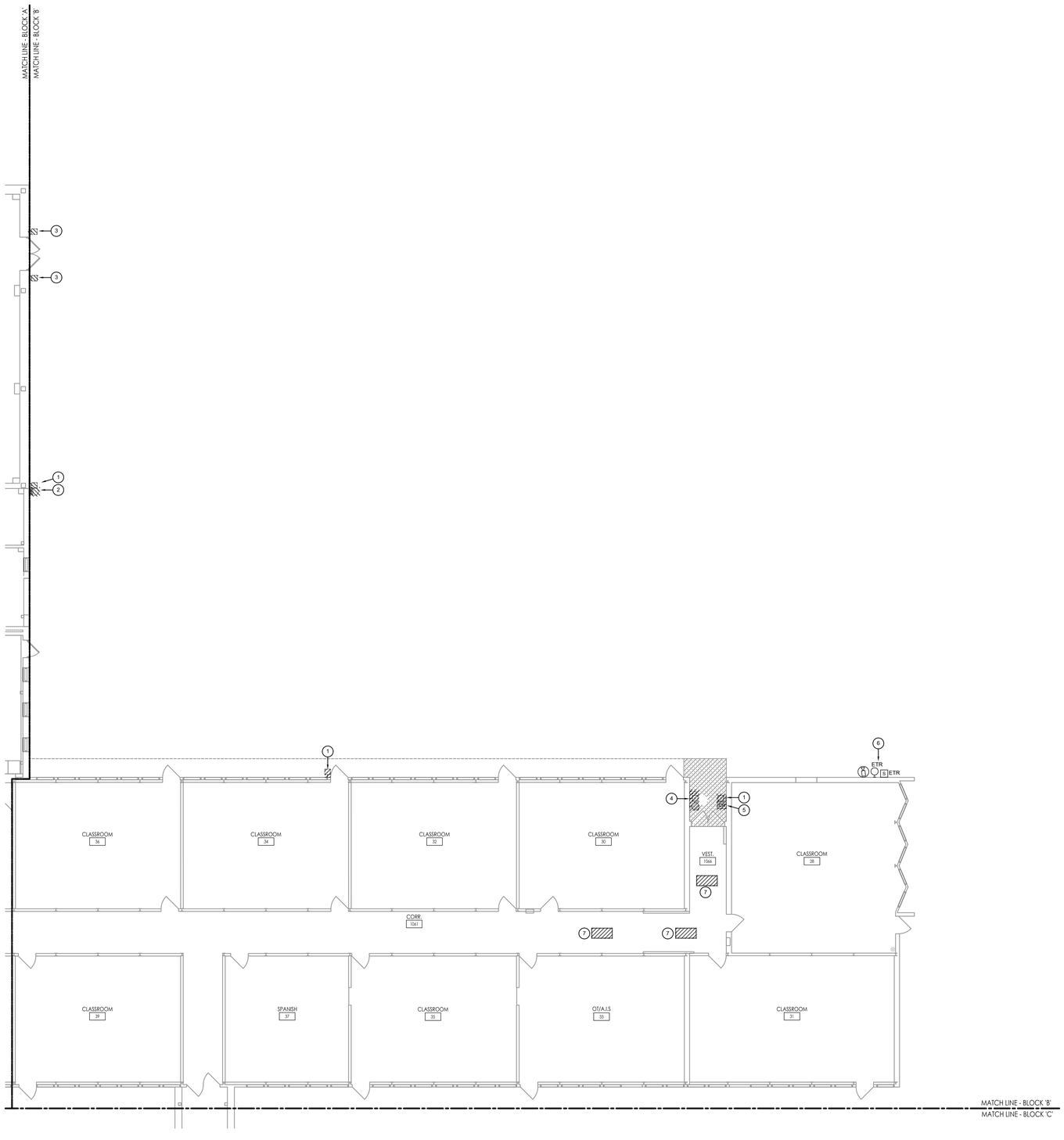


DEMOLITION PLAN - BLOCK B

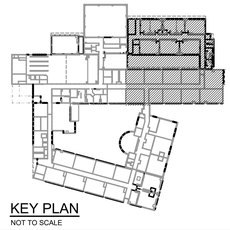
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. ALL EXISTING WIRING DEVICES AND LIGHTING FIXTURES SHALL BE EXISTING TO REMAIN UNLESS SHOWN FOR DEMOLITION OR INDICATED TO BE RELOCATED ON THE THIS DRAWING AND ARCHITECTURAL DRAWINGS. REFER TO ARCHITECTURAL DEMOLITION PLANS FOR FULL EXTENT OF DEMOLITION AREAS.
2. REFER TO NEW WORK PLANS FOR NEW LOCATIONS OF RELOCATED WIRING DEVICES, LIGHTING FIXTURES, COMMUNICATIONS DEVICES AND FIRE ALARM DEVICES, ETC.
3. MAINTAIN CONTINUITY OF ALL BRANCH CIRCUITS TO EXISTING WIRING DEVICES AND LIGHTING TO REMAIN.
4. MAINTAIN CONTINUITY OF ALL FIRE ALARM CIRCUITS AND TEMPORARILY SUPPORT SMOKE DETECTORS FROM STRUCTURAL CEILING DURING DEMOLITION FOR REINSTALLATION TO CEILINGS AS REQUIRED.
5. DISCONNECT AND REMOVE ALL DEVICES IN WALLS INDICATED FOR DEMOLITION BACK TO SOURCE OR LAST DEVICE TO REMAIN. REFER TO ARCHITECTURAL DEMOLITION PLANS FOR FULL EXTENT OF DEMOLITION AREAS.
6. TURN OVER ALL SECURITY SYSTEM DEVICES, MOTION SENSORS, CARD READERS, PROJECTORS, SPECIALTY SPEAKERS, ETC. TO THE OWNER AFTER DEMOLITION UNLESS SPECIFICALLY DIRECTED TO BE DISCARDED BY THE OWNER.

DEMOLITION KEY NOTES

1. EXISTING EXTERIOR LIGHTING FIXTURE TO BE DISCONNECTED AND REMOVED BACK TO SOURCE OR LAST LIGHTING FIXTURE TO REMAIN.
2. EXISTING EXTERIOR WALL MOUNTED WATER COOLER TO BE REMOVED. DISCONNECT AND REMOVE POWER WIRING AND CONDUIT BACK TO SOURCE OR LAST DEVICE TO REMAIN.
3. EXISTING EXTERIOR LIGHTING FIXTURE TO BE DISCONNECTED, REMOVED, AND REPLACED WITH NEW LIGHTING FIXTURE. REFER TO LIGHTING PLAN FOR NEW FIXTURES.
4. EXISTING EXTERIOR LIGHTING FIXTURE, JUNCTION BOX AND SWITCH TO BE DISCONNECTED, REMOVED, AND REPLACED WITH NEW LIGHTING FIXTURE. REFER TO LIGHTING PLAN FOR NEW FIXTURES.
5. EXISTING CARD READER TO BE DISCONNECTED AND REMOVED BACK TO SOURCE OR LAST DEVICE TO REMAIN.
6. EXISTING CCTV CAMERA AND SPEAKER TO REMAIN. DISCONNECT, REMOVE AND RELOCATE AS REQUIRED TO ACCOMMODATE THE NEW ADDITION CONSTRUCTION.
7. EXISTING CORRIDOR LIGHTING FIXTURE TO BE DISCONNECTED, REMOVED AND REPLACED WITH NEW. COIL WIRING FOR CONNECTION TO NEW FIXTURES. REFER TO LIGHTING PLAN.



KEY PLAN
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Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number
5516D

Project Date
10.10.2025

Checked By
AHG

Drawn By
AMP

Scale
AS NOTED

Drawing Name
ELECTRICAL DEMOLITON PLAN - BLOCK B

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

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Drawing Number
E2.1

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DEMOLITION PLAN - BLOCK C

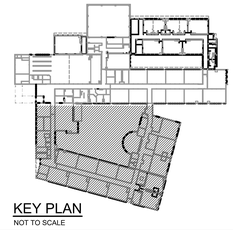
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. ALL EXISTING WIRING DEVICES AND LIGHTING FIXTURES SHALL BE EXISTING TO REMAIN UNLESS SHOWN FOR DEMOLITION OR INDICATED TO BE RELOCATED ON THE THIS DRAWING AND ARCHITECTURAL DRAWINGS. REFER TO ARCHITECTURAL DEMOLITION PLANS FOR FULL EXTENT OF DEMOLITION AREAS.
2. REFER TO NEW WORK PLANS FOR NEW LOCATIONS OF RELOCATED WIRING DEVICES, LIGHTING FIXTURES, COMMUNICATIONS DEVICES AND FIRE ALARM DEVICES, ETC.
3. MAINTAIN CONTINUITY OF ALL BRANCH CIRCUITS TO EXISTING WIRING DEVICES AND LIGHTING TO REMAIN.
4. MAINTAIN CONTINUITY OF ALL FIRE ALARM CIRCUITS AND TEMPORARILY SUPPORT SMOKE DETECTORS FROM STRUCTURAL CEILING DURING DEMOLITION FOR REINSTALLATION TO CEILINGS AS REQUIRED.
5. DISCONNECT AND REMOVE ALL DEVICES IN WALLS INDICATED FOR DEMOLITION BACK TO SOURCE OR LAST DEVICE TO REMAIN. REFER TO ARCHITECTURAL DEMOLITION PLANS FOR FULL EXTENT OF DEMOLITION AREAS.
6. TURN OVER ALL SECURITY SYSTEM DEVICES, MOTION SENSORS, CARD READERS, PROJECTORS, SPECIALTY SPEAKERS, ETC. TO THE OWNER AFTER DEMOLITION UNLESS SPECIFICALLY DIRECTED TO BE DISCARDED BY THE OWNER.

DEMOLITION KEY NOTES

1. DISCONNECT AND REMOVE ALL WIRING DEVICES AND LIGHTING FIXTURES THIS ROOM BACK TO SOURCE OR LAST DEVICE TO REMAIN UNLESS NOTED OTHERWISE.
2. EXISTING WALL OR PORTION OF WALL TO BE REMOVED. REFER TO SHEET NOTE #5. TYPICAL FOR ALL DEMOLISHED WALLS.
3. EXISTING SURFACE MOUNTED FIRE ALARM STROBE OR HORN/STROBE TO BE DISCONNECTED AND REMOVED BACK TO LAST DEVICE TO REMAIN.
4. EXISTING LIGHTING SWITCHES TO BE REMOVED AND REPLACED WITH NEW. REFER TO LIGHTING AND LIGHTING CONTROL PLANS.
5. EXISTING WIREMOLD OR PLUGMOLD TO BE DISCONNECTED AND REMOVED BACK TO SOURCE. TYPICAL FOR ALL THIS ROOM UNLESS NOTED OTHERWISE.
6. EXISTING FLUSH OR SURFACE MOUNTED RECEPTACLE TO BE DISCONNECTED AND REMOVED BACK TO SOURCE OR LAST DEVICE TO REMAIN (TYPICAL).
7. EXISTING HVAC EQUIPMENT AND ALL ASSOCIATED DISCONNECT SWITCHES, CONDUIT, AND WIRING TO BE DISCONNECTED AND REMOVED BACK TO SOURCE.
8. EXISTING CEILING MOUNTED CORRIDOR SPEAKER, SMOKE DETECTOR, EXIT SIGN AND CCTV CAMERA TO REMAIN. DISCONNECT, REMOVE AND RELOCATE AS REQUIRED TO ACCOMMODATE THE DEMOLITION AND NEW WORK.
9. ALL EXISTING CEILING MOUNTED EXPOSED CONDUIT THIS ROOM TO BE DISCONNECTED, REMOVED AND REROUTED TO BE CONCEALED IF CIRCUITS ARE TO REMAIN ACTIVE AFTER DEMOLITION.
10. DISCONNECT AND REMOVE EXISTING JUNCTION BOX AND WIREMOLD AT THE EXTERIOR DOOR BACK TO SOURCE OR LAST DEVICE TO REMAIN.
11. EXISTING REMOTE EMERGENCY LIGHTING FIXTURE BATTERY BALLAST AND TEST SWITCH TO BE REMOVED AND RELOCATED IF TO REMAIN ACTIVE. FIELD VERIFY NEW LOCATION. IF NO LONGER ACTIVE OR ENERGIZED AFTER DEMOLITION, DISCONNECT AND REMOVE BACK TO SOURCE.



KEY PLAN

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Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number: 5516D

Project Date: 10.10.2025

Checked By: AHG

Drawn By: AMP

Scale: AS NOTED

Drawing Name

ELECTRICAL DEMOLITON PLAN - BLOCK C

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

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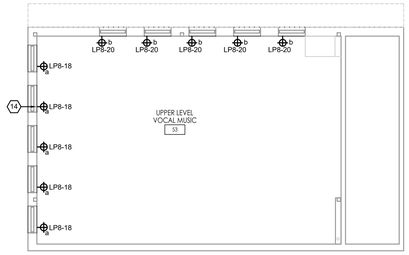
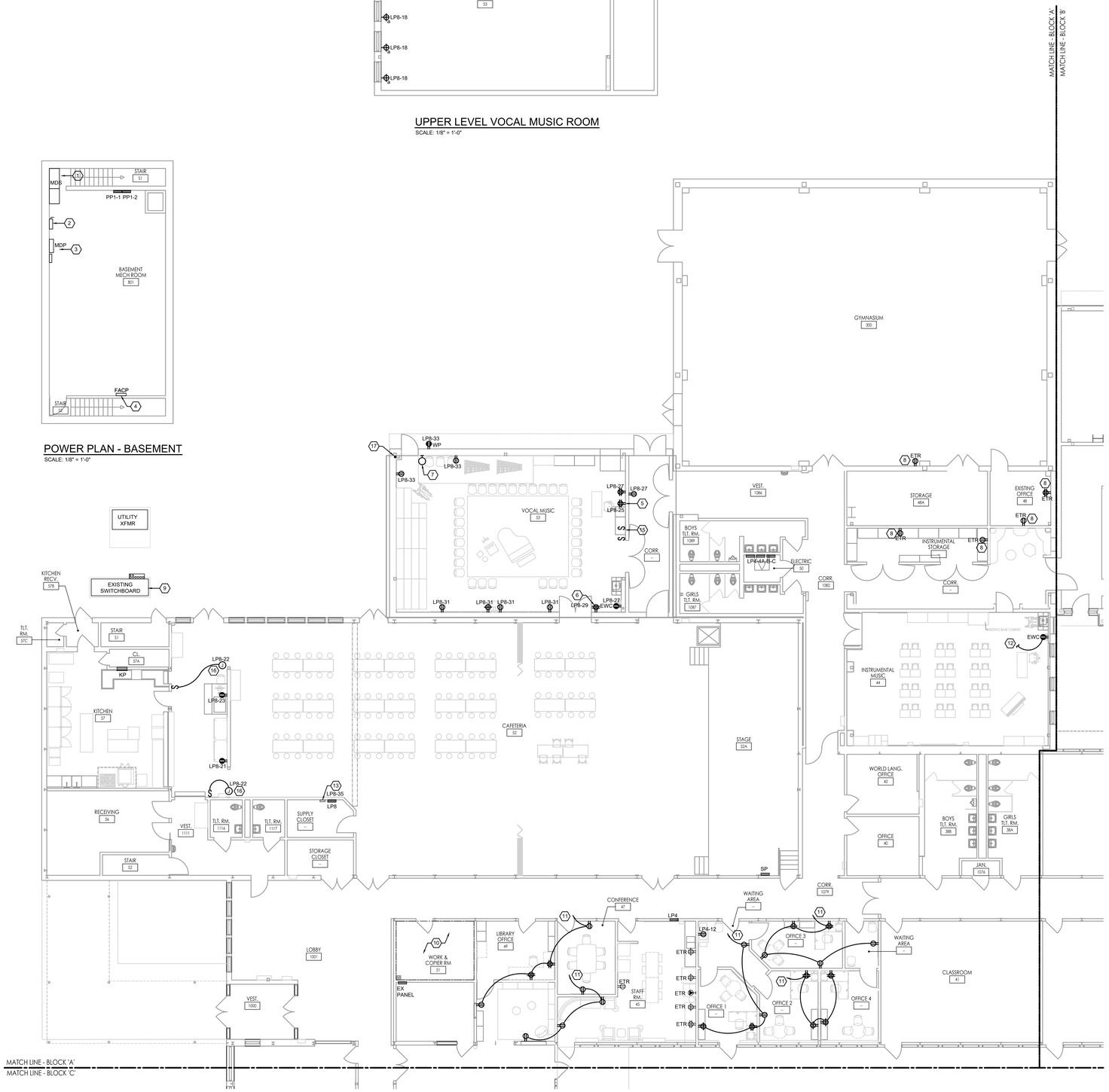
Drawing Number

E2.2



UPPER LEVEL VOCAL MUSIC ROOM
SCALE: 1/8" = 1'-0"

POWER PLAN - BASEMENT
SCALE: 1/8" = 1'-0"



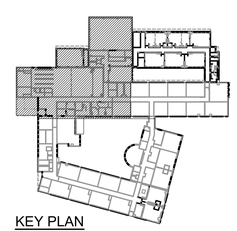
POWER PLAN - BLOCK A
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. COORDINATE ALL WIRING DEVICE LOCATIONS AND MOUNTING HEIGHTS WITH THE ARCHITECT PRIOR TO ROUGH-IN. ALL RECEPTACLES SHALL BE TAMPER RESISTANT.
2. CONTRACTOR SHALL CAREFULLY COORDINATE ALL ELECTRICAL EQUIPMENT LOCATIONS AND CLEARANCES. PANEL AND EQUIPMENT SIZES SHOWN ON THE PLANS ARE BASED ON SQUARE D.
3. CIRCUIT ELECTRONIC TRAP PRIMERS TO THE NEAREST RECEPTACLE CIRCUIT SERVING THE AREA LOCATED - 2#12 & 1#12EG IN 3/4"C. REFER TO PLUMBING PLANS FOR EXACT LOCATIONS.
4. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR ADDITIONAL INFORMATION.
5. UNLESS SHOWN ON THIS PLAN AS NEW OR RELOCATED, ALL EXISTING WIRING DEVICES SHALL REMAIN.
6. "ETR" DESIGNATES SPECIFIC EXISTING EQUIPMENT OR DEVICES TO REMAIN.
7. ALL EXTERIOR RECEPTACLES SHALL BE TAMPER RESISTANT GFCI TYPE WITH CAST ALUMINUM IN-USE LOCKABLE COVER.
8. IN RENOVATED CLASSROOM AREAS, ALL NEW WIRING SHALL BE RUN CONCEALED WITHIN DRY WALLS AND ABOVE SUSPENDED CEILINGS. ARCHITECT SHALL APPROVE ALL EXPOSED CONDUIT OR WIREMOLD LOCATIONS ON EXISTING WALLS PRIOR TO ROUGH-IN.

KEY NOTES

1. EXISTING MAIN DISTRIBUTION SWITCHBOARD.
2. EXISTING DISCONNECT SWITCH.
3. EXISTING BASEMENT DISTRIBUTION PANEL MDS.
4. EXISTING EDWARDS EST3 FIRE ALARM CONTROL PANEL.
5. QUAD OUTLET FOR CLASSROOM AUDIO CABINET. FIELD VERIFY EXACT MOUNTING HEIGHT AND LOCATION.
6. QUAD OUTLET FOR VOCAL MUSIC SOUND SYSTEM RACK OR CABINET. FIELD VERIFY EXACT MOUNTING HEIGHT AND LOCATION.
7. JUNCTION BOX FOR MOTORIZED SHADES CONTROLLER. COORDINATE EXACT REQUIREMENTS IN THE FIELD WITH THE VENDOR AND SYSTEM SHOP DRAWINGS.
8. PROVIDE NEW TAMPER-PROOF DUPLEX OR DOUBLE DUPLEX (QUAD) RECEPTACLE AT EXISTING LOCATION. EXISTING WIRING TO BE REUSED.
9. EXISTING EXTERIOR MAIN DISTRIBUTION SWITCHBOARD.
10. REFER TO LOW VOLTAGE PLANS FOR EXISTING EQUIPMENT THIS ROOM.
11. REUSE EXISTING CIRCUIT MADE SPARE BY DEMOLITION - 3#12 MC CABLE. ALL MC CABLE SHALL BE RUN CONCEALED WITHIN DRY WALLS OR ABOVE SUSPENDED CEILING. SEE SHEET NOTE #6 FOR ADDITIONAL INFORMATION.
12. CONNECT TO EXISTING RECEPTACLE CIRCUIT SERVING THIS AREA - 3#12 MC CABLE. ALL MC CABLE SHALL BE RUN CONCEALED WITHIN DRY WALLS OR ABOVE SUSPENDED CEILING. SEE SHEET NOTE #8 FOR ADDITIONAL INFORMATION.
13. MOTORIZED SHADE CONTROLLER CONTROL PANEL LOCATION.
14. SIMPLEX NEMA 5-15R RECEPTACLE FOR MOTORIZED SHADE POWER. FIELD COORDINATE EXACT REQUIREMENTS WITH THE SHADE MANUFACTURER. PROVIDE ALL JUNCTION BOXES, RECEPTACLES, WIRING AND CONDUIT REQUIRED FOR A COMPLETE AND OPERATIONAL INSTALLATION. REFER TO MANUFACTURER'S SHOP DRAWINGS FOR EXACT REQUIREMENTS AND LOCATIONS. LOWER CASE LETTER DESIGNATES SWITCHING. TYPICAL FOR ALL.
15. MOTORIZED SHADE LOW VOLTAGE CONTROLLER WALL SWITCH(S). PROVIDE LOW VOLTAGE WIRING TO SHADES, AND FROM SHADES TO THE MECHONET POWER STATION. FIELD VERIFY EXACT LOCATION. REFER TO MOTORIZED SHADE SHOP DRAWINGS FOR FULL EXTENT OF THE WORK.
16. JUNCTION BOX WITH POWER WIRING AND KEY SWITCH FOR OVERHEAD COILING DOOR. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH THE DOOR MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND SHOP DRAWINGS FOR A COMPLETE AND OPERATIONAL INSTALLATION.
17. FOUNDATION / UFER GROUNDING ELECTRODE CONDUCTOR LOCATION.



KEY PLAN
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Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number
5516D

Project Date
10.10.2025

Checked By
AHG

Drawn By
AMP

Scale
AS NOTED

Drawing Name
ELECTRICAL POWER PLAN - BLOCK A

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION
1	11.21.25	NJ DCA RESPONSES

Drawing Number
E3.0

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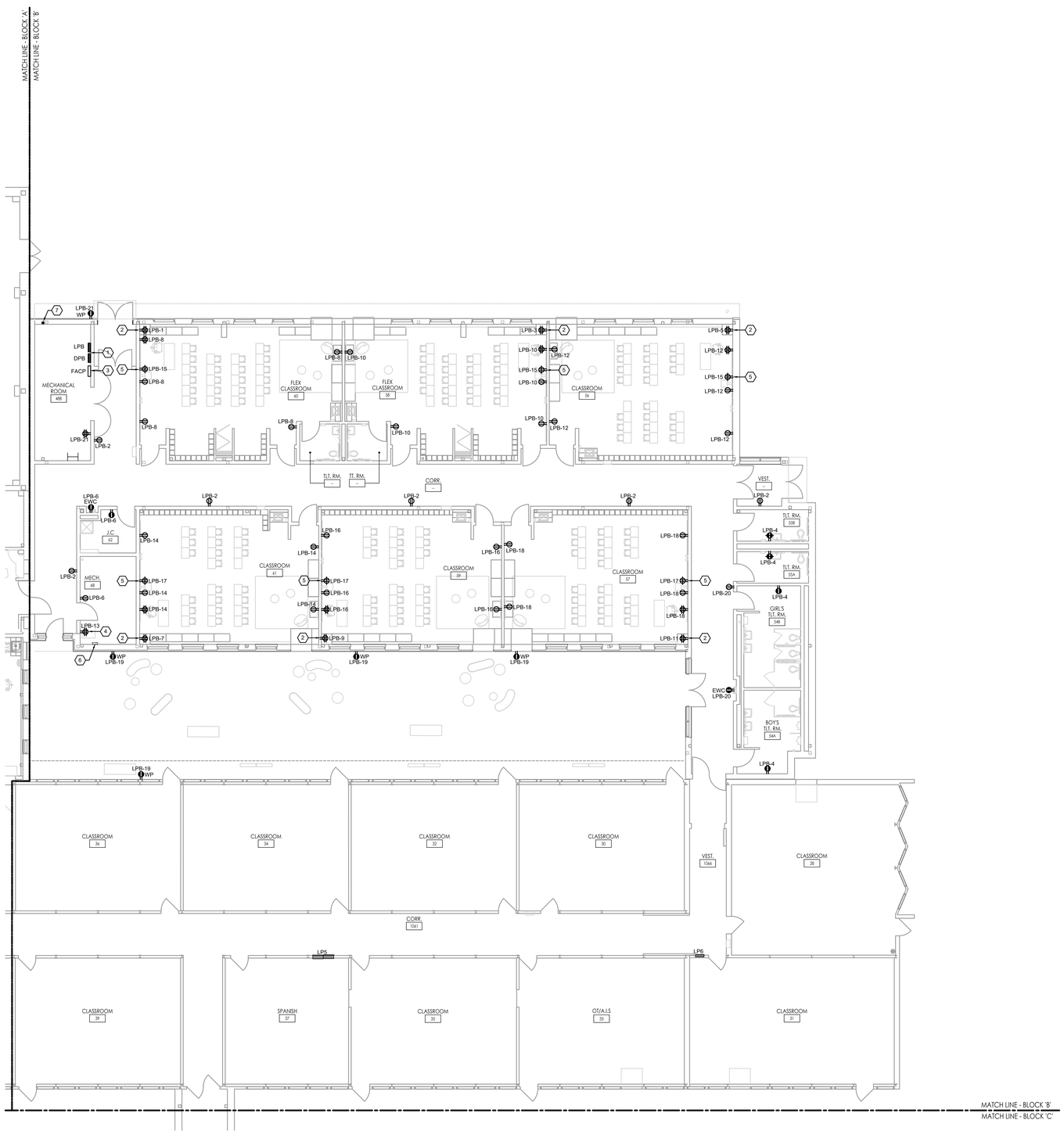


POWER PLAN - BLOCK B

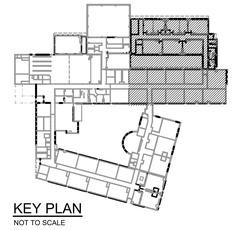
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. COORDINATE ALL WIRING DEVICE LOCATIONS AND MOUNTING HEIGHTS WITH THE ARCHITECT PRIOR TO ROUGH-IN. ALL RECEPTACLES SHALL BE TAMPER RESISTANT.
2. CONTRACTOR SHALL CAREFULLY COORDINATE ALL ELECTRICAL EQUIPMENT LOCATIONS AND CLEARANCES. PANEL AND EQUIPMENT SIZES SHOWN ON THE PLANS ARE BASED ON SQUARE D.
3. CIRCUIT ELECTRONIC TRAP PRIMERS TO THE NEAREST RECEPTACLE CIRCUIT SERVING THE AREA LOCATED - 2#12 & 1#12EG IN 3/4"C. REFER TO PLUMBING PLANS FOR EXACT LOCATIONS.
4. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR ADDITIONAL INFORMATION.
5. UNLESS SHOWN ON THIS PLAN AS NEW OR RELOCATED, ALL EXISTING WIRING DEVICES SHALL REMAIN.
6. "ETR" DESIGNATES SPECIFIC EXISTING EQUIPMENT OR DEVICES TO REMAIN.
7. ALL EXTERIOR RECEPTACLES SHALL BE TAMPER RESISTANT GFCI TYPE WITH CAST ALUMINUM IN-USE LOCKABLE COVER.

KEY NOTES

1. NEW BLOCK B ADDITION POWER AND LIGHTING PANEL LPB AND DISTRIBUTION / MECHANICAL PANEL DPB.
2. QUAD OUTLET FOR CLASSROOM AUDIO CABINET. FIELD VERIFY EXACT MOUNTING HEIGHT AND LOCATION.
3. NEW FIRE ALARM EXPANDER PANEL.
4. NEW IDF RACK (BY OTHERS) AND QUAD RECEPTACLES.
5. PROJECTOR RECEPTACLE. FIELD VERIFY MOUNTING HEIGHT WITH PROJECTOR MANUFACTURER'S INSTALLATION INSTRUCTIONS.
6. IDF MASTER GROUND BUS. SEE DETAIL SHEET.
7. FOUNDATION / UFER GROUNDING ELECTRODE CONDUCTOR LOCATION.



KEY PLAN

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Architect
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Pennsylvania: 140 Whitaker Avenue Mont Clare - Pennsylvania 19453

Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number

5516D

Project Date

10.10.2025

Checked By

AHG

Drawn By

AMP

Scale

AS NOTED

Drawing Name

ELECTRICAL POWER PLAN - BLOCK B

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION
1	11.21.25	NJ DCA RESPONSES

Drawing Number

E3.1

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POWER PLAN - BLOCK C

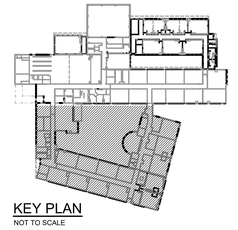
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. COORDINATE ALL WIRING DEVICE LOCATIONS AND MOUNTING HEIGHTS WITH THE ARCHITECT PRIOR TO ROUGH-IN. ALL RECEPTACLES SHALL BE TAMPER RESISTANT.
2. CONTRACTOR SHALL CAREFULLY COORDINATE ALL ELECTRICAL EQUIPMENT LOCATIONS AND CLEARANCES. PANEL AND EQUIPMENT SIZES SHOWN ON THE PLANS ARE BASED ON SQUARE D.
3. CIRCUIT ELECTRONIC TRAP PRIMERS TO THE NEAREST RECEPTACLE CIRCUIT SERVING THE AREA LOCATED - 2#12 & 1#12EG IN 3/4"C. REFER TO PLUMBING PLANS FOR EXACT LOCATIONS.
4. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR ADDITIONAL INFORMATION.
5. UNLESS SHOWN ON THIS PLAN AS NEW OR RELOCATED, ALL EXISTING WIRING DEVICES SHALL REMAIN.
6. IN RENOVATED CLASSROOM AREAS, ALL NEW WIRING SHALL BE RUN CONCEALED WITHIN DRY WALLS AND ABOVE SUSPENDED CEILINGS. ARCHITECT SHALL APPROVE ALL EXPOSED CONDUIT OR WIREMOLD LOCATIONS ON EXISTING WALLS PRIOR TO ROUGH-IN.
7. "ETR" DESIGNATES SPECIFIC EXISTING EQUIPMENT OR DEVICES TO REMAIN.

KEY NOTES

1. EXISTING POWER PANELS AND CONTROL PANELS THIS ROOM. FIELD VERIFY EXACT LOCATIONS.
2. QUAD OUTLET FOR CLASSROOM AUDIO CABINET. FIELD VERIFY EXACT MOUNTING HEIGHT AND LOCATION.
3. PROJECTOR RECEPTACLE. FIELD VERIFY MOUNTING HEIGHT WITH PROJECTOR MANUFACTURER'S INSTALLATION INSTRUCTIONS.
4. REUSE EXISTING CIRCUIT MADE SPARE BY DEMOLITION - 3#12 MC CABLE. ALL MC CABLE SHALL BE RUN CONCEALED WITHIN DRY WALLS OR ABOVE SUSPENDED CEILING. SEE SHEET NOTE #6 FOR ADDITIONAL INFORMATION.
5. SIMPLEX NEMA 5-15R RECEPTACLE FOR MOTORIZED SHADE POWER. FIELD COORDINATE EXACT REQUIREMENTS WITH THE SHADE MANUFACTURER. PROVIDE ALL JUNCTION BOXES, RECEPTACLES, WIRING AND CONDUIT REQUIRED FOR A COMPLETE AND OPERATIONAL INSTALLATION. REFER TO MANUFACTURER'S SHOP DRAWINGS FOR EXACT REQUIREMENTS AND LOCATIONS. LOWER CASE LETTER DESIGNATES SWITCHING. TYPICAL FOR ALL.
6. MOTORIZED SHADE LOW VOLTAGE CONTROLLER WALL SWITCH(S). PROVIDE LOW VOLTAGE WIRING TO SHADES, AND FROM SHADES TO THE MECHONET POWER STATION. FIELD VERIFY EXACT LOCATION. REFER TO MOTORIZED SHADE SHOP DRAWINGS FOR FULL EXTENT OF THE WORK.



KEY PLAN

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Architect
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F V H D P C . C O M

Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	AHG
Drawn By	AMP
Scale	AS NOTED

Drawing Name

ELECTRICAL POWER PLAN - BLOCK C

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

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AMIN H. GOMAA, PE
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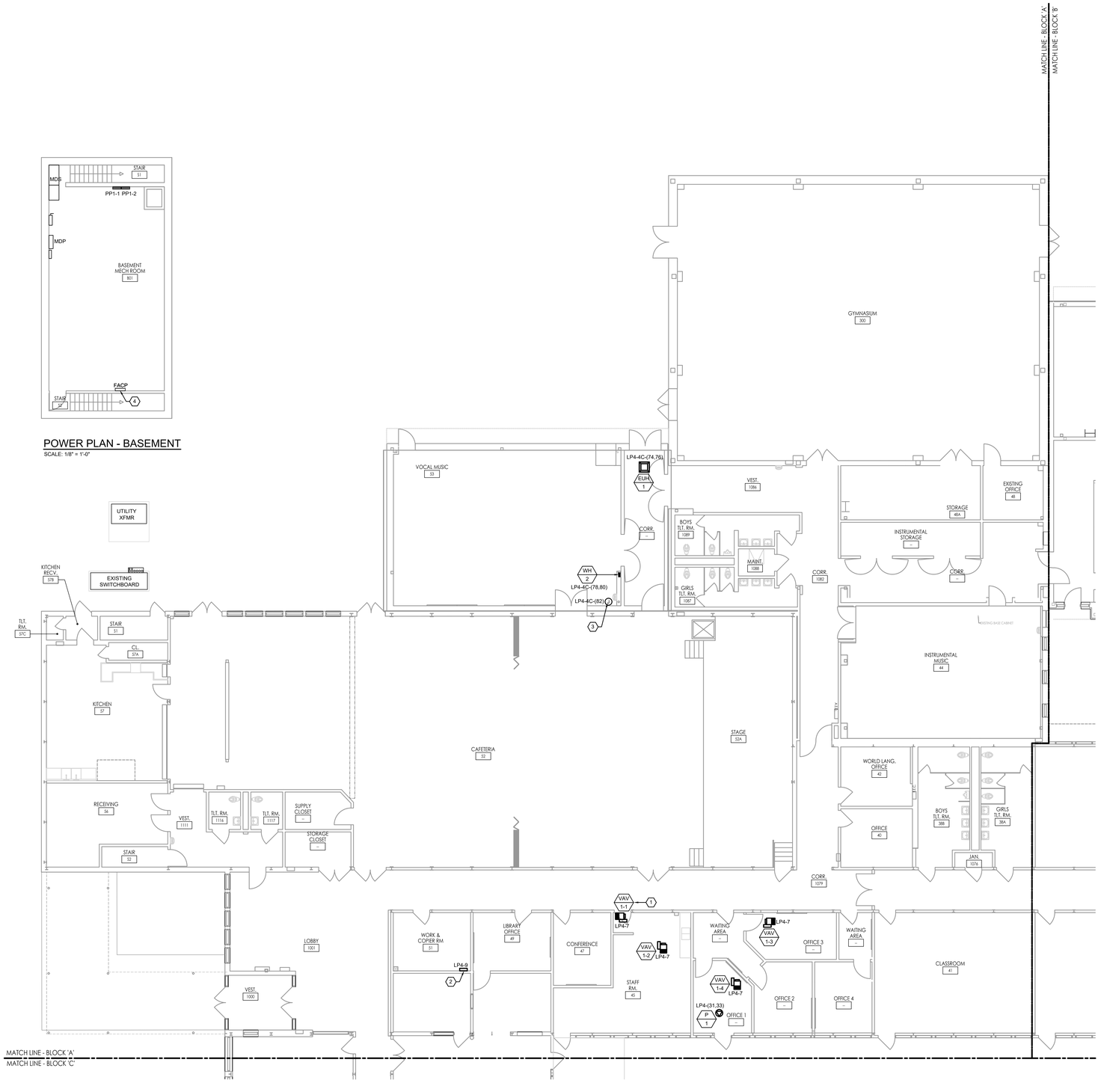
Drawing Number

E3.2

POWER PLAN - BASEMENT

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



HVAC POWER PLAN - BLOCK A

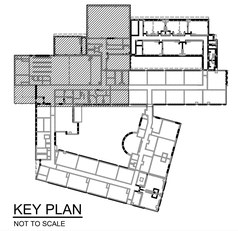
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. REFER TO LOW VOLTAGE & FIRE ALARM PLANS, AND FIRE ALARM RISER DIAGRAM FOR ADDITIONAL DUCT SMOKE DETECTOR INFORMATION.
2. FOR ADDITIONAL SCOPE OF WORK RELATED TO THE BUILDING MANAGEMENT SYSTEM AND HVAC CONTROLS, PLEASE REFER TO SPECIFICATION SECTION 230900 - INSTRUMENTATION AND CONTROL FOR HVAC EQUIPMENT.
3. REFER TO MECHANICAL AND PLUMBING PLANS FOR EXACT EQUIPMENT LOCATIONS.
4. REFER TO POWER PLANS FOR LOCATIONS OF PANELBOARDS.

KEY NOTES

1. MECHANICAL EQUIPMENT TAG. REFER TO MECHANICAL EQUIPMENT COORDINATION SCHEDULE FOR LOCAL POWER DISCONNECT INFORMATION AND PANEL SCHEDULES FOR CIRCUIT, WIRE AND CONDUIT SIZES. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS. (TYPICAL).
2. ATC PANEL LOCATION. COORDINATE EXACT LOCATION WITH THE MECHANICAL CONTRACTOR
3. JUNCTION BOX AND POWER WIRING FOR FUTURE RADON VENT FAN. REFER TO DETAILS ON ARCHITECTURAL PLANS.



KEY PLAN

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Architect
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Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number

5516D

Project Date

10.10.2025

Checked By

AHG

Drawn By

AMP

Scale

AS NOTED

Drawing Name

ELECTRICAL HVAC POWER PLAN - BLOCK A

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number

E4.0

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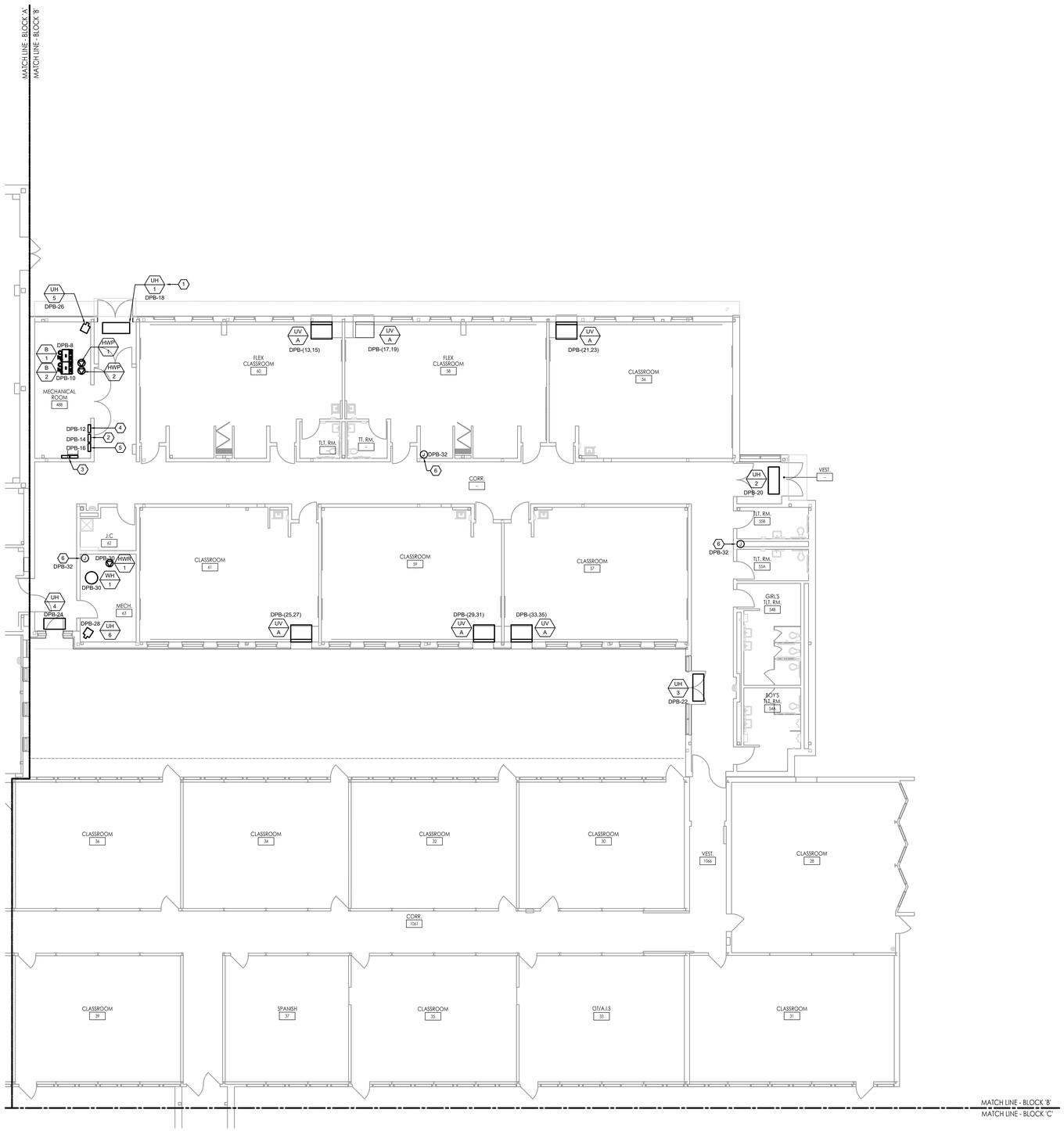


HVAC POWER PLAN - BLOCK B

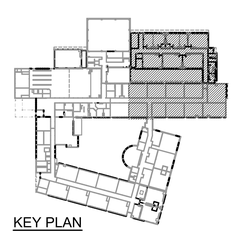
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. REFER TO LOW VOLTAGE & FIRE ALARM PLANS, AND FIRE ALARM RISER DIAGRAM FOR ADDITIONAL DUCT SMOKE DETECTOR INFORMATION.
2. FOR ADDITIONAL SCOPE OF WORK RELATED TO THE BUILDING MANAGEMENT SYSTEM AND HVAC CONTROLS, PLEASE REFER TO SPECIFICATION SECTION 230900 - INSTRUMENTATION AND CONTROL FOR HVAC EQUIPMENT.
3. REFER TO MECHANICAL AND PLUMBING PLANS FOR EXACT EQUIPMENT LOCATIONS.
4. REFER TO POWER PLANS FOR LOCATIONS OF PANELBOARDS.

KEY NOTES

1. MECHANICAL EQUIPMENT TAG. REFER TO MECHANICAL EQUIPMENT COORDINATION SCHEDULE FOR LOCAL POWER DISCONNECT INFORMATION AND PANEL SCHEDULES FOR CIRCUIT, WIRE AND CONDUIT SIZES. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS. (TYPICAL).
2. ATC PANEL LOCATION. COORDINATE EXACT LOCATION WITH THE MECHANICAL CONTRACTOR
3. WALL MOUNTED REMOTE VFD'S FOR HOT WATER PUMPS. COORDINATE WITH MECHANICAL CONTRACTOR.
4. GAS DETECTION PANEL LOCATION.
5. BOILER CONTROL PANEL LOCATION.
6. JUNCTION BOX AND POWER WIRING FOR FUTURE RADON VENT FAN. REFER TO DETAILS ON ARCHITECTURAL PLANS.



KEY PLAN

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Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	AHG
Drawn By	AMP
Scale	AS NOTED

Drawing Name

ELECTRICAL HVAC POWER PLAN - BLOCK B

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number

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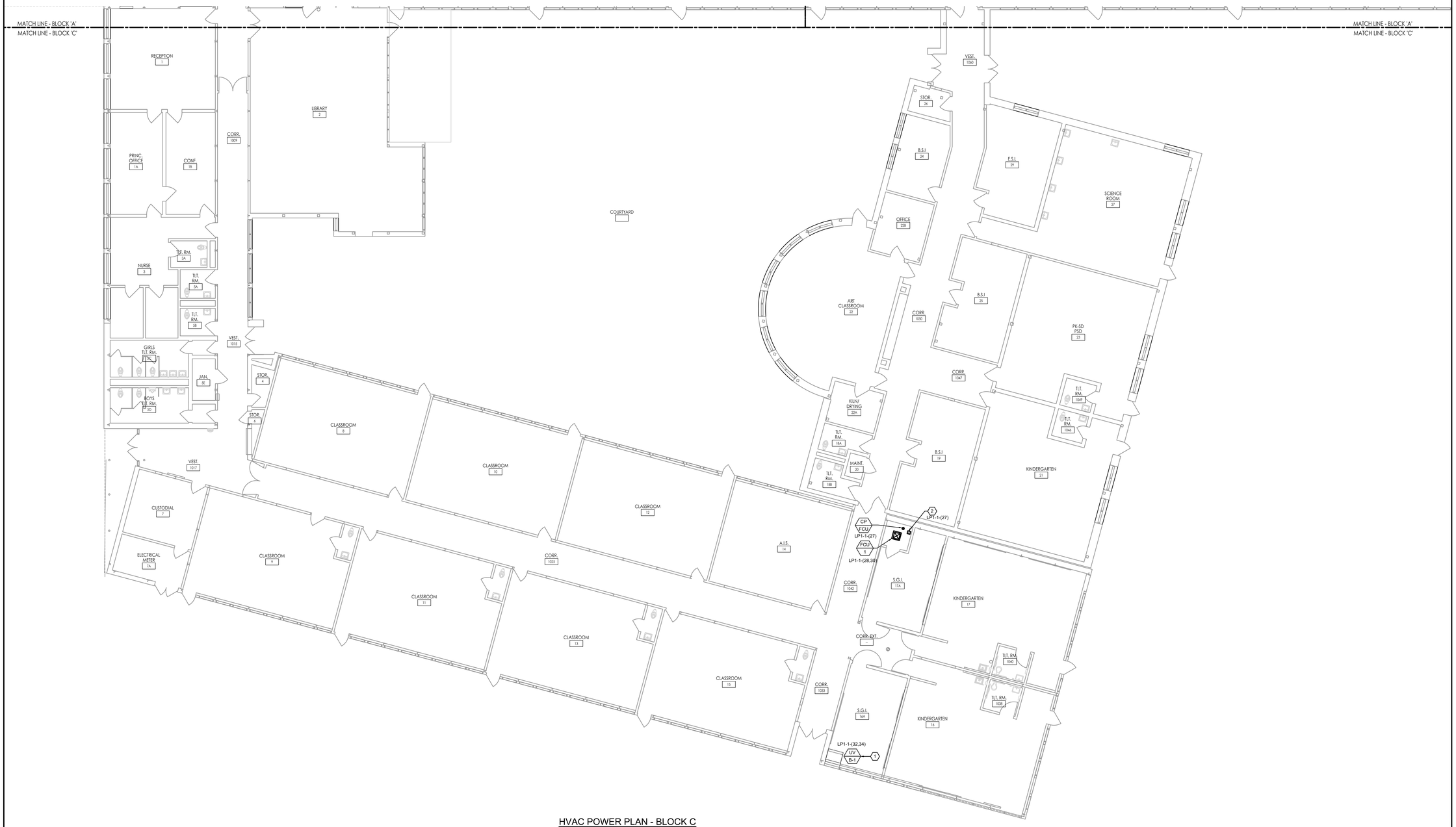


HVAC POWER PLAN - BLOCK C

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

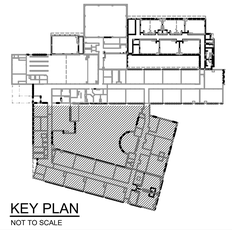
SHEET NOTES

1. REFER TO LOW VOLTAGE & FIRE ALARM PLANS, AND FIRE ALARM RISER DIAGRAM FOR ADDITIONAL DUCT SMOKE DETECTOR INFORMATION.
2. FOR ADDITIONAL SCOPE OF WORK RELATED TO THE BUILDING MANAGEMENT SYSTEM AND HVAC CONTROLS, PLEASE REFER TO SPECIFICATION SECTION 230900 - INSTRUMENTATION AND CONTROL FOR HVAC EQUIPMENT
3. REFER TO MECHANICAL AND PLUMBING PLANS FOR EXACT EQUIPMENT LOCATIONS.
4. REFER TO POWER PLANS FOR LOCATIONS OF PANELBOARDS.

KEY NOTES

(1) MECHANICAL EQUIPMENT TAG. REFER TO MECHANICAL EQUIPMENT COORDINATION SCHEDULE FOR LOCAL POWER DISCONNECT INFORMATION AND PANEL SCHEDULES FOR CIRCUIT, WIRE AND CONDUIT SIZES. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS. (TYPICAL).

(2) MOTORIZED DAMPER. PROVIDE 120V POWER TO ACTUATORS.



KEY PLAN
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Pennsylvania: 140 Whitaker Avenue
Mont Clare - Pennsylvania 19453
F V H D P C . C O M

Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	AHG
Drawn By	AMP
Scale	AS NOTED

Drawing Name
ELECTRICAL HVAC POWER PLAN - BLOCK C

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number
E4.2

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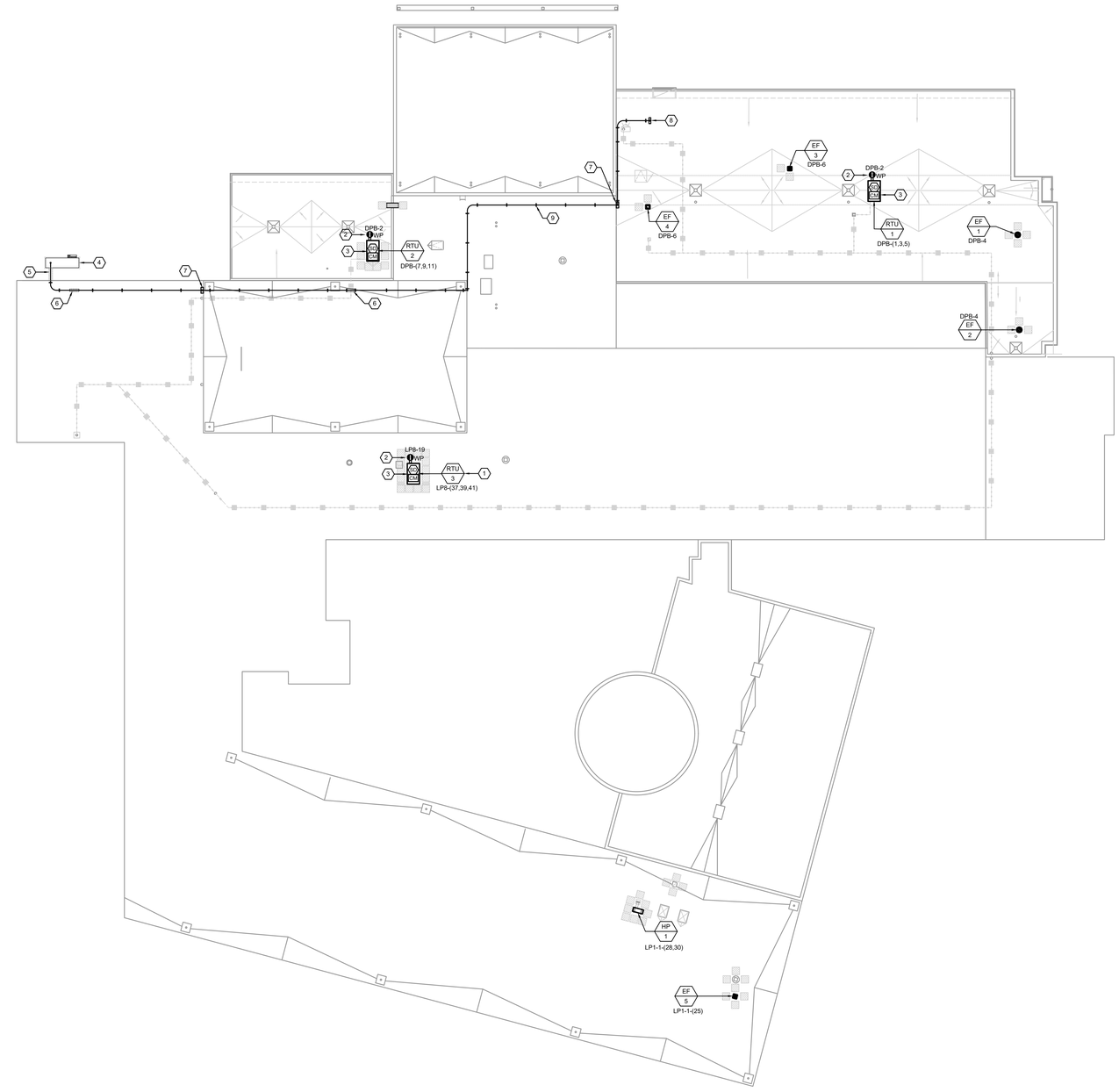

HVAC POWER PLAN - ROOF

SCALE: 1/16" = 1'-0"

SHEET NOTES

1. REFER TO LOW VOLTAGE & FIRE ALARM PLANS, AND FIRE ALARM RISER DIAGRAM FOR ADDITIONAL DUCT SMOKE DETECTOR INFORMATION.
2. FOR ADDITIONAL SCOPE OF WORK RELATED TO THE BUILDING MANAGEMENT SYSTEM AND HVAC CONTROLS, PLEASE REFER TO SPECIFICATION SECTION 230900 - INSTRUMENTATION AND CONTROL FOR HVAC EQUIPMENT
3. REFER TO MECHANICAL AND PLUMBING PLANS FOR EXACT EQUIPMENT LOCATIONS.
4. REFER TO ONE LINE DIAGRAM AND PANEL SCHEDULES FOR ALL CONDUIT AND FEEDER SIZES.
5. CONTRACTOR SHALL COORDINATE ALL ROOFTOP CONDUIT ROUTING. AVOID CONFLICTS WITH OTHER TRADES AND EXISTING CONDITIONS. VERIFY EXACT RUN LENGTHS IN THE FIELD AND PROVIDE ALL PULLBOXES AND OFFSET AS REQUIRED PER NEC. CONTRACTOR SHALL COORDINATE ALL CONDUIT RUNS WITH THE GENERAL CONTRACTOR AND MARK OUT THEIR LOCATIONS PRIOR TO COMMENCING WORK.
6. ALL ROOF MOUNTED FEEDERS SHALL BE TYPE XHHW-2 IN RGS CONDUIT. REFER TO ONE LINE DIAGRAM AND PANEL SCHEDULES FOR ADDITIONAL INFORMATION.

KEY NOTES

1. MECHANICAL EQUIPMENT TAG. REFER TO MECHANICAL EQUIPMENT COORDINATION SCHEDULE FOR LOCAL POWER DISCONNECT INFORMATION AND PANEL SCHEDULES FOR CIRCUIT, WIRE AND CONDUIT SIZES. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS. (TYPICAL).
2. DUPLEX GFI RECEPTACLE WITH CAST ALUMINUM IN-USE WEATHERPROOF COVER. FIELD COORDINATE EXACT LOCATION AT THE UNIT.
3. DUCT SMOKE DETECTOR AND CONTROL MODULE. REFER TO FIRE ALARM RISER DIAGRAM AND MECHANICAL EQUIPMENT COORDINATION SCHEDULE FOR ADDITIONAL INFORMATION.
4. EXISTING OUTDOOR MAIN DISTRIBUTION SWITCHBOARD.
5. PROVIDE UNI-STRUT SUPPORTS FROM MDS TO ROOF.
6. PROVIDE ROOF SUPPORTS SUITABLE TO CROSS OVER EXISTING CONDUITS OR NEW GAS PIPING. AFTER CROSSING, DROP DOWN TO MINIMUM 4" ABOVE ROOF SURFACE.
7. NEMA 3R PULLBOX SIZED PER NEC.
8. NEW PANEL DPB IN MECHANICAL ROOM BELOW.
9. ROOF CONDUIT SUPPORT SPACED EVERY 10'-0" PER NEC. CONDUIT SHALL BE A MINIMUM OF 4" ABOVE ROOF. REFER TO ARCHITECTURAL DETAIL SHEETS.

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Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number

5516D

Project Date

10.10.2025

Checked By

AHG

Drawn By

AMP

Scale

AS NOTED

Drawing Name

ELECTRICAL HVAC POWER PLAN - ROOF

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

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Drawing Number

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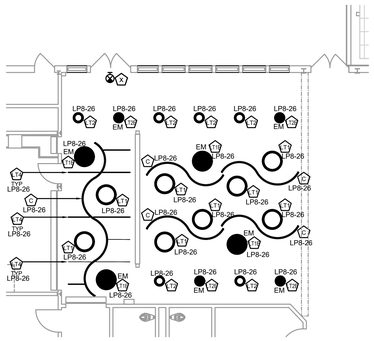
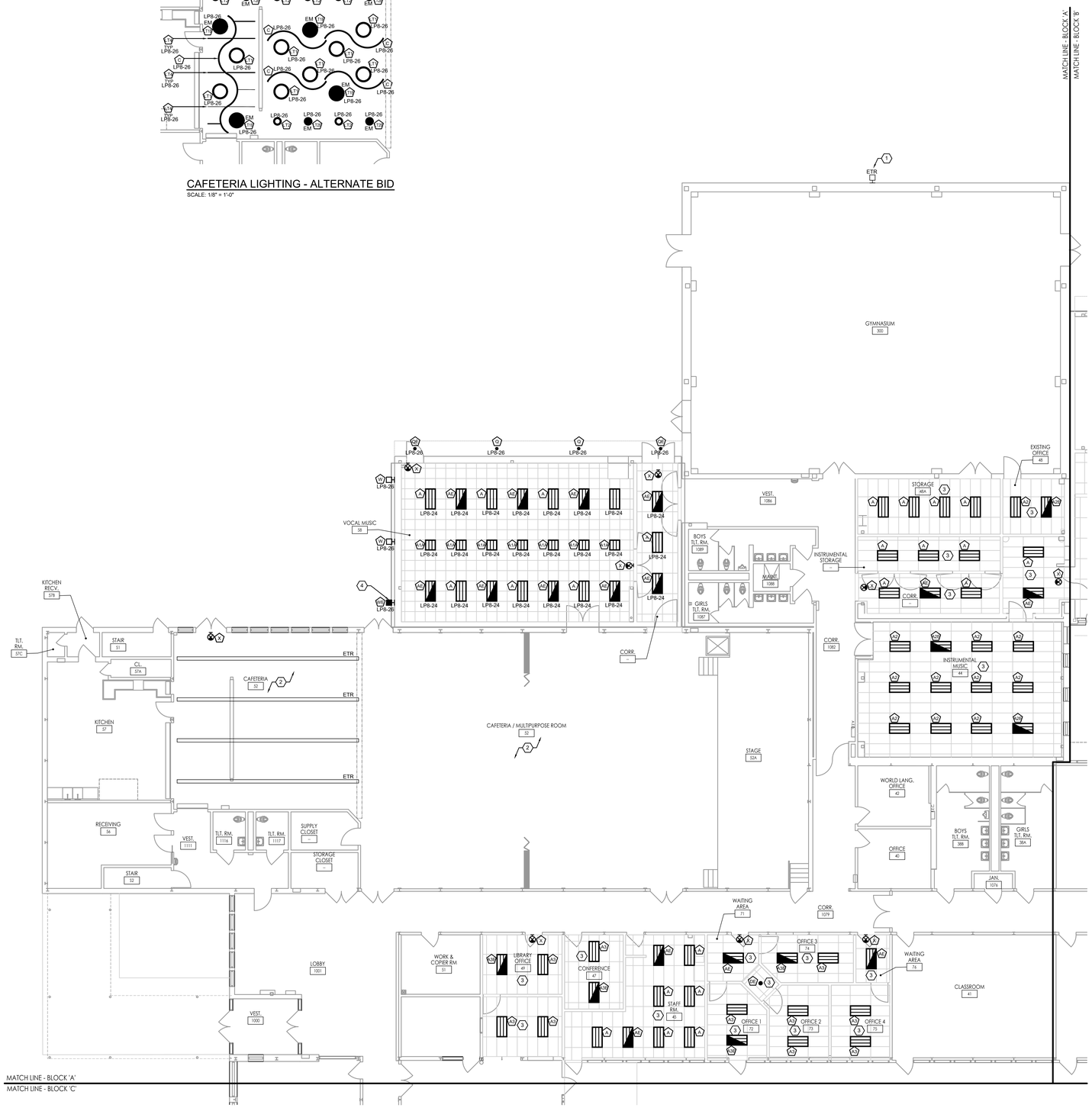


CAFETERIA LIGHTING - ALTERNATE BID

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



LIGHTING PLAN - BLOCK A

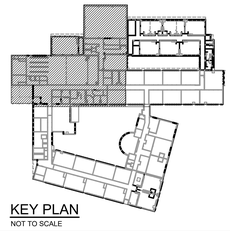
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. COORDINATE ALL LIGHTING FIXTURE AND WIRING DEVICE LOCATIONS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. CONTRACTOR SHALL COORDINATE ALL LIGHTING LOCATIONS, MOUNTING HEIGHTS AND SWITCHING LOCATIONS WITH THE ARCHITECTURAL PLANS PRIOR TO ROUGH-IN. REFER TO LIGHTING CONTROLS DRAWINGS.
3. ALL EXIT, UNIT EMERGENCY LIGHTING AND FIXTURE EMERGENCY BATTERY PACKS SHALL BE CONNECTED TO THE LINE SIDE OF THE CIRCUIT SERVING AREA LOCATED AND AHEAD OF ANY SWITCHING OR LIGHTING CONTROL.
4. UNLESS SHOWN ON THIS PLAN AS NEW, ALL OTHER LIGHTING SHALL BE EXISTING TO REMAIN.

KEY NOTES

1. EXISTING EXTERIOR WALL PACK TO REMAIN.
2. EXISTG CAFETERIA LIGHTING THIS AREA TO REMAIN.
3. CIRCUIT NEW LIGHTING THIS ROOM TO THE EXISTING LIGHTING CIRCUIT SERVING THIS AREA - 3#12 MC.
4. MOUNT WALL PACK FIXTURES 13'-0" TO BOTTOM OF FIXTURE ON VOCAL MUSIC ADDITION.



KEY PLAN

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10.10.25
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Architect
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Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number

5516D

Project Date

10.10.2025

Checked By

AHG

Drawn By

JAM

Scale

AS NOTED

Drawing Name

ELECTRICAL LIGHTING PLAN - BLOCK A

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number

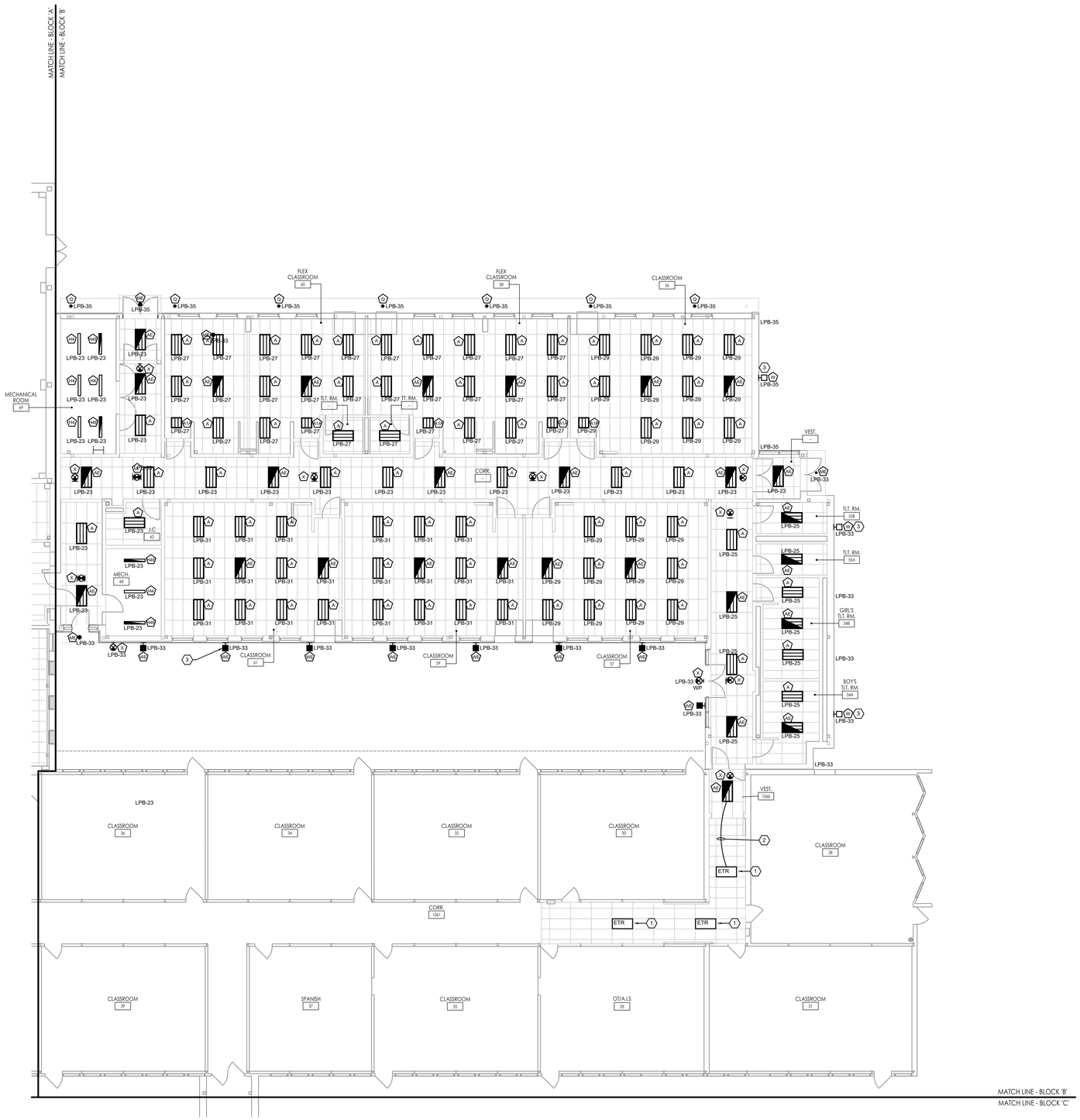
E5.0

SHEET NOTES

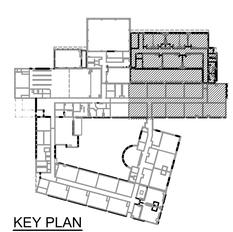
1. COORDINATE ALL LIGHTING FIXTURE AND WIRING DEVICE LOCATIONS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. CONTRACTOR SHALL COORDINATE ALL LIGHTING LOCATIONS, MOUNTING HEIGHTS AND SWITCHING LOCATIONS WITH THE ARCHITECTURAL PLANS PRIOR TO ROUGH-IN. REFER TO LIGHTING CONTROLS DRAWINGS.
3. ALL EXIT, UNIT EMERGENCY LIGHTING AND FIXTURE EMERGENCY BATTERY PACKS SHALL BE CONNECTED TO THE LINE SIDE OF THE CIRCUIT SERVING AREA LOCATED AND AHEAD OF ANY SWITCHING OR LIGHTING CONTROL.
4. UNLESS SHOWN ON THIS PLAN AS NEW, ALL OTHER LIGHTING SHALL BE EXISTING TO REMAIN.

KEY NOTES

1. EXISTING LIGHTING FIXTURE TO BE RELOCATED TO NEW CEILING GRID. EXTEND EXISTING BRANCH CIRCUIT WIRING AS REQUIRED FOR A COMPLETE AND OPERATIONAL RELOCAITON. EXISTING CONTROLS TO REMAIN.
2. NEW LIGHTING FIXTURE TO BE CIRCUITED TO EXISTING CORRIDOR LIGHTING CIRCUIT AND CONTROLS - 3#12 MC.
3. MOUNT WALL PACK FIXTURES 12'- 4" TO BOTTOM OF FIXTURE ON NEW CLASSROOM ADDITION. (TYPICAL).



LIGHTING PLAN - BLOCK B
SCALE: 1/8" = 1'-0"



KEY PLAN
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Pennsylvania: 140 Whitaker Avenue, Mont Clare - Pennsylvania 19453

Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number
5516D

Project Date
10.10.2025

Checked By
WWG

Drawn By
JCM/AP

Scale
AS NOTED

Drawing Name
ELECTRICAL LIGHTING PLAN - BLOCK B

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number
E5.1

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LIGHTING PLAN - BLOCK C

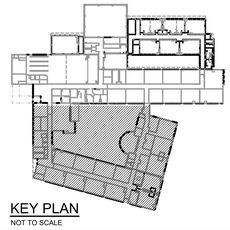
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. COORDINATE ALL LIGHTING FIXTURE AND WIRING DEVICE LOCATIONS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. CONTRACTOR SHALL COORDINATE ALL LIGHTING LOCATIONS, MOUNTING HEIGHTS AND SWITCHING LOCATIONS WITH THE ARCHITECTURAL PLANS PRIOR TO ROUGH-IN. REFER TO LIGHTING CONTROLS DRAWINGS.
3. ALL EXIT, UNIT EMERGENCY LIGHTING AND FIXTURE EMERGENCY BATTERY PACKS SHALL BE CONNECTED TO THE LINE SIDE OF THE CIRCUIT SERVING AREA LOCATED AND AHEAD OF ANY SWITCHING OR LIGHTING CONTROL.
4. UNLESS SHOWN ON THIS PLAN AS NEW, ALL OTHER LIGHTING SHALL BE EXISTING TO REMAIN.

KEY NOTES

1. CIRCUIT NEW LIGHTING THIS ROOM TO THE EXISTING LIGHTING CIRCUIT SERVING THIS AREA - 3#12 MC.
2. CIRCUIT NEW CORRIDOR EXTENSION LIGHTING TO THE EXISTING CORRIDOR LIGHTING CIRCUIT - 3#12 MC.
3. EXISTING EXIT SIGN TO REMAIN.



KEY PLAN
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NJDCA Electronic Release Stamp

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Date 10.10.25
Architect
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Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	AHG
Drawn By	JDMP
Scale	AS NOTED

Drawing Name
ELECTRICAL LIGHTING PLAN - BLOCK C

Revisions

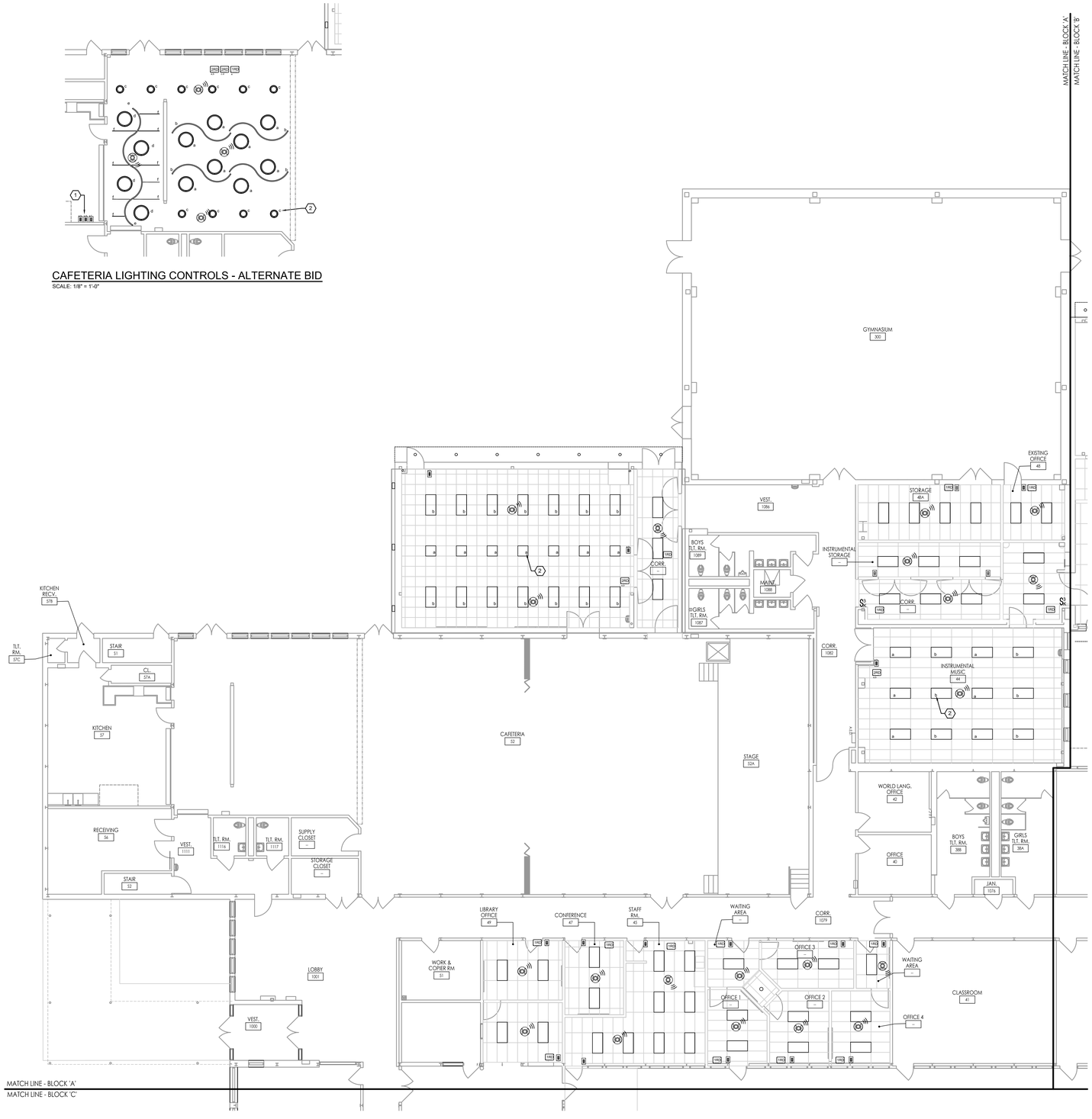
No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number
E5.2

\\fpa-fileserver\data\PROJECTS\2025\25400\25485 Princeton Boe\25485 004 - Littlebrook ES\CAD\E\DWG\25485 004 - E5.1.dwg

CAFETERIA LIGHTING CONTROLS - ALTERNATE BID

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



LIGHTING CONTROLS PLAN - BLOCK A

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

Controls Legend

FOR SWITCH LEG PLACEMENT SEE ELEVATIONS

*Bridge module example reference.

* LV connection line is low voltage 18-22 AWG
* CAT5 connection line is CAT5 cable for SP protocol
* NX Bus connection line is NX3 cable for CAT5 network cable
* NX Bus connection line is NX3 cable for SP protocol
* LINV connection line represents line voltage
* LV-LINV connection represents line and low voltage

*Connection line types are for reference only and may not be shown on drawings.

	(1) DLCPCO PHOTOCELL SENSOR, OUTDOOR, WHITE		(49) NXSMDT-OMNI NX SENSOR MODULE, DUAL TECH, 360° LENS, WHITE
	(2) LHRMTS1-G-WH LIGHTHAWK MULTI-TECHNOLOGY WALL SWITCH SENSOR WITH INTELLIDAPT, SINGLE CIRCUIT, ONE BUTTON, 1200TTHAC, 1000 SQ. FT., PHOTOCELL		(1) NXSW2-4-WH NX DIGITAL SMART SWITCH, FOUR BUTTON, MOMENTARY, PILOT
NXP2	(1) NX PANEL=NXP2-PNL-8-8-U-S NXP2 SERIES LIGHTING CONTROL PANEL		(18) NXSW2-6-WH NX DIGITAL SMART SWITCH, SIX BUTTON, MOMENTARY, PILOT
	(2) NXCI NX SMART PORT CONTACT INTEFACE MODULE		(12) NXSW2-OO-WH NX DIGITAL SPECIALTY ON/OFF SWITCH
	(10) NXDS NX DAYLIGHT SENSOR		(29) NXSW2-ORLD-WH NX DIGITAL SPECIALTY ON/RAISE/LOWER/OFF SWITCH
	(4) NXHNB2 NX HUBNET NETWORK BRIDGE MODULE		(2) NXWPS NX WALL PARTITION SENSOR
NXC	(36) NXRCFX2-1RD-UNV NX ROOM CONTROLLER, FX, 1 RELAY, 2 - 10V DIMMING, POWER MONITORING, UNIVERSAL VOLTAGE	CAT5	(10) RJ45ADAPTER RJ45 ADAPTER FOR OCCUPANCY AND DAYLIGHT SENSORS
NXC	(15) NXRCFX2-2RD-UNV NX ROOM CONTROLLER, FX, 2 RELAY, LV/LINV DIMMING, POWER MONITORING, UNIVERSAL VOLTAGE		

NOTES:

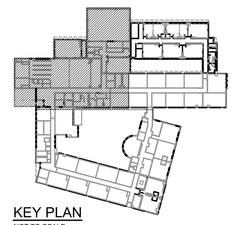
1. All device locations are approximate, refer to manufacturers installation instructions prior to installation.
2. Occupancy sensors utilizing ultrasonic technology must be located a minimum of four to six feet from HVAC supply and return vents.
3. 360 degree Occupancy sensors utilizing ultrasonic technology must be located a minimum of two feet from the wall.
4. Sensors mounted over a door must be placed one foot inside the threshold.
5. All switches are displayed as White. Please refer to your Bill of Material for correct color on each project.
6. By default line voltage wall switch occupancy sensors are selected as Ground leakage devices. If installation requires Neutral connection, please refer to your Bill of Material to for appropriate model number.
7. Contractor is responsible for: proper sensitivity & time delay settings (for non-adaptive products), recommended placement and verification of circuits with respect to power placement.
8. Contractor is responsible for field verification of required number of Power Packs/Smart Packs/Room Controllers:
   - One Power Pack/Room Controller is required for each circuit to be controlled.
   - One Room Controller can handle a total of 30 load points per module (see install instructions).
   - One power pack is required for every four sensors in the zone.
   - If multiple circuits are to be controlled by a sensor, an auxiliary relay can be used in conjunction with the power pack.
   - The maximum number of sensors that can be put on a power pack is to be reduced by one for each slave pack used.
   - Contractor is responsible for ensuring that the bill of materials complies with the intended design, project specifications and local codes.
9. NX Network is a powered network; do not connect NX Network CAT5 cables to standard Ethernet devices. Consult factory if additional network segments are required. Current is not liable for any damage caused.
10. If the distance between the Signal Generating Devices (Area Controller, NX Panel, NXHDI or NXHNB) exceeds 100 meters (328 feet) of cable, a Power over Ethernet Router (not provided by Current) will need to be installed.
11. The placement of the photocells are not the exact placement. They may need to be moved to a more optimum location per the individual room conditions.

SHEET NOTES

1. COORDINATE ALL LIGHTING FIXTURE AND WIRING DEVICE LOCATIONS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. UNLESS SHOWN ON THIS PLAN AS NEW, ALL OTHER LIGHTING AND CONTROLS SHALL BE EXISTING TO REMAIN.
3. ALL CORRIDOR LIGHTING SHALL BE CONTROLLED VIA TIMECLOCK WITH OCCUPANCY SENSOR OVERRIDE. PROVIDE KEY SWITCHES FOR LOCAL CONTROL BY AUTHORIZED PERSONNEL ONLY.

KEY NOTES

1. FIELD VERIFY EXACT LOCATION OF CAFETERIA LIGHTING CONTROL SWITCHES. SWITCHES SHALL BE LOCATED ONLY WHERE AVAILABLE TO AUTHORIZED PERSONNEL.
2. LOWER CASE LETTER DESIGNATES SWITCHING ARRANGEMENT (TYPICAL).



KEY PLAN

NOT TO SCALE

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10.10.25 Date

William D. Hopkins Architect

Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number
5516D

Project Date
10.10.2025

Checked By
AHG

Drawn By
AMP

Scale
AS NOTED

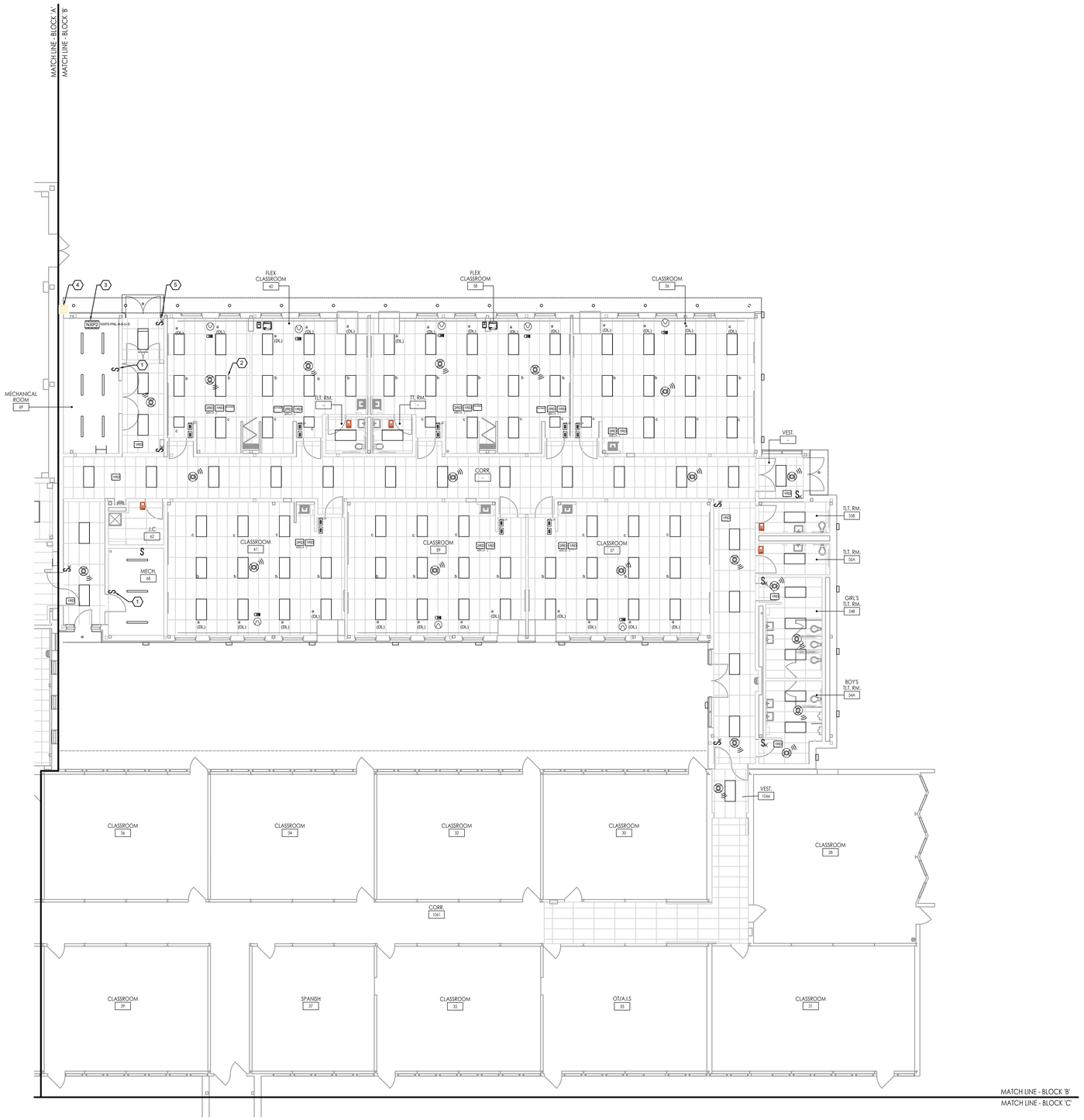
Drawing Name
ELECTRICAL LIGHTING CONTROLS PLAN - BLOCK A

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number
E5.3

\\fpa-fileserver\data\PROJECTS\2025\Q1\25005\25485 Princeton Boe\25485 1004 - Littlebrook ES\CAD\EDW\Plot\25485-1004 - ES 3.dwg



LIGHTING CONTROLS PLAN - BLOCK B

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

Controls Legend

FOR SWITCH LEG PLACEMENT

*Bridge module example reference.

- * LV connection line is low voltage 18-22 AWG
- * CAT5 connection line is CAT5 cable for SP protocol
- * NX Network connection line is CAT5 cable for NX network cable
- * FX Bus connection line is CAT5 cable for FX protocol
- * LNV connection line represents line voltage
- * LV-LNV connection represents line and low voltage

*Connection line types are for reference only and may not be shown on drawings.

- (1) DLCPCO — PHOTOCELL SENSOR, OUTDOOR, WHITE
- (2) LHRMT51-G-WH — LIGHTHAWK MULTI-TECHNOLOGY WALL SWITCH SENSOR WITH INTELLIDAPT, SINGLE CIRCUIT, ONE BUTTON, 1000TT/VAC, 1000 SQ. FT.; PHOTOCELL
- (1) NX PANEL=NXP2-PNL-8-8-U-S — NXP2 SERIES LIGHTING CONTROL PANEL
- (2) NXCI — NX SMART PORT CONTACT INTEFACE MODULE
- (10) NXDS — NX DAYLIGHT SENSOR
- (4) NXHNB2 — NX HUBNET NETWORK BRIDGE MODULE
- (36) NXRCFX2-1RD-UNV — NX ROOM CONTROLLER, FX, 1 RELAY, 0 - 10V DIMMING, POWER MONITORING, UNIVERSAL VOLTAGE
- (15) NXRCFX2-2RD-UNV — NX ROOM CONTROLLER, FX, 2 RELAY, 0 - 10V DIMMING, POWER MONITORING, UNIVERSAL VOLTAGE
- (49) NXSMDT-OMNI — NX SENSOR MODULE, DUAL TECH, 360° LENS, WHITE
- (1) NXSW2-4-WH — NX DIGITAL SMART SWITCH, FOUR BUTTON, MOMENTARY, PILOT
- (18) NXSW2-6-WH — NX DIGITAL SMART SWITCH, SIX BUTTON, MOMENTARY, PILOT
- (12) NXSW2-OD-WH — NX DIGITAL SPECIALTY ON/OFF SWITCH
- (29) NXSW2-ORLD-WH — NX DIGITAL SPECIALTY ON/RAISE/LOWER/OFF SWITCH
- (2) NXWPS — NX WALL PARTITION SENSOR
- (10) RJ45ADAPTER — RJ45 ADAPTER FOR OCCUPANCY AND DAYLIGHT SENSORS

NOTES:

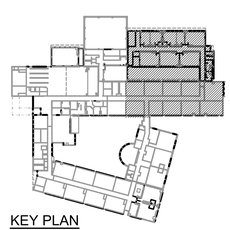
1. All device locations are approximate, refer to manufacturers installation instructions prior to installation.
2. Occupancy sensors utilizing ultrasonic technology must be located a minimum of four to six feet from HVAC supply and return vents.
3. 360 degree Occupancy sensors utilizing ultrasonic technology must be located a minimum of two feet from the wall.
4. Sensors mounted over a door must be placed one foot inside the threshold.
5. All switches are displayed as White. Please refer to your Bill of Material for correct color on each project.
6. By default line voltage wall switch occupancy sensors are selected as Ground leakage devices. If installation requires Neutral connection, please refer to your Bill of Material to for appropriate model number.
7. Contractor is responsible for: proper sensitivity & time delay settings (for non-adaptive products), recommended placement and verification of circuits with respect to power placement.
8. Contractor is responsible for field verification of required number of Power Packs/Smart Packs/Room Controllers:
   - One Power Pack/Room Controller is required for each circuit to be controlled.
   - One Room Controller can handle a total of 30 load points per module (see install instructions).
   - One power pack is required for every four sensors in the zone.
   - If multiple circuits are to be controlled by a sensor, an auxiliary relay can be used in conjunction with the power pack.
   - The maximum number of sensors that can be put on a power pack is to be reduced by one for each slave pack used.
   - Contractor is responsible for ensuring that the bill of materials complies with the intended design, project specifications and local codes.
9. NX Network is a powered network; do not connect NX Network CAT5 cables to standard Ethernet devices. Consult factory if additional network segments are required. Current is not liable for any damage caused.
10. If the distance between the Signal Generating Devices (Area Controller, NX Panel, NXHDI or NXHNB) exceeds 100 meters (328 feet) of cable, a Power over Ethernet Router (not provided by Current) will need to be installed.
11. The placement of the photocells are not the exact placement. They may need to be moved to a more optimum location per the individual room conditions.

SHEET NOTES

1. COORDINATE ALL LIGHTING FIXTURE AND WIRING DEVICE LOCATIONS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. UNLESS SHOWN ON THIS PLAN AS NEW, ALL OTHER LIGHTING AND CONTROLS SHALL BE EXISTING TO REMAIN.
3. ALL CORRIDOR LIGHTING SHALL BE CONTROLLED VIA TIMECLOCK WITH OCCUPANCY SENSOR OVERRIDE. PROVIDE KEY SWITCHES FOR LOCAL CONTROL BY AUTHORIZED PERSONNEL ONLY.

KEY NOTES

1. PROVIDE GENERAL USE SNAP SWITCH.
2. LOWER CASE LETTER DESIGNATES SWITCHING ARRANGEMENT (TYPICAL).
3. PROVIDE CONTROL PANEL FOR EXTERIOR AND CORRIDOR LIGHTING TIMECLOCK CONTROL. FIELD VERIFY EXACT LOCATION.
4. PHOTOCELL FOR EXTERIOR LIGHTING CONTROL.
5. PROVIDE KEY SWITCHES IN CORRIDORS FOR MANUAL OVERRIDE OF CORRIDOR LIGHTING FIXTURES FOR USE BY AUTHORIZED PERSONNEL ONLY. (TYPICAL).



KEY PLAN

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Date
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Pennsylvania: 140 Whitaker Avenue Mont Clare - Pennsylvania 19453

Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	AHG
Drawn By	AMP
Scale	AS NOTED

Drawing Name

ELECTRICAL LIGHTING CONTROLS PLAN - BLOCK B

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number

E5.4

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SHEET NOTES

1. COORDINATE ALL LIGHTING FIXTURE AND WIRING DEVICE LOCATIONS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. UNLESS SHOWN ON THIS PLAN AS NEW, ALL OTHER LIGHTING AND CONTROLS SHALL BE EXISTING TO REMAIN.
3. ALL CORRIDOR LIGHTING SHALL BE CONTROLLED VIA TIMECLOCK WITH OCCUPANCY SENSOR OVERRIDE. PROVIDE KEY SWITCHES FOR LOCAL CONTROL BY AUTHORIZED PERSONNEL ONLY.

KEY NOTES

(1) CIRCUIT AND CONTROL NEW CORRIDOR EXTENSION LIGHTING TO THE EXISTING LIGHTING CIRCUIT AND CONTROLS SERVING THIS AREA.

(2) LOWER CASE LETTER DESIGNATES SWITCHING ARRANGEMENT (TYPICAL).

LIGHTING CONTROLS PLAN - BLOCK C

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

Controls Legend

PDE SWITCH ID (Bridge module example reference.)

- * LV connection line is low voltage 18-22 AWG
- * CAT5 connection line is CAT5 cable for ISP protocol
- * NX Network connection line is powered CAT5 network cable
- * FX Bus connection line is CAT5 cable for FX protocol
- * 120/277VAC connection line is 120/277VAC
- * 1-5 LV connection represents line and low voltage

*Connection line types are for reference only and may not be shown on drawings.

	(1) DLCPCO PHOTOCELL SENSOR, OUTDOOR, WHITE		(49) NXSMDT-OMNI NX SENSOR MODULE, DUAL TECH, 360° LENS, WHITE
	(2) LHRMTS1-G-WH LIGHTHAWK MULTI-TECHNOLOGY (DUAL TECH) OCCUPANCY SENSOR, INTELLISWITCH, SINGLE CIRCUIT, ONE BUTTON, 120/277VAC, 1000 SQ. FT., PHOTOCELL		(1) NXSW2-4-WH NX DIGITAL SMART SWITCH, FOUR BUTTON, MOMENTARY, PILOT
NXPD2	(1) NX PANEL=NXP2-PNL-8-B-LI-S NXP2 SERIES LIGHTING CONTROL PANEL		(18) NXSW2-6-WH NX DIGITAL SMART SWITCH, SIX BUTTON, MOMENTARY, PILOT
	(2) NXCI NX SMART PORT CONTACT INTEFACE MODULE		(12) NXSW2-OO-WH NX DIGITAL SPECIALTY ON/OFF SWITCH
	(10) NXDS NX DAYLIGHT SENSOR		(29) NXSW2-ORLO-WH NX DIGITAL SPECIALTY ON/RAISE/LOWER/OFF SWITCH
	(4) NXHNB2 NX HUBNET NETWORK BRIDGE MODULE		(2) NXWPS NX WALL PARTITION SENSOR
1RD	(36) NXRCFX2-1RD-UNV NX ROOM CONTROLLER, FX, 1 RELAY, 0 - 10V DIMMING, POWER MONITORING, UNIVERSAL VOLTAGE		(10) RJ45ADAPTER RJ45 ADAPTER FOR OCCUPANCY AND DAYLIGHT SENSORS
2RD	(15) NXRCFX2-2RD-UNV NX ROOM CONTROLLER, FX, 2 RELAY, 0 - 10V DIMMING, POWER MONITORING, UNIVERSAL VOLTAGE		

NOTES:

1. All device locations are approximate, refer to manufacturers installation instructions prior to installation.
2. Occupancy sensors utilizing ultrasonic technology must be located a minimum of four to six feet from HVAC supply and return vents.
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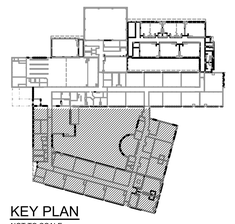
   - Contractor is responsible for ensuring that the bill of materials complies with the intended design, project specifications and local codes.
9. NX Network is a powered network; do not connect NX Network CAT5 cables to standard Ethernet devices. Consult factory if additional network segments are required. Current is not liable for any damage caused.
10. If the distance between the Signal Generating Devices (Area Controller, NX Panel, NXHDI or NXHNB) exceeds 100 meters (328 feet) of cable, a Power over Ethernet Router (not provided by Current) will need to be installed.
11. The placement of the photocells are not the exact placement. They may need to be moved to a more optimum location per the individual room conditions.



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F V H D P C . C O M

Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
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Project Number
5516D

Project Date
10.10.2025

Checked By
AHG

Drawn By
AMP

Scale
AS NOTED

Drawing Name
ELECTRICAL LIGHTING CONTROLS PLAN - BLOCK C

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number
E5.5

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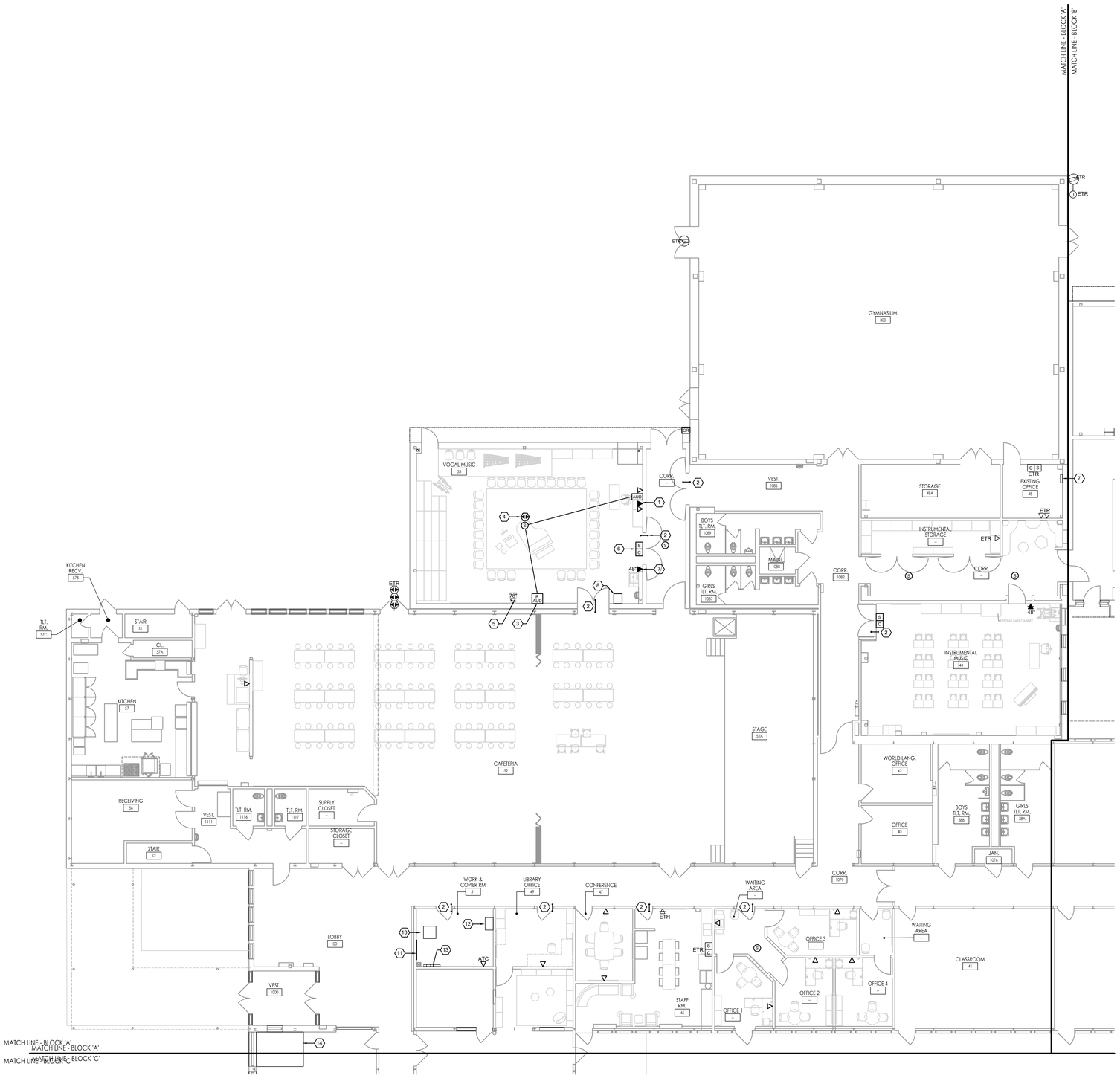
SHEET NOTES

1. COORDINATE ALL WIRING DEVICE LOCATIONS AND MOUNTING HEIGHTS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. REFER TO SYMBOL LIST ON DRAWING E1.0 FOR ADDITIONAL INFORMATION.
3. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR ADDITIONAL INFORMATION.
4. ALL DEVICES LABELED "ETR" ARE EXISTING TO REMAIN.

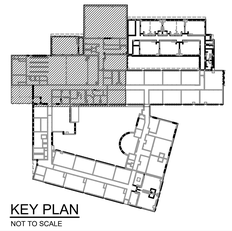
KEY NOTES

1. DATA, TELEPHONE AND HDMI JUNCTION BOXS AT TEACHER'S AV CABINET LOCATION. REFER TO SYMBOL LIST.
2. 2" CONDUIT SLEEVE(S) INTO ROOM. PROVIDE QUANTITY AS SHOWN (TYPICAL).
3. LOCAL AUDIO SYSTEM WITH HDMI CABLES TO CEILING TEACHING SPEAKER, REMOTE MICROPHONE WITH VOLUME CONTROL AND SOURCE SETTING, AND SHORT THROW PROJECT.
4. CEILING MOUNTED WIRELESS ACCESS (WIFI) ROUTER LOCATION.
5. DATA OUTLET FOR SHORT THROW PROJECTOR MOUNTED 78" AFF (TYPICAL).
6. CLOCK/SPEAKER LOCATION. REFER TO SYMBOL LIST (TYPICAL).
7. TELEPHONE MOUNTED AT 48" AFF (TYPICAL).
8. AUDIO SYSTEM RACK LOCATION.
9. EXISTING GYMNASIUM BOGEN SOUND SYSTEM TO REMAIN.
10. EXISTING MDF RACK LOCATION.
11. EXISTING PLYWOOD BACKBOARD WITH BOGEN SOUND SYSTEM EQUIPMENT AND PUNCHDOWN BLOCKS LOCATION.
12. EXISTING PLYWOOD BACKBOARD WITH PATCH PANEL AND PUNCHDOWN BLOCKS.
13. EXISTING SECURITY SYSTEM EQUIPMENT TO REMAIN.
14. EXISTING SECURITY OFFICE LOCATION.



LOW VOLTAGE PLAN - BLOCK A

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



KEY PLAN

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Architect

Date 10.10.25

FVHD Fellows Valeisz Hopkins Duthie P.C.

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Mont Clare - Pennsylvania 19453

F V H D P C . C O M

Project Name

Addition and Renovations to Littlebrook Elementary School

Project Owner Name

Princeton Public Schools

Project Location

39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	AHG
Drawn By	AMP
Scale	AS NOTED

Drawing Name

ELECTRICAL LOW VOLTAGE PLAN - BLOCK A

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number

E6.0

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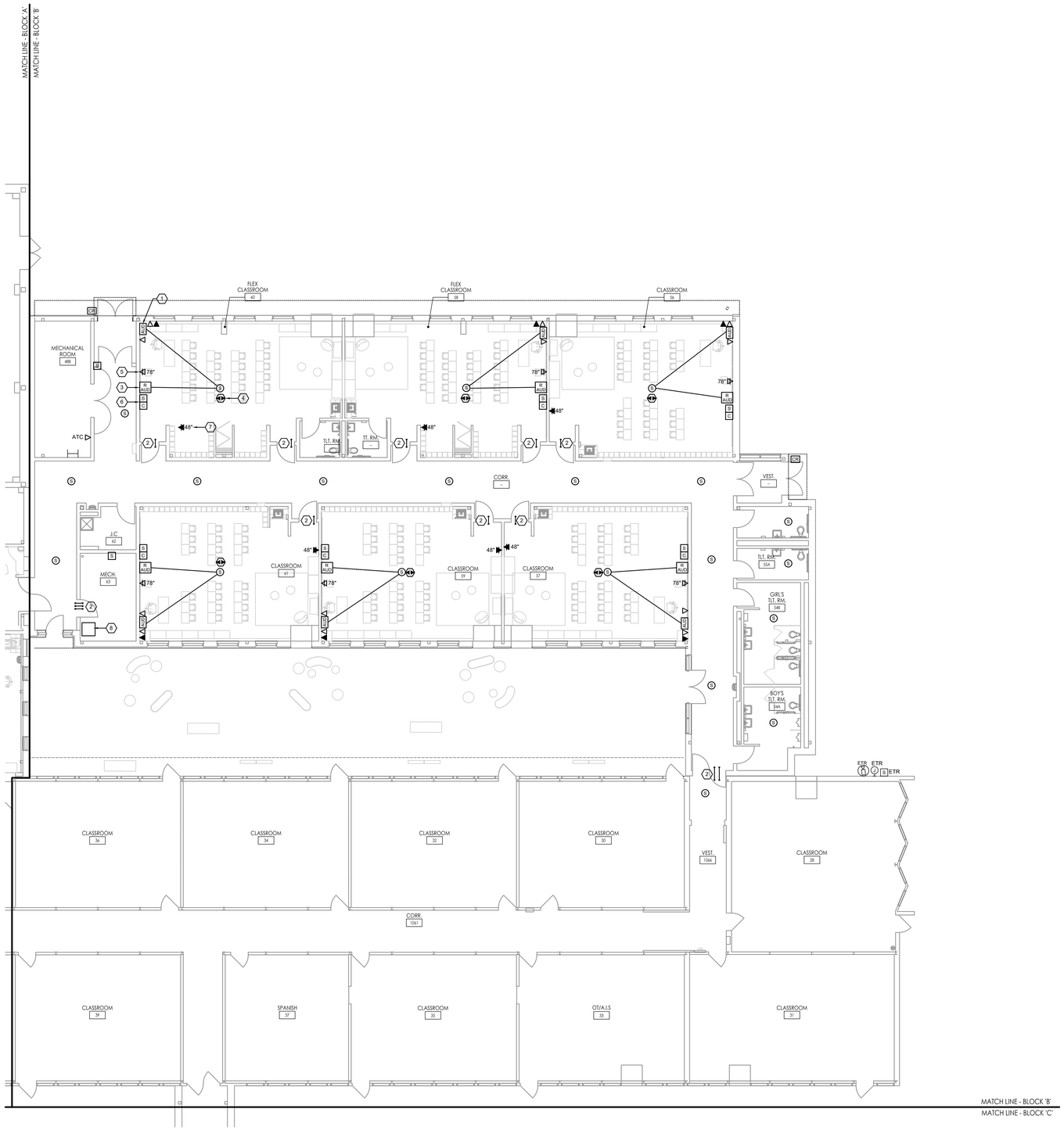


LOW VOLTAGE PLAN - BLOCK B

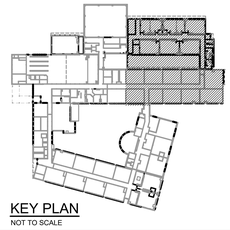
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. COORDINATE ALL WIRING DEVICE LOCATIONS AND MOUNTING HEIGHTS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. REFER TO SYMBOL LIST ON DRAWING E1.0 FOR ADDITIONAL INFORMATION.
3. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR ADDITIONAL INFORMATION.
4. ALL DEVICES LABELED "ETR" ARE EXISTING TO REMAIN.

KEY NOTES

1. DATA, TELEPHONE AND HDMI JUNCTION BOXS AT TEACHER'S AV CABINET LOCATION. REFER TO SYMBOL LIST.
2. 2" CONDUIT SLEEVE(S) INTO ROOM. PROVIDE QUANTITY AS SHOWN (TYPICAL).
3. LOCAL AUDIO SYSTEM WITH HDMI CABLES TO CEILING TEACHING SPEAKER, REMOTE MICROPHONE WITH VOLUME CONTROL AND SOURCE SETTING, AND SHORT THROW PROJECT.
4. CEILING MOUNTED WIRELESS ACCESS (WIFI) ROUTER LOCATION.
5. DATA OUTLET FOR SHORT THROW PROJECTOR MOUNTED 78" AFF (TYPICAL).
6. CLOCK/SPEAKER LOCATION. REFER TO SYMBOL LIST (TYPICAL).
7. TELEPHONE MOUNTED AT 48" AFF (TYPICAL).
8. IDF RACK LOCATION. RACK FURNISHED BY OTHERS.



KEY PLAN

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Date
Architect

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F V H D P C . C O M

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Project Number
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Project Date
10.10.2025

Checked By
AHG

Drawn By
AMP

Scale
AS NOTED

Drawing Name
ELECTRICAL LOW VOLTAGE PLAN - BLOCK B

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number
E6.1

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LOW VOLTAGE PLAN - BLOCK C

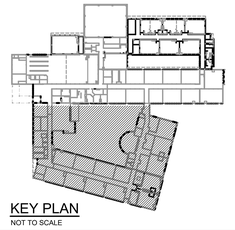
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. COORDINATE ALL WIRING DEVICE LOCATIONS AND MOUNTING HEIGHTS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. REFER TO SYMBOL LIST ON DRAWING E1.0 FOR ADDITIONAL INFORMATION.
3. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR ADDITIONAL INFORMATION.
4. ALL DEVICES LABELED "ETR" ARE EXISTING TO REMAIN.

KEY NOTES

1. DATA, TELEPHONE AND HDMI JUNCTION BOXS AT TEACHER'S AV CABINET LOCATION. REFER TO SYMBOL LIST.
2. 2" CONDUIT SLEEVE(S) INTO ROOM. PROVIDE QUANTITY AS SHOWN (TYPICAL).
3. LOCAL AUDIO SYSTEM WITH HDMI CABLES TO CEILING TEACHING SPEAKER, REMOTE MICROPHONE WITH VOLUME CONTROL AND SOURCE SETTING, AND SHORT THROW PROJECT.
4. CEILING MOUNTED WIRELESS ACCESS (WIFI) ROUTER LOCATION.
5. DATA OUTLET FOR SHORT THROW PROJECTOR MOUNTED 78" AFF (TYPICAL).
6. CLOCK/SPEAKER LOCATION. REFER TO SYMBOL LIST (TYPICAL).
7. TELEPHONE MOUNTED AT 48" AFF (TYPICAL).
8. EXISTING SECURITY OFFICE LOCATION.



KEY PLAN

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Architect
Date 10.10.25

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Pennsylvania: 140 Whitaker Avenue, Mont Clare - Pennsylvania 19453
F V H D P C . C O M

Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number
5516D

Project Date
10.10.2025

Checked By
AHG

Drawn By
AMP

Scale
AS NOTED

Drawing Name
ELECTRICAL LOW VOLTAGE PLAN - BLOCK C

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

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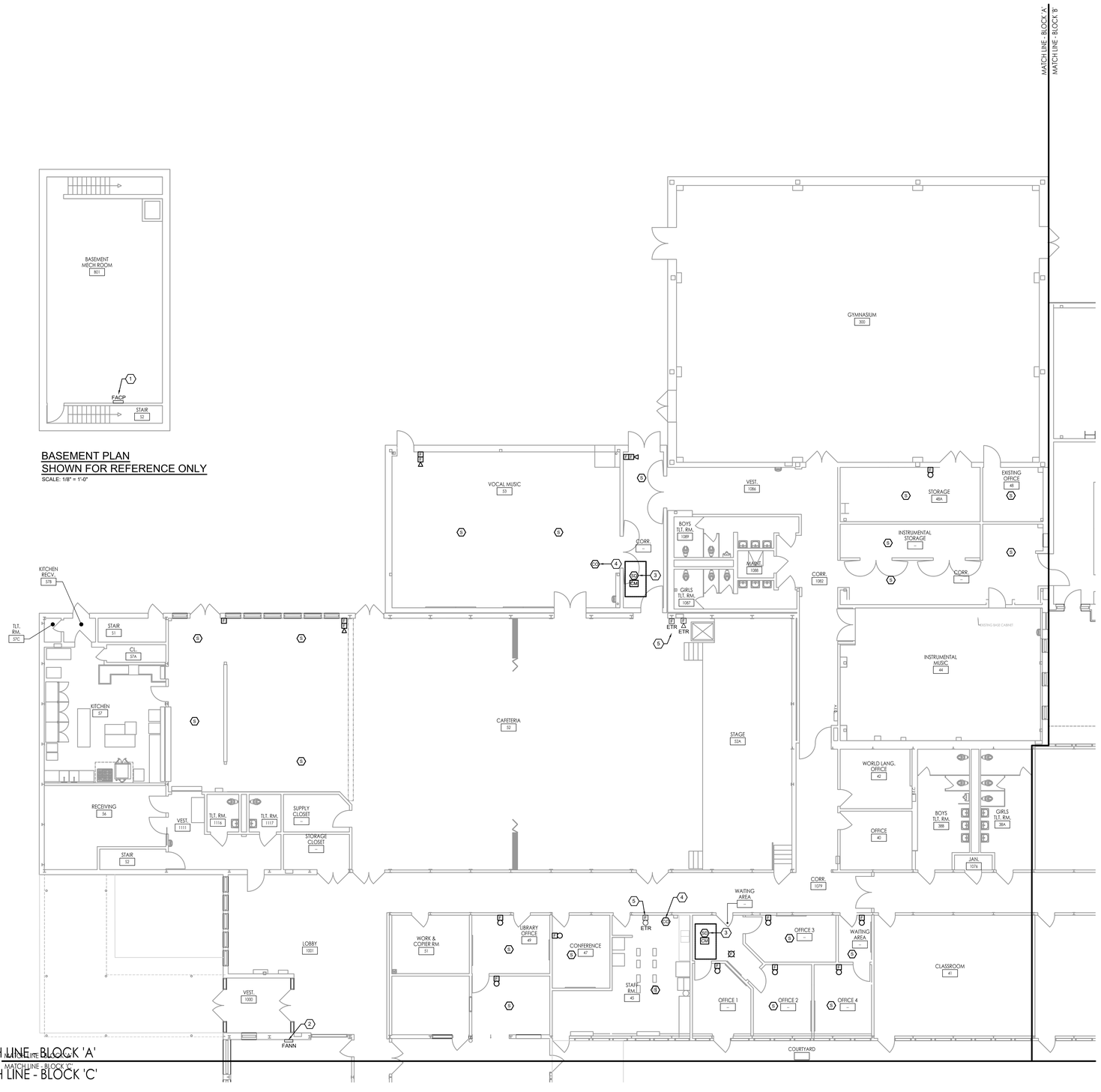
Drawing Number
E6.2

BASEMENT PLAN
SHOWN FOR REFERENCE ONLY
SCALE: 1/8" = 1'-0"



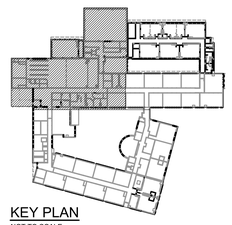
FIRE ALARM PLAN - BLOCK A
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. UNLESS SHOWN AS DEMOLITION ON DEMOLITION PLANS, OR AS NEW ON THIS SHEET, EXISTING FIRE ALARM DEVICES SHALL BE EXISTING TO REMAIN.
2. REFER TO FIRE ALARM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
3. ALL GYMNASIUM AND PLAYGROUND DEVICES SHALL BE PROTECTED WITH A WIREGUARD.
4. ALL EXTERIOR DEVICES SHALL BE WEATHERPROOF.

KEY NOTES

1. EXISTING EDWARDS EST3 FIRE ALARM CONTROL PANEL LOCATED IN BASEMENT MECHANICAL ROOM.
2. EXISTING MAIN OFFICE FIRE ALARM ANNUNCIATOR.
3. DUCT SMOKE DETECTOR AND CONTROL MODULE FOR ROOFTOP UNIT. FIELD COORDINATE EXACT LOCATION WITH THE MECHANICAL CONTRACTOR.
4. CO DETECTOR TO BE LOCATED AT FIRST SUPPLY REGISTER AREA FROM ROOFTOP UNIT.
5. EXISTING FIRE ALARM DEVICES IN RENOVATION AREA TO REMAIN.



KEY PLAN
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Architect
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F V H D P C . C O M

Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
Project Date	10.10.2025
Checked By	AHG
Drawn By	AMP
Scale	AS NOTED

Drawing Name
ELECTRICAL FIRE ALARM PLAN - BLOCK A

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number
E7.0

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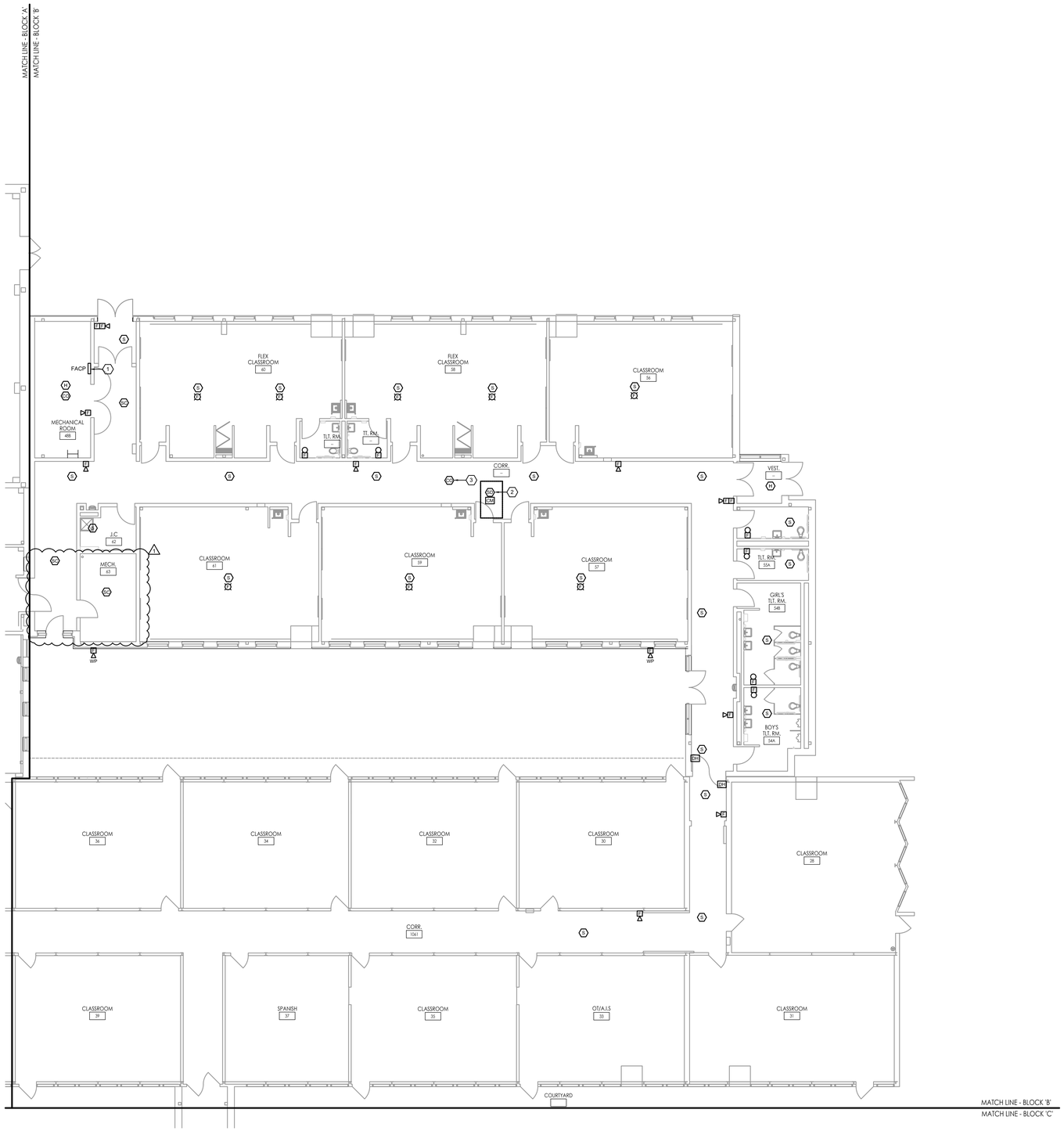


FIRE ALARM PLAN - BLOCK B

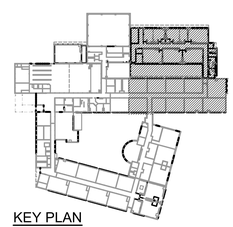
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. UNLESS SHOWN AS DEMOLITION ON DEMOLITION PLANS, OR AS NEW ON THIS SHEET, EXISTING FIRE ALARM DEVICES SHALL BE EXISTING TO REMAIN.
2. REFER TO FIRE ALARM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
3. ALL GYMNASIUM AND PLAYGROUND DEVICES SHALL BE PROTECTED WITH A WIREGUARD.
4. ALL EXTERIOR DEVICES SHALL BE WEATHERPROOF.

KEY NOTES

1. NEW FIRE ALARM EXPANDER PANEL FOR NEW ADDITION.
2. DUCT SMOKE DETECTOR AND CONTROL MODULE FOR ROOFTOP UNIT. FIELD COORDINATE EXACT LOCATION WITH THE MECHANICAL CONTRACTOR.
3. CO DETECTOR TO BE LOCATED AT FIRST SUPPLY REGISTER AREA FROM ROOFTOP UNIT.



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Date
Architect

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Pennsylvania: 140 Whitaker Avenue, Mont Clare - Pennsylvania 19453
F V H D P C . C O M

Project Name

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Project Date	10.10.2025
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Drawn By	AMP
Scale	AS NOTED

Drawing Name

ELECTRICAL FIRE ALARM PLAN - BLOCK B

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION
1	11.21.25	NJ DCA RESPONSES

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Drawing Number

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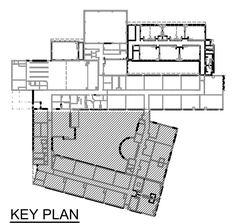
FIRE ALARM PLAN - BLOCK C

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

SHEET NOTES

1. UNLESS SHOWN AS DEMOLITION ON DEMOLITION PLANS, OR AS NEW ON THIS SHEET, EXISTING FIRE ALARM DEVICES SHALL BE EXISTING TO REMAIN.
2. REFER TO FIRE ALARM RISER DIAGRAM FOR ADDITIONAL INFORMATION.
3. ALL GYMNASIUM AND PLAYGROUND DEVICES SHALL BE PROTECTED WITH A WIREGUARD.
4. ALL EXTERIOR DEVICES SHALL BE WEATHERPROOF.



KEY PLAN
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Architect
Date 10/10/25

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F V H D P C . C O M

Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number	5516D
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Checked By	AHG
Drawn By	AMP
Scale	AS NOTED

Drawing Name
ELECTRICAL FIRE ALARM PLAN - BLOCK C

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

Drawing Number
E7.2

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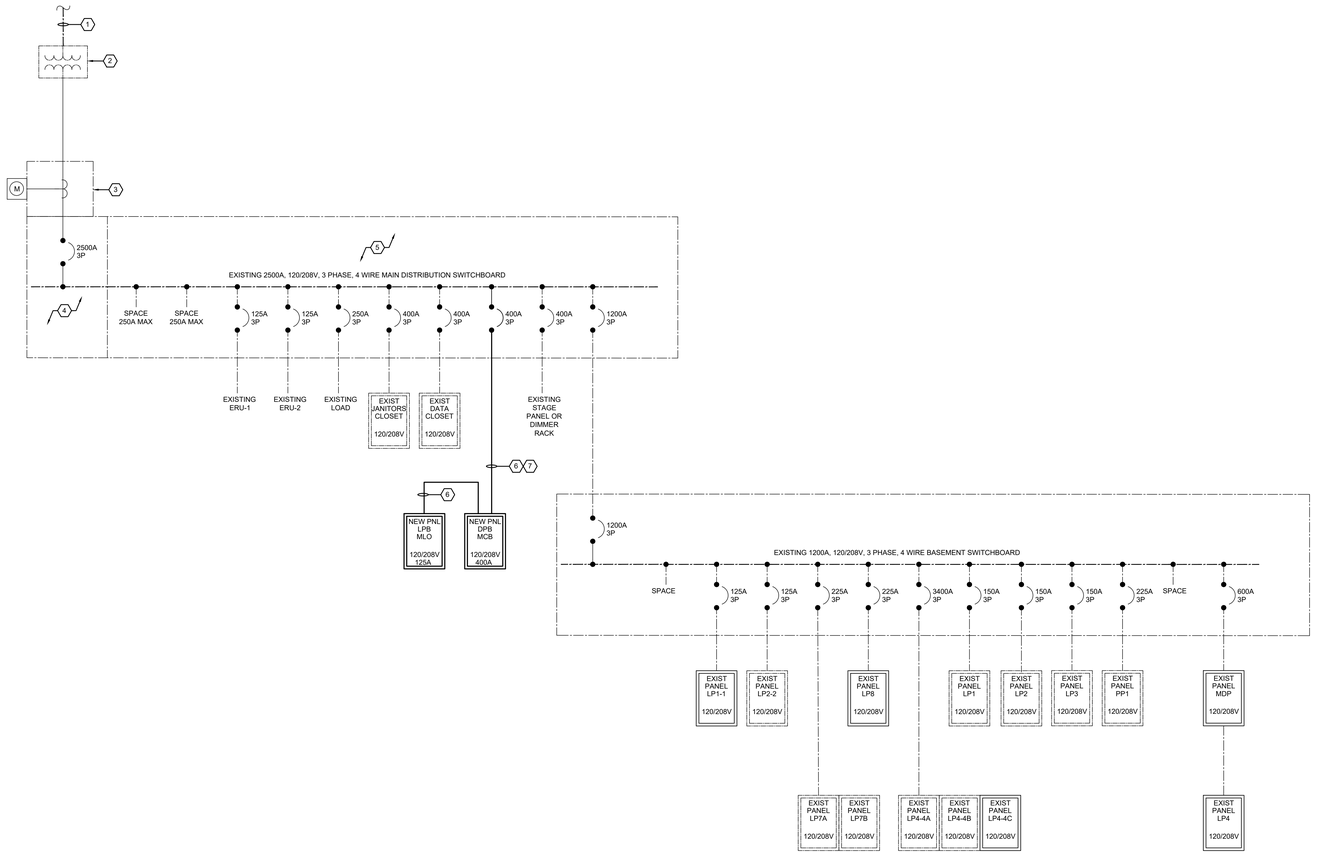

LINETYPE LEGEND	
— · — · — · —	EXISTING
————	EXISTING (MODIFIED)
————	NEW

EXISTING PARTIAL ONE LINE DIAGRAM

NOT TO SCALE

SHEET NOTES

1. THE CONTRACTOR SHALL COORDINATE ANY REQUIRED ELECTRIC SERVICE OR AREA POWER SHUTDOWNS WITH THE OWNER AT LEAST SEVEN (7) DAYS PRIOR TO THE SHUTDOWN. ALL SHUTDOWN WORK SHALL BE PERFORMED ON WEEKENDS.
2. UNLESS NOTED OTHERWISE OR SHOWN AS NEW, ALL PANELS, CIRCUIT BREAKERS, WIRING AND CONDUIT SHALL BE EXISTING TO REMAIN.
3. THE CONTRACTOR SHALL CONFIRM EXISTING CIRCUIT ARRANGMENT WHERE INDICATED TO FIELD VERIFY AND UPDATE PANEL DIRECTORIES AND NAMEPLATE AS REQUIRED. REFER TO PANEL SCHEDULES.

ONE LINE DIAGRAM KEY NOTES

1. EXISTING UNDERGROUND PRIMARY SERVICE.
2. EXISTING UTILITY COMPANY TRANSFORMER.
3. EXISTING C/T SECTION AND SWITCHBOARD MOUNTED METER.
4. EXISTING MAIN SERVICE DISCONNECT SWITCH.
5. EXISTING DISTRIBUTION SECTION.
6. SEE PANEL SCHEDULES.
7. CONDUITS TO BE ROUTED ALONG ROOF. REFER TO DRAWING E4.3.

NJDCA Electronic Release Stamp

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NJ - 21AE00351100 | PA - RA414583
Architect
Date 10.10.25

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10.10.2025

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AHG

Drawn By
AMP

Scale
AS NOTED

Drawing Name
ELECTRICAL ONE LINE DIAGRAM

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

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Drawing Number
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EXISTING OUTDOOR MDS

JOB NAME: LITTLEBROOK ES — JOB NO.: 23463.004
RATING: 208/120V, 3 PH, 4W, 2500A — (EXISTING) — LOCATION: EXTERIOR AT GRADE

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR.	CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR.	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
	EXISTING MAIN DISCONNECT SWITCH	3	50.6 50.6 50.6	2500	HIGHEST PEAK DEMAND KW	50.6	50.6	50.6						
1	250A MAX.SPACE	3			#N/A	0.0	0.0	0.0	#N/A			3	250A MAX.SPACE	2
3	EXISTING ERU-1	3		125	EXISTING	0.0	0.0	0.0						
4	EXISTING ERU-2	3		125	EXISTING	0.0	0.0	0.0						
5	EXISTING LOAD	3		250	EXISTING	0.0	0.0	0.0						
6	EXISTING PANEL (JANITOR'S CLOSET)	3		400	EXISTING	0.0	0.0	0.0						
7	EXISTING PANEL (DATA CLOSET)	3		400	EXISTING	0.0	0.0	0.0						
1 8	**NEW ADDITION PANEL DPB**	**3**	**34.8** **34.3** **34.4**	**400**	**48600 MCM & 1#3DEG IN 4"C**	34.8	34.3	34.4						
9	EXISTING STAGE PANEL / DIMMER	3		400	EXISTING	0.0	0.0	0.0						
10	EXISTING BASEMENT MDS	3	16.5 15.8 20.6	1200	EXISTING	16.5	15.8	20.6						
	PANEL TYPE: NEMA 3R MOUNTING: SURFACE MAIN CIRCUIT BREAKER: 2500A INTERRUPTING RATING: 65KA SYM. FED FROM: UTILITY CO. TRANSFORMER				TOTAL (PHASE)	101.9	100.7	105.5						

TOTAL CONNECTED LOAD: 308.1 KVA
856.2 AMPS

NOTES
1. EXISTING EATON POW-R-LINE PRL-C NEMA 3R SWITCHBOARD TO REMAIN. PSE&G METER #000009221609A.
2. ALL NEW CIRCUIT BREAKERS SHALL MATCH THE PANEL MANUFACTURER AND EXISTING SHORT CIRCUIT RATING.
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. CONTRACTOR SHALL FIELD VERIFY ALL PANEL SPARES AND SPACES

EXISTING BASEMENT MDS (3)

JOB NAME: LITTLEBROOK ES — JOB NO.: 23463.004
RATING: 208/120V, 3 PH, 4W, 1200A — (EXISTING) — LOCATION: BASEMENT

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR.	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR.	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
	EXISTING MAIN DISCONNECT SWITCH	3		1200		0.0	0.0	0.0						
1	SPACE	3			#N/A	0.0	0.0	0.0						
2	EXISTING PANEL LP1-1	3	3.6 6.0 4.2	125	EXISTING	3.6	6.0	4.2						
3	EXISTING PANEL LP2-2	3		125	EXISTING	0.0	0.0	0.0						
4	EXISTING PANEL LP7	3	0.0 0.0 0.0	225	EXISTING	0.0	0.0	0.0						
5	EXISTING PANEL LP8	3	9.6 8.7 8.7	225	EXISTING	9.6	8.7	8.7						
6	PANEL LP4-4	3	2.5 0.0 6.6	300	EXISTING	2.5	0.0	6.6						
7	EXISTING PANEL LP1 (VERIFY)	3		150	EXISTING	0.0	0.0	0.0						
8	EXISTING PANEL LP2 (VERIFY)	3		150	EXISTING	0.0	0.0	0.0						
9	EXISTING PANEL LP3 (VERIFY)	3		150	EXISTING	0.0	0.0	0.0						
10	EXISTING PANEL PP1	3		225	EXISTING	0.0	0.0	0.0						
11	SPACE	3			#N/A	0.0	0.0	0.0						
12	EXISTING LOAD (PANEL MDP) CONFIRM IN FIELD	3	0.8 1.1 1.2	600	EXISTING	0.8	1.1	1.2						
	PANEL TYPE: NEMA 1 MOUNTING: SURFACE MAIN CIRCUIT BREAKER: 1200A INTERRUPTING RATING: 65KA SYM. FED FROM: EXISTING OUTDOOR MDS				TOTAL (PHASE)	16.5	15.8	20.6						

NOTES
1. EXISTING CUTLER-HAMMER TYPE ES SWITCHBOARD TO REMAIN
2. ALL NEW CIRCUIT BREAKERS SHALL MATCH THE PANEL MANUFACTURER AND EXISTING SHORT CIRCUIT RATING.
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. CONTRACTOR SHALL FIELD VERIFY ALL PANEL SPARES AND SPACES

EXISTING PANEL MDP (3)

JOB NAME: LITTLEBROOK ES — JOB NO.: 23463.004
RATING: 208/120V, 3 PH, 4W, 600A — (EXISTING) — LOCATION: BASEMENT

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR.	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR.	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
1	EXISTING PANEL LP1	3		125	EXISTING	0.0	0.0	0.0	EXISTING	125	0.0 0.0 0.0	3	EXISTING STAGE PANEL SP	2
3	EXISTING SPARE	3		125		0.0	0.0	0.0	#N/A			3	125A MAX.SPACE	4
5	EXISTING PANEL LP4	3	0.8 1.1 1.2	100	EXISTING	0.8	1.1	1.2	EXISTING	100		3	EXISTING SPARE	6
7	EXISTING PANEL LP2	3		100	EXISTING	0.0	0.0	0.0	EXISTING	100		3	EXISTING PANEL LP5	8
9	EXISTING PANEL LP3	3		50	EXISTING	0.0	0.0	0.0	EXISTING	100	0.0 0.0 0.0	3	EXISTING KITCHEN PANEL KP	10
11	EXISTING PANEL LPD	3		70	EXISTING	0.0	0.0	0.0	#N/A			3	125A MAX.SPACE	12
	PANEL TYPE: NEMA 1 MOUNTING: SURFACE MAIN LUGS ONLY INTERRUPTING RAING: EXISTING KA SYM. FED FROM: EXISTING SWITCHBOARD VIA 600A DISCONNECT SWITCH				TOTAL (PHASE)	0.8	1.1	1.2						

NOTES
1. EXISTING SIEMENS TYPE P4 PANELBOARD TO REMAIN
2. ALL NEW CIRCUIT BREAKERS SHALL MATCH THE PANEL MANUFACTURER AND EXISTING SHORT CIRCUIT RATING.
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. CONTRACTOR SHALL FIELD VERIFY ALL PANEL SPARES AND SPACES. PROVIDE UPDATED PANELBOARD DIRECTORY.

EXISTING PANEL LP1-1

JOB NAME: LITTLEBROOK ES — JOB NO.: 23463.004
RATING: 208/120V, 3 PH, 4W, 225A — (EXISTING) — LOCATION: COORIDOR 1042

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR.	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR.	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
1	EXISTING WIREMOLD	1		20	EXISTING	0.0							EXISTING - ROOM 14 AC	2
3	EXISTING WIREMOLD	1		20	EXISTING		0.0		EXISTING	30		2	RECEPTACLE	4
5	EXISTING WIREMOLD	1		20	EXISTING			0.0	EXISTING	20		1	EXISTING LOAD	6
7	EXISTING WIREMOLD	1		20	EXISTING	0.0			EXISTING	20		1	EXISTING LOAD	8
9	EXISTING WIREMOLD	1		20	EXISTING		0.0		EXISTING	20		1	EXISTING RM 21 WINDOW AC	10
11	EXISTING WIREMOLD	1		20	EXISTING			0.0		20		1	SPARE	12
13	EXISTING WIREMOLD	1		20	EXISTING	0.0				40		1	SPARE	14
15	EXISTING WIREMOLD	1		20	EXISTING		0.0			40		1	SPARE	16
17	EXISTING WIREMOLD	1		20	EXISTING			0.0		20		1	SPARE	18
19	EXISTING WIREMOLD	1		20	EXISTING	0.0				20		1	SPARE	20
21	EXISTING WIREMOLD	1		20	EXISTING		0.0			20		1	SPARE	22
23	EXISTING WIREMOLD	1		20	EXISTING			0.0					EXISTING - ROOM 15 AC	24
25	**NEW EXHAUST FAN EF-5**	**1**	**0.3**	**20**	**2#12 & 1#12EG IN 3/4"C**	0.3			EXISTING	20		2	RECEPTACLE	26
27	**NEW MOD & CP-FCU**	**1**	**0.1**	**20**	**2#12 & 1#12EG IN 3/4"C**		2.5		**3#8 & 1#10EG IN 1"C**	**40**	**2.5**	**2**	**NEW FCU-1 & HP-1**	28
29	**AV CABINET QUAD**	**1**	**0.4**	**20**	**2#12 & 1#12EG IN 3/4"C**			2.9			**2.5**			30
31	**AV CABINET QUAD**	**1**	**0.4**	**20**	**2#12 & 1#12EG IN 3/4"C**	2.5			**3#10 & 1#10EG IN 3/4"C**	**30**	**2.2**	**2**	**NEW UNIT VENT UV-B1**	32
33	**PROJECTOR RECEPTACLES**	**1**	**0.5**	**20**	**2#12 & 1#12EG IN 3/4"C**		2.8				**2.2**			34
35	**AV CABINET QUAD**	**1**	**0.4**	**20**	**2#12 & 1#12EG IN 3/4"C**			1.3	**2#12 & 1#12EG IN 3/4"C**	**20**	**1.0**	**1**	**MOTORIZED SHADES**	36
37	**AV CABINET QUAD**	**1**	**0.4**	**20**	**2#12 & 1#12EG IN 3/4"C**	0.7			**2#12 & 1#12EG IN 3/4"C**	**20**	**0.4**	**1**	**MOTORIZED SHADES**	38
39	**PROJECTOR RECEPTACLES**	**1**	**0.6**	**20**	**2#12 & 1#12EG IN 3/4"C**		0.6		#N/A			1	SPACE	40
41	SPACE	1			#N/A			0.0	#N/A			1	SPACE	42
	PANEL TYPE: NEMA 1 MOUNTING: FLUSH MAIN LUGS ONLY INTERRUPTING RATING: EXISTING KA SYM. FED FROM: EXISTING BASEMENT MDS				TOTAL (PHASE)	3.5	6.0	4.2						

NOTES
1. EXISTING SQUARE D NQOD. SERIES E2 PANEL TO REMAIN
2. ALL NEW CIRCUIT BREAKERS SHALL MATCH THE PANEL MANUFACTURER AND EXISTING SHORT CIRCUIT RATING.
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. EXISTING BREAKER TAGGED "NOT SAFED OFF". CONTRACTOR SHALL INVESTIGATE CIRCUIT AND MAKE SAFE ANY EXISTING JUNCTION POINTS PER NEC.
6. CONTRACTOR SHALL FIELD VERIFY ALL PANEL SPARES AND SPACES. PROVIDE UPDATED PANELBOARD DIRECTORY.

EXISTING PANEL LP4

JOB NAME: LITTLEBROOK ES — JOB NO.: 23463.004
RATING: 208/120V, 3 PH, 4W, 100A — (EXISTING) — LOCATION: CORRIDOR 1079

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR.	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR.	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
1	EXISTING TRAY POWER FEED	2		20	EXISTING	0.0			EXISTING	20		1	EXISTING WIREMOLD	2
3	EXISTING RECEPTACLES	1		20	EXISTING		0.0		EXISTING	20		1	EXISTING WIREMOLD	4
2 7	**NEW VAV BOXES**	**1**	**0.2**	**15**	**2#12 & 1#12EG IN 3/4"C**	0.2			EXISTING	20		1	EXISTING STAGE QUAD RECEPT	6
9	**NEW ATC PANEL**	**1**	**0.5**	**15**	**2#12 & 1#12EG IN 3/4"C**		0.5		EXISTING	20		1	EXISTING RECEPTACLES	8
11	EXISING OVEN (TEACHERS LOUNGE)	1		20	EXISTING			1.2	**2#12 & 1#12EG IN 3/4"C**	**20**	**1.2**	**1**	**NEW OFFICE COPIER**	10
13	EXISTING RECEPTACLES	1		20	EXISTING	0.0			EXISTING	20		1	EXISTING TRAY POWER FEED	12
15	EXISTING OUTSIDE GFI RECEPT	1		20	EXISTING		0.0		EXISTING	15		1	EXISTING CU/H-6	14
17	EXISTING RECEPTACLES	1		20	EXISTING			0.0	EXISTING	20		1	EXISTING LTG & EP	16
19	EXISTING RECEPTACLES	1		20	EXISTING	0.0			EXISTING	20		1	EXISTING LIGHTING	18
21					EXISTING		0.0		EXISTING	20		1	EXISTING EMLIGHTING	20
23	EXISTING LIBRARY AC UNIT	2		30	EXISTING			0.0	EXISTING	20		1	EXISTING TRAY POWER FEED	22
25	EXISTING LIBRARY AC UNIT	C		30	EXISTING	0.0			EXISTING	20		1	EXISTING TRAY POWER FEED	24
27					EXISTING		0.0		EXISTING	15		1	EXISTING BOOKSHELF	26
29	EXISTING LIGHTING	1		20	EXISTING			0.0	EXISTING	20		1	EXISTING CLOSET LIGHTING	28
31		**2**	**0.6**	**15**	**1#JMP P-1**	0.6			EXISTING	15		1	EXISTING HALLWAY LTG	30
2 33			**0.6**		**3#12 & 1#12EG IN 3/4"C**		0.6		EXISTING	15		1	SPARE (VERIFY)	32
35	EXISTING RECEPTACLES	1		20	EXISTING			0.0	EXISTING	15		1	EXISTING HALLWAY LTG	34
37	EXISTING RECEPTACLES	1		20	EXISTING	0.0			EXISTING	15		1	EXISTING HALLWAY LTG	36
39	EXISTING TOILET SENSORS	1		20	EXISTING		0.0		EXISTING	15		1	EXISTING HALLWAY LTG	38
41	EXISTING HALLWAY EM LTG	1		20	EXISTING			0.0	EXISTING	20		1	EXISTING TRAY POWER FEED	42
	PANEL TYPE: NEMA 1 MOUNTING: SURFACE MAIN LUGS ONLY INTERRUPTING RATING: EXISTING KA SYM. FED FROM: EXISTING PANEL MDP				TOTAL (PHASE)	0.8	1.1	1.2						

NOTES
1. EXISTING SQUARE D NQOD, SERIES E2 PANEL TO REMAIN
2. ALL NEW CIRCUIT BREAKERS SHALL MATCH THE PANEL MANUFACTURER AND EXISTING SHORT CIRCUIT RATING.
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. CONTRACTOR SHALL FIELD VERIFY ALL PANEL SPARES AND SPACES. PROVIDE UPDATED PANELBOARD DIRECTORY.

EXISTING PANEL LP4-4C

JOB NAME: LITTLEBROOK ES — JOB NO.: 23463.004
RATING: 208/120V, 3 PH, 4W, 400A — (EXISTING) — LOCATION: ELEC ROOM #50

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR.	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR.	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
73						2.5			**3#10 & 1#10EG IN 3/4"C**	**30**	**2.5**	**2**	**NEW ELECTRIC UNIT HEATER EUH-1**	74
75	EXISTING EMI PE OFFICE	2		15	EXISTING		2.5				**2.5**			76
77	SPACE	1			#N/A			6.6	**3#4 & 1#8EG IN 1 1/4"C**	**80**	**6.6**	**2**	**NEW ELECTRIC WATER HEATER WH-2**	78
79	SPACE	1			#N/A	6.6								80
81	SPACE	1			#N/A		0.0		**2#12 & 1#12EG IN 3/4"C**	20		1	**FUTURE RADON VENT FAN(S)**	82
83	SPACE	1			#N/A			0.0	#N/A			1	SPACE	84
85	SPACE	1			#N/A	0.0			#N/A			1	SPACE	86
87	SPACE	1			#N/A		0.0		#N/A			1	SPACE	88
89	SPACE	1			#N/A			0.0	#N/A			1	SPACE	90
91	SPACE	1			#N/A	0.0			#N/A			1	SPACE	92
93	SPACE	1			#N/A		0.0		#N/A			1	SPACE	94
95	SPACE	1			#N/A			0.0	#N/A			1	SPACE	96
	PANEL TYPE: NEMA 1 MOUNTING: SURFACE MAIN LUGS ONLY INTERRUPTING RATING: EXISTING KA SYM. FED FROM: EXISTING BASEMENT MDS				TOTAL (PHASE)	9.1	2.5	6.6						

NOTES
1. EXISTING SQUARE D NQOD, SERIES E1 PANEL TO REMAIN
2. ALL NEW CIRCUIT BREAKERS SHALL MATCH THE PANEL MANUFACTURER AND EXISTING SHORT CIRCUIT RATING.
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. CONTRACTOR SHALL FIELD VERIFY ALL PANEL SPARES AND SPACES. PROVIDE UPDATED PANELBOARD DIRECTORY.

EXISTING PANEL LP8

JOB NAME: LITTLEBROOK ES — JOB NO.: 23463.004
RATING: 208/120V, 3 PH, 4W, 225A — (EXISTING) — LOCATION: SUPPLY CLOSET 52B

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR.	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR.	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
1	EXISTING LOAD	1		20	EXISTING	0.0			EXISTING	20		1	EXISTING LOAD	2
3	EXISTING LOAD	1		20	EXISTING		0.0		EXISTING	20		1	EXISTING LOAD	4
5	EXISTING LOAD	1		20	EXISTING			0.0	EXISTING	20		1	EXISTING LOAD	6
7	EXISTING LOAD	1		20	EXISTING	0.0			EXISTING	20		1	EXISTING LOAD	8
9	EXISTING LOAD	1		20	EXISTING		0.0		EXISTING	20		1	EXISTING LOAD	10
11	EXISTING LOAD	1		20	EXISTING			0.0	EXISTING	20		1	EXISTING LOAD	12
13	EXISTING LOAD	1		20	EXISTING	0.0			EXISTING	20		1	EXISTING LOAD	14
15	EXISTING LOAD	1		20	EXISTING		0.0		EXISTING	20		1	EXISTING LOAD	16
17	EXISTING LOAD	1		20	EXISTING			1.2	**2#12 & 1#12EG IN 3/4"C**	**20**	**1.2**	**1**	**M/OTORIZED SHADE RECEPT**	18
19	**NEW RTU RECEPTACLE**	**1**	**1.8**	**20**	**2#12 & 1#12EG IN 3/4"C**	3.0			**2#12 & 1#12EG IN 3/4"C**	**20**	**1.2**	**1**	**M/OTORIZED SHADE RECEPT**	20
21	**NEW COLD UNIT**	**1**	**1.2**	**20**	**2#12 & 1#12EG IN 3/4"C**		2.3		**2#12 & 1#12EG IN 3/4"C**	**20**	**1.1**	**1**	**OVERHEAD COILING DOORS**	22
23	**NEW COLD UNIT**	**1**	**1.2**	**20**	**2#12 & 1#12EG IN 3/4"C**			2.4	**2#12 & 1#12EG IN 3/4"C**	**20**	**1.2**	**1**	**NEW ADDITION LIGHTING**	24
25	**AV CABINET QUAD**	**1**	**0.4**	**20**	**2#12 & 1#12EG IN 3/4"C**	1.6			**2#12 & 1#12EG IN 3/4"C**	**20**	**1.2**	**1**	**CAFETERIA LTG- ALT BIO**	26
27	**EWC & RECEPTACLES**	**1**	**1.3**	**20**	**2#12 & 1#12EG IN 3/4"C**		1.5		**2#12 & 1#12EG IN 3/4"C**	**20**	**0.2**	**1**	**NEW ADDITION EXTERIOR LTG**	28
29	**SOUND SYSTEM QUAD**	**1**	**0.4**	**20**	**2#12 & 1#12EG IN 3/4"C**			0.4	#N/A			1	SPACE	30
31	**PROJECTOR & RECEPTACLES**	**1**	**0.8**	**20**	**2#12 & 1#12EG IN 3/4"C**	0.8			#N/A			1	SPACE	32
33	**RECEPTACLS & SHADES**	**1**	**0.7**	**20**	**2#12 & 1#12EG IN 3/4"C**		0.7		#N/A			1	SPACE	34
35	**MECHO SHADE CONTROL PNL**	**1**	**0.5**	**20**	**2#12 & 1#12EG IN 3/4"C**			0.5	#N/A			1	SPACE	36
37			**4.2**			4.2			#N/A			1	SPACE	38
2 39	**NEW RTU-3**	**3**	**4.2**	**50**	**4#8 & 1#10EG IN 1"C**		4.2		#N/A			1	SPACE	40
41			**4.2**					4.2	#N/A			1	SPACE	42
	PANEL TYPE: NEMA 1 MOUNTING: SURFACE MAIN LUGS ONLY INTERRUPTING RATING: EXISTING KA SYM. FED FROM: EXISTING BASEMENT MDS				TOTAL (PHASE)	9.6	8.7	8.7						

NOTES
1. EXISTING SQUARE D NQOD, SERIES E2 PANEL TO REMAIN
2. ALL NEW CIRCUIT BREAKERS SHALL MATCH THE PANEL MANUFACTURER AND EXISTING SHORT CIRCUIT RATING.
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. CONTRACTOR SHALL FIELD VERIFY ALL PANEL SPARES AND SPACES. PROVIDE UPDATED PANELBOARD DIRECTORY.

NEW PANEL LPB

JOB NAME: LITTLEBROOK ES — JOB NO.: 23463.004
RATING: 208/120V, 3 PH, 4W, 225A. — (NEW) — LOCATION: CORRIDOR 1079

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR.	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR.	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
1	AV CABINET QUAD	1	0.4	20	2#12 & 1#12EG IN 3/4"C	1.9			2#12 & 1#12EG IN 3/4"C	20	1.5	1	CORRIDOR RECEPTACLES	2
3	AV CABINET QUAD	1	0.4	20	2#12 & 1#12EG IN 3/4"C		1.1		2#12 & 1#12EG IN 3/4"C	20	0.7	1	RESTROOM RECEPTS	4
5	AV CABINET QUAD	1	0.4	20	2#12 & 1#12EG IN 3/4"C			1.4	2#12 & 1#12EG IN 3/4"C	20	1.0	1	EWC & RECEPTACLES	6
7	AV CABINET QUAD	1	0.4	20	2#12 & 1#12EG IN 3/4"C	1.4			2#12 & 1#12EG IN 3/4"C	20	1.1	1	CLASSROOM RECEPT	8
9	AV CABINET QUAD	1	0.4	20	2#12 & 1#12EG IN 3/4"C		1.4		2#12 & 1#12EG IN 3/4"C	20	1.1	1	CLASSROOM RECEPT	10
11	AV CABINET QUAD	1	0.4	20	2#12 & 1#12EG IN 3/4"C			1.4	2#12 & 1#12EG IN 3/4"C	20	1.1	1	CLASSROOM RECEPT	12
13	DATA RACK - ROOM	1	0.4	20	2#12 & 1#12EG IN 3/4"C	1.4			2#12 & 1#12EG IN 3/4"C	20	1.1	1	CLASSROOM RECEPT	14
15	PROJECTOR RECEPTACLES	1	0.9	20	2#12 & 1#12EG IN 3/4"C		2.0		2#12 & 1#12EG IN 3/4"C	20	1.1	1	CLASSROOM RECEPT	16
17	PROJECTOR RECEPTACLES	1	0.9	20	2#12 & 1#12EG IN 3/4"C			2.0	2#12 & 1#12EG IN 3/4"C	20	1.1	1	CLASSROOM RECEPT	18
19	EXTERIOR RECEPTACLES	1	0.7	20	2#12 & 1#12EG IN 3/4"C	1.5			2#12 & 1#12EG IN 3/4"C	20	0.8	1	EWC & RECEPTACLES	20
21	MECH ROOM RECEPT	1	0.4	20	2#12 & 1#12EG IN 3/4"C		0.4			20		1	SPARE	22
23	MECH / CORRIDOR LTG	1	1.5	20	2#12 & 1#12EG IN 3/4"C			1.5		20		1	SPARE	24
25	CORRIDOR / RESTROOM LTG	1	0.6	20	2#12 & 1#12EG IN 3/4"C	0.6				20		1	SPARE	26
27	CLASSROOM LIGHTING	1	1.5	20	2#12 & 1#12EG IN 3/4"C		1.5			20		1	SPARE	28
29	CLASSROOM LIGHTING	1	1.2	20	2#12 & 1#12EG IN 3/4"C			1.2		20		1	SPARE	30
31	CLASSROOM LIGHTING	1	1.1	20	2#12 & 1#12EG IN 3/4"C	1.4			EXISTING HALLWAY LTG	20		1	SPARE	32
33	COURTYARD & EAST EXT LTG	1	0.4	20	2#12 & 1#12EG IN 3/4"C		0.4			20		1	SPARE	34
35	NORTH EXTERIOR LIGHTING	1	0.8	20	2#12 & 1#12EG IN 3/4"C			0.8		20		1	SPARE	36
37	SPARE	1		20		0.0				20		1	SPARE	38
39	SPARE	1		20			0.0			20		1	SPARE	40
41	SPARE	1		20				0.0		20		1	SPARE	42
	PANEL TYPE: NEMA 1 MOUNTING: SURFACE MAIN LUGS ONLY INTERRUPTING RATING: 65KA SYM. FED FROM: NEW PANEL MPB				TOTAL (PHASE)	7.9	6.7	5.1						

TOTAL CONNECTED LOAD: 22.8 KVA
63.3 AMPS

NOTES
1. ALL BUSING TO BE COPPER
2. BOLT ON BREAKERS ONLY
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE
5. SHORT CIRCUIT RATING. PANEL SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS.

NEW PANEL DPB

JOB NAME: LITTLEBROOK ES — JOB NO.: 23463.004
RATING: 208/120V, 3 PH, 4W, 400A. — (NEW) — LOCATION: BLOCK B MECH RM 63

CKT NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR.	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR.	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO.
1						4.8			2#12 & 1#12EG IN 3/4"C	20	0.4	1	RTU RECEPTACLES	2
3	ROOFTOP UNIT RTU-1	3	4.2 5.3 4.8	50	4#6 & 1#10EG IN 1"C		5.3		2#12 & 1#12EG IN 3/4"C	20	1.1	1	EF-1 & EF-2	4
5								4.8	2#12 & 1#12EG IN 3/4"C	20	0.6	1	EF-3 & EF-4	6
7						6.3			2#12 & 1#12EG IN 3/4"C	20	1.6	1	BOILER B-1	8
9	ROOFTOP UNIT RTU-2	3	4.7 6.3 4.9	60	4#6 & 1#10EG IN 1-1/4"C		6.3		2#12 & 1#12EG IN 3/4"C	20	1.6	1	BOILER B-2	10
11			4.7					4.9	2#12 & 1#12EG IN 3/4"C	20	0.2

MECHANICAL EQUIPMENT COORDINATION SCHEDULE

IDENTIFICATION		① ELECTRICAL CHARACTERISTICS							③ ④ LOCAL POWER DISCONNECT					
PLAN ID	DESCRIPTION	VOLTAGE & Ø	MOTOR HP	UNIT KW	FLA	MCA	MOCP	WIRING ②	AMPS	POLES	FUSE AMPS	NEMA TYPE	SERVICE RECEPTACLE	REMARKS
RTU-1	GAS-FIRED ROOFTOP UNIT	208V-3Ø				44.0	50	SEE PANEL SCHEDULES	60	3	50	NEMA 3R	YES	⑥
RTU-2	GAS-FIRED ROOFTOP UNIT	208V-3Ø				49.0	60	SEE PANEL SCHEDULES	60	3	60	NEMA 3R	YES	⑥
RTU-3	PACKAGED ROOFTOP UNIT	208V-3Ø				44.0	50	SEE PANEL SCHEDULES	60	3	50	NEMA 3R	YES	⑥
B-1	CONDENSING HOT WATER BOILER	120V-1Ø			13.0	16.3	20	SEE PANEL SCHEDULES	30	1	20	NEMA 1	NO	
B-2	CONDENSING HOT WATER BOILER	120V-1Ø			13.0	16.3	20	SEE PANEL SCHEDULES	30	1	20	NEMA 1	NO	
HWP-1	HOT WATER PUMP	208V-3Ø	1.5		6.6	8.3	15	SEE PANEL SCHEDULES	30	3	15	NEMA 1	NO	⑩
HWP-2	HOT WATER PUMP	208V-3Ø	1.5		6.6	8.3	15	SEE PANEL SCHEDULES	30	3	15	NEMA 1	NO	⑩
P-1	FREEZE PROTECTION PUMP	208V-1Ø	1/2		5.4	6.8	15	SEE PANEL SCHEDULES	30	2	15	NEMA 1	NO	
UV-A	SELF-CONTAINED UNIT VENTILATOR	208V-1Ø			32.3	36.9	50	SEE PANEL SCHEDULES	60	2	59	NEMA 1	NO	
UV-B1	SELF-CONTAINED UNIT VENTILATOR	208V-1Ø			21.0	23.6	30	SEE PANEL SCHEDULES	30	2	30	NEMA 1	NO	
FCU-1	DUCTED VERTICAL SPLIT SYSTEM	208V-1Ø				-	-	SEE PANEL SCHEDULES	⑤	-	-	NEMA 1	NO	INDOOR UNIT
HP-1	DUCTED VERTICAL SPLIT SYSTEM	208V-1Ø				24.0	40	SEE PANEL SCHEDULES	60	2	40	NEMA 3R	NO	OUTDOOR UNIT
EUH-1	ELECTRIC UNIT HEATER	208V-1Ø		5.0		18.1	30	SEE PANEL SCHEDULES	30	2	30	NEMA 1	NO	
UH-1	HOT WATER UNIT HEATER	120V-1Ø	1/2		9.8	12.3	20	SEE PANEL SCHEDULES	⑦	-	-	NEMA 1	NO	
UH-2	HOT WATER UNIT HEATER	120V-1Ø	1/2		9.8	12.3	20	SEE PANEL SCHEDULES	⑦	-	-	NEMA 1	NO	
UH-3	HOT WATER UNIT HEATER	120V-1Ø	1/2		9.8	12.3	20	SEE PANEL SCHEDULES	⑦	-	-	NEMA 1	NO	
UH-4	HOT WATER UNIT HEATER	120V-1Ø	1/2		9.8	12.3	20	SEE PANEL SCHEDULES	⑦	-	-	NEMA 1	NO	
UH-5	HOT WATER UNIT HEATER	120V-1Ø	1/25		1.5	1.9	15	SEE PANEL SCHEDULES	⑦	-	-	NEMA 1	NO	
UH-6	HOT WATER UNIT HEATER	120V-1Ø	1/25		1.5	1.9	15	SEE PANEL SCHEDULES	⑦	-	-	NEMA 1	NO	
EF-1	EXHAUST FAN	115V-1Ø	1/6		4.4	5.5	15	SEE PANEL SCHEDULES	⑦	-	-	NEMA 1	NO	
EF-2	EXHAUST FAN	115V-1Ø	1/6		4.4	5.5	15	SEE PANEL SCHEDULES	⑦	-	-	NEMA 1	NO	
EF-3	EXHAUST FAN	115V-1Ø	1/15		2.5	3.1	15	SEE PANEL SCHEDULES	⑦	-	-	NEMA 1	NO	
EF-4	EXHAUST FAN	115V-1Ø	1/15		2.5	3.1	15	SEE PANEL SCHEDULES	⑦	-	-	NEMA 1	NO	
EF-5	EXHAUST FAN	115V-1Ø	1/15		2.5	3.1	15	SEE PANEL SCHEDULES	⑦	-	-	NEMA 1	NO	
VAV-X	TYPICAL HOT WATER VAV UNIT	120V-1Ø			-	-	15	SEE PANEL SCHEDULES	⑦	-	-	NEMA 1	NO	⑨
CP-FCU	CONDENSATE PUMP	115V-1Ø	1/30		1.5	1.9	15	SEE PANEL SCHEDULES	⑦	-	-	NEMA 1	NO	⑧
WH-1	WATER HEATER	120V-1Ø			5.0	6.3	15	SEE PANEL SCHEDULES	⑦	-	-	NEMA 1	NO	
WH-2	WATER HEATER	208V-1Ø		13.1	63.0	78.7	80	SEE PANEL SCHEDULES	100	2	80	NEMA 1	NO	
HWR-1	HOT WATER RECIRCULATING PUMP	120V-1Ø			92 WATTS	-	15	SEE PANEL SCHEDULES	⑦	-	-	NEMA 1	NO	

EQUIPMENT SCHEDULE KEY NOTES

① DATA FROM SPECIFIED MANUFACTURER. REFER TO MECHANICAL DRAWINGS

② QUANTITY AND SIZE OF POWER CONDUCTORS BASED ON DATA FROM SPECIFIED MANUFACTURER. PROVIDE GROUND WIRE IN ACCORDANCE WITH THE PROJECT GENERAL NOTES THIS SHEET.

③ WHERE A FUSE SIZE IS NOT ENTERED IN COLUMN TITLED "FUSE AMPS", THE DISCONNECT MAY BE UNFUSED.

④ EQUIPMENT FURNISHED AND INSTALLED UNDER OTHER SPECIFICATION DIVISIONS, WIRED AND CONNECTED UNDER DIVISION 16, UNLESS NOTED OTHERWISE. DISCONNECT SWITCHES FURNISHED UNDER DIVISION 15.

⑤ INDOOR UNIT FED VIA OUTDOOR CONDENSING UNIT. PROVIDE ALL WIRING AS REQUIRED TO MAKE A COMPLETE AND OPERATIONAL INSTALLATION.

⑥ PROVIDE DUCT SMOKE DETECTOR(S). LOCATE REMOTE TEST STATION NEXT TO THE THERMOSTAT.

⑦ PROVIDE MANUAL MOTOR STARTER WITH THERMAL OVERLOAD PROTECTION.

⑧ PROVIDE HARD WIRED 120V POWER FOR CONDENSATE PUMPS - 2#12 MC. CIRCUIT AS SHOWN OR TO THE NEAREST RECEPTACLE CIRCUIT SERVING THE AREA LOCATED.

⑨ REFER TO MECHANICAL PLANS FOR QUANTITIES OF VAV BOXES. POWER IS FOR CONTROL POWER ONLY.

⑩ IN ADDITION TO POWER TO THE VFD, PROVIDE ALL REQUIRED WIRING FROM VFD TO EQUIPMENT LOCATIONS. COORDINATE WITH MECHANICAL CONTRACTOR.

EQUIPMENT SCHEDULE GENERAL NOTES

1. REFER TO CIVIL ENGINEERING, MECHANICAL, AND PLUMBING PLANS FOR EXACT LOCATIONS OF EQUIPMENT.

2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL 120V POWER WIRING AND CIRCUIT BREAKERS REQUIRED FOR THE INSTALLATION OF MECHANICAL EQUIPMENT, INCLUDING POWER FOR ALL MOTOR OPERATED DAMPER ACTUATORS, VAV BOXES, ETC. STARTERS AND POWER DISCONNECT SWITCHES SHALL BE BY THE MECHANICAL CONTRACTOR. REFER TO MECHANICAL SPECIFICATION SECTIONS AND COORDINATE WITH THE MECHANICAL CONTRACTOR FOR EXTENT OF WORK REQUIRED.

3. DUCT SMOKE DETECTORS SHALL BE PROVIDED AT ALL UNITS OVER 2000 CFM AND MOUNTED ON THE SUPPLY AND RETURN DUCT. DETECTORS SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR, INSTALLED BY THE MECHANICAL CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR. COORDINATE EXACT QUANTITY AND LOCATIONS WITH THE MECHANICAL CONTRACTOR AND MECHANICAL DRAWINGS.

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F V H D P C . C O M

NJDCA Electronic Release Stamp

Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number
5516D

Project Date
10.10.2025

Checked By
AHG

Drawn By
AMP

Scale
AS NOTED

Drawing Name
ELECTRICAL MECHANICAL EQUIPMENT COORDINATION SCHEDULE

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION

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Drawing Number
E9.1

C:\Jobs Research\DATA\DOCS\23K\23400\23483.Princeton Blvd\23483.004 - Littlebrook Elm\CAD\2W\23483.004 - E9.1.dwg

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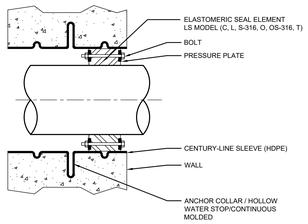
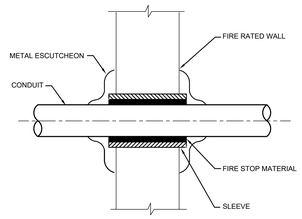


LINK-SEAL MODULAR SEALS WITH CENTURY-LINE SLEEVES
MANUFACTURED BY PIPELINE SEAL & INSULATOR, INC. OR APPROVED EQUAL.
HOUSTON, TEXAS, U.S.A. TEL: 800-423-2410 E-MAIL: INFO@PSIPSI.COM

FOUNDATION CONDUIT PENETRATION DETAIL
NOT TO SCALE



CONDUIT PENETRATION DETAIL THRU FIRE RATED SOLID WALL
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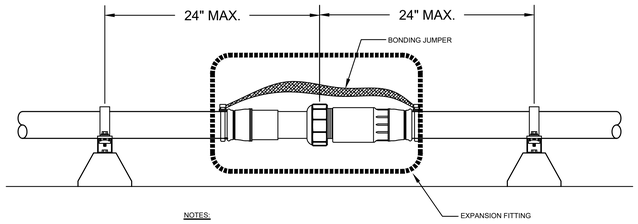
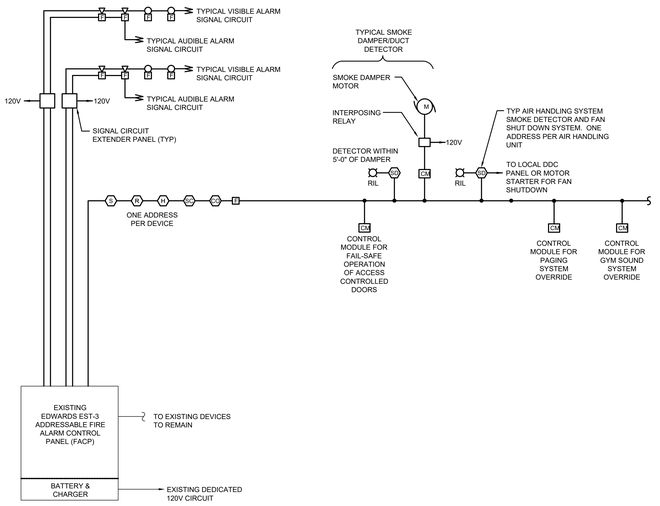


NOTES:

PROVIDE EXPANSION JOINT FOR CONDUIT RUN ON ROOF WHERE:
1. CONDUIT CROSS STRUCTURAL JOINTS.
2. CONDUIT RUN MORE THAN 200'.
3. EXPANSION JOINT SHALL BE COOPER MODEL# XJG-EMT WITH BONDING JUMPER.

EXPANSION JOINT DETAIL
NOT TO SCALE



ADDRESSABLE FIRE ALARM RISER DIAGRAM
NOT TO SCALE

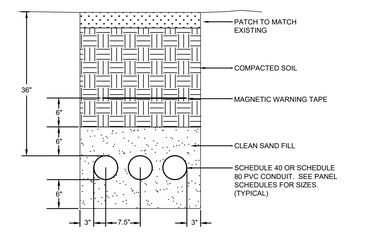
DEVICE LEGEND:

- FIRE ALARM HORN/STROBE
- FIRE ALARM STROBE
- FIRE ALARM MANUAL PULL STATION
- SMOKE DETECTOR
- SMOKE DUCT DETECTOR
- HEAT DETECTOR (135°F UNO)
- RATE OF RISE HEAT DETECTOR
- CO DETECTOR
- COMBINATION SMOKE/CO DETECTOR
- DOOR HOLDER
- SPRINKLER TAMPER SWITCH
- SPRINKLER FLOW SWITCH
- ADDRESSABLE MONITOR MODULE
- ADDRESSABLE CONTROL MODULE
- REMOTE INDICATING LIGHT

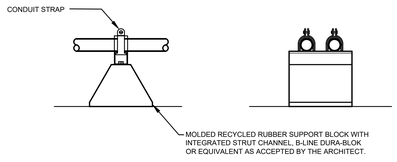
FIRE ALARM RISER DIAGRAM NOTES

1. ALL WIRING SHALL BE PER MANUFACTURER'S REQUIREMENT AND RECOMMENDATION AND MEET APPLICABLE CODE REQUIREMENTS INCLUDING BUT NOT LIMITED TO NEC 760.
2. PROJECT SPECIFIC FIRE ALARM RISER DIAGRAM AND SHOP DRAWINGS, INCLUDING BATTERY CALCULATIONS AND NOTIFICATION APPLIANCE CIRCUIT VOLTAGE DROP ANALYSIS PLUS SEQUENCE OF OPERATIONS, SHALL BE PREPARED AND SUBMITTED, BY THE FIRE ALARM VENDOR, TO THE PROJECT ENGINEER FOR APPROVAL. ROOM NAMES AND NUMBERS ON PLANS ARE NOT FOR LABELING OR PROGRAMMING USE. CONSULT WITH OWNER FOR THIS INFORMATION. AFTER APPROVAL BY THE ENGINEER, A SUBMITTAL, SIGNED BY A REGISTERED NICET LEVEL 4, AND ASSOCIATED WITH THE FIRE ALARM VENDOR, SHALL BE FORWARDED TO THE CONTRACTOR FOR SUBMITTAL TO THE AUTHORITIES HAVING JURISDICTION.
3. ALL WIRING SHALL BE RUN CONCEALED UNLESS PERMITTED BY THE ARCHITECT. PLENUM RATED CABLE WITHOUT RACEWAY IS ACCEPTABLE ONLY IN CONCEALED CEILING SPACES.
4. ALL DEVICES SHALL BE FULLY ADDRESSABLE. CONVENTIONAL HEAT-DETECTORS, ZONED TO AN ADDRESSABLE MODULE, MAY BE AN ACCEPTABLE ALTERNATE IN ATTIC SPACES. (EXTREME HEAT CONDITIONS) CONTACT PROJECT ENGINEER FOR RESOLUTION.
5. CONTRACTOR SHALL COMPLETE A FULL AND THOROUGH FIELD SURVEY OF EXISTING CONDITIONS AND BUILDING FEATURES. CONTRACTOR MUST BE FAMILIAR WITH STRUCTURE PRIOR TO START OF WORK IN ORDER TO PROVIDE A FIRE ALARM SYSTEM THAT COMPLIES WITH ALL APPLICABLE CODES, OWNERS UNDERWRITER REQUIREMENTS, AND RECOMMENDATIONS OF LOCAL AUTHORITIES HAVING JURISDICTION. IF CONTRACTOR FAILS TO COMPLY, NO ADDITIONAL COMPENSATION WILL BE AWARDED FOR WORK THAT IS REASONABLE HAD A PRE-CONSTRUCTION FIELD SURVEY BEEN COMPLETED.
6. A 100% TOTAL RE-ACCEPTANCE TEST SHALL BE PERFORMED AT THE COMPLETION OF THE NEW FIRE ALARM SYSTEM INSTALLATION PER INTERNATIONAL BUILDING CODE (IBC) SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
7. ALARM VENDOR SHALL PROVIDE WIRE GUARDS/COVERS ON ALL SPEAKER-STROBES, HORN-STROBES, AND DETECTORS LOCATED IN PUBLIC AREAS SUCH AS, GYMNASIUMS AND MULTI-PURPOSE ROOMS, ETC. (TYPICAL) LOW PROFILE DETECTORS SHALL BE USED IN ALL HALLWAYS. ALL PULL STATIONS SHALL BE PROVIDED PROTECTIVE COVERS. REFER TO SPECIFICATIONS.
8. FIRE ALARM SPECIFICATIONS SHALL BE USED IN CONJUNCTION WITH ALL DRAWINGS. ANY DISCREPANCIES SHALL BE BROUGHT TO TO ATTENTION OF THE ENGINEER FOR RESOLUTION. EXISTING FIRE ALARM SYSTEM IS EDWARDS EST-3.
9. HEAT DETECTORS IN THE ELEVATOR MACHINE ROOMS AND ELEVATOR SHAFTS SHALL BE PROGRAMMED TO SIGNAL CONTROL MODULES FOR ELEVATOR SHUT DOWN VIE A SHUNT TRIP ON THE ELEVATOR FEEDER PER ASME A17.1
10. PROVIDE DUCT SMOKE DETECTORS IN RETURN DUCTS OF ALL HVAC SYSTEMS OVER 2000 CFM, OR AS REQUIRED BY INTERNATIONAL MECHANICAL CODE (IMC). DETECTORS, HOUSINGS, AND SAMPLING TUBES SHALL BE PROVIDED AND WIRED BY THE ELECTRICAL CONTRACTOR AND INSTALLED IN THE DUCTWORK BY THE MECHANICAL CONTRACTOR, UNO. PROVIDE A DEDICATED CONTROL MODULE FOR EACH DETECTOR TO BE PROGRAMMED TO SEND A SHUTDOWN SIGNAL TO THE HVAC SYSTEM TO SHUTDOWN THE FAN, MOTORS, DAMPERS, ETC. ALL LOW VOLTAGE WIRING BETWEEN THE CONTROL MODULE AND THE HVAC SYSTEM SHALL BE BY THE ATC CONTRACTOR, UNO.
11. PROVIDE REMOTE INDICATING LIGHT AND TEST SWITCH (WITH IDENTIFICATION LABEL) FOR EACH DETECTOR IN ACCESSIBLE SPACE INSIDE THE BUILDING.
12. CONTRACTOR SHALL INSTALL ALL ABOVE CEILING DEVICES AFTER ALL PIPING, DUCTWORK, CONDUITS, ETC ARE INSTALLED SUCH THAT THE FIRE ALARM DEVICE IS EASILY ACCESSIBLE. COORDINATE LOCATIONS WITH THE STRUCTURE AND ALL OTHER UTILITIES.
13. PROVIDE A SMALL SCALE FLOORPLAN INCLUDING ROOM NAMES/NUMBERS, MOUNTED BEHIND A PLEXIGLASS FRAME, ADJACENT TO THE REMOTE ANNUNCIATOR PANEL.
14. PROVIDE WEATHERPROOF AUDIBLE / VISUAL SIGNAL OVER EXTERIOR FIRE DEPARTMENT CONNECTION. COORDINATE LOCATION WITH THE FIRE PROTECTION SHOP DRAWINGS.
15. EXTRA DEVICES:
    PROVIDE TEN (10) OF EACH OF THE FOLLOWING EXTRA FIRE ALARM SYSTEM DEVICES AND ASSOCIATED WIRING TO BE FIELD LOCATED BY THE ENGINEER OR LOCAL FIRE MARSHAL:

    MANUAL PULL STATIONS
    HORN / STROBES
    STROBES
    CO DETECTORS
    COMBINATION CO / SMOKE DETECTORS
    MONITOR MODULES
    CONTROL MODULES



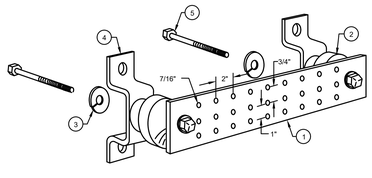
TYPICAL DIRECT BURIAL CONDUIT DETAIL
NOT TO SCALE



NOTES:

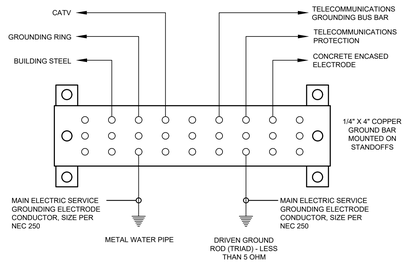
1. RUBBER FOOTINGS TO REST ON ROOF. NO AFFIXING IS REQUIRED.
2. PROVIDE SPACE FOR THERMAL EXPANSION OF CONDUIT ACCOMMODATED BY CONDUIT STRAP AND SQUARE WASHER COMBINATION.

ROOF CONDUIT MOUNTING DETAIL
NOT TO SCALE



DETAIL KEY NOTES

1. COPPER GROUND BAR, 1/4"X 4"X 20" WITH THREE (3) HOLES. HOLE CENTERS SHALL MATCH NEMA DOUBLE LUG CONFIGURATION
2. INSULATORS.
3. 5/8" LOCKWASHERS.
4. WALL MOUNTING BRACKET.
5. 5/8"-11 X 1" HHCS BOLTS.



NOTES:

1. REFER TO NATIONAL ELECTRICAL CODE "GROUNDING ELECTRODE CONDUCTORS" TABLE (2020 NEC 250.66) AND "EQUIPMENT GROUNDING CONDUCTORS" TABLE (2020 NEC 250.122) FOR SIZING OF GROUNDING CONDUCTORS INDICATED ABOVE.
2. BUSBAR AND ACCESSORIES SHALL BE BY THE FOLLOWING MANUFACTURERS:
   A. HARGER
   B. NEWTON
   C. APPROVED EQUAL

MASTER GROUND BAR
NOT TO SCALE

NJDCA Electronic Release Stamp

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10.10.25
Date
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Architect

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F V H D P C . C O M

Project Name
Addition and Renovations to Littlebrook Elementary School

Project Owner Name
Princeton Public Schools

Project Location
39 Magnolia Ln, Princeton, NJ 085402

Project Number
5516D

Project Date
10.10.2025

Checked By
AHG

Drawn By
AMP

Scale
AS NOTED

Drawing Name
ELECTRICAL FIRE ALARM RISER DIAGRAM & DETAILS

Revisions

No.	Date	Description
	10.10.25	NJ DCA SUBMISSION
1	11.21.25	NJ DCA RESPONSES

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Drawing Number
E10.0

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