

ASBESTOS ABATEMENT NOTES

PRE-ABATEMENT WORK NOTES:

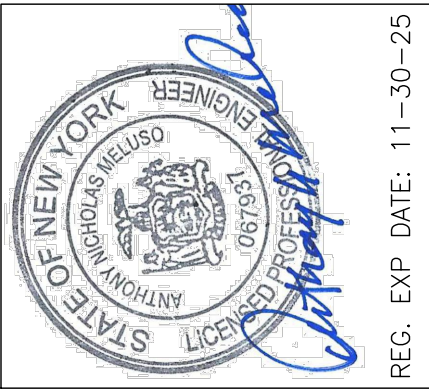
1. THESE DRAWINGS HAVE BEEN PREPARED UTILIZING THE OWNERS' ORIGINAL CONSTRUCTION DOCUMENTS IN ORDER TO ILLUSTRATE THE EXISTING CONDITIONS OF THE SITE AND STRUCTURES THEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACTUAL VERIFICATION OF ALL EXISTING CONDITIONS IN THE FIELD.
2. THE CONTRACTOR SHALL DETERMINE EXACT FINAL LOCATIONS OF PERSONNEL AND WASTE DECONTAMINATION ENCLOSURES, PICK UP AREA FOR REFUSE AND ASBESTOS DEBRIS. THESE LOCATIONS SHALL BE REVIEWED AND PROPERLY APPROVED BY THE DISTRICT PRIOR TO COMMENCEMENT OF WORK. THIS CONTRACTOR SHALL ESTABLISH, LABEL AND MAINTAIN PROPER EXITS AND WAYS OF EGRESS WITHIN EACH WORK AREA FOR NORMAL AND EMERGENCY USE BY WORKERS DURING ALL ABATEMENT ACTIVITIES.
3. THE CONTRACTOR, PRIOR TO BIDDING SHALL BE RESPONSIBLE TO BECOME COMPLETELY FAMILIAR WITH ALL ASPECTS OF THE PROJECT, INCLUDING, BUT NOT LIMITED TO, ALL DEMOLITION AND CONSTRUCTION WORK AS SHOWN IN THE COMPLETE SET OF DRAWINGS AND IN THE PROJECT MANUAL / SPECIFICATIONS AND ASBESTOS SURVEY REPORTS IN ORDER THAT THE FULL SCOPE OF WORK WHICH MAY ENCOUNTER ASBESTOS CONTAINING MATERIALS IS UNDERSTOOD AND ACCOUNTED FOR, BY THE CONTRACTOR IN (UNDERTAKING)THIS PROJECT. A COPY OF THE ASBESTOS SURVEY REPORT CAN BE REQUESTED FROM THE OWNERS' ENVIRONMENTAL CONSULTANT.
4. PRIOR TO ABATEMENT ALL CONTRACTORS WILL SURVEY EXISTING CONDITIONS IN THE ABATEMENT AND GENERAL WORK AREAS. ITEMS / MATERIALS, ETC., DAMAGED OR NON-FUNCTIONAL SHALL BE LISTED, NOTED, PHOTOGRAPHED AND REVIEWED WITH THE PROJECT INSPECTOR. ALL OTHER ITEMS / MATERIALS SHALL BE REVIEWED WITH THE PROJECT INSPECTOR. ALL OTHER ITEMS / MATERIALS SHALL BE ASSUMED TO BE IN GOOD CONDITION AND WORKING ORDER. IT SHALL BE THE RESPONSIBILITY OF THE ABATEMENT CONTRACTOR TO MAINTAIN ALL MATERIALS, ITEMS, EQUIPMENT, SYSTEMS, ETC. IN THEIR ORIGINAL CONDITION AND RETURN TO OWNER/GENERAL CONTRACTOR, ETC., IN SAME CONDITION AT THE END OF THIS CONTRACT.

ASBESTOS REMOVAL GENERAL NOTES:

1. ASBESTOS ABATEMENT INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY A NYS DEPARTMENT OF LABOR LICENSED ASBESTOS ABATEMENT CONTRACTOR, WHO SHALL VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND QUANTITIES PRIOR TO BID.
2. THE CONTRACTOR SHALL PERFORM ALL CONTRACT WORK IN ACCORDANCE WITH CONTRACT SPECIFICATIONS, NEW YORK STATE DEPARTMENT OF LABOR (NYSDEL) INDUSTRIAL HEALTH CODE RULE 56, OSHA, NESHAPS, AHERA, NYSDEC AND ALL OTHER APPLICABLE CODES.
3. THE CONTRACTOR SHALL MAINTAIN THE SITE AS NEAT AS POSSIBLE AND ORDERLY DURING (THE COURSE OF)THE WORK. ALL LOOSE DEBRIS WHICH MAY (BECOME WINDBORNE) BLOW OFF THE SITE, SHALL BE COLLECTED AND DISPOSED OF PROPERLY BY THE CONTRACTOR ON A DAILY BASIS AS PART OF THE PROJECT WORK.
4. THE CONTRACTOR SHALL PROVIDE BARRIERS AROUND THE WORK AREAS IN ORDER TO ENSURE SAFE PASSAGE BY ANY PERSON. THESE BARRIERS SHALL ALSO SERVE TO KEEP ALL UNAUTHORIZED PERSONS OUT OF THE PROJECT AREA FOR THE DURATION OF THE WORK.
5. VARIANCES: CONTRACTOR SHALL PAY FOR AND OBTAIN ANY NECESSARY SITE SPECIFIC VARIANCES.
6. THE CONTRACTOR SHALL MAINTAIN SECURITY IN THE BUILDING AND THE WORK AREAS AT ALL TIMES.
7. PROJECT STAGING, STORAGE, SCHEDULING AND ACCESS SHALL BE COORDINATED WITH AND APPROVED BY THE ARCHITECT, CONSTRUCTION MANAGER AND OWNER PRIOR TO PROCEEDING WITH WORK.
8. SHOULD IT BECOME NECESSARY, THE CONTRACTOR SHALL COORDINATE SHUT DOWN AND LOCK OUT / TAG OUT OF THE ELECTRICAL POWER FROM THE OWNERS' POWER, WITH OWNERS' REPRESENTATIVE, PRIOR TO THE COMMENCEMENT OF WORK.
9. ALL TEMPORARY POWER TO THE WORK AREA SHALL BE BROUGHT IN FROM OUTSIDE THE WORK AREA THROUGH A GROUND-FAULT CIRCUIT INTERRUPTER AT THE SOURCE.
10. CONTRACTOR SHALL COORDINATE CONNECTION OF WATER SERVICE FOR DECONTAMINATION PURPOSES WITH OWNERS' REPRESENTATIVE. WATER FOR DECONTAMINATION UNITS IS AVAILABLE FROM THE OWNER.
11. THE OWNER OR OWNERS' REPRESENTATIVE IS RESPONSIBLE TO CONTRACT FOR NYSDEL PROJECTS MONITORING / AIR SAMPLING TECHNICIAN SERVICES AS REQUIRED.
12. CONTRACTOR TO PROVIDE A COPY OF SAFETY DATA SHEETS (SDS'S) FOR ANY CHEMICAL AGENTS TO BE USED DURING THE ASBESTOS ABATEMENT TO THE PROJECT MONITOR AND THE OWNER'S REPRESENTATIVE.
13. CONTRACTOR SHALL REQUEST AND RECEIVE PROJECT MONITOR AND OWNERS' REPRESENTATIVES APPROVAL OF ALL WORK BEFORE ANY ABATEMENT IS UNDERTAKEN.
14. UNDER NO CIRCUMSTANCES SHALL CONTAMINATED WASTE WATER BE DISCHARGED THROUGH A SYSTEM WITHOUT FILTERING. THE MAXIMUM FILTER SIZE OPENING SHALL BE CAPABLE OF RETAINING A 5.0 MICRON PARTICLE SIZE COLLECTION CAPABILITY.
15. DRAWINGS ATTEMPT TO INDICATE THE GENERAL SCOPE OF EXISTING CONDITIONS AND ITEMS AFFECTED BY THE ABATEMENT WORK. CONTRACTOR SHALL EXAMINE THE WORK AREA PRIOR TO FORMULATING HIS BID SHALL INCLUDE FIELD VARIATIONS FROM THOSE SHOWN WITHIN THE GENERAL INTENT OF THE WORK.
16. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ASBESTOS CONTAINING MATERIALS CONTAINED WITHIN AND GENERATED FROM THE ABATEMENT PROJECT AND ASSOCIATED WITH ALL PROJECT WORK, IN COMPLIANCE WITH ALL APPLICABLE LAWS, RULES REGULATIONS AND ALL REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION.
17. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ASBESTOS CONTAINING MATERIALS CONTAINED WITHIN AND GENERATED FROM THE PROJECT AND ASSOCIATED WITH ALL PROJECT WORK, IN THE MOST EFFICIENT AND COST EFFECTIVE METHOD POSSIBLE, WHICH ALSO COMPLIES WITH THE REQUIREMENTS LISTED ABOVE.

POST ABATEMENT WORK NOTES:

1. PROVIDE ALL APPLICABLE CODE RULE 56 PROCEDURES, CLEAN UP AND ADDITIONAL TESTING AS REQUIRED.
2. AFTER FINAL CLEARANCE HAS BEEN ATTAINED (SUBSTANTIAL COMPLETION) THE ABATEMENT CONTRACTOR, TOGETHER WITH THE PROJECT INSPECTOR AND OWNER'S REPRESENTATIVE WILL SURVEY FINAL CONDITIONS IN THE ABATEMENT AND GENERAL WORK AREAS. ITEMS / MATERIALS, ETC., DAMAGED OR NON-FUNCTIONAL SHALL BE LISTED, NOTED, PHOTOGRAPHED AND REVIEWED WITH THE PROJECT INSPECTOR. ALL OTHER ITEMS / MATERIALS SHALL BE REVIEWED WITH THE PROJECT INSPECTOR. ALL OTHER ITEMS / MATERIALS NOT NOTED, SHALL BE ASSUMED TO BE IN GOOD CONDITION AND WORKING ORDER. IT SHALL BE THE RESPONSIBILITY OF THE ABATEMENT CONTRACTOR TO MAINTAIN ALL MATERIALS, ITEMS, EQUIPMENT, SYSTEMS, ETC. IN THEIR ORIGINAL CONDITION AND RETURN TO OWNER/GENERAL CONTRACTOR, ETC., IN SAME CONDITION AT THE END OF THIS CONTRACT. ANY NEW DAMAGE OR MISSING EQUIPMENT SHALL BE NOTED AND THE COST OFFSET FROM THE CONTRACT.
3. REMOVE ALL TEMPORARY ENCLOSURES, BARRIERS, ETC. REINSTALL ITEMS/WORK PREVIOUSLY REMOVED. ALL TAPE AND ADHESIVE RESIDUALS TO BE REMOVED. TEST AND REPAIR.
4. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE AGAINST DAMAGE TO THE EXISTING WORK TO REMAIN IN PLACE. ANY DAMAGE TO SUCH WORK SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ARCHITECT AND OWNER AT NO ADDITIONAL COST TO THE CONTRACT.
5. AT COMPLETION OF THE ABATEMENT WORK, A CONDITION SURVEY SHALL BE DONE BY ALL CONTRACTORS AND PROJECT INSPECTOR (SEE NOTE 2.) ANY VARIATION (I.E. DAMAGE BY THE CONTRACTOR) SHALL BE REPAIRED / RESTORED BY THE ABATEMENT CONTRACTOR.
6. THE CONTRACTOR SHALL, UPON COMPLETION OF THE REMOVAL, PROVIDE WRITTEN DOCUMENTATION (INCLUDING ALL APPROPRIATE THIRD PARTY TESTING RESULTS) THAT THE PROJECT WORK AREAS ARE COMPLETELY FREE OF ALL ASBESTOS CONTAINING MATERIALS (CONTEMPLATED FOR REMOVAL UNDER THIS PROJECT, OR PHASE) AT FINAL CLEARANCE.
7. THE CONTRACTOR SHALL PROVIDE RECORDS OF ALL ASBESTOS CONTAINING MATERIALS REMOVED FROM THE SITE, INCLUDING THE COMPOSITION AND VOLUMES OF DISPOSED MATERIALS AND THE FINAL DISPOSAL SITE(S).

[illegible]

Drawn by	AMM
Checked by	RL
Project No.	
Scale	AS NOTED
Date	05-07-24

Mechanical & Electrical Engineer:	
Environmental Engineer:	QES&T, Inc. 1376 Route 9 Wappingers Falls, NY 12590 845.298.6031 www.qualityenv.com

UNIVENT REPLACEMENT AT
STONY POINT, THIELS
AND WEST HAVERSTRAW
ELEMENTARY SCHOOL
PES SED# 50-02-01-06-0-003-012
TES SED# 50-02-01-06-0-025-018
WHES SED# 50-02-01-06-0-024-015



ABATEMENT NOTES

HM-000



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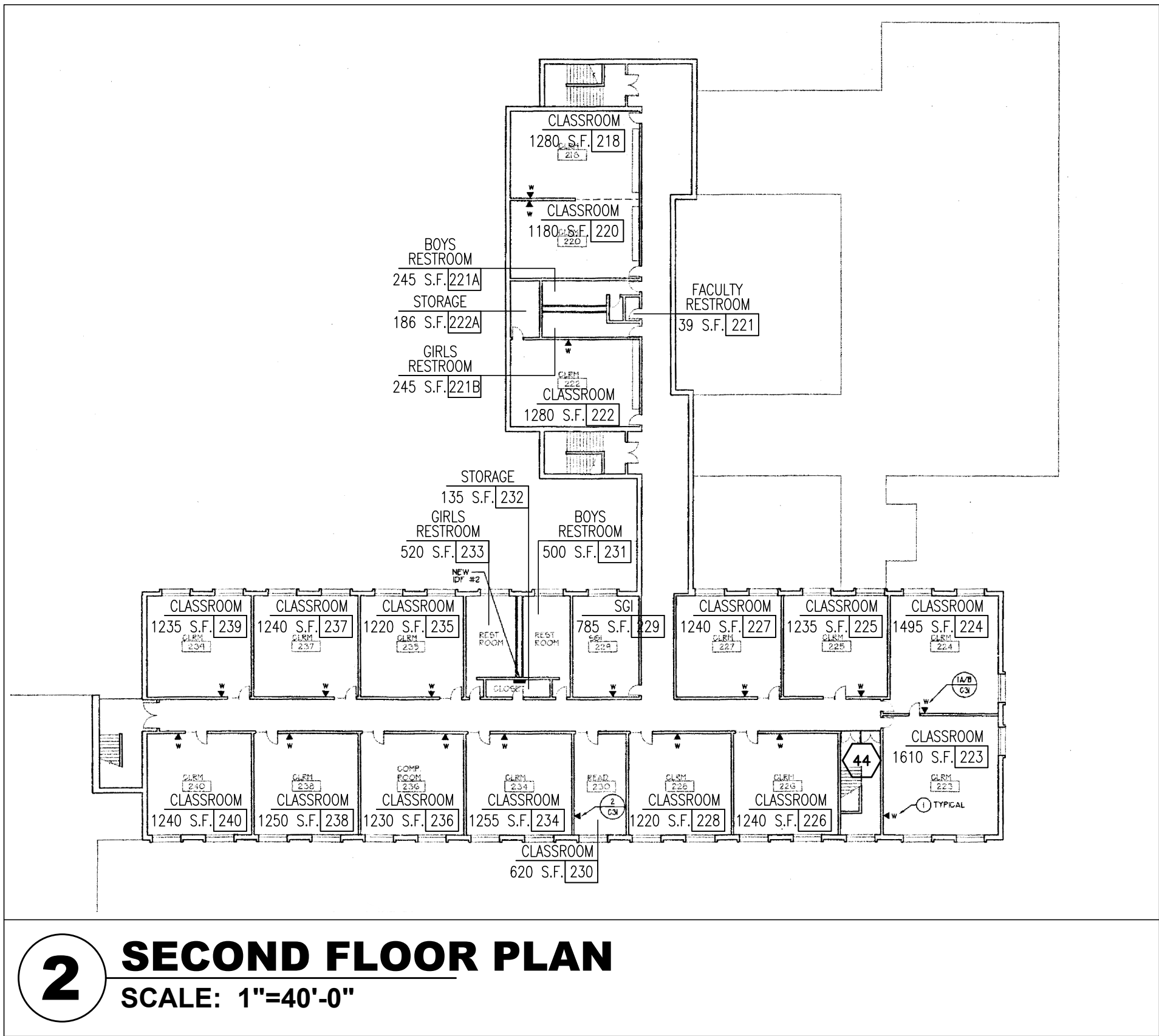
MICHAEL SHILALE ARCHITECTS, L.L.P.
140 Park Avenue New City, NY 10956 Tel 845-708-9200
www.shilale.com

Drawing No.

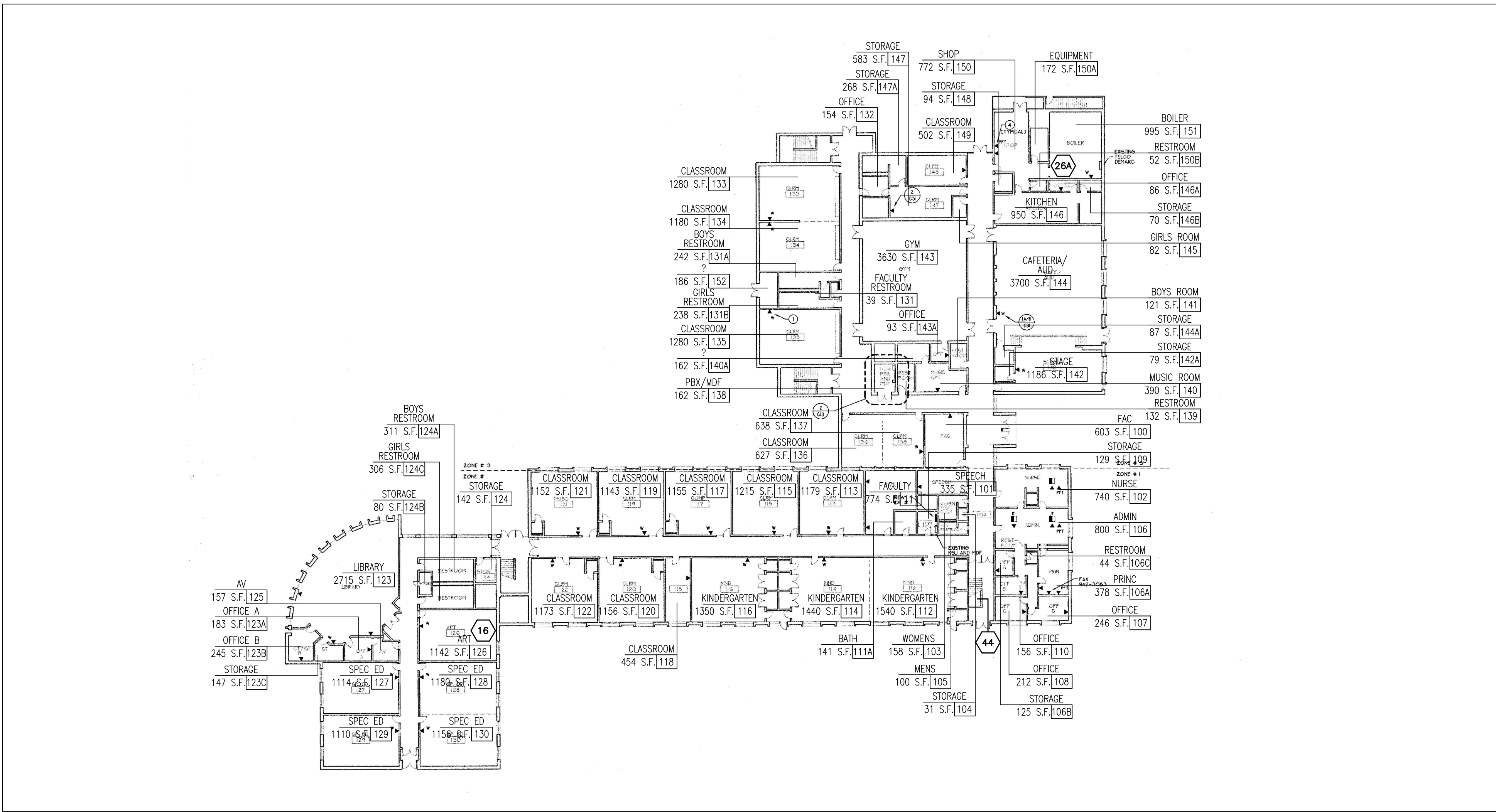
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ABATEMENT NOTES

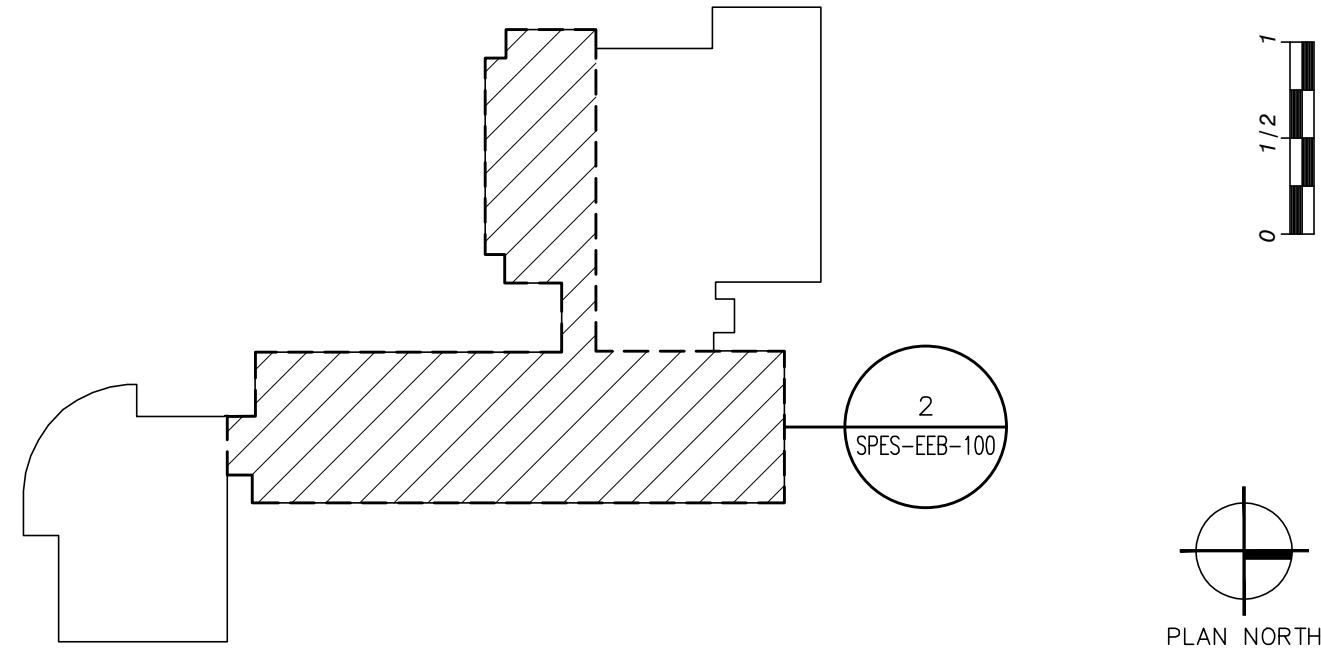
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2 SECOND FLOOR PLAN
SCALE: 1"=40'-0"



1 FIRST FLOOR PLAN
SCALE: 1"=40'-0"



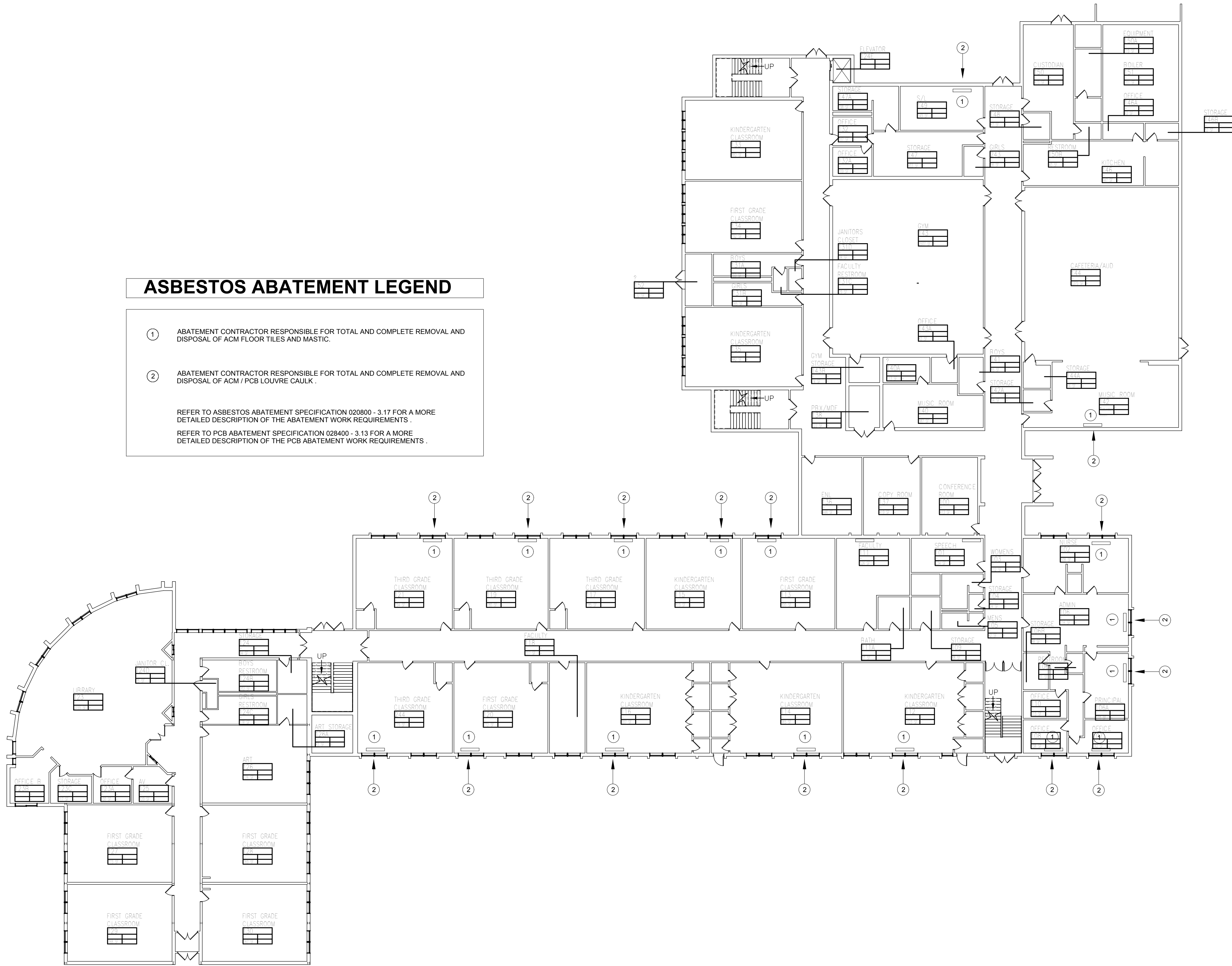
KEY PLAN

- 26A** CONTRACTOR TO REPLACE CLOSER ON BOILER ROOM DOOR
- 33** CONTRACTOR TO VERIFY IF FLAME MONITOR (FIRE-EYE) SYSTEM IS OPERABLE AND NOTIFY ARCHITECT/OWNER
- 44** CONTRACTOR TO INSTALL NEW WALL-MOUNTED EMERGENCY/EXIT LIGHT COMBO WITH SELF-CONTAINED BACK-UP BATTERY

KEY NOTES

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, TO ALTER AN ITEM IN ANY WAY.

1 EXISTING FIRST FLOOR ABATEMENT PLAN
SCALE: 1/16"=1'-0"



ASBESTOS ABATEMENT LEGEND

① ABATEMENT CONTRACTOR RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF ACM FLOOR TILES AND MASTIC.

② ABATEMENT CONTRACTOR RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF ACM / PCB LOUVRE CAULK .

REFER TO ASBESTOS ABATEMENT SPECIFICATION 020800 - 3.17 FOR A MORE DETAILED DESCRIPTION OF THE ABATEMENT WORK REQUIREMENTS .

REFER TO PCB ABATEMENT SPECIFICATION 028400 - 3.13 FOR A MORE DETAILED DESCRIPTION OF THE PCB ABATEMENT WORK REQUIREMENTS .



**FIRST FLOOR
ABATEMENT
PLAN**

Drawing No.
**SPES
HM-101**

MSA
MICHAEL SHIALE ARCHITECTS, L.L.P.
140 Park Avenue New City, NY 10956 Tel 845 708-9200
www.shiale.com

**UNIVENT REPLACEMENT AT
STONY POINT, THIELS
& WEST HAVERSTRAW
ELEMENTARY SCHOOLS**
PES SED# 50-02-01-06-0-003-012
TES SED# 50-02-01-06-0-025-018
WHES SED# 50-02-01-06-0-024-015
140 ROUTE 210,
STONY POINT, NY 10980
COUNTY OF ROCKLAND

Mechanical
& Electrical
Engineer

Environmental
Engineer

QUEST, Inc.
1376 Route 9
Wappingers Falls, NY 12590
www.qualivenv.com

Drawn by AM
Checked by RL
Project No. 43040
Scale AS NOTED
Date 05-10-24



No.	Date	Revisions

0 1/2 1
IF THIS DRAWING DOES NOT
MEASURE TO FULL SCALE
NOT TO FULL SCALE

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, TO ALTER AN ITEM IN ANY WAY.

1 ROOF ABATEMENT PLAN

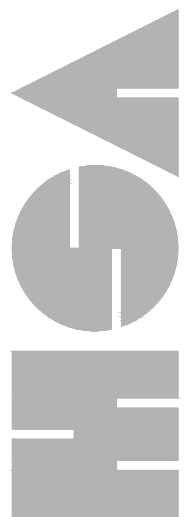
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Drawing Title
**ROOF
ABATEMENT
PLAN**

rawing No. **SPES**
HM-103

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STONY POINT, THIELLS
& WEST HAVERSTRAW
ELEMENTARY SCHOOLS

FES SED# 50-02-01-06-0-003-012
TES SED# 50-02-01-06-0-025-018
WHES SED# 50-02-01-06-0-024-015

10 ROUTE 210,
TONY POINT, NY 10980

Mechanical
& Electrical
Engineer:

Environmental Engineer:
QuEST, Inc.
1376 Route 9
Wappingers Falls, NY
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Drawn by

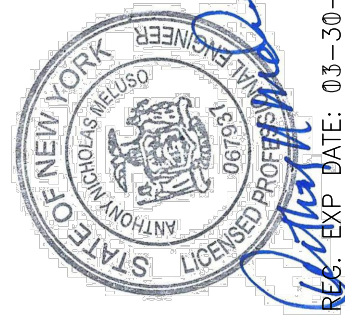
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Project No.

Scal

Date _____

Date 05-10-24



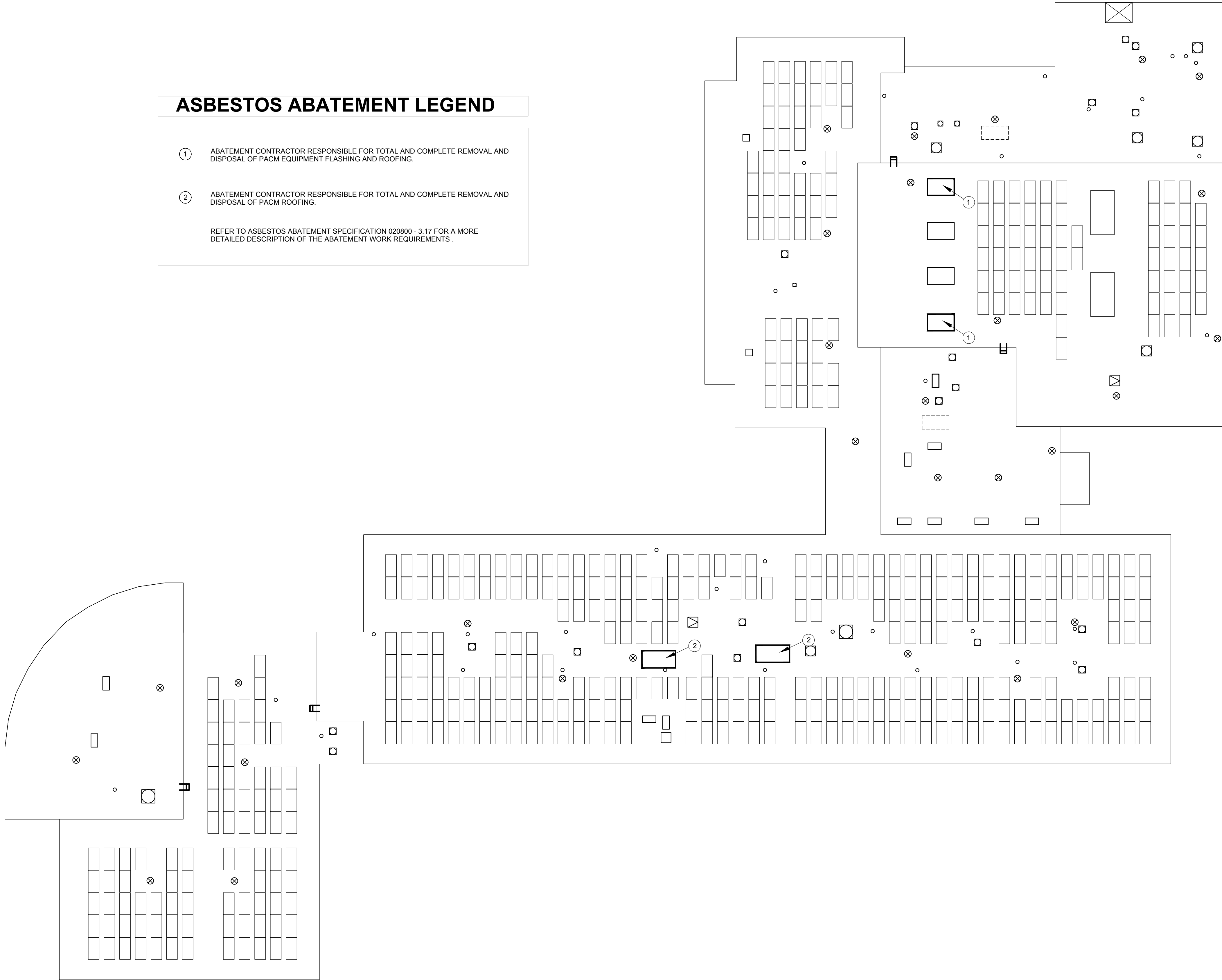
REG. EXP. DATE: 03-30-25

No.	Date	Revisions
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ASBESTOS ABATEMENT LEGEND

- | | |
|---|--|
| 1 | ABATEMENT CONTRACTOR RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF PACM EQUIPMENT FLASHING AND ROOFING. |
| 2 | ABATEMENT CONTRACTOR RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF PACM ROOFING. |

REFER TO ASBESTOS ABATEMENT SPECIFICATION 020800 - 3.17 FOR A MORE DETAILED DESCRIPTION OF THE ABATEMENT WORK REQUIREMENTS .



0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING NOT TO FULL SCALE

COMcheck Software Version COMcheckWeb
Mechanical Compliance Certificate

Project Information

Energy Code: 2020 NYStretch Energy Code - 90.1 (2016) Standard
Project Title: UNIVENT REPLACEMENT STONY POINT ELEMENTARY SCHOOL
Location: Thiells, New York
Climate Zone: 5a
Project Type: Alteration

Construction Site: 7 GURNEE DR STONY POINT, NY 10980
Owner/Agent: NORTH ROCKLAND CENTRAL SCHOOL DISTRICT 65 CHAPEL STREET GARNERVILLE, NY 10923 845-942-3000
Designer/Contractor: GREENMAN-PEDERSEN INC. 2 EXECUTIVE BLVD SUFFERN, NY 10901 845-368-4050

Mechanical Systems List

QuantitySystem Type & Description

- 2 ACCU-1A, ACCU-1B
VRF Condensing Unit, Air Cooled w/ Heat Recovery Heat Pump
Heating Mode: Capacity = 264 kBtu/h,
Proposed Efficiency = 3.44 COP, Required Efficiency = 3.20 COP
Cooling Mode: Capacity = 295 kBtu/h,
Proposed Efficiency = 9.30 EER, Required Efficiency = 9.30 EER
Proposed Part Load Efficiency = 20.25 IEER, Required Part Load Efficiency = 12.50 IEER
Fan System: None
SYSTEM VERIFICATION REQUIRED.
- 1 ACCU-2
VRF Condensing Unit, Air Cooled w/ Heat Recovery Heat Pump
Heating Mode: Capacity = 289 kBtu/h,
Proposed Efficiency = 3.36 COP, Required Efficiency = 3.20 COP
Cooling Mode: Capacity = 323 kBtu/h,
Proposed Efficiency = 9.30 EER, Required Efficiency = 9.30 EER
Proposed Part Load Efficiency = 20.40 IEER, Required Part Load Efficiency = 12.50 IEER
Fan System: None
SYSTEM VERIFICATION REQUIRED.
- 1 ACCU-3A
VRF Condensing Unit, Air Cooled w/ Heat Recovery Heat Pump
Heating Mode: Capacity = 216 kBtu/h,
Proposed Efficiency = 3.65 COP, Required Efficiency = 3.20 COP
Cooling Mode: Capacity = 243 kBtu/h,
Proposed Efficiency = 10.15 EER, Required Efficiency = 9.30 EER
Proposed Part Load Efficiency = 20.40 IEER, Required Part Load Efficiency = 12.50 IEER
Fan System: None
SYSTEM VERIFICATION REQUIRED.
- 1 ACCU-3B
VRF Condensing Unit, Air Cooled w/ Heat Recovery Heat Pump
Heating Mode: Capacity = 96 kBtu/h,
Proposed Efficiency = 4.10 COP, Required Efficiency = 3.30 COP
Cooling Mode: Capacity = 109 kBtu/h,
Proposed Efficiency = 11.85 EER, Required Efficiency = 10.80 EER
Proposed Part Load Efficiency = 23.35 IEER, Required Part Load Efficiency = 14.40 IEER
Fan System: None
SYSTEM VERIFICATION REQUIRED.

Project Title: UNIVENT REPLACEMENT STONY POINT ELEMENTARY SCHOOL
Data Filename: Report date: 04/08/24
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QuantitySystem Type & Description

- 2 ACCU-4, ACCU-5
VRF Condensing Unit, Air Cooled w/ Heat Recovery Heat Pump
Heating Mode: Capacity = 192 kBtu/h,
Proposed Efficiency = 3.83 COP, Required Efficiency = 3.20 COP
Cooling Mode: Capacity = 215 kBtu/h,
Proposed Efficiency = 11.15 EER, Required Efficiency = 10.40 EER
Proposed Part Load Efficiency = 21.45 IEER, Required Part Load Efficiency = 13.70 IEER
Fan System: None
SYSTEM VERIFICATION REQUIRED.
- 1 ACCU-6
VRF Condensing Unit, Air Cooled w/ Heat Recovery Heat Pump
Heating Mode: Capacity = 216 kBtu/h,
Proposed Efficiency = 3.73 COP, Required Efficiency = 3.20 COP
Cooling Mode: Capacity = 243 kBtu/h,
Proposed Efficiency = 10.45 EER, Required Efficiency = 9.30 EER
Proposed Part Load Efficiency = 20.90 IEER, Required Part Load Efficiency = 12.50 IEER
Fan System: None
SYSTEM VERIFICATION REQUIRED.
- 4 Ceiling Cassette, 15 MBH
Cooling: 4 each - VRF Zone Fan Unit, Capacity = 15 kBtu/h
No minimum efficiency requirement applies
SYSTEM VERIFICATION REQUIRED.
- 10 Ceiling Cassette, 12 MBH
Cooling: 10 each - VRF Zone Fan Unit, Capacity = 12 kBtu/h
No minimum efficiency requirement applies
SYSTEM VERIFICATION REQUIRED.
- 2 Ceiling Cassette, 6 MBH
Cooling: 2 each - VRF Zone Fan Unit, Capacity = 6 kBtu/h
No minimum efficiency requirement applies
SYSTEM VERIFICATION REQUIRED.

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2020 NYStretch Energy Code - 90.1 (2016) Standard requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date

Project Title: UNIVENT REPLACEMENT STONY POINT ELEMENTARY SCHOOL
Data Filename: Report date: 04/08/24
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COMcheck Software Version COMcheckWeb
Inspection Checklist

Energy Code: 2020 NYStretch Energy Code - 90.1 (2016) Standard

Requirements: 100.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
4.2.2, 6.4.4.2.1, 6.7.2 [PR2]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met. Location on plans/spec: M-001
4.2.2, 8.7 [PR6]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the electrical systems and equipment and document where exceptions are claimed. Feeder connectors sized in accordance with approved plans and branch circuits sized for maximum drop of 5%.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
6.7.2.4 [PR5]	Detailed instructions for HVAC systems commissioning included on the plans or specifications for projects >=50,000 ft2.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met. Location on plans/spec: M-001

Additional Comments/Assumptions:

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
6.4.3.7 [F09]	Freeze protection and snow/melting system sensors for future connection to controls.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: UNIVENT REPLACEMENT STONY POINT ELEMENTARY SCHOOL
Data Filename: Report date: 04/08/24
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Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.4.1.4, 6.4.1.5 [ME1]	HVAC equipment efficiency verified. Non-NAECA HVAC equipment labeled as meeting 90.1.	Efficiency: _____	Efficiency: _____	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	See the Mechanical Systems list for values.
6.4.3.4.1 [ME3]	Stair and elevator shaft vents have motorized dampers that automatically close.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
6.4.3.4.2, 6.4.3.4.3 [ME4]	Outdoor air and exhaust systems have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Check gravity dampers where allowed.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met. Location on plans/spec: SPES M-004
6.4.3.4.5 [ME39]	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
6.4.3.4.4 [ME5]	Ventilation fans >0.75 hp have automatic controls to shut off fan when not required.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
6.4.3.8 [ME6]	Demand control ventilation provided for spaces >500 ft2 and >25 people/1,000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met. Location on plans/spec: SPES M-005
6.5.3.2.1 [ME40]	DX cooling systems >= 75 kBtu/h (>= 65 kBtu/h effective 1/2016) and chilled-water and evaporative cooling fan motor hp >= 1/4 designed to vary supply fan airflow as a function of load and comply with operational requirements.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met. Location on plans/spec: SPES M-005 See the Mechanical Systems list for values.
6.4.4.1.1 [ME7]	Insulation exposed to weather protected from damage. Insulation outside of the conditioned space and associated with cooling systems is vapor retardant.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
6.4.4.1.2 [ME8]	HVAC ducts and plenums insulated per Table 6.8.2. Where ducts or plenums are installed in or under a slab, verification may need to occur during Foundation Inspection.	R_____	R_____	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
6.4.4.1.3 [ME9]	HVAC piping insulation thickness. Where piping is installed in or under a slab, verification may need to occur during Foundation Inspection.	_____ in.	_____ in.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: UNIVENT REPLACEMENT STONY POINT ELEMENTARY SCHOOL
Data Filename: Report date: 04/08/24
Page 4 of 8

Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.4.4.1.4 [ME41]	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
6.4.4.2.1 [ME10]	Ducts and plenums having pressure class ratings are Seal Class A construction.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
6.8.1-15, 6.8.1-16 [ME110]	Electrically operated DX-DOAS units meet requirements per Tables 6.8.1-15 or 6.8.1-16.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
6.4.4.2.2 [ME11]	Ductwork operating >3 in. water column requires air leakage testing.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
6.5.2.3 [ME19]	Dehumidification controls provided to prevent reheating, recouling, mixing of hot and cold airstreams or concurrent heating and cooling of the same airstream.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
6.5.2.4.1 [ME68]	Humidifiers with airstream mounted preheating jackets have preheat auto-shutoff value set to activate when humidification is not required.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
6.5.2.4.2 [ME69]	Humidification system dispersion tube hot surfaces in the airstreams of ducts or air-handling units insulated >= R-0.5.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
6.5.2.5 [ME70]	Preheat coils controlled to stop heat output whenever mechanical cooling, including economizer operation, is active.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
6.5.2.6 [ME106]	Units that provide ventilation air to multiple zones and operate in conjunction with zone heating and cooling systems are prevented from using heating or heat recovery to warm supply air above 60°F when representative building loads or outdoor air temperature indicate that most zones demand cooling.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
6.5.4.7 [ME107]	Chilled-water cooling coils provide a 15°F or higher temperature difference between leaving and entering water temperatures and a minimum of 5°F leaving water temperature at design conditions.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
6.5.3.3 [ME42]	Multiple zone VAV systems with ODC of individual zone boxes have static pressure setpoint reset controls.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply. See the Mechanical Systems list for values.

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: UNIVENT REPLACEMENT STONY POINT ELEMENTARY SCHOOL
Data Filename: Report date: 04/08/24
Page 5 of 8

Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.5.4.2 [ME25]	HVAC pumping systems with >= 3 control valves designed for variable fluid flow (see section details).			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
6.5.6.1 [ME56]	Exhaust air energy recovery on systems meeting Tables 6.5.6.1-1, and 6.5.6.1-2.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
6.5.7.2.1 [ME32]	Kitchen hoods >5,000 cfm have make up air >=50% of exhaust air volume.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
6.5.7.2.4 [ME49]	Approved field test used to evaluate design air flow rates and demonstrate proper capture and containment of kitchen exhaust systems.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
6.5.8.1 [ME34]	Unenclosed spaces that are heated use only radiant heat.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
6.4.3.9 [ME63]	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45°F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60°F and cooling setpoint >= 60°F.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
6.5.10 [ME73]	Doors separating conditioned space from the outdoors have controls that disable/reset heating and cooling system when open.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Alteration project to existing building.
6.4.5 [ME123]	Site-assembled or site-constructed walk-in coolers and freezers conform to section details.			☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: UNIVENT REPLACEMENT STONY POINT ELEMENTARY SCHOOL
Data Filename: Report date: 04/08/24
Page 6 of 8

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
8.4.2 [EL10]	At least 50% of all 125 volt 15- and 20-Amp receptacles are controlled by an automatic control device.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
8.4.3 [EL11]	New buildings have electrical energy use measurement devices installed. Where tenant spaces exist, each tenant is monitored separately. In buildings with a digital control system the energy use is transmitted to to control system and displayed graphically.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
10.4.1 [EL9]	Electric motors meet requirements where applicable.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C408.2.5, 1 [F17]	Mechanical systems, Renewable Systems, and SWH Commissioning: Furnished HVAC as-built drawings submitted within 90 days of system acceptance. See section details.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: UNIVENT REPLACEMENT STONY POINT ELEMENTARY SCHOOL
Data Filename: Report date: 04/08/24
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Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
6.4.3.1.2 [F13]	Thermostatic controls have a 5 °F deadband.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
6.4.3.2 [F120]	Temperature controls have setpoint overlap restrictions.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
6.4.3.3.1 [F121]	HVAC systems equipped with at least one automatic shutdown control.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
6.4.3.3.2 [F122]	Setback controls allow automatic restart and temporary operation as required for maintenance.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
6.4.3.5 [F15]	Heat pump controls prevent supplemental electric resistance heat from coming on when not needed.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met. Location on plans/spec: SPES M-005
6.4.3.6 [F16]	When humidification and dehumidification are provided to a zone, simultaneous operation is prohibited. Humidity control prohibits the use of fossil fuel or electricity to produce RH > 30% in the warmest zone humidified and RH < 60% in the coldest zone dehumidified.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
6.7.2.1 [F17]	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
6.7.2.2 [F18]	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
6.7.2.3 [F19]	An air and/or hydronic system balancing report is provided for HVAC systems serving zones >5,000 ft2 of conditioned area.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
6.7.2.4 [F110]	HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
10.4.3 [F124]	Elevators are designed with the proper lighting, ventilation power, and standby mode.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.
C408.2.4 [F129]	Mechanical systems, Renewable Systems, and SWH Commissioning: Preliminary commissioning report completed and certified by registered design professional or approved agency. See section details.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: UNIVENT REPLACEMENT STONY POINT ELEMENTARY SCHOOL
Data Filename: Report date: 04/08/24
Page 8 of 8



No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

--

Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

Mechanical Electrical Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUFFERN, NY 10901 PROJ. NO. : MNY-2000060-00
Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUFFERN, NY 10901

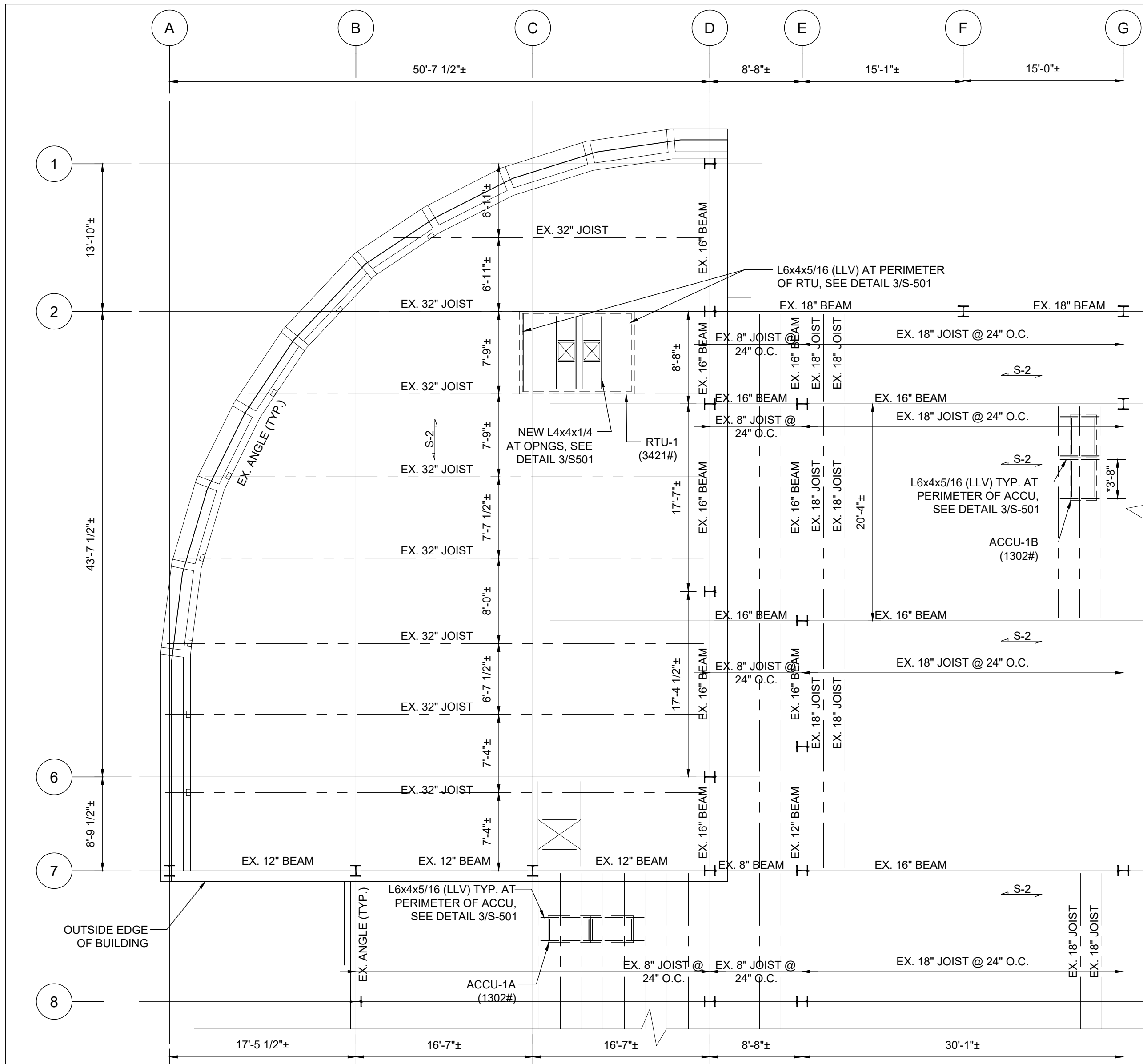
UNIVENT REPLACEMENT AT STONY POINT, THIELLS, WEST HAVESTRAW ELEMENTARY SCHOOL
SD# 50-02-01-06-0-014-012
SD# 50-02-01-06-0-025-018
SD# 50-02-01-06-0-024-015
NEW YORK STATE
NORTH ROCKLAND COUNTY

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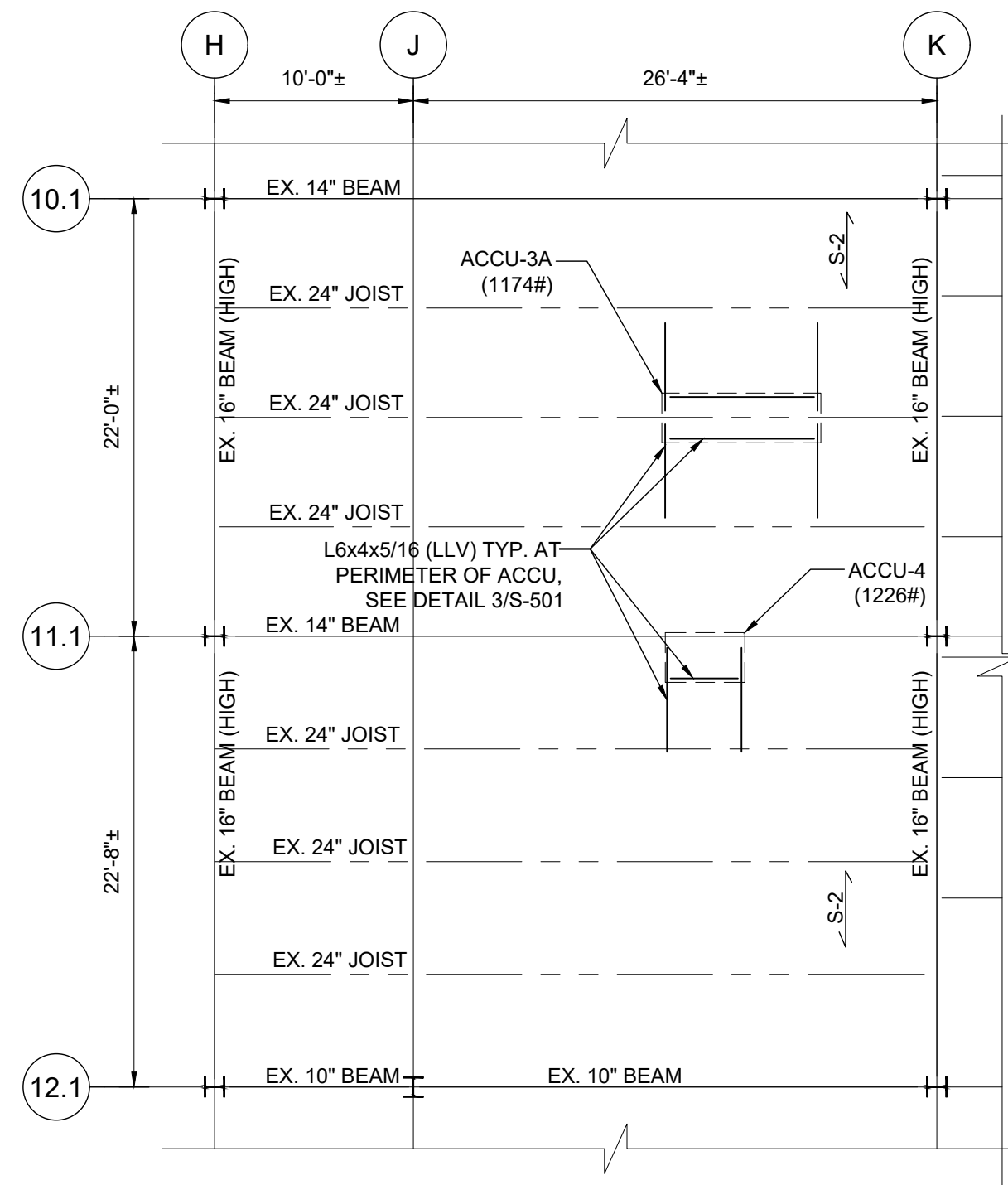
Drawing Title
ENERGY CODE COMPLIANCE

Michael Shilale Architects, LLP
140 Park Avenue New York, NY 10050 Tel 845-708-9200
www.shilale.com

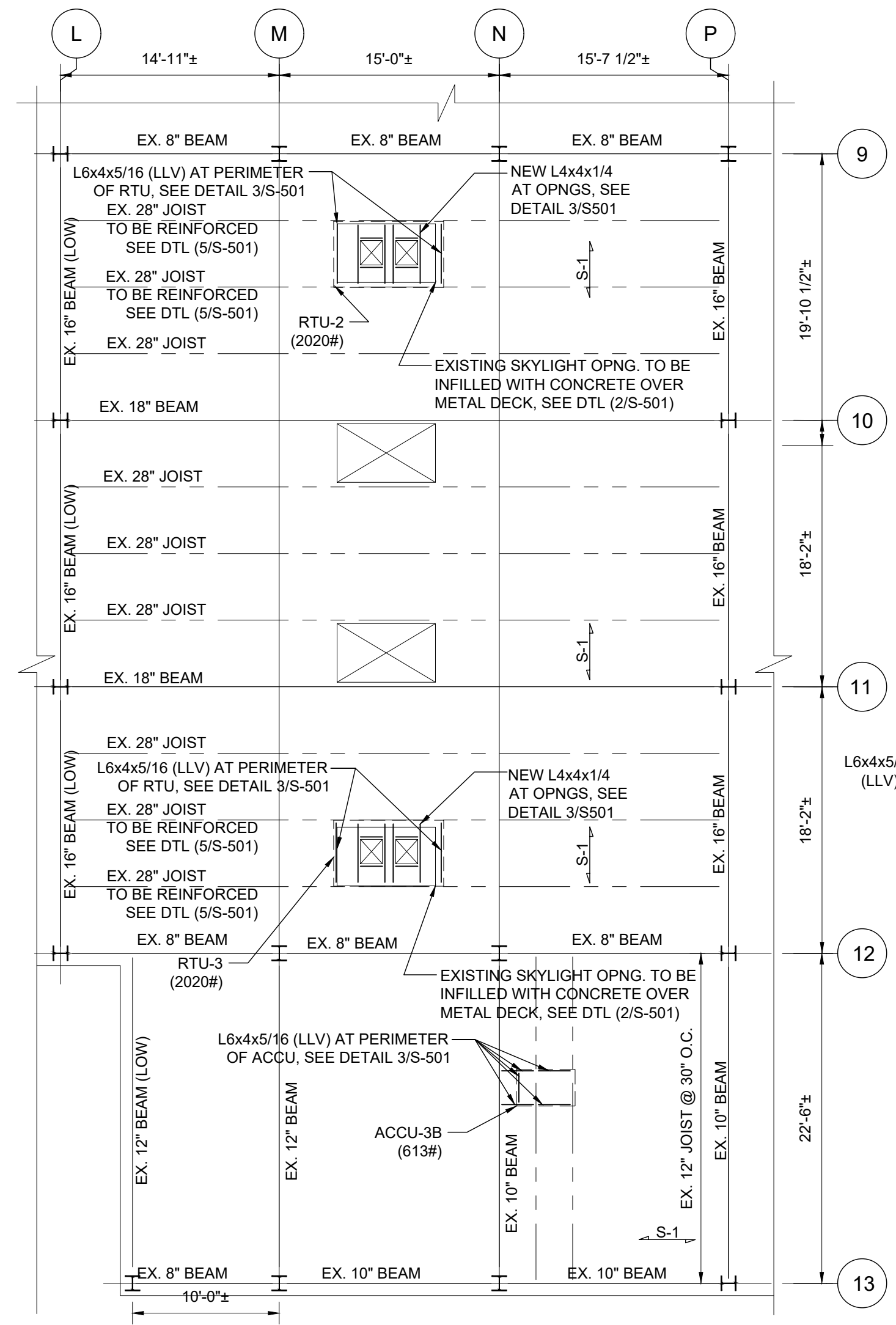
Drawing No.
SPES-EN001



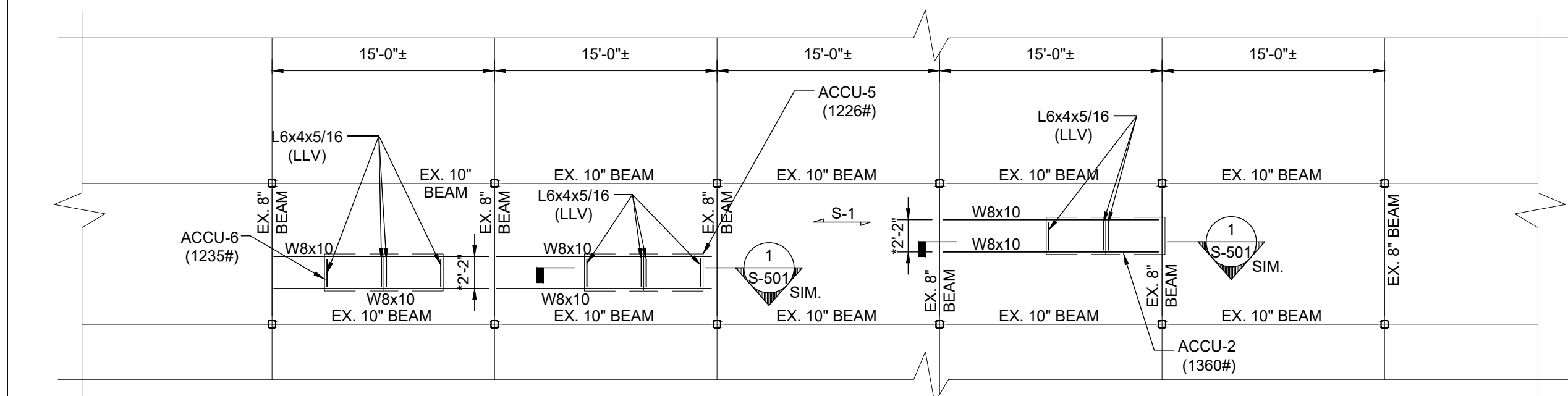
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SCALE: 1/8" = 1'-0"



2 PARTIAL ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"



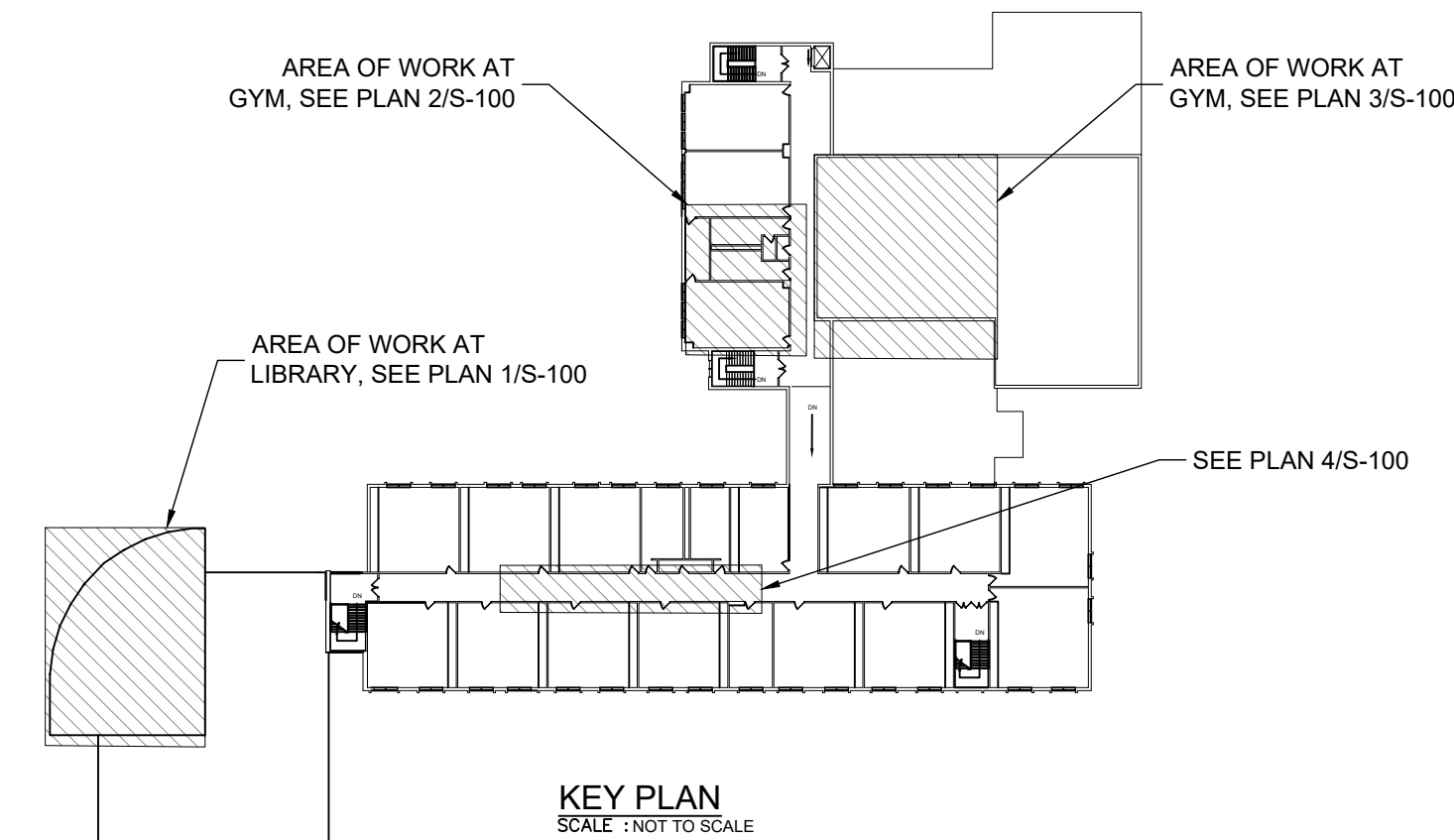
3 PARTIAL ROOF FRAMING PLAN AT GYM
SCALE: 1/8" = 1'-0"



4 PARTIAL ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"

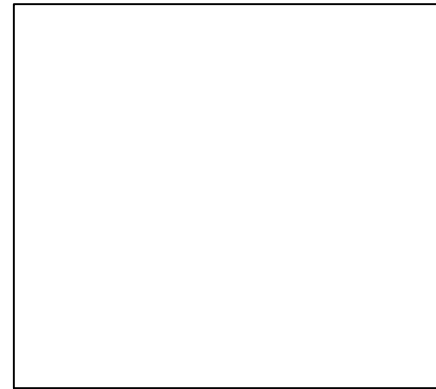
ROOF LOAD SCHEDULE	
EXISTING DEAD LOAD (S-1)	
3 1/2" LWT CONC. W/ 1 1/2" ROOF DECK	41 PSF
ROOFING/INSULATION	5 PSF
ROOF BEAMS	5 PSF
CEILING	4 PSF
MEP	5 PSF
TOTAL DEAD LOAD	60 PSF
EXISTING DEAD LOAD (S-2)	
ROOF DECK	2 PSF
ROOFING/INSULATION	5 PSF
ROOF BEAMS	5 PSF
CEILING	3 PSF
MEP	5 PSF
TOTAL DEAD LOAD	20 PSF
LIVE LOAD:	
ROOF	20 PSF
+ WEIGHT OF MECHANICAL UNITS	

- PLAN NOTES:
- EXISTING CONSTRUCTION IS THE BEST REPRESENTATION OF INFORMATION COMPILED FROM HISTORICAL DOCUMENTS. CONTRACTOR SHALL SURVEY AND CONFIRM EXISTING CONSTRUCTION PRIOR TO BEGINNING ANY WORK. NOTIFY THE ARCHITECT IF ANY DISCREPANCIES ARE DISCOVERED.
 - EXISTING STEEL COLUMNS AND BEAMS ARE NOT TO BE REMOVED.
 - CONTRACTOR SHALL BRACE, SHORE, PROTECT, ETC EXISTING CONSTRUCTION AS REQUIRED TO PROVIDE SAFE WORK ENVIRONMENT AND OVERALL BUILDING STABILITY.
 - CARE SHALL BE TAKEN NOT TO DISTURB OR DAMAGE EXISTING STRUCTURAL STEEL COLUMNS AND BEAMS ETC DURING CONSTRUCTION.
 - $\overrightarrow{S-1}$ INDICATES SPAN DIRECTION OF EXISTING ROOF DECK. EXISTING CONSTRUCTION CONSISTS OF CONCRETE OVER METAL DECK SPANNING OVER STEEL BEAMS.
 - $\overrightarrow{S-2}$ INDICATES SPAN DIRECTION OF EXISTING ROOF DECK. EXISTING CONSTRUCTION CONSISTS OF ROOF METAL DECK SPANNING OVER STEEL BEAMS.
 - COORDINATE SIZE AND LOCATION OF ALL ROOFTOP EQUIPMENT AND ROOF PENETRATIONS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.



0 1/2 1
IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



Drawn by	S.I.
Checked by	R.B.
Project No.	43040
Scale	AS NOTED
Date	03-04-25

Mechanical & Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981 PROJ. NO. : MNY-2000080.00
	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVESTRAW ELEMENTARY SCHOOL	SD# 50-02-01-06-0-014-012
	SD# 50-02-01-06-0-025-018
MICHAEL SHILALE ARCHITECTS, LLP 140 Park Avenue New City, NY 10956 Tel 845-708-9200 www.shilale.com	SD# 50-02-01-06-0-024-015
	SD# 50-02-01-06-0-024-015



Drawing Title	STRUCTURAL ROOF PLAN & DETAILS
Drawing No.	SPES-S-100

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D1

REMOVE EXISTING UV AND CABINET. PREPARE LOCATION FOR NEW UV. SEE MECHANICAL DRAWINGS.

D2

REMOVE EXISTING CEILING MOUNTED CASSETTES/HVAC UNIT AND PREPARE FOR NEW. SEE MECHANICAL DRAWINGS FOR MORE DETAILS.

D3

EXISTING CEILING AND LIGHTS TO BE REMOVED. PREPARE FOR NEW. (BASE BID)

D4

BASE BID; REMOVE AND STORE EXISTING CEILING TILE & CEILING LIGHTS FOR MODIFICATION/REINSTALLATION AS REQ'D FOR INSTALLATION OF CEILING CASSETTES/NEW HVAC EQUIPMENT. SEE MECHANICAL DRAWINGS.
ALT-100; REMOVE CEILING TILE, GRID AND CEILING LIGHTS.

D5

DEMO PORTION OF WALL AS REQUIRED TO INSTALL NEW UV. PREPARE LOCATION FOR NEW UV.

D6

REMOVE EXISTING HVAC EQUIPMENT. SEE MECHANICAL DRAWINGS.

D7

SKYLIGHT TO BE REMOVED. SEE DEMOLITION ROOF PLAN SPES-D-103

D8

REMOVE EXISTING LOUVER ON SOFFIT AND PREPARE AREA TO BE PATCHED.

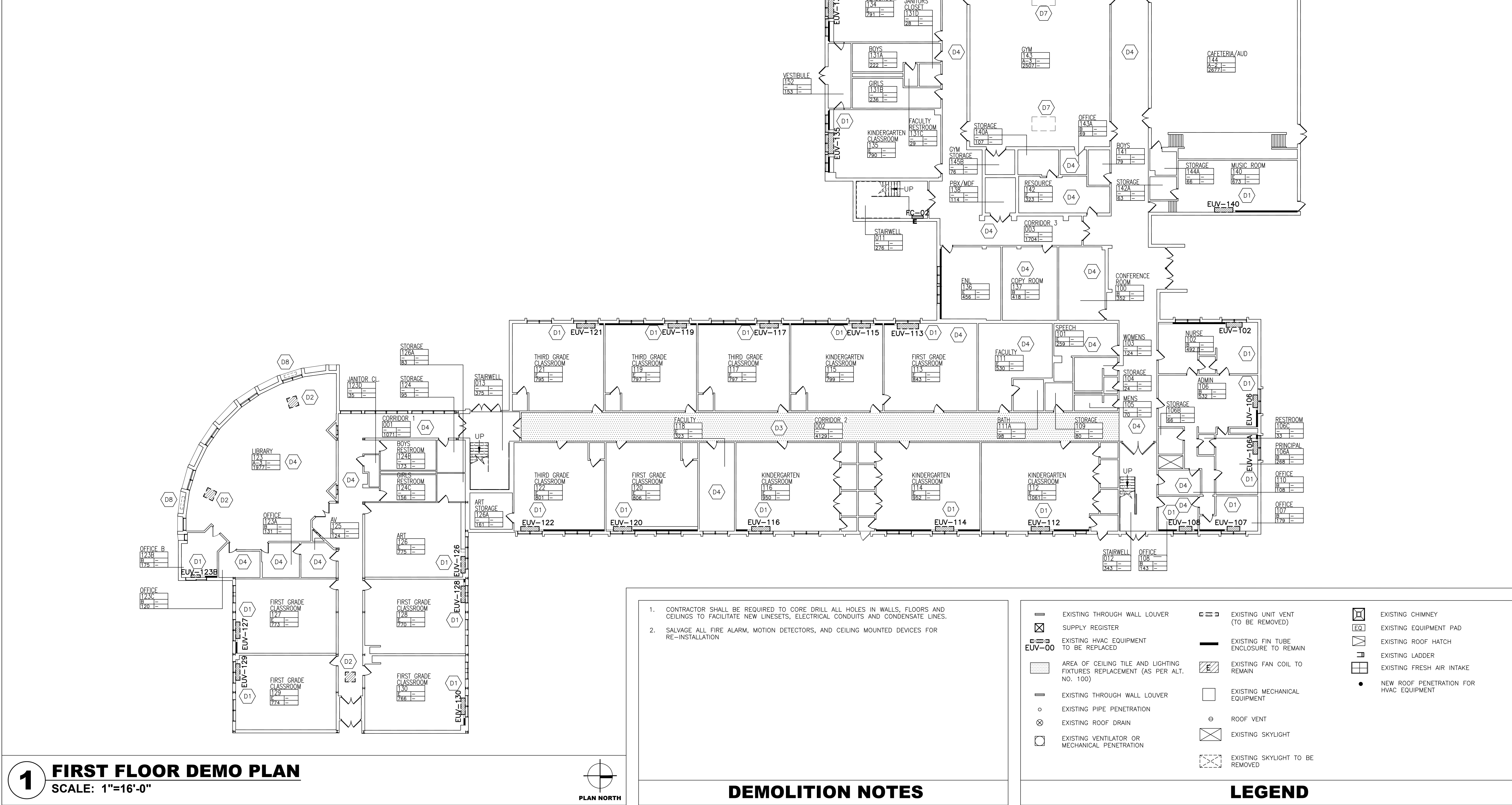
D9

PREPARE GYPSUM BOARD CEILING TO RECEIVE ACCESS HATCH. SEE MECHANICAL DRAWINGS.

D10

REMOVE EXISTING GYPSUM CEILING AS REQUIRED FOR INSTALLATION OF NEW DUCTWORK OR INSULATION OVER EXISTING DUCTWORK. SEE MECHANICAL DRAWINGS. ANY CEILING FIXTURES REQUIRED TO BE REMOVED TO BE STORED FOR REINSTALLATION.

DEMO KEY NOTES



DEMOLITION NOTES

1.

CONTRACTOR SHALL BE REQUIRED TO CORE DRILL ALL HOLES IN WALLS, FLOORS AND CEILINGS TO FACILITATE NEW LINESETS, ELECTRICAL CONDUITS AND CONDENSATE LINES.

2.

SALVAGE ALL FIRE ALARM, MOTION DETECTORS, AND CEILING MOUNTED DEVICES FOR RE-INSTALLATION

LEGEND

—

EXISTING THROUGH WALL LOUVER

☒

SUPPLY REGISTER

EXISTING HVAC EQUIPMENT TO BE REPLACED

AREA OF CEILING TILE AND LIGHTING FIXTURES REPLACEMENT (AS PER ALT. NO. 100)

—

EXISTING THROUGH WALL LOUVER

○

EXISTING PIPE PENETRATION

⊗

EXISTING ROOF DRAIN

□

EXISTING VENTILATOR OR MECHANICAL PENETRATION

—

EXISTING UNIT VENT (TO BE REMOVED)

—

EXISTING FIN TUBE ENCLOSURE TO REMAIN

EXISTING FAN COIL TO REMAIN

□

EXISTING MECHANICAL EQUIPMENT

⊙

ROOF VENT

⊠

EXISTING SKYLIGHT

EXISTING SKYLIGHT TO BE REMOVED

EXISTING CHIMNEY

EQ

EXISTING EQUIPMENT PAD

⊠

EXISTING ROOF HATCH

⊠

EXISTING LADDER

⊠

EXISTING FRESH AIR INTAKE

•

NEW ROOF PENETRATION FOR HVAC EQUIPMENT

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1", THEN DRAWING IS NOT TO FULL SCALE

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Drawn by
JR/SP/CG

Checked by
MS/JC

Project No.
43041

Scale
AS NOTED

Date
03-18-24

GREENMAN PEDERSEN, INC
Mechanical & Electrical Engineer
400 BELLA BOULEVARD
MONTEBELLO, NY 10901

GREENMAN PEDERSEN, INC
Structural Engineer
400 BELLA BOULEVARD
MONTEBELLO, NY 10901

UNIVENT REPLACEMENT AT
STONY POINT, THIELLS
AND WEST HAVERSTRAW
ELEMENTARY SCHOOL
SPES SED# 50-02-01-06-0-014-012
TES SED# 50-02-01-06-0-025-018
WHES SED# 50-02-01-06-0-024-015
7 GURNEE DRIVE
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MHSA

Michael Shilale Architects, L.L.P.
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MHSA

Drawing Title
**FIRST FLOOR
DEMO PLAN**

Drawing No.
SPES-D-101

0 03-04-25 BIDDING DOCUMENTS

No. Date Revisions

D20

REMOVE EXISTING SKYLIGHT AND CURB FOR INSTALLATION OF NEW HVAC EQUIPMENT. SEE MECHANICAL AND STRUCTURAL DRAWINGS.

D21

REMOVE EXISTING CONDENSER UNIT AND PIPING. PREPARE FOR ROOF REPAIR.

D22

REMOVE EXISTING EXHAUST FAN. PREPARE FOR ROOF REPAIR.

D23

SAWCUT EXISTING ROOF FOR NEW RTU. COORDINATE WITH MECHANICAL AND STRUCTURAL DRAWINGS.

D24

CORE DRILL ROOF DECK REQUIRED FOR POWER AND LINESETS FOR CONDENSER UNITS. COORDINATE LOCATIONS WITH DRAWING SPES-M-111

DEMO KEY NOTES

1

ROOF DEMO PLAN

SCALE: 1"=16'-0"

1. CONTRACTOR SHALL BE REQUIRED TO CORE DRILL ALL HOLES IN WALLS, FLOORS AND CEILINGS TO FACILITATE NEW LINESETS, ELECTRICAL CONDUITS AND CONDENSATE LINES.

2. SALVAGE ALL FIRE ALARM, MOTION DETECTORS, AND CEILING MOUNTED DEVICES FOR RE-INSTALLATION

DEMOLITION NOTES

—

EXISTING THROUGH WALL LOUVER

☒

SUPPLY REGISTER

EXISTING HVAC EQUIPMENT TO BE REPLACED

AREA OF CEILING TILE AND LIGHTING FIXTURES REPLACEMENT (AS PER ALT. NO. 100)

—

EXISTING THROUGH WALL LOUVER

○

EXISTING PIPE PENETRATION

⊗

EXISTING ROOF DRAIN

□

EXISTING VENTILATOR OR MECHANICAL PENETRATION

—

EXISTING UNIT VENT (TO BE REMOVED)

—

EXISTING FIN TUBE ENCLOSURE TO REMAIN

EXISTING FAN COIL TO REMAIN

□

EXISTING MECHANICAL EQUIPMENT

○

ROOF VENT

⊗

EXISTING SKYLIGHT

EXISTING SKYLIGHT TO BE REMOVED

EXISTING CHIMNEY

EXISTING EQUIPMENT PAD

EXISTING ROOF HATCH

EXISTING LADDER

EXISTING FRESH AIR INTAKE

NEW ROOF PENETRATION FOR HVAC EQUIPMENT

LEGEND

0

1/2

1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

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Drawn by
Checked by
Project No.
Scale
Date

GREENMAN PEDERSEN, INC

400 BELLA ROUTE 240

MONTEBELLO, NY 10901

MECHANICAL & ELECTRICAL ENGINEER

GREENMAN PEDERSEN, INC

400 BELLA ROUTE 240

MONTEBELLO, NY 10901

STRUCTURAL ENGINEER

UNIVENT REPLACEMENT AT STONY POINT, THIELS AND WEST HAVERSTRAW ELEMENTARY SCHOOL

SPES SED# 50-02-01-06-0-014-012
YES SED# 50-02-01-06-0-025-018
WHES SED# 50-02-01-06-0-024-015
7 SURVEY DATE: NY 10960
COUNTY OF ROCKLAND

ROOF DEMO PLAN

SPES-D-103

Revisions

No.

Date

REG. EXP. DATE: 12-31-25

- ## KEY NOTES



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



- ## LEGEND

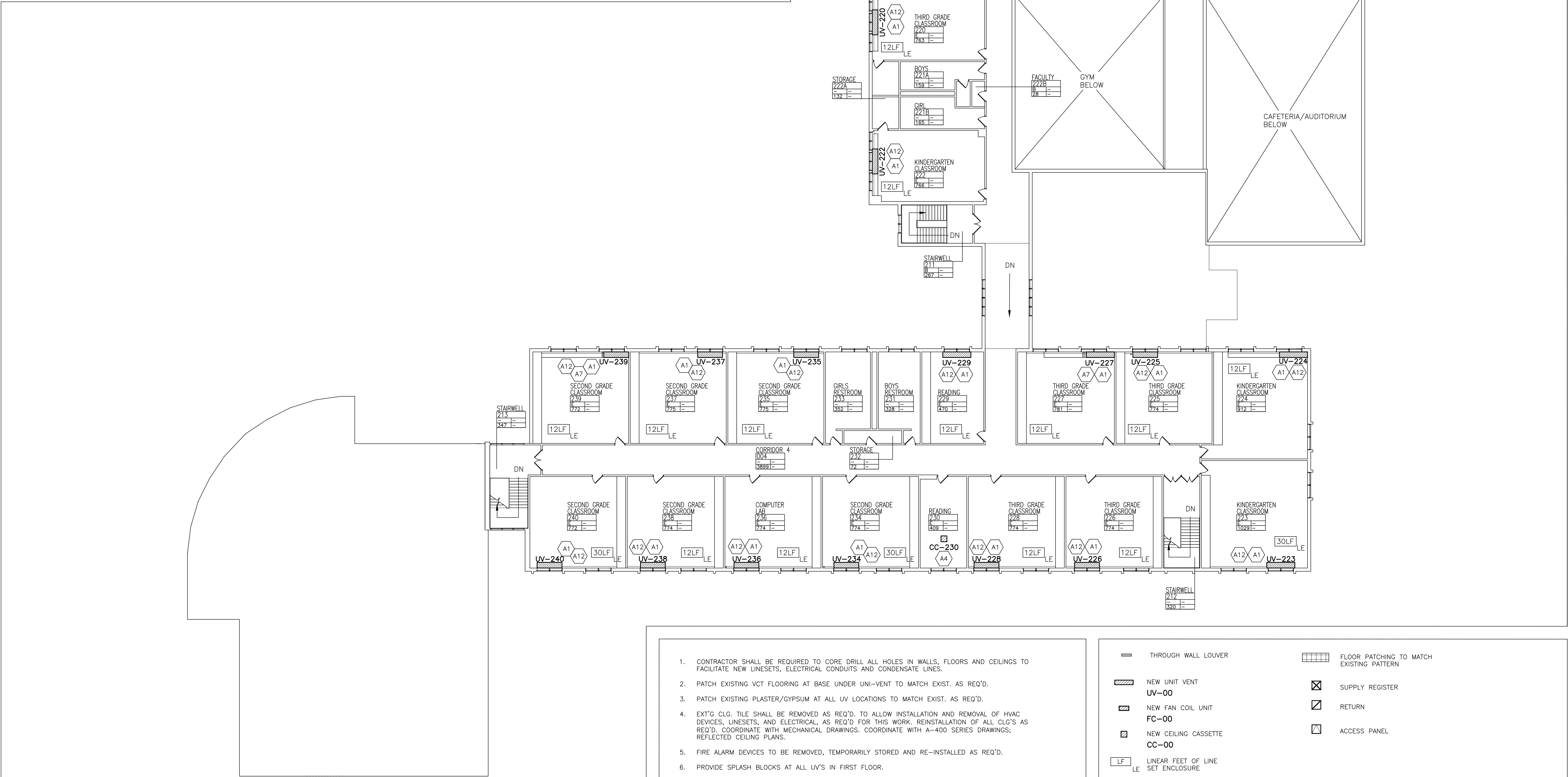
REG. EXP DATE: 12-31-25

7 GURNEE DRIVE
STONY POINT, NY 10980

Drawing No.

SPES-A-101

A1 INSTALL NEW UNIT VENTILATOR (UV). SEE MECHANICAL DRAWINGS	A7 PATCH FLOOR AS REQUIRED WHERE HVAC UNIT WAS REMOVED.
A2 VOID.	A8 PATCH SOFFIT WHERE LOUVER WAS REMOVED AND MATCH FINISH TO EXISTING.
A3 INSTALL NEW AIR HANDLER UNIT (AHU). SEE MECHANICAL DRAWINGS	A9 PROVIDE NEW LOUVER L-1. SEE MECHANICAL DRAWINGS
A4 INSTALL NEW CEILING CASSETTES (CC). SEE MECHANICAL DRAWINGS	A10 PATCH EXISTING FLOOR AND WALL WHERE EXISTING UV IS REMOVED
A5 INSTALL NEW SUPPLY/RETURN DIFFUSER AND REPLACE CEILING TILES WHERE REQUIRED. SEE MECHANICAL DRAWINGS FOR LOCATION OF DIFFUSERS.	A11 VOID
A6 INSTALL NEW RTU ABOVE TO INFILL EXISTING SKYLIGHT OPENING. SEE PLANS SPES-A-103, SPES-S-101, AND SPES-M-106.	A12 PROVIDE METAL LINE SET ENCLOSURES AS PER DETAIL 1/A-610. COORDINATE WITH MECHANICAL DRAWINGS FOR LOCATIONS.
KEY NOTES	



1 **PROPOSED SECOND FLOOR PLAN**
SCALE: 1/16"=1'-0"

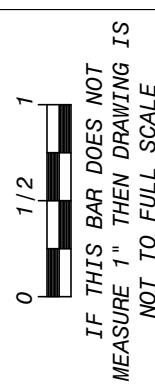


GENERAL NOTES

- CONTRACTOR SHALL BE REQUIRED TO CORE DRILL ALL HOLES IN WALLS, FLOORS AND CEILINGS TO FACILITATE NEW LINESETS, ELECTRICAL CONDUITS AND CONDENSATE LINES.
- PATCH EXISTING VOT FLOORING AT BASE UNDER UNI-VENT TO MATCH EXIST. AS REQ'D.
- PATCH EXISTING PLASTER/GYPSUM AT ALL UV LOCATIONS TO MATCH EXIST. AS REQ'D.
- EXT'G CLG. TILE SHALL BE REMOVED AS REQ'D. TO ALLOW INSTALLATION AND REMOVAL OF HVAC DEVICES, LINESETS, AND ELECTRICAL, AS REQ'D FOR THIS WORK. REINSTALLATION OF ALL CLG'S AS REQ'D. COORDINATE WITH MECHANICAL DRAWINGS. COORDINATE WITH A-400 SERIES DRAWINGS; REFLECTED CEILING PLANS.
- FIRE ALARM DEVICES TO BE REMOVED, TEMPORARILY STORED AND RE-INSTALLED AS REQ'D.
- PROVIDE SPLASH BLOCKS AT ALL UV'S IN FIRST FLOOR.

- | | |
|--|---|
| <div>THROUGH WALL LOUVER</div> | <div>FLOOR PATCHING TO MATCH EXISTING PATTERN</div> |
| <div>NEW UNIT VENT
UV-00</div> | <div>SUPPLY REGISTER</div> |
| <div>NEW FAN COIL UNIT
FC-00</div> | <div>RETURN</div> |
| <div>NEW CEILING CASSETTE
CC-00</div> | <div>ACCESS PANEL</div> |
| <div>LINEAR FEET OF LINE SET ENCLOSURE</div> | |

LEGEND



IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, TO ALTER AN ITEM IN ANY WAY.

Down by
JR/SP/CG

Checked by
MS/JC

Project No.
43040

Scale
AS NOTED

Date
03-18-24

REG. EXP DATE: 12-31-25

GREENMAN PEDERSEN, INC
400 BELLA BOULEVARD
MONTEBELLO, NY 10901

Mechanical & Electrical Engineer:

GREENMAN PEDERSEN, INC
400 BELLA BOULEVARD
MONTEBELLO, NY 10901

Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELLS AND WEST HAVERSTRAW ELEMENTARY SCHOOL

SPES SED# 50-02-01-08-0-014-012
YES SED# 50-02-01-06-0-025-018
WHES SED# 50-02-01-06-0-024-015

7 EIDER DRIVE
STONY POINT, NY 10980

COUNTY OF ROCKLAND

MSA

MICHAEL SHILALE ARCHITECTS, L.L.P.
140 Park Avenue New York, NY 10022 Tel 945-705-6000
info@shilale.com

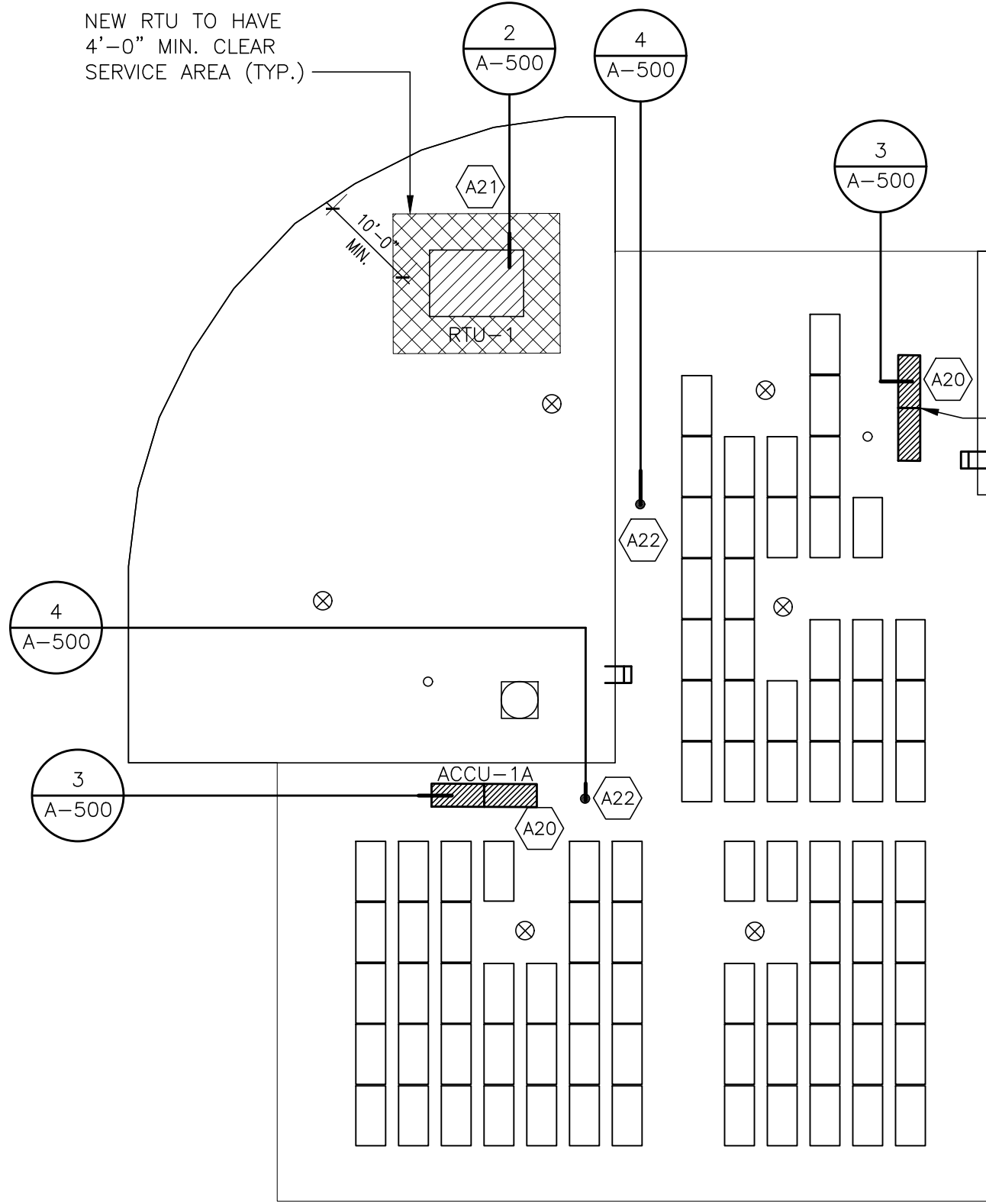
Drawing Title
PROPOSED SECOND FLOOR PLAN

Drawing No.
SPES-A-102

No.	Date	Revisions
0	03-04-25	BIDDING DOCUMENTS

- A20 INSTALL NEW AIR-COOLING-CONDENSING UNIT (ACCU)
- A21 INSTALL NEW RTU. SEE STRUCTURAL AND MECHANICAL DRAWINGS.
- A22 NEW MECHANICAL ROOF PENETRATION WITH ROOF FLASHING. SEE DETAIL 4/A-500 AND MECHANICAL DRAWINGS.

KEY NOTES



NEW RTU TO INFILL EXISTING SKYLIGHT OPENING. SEE PLANS SPES-S-101, AND SPES-M-111.

NEW PROTECTION RAILING TO MAINTAIN 10'-0" MIN. CLEARANCE FROM ROOF EDGE AT NEW RTU. SEE DETAIL 6/A-500 (TYP. OF 2)

- CONTRACTOR SHALL BE REQUIRED TO COORDINATE WITH ALL MEP AND STRUCTURAL DRAWINGS. SEE MECHANICAL DRAWINGS FOR ALL HVAC ROOFTOP EQUIPMENT.
- EXISTING ROOF HAS A WARRANTY ISSUED BY TREMCO. ALL REPAIR WORK MUST BE PERFORMED BY TREMCO AUTHORIZED CONTRACTOR. LETTER FROM TREMCO WILL BE REQUIRED STATING WORK PERFORMED DOES NOT VOID EXISTING WARRANTY AND NEW WORK IS COVERED UNDER EXISTING WARRANTY.

GENERAL NOTES

- EXISTING THROUGH WALL LOUVER
- EXISTING THROUGH WALL SCUPPER
- EXISTING PIPE PENETRATION
- EXISTING ROOF DRAIN
- NEW ROOF DRAIN
- EXISTING VENTILATOR OR MECHANICAL PENETRATION
- EXISTING EQUIPMENT PAD
- EXISTING ROOF HATCH
- EXISTING LADDER
- NEW RTU
- EXISTING MECHANICAL EQUIPMENT
- ROOF VENT
- EXISTING SKYLIGHT
- EXISTING FRESH AIR INTAKE
- EXISTING CHIMNEY
- NEW PROTECTION RAILING

LEGEND

1 PROPOSED ROOF PLAN

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



0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

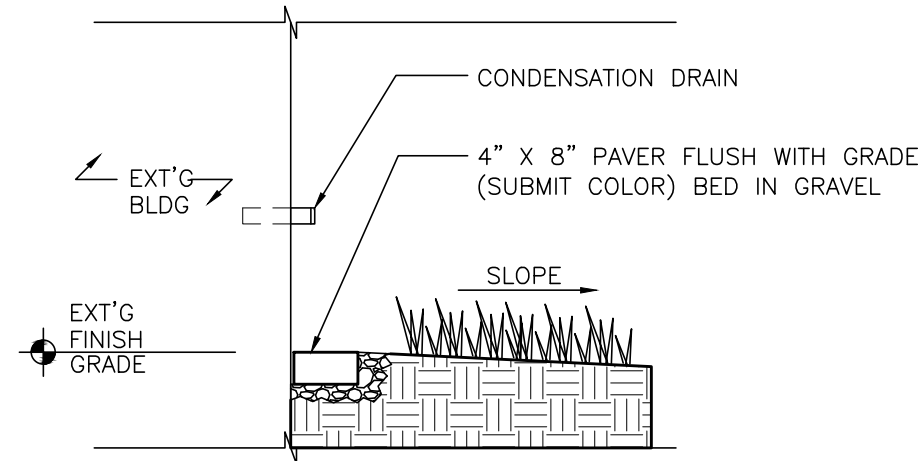
IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, TO ALTER AN ITEM IN ANY WAY.

No.	Date	Revisions
0	03-04-25	BIDDING DOCUMENTS

REG. EXP DATE: 12-31-25

Drawn by JR/SP/CG	Checked by MS/JC	Project No. 43040	Scale AS NOTED	Date 03-18-24
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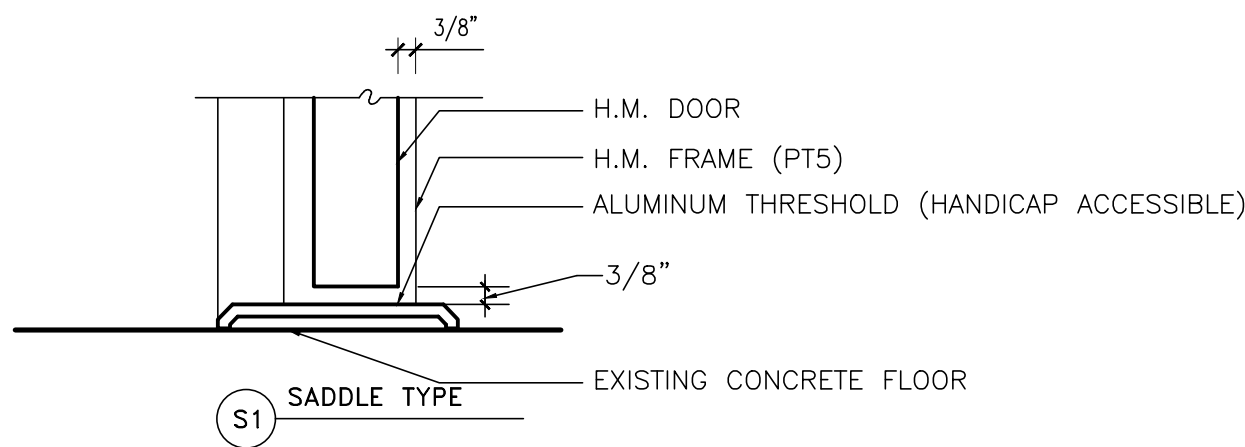
Mechanical & Electrical Engineer:	GREENMAN PEDERSEN, INC 400 BELLA BOULEVARD MONTEBELLO, NY 10001
Structural Engineer:	GREENMAN PEDERSEN, INC 400 BELLA BOULEVARD MONTEBELLO, NY 10001



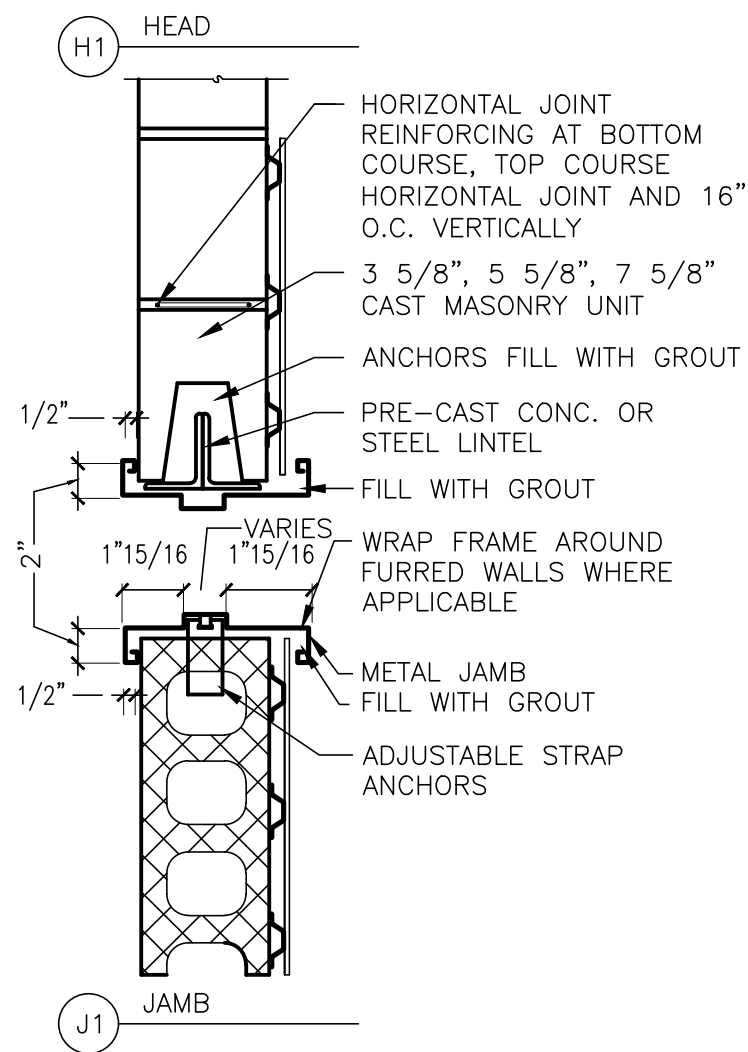
NOTE: TO BE USED FOR ALL UV'S IN FIRST FLOOR

4 SPLASH BLOCK DETAILS

SCALE: 1"=1'-0"

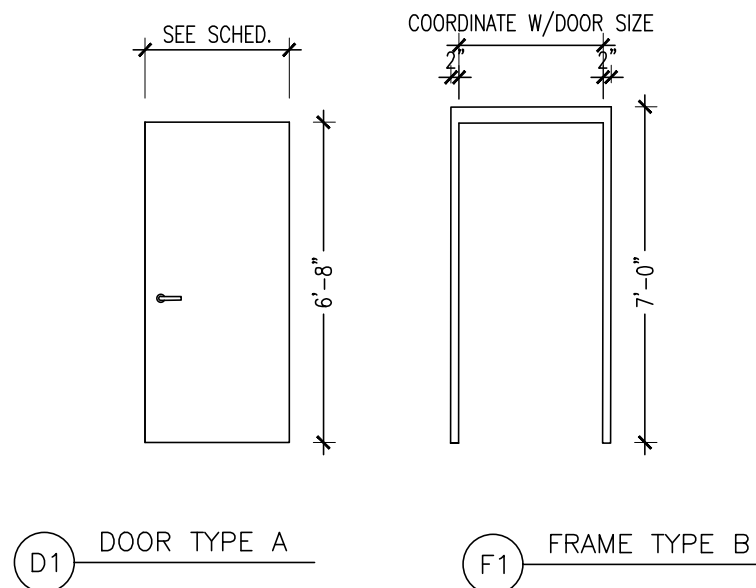


DOOR SADDLE DETAILS

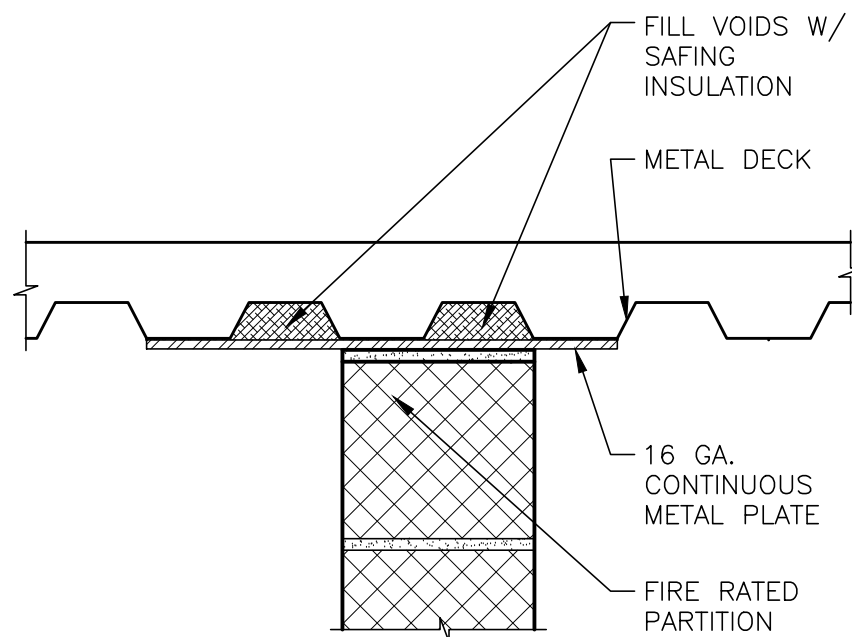


3 DOOR JAMB / HEAD DETAILS

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

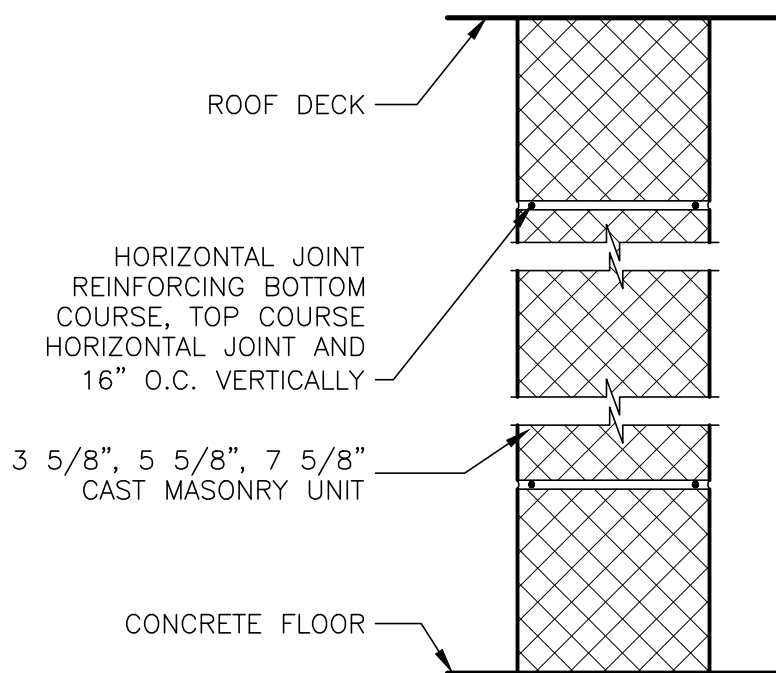


DOOR ELEVATIONS & FRAMES

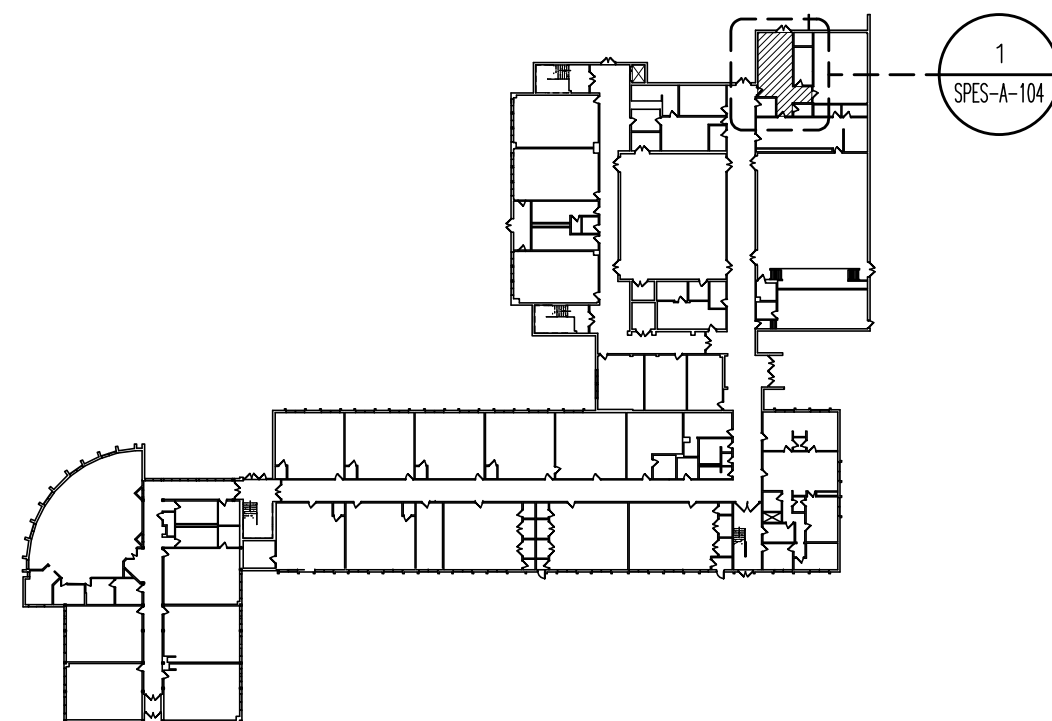


2 FIRE SAFING DETAIL

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



PARTITION TYPES



KEY PLAN

NEW DOOR:
(1) 4' X 6'-8"
1-3/4" HOLLOW METAL DOORS(D1)
WITH HOLLOW METAL FRAME
1.5 HR RATED
PTS

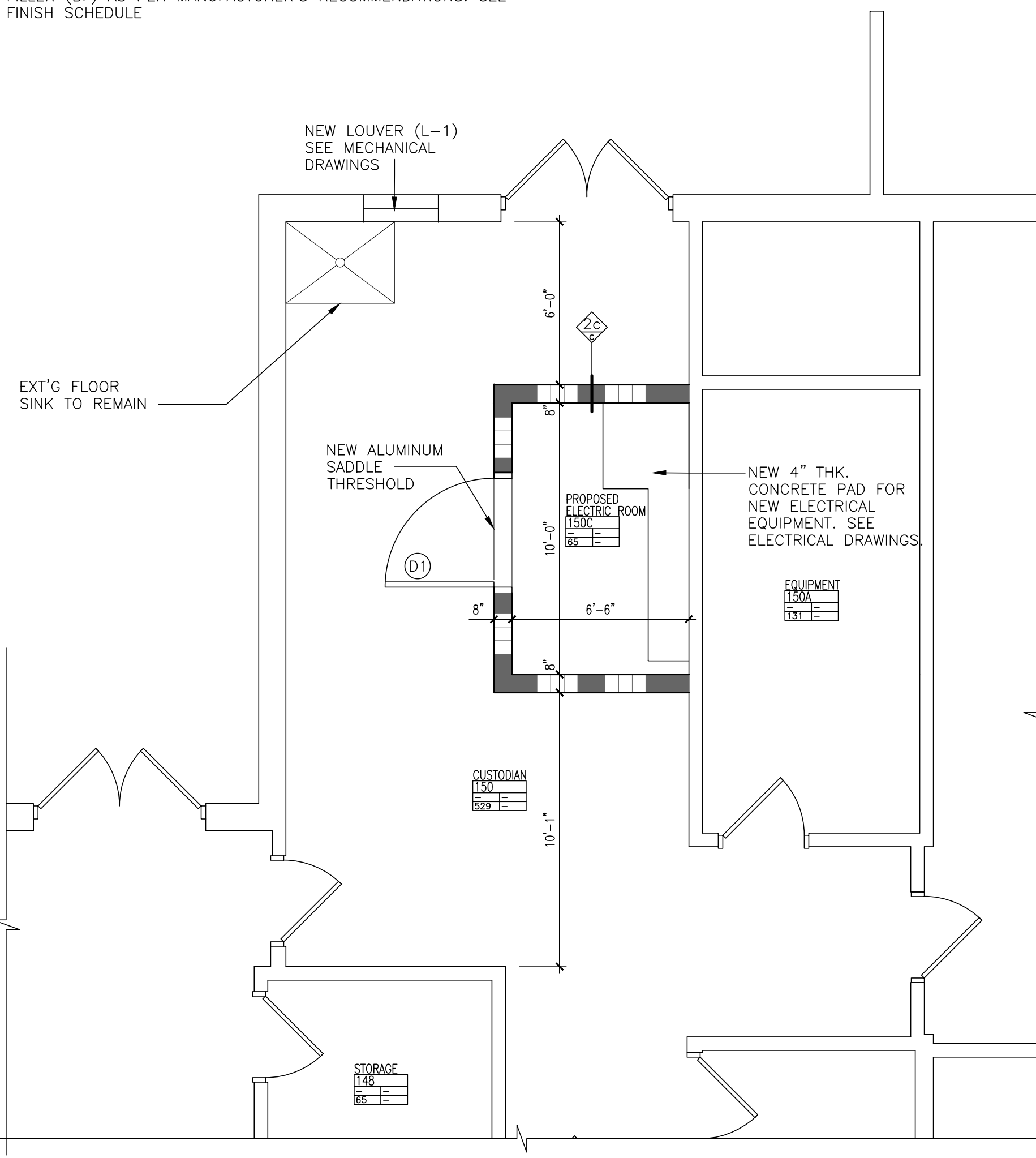
CONTINUOUS HINGES:
MARKAR (FM-300 EDGE MOUNT)

HEAVY DUTY LOCKSET:
BEST-7-PIN-SMALL FORMAT-CORMAX CORE
(1) ED4200 FR PANIC BAR

FR-08 (1) LCN 4110 DOOR CLOSER
ALUMINUM SADDLE THRESHOLD

PROVIDE PT1 AT ALL DISTURBED AREAS. COLOR TO MATCH
EXISTING. ALL NEW SURFACES TO RECEIVE PT1.

PREPARE AND PRIME NEW CMU WALL SURFACES WITH BLOCK
FILLER (BF) AS PER MANUFACTURER'S RECOMMENDATIONS. SEE
FINISH SCHEDULE



1 PROPOSED ELECTRICAL RM PLAN

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

No.	Date	Revisions
0	03-04-25	BIDDING DOCUMENTS

REG. EXP DATE: 12-31-25

Drawn by	JR
Checked by	MS/JC
Project No.	43040
Scale	AS NOTED
Date	03-18-24

Mechanical & Electrical Engineer:	GREENMAN PEDERSEN INC 400 BELLA BOULEVARD MONTEBELLO, NY 10601
Structural Engineer:	GREENMAN PEDERSEN INC 400 BELLA BOULEVARD MONTEBELLO, NY 10601

UNIVENT REPLACEMENT AT STONY POINT, THIELS AND WEST HAVERSTRAW ELEMENTARY SCHOOL
SPES SED# 50-02-01-08-0-014-012 YES SED# 50-02-01-06-0-025-018 WHES SED# 50-02-01-06-0-024-015
7 ERIER DRIVE, NY 10960 COUNTY OF ROCKLAND

MSA
MICHAEL SHILALE ARCHITECTS, L.L.P. 140 Park Avenue New York, NY 10022 Tel 945-705-6200 info@shilale.com

Proposed Electrical Room Plan
Drawing No. SPES-A-104

A40

VOID.

A41

VOID

A42

INSTALL NEW 2X2 SUSPENDED ACT-1 CEILING. NEW CEILING HEIGHT TO MATCH EXISTING.

A43

INSTALL NEW 2X2 RECESSED LIGHTING IN NEW CEILING GRID.

A44

BASE BID: MODIFY AND REINSTALL EXISTING ACT CEILING/CEILING, CEILING LIGHTS FOR NEW HVAC EQUIPMENT AND REFRIGERANT PIPING AS REQUIRED.
ALTERNATE-100: REPLACE EXISTING CEILING/CEILING TILE, GRID AND LIGHTING WITH NEW ACT-1 AND LIGHTING

A45

NEW RTU ABOVE TO INFILL EXISTING SKYLIGHT OPENING. SEE PLANS SPES-A-103, SPES-S-101, AND SPES-M-106.

KEY NOTES

1

PROPOSED FIRST FLOOR REFLECTED CEILING PLAN

SCALE: 1"=16'-0"

PLAN NORTH

GENERAL NOTES

1.

CONTRACTOR SHALL BE REQUIRED TO CORE DRILL ALL HOLES IN WALLS, FLOORS AND CEILINGS TO FACILITATE NEW LINESETS, ELECTRICAL CONDUITS AND CONDENSATE LINES.

2.

EXT'S CLG. TILE SHALL BE REMOVED AS REQ'D. TO ALLOW INSTALLATION AND REMOVAL OF HVAC DEVICES, LINESETS, AND ELECTRICAL. AS REQ'D FOR THIS WORK. REINSTALLATION OF ALL CLG'S AS REQ'D. COORDINATE WITH MECHANICAL DRAWINGS.

3.

FIRE ALARM DEVICES, SECURITY CAMERA, AND OTHER CEILING MOUNTED DEVICES TO BE REMOVED, TEMPORARILY STORED AND RE-INSTALLED AS REQ'D.

LEGEND

—

EXISTING THROUGH WALL LOUVER

☒

SUPPLY REGISTER

☒

EXISTING SUPPLY REGISTER

NEW UNIT VENT
UV-00

NEW FAN COIL UNIT
FC-00

NEW CEILING CASSETTE
CC-00

NEW RELIEF VENT ENCLOSURE

2' x 2' SUSPENDED CLG GRID

2' x 2' RECESSED LIGHT

RETURN

CEILING ACCESS PANEL

X'-X" CEILING ELEVATION

EXHAUST

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1", THEN DRAWING IS NOT TO FULL SCALE

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Drawn by
JR/SP/OG

Checked by
MS/JC

Project No.
43041

Scale
AS NOTED

Date
03-18-24

Mechanical & Electrical Engineer

GREENMAN PEDERSEN, INC
400 BELLA BOULEVARD
MONTEBELLO, NY 10901

Structural Engineer

GREENMAN PEDERSEN, INC
400 BELLA BOULEVARD
MONTEBELLO, NY 10901

UNIVENT REPLACEMENT AT STONY POINT, THIELLS AND WEST HAVERSTRAW ELEMENTARY SCHOOL

SPES SED# 50-02-01-06-0-014-012
TES SED# 50-02-01-06-0-025-018
WHES SED# 50-02-01-06-0-024-015

7 GUNBER DRIVE
STONY POINT, NY 10980

COUNTY OF ROCKLAND

HSA

MICHAEL SHILALE ARCHITECTS, L.L.P.
140 Park Avenue New City, NY 10956 Tel 845-708-9200
www.mshlak.com

Drawing Title
PROPOSED FIRST FLOOR RCP

Drawing No.
SPES-A-401

A40

VOID.

A41

VOID

A42

INSTALL NEW 2X2 SUSPENDED ACT-1 CEILING. NEW CEILING HEIGHT TO MATCH EXISTING.

A43

INSTALL NEW 2X2 RECESSED LIGHTING IN NEW CEILING GRID.

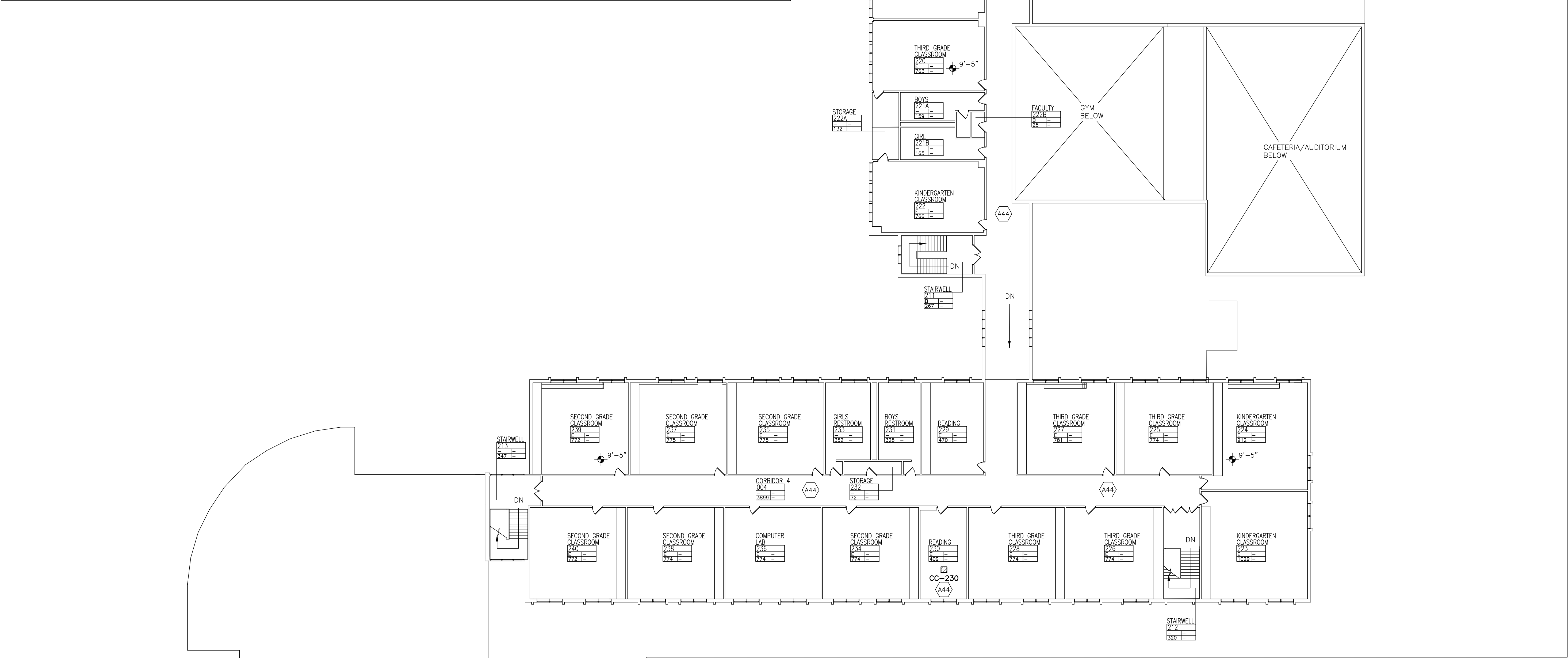
A44

BASE BID: MODIFY AND REINSTALL EXISTING ACT CEILING/CEILING, CEILING LIGHTS FOR NEW HVAC EQUIPMENT AND REFRIGERANT PIPING AS REQUIRED.
ALTERNATE-100: REPLACE EXISTING CEILING/CEILING TILE, GRID AND LIGHTING WITH NEW ACT-1 AND LIGHTING

A45

NEW RTU ABOVE TO INFILL EXISTING SKYLIGHT OPENING. SEE PLANS SPES-A-103, SPES-S-101, AND SPES-M-106.

KEY NOTES



1

PROPOSED SECOND FLOOR REFLECTED CEILING PLAN

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

PLAN NORTH

1. CONTRACTOR SHALL BE REQUIRED TO CORE DRILL ALL HOLES IN WALLS, FLOORS AND CEILINGS TO FACILITATE NEW LINESETS, ELECTRICAL CONDUITS AND CONDENSATE LINES.

2. EXT'G CLG. TILE SHALL BE REMOVED AS REQ'D. TO ALLOW INSTALLATION AND REMOVAL OF HVAC DEVICES, LINESETS, AND ELECTRICAL, AS REQ'D FOR THIS WORK. REINSTALLATION OF ALL CLG'S AS REQ'D. COORDINATE WITH MECHANICAL DRAWINGS.

3. FIRE ALARM DEVICES, SECURITY CAMERA, AND OTHER CEILING MOUNTED DEVICES TO BE REMOVED, TEMPORARILY STORED AND RE-INSTALLED AS REQ'D.

GENERAL NOTES

—

EXISTING THROUGH WALL LOUVER

☒

SUPPLY REGISTER

☒

EXISTING SUPPLY REGISTER

NEW UNIT VENT
UV-00

NEW FAN COIL UNIT
FC-00

☒

NEW CEILING CASSETTE
CC-00

RA

NEW RELIEF VENT ENCLOSURE

2' x 2' SUSPENDED CLG GRID

A

2' x 2' RECESSED LIGHT

☒

RETURN

☒

CEILING ACCESS PANEL

X'-X"

CEILING ELEVATION

EXHAUST

LEGEND

0

1/2

1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

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Drawn by
JR/SP/CG

Checked by
MS/JC

Project No.
43041

Scale
AS NOTED

Date
03-18-24

GREENMAN PEDERSEN, INC
400 BELLA BOULEVARD
MONTEBELLO, NY 10901

Mechanical & Electrical Engineer:

GREENMAN PEDERSEN, INC
400 BELLA BOULEVARD
MONTEBELLO, NY 10901

Structural Engineer:

UNIVENT REPLACEMENT AT
STONY POINT, THIELLS
AND WEST HAVERSTRAW
ELEMENTARY SCHOOL

SPES SED# 50-02-01-08-0-014-012
YES SED# 50-02-01-06-0-025-018
WHES SED# 50-02-01-06-0-024-015

7 GURNE DRIVE
STONY POINT, NY 10980

COUNTY OF ROCKLAND

MSA

MICHAEL SHILALE ARCHITECTS, L.L.P.
140 Park Avenue New York, NY 10022 Tel 945-706-6200
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PROPOSED
SECOND FLOOR
RCP PLAN

Drawing No.
SPES-A-402

Revisions

No.	Date	Revisions
0	03-04-25	BIDDING DOCUMENTS

0

1/2

1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

Drawn by

VF /AW

Checked by

EF

Project No.

43040

Scale

AS NOTED

Date

03-04-25

MECHANICAL ENGINEER:
GREENMAN PEDERSEN, INC
2 EXECUTIVE BOULEVARD
SUITE 200
ROCKAWAY, NY 10866
PH: 914-961-0000
FAX: 914-961-0001

STRUCTURAL ENGINEER:
GREENMAN PEDERSEN, INC
2 EXECUTIVE BOULEVARD
SUITE 200
ROCKAWAY, NY 10866

UNIVENT REPLACEMENT AT
STONY POINT, THIELLS,
WEST HAVESTRAW
ELEMENTARY SCHOOL

SED# 50-02-01-06-0-014-012
SED# 50-02-01-06-0-026-018
SED# 50-02-01-06-0-024-015

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STONY POINT, NY 10980

MECHANICAL SCHEDULES - 1

Drawing No.
SPES-M-003

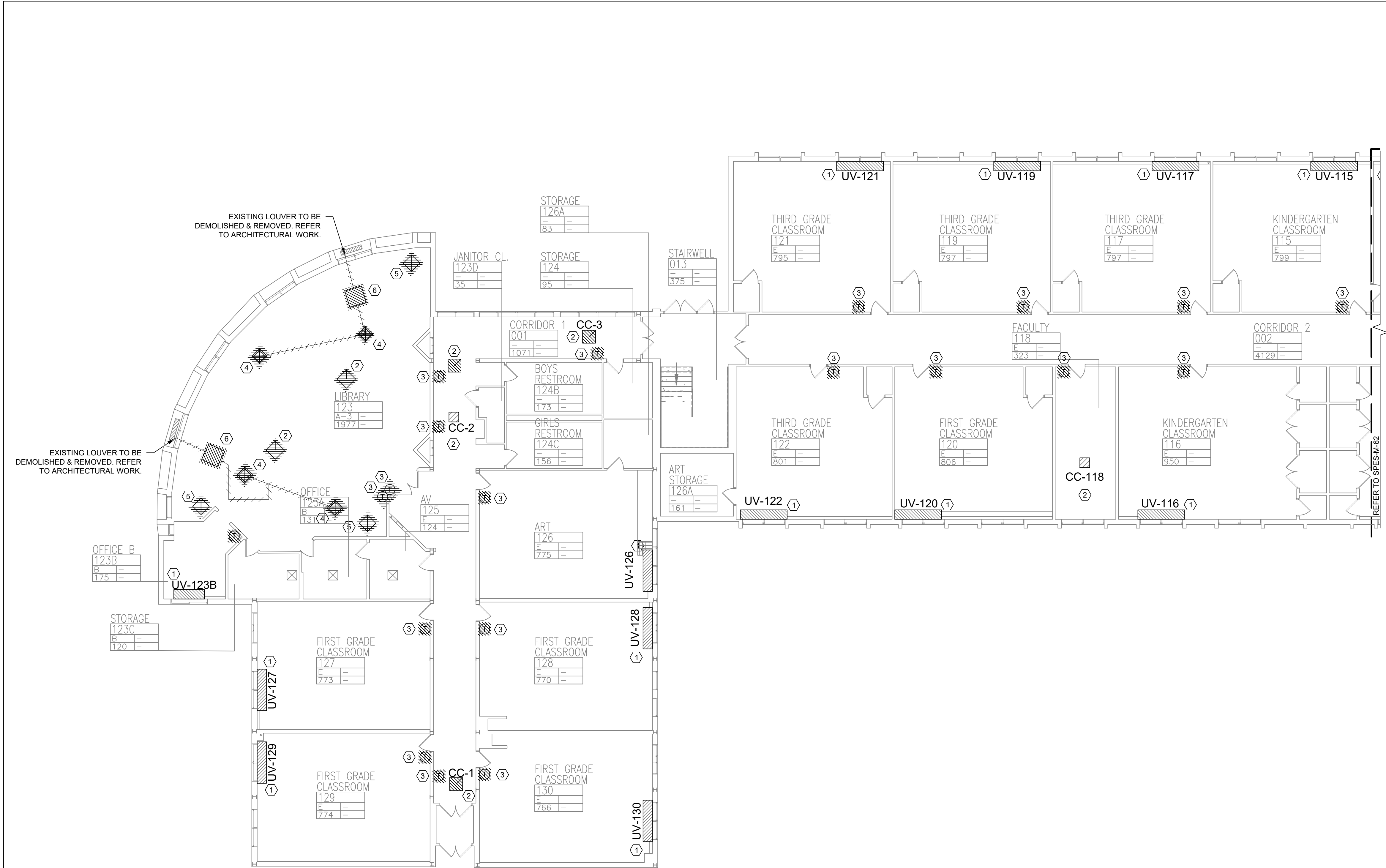
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MECHANICAL VENTILATION SCHEDULE															
ROOM	OCCUPANY CLASSIFICATION	FLOOR AREA (FT*2)	ROOM VOLUME (FT*3)	OCCUPANT LOAD (OCCUPANT/1,000 FT*2)	# OF OCCUPANTS	REQUIRED CFM/OCCUPANT	REQUIRED CFM/FT*2	BREATHING ZONE OUTDOOR AIRFLOW (CFM)	ZONE DISTRIBUTION EFFECTIVENESS		TOTAL ROOM OUTDOOR AIR REQUIRED (CFM)		ACTUAL ROOM OUTDOOR AIRFLOW RATE (CFM)		
									COOLING	HEATING	COOLING	HEATING	COOLING	HEATING	
CORRIDOR 1	CORRIDORS	1050	11550	0	0	0	0.06	63	0.9	0.9	70	70	70	70	
CONFERENCE ROOM 100	CONFERENCE ROOMS	352	3872	50	18	5	0.06	109	0.9	0.9	121	121	125	125	
SPEECH 101	OFFICE SPACES	259	2849	5	1	5	0.06	22	0.9	0.9	24	24	25	25	
NURSE OFFICE 102	OFFICE SPACES	492	5412	5	2	5	0.06	42	0.8	0.8	52	52	55	55	
ADMIN OFFICE 106	OFFICE SPACES	532	5852	5	3	5	0.06	45	0.8	0.8	57	57	60	60	
PRINCIPAL OFFICE 106A	OFFICE SPACES	268	2948	5	1	5	0.06	23	0.8	0.8	28	28	30	30	
OFFICE 107	OFFICE SPACES	179	1969	5	1	5	0.06	15	0.8	0.8	19	19	20	20	
OFFICE 108	OFFICE SPACES	143	1573	5	1	5	0.06	12	0.8	0.8	15	15	20	20	
OFFICE 110	OFFICE SPACES	108	1188	5	1	5	0.06	9	0.9	0.9	10	10	15	15	
FACULTY OFFICE 111	OFFICE SPACES	530	5830	5	3	5	0.06	45	0.9	0.9	50	50	55	55	
CLASSROOM 112	CLASSROOMS (AGES 5-8)	1061	11671	25	25	10	0.12	377	0.8	0.8	472	472	475	475	
CLASSROOM 113	CLASSROOMS (AGES 5-8)	843	9273	25	21	10	0.12	312	0.8	0.8	390	390	390	390	
CLASSROOM 114	CLASSROOMS (AGES 5-8)	952	10472	25	24	10	0.12	352	0.8	0.8	440	440	445	445	
CLASSROOM 115	CLASSROOMS (AGES 5-8)	799	8789	25	20	10	0.12	296	0.8	0.8	370	370	370	370	
CLASSROOM 116	CLASSROOMS (AGES 5-8)	950	10450	25	24	10	0.12	352	0.8	0.8	439	439	440	440	
CLASSROOM 117	CLASSROOMS (AGES 5-8)	797	8767	25	20	10	0.12	295	0.8	0.8	369	369	370	370	
FACULTY OFFICE 118	OFFICE SPACES	323	3553	5	2	5	0.06	27	0.9	0.9	31	31	35	35	
CLASSROOM 119	CLASSROOMS (AGES 5-8)	797	8767	25	20	10	0.12	295	0.8	0.8	369	369	370	370	
CLASSROOM 120	CLASSROOMS (AGES 5-8)	806	8866	25	20	10	0.12	298	0.8	0.8	373	373	375	375	
CLASSROOM 121	CLASSROOMS (AGES 5-8)	795	8745	25	20	10	0.12	294	0.8	0.8	368	368	370	370	
CLASSROOM 122	CLASSROOMS (AGES 5-8)	801	8811	25	20	10	0.12	296	0.8	0.8	370	370	375	375	
LIBRARY 123	LIBRARIES	1977	21747	10	20	5	0.12	336	0.9	0.9	373	373	375	375	
OFFICE 123A	OFFICE SPACES	123	1353	5	1	5	0.06	10	0.9	0.9	12	12	15	15	
OFFICE 123B	OFFICE SPACES	175	1925	5	1	5	0.06	15	0.8	0.8	19	19	20	20	
OFFICE 123C	OFFICE SPACES	120	1320	5	1	5	0.06	10	0.9	0.9	11	11	15	15	
AV 125	OFFICE SPACES	124	1364	5	1	5	0.06	11	0.9	0.9	12	12	15	15	
ART ROOM 126	CLASSROOMS (AGES 5-8)	775	8525	25	19	10	0.12	287	0.8	0.8	358	358	360	360	
CLASSROOM 127	CLASSROOMS (AGES 5-8)	773	8503	25	19	10	0.12	286	0.8	0.8	358	358	360	360	
CLASSROOM 128	CLASSROOMS (AGES 5-8)	770	8470	25	19	10	0.12	285	0.8	0.8	356	356	360	360	
CLASSROOM 129	CLASSROOMS (AGES 5-8)	774	8514	25	19	10	0.12	286	0.8	0.8	358	358	360	360	
CLASSROOM 130	CLASSROOMS (AGES 5-8)	766	8426	25	19	10	0.12	283	0.8	0.8	354	354	355	355	
OFFICE 132	OFFICE SPACES	116	1276	5	1	5	0.06	10	0.9	0.9	11	11	15	15	
OFFICE 132A	OFFICE SPACES	98	1078	5	0	5	0.06	8	0.9	0.9	9	9	10	10	
CLASSROOM 133	CLASSROOMS (AGES 5-8)	796	8756	25	20	10	0.12	295	0.8	0.8	368	368	370	370	
CLASSROOM 134	CLASSROOMS (AGES 5-8)	791	8701	25	20	10	0.12	293	0.8	0.8	366	366	370	370	
CLASSROOM 135	CLASSROOMS (AGES 5-8)	790	8690	25	20	10	0.12	292	0.8	0.8	365	365	370	370	
ENL ROOM 136	OFFICE SPACES	456	5016	5	2	5	0.06	39	0.8	0.8	48	48	50	50	
COPY ROOM 137	OFFICE SPACES	418	4598	5	2	5	0.06	36	0.9	0.9	39	39	40	40	
MUSIC ROOM 140	MUSIC/THEATRE/DANCE	673	7403	35	24	10	0.06	276	0.8	0.8	345	345	345	345	
STORAGE 140A	STORAGE	107	1177	0	0	0	0.12	13	0.9	0.9	14	14	15	15	
RESOURCE ROOM	OFFICE SPACES	320	3520	5	2	5	0.06	27	0.9	0.9	30	30	35	35	
GYM 143	GYMNASIUMS	2507	27577	7	18	20	0.18	802	0.9	0.9	891	891	895	895	
OFFICE 143A	OFFICE SPACES	69	759	5	0	5	0.06	6	0.9	0.9	7	7	10	10	
STORAGE 147	OFFICE SPACES	318	3498	5	2	5	0.06	27	0.9	0.9	30	30	35	35	
S/L ROOM 149	OFFICE SPACES	259	2849	5	1	5	0.06	22	0.9	0.9	24	24	25	25	
CUSTODIAN OFFICE 150	OFFICE SPACES	529	5819	5	3	5	0.06	45	0.9	0.9	50	50	50	50	
CLASSROOM 218	CLASSROOMS (AGES 5-8)	761	8371	25	19	10	0.12	282	0.8	0.8	352	352	355	355	
CLASSROOM 220	CLASSROOMS (AGES 5-8)	763	8393	25	19	10	0.12	282	0.8	0.8	353	353	355	355	
CLASSROOM 222	CLASSROOMS (AGES 5-8)	766	8426	25	19	10	0.12	283	0.8	0.8	354	354	355	355	
CLASSROOM 223	CLASSROOMS (AGES 5-8)	1029	11319	25	25	10	0.12	373	0.8	0.8	467	467	470	470	
CLASSROOM 224	CLASSROOMS (AGES 5-8)	912	10032	25	23	10	0.12	337	0.8	0.8	422	422	425	425	
CLASSROOM 225	CLASSROOMS (AGES 5-8)	774	8514	25	19	10	0.12	286	0.8	0.8	358	358	360	360	
CLASSROOM 226	CLASSROOMS (AGES 5-8)	774	8514	25	19	10	0.12	286	0.8	0.8	358	358	360	360	
CLASSROOM 227	CLASSROOMS (AGES 5-8)	781	8591	25	20	10	0.12	289	0.8	0.8	361	361	365	365	
CLASSROOM 228	CLASSROOMS (AGES 5-8)	774	8514	25	19	10	0.12	286	0.8	0.8	358	358	360	360	
READING ROOM 229	OFFICE SPACES	470	5170	5	2	5	0.06	40	0.8	0.8	50	50	50	50	
READING ROOM 230	OFFICE SPACES	409	4499	5	2	5	0.06	35	0.9	0.9	39	39	40	40	
CLASSROOM 234	CLASSROOMS (AGES 5-8)	774	8514	25	19	10	0.12	286	0.8	0.8	358	358	360	360	
CLASSROOM 235	CLASSROOMS (AGES 5-8)	775	8525	25	19	10	0.12	287	0.8	0.8	358	358	360	360	
COMPUTER LAB 236	COMPUTER LAB	774	8514	25	19	10	0.12	286	0.8	0.8	358	358	360	360	
CLASSROOM 237	CLASSROOMS (AGES 5-8)	775	8525	25	19	10	0.12	287	0.8	0.8	358	358	360	360	
CLASSROOM 238	CLASSROOMS (AGES 5-8)	774	8514	25	19	10	0.12	286	0.8	0.8	358	358	360	360	
CLASSROOM															

UNIT VENTILATOR SCHEDULE NOTES:

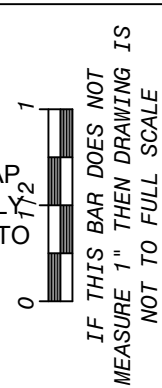
1. BASIS OF DESIGN IS TRANE
2. CONTROLS TO BE FACTORY INSTALLED AND COMMISSIONED BY TRANE.
3. PROVIDE UNITS WITH VARIABLE FAN AIRFLOW CONTROL SEQUENCE
4. PROVIDE FACTORY-MOUNTED, PRE-PROGRAMMED, WIRELESS BACNET DDC CONTROL
5. PROVIDE WITH WIRELESS ZONE TEMPERATURE SENSOR
6. EQUIPMENT MANUFACTURER TO PROVIDE 2 YEAR PARTS AND LABOR WARRANTY
7. PROVIDE UNIT VENTILATORS WITH BLOW THROUGH CONFIGURATION
8. PROVIDE LEV KIT TO MEET SCHEDULE PERFORMANCE CAPACITY
9. PROVIDE DELUXE PIPING PACKAGE TO INCLUDE UNION, STRAINER, P/T PORT AND SHUTOFF VALVE ON THE SUPPLY LINE
10. PROVIDE DELUXE PIPING PACKAGE TO INCLUDE UNION, CONTROL VALVE AND MANUAL CIRCUIT SETTER ON THE RETURN LINE
11. PROVIDE A DRAIN PAN THAT IS NON-CORROSIVE AND REMOVABLE
12. PROVIDE SHELVING FROM HVAC CUSTOM ENCLOSURE FOR ALL CLASSROOMS AS REQUIRED
13. PROVIDE 21.25" DEEP END COVER AND FULL SHEET METAL BACK
14. PROVIDE A 2" SUBBASE FOR EACH UNIT VENTILATOR AT MINIMUM
15. MC TO PROVIDE NEW WALL BOXES AND WALL SLEEVES TO ACCOMMODATE THE EXISTING WALL OPENING
16. PROVIDE COLOR OPTIONS TO ARCHITECT FOR ALL UNIT VENTILATORS PRIOR TO RELEASING THE UNIT VENTILATORS FOR PRODUCTION
17. PROVIDE DX COOLING COIL IN EACH UNIT VENTILATOR
18. PROVIDE A 4 PIPE REHEAT HYDRONIC COIL IN EACH UNIT VENTILATOR.
19. PROVIDE MERV 13 FILTERS IN EACH UNIT VENTILATOR
20. MECHANICAL CONTRACTOR TO PROVIDE A FACTORY DISCONNECT. INSTALLATION BY ELECTRICAL CONTRACTOR.

Drawing Title MECHANICAL SCHEDULES - 2	Drawing No. SPES-M-004
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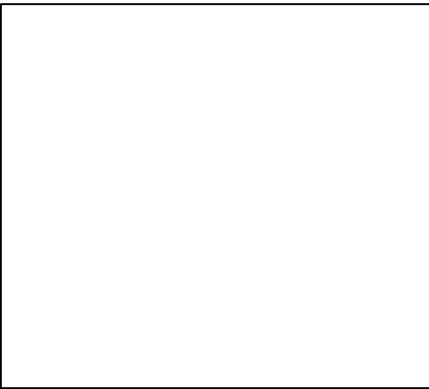


KEYED NOTES:

- 1 DISCONNECT, REMOVE UNIT VENTILATOR. CUT AND CAP HOT WATER SUPPLY AND RETURN PIPING TEMPORARILY FOR REUSE. EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN. DISCONNECT & DISPOSE OF ASSOCIATED THERMOSTAT. SEE DETAIL 1/M501.
- 2 DISCONNECT EXISTING CEILING CASSETTE AND ASSOCIATED CONTROLS & THERMOSTAT. REMOVE REFRIGERANT PIPING & ROOFTOP CONDENSING UNIT.
- 3 EXISTING THERMOSTATS FOR EXISTING HEATING & VENTILATING UNIT TO BE DEMOLISHED & REMOVED.
- 4 EXISTING SUPPLY DIFFUSER TO BE DEMOLISHED & REMOVED.
- 5 EXISTING RETURN GRILLE & REGISTER TO BE DEMOLISHED & REMOVED.
- 6 EXISTING HEATING & VENTILATING UNIT TO BE DEMOLISHED & REMOVED. CUT AND CAP HOT WATER SUPPLY AND RETURN PIPING TEMPORARILY FOR REUSE.



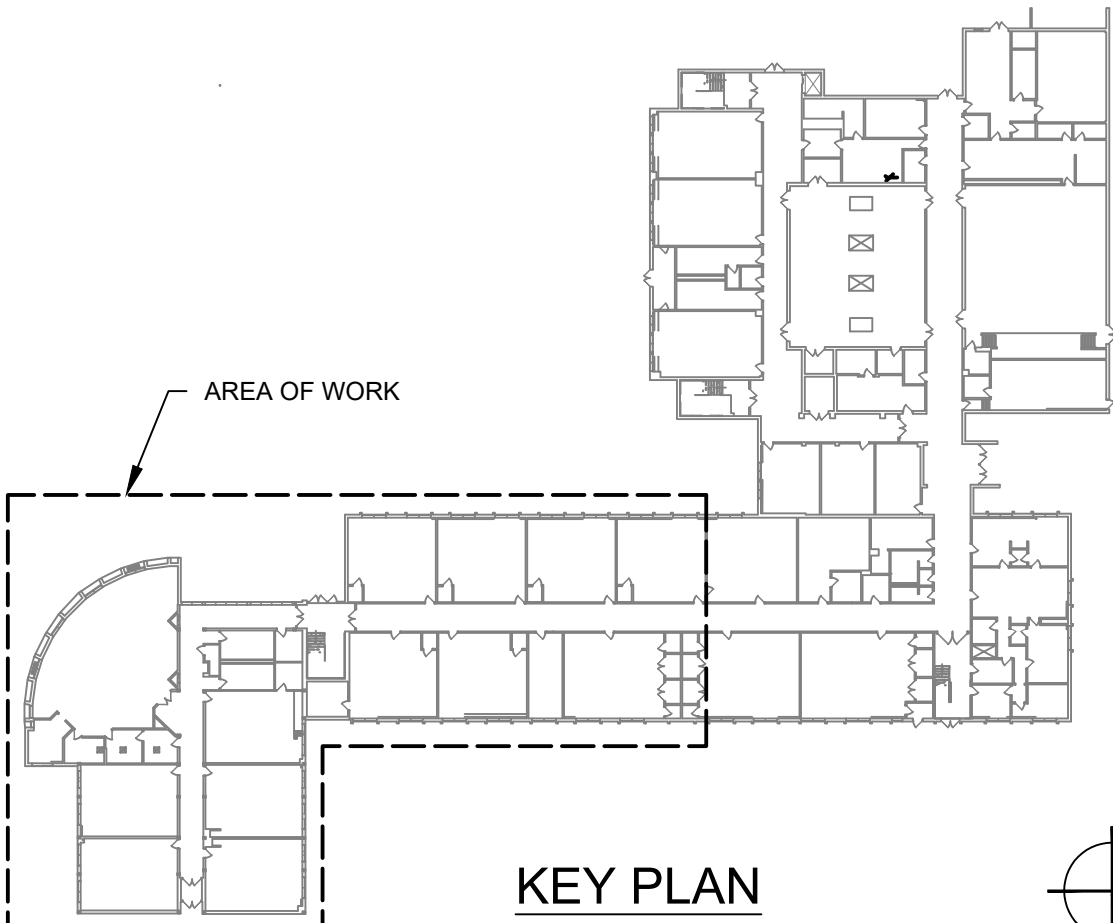
No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981 PROJ. NO. : MNY-5000080.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981
Mechanical Structural Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVESTRAW ELEMENTARY SCHOOL SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015 STONY POINT, NY 10980
--



KEY PLAN

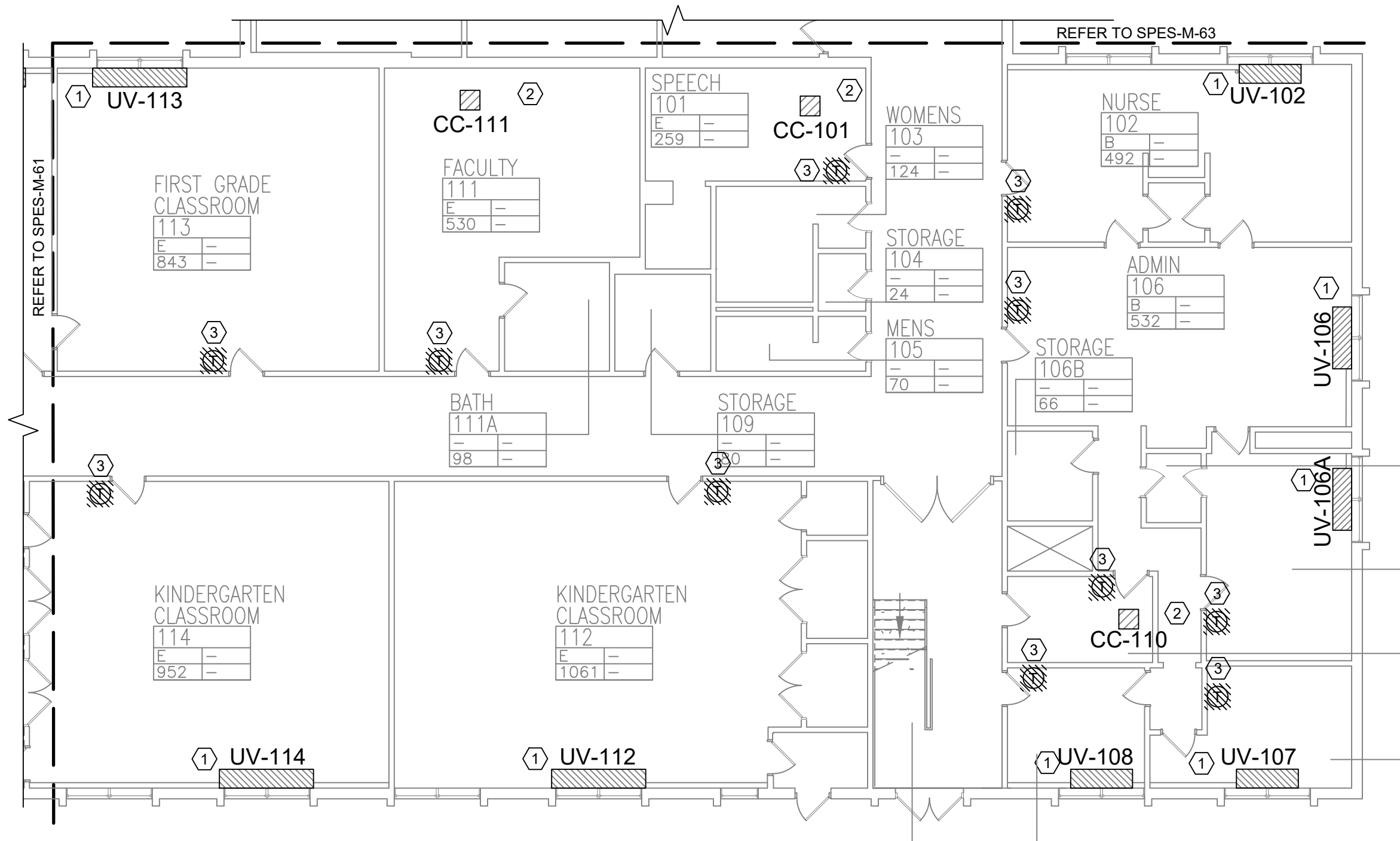


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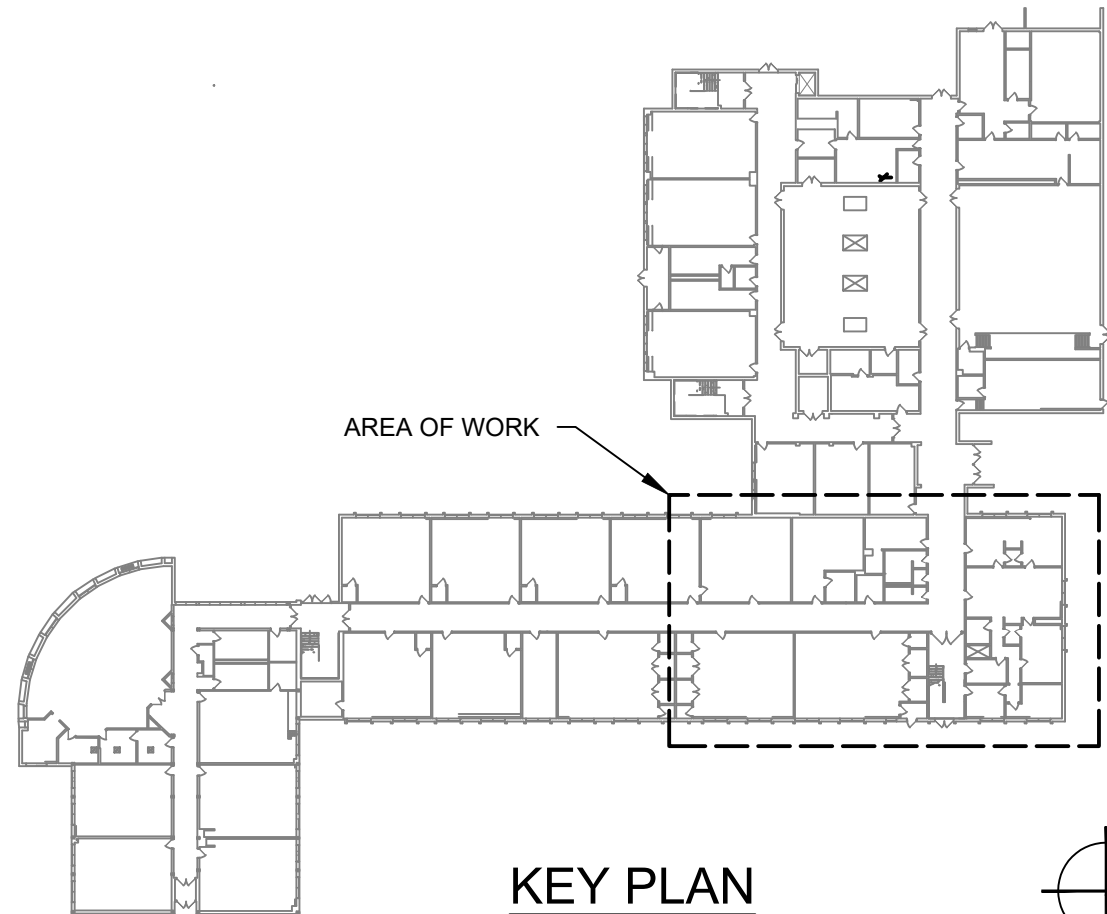


Drawing Title
FIRST FLOOR PARTIAL REMOVAL - MECHANICAL - 1

Drawing No.
SPES-M-061



1 FIRST FLOOR PARTIAL REMOVAL - MECHANICAL - 2
SCALE: 3/32" = 1'- 0"



KEYED NOTES:

- 1 DISCONNECT & REMOVE UNIT VENTILATOR. CUT AND CAP HOT WATER SUPPLY AND RETURN PIPING TEMPORARILY FOR REUSE. EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN. DISCONNECT & DISPOSE OF ASSOCIATED THERMOSTAT. SEE DETAIL 1/M501.
- 2 DISCONNECT EXISTING CEILING CASSETTE AND ASSOCIATED CONTROLS. REMOVE EXISTING ROOFTOP UNIT AND CONDENSING PIPING..
- 3 EXISTING THERMOSTATS FOR EXISTING HEATING & VENTILATING UNIT TO BE DEMOLISHED & REMOVED.



No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

Mechanical & Electrical Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10901 PROJ. NO. : MNY-5000080.00
Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10901

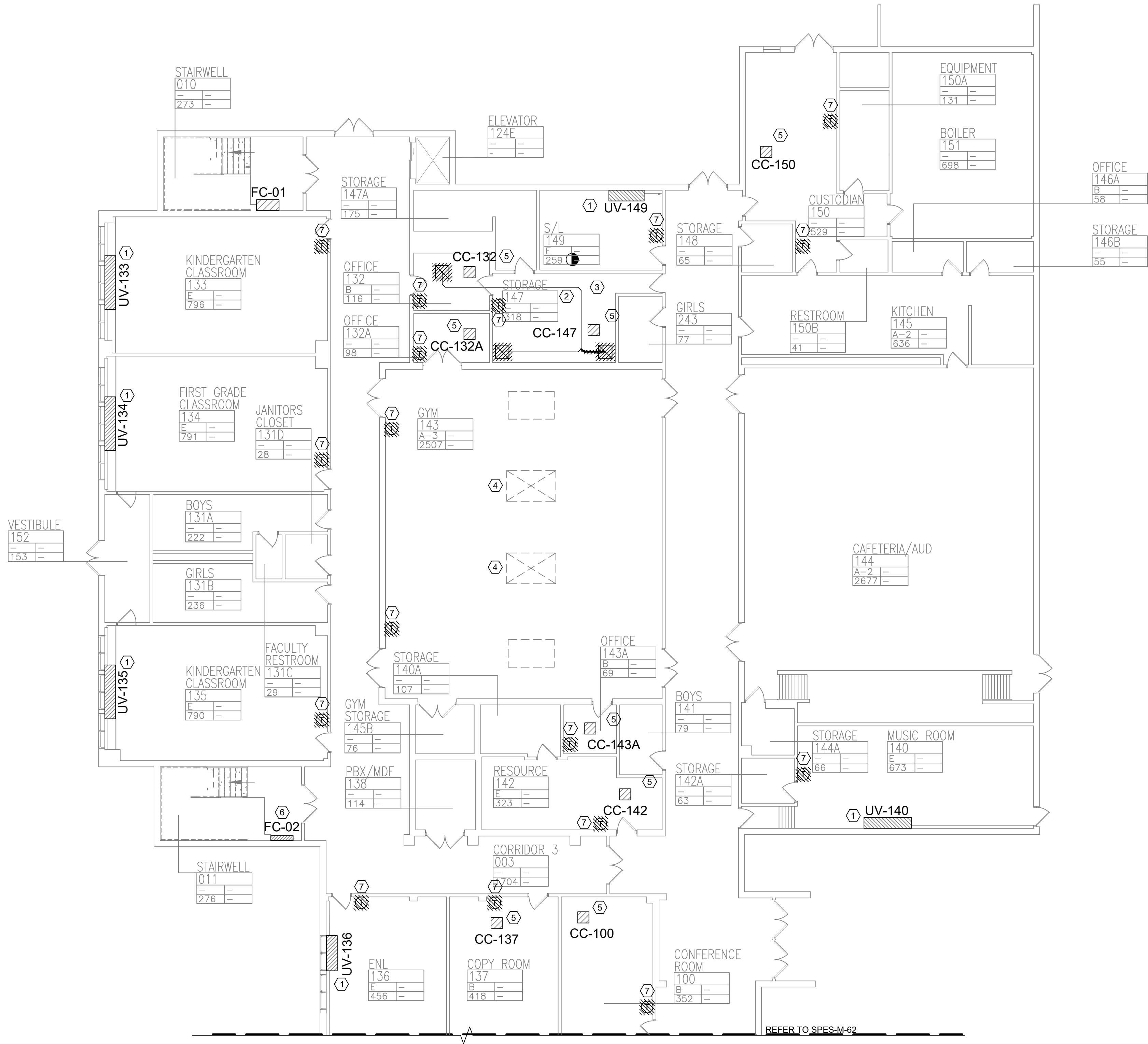
UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVESTRAW ELEMENTARY SCHOOL	SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015	STONY POINT SCHOOL DISTRICT
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Drawing Title
**FIRST FLOOR PARTIAL
REMOVAL -
MECHANICAL - 2**

Drawing No.
SPES-M-062

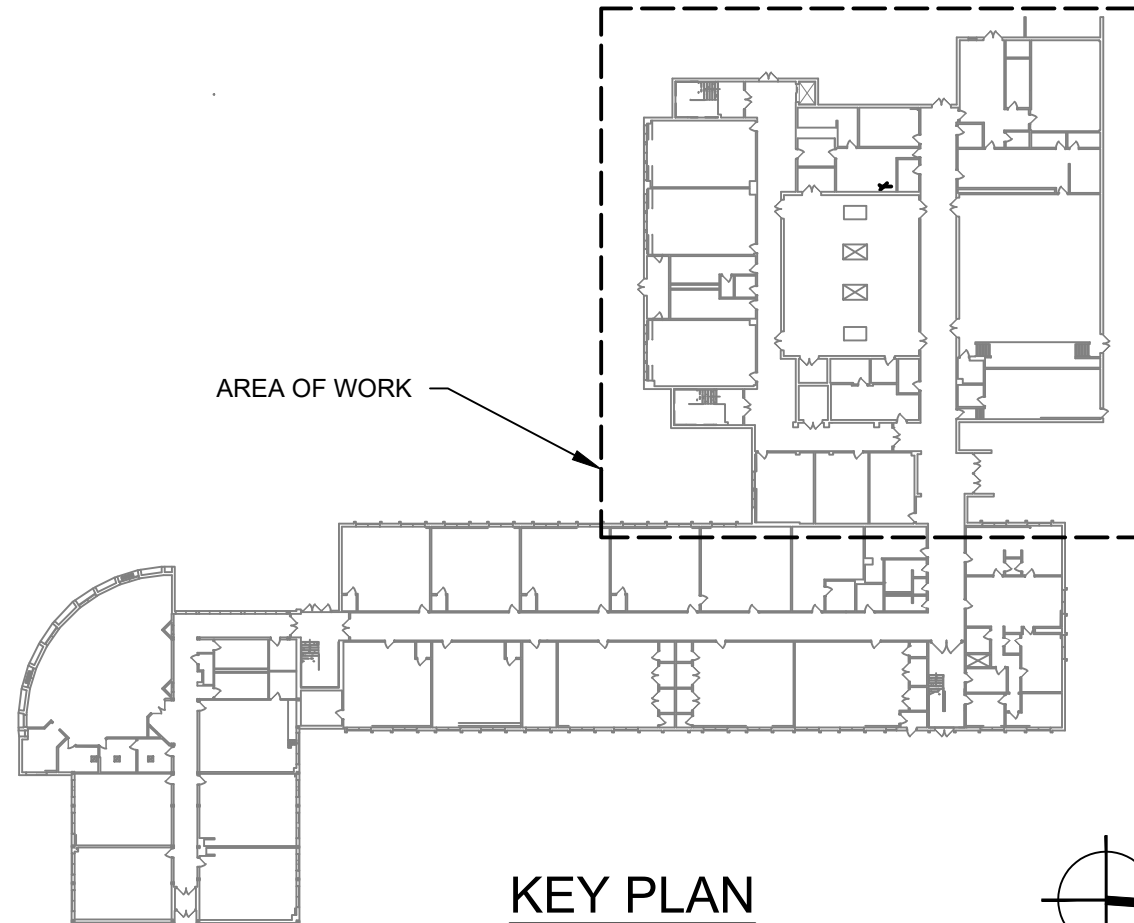
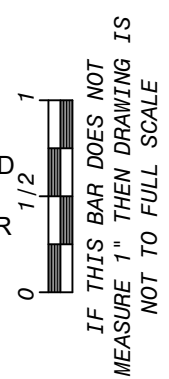
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1 FIRST FLOOR PARTIAL REMOVAL - MECHANICAL - 3
SCALE: 3/32" = 1'-0"

KEYED NOTES:

- 1 DISCONNECT AND REMOVE UNIT VENTILATOR CUT AND CAP HOT WATER SUPPLY AND RETURN PIPING TEMPORARILY FOR REUSE. EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN. DISCONNECT ASSOCIATED THERMOSTAT. SEE DETAIL 1M501.
- 2 EXISTING EXHAUST DUCTWORK TO REMAIN.
- 3 EXISTING EXHAUST DUCT UP TO ROOF TO REMAIN.
- 4 EXISTING DUCTWORK TO REMAIN IN GYM AS BACKUP (HV ONLY).
- 5 EXISTING CEILING CASSETTE TO BE DEMOLISHED & REMOVED.
- 6 DISCONNECT AND REMOVE EXISTING FAN COIL UNIT. CUT AND CAP HOT WATER SUPPLY AND RETURN PIPING PIPING BACK TO WALL PENETRATION.
- 7 EXISTING THERMOSTATS FOR EXISTING HEATING & VENTILATING UNIT TO BE DEMOLISHED & REMOVED.



Revisions	
No.	Date
1	03-04-25 BIDDING DOCUMENTS

Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981 PROJ. NO. : MNY-5000086.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981
Mechanical & Electrical Engineer:	Structural Engineer:

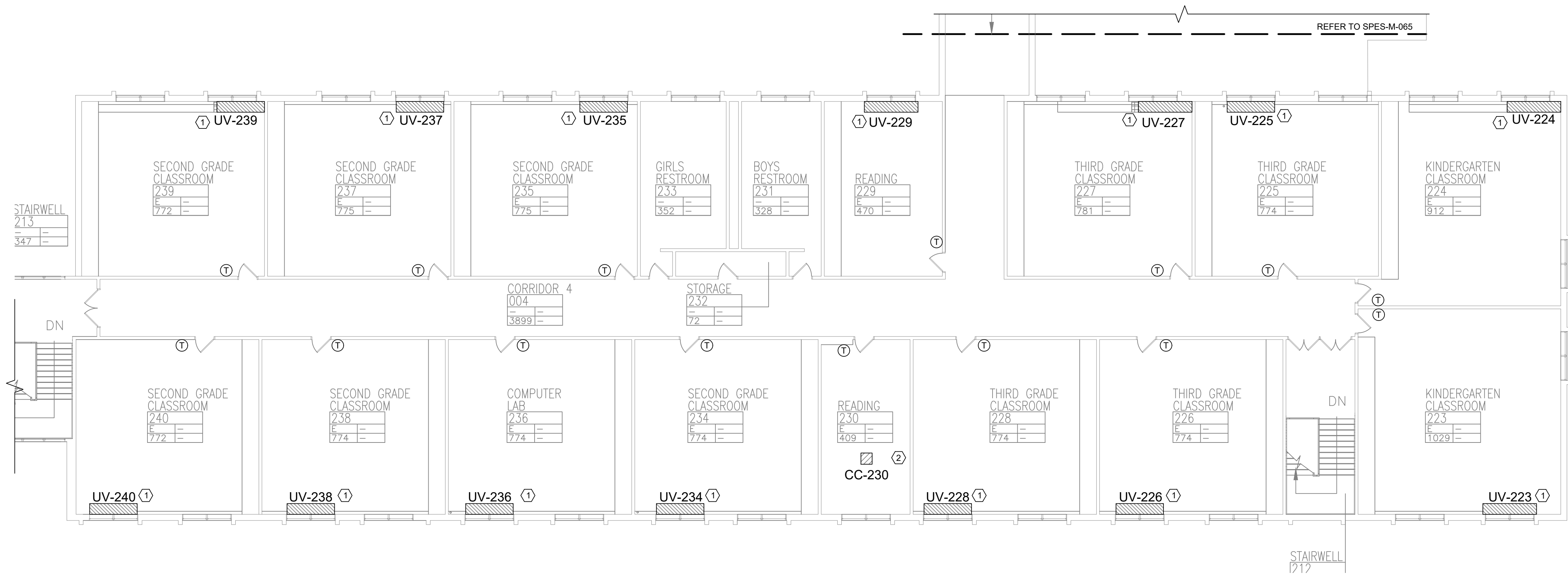
UNIVENT REPLACEMENT AT STONY POINT THIELLS, WEST HAVESTRAW ELEMENTARY SCHOOL SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015 © GREENMAN, INC. STONY POINT, NY 10980	STONY POINT PROJECT AND EXISTING
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Drawing Title
FIRST FLOOR PARTIAL REMOVAL - MECHANICAL - 3

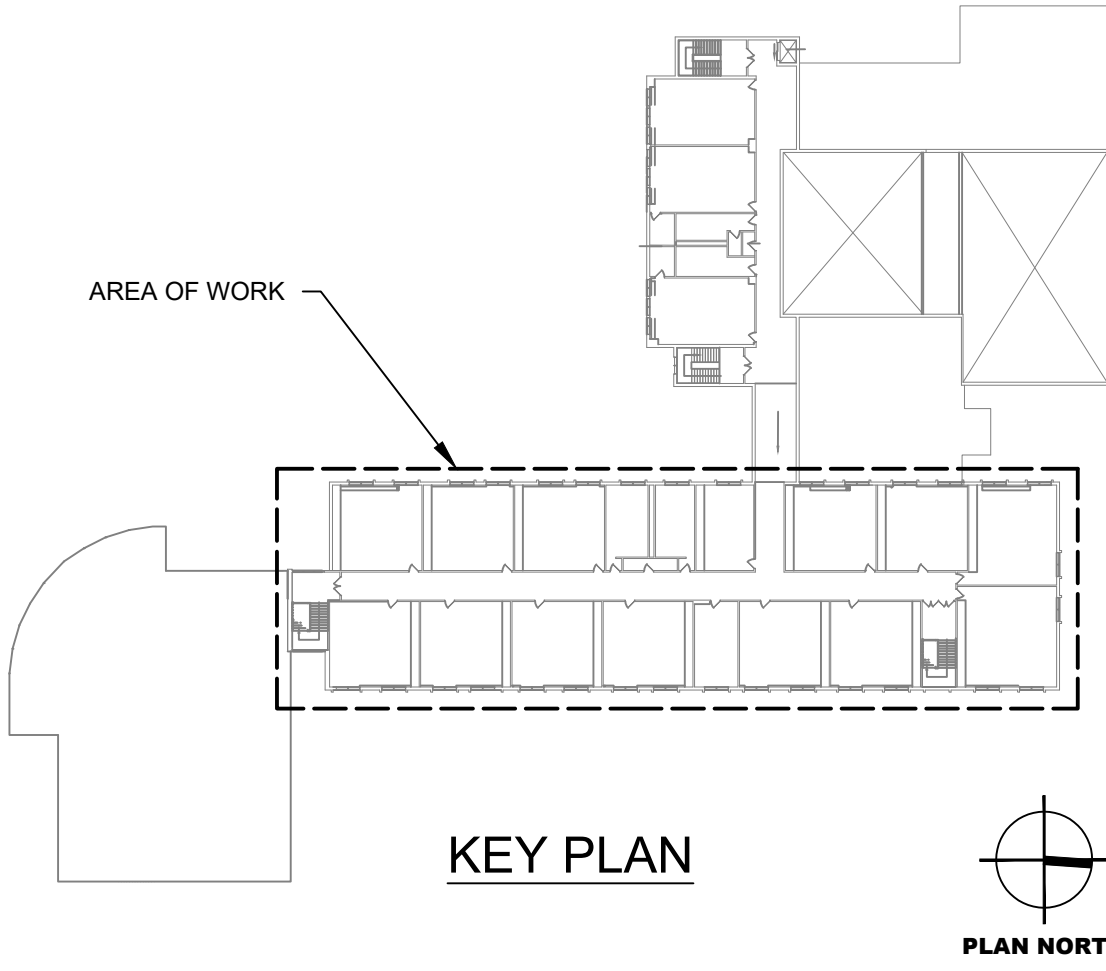
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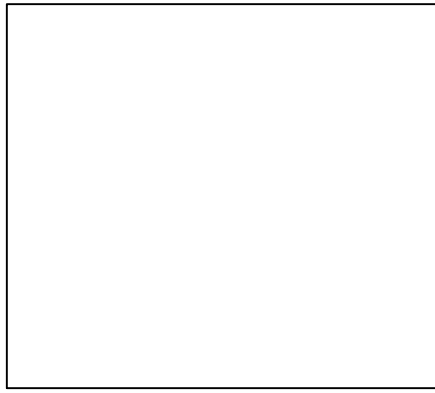
1 SECOND FLOOR PARTIAL REMOVAL - MECHANICAL - 1
SCALE: 3/32" = 1'- 0"

KEYED NOTES:

- ① DISCONNECT, REMOVE UNIT VENTILATOR CUT AND CAP. HOT WATER SUPPLY AND RETURN PIPING TEMPORARILY FOR REUSE. EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN. DISCONNECT & DISPOSE OF ASSOCIATED THERMOSTAT. SEE DETAIL 1/M501.
- ② DISCONNECT EXISTING CEILING CASSETTE AND ASSOCIATED CONTROLS. REMOVE EXISTING ROOFTOP UNIT AND CONDENSING PIPING.



No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



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Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10901 PROJ. NO. : MNY-5000080.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10901
Mechanical Structural Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVESTRAW ELEMENTARY SCHOOL SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015 © GREENMAN, INC. STONY POINT, NY 10980	STONY POINT ELEMENTARY SCHOOL REPLACEMENT
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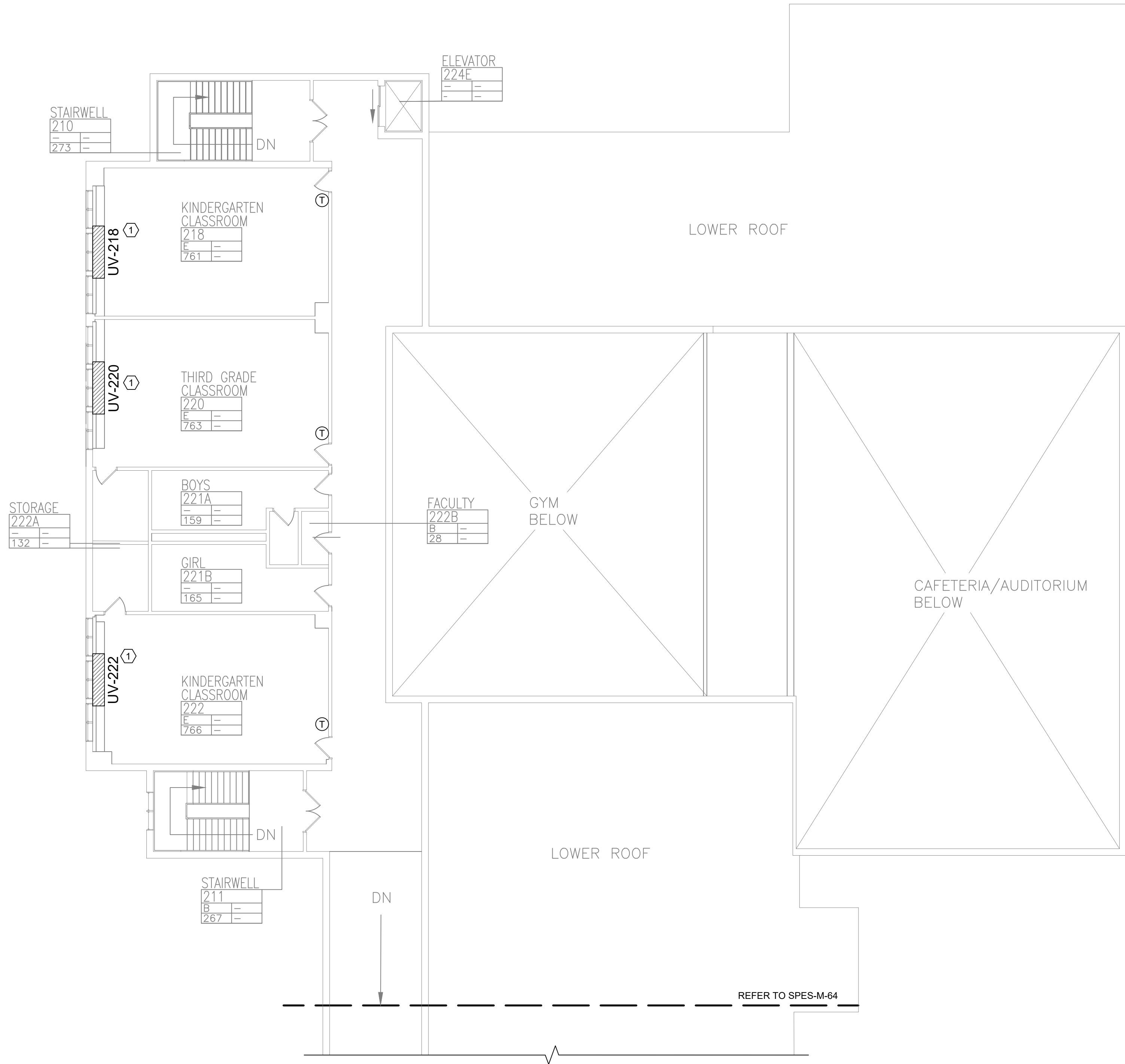


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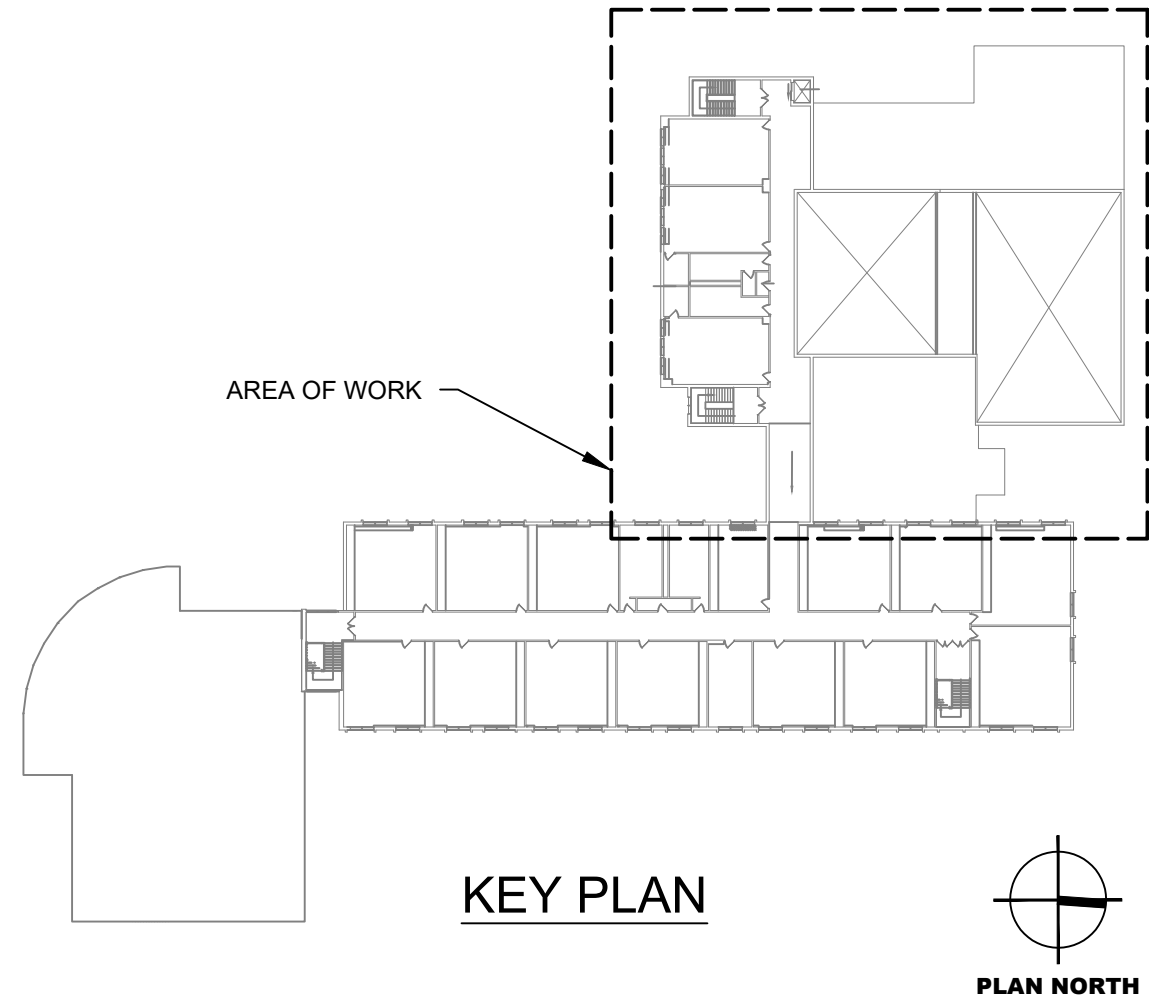
Drawing Title
**SECOND FLOOR
PARTIAL REMOVAL -
MECHANICAL - 1**

Drawing No.
SPES-M-064

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1 FIRST FLOOR PARTIAL REMOVAL - MECHANICAL - 2
SCALE: 3/32" = 1'-0"



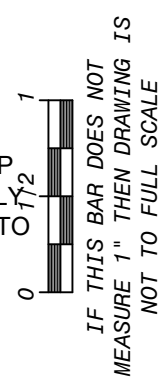
KEY PLAN



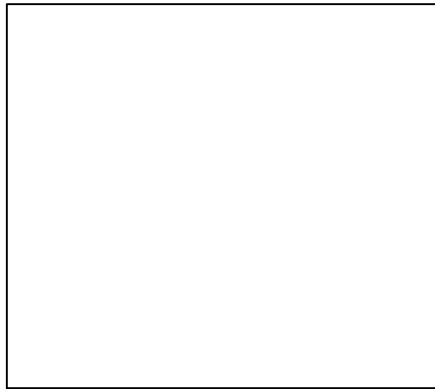
PLAN NORTH

KEYED NOTES:

- ① DISCONNECT, REMOVE UNIT VENTILATOR CUT AND CAP HOT WATER SUPPLY AND RETURN PIPING TEMPORARILY FOR REUSE. EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN. DISCONNECT & DISPOSE OF ASSOCIATED THERMOSTAT. SEE DETAIL 1/M501.



No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



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Project No.	43040
Scale	AS NOTED
Date	03-04-25

Mechanical Electrical Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981 PROJ. NO. : MNY-5000086.00
Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981

UNIVENT REPLACEMENT AT STONY POINT, THIELLS, WEST HAVESTRAW ELEMENTARY SCHOOL	SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015	STONY POINT SCHOOL DISTRICT STONY POINT, NY 10980
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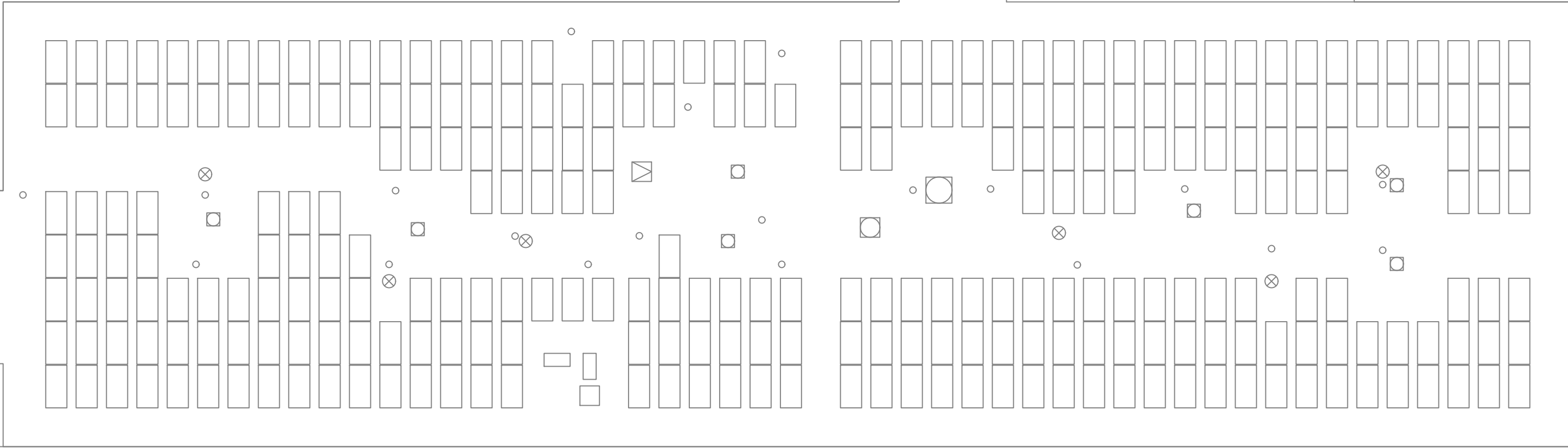
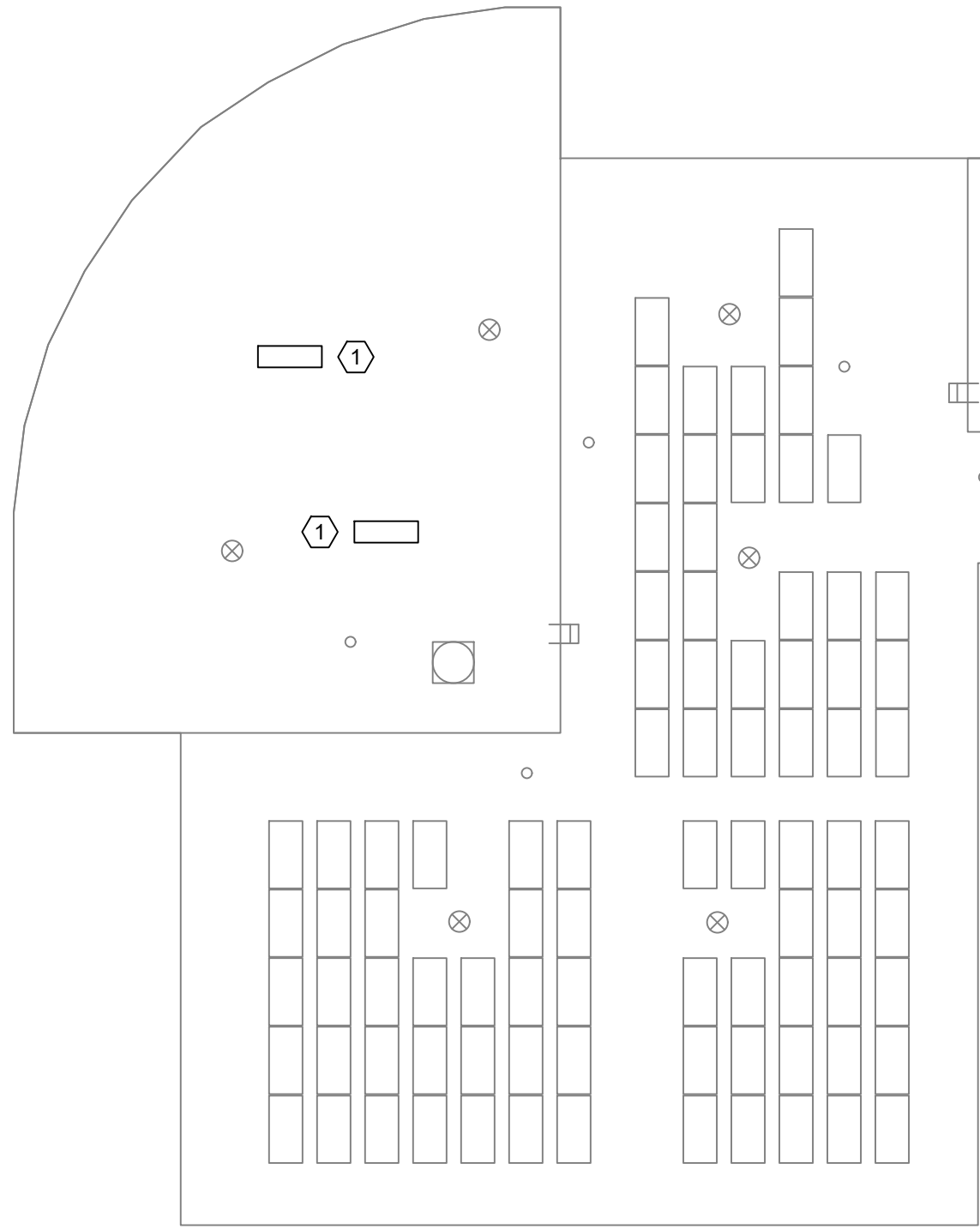


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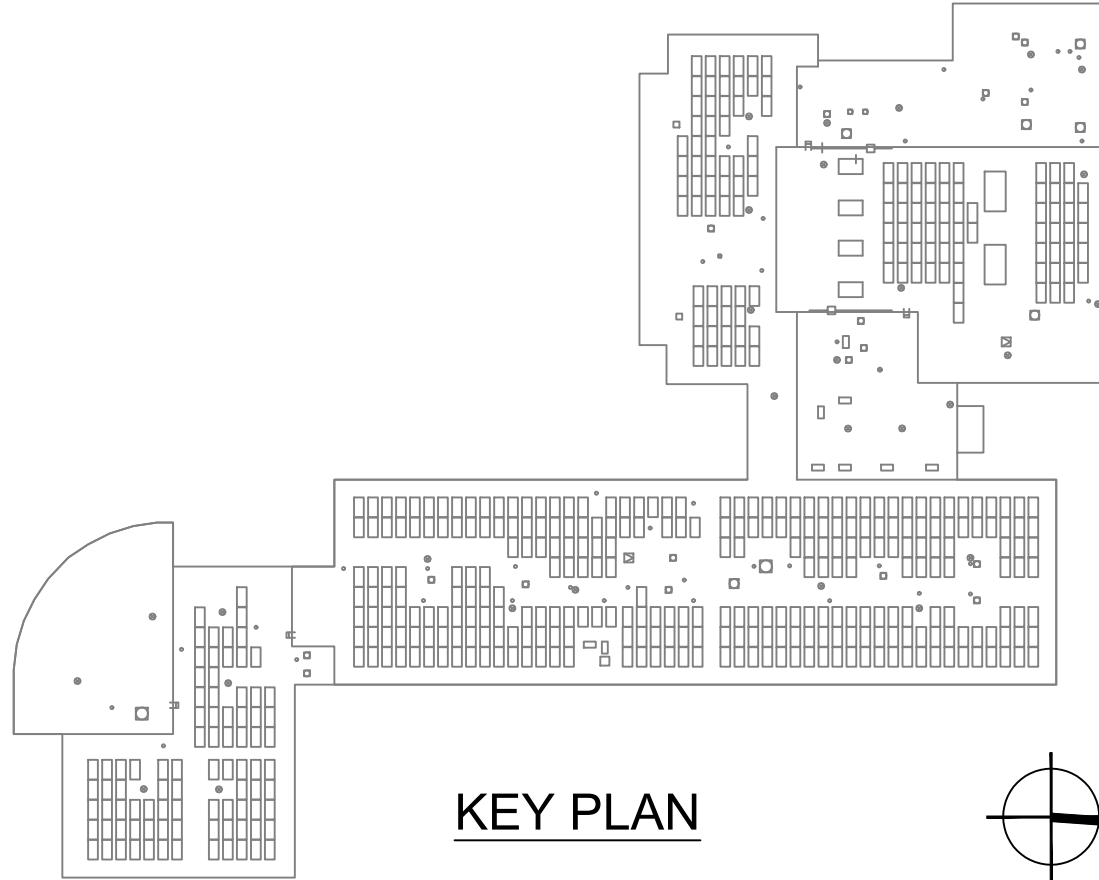
Drawing Title
**SECOND FLOOR
PARTIAL REMOVAL -
MECHANICAL - 2**

Drawing No.
SPES-M-065

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1 ROOF REMOVAL - MECHANICAL - 1
SCALE: 1/16" = 1'-0"



KEYED NOTES:

- ① DISCONNECT AND REMOVE EXISTING CONDENSER UNITS AND ASSOCIATED PIPING.
- ② DISCONNECT AND REMOVE EXISTING EXHAUST FAN.



Drawing Title
**ROOF REMOVAL -
MECHANICAL**

Drawing No.
SPES-M-066

MSA
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UNIVENT REPLACEMENT AT
STONY POINT, THIELLS,
WEST HAVESTRAW
ELEMENTARY SCHOOL
SED# 50-02-01-06-0-014-012
SED# 50-02-01-06-0-025-018
SED# 50-02-01-06-0-024-015
© GREENMAN, INC.
STONY POINT, NY 10980

Mechanical
Engineer:

**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
STONY POINT, NY 10981
PROJ. NO. : MNY-5000086.00

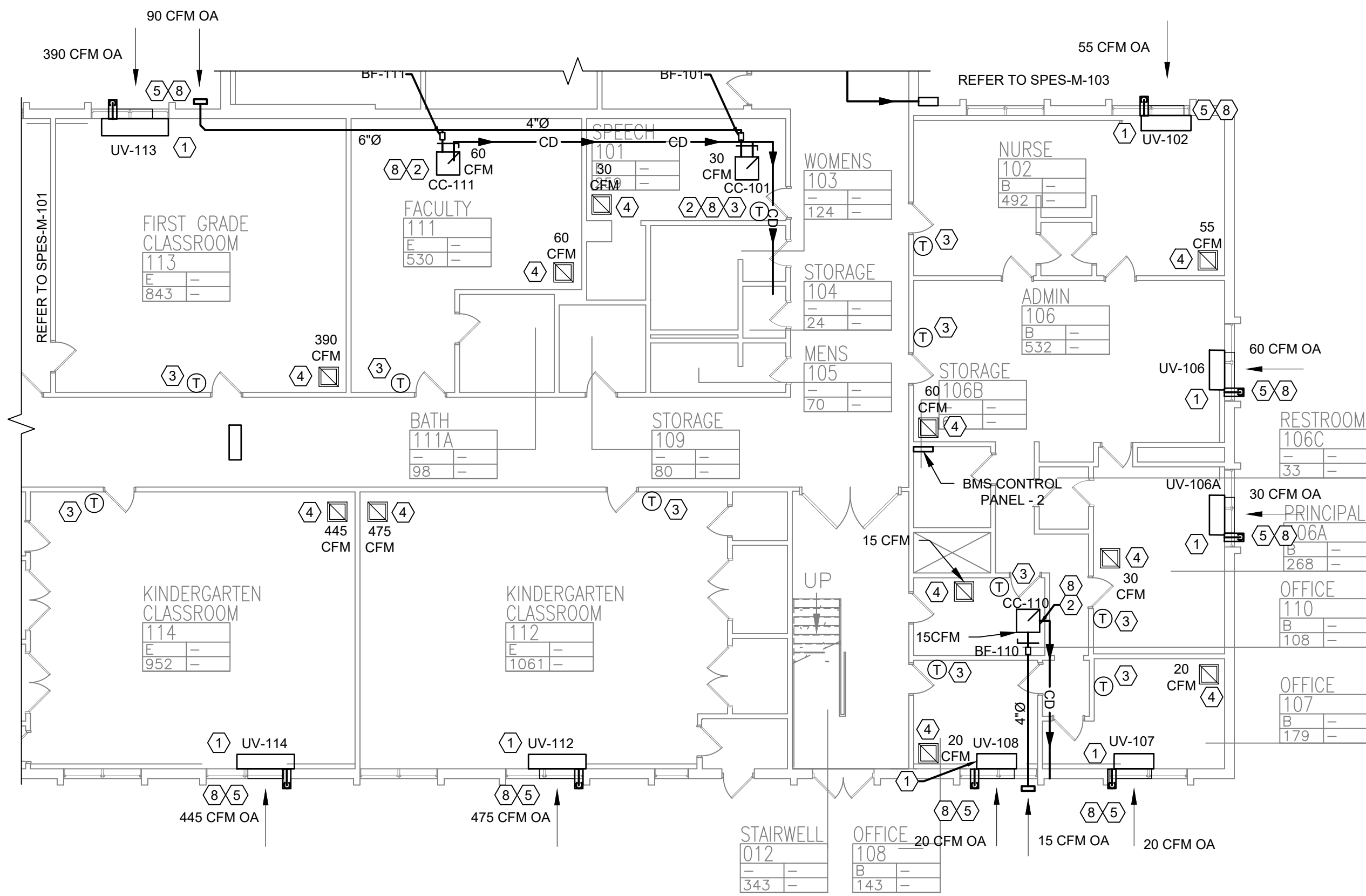
Structural
Engineer:

**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
STONY POINT, NY 10981

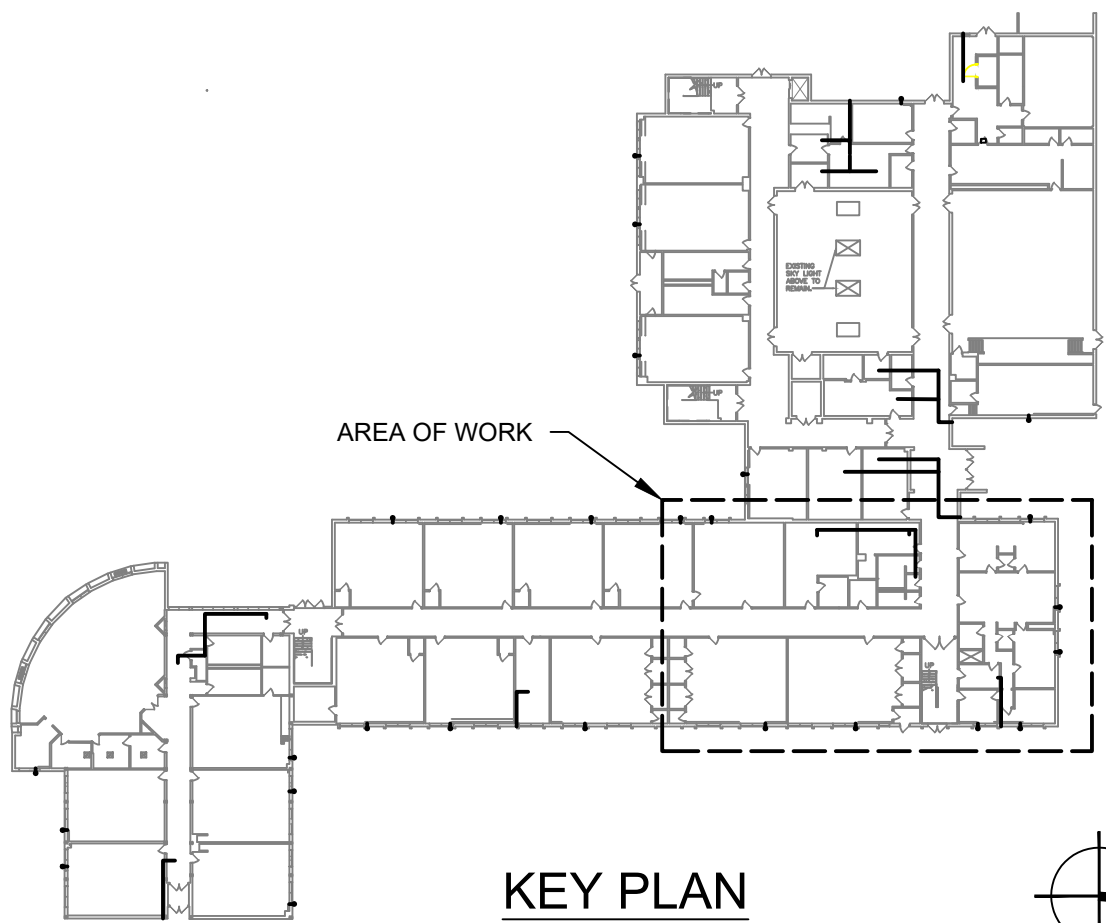
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Checked by EF
Project No. 43040
Scale AS NOTED
Date 03-04-25

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

1 FIRST FLOOR PARTIAL PLAN - MECHANICAL - 1
SCALE: 3/32" = 1'-0"



1 FIRST FLOOR PARTIAL PLAN - MECHANICAL - 2
SCALE: 3/32" = 1'- 0"



- KEYED NOTES:**
1. INSTALL AND CONNECT DX HEAT PUMP WITH HOT WATER BACKUP UNIT VENTILATOR, CONNECT HOT WATER SUPPLY AND RETURN TO EXISTING HOT WATER SYSTEM. CONNECT TO EXISTING OUTSIDE SLEEVE, PATCH AND MODIFY AS REQUIRED. SEE DETAILS 5/M501, 2/M502, 3/M502.
 2. INSTALL AND CONNECT CEILING CASSETTE AND FRESH AIR DUCT WITH BOOSTER FAN AS INDICATED. SEE DETAIL 1/M503.
 3. INSTALL AND CONNECT SYSTEM THERMOSTAT.
 4. BALANCE EXISTING EXHAUST GRILLE.
 5. EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN AND CONNECT TO NEW UNIT.
 6. INSTALL SUPPLY DIFFUSER. BALANCE TO CFM AMOUNT SHOWN ON PLANS.
 7. INSTALL RETURN GRILLE. BALANCE TO CFM AMOUNT SHOWN ON PLANS.
 8. 3/4" CONDENSATE PIPE TO RUN OUTSIDE ON SPLASH BLOCK OR TERMINATE IN AIR GAP AT SLOP SINK IN JANITOR CLOSET.

- GENERAL NOTES:**
1. RELIEF PATH FOR OUTSIDE AIR IS VIA EXHAUST GRILLES IN EXHAUST ROOMS.



Revisions	
No.	Date
1	03-04-25



Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10901 PROJ. NO. : MNY-2000080.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10901
Mechanical Electrical Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVESTRAW ELEMENTARY SCHOOL	SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015
© GREENMAN, INC. STONY POINT, NY 10900	STONY POINT, NY 10900

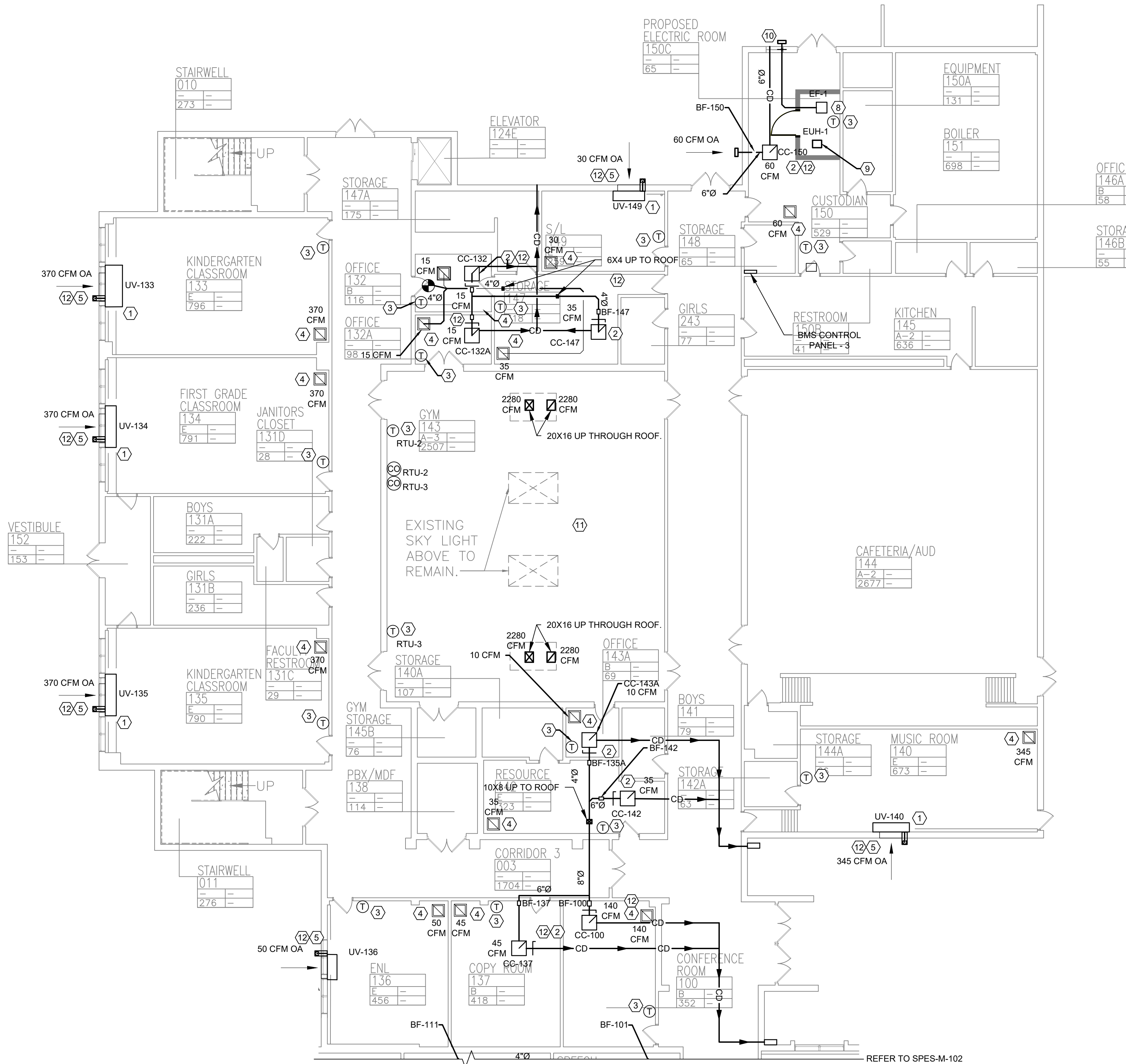


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Drawing Title
FIRST FLOOR PARTIAL PLAN - MECHANICAL - 2

Drawing No.
SPES-M-102

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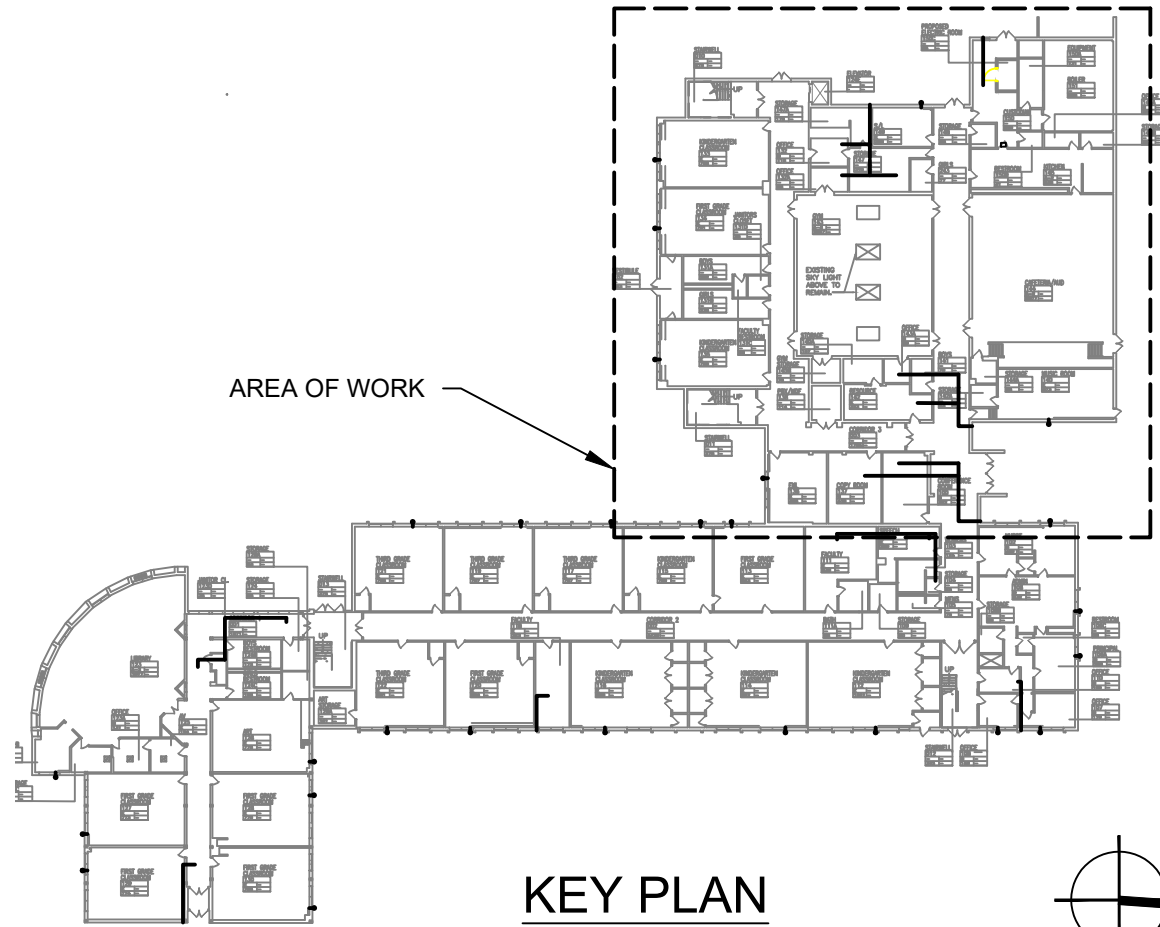
1 FIRST FLOOR PARTIAL PLAN - MECHANICAL - 3
SCALE: 3/32" = 1'- 0"

KEYED NOTES:

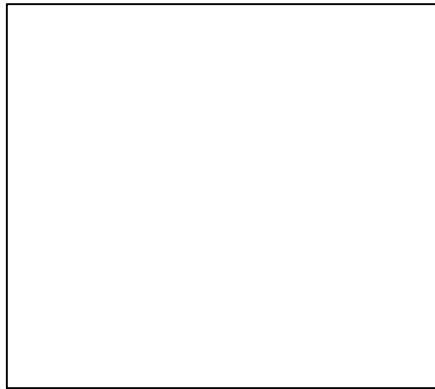
1. INSTALL AND CONNECT DX HEAT PUMP WITH HOT WATER BACKUP UNIT VENTILATOR, CONNECT HOT WATER SUPPLY AND RETURN TO EXISTING HOT WATER SYSTEM. CONNECT TO EXISTING OUTSIDE SLEEVE, PATCH AND MODIFY AS REQUIRED. SEE DETAILS 5/M501, 2/M502, 3/M502.
2. INSTALL AND CONNECT CEILING CASSETTE AND FRESH AIR DUCT AS INDICATED. SEE DETAIL 1/M503. INSULATE ALL DUCTWORK AND BOOSTER FAN.
3. INSTALL AND CONNECT SYSTEM THERMOSTAT.
4. BALANCE EXISTING EXHAUST GRILLE.
5. EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN.
6. INSTALL SUPPLY DIFFUSER. BALANCE TO CFM AMOUNT SHOWN ON PLANS.
7. INSTALL RETURN GRILLE. BALANCE TO CFM AMOUNT SHOWN ON PLANS.
8. INSTALL INDOOR EXHAUST FAN AND DUCTWORK. SEE DETAIL.
9. INSTALL ELECTRIC UNIT HEATER, EUH-1.
10. INSTALL LOUVER, L-1.
11. EXISTING DUCTWORK TO REMAIN IN GYM AS BACKUP (HV ONLY).
12. 3/4" CONDENSATE PIPE TO RUN OUTSIDE ON SPLASH BLOCK OR NEAREST JANITORS CLOSET.

GENERAL NOTES:

1. RELIEF PATH FOR OUTSIDE AIR IS VIA EXHAUST GRILLES IN EXHAUST ROOMS.



No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981 PROJ. NO.: MNY-2000086.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981
Mechanical Structural Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT THIELLS, WEST HAVESTRAW ELEMENTARY SCHOOL	SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015
© GREENMAN, INC. STONY POINT, NY 10980	STONY POINT SCHOOL DISTRICT



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Drawing Title
**FIRST FLOOR PARTIAL
PLAN - MECHANICAL -
3**

Drawing No.
SPES-M-103

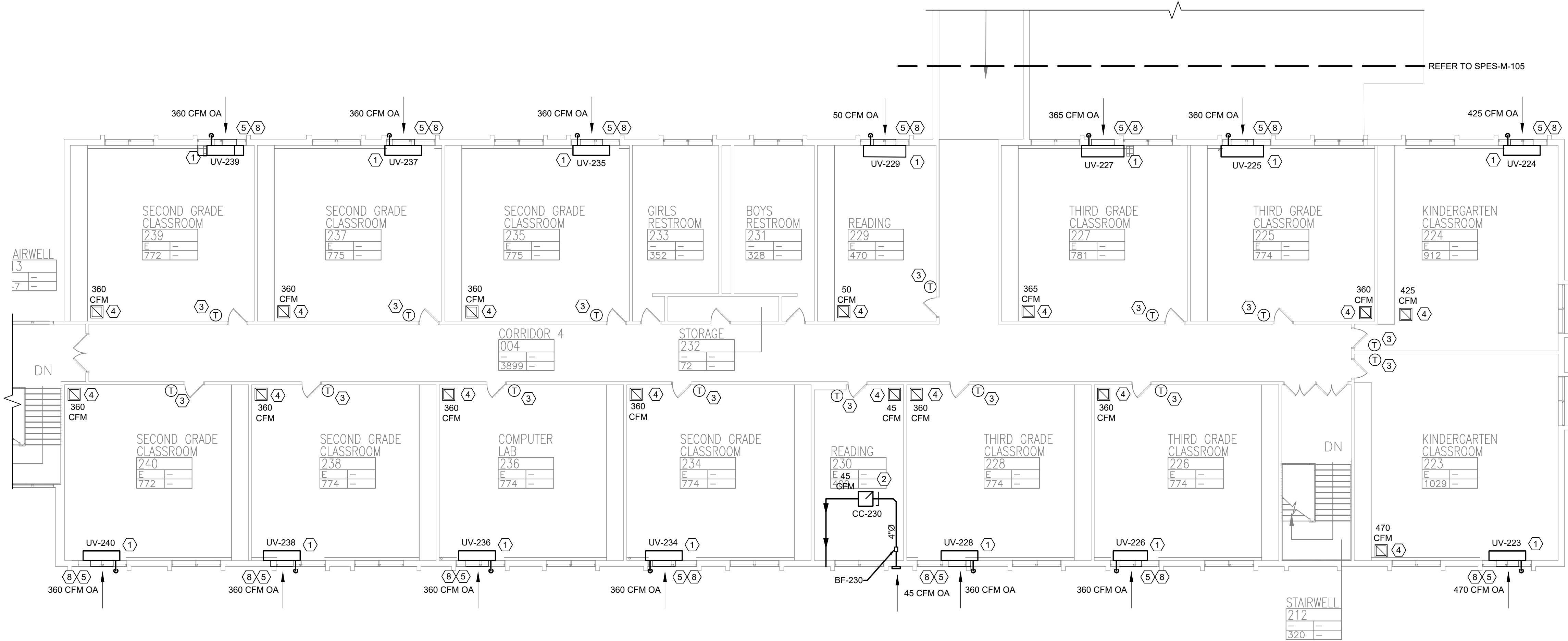
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GENERAL NOTES:

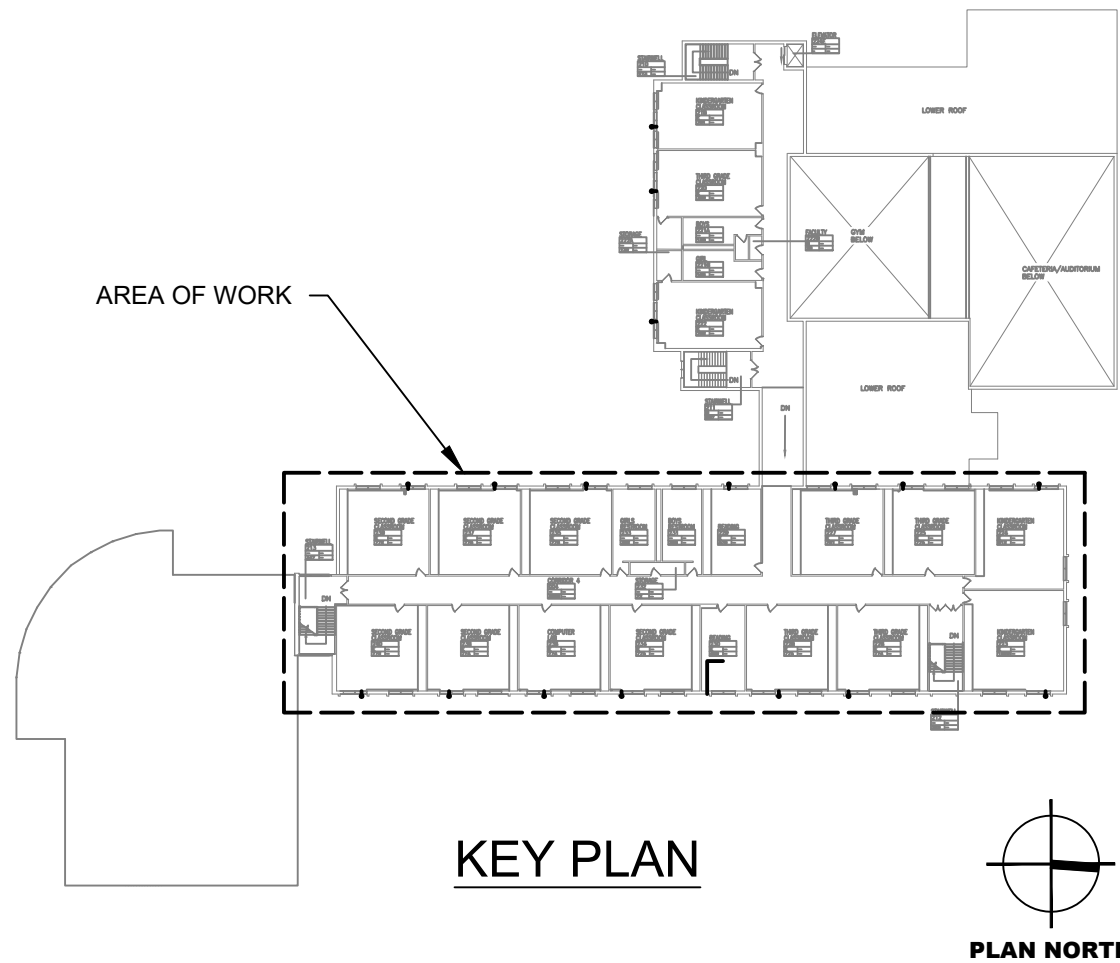
1. RELIEF PATH FOR OUTSIDE AIR IS VIA EXHAUST GRILLES IN EXHAUST ROOMS.

KEYED NOTES:

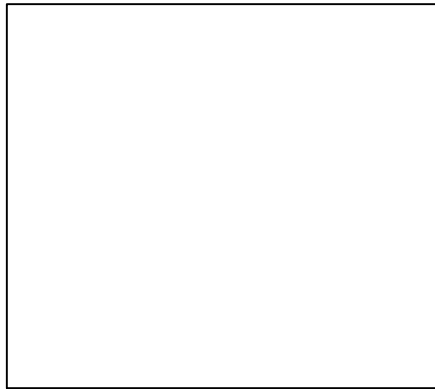
- ① INSTALL AND CONNECT DX HEAT PUMP WITH HOT WATER BACKUP UNIT VENTILATOR, CONNECT HOT WATER SUPPLY AND RETURN TO EXISTING HOT WATER SYSTEM. CONNECT TO EXISTING OUTSIDE SLEEVE, PATCH AND MODIFY AS REQUIRED. SEE DETAILS 5/M501, 2/M502, 3/M502.
- ② INSTALL AND CONNECT CEILING CASSETTE AND FRESH AIR DUCT WITH BOOSTER FAN AS INDICATED. SEE DETAIL 1/M503. INSULATE ALL DUCTWORK AND BOOSTER FAN.
- ③ INSTALL AND CONNECT SYSTEM THERMOSTAT.
- ④ BALANCE EXISTING EXHAUST GRILLE.
- ⑤ EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN AND CONNECT TO NEW UNITS.
- ⑥ INSTALL SUPPLY DIFFUSER. BALANCE TO CFM AMOUNT SHOWN ON PLANS.
- ⑦ INSTALL RETURN GRILLE. BALANCE TO CFM AMOUNT SHOWN ON PLANS.
- ⑧ 3/4" CONDENSATE PIPE TO RUN OUTSIDE TO SPLASHBACK OR NEAREST JANITORS CLOSET.



1 SECOND FLOOR PARTIAL PLAN - MECHANICAL - 1
SCALE: 3/32" = 1'- 0"



Revisions	
No.	Date
1	03-04-25
BIDDING DOCUMENTS	



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Project No.	43040
Scale	AS NOTED
Date	03-04-25

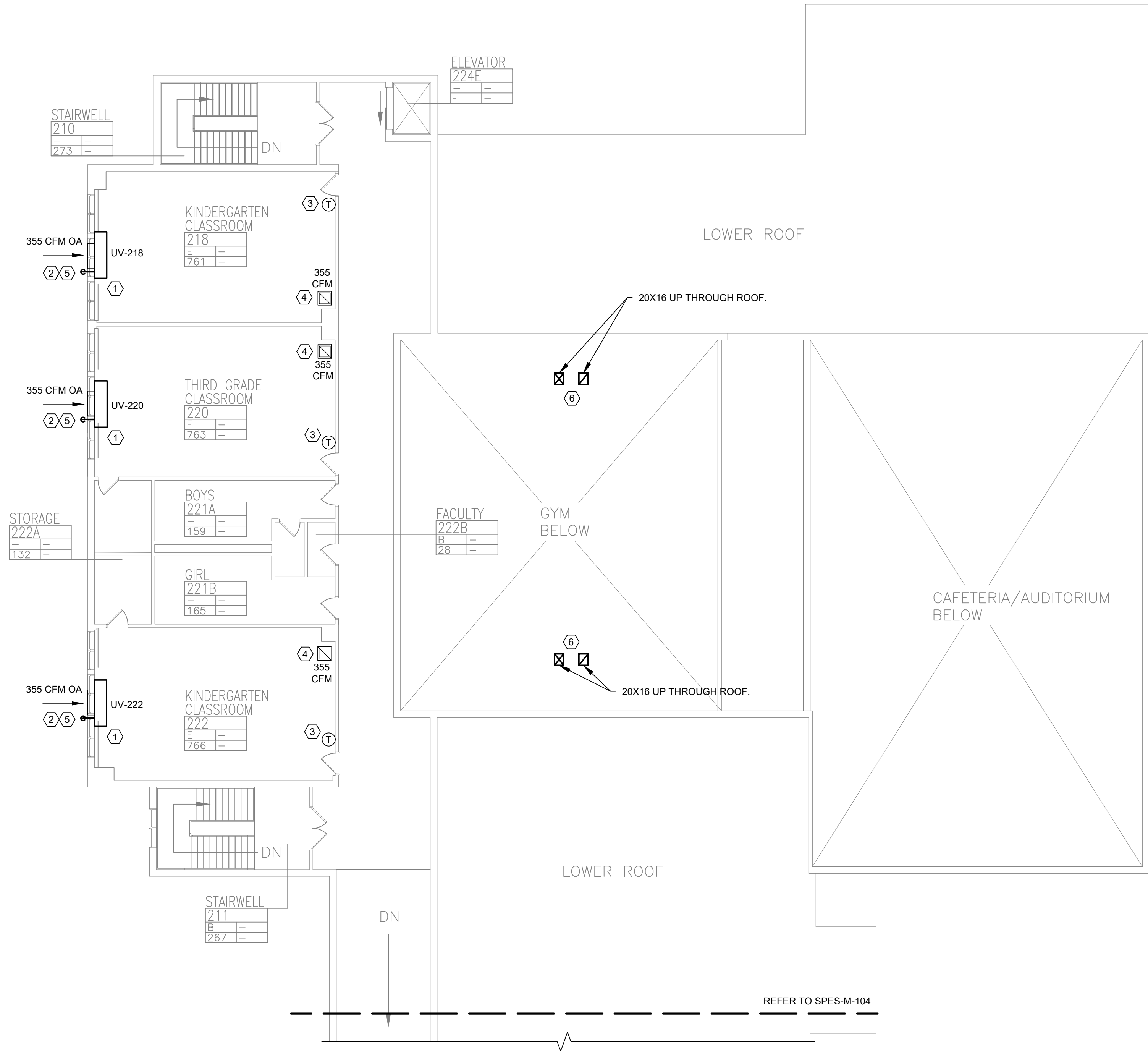
Mechanical Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981 PROJ. NO. : NY-5000086.00
	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981

UNIVENT REPLACEMENT AT STONY POINT THIELLS, WEST HAVESTRAW ELEMENTARY SCHOOL	SED# 50-02-01-06-0-014-012
	SED# 50-02-01-06-0-025-018
ARCHITECT MICHAEL SHILALE ARCHITECTS, LLP 140 Park Avenue New City, NY 10956 Tel 845-708-9200 www.shilale.com	SED# 50-02-01-06-0-024-015
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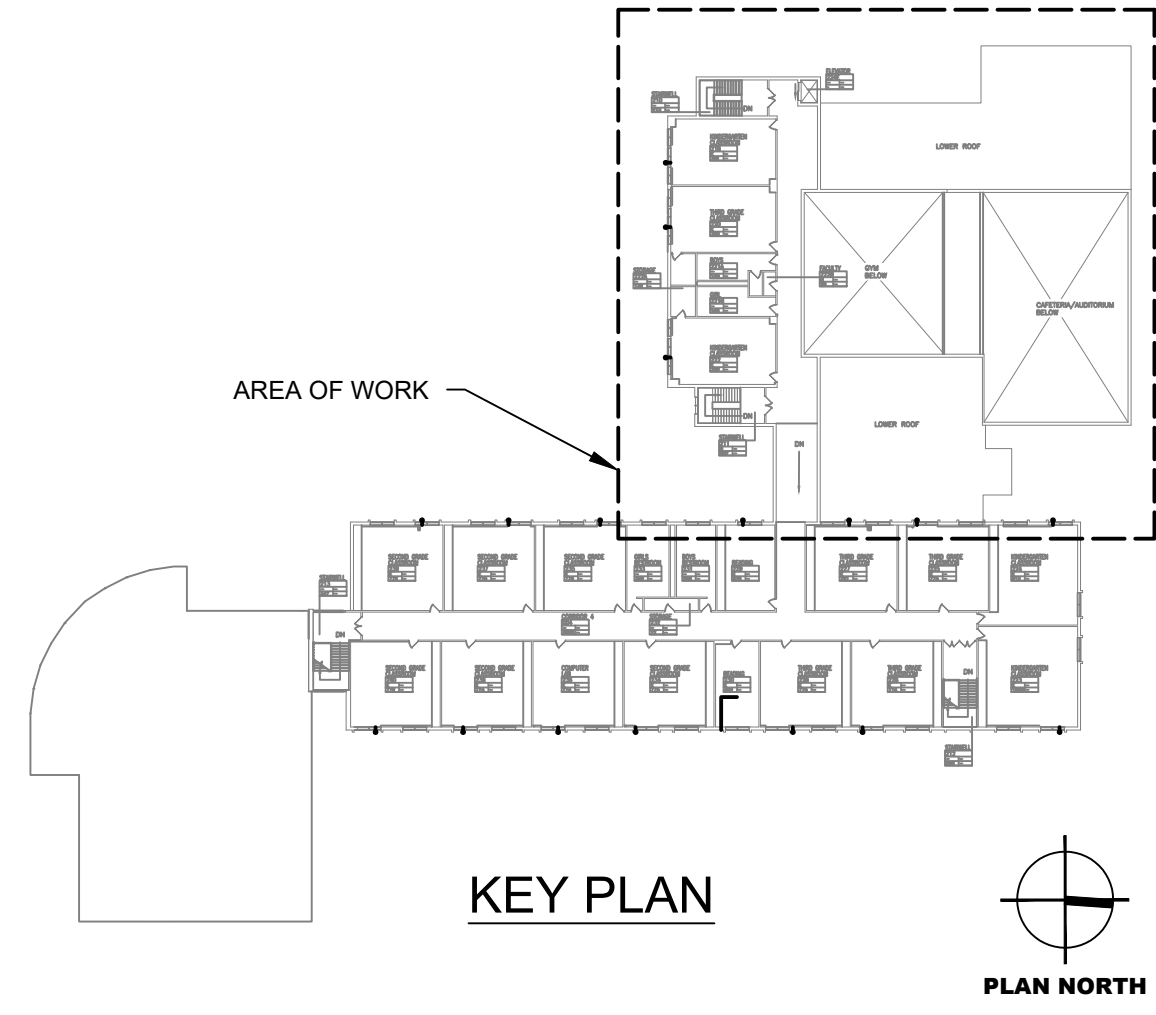


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Drawing Title SECOND FLOOR PARTIAL PLAN - MECHANICAL - 1	Drawing No. SPES-M-104
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1 SECOND FLOOR PARTIAL PLAN - MECHANICAL - 2
SCALE: 3/32" = 1'-0"



KEYED NOTES:

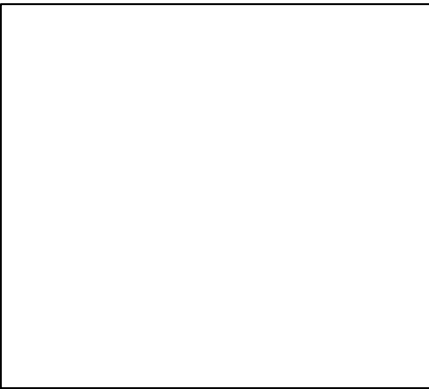
1. INSTALL AND CONNECT DX HEAT PUMP WITH HOT WATER BACKUP UNIT VENTILATOR, CONNECT HOT WATER SUPPLY AND RETURN TO EXISTING HOT WATER SYSTEM. CONNECT TO EXISTING OUTSIDE SLEEVE, PATCH AND MODIFY AS REQUIRED. SEE DETAILS 5/M501, 2/M502, 3/M502.
2. 3/4" CONDENSATE PIPE TO RUN OUTSIDE OR NEAREST JANITORS CLOSET
3. INSTALL AND CONNECT SYSTEM THERMOSTAT.
4. BALANCE EXISTING EXHAUST GRILLE.
5. EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN AND CONNECT TO NEW UNIT.
6. PROVIDE SUPPLY AND RETURN DUCTWORK UP THOUGH ROOF TO RTU-2&3. SEE DETAIL XXX

GENERAL NOTES:

1. RELIEF PATH FOR OUTSIDE AIR IS VIA EXHAUST GRILLES IN EXHAUST ROOMS.

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No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



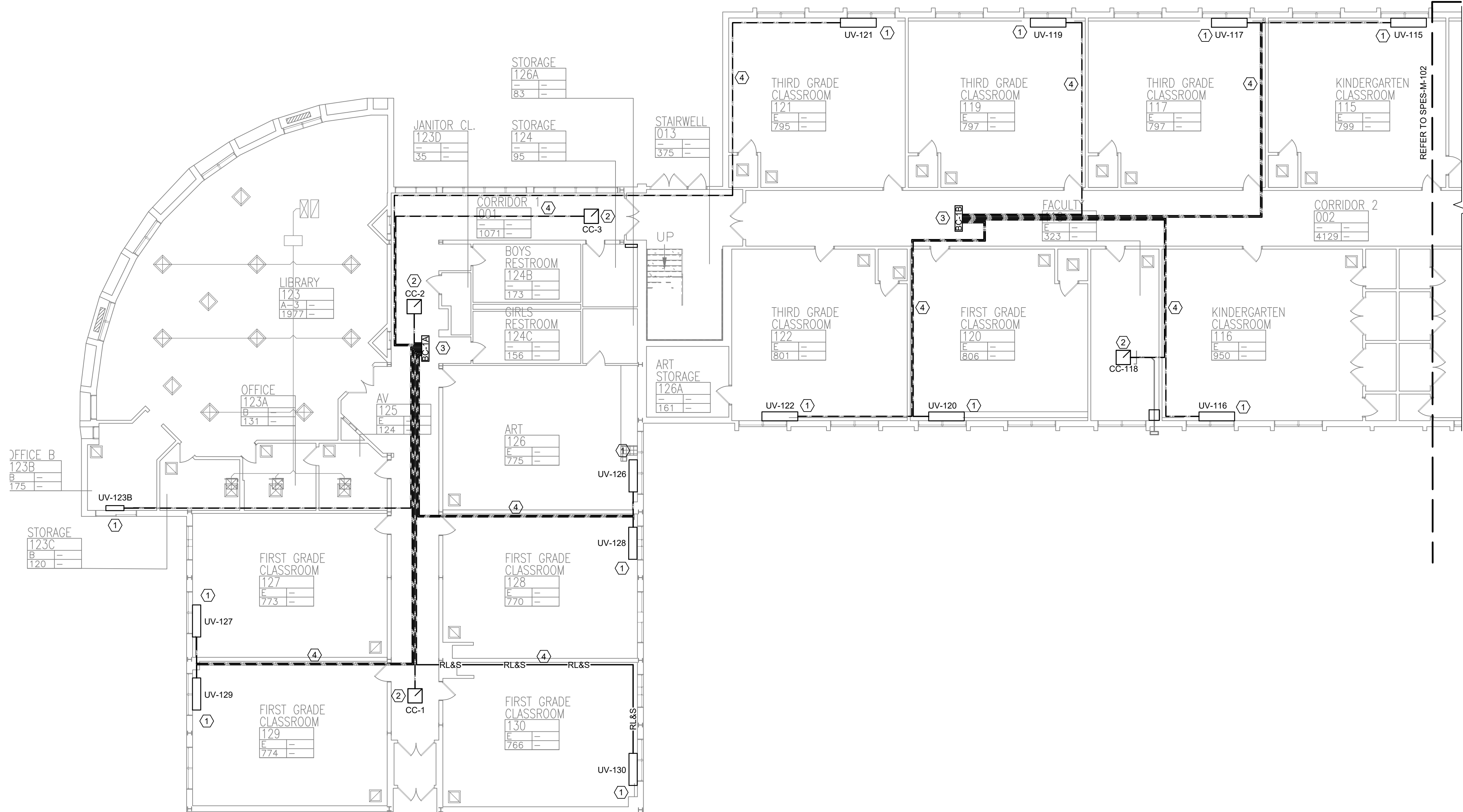
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Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUFFERN, NY 10901 PROJ. NO. : MNY-5000086.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUFFERN, NY 10901
Mechanical Structural Engineer:	Structural Engineer:

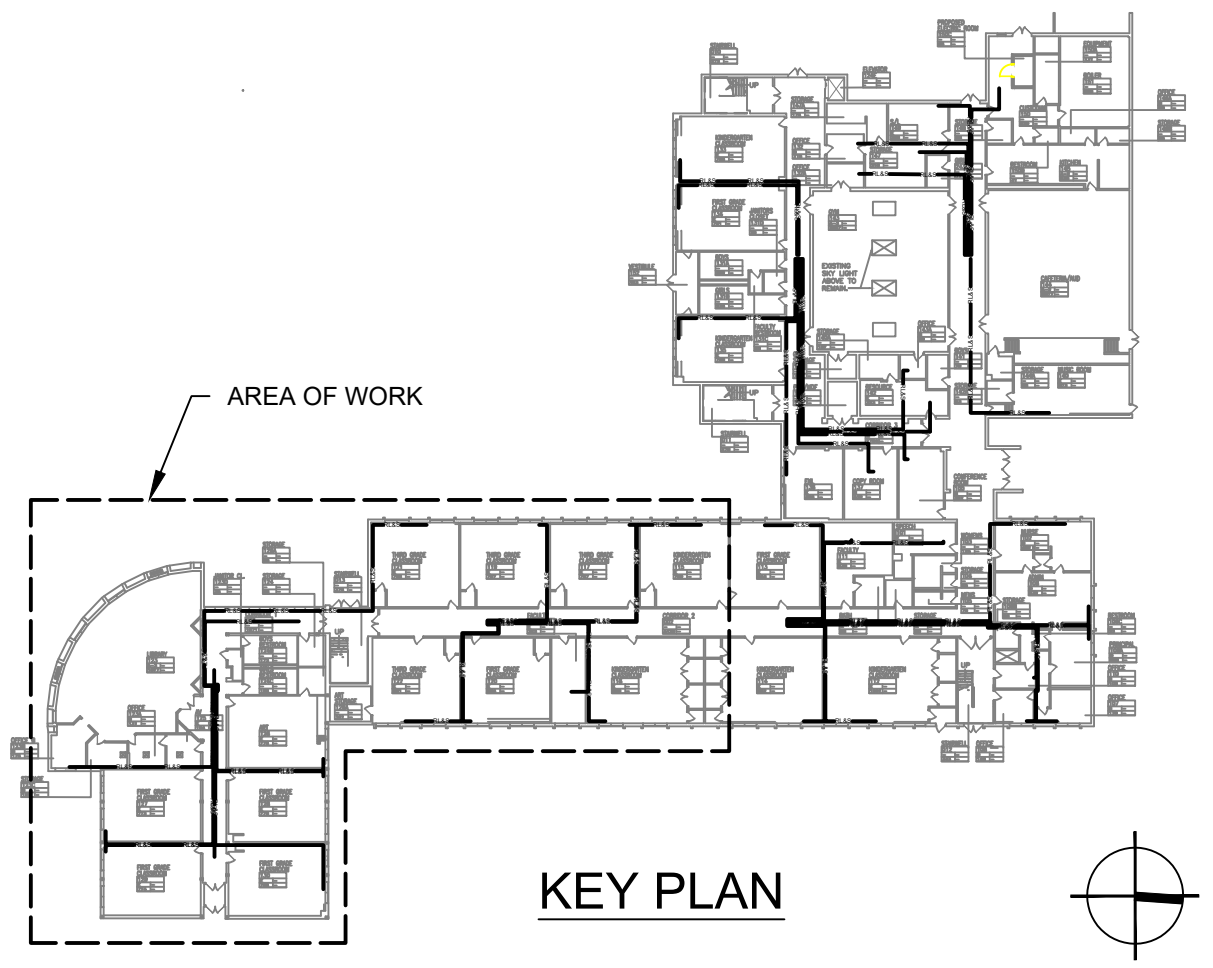
UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVESTRAW ELEMENTARY SCHOOL	SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015
GREENMAN PEDERSEN, INC STONY POINT, NY 10980	GREENMAN PEDERSEN, INC STONY POINT, NY 10980

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SECOND FLOOR PARTIAL PLAN - MECHANICAL - 2	SPES-M-105
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1 MECHANICAL FIRST FLOOR PARTIAL PLAN - REFRIGERANT PIPING - 1
SCALE: 3/32" = 1'-0"



- KEYED NOTES:**
- 1 NEW UNIT VENTILATOR.
 - 2 NEW CEILING CASSETTE.
 - 3 INSTALL BRANCH CONTROLLER ABOVE SUSPENDED CEILING. PROVIDE ASSOCIATED SUPPORT. SEE DETAIL 5/M502.
 - 4 INSTALL, ROUTE, AND CONNECT REFRIGERANT PIPING AS INDICATED ABOVE SUSPENDED CEILING. COORDINATE WITH ARCHITECT DRAWINGS.

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No.	Date	Revisions
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Project No.	43040
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Date	03-04-25

Mechanical Electrical Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981 PROJ. No.: NY-5000086.00
Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981

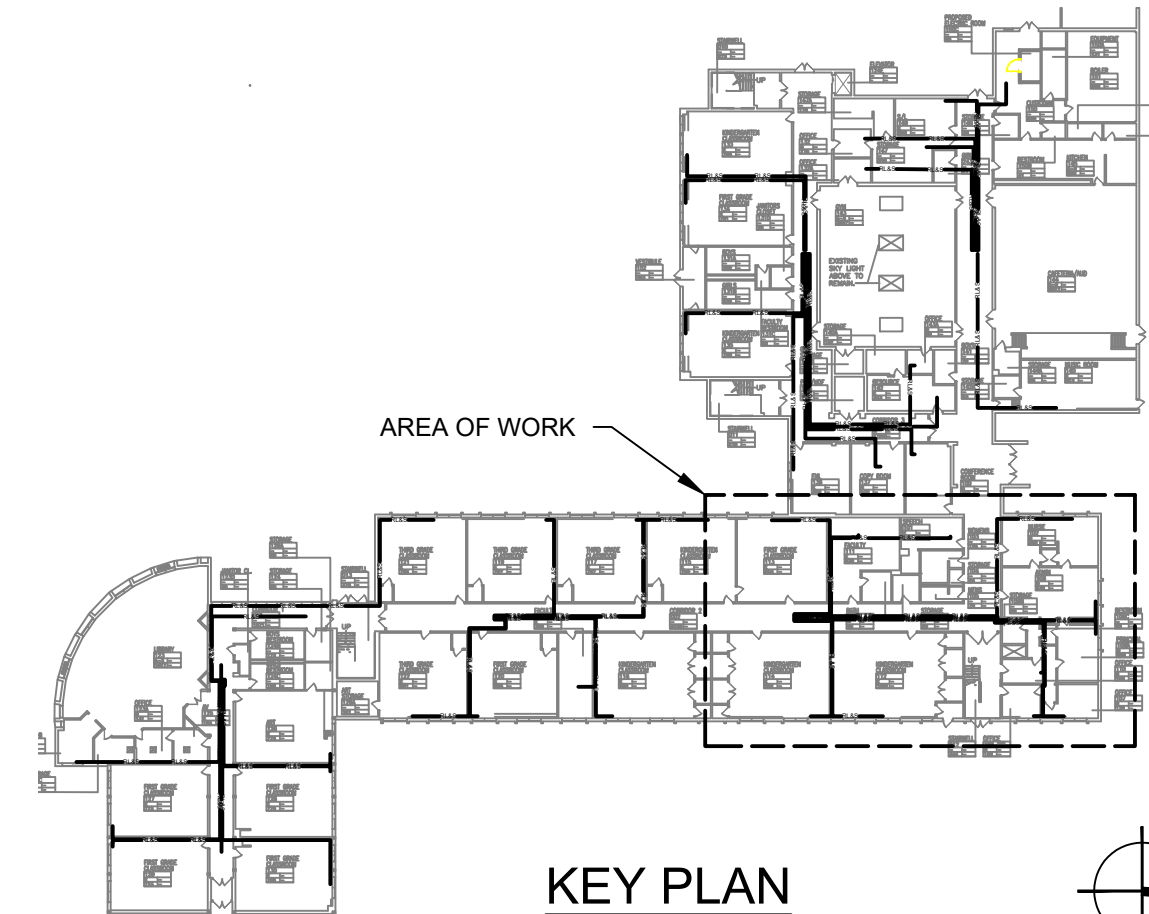
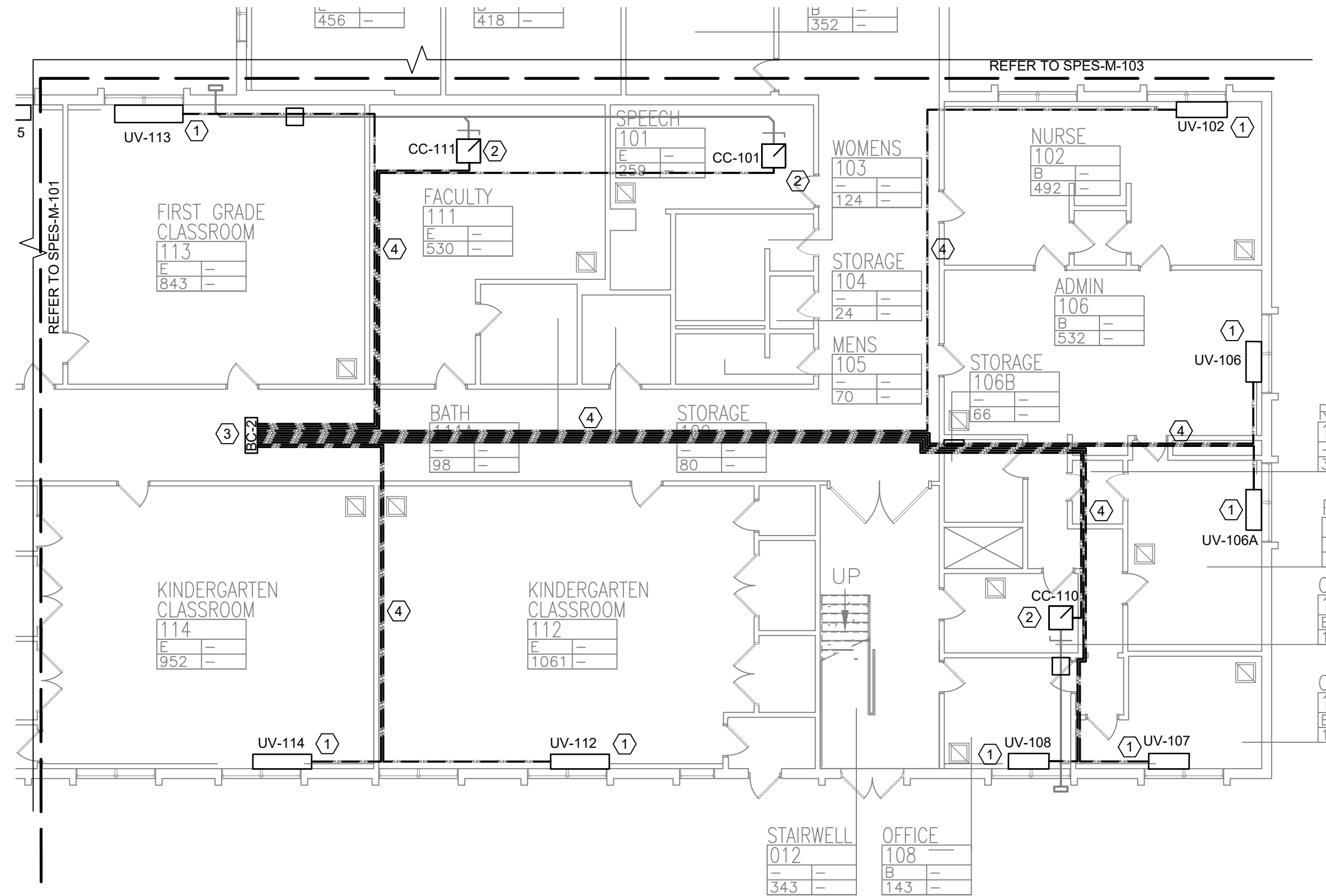
UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVESTRAW ELEMENTARY SCHOOL	SD# 50-02-01-06-0-014-012 SD# 50-02-01-06-0-025-018 SD# 50-02-01-06-0-024-015
DESIGNED BY MICHAEL SHILALE ARCHITECTS, LLP STONY POINT, NY 10980	SEAL, STAMP AND SIGNATURE



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Drawing No.	SPES-M-106
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1 MECHANICAL FIRST FLOOR PARTIAL PLAN - REFRIGERANT PIPING - 2
SCALE: 3/32" = 1'- 0"



KEYED NOTES:

- 1 NEW UNIT VENTILATOR.
- 2 NEW CEILING CASSETTE.
- 3 INSTALL BRANCH CONTROLLER IN SUSPENDED CEILING. SEE DETAIL 5/M502.
- 4 INSTALL, ROUTE, AND CONNECT REFRIGERANT PIPING AS INDICATED ABOVE SUSPENDED CEILING. COORDINATE WITH ARCHITECT DRAWINGS.



Drawing Title
FIRST FLOOR PART.
PLAN - REFG. PIPING -
2

Drawing No.
SPES-M-107

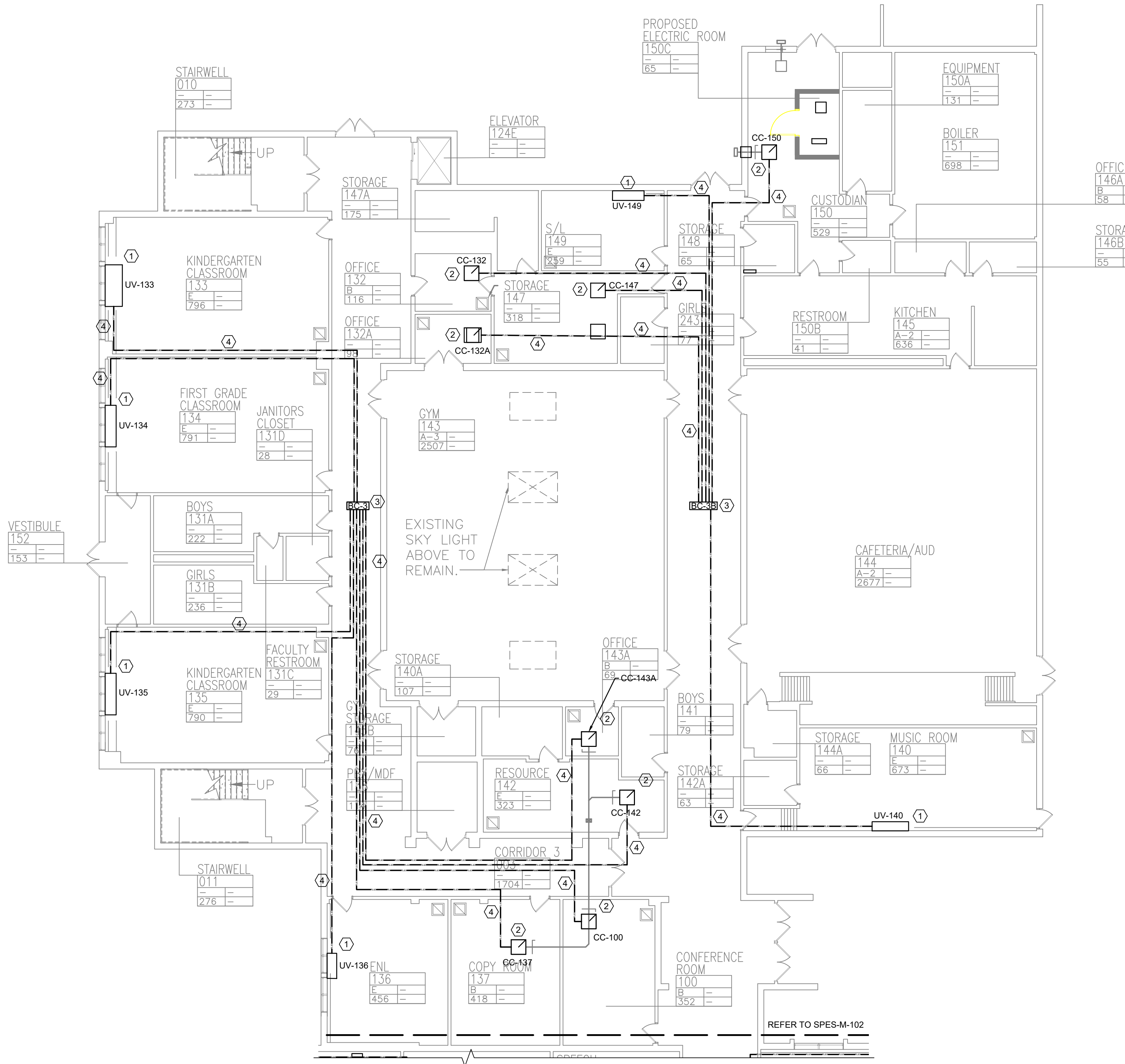
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WEST HAVESTRAW
ELEMENTARY SCHOOL
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SED# 50-02-01-06-0-025-018
SED# 50-02-01-06-0-024-015
STONY POINT, NY 10980
STONY POINT, NY 10980

Mechanical
Engineer:
GREENMAN
PEDERSEN, INC
2 EXECUTIVE BOULEVARD
STONY POINT, NY 10901
PROJ. NO. : MNY-5000088.00
Structural
Engineer:
GREENMAN
PEDERSEN, INC
2 EXECUTIVE BOULEVARD
STONY POINT, NY 10901

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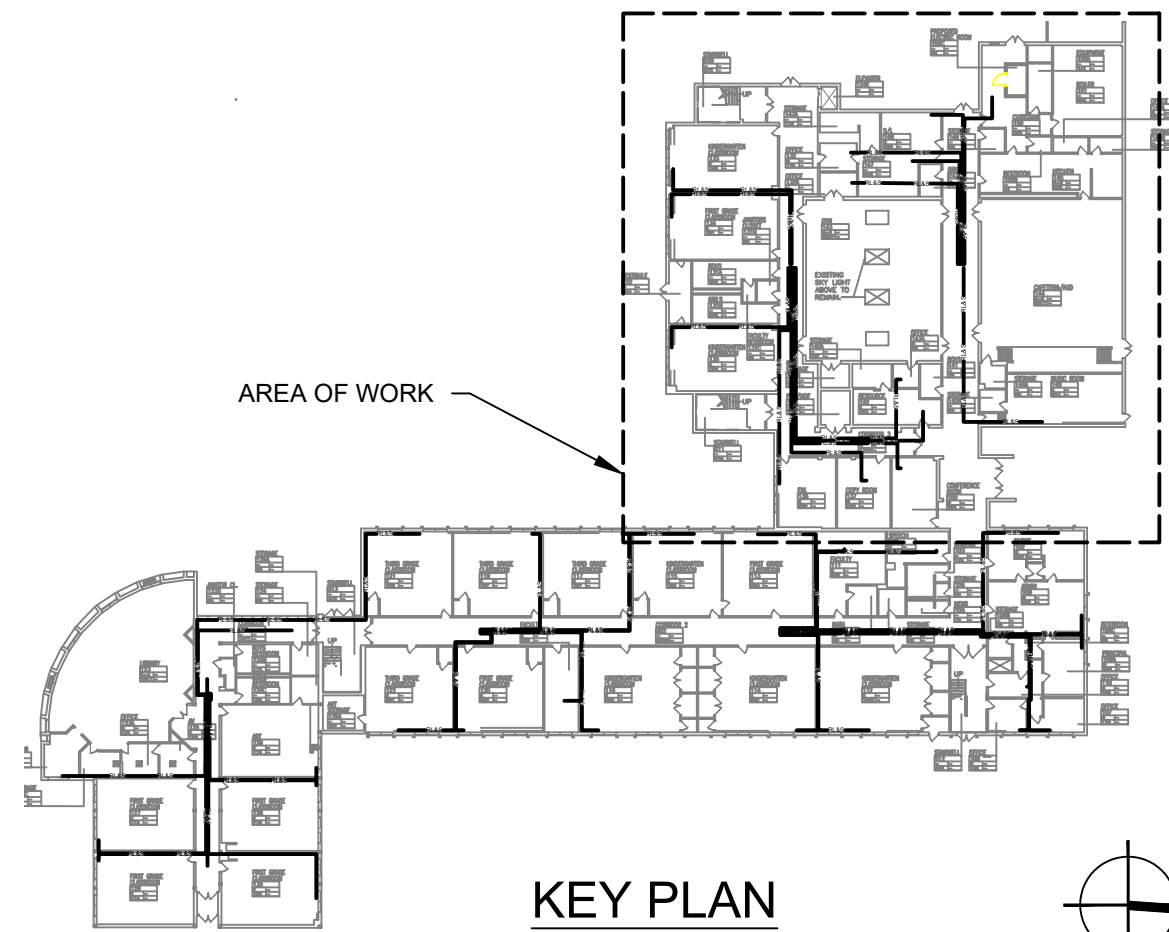
No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



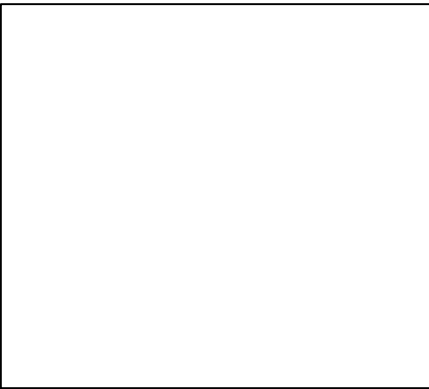
- KEYED NOTES:**
- 1 NEW UNIT VENTILATOR.
 - 2 NEW CEILING CASSETTE.
 - 3 INSTALL BRANCH CONTROLLER IN SUSPENDED CEILING. SEE DETAIL 5/M502.
 - 4 INSTALL, ROUTE, AND CONNECT REFRIGERANT PIPING AS INDICATED ABOVE SUSPENDED CEILING. COORDINATE WITH ARCHITECT DRAWINGS.

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1 MECHANICAL FIRST FLOOR PARTIAL PLAN - REFRIGERANT PIPING - 3
SCALE: 3/32" = 1'-0"



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Mechanical Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981 PROJ. NO. : MNY-2000086.00
Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981

UNIVENT REPLACEMENT AT STONY POINT THIELLS, WEST HAVESTRAW ELEMENTARY SCHOOL	SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015
GREENMAN, INC. STONY POINT, NY 10980	STONY POINT ELEMENTARY SCHOOL

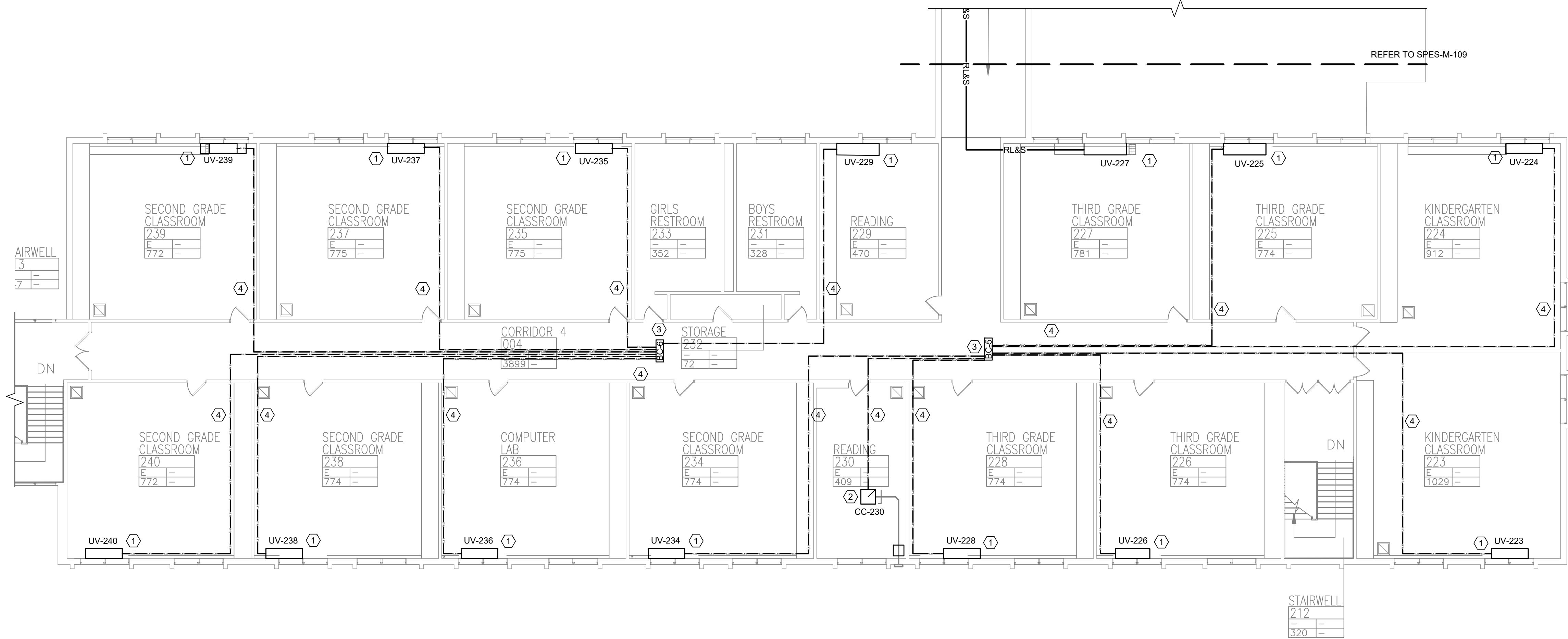


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Drawing Title
**FIRST FLOOR PART.
PLAN - REFG. PIPING -
3**

Drawing No.
SPES-M-108

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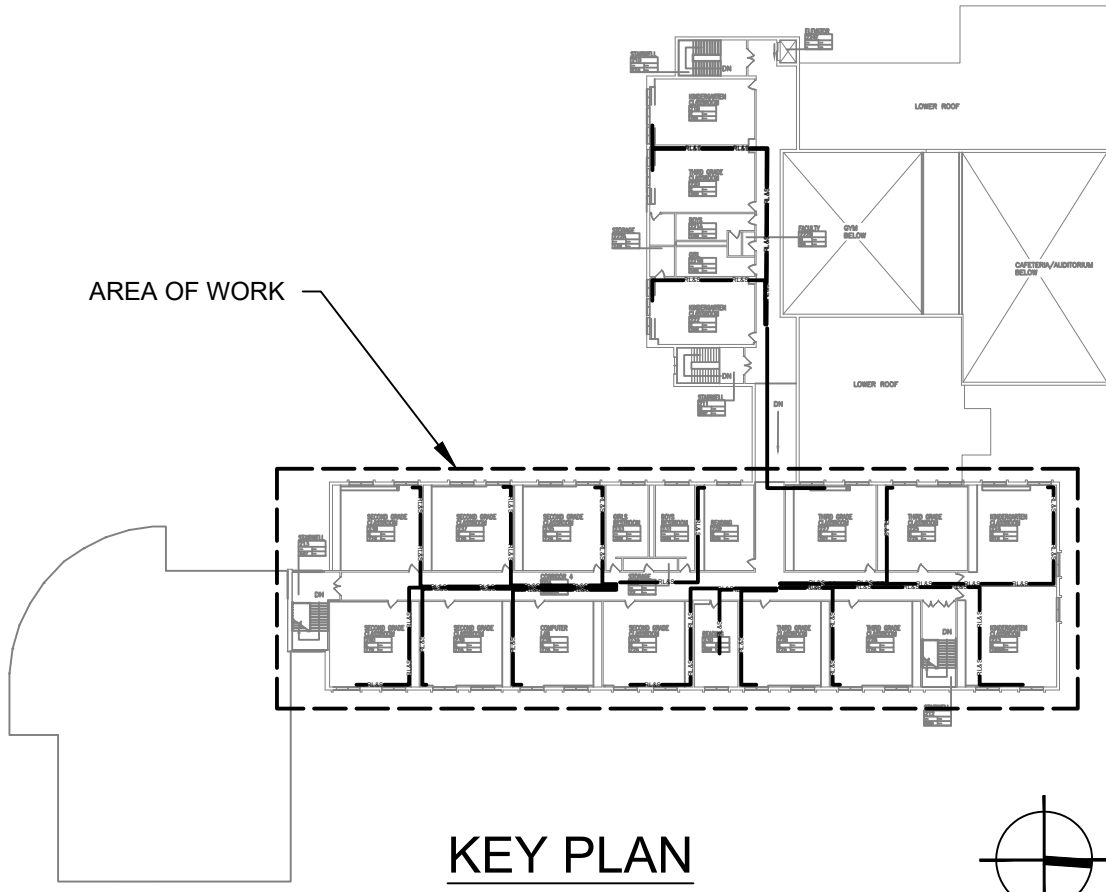


KEYED NOTES:

- 1 NEW UNIT VENTILATOR.
- 2 NEW CEILING CASSETTE.
- 3 INSTALL BRANCH CONTROLLER IN SUSPENDED CEILING. SEE DETAIL 5/M502.
- 4 INSTALL, ROUTE, AND CONNECT REFRIGERANT PIPING AS INDICATED ABOVE SUSPENDED CEILING. COORDINATE WITH ARCHITECT DRAWINGS.

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1 MECHANICAL SECOND FLOOR PARTIAL PLAN - REFRIGERANT PIPING - 1
SCALE: 3/32" = 1'- 0"



No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

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Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10980 PROJ. NO. : NY-5000080.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10980
Mechanical Structural Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVESTRAW ELEMENTARY SCHOOL SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015 © GREENMAN, INC. STONY POINT, NY 10980	STONY POINT SCHOOL DISTRICT
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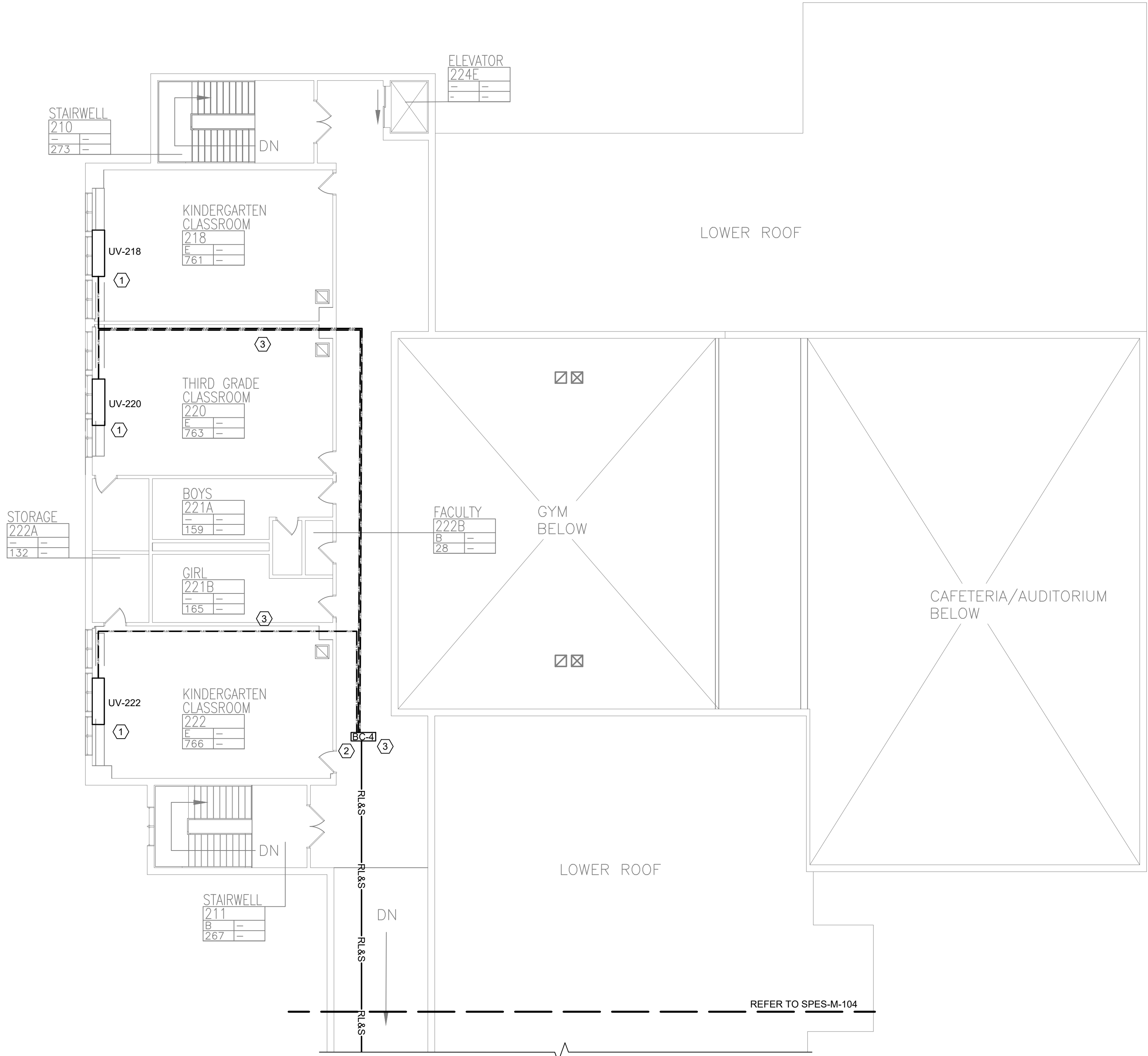


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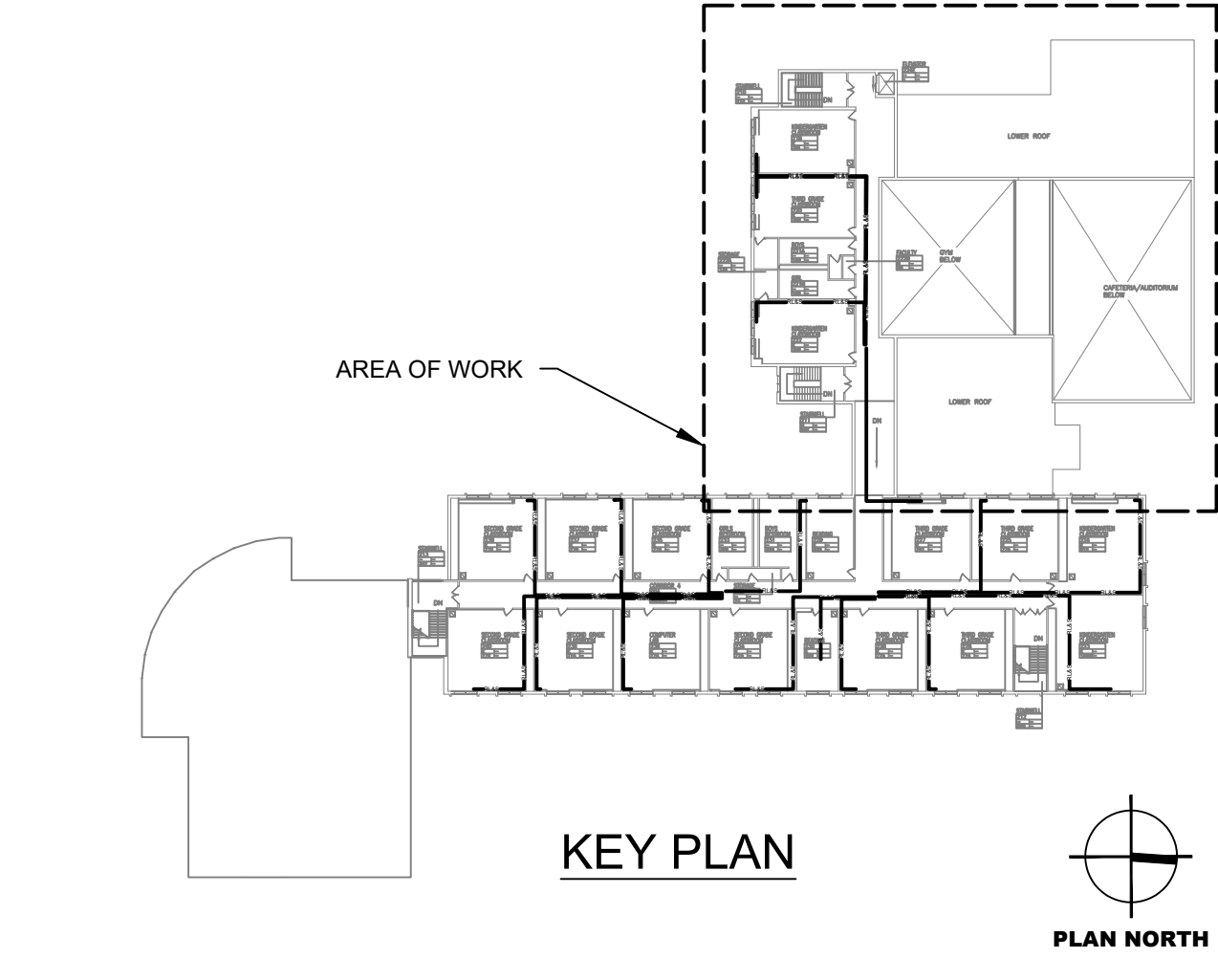
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**SECOND FLOOR PART.
PLAN - REFG. PIPING - 1**

Drawing No.
SPES-M-109

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1 MECHANICAL SECOND FLOOR PARTIAL PLAN - REFRIGERANT PIPING - 2
SCALE: 3/32" = 1'-0"



KEYED NOTES:

- 1 PROVIDE NEW UNIT VENTILATOR.
- 2 PROVIDE AND INSTALL BRANCH CONTROLLER IN SUSPENDED CEILING. SEE DETAIL 5/M502.
- 3 PROVIDE, INSTALL, ROUTE, AND CONNECT REFRIGERANT PIPING AS INDICATED ABOVE SUSPENDED CEILING.COORDINATE WITH ARCHITECT DRAWINGS.

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UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVESTRAW ELEMENTARY SCHOOL SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015	STONY POINT ELEMENTARY SCHOOL STONY POINT, NY 10980
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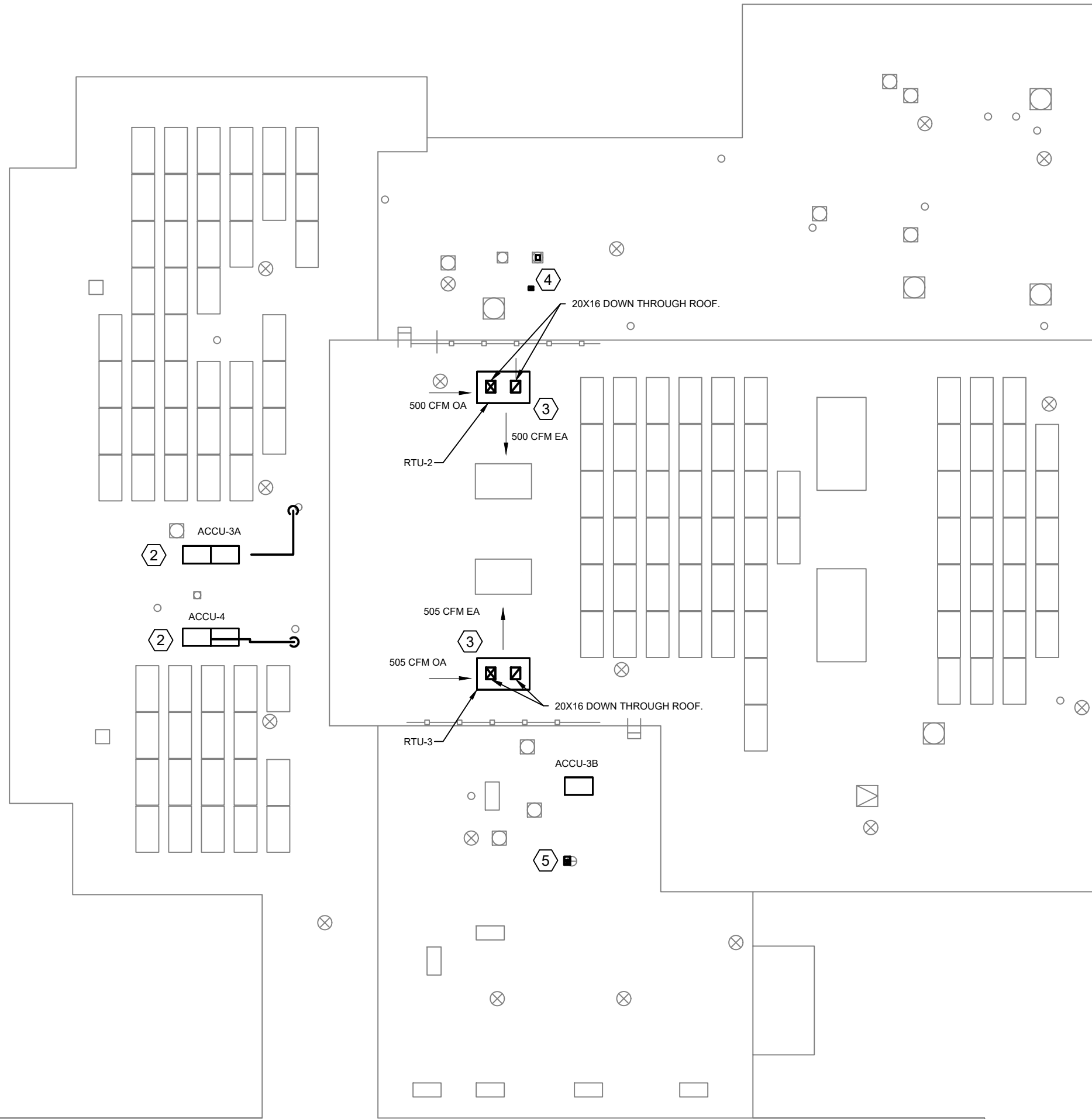
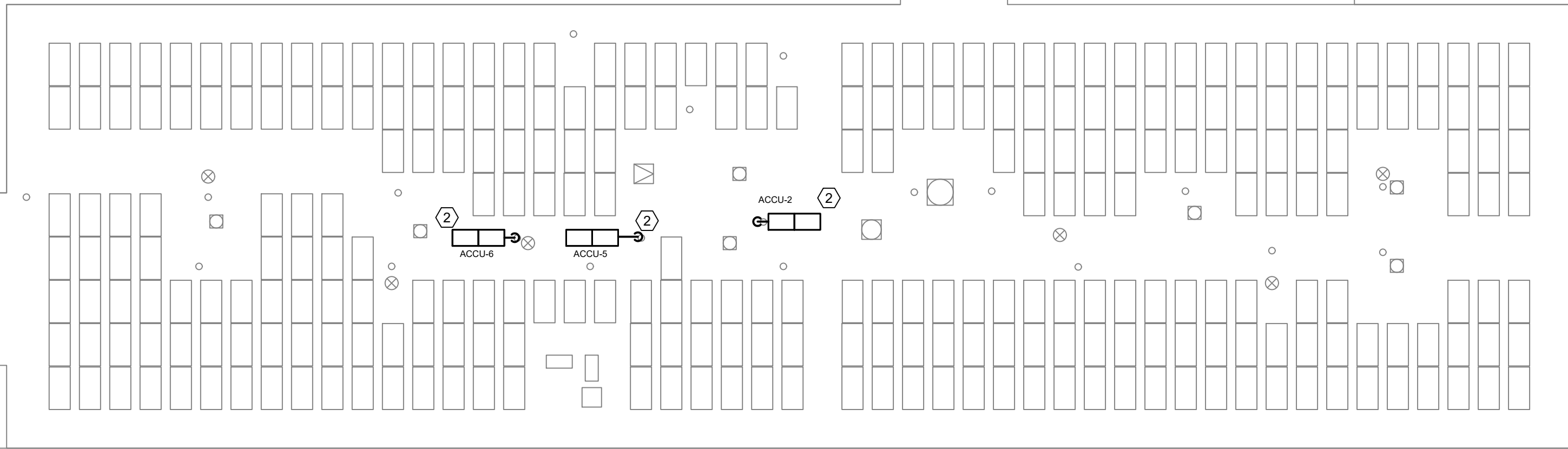
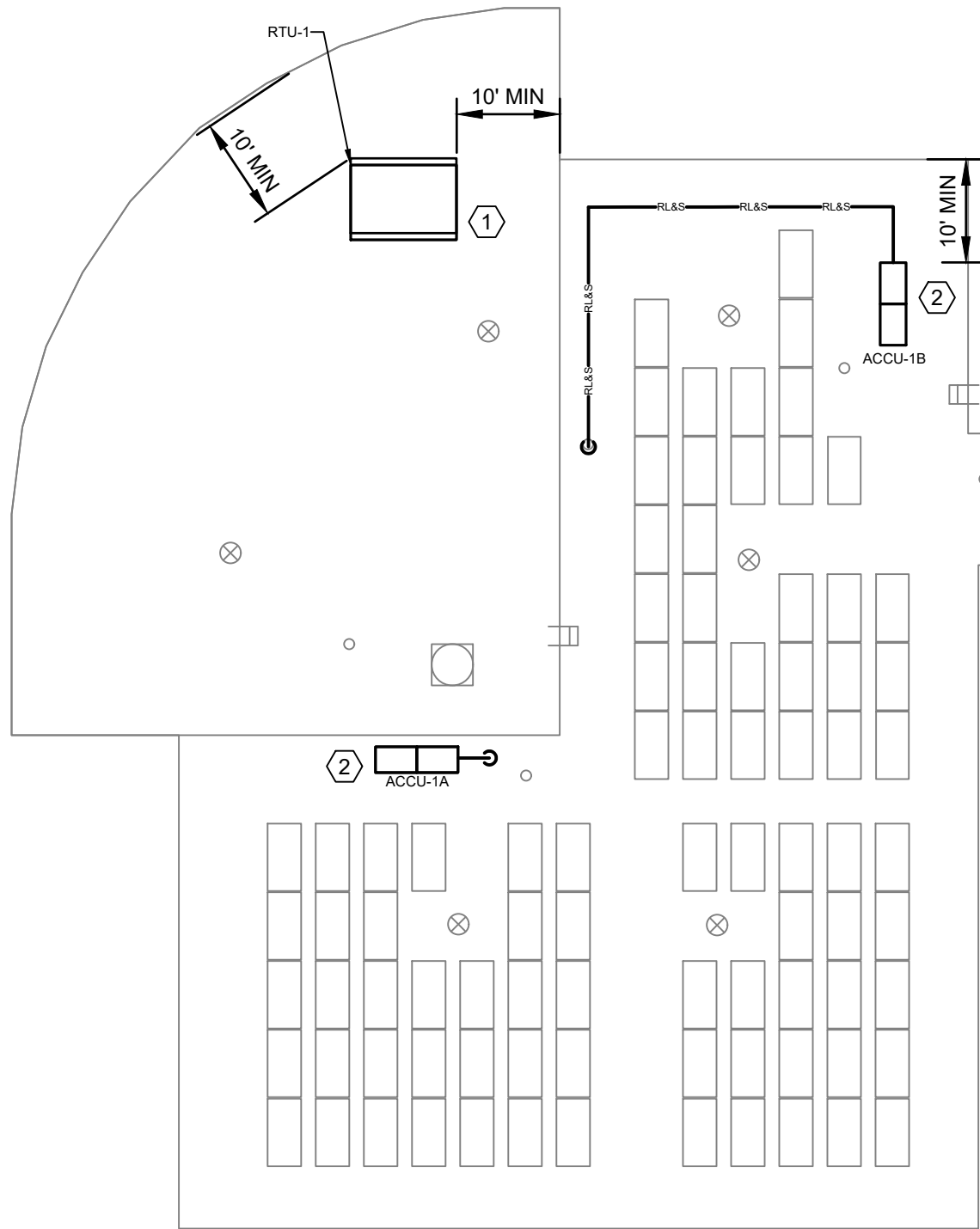


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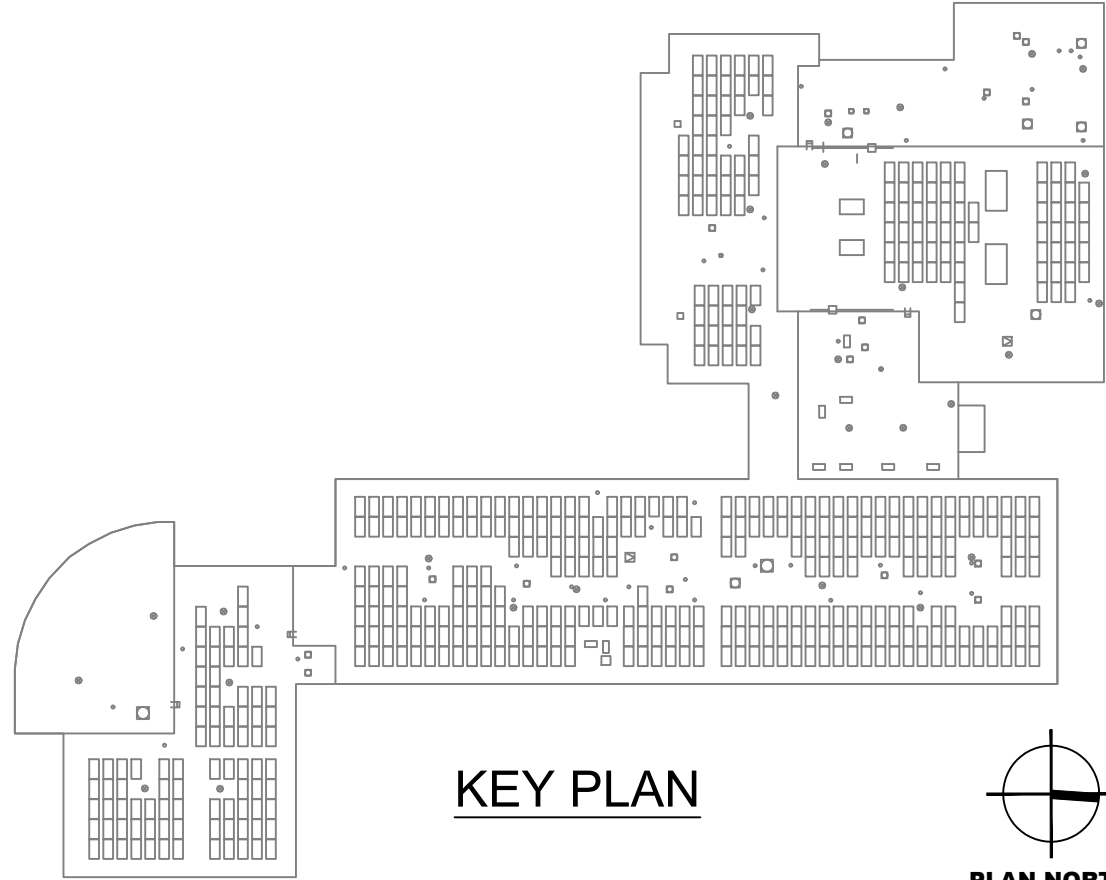
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**SECOND FLOOR PART.
PLAN - REFG. PIPING -
2**

Drawing No.
SPES-M-110

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1	03-04-25	BIDDING DOCUMENTS



1 MECHANICAL ROOF PLAN
SCALE: 1/16" = 1'-0"



KEY PLAN



KEYED NOTES:

- 1 INSTALL NEW ROOF TOP UNIT. CONNECT TO NEW SUPPLY AND RETURN DUCTWORK. SEE 10/M501.
- 2 INSTALL AND CONNECT ACCU AS SHOWN. SEE STRUCTURAL DRAWINGS FOR COORDINATION AS REQUIRED. SEE DETAILS 1/M502, 2/M503, 3/M503, AND 4/M503.
- 3 INSTALL AND CONNECT NEW ROOF TOP UNIT. CONNECT TO NEW SUPPLY AND RETURN DUCTWORK. SEE 6/M504.
- 4 FURNISH & INSTALL GOOSENECK VENT INTAKE. 6X4 DUCTWORK TO FLOOR BELOW. SEE 4/502.
- 5 FURNISH & INSTALL GOOSENECK VENT INTAKE. 10X8 DUCTWORK TO FLOOR BELOW. SEE 4/502.

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Drawing Title
**ROOF PLAN -
MECHANICAL**

Drawing No.
SPES-M-111

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Mechanical
Engineer:
GREENMAN
PEDERSEN, INC
2 EXECUTIVE BOULEVARD
STONY POINT, NY 10981
PROJ. NO. : MNY-5000088.00
Structural
Engineer:
GREENMAN
PEDERSEN, INC
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STONY POINT, NY 10981

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1	03-04-25	BIDDING DOCUMENTS

SEQUENCE OF OPERATIONS
UNIT VENTILATOR

BUILDING AUTOMATION SYSTEM INTERFACE:
THE BUILDING AUTOMATION SYSTEM (BAS) SHALL SEND THE CONTROLLER OCCUPIED / UNOCCUPIED MODES AND SETPOINTS. IF A BAS IS NOT PRESENT, OR COMMUNICATION IS LOST WITH THE BAS THE CONTROLLER SHALL OPERATE USING DEFAULT MODES AND SETPOINTS.

OCCUPIED MODE:
DURING OCCUPIED PERIODS THE SUPPLY FAN WILL RUN CONTINUOUSLY AND THE OUTSIDE AIR DAMPER WILL OPEN TO MAINTAIN MINIMUM VENTILATION REQUIREMENTS. VRF HEATING/COOLING OR THE HOT WATER COIL VALVE WILL OPERATE TO MAINTAIN THE ACTIVE SPACE TEMPERATURE SETPOINT. VRF HEATING WILL OPERATE AS THE FIRST FORM OF HEAT. THE UNIT WILL UTILIZE HOT WATER HEAT AND FIN TUBE RADIATION IN CONDITIONS WHERE VRF HEAT IS NOT ABLE TO MEET THE HEATING DEMAND.

UNOCCUPIED MODE:
WHEN THE SPACE TEMPERATURE IS BELOW THE UNOCCUPIED HEATING SETPOINT OF 60.0 DEG. F (ADJ.), THE SUPPLY FAN WILL START, THE OUTSIDE AIR DAMPER WILL REMAIN CLOSED AND HEATING WILL BE ENABLED. WHEN THE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED HEATING SETPOINT OF 60.0 DEG. F (ADJ.) PLUS THE UNOCCUPIED DIFFERENTIAL OF 2.0 DEG. F (ADJ.) THE SUPPLY FAN WILL STOP AND HEATING WILL BE DISABLED. WHEN THE SPACE TEMPERATURE IS ABOVE THE UNOCCUPIED COOLING SETPOINT OF 85.0 DEG. F (ADJ.), THE SUPPLY FAN WILL START, THE OUTSIDE AIR DAMPER WILL OPEN IF ECONOMIZING IS ENABLED AND REMAIN CLOSED IF ECONOMIZING IS DISABLED AND COOLING WILL MODULATE TO MAINTAIN SPACE TEMPERATURE. WHEN THE SPACE TEMPERATURE FALLS BELOW THE UNOCCUPIED COOLING SETPOINT MINUS THE UNOCCUPIED DIFFERENTIAL OF 4.0 DEG. F (ADJ.) THE SUPPLY FAN WILL STOP, COOLING WILL BE DISABLED AND THE OUTSIDE AIR DAMPER WILL CLOSE.

OPTIMAL START:
THE BAS SHALL MONITOR THE SCHEDULED OCCUPIED TIME, OCCUPIED SPACE SETPOINTS AND SPACE TEMPERATURE TO CALCULATE WHEN THE OPTIMAL START OCCURS.

MORNING WARM-UP MODE:
DURING OPTIMAL START, WHEN THE SPACE TEMPERATURE IS BELOW THE OCCUPIED HEATING SETPOINT, A MORNING WARM-UP MODE WILL BE ACTIVATED. WHEN MORNING WARM-UP IS INITIATED, THE UNIT WILL ENABLE THE HEATING AND SUPPLY FAN. THE OUTSIDE AIR DAMPER WILL REMAIN CLOSED. WHEN THE SPACE TEMPERATURE REACHES THE OCCUPIED HEATING SETPOINT (ADJ.), THE UNIT WILL TRANSITION TO THE OCCUPIED MODE.

PRE-COOL MODE:
DURING OPTIMAL START, WHEN THE SPACE TEMPERATURE IS ABOVE THE OCCUPIED COOLING SETPOINT, PRE-COOL MODE WILL BE ACTIVATED. WHEN PRE-COOL IS INITIATED, THE UNIT WILL ENABLE THE FAN AND COOLING OR ECONOMIZER. THE OUTSIDE AIR DAMPER WILL REMAIN CLOSED, UNLESS ECONOMIZING. WHEN THE SPACE TEMPERATURE REACHES OCCUPIED COOLING SETPOINT (ADJ.), THE UNIT WILL TRANSITION TO THE OCCUPIED MODE.

OCCUPIED BYPASS:
THE BAS SHALL MONITOR THE STATUS OF THE "ON" AND "CANCEL" BUTTONS OF THE SPACE TEMPERATURE SENSOR OR MOVEMENT AS DETECTED BY A SPACE OCCUPANCY SENSOR. WHEN AN OCCUPIED BYPASS REQUEST IS RECEIVED FROM A SPACE SENSOR, THE UNIT SHALL TRANSITION FROM ITS CURRENT OCCUPANCY MODE TO OCCUPIED BYPASS MODE AND THE UNIT SHALL MAINTAIN THE SPACE TEMPERATURE TO THE OCCUPIED SETPOINTS (ADJ.).

SPACE TEMPERATURE CONTROL:
CASCADE ZONE CONTROL WILL BE USED IN THE OCCUPIED, OCCUPIED BYPASS, AND OCCUPIED STANDBY MODES. IT MAINTAINS ZONE TEMPERATURE BY CONTROLLING THE DISCHARGE AIR TEMPERATURE TO CONTROL THE ZONE TEMPERATURE WHILE MINIMIZING THE FAN SPEED. THE SPACE TEMPERATURE WILL BE MAINTAINED BETWEEN THE OCCUPIED COOLING SETPOINT OF 74.0 DEG. F (ADJ.) AND THE OCCUPIED HEATING SETPOINT OF 71.0 DEG. F (ADJ.). THE UNIT WILL TRANSITION TO THE COOLING MODE WHEN THE SPACE TEMPERATURE RISES ONE DEGREE ABOVE THE OCCUPIED COOLING SETPOINT OF 74.0 DEG. F (ADJ.). THE UNIT WILL TRANSITION TO THE HEATING MODE WHEN THE SPACE TEMPERATURE DROPS ONE DEGREE BELOW THE OCCUPIED HEATING SETPOINT OF 74.0 DEG. F (ADJ.).

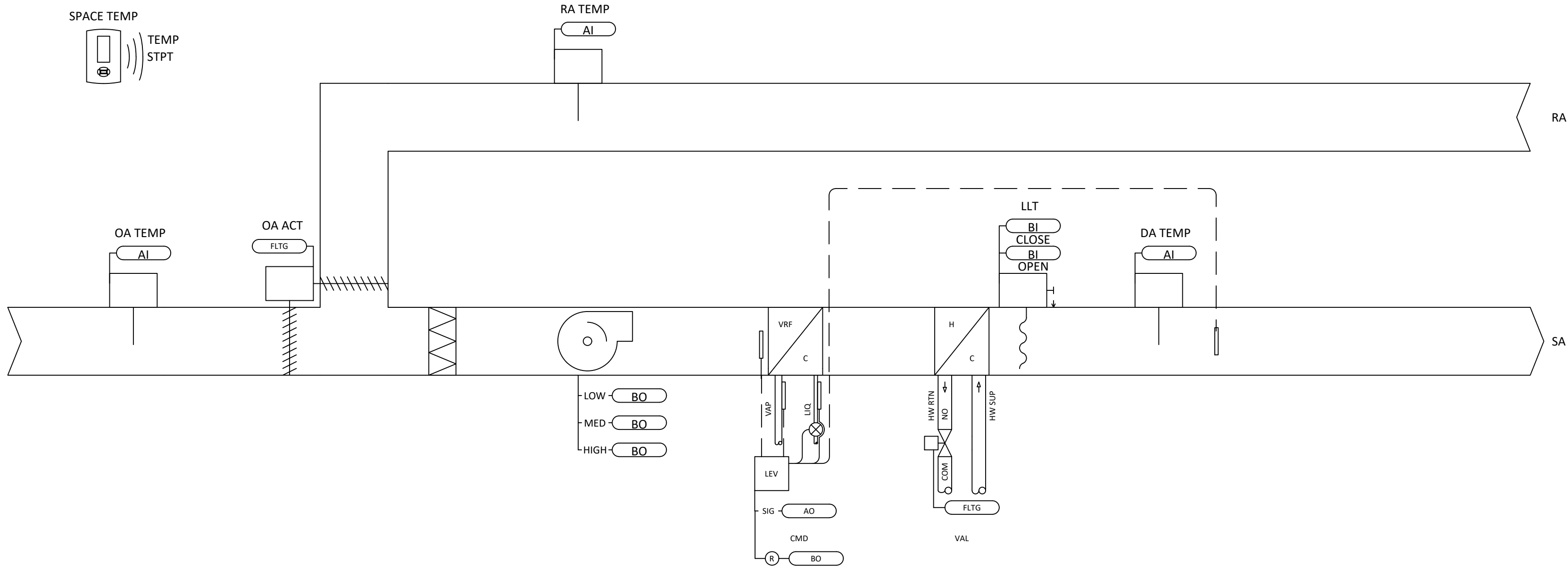
ECONOMIZER CONTROL:
ECONOMIZING WILL BE ENABLED WHEN THE OUTDOOR AIR TEMPERATURE IS BELOW THE ECONOMIZING ENABLE SETPOINT OF 65.0 DEG. F (ADJ.). ECONOMIZING WILL BE DISABLED WHEN THE OUTDOOR AIR TEMPERATURE IS GREATER THAN 5.0 DEG. F ABOVE THE ECONOMIZER ENABLE SETPOINT. WHEN ECONOMIZING IS ENABLED THE OUTSIDE AIR DAMPER WILL MODULATE BETWEEN THE MINIMUM DAMPER POSITION AND 100% OPEN TO MAINTAIN THE OCCUPIED COOLING SETPOINT. IF THE OUTDOOR AIR TEMPERATURE SENSOR FAILS, ECONOMIZING WILL BE DISABLED AND AN ALARM WILL BE ANNUNCIATED AT THE BAS.

SUPPLY FAN OPERATION:
THE SUPPLY FAN SHALL CYCLE ON DEMAND DURING THE UNOCCUPIED MODE. WHEN THE CONTROLLER TRANSITIONS TO THE OCCUPIED MODE, THE SUPPLY FAN SHALL START AT HIGH SPEED BEFORE TRANSITIONING TO CONTINUOUS OPERATION AT THE SELECTED SPEED. THE SUPPLY FAN STATUS SHALL BE MONITORED BY A DIFFERENTIAL PRESSURE SWITCH. IF THE SUPPLY FAN FAILS THE FAN SHALL BE COMMANDED OFF AND AN ALARM WILL BE ANNUNCIATED AT THE BAS. A MANUAL RESET SHALL BE REQUIRED TO RESTART THE FAN.

FREEZE PROTECTION:
A HARDWIRED, LOW LIMIT TEMPERATURE SWITCH WILL BE ELECTRICALLY INTERLOCKED WITH THE SAFETY CIRCUIT. IF THE LOW LIMIT TEMPERATURE SWITCH IS TRIPPED 38.0 DEG. F (ADJ.), THE SUPPLY FAN WILL BE COMMANDED OFF, WATER VALVES WILL OPEN TO 100%, OUTSIDE AIR DAMPER WILL CLOSE, AND AN ALARM WILL BE ANNUNCIATED AT THE BAS. THE CONTROLLER WILL AUTOMATICALLY ATTEMPT TO RESTART THE UNIT AFTER 30 MINUTES. IF THE UNIT RESTARTS SUCCESSFULLY WITH NO LOW TEMPERATURE CONDITION, THE DIAGNOSTIC IS CLEARED. IF A SECOND LOW TEMPERATURE CONDITION OCCURS WITHIN A 24 HOUR PERIOD THE UNIT WILL BE LOCKED OUT UNTIL MANUALLY RESET.

FILTER TIMER:
THE FAN-RUN TIME (HRS) WILL BE COMPARED TO THE FILTER MAINTENANCE TIMER SETPOINT. ONCE THE SETPOINT IS REACHED A FILTER TIMER ALARM DIAGNOSTIC WILL BE ANNUNCIATED AT THE BAS. WHEN THE DIAGNOSTIC IS CLEARED, THE FILTER-MAINTENANCE TIMER IS RESET TO ZERO, AND THE TIMER BEGINS ACCUMULATING FAN-RUN TIME AGAIN.

FIN TUBE RADIATOR:
THE FIN TUBE RADIATOR WILL ACT AS SECOND STAGE OF HEAT.



1 UNIT VENTILATOR FLOW DIAGRAM & SEQUENCE OF OPERATIONS
SCALE: NONE

SEQUENCE OF OPERATIONS
VRF INDOOR UNITS

BUILDING AUTOMATION SYSTEM INTERFACE:
THE BUILDING AUTOMATION SYSTEM (BAS) WILL SEND THE CONTROLLER OCCUPIED / UNOCCUPIED MODES AND SETPOINTS. IF A BAS IS NOT PRESENT, OR COMMUNICATION IS LOST WITH THE BAS THE CONTROLLER WILL OPERATE USING DEFAULT MODES AND SETPOINTS .

OCCUPIED MODE:
DURING OCCUPIED PERIODS, THE SUPPLY FAN WILL RUN CONTINUOUSLY. VRF HEATING OR COOLING WILL MODULATE TO MAINTAIN THE OCCUPIED SPACE TEMPERATURE SETPOINT.

UNOCCUPIED MODE:
WHEN THE SPACE TEMPERATURE FALLS BELOW THE UNOCCUPIED HEATING SETPOINT OF 60.0 DEG. F (ADJ.), THE SUPPLY FAN WILL START AND VRF HEATING WILL BE ENABLED. WHEN THE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED HEATING SETPOINT PLUS THE UNOCCUPIED DIFFERENTIAL OF 4.0 DEG. F (ADJ.), THE SUPPLY FAN WILL STOP AND THE VRF HEATING WILL BE DISABLED. WHEN THE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED COOLING SETPOINT OF 85.0 DEG. F (ADJ.), THE SUPPLY FAN WILL START AND VRF COOLING WILL BE ENABLED. WHEN THE SPACE TEMPERATURE FALLS BELOW THE UNOCCUPIED COOLING SETPOINT MINUS THE UNOCCUPIED DIFFERENTIAL OF 4.0 DEG. F (ADJ.), THE SUPPLY FAN WILL STOP AND THE VRF COOLING WILL BE DISABLED.

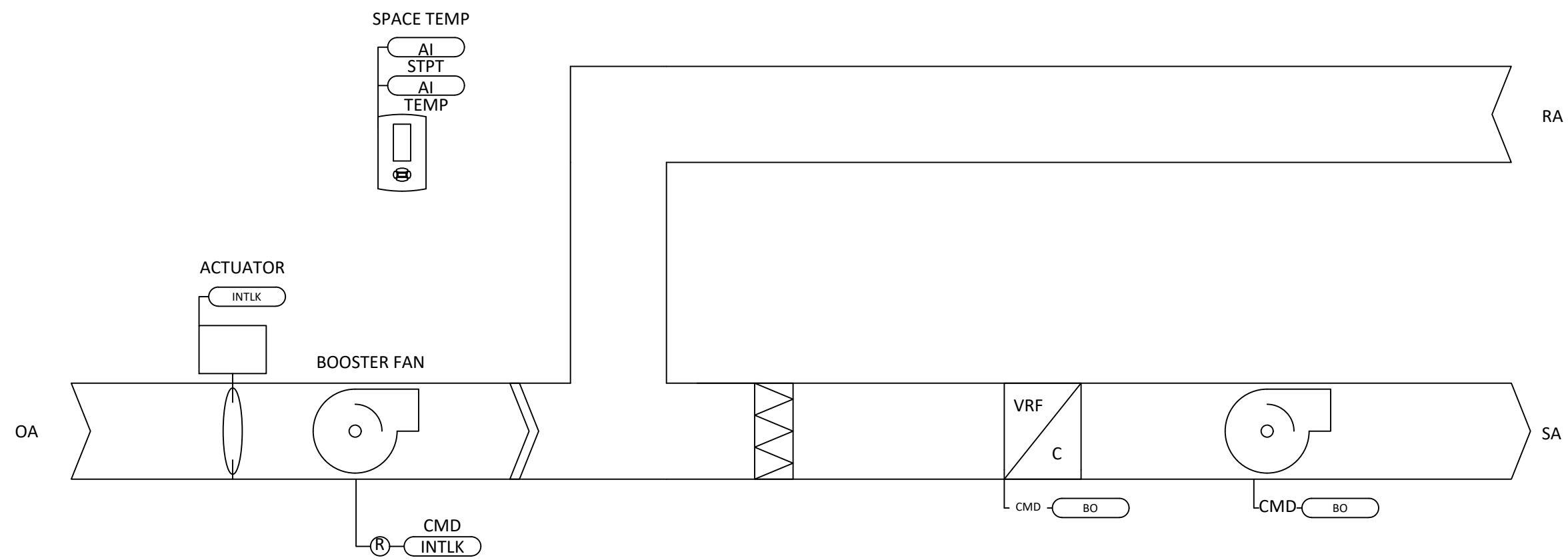
COOLING MODE:
THE UNIT CONTROLLER WILL USE SPACE TEMPERATURE AND SPACE TEMPERATURE SETPOINT TO DETERMINE WHEN TO INITIATE REQUESTS FOR COOLING. WHEN THE SPACE TEMPERATURE RISES ABOVE THE SETPOINT, THE UNIT CONTROLLER WILL MODULATE VRF COOLING AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE SETPOINT. ONCE THE SPACE TEMPERATURE FALLS BELOW THE SETPOINT, VRF COOLING WILL BE DISABLED.

HEATING MODE:
THE UNIT CONTROLLER WILL USE SPACE TEMPERATURE AND SPACE TEMPERATURE SETPOINT TO DETERMINE WHEN TO INITIATE REQUESTS FOR HEATING. WHEN THE SPACE TEMPERATURE FALLS BELOW THE SETPOINT, THE UNIT CONTROLLER WILL MODULATE VRF HEATING AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE SETPOINT. ONCE THE SPACE TEMPERATURE RISES ABOVE THE SETPOINT, VRF HEATING WILL BE DISABLED.

BOOSTER FAN:
THE BOOSTER FAN WILL BE INTERLOCKED WITH THE INDOOR UNIT. THE FAN WILL RUN WHEN THE UNIT SUPPLY FAN IS RUNNING.

OUTDOOR AIR DAMPER:
THE OUTDOOR AIR DAMPER WILL BE INTERLOCKED WITH THE INDOOR UNIT. THE FAN WILL BE OPEN WHEN THE UNIT SUPPLY FAN IS RUNNING.

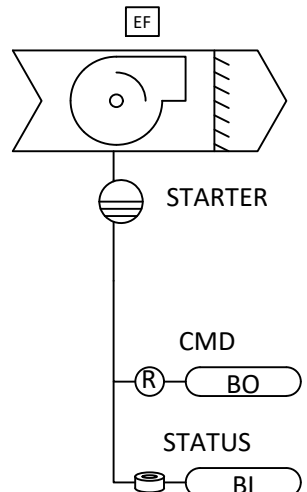
2 CEILING CASSETTE FLOW DIAGRAM & SEQUENCE OF OPERATIONS
SCALE: NONE



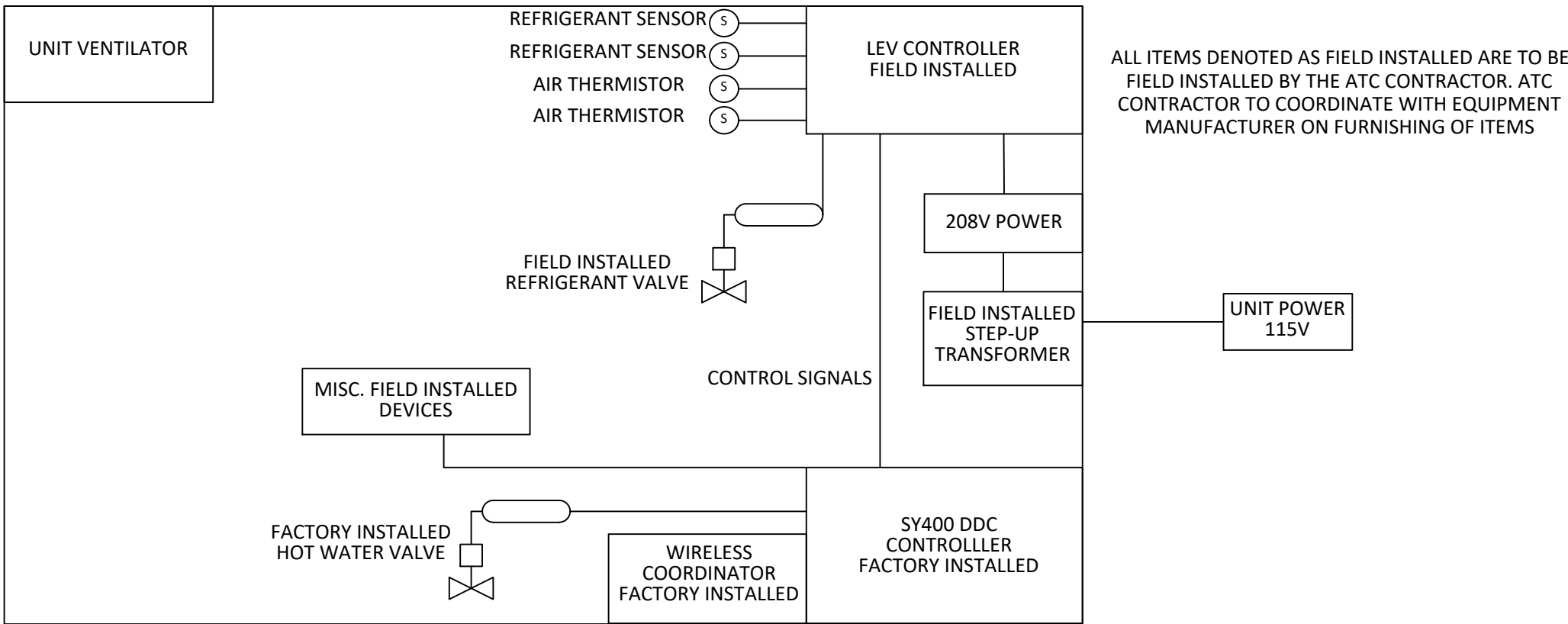
SEQUENCE OF OPERATIONS
EXHAUST FANS

OCCUPANCY CONTROL:
THE EXHAUST FANS WILL BE ENABLED WHEN THE CONTROLLER IS IN THE OCCUPIED MODE AND DISABLED IN THE UNOCCUPIED MODE. THE BAS WILL MONITOR FAN STATUS FOR ALARMING PURPOSES.

3 EXHAUST FAN FLOW DIAGRAM & SEQUENCE OF OPERATIONS
SCALE: NONE



(UNIT VENTILATOR W/ VRF LEV)



ALL ITEMS DENOTED AS FIELD INSTALLED ARE TO BE FIELD INSTALLED BY THE ATC CONTRACTOR. ATC CONTRACTOR TO COORDINATE WITH EQUIPMENT MANUFACTURER ON FURNISHING OF ITEMS

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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

Revisions	No.	Date
	1	03-04-25

Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	
Date	03-04-25

Mechanical Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981 PROJ. NO. : MNY-2000080.00
Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981

UNIVENT REPLACEMENT AT STONY POINT, THIELLS, WEST HAVESTRAW ELEMENTARY SCHOOL	SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015
DESIGNED BY STONY POINT, NY 10980	ISSUED BY STONY POINT, NY 10980

M S A	MICHAEL SHILALE ARCHITECTS, LLP 140 Park Avenue New City, NY 10956 Tel 845-708-9200 www.shilale.com
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Drawing Title FLOW DIAGRAM AND SEQUENCE OF OPERATIONS - 1	Drawing No. SPES-M-301
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SEQUENCE OF OPERATIONS
GYM FLOW

BUILDING AUTOMATION SYSTEM INTERFACE:

THE BUILDING AUTOMATION SYSTEM (BAS) SHALL SEND THE CONTROLLER OCCUPIED BYPASS, MORNING WARMUP, NIGHT PURGE, PRE-COOL, OCCUPIED / UNOCCUPIED AND HEAT / COOL MODES. IF A BAS IS NOT PRESENT, OR COMMUNICATION IS LOST WITH THE BAS, THE CONTROLLER SHALL OPERATE USING DEFAULT MODES AND SETPOINTS. THE BAS SHALL ALSO SEND THE CONTROLLER A RELATIVE HUMIDITY SETPOINT, AND DAMPER MINIMUM POSITION.

EMERGENCY STOP:

WHEN CONTACT CLOSURE AT TERMINALS TOAU-9 & 10 ARE OPEN, THE UNIT OPERATION SHALL BE IN ALARM STATUS AND AN ALARM SHALL BE GENERATED. UNIT SHALL REVERT TO NORMAL OPERATION UPON CLOSURE OF CAUTS 9 AND 10. IMPORTANT: CYCLING POWER TO UNIT MAY NOT RESOLVE ALARM CONDITION.

OCCUPIED START SEQUENCE:

POWERING UNIT INITIALIZES VIA A 3 -MINUTE PROCESS. OCCUPIED MODE SHALL ENABLE VIA BAS SIGNAL OR CONTACT CLOSURE ACROSS ENABLE TERMINALS ON CUSTOMER SUPPLIED FIELD WIRING TERMINAL BOARD. WHEN ENABLED IN THE OCCUPIED MODE, THE OUTDOOR AIR AND RETURN AIR DAMPER SHALL BE COMMANDED TO PRESET OCCUPIED POSITION.

OCCUPIED COOLING MODE ENABLE:

WHEN COOLING MODE IS ENABLED, THE UNIT USES THE EVAPORATOR COIL LEAVING AIR TEMPERATURE AND COOLING COIL LEAVING AIR TEMPERATURE SETPOINTS RESPECTIVELY.

OCCUPIED COOLING MODE:

ON A CALL FOR COOLING, THE COMPRESSOR(S) SHALL BE STAGED TO MAINTAIN THE ACTIVE COOL TEMPERATURE SETPOINT. TO PREVENT EXCESSIVE CYCLING, COMPRESSOR STAGING INCLUDES AN INTERSTAGE TIMER TO ALLOW AN ADDITIONAL COMPRESSOR TO START EVERY 3 MINUTES. DURING COOLING, THE COMPRESSOR STAGING CALCULATION MONITORS EVAPORATOR COIL LEAVING AIR TEMPERATURE AND COMPARES TO THE COOLING COIL LEAVING AIR TEMPERATURE SETPOINT. AS THE TEMPERATURE APPROACHES 52.0 DEG. F. (ADJ.) LEAVING THE EVAPORATOR COIL, THE DEMAND FOR COOLING SHALL BE REDUCED. IF ECONOMIZING IS ENABLED THE OUTSIDE AIR DAMPER SHALL MODULATE TO MAINTAIN THE OCCUPIED SPACE TEMPERATURE SETPOINT.

OCCUPIED HEATING MODE:

DURING HEATING MODE, THE UNIT SHALL MODULATE THE HEATING OUTPUT TO MAINTAIN THE DISCHARGE AIR TEMPERATE AT THE DISCHARGE AIR SETPOINT ACTIVE.

OCCUPIED AUXILIARY HEAT MODE:

AUXILIARY HEATING MODE SHALL BE ENABLED IF THE COMPRESSOR HEAT IS NOT ABLE TO MAINTAIN SETPOINT FOR MORE THAN 10 MINUTES, OR IF THE OUTDOOR AIR TEMPERATURE IS BELOW THE HEAT PUMP OUTDOOR AIR TEMPERATURE DISABLE SETPOINT (0.0 DEG. F ADJ.).

DEMAND DEFROST CONTROL:

OUTDOOR COIL DEFROSTING OCCURS ONLY WHEN OPERATING IN DX HEATING MODE WITH OUTDOOR AMBIENT TEMPERATURE BELOW 52.0 DEG. F AND THE OUTDOOR COIL TEMPERATURE BELOW 35.0 DEG. F. AUXILIARY HEATING MODE SHALL DISABLE THE COMPRESSORS FROM RUNNING AND MODULATE THE HEATING OUTPUT TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT. THE FIRST DEFROST CYCLE AFTER POWER-UP IS INITIATED BASED ON 30 MINUTES OPERATING TIME AT THE REQUIRED CONDITIONS. IF NO AUXILIARY HEAT IS PROVIDED, UNIT SHALL NOT DISABLE THE HEAT AND SHALL PROVIDE AS MUCH HEAT AS POSSIBLE. TWELVE MINUTES AFTER COMPLETION OF THE DEFROST CYCLE, THE TEMPERATURE DIFFERENCE BETWEEN THE OUTDOOR COIL AND OUTDOOR AIR IS CALCULATED RESULTING IN A CLEAN COIL DELTA T (DT) AND IS USED AS AN INDICATOR OF UNIT PERFORMANCE AT DRY COIL CONDITIONS. AUXILIARY HEATING MODE SHALL BE DISABLED WHEN THE OAT RISES 5.0 DEG. F ABOVE THE TEMPERATURE THAT IT SWITCHED FROM DX HEATING TO AUXILIARY HEATING. OVER TIME, AS MOISTURE AND FROST ACCUMULATE ON THE COIL, THE COIL TEMPERATURE SHALL DROP, INCREASING THE TEMPERATURE DIFFERENCE. MAXIMUM DISCHARGE AIR HEATING TEMPERATURE IS ADJUSTABLE BUT CANNOT EXCEED 125.0 DEG. F. WHEN THE TEMPERATURE DIFFERENCE BETWEEN THE OUTDOOR COIL AND OUTDOOR AIR REACHES 1.8 X DT, A DEFROST CYCLE IS INITIATED. WHILE DEFROSTING, THE REVERSING VALVE(S) ARE IN THE COOLING POSITION, OUTDOOR FAN(S) ARE OFF, OUTDOOR DAMPER CLOSES, RETURN DAMPER OPENS, THE SUPPLY FAN RUNS AT MINIMUM, AND THE COMPRESSOR(S) CONTINUE TO OPERATE. IF THE OPTIONAL RETURN DAMPER IS NOT INSTALLED, THE OUTDOOR DAMPER SHALL REMAIN OPEN. THE DEFROST CYCLE IS TERMINATED WHEN THE COIL TEMPERATURE RISES HIGH ENOUGH TO INDICATE THAT THE FROST HAS BEEN ELIMINATED. TERMINATION OF THE DEFROST CYCLE INCLUDES A "SOFT START" DELAY. AT THE END OF EACH DEFROST CYCLE, THE OUTDOOR FAN COMES ON 5 SECONDS BEFORE THE REVERSING VALVE IS DE-ENERGIZED TO REDUCE NOISE.

UNOCCUPIED START SEQUENCE:

WHEN UNOCCUPIED MODE ENABLED, THE OUTDOOR AIR DAMPER SHALL BE COMMANDED TO CLOSE AND RETURN DAMPERS TO OPEN; THE SUPPLY FAN SHALL BE COMMANDED TO START AND A PRESET SIGNAL OF 50% (50-100% ADJ.) IS SENT TO THE SUPPLY FAN VFD OR ECM. A DIFFERENTIAL PRESSURE SWITCH SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FAN. IF THE SWITCH DOES NOT OPEN WITHIN 60 SECONDS (ADJ.) AFTER A REQUEST FOR FAN OPERATION A FAN FAILURE ALARM SHALL BE ANNUNCIATED AT THE BAS. THE UNIT SHALL STOP, REQUIRING A MANUAL RESET. ON UNITS EQUIPPED WITH MORE THAN TWO COMPRESSORS, ONLY STAGE 1 AND 2 ENABLED DURING UNOCCUPIED MODES.

UNOCCUPIED COOLING MODE:

DURING UNOCCUPIED COOLING MODE OUTDOOR AIR CONDITIONS ARE IGNORED AND ONLY SPACE TEMPERATURE USED IN CONTROL DECISIONS. UNOCCUPIED COOLING MODE INITIALIZED WHEN NO CALL FOR UNOCCUPIED DEHUMIDIFICATION OR UNOCCUPIED HEATING IS PRESENT AND THE ACTIVE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED SPACE COOLING SETPOINT (80 DEF F ADJ.). CONTROL SHALL REMAIN IN COOLING MODE UNTIL THE ACTIVE SPACE TEMPERATURE DROPS BELOW THE UNOCCUPIED COOLING SETPOINT MINUS THE UNOCCUPIED OFFSET.

NOTE: IN UNOCCUPIED COOLING MODE, ONLY STAGES 1 AND 2 ARE ACTIVE STAGES. IF ECONOMIZING IS ENABLED THE OUTSIDE AIR DAMPER SHALL MODULATE TO MAINTAIN THE OCCUPIED SPACE TEMPERATURE SETPOINT.

DEMAND DEFROST CONTROL:

OUTDOOR COIL DEFROSTING OCCURS ONLY WHEN OPERATING IN DX HEATING MODE WITH OUTDOOR AMBIENT TEMPERATURE BELOW 52.0 DEG. F AND THE OUTDOOR COIL TEMPERATURE BELOW 35.0 DEG. F. THE FIRST DEFROST CYCLE AFTER POWER-UP IS INITIATED BASED ON 30 MINUTES OPERATING TIME AT THE REQUIRED CONDITIONS. TWELVE MINUTES AFTER COMPLETION OF THE DEFROST CYCLE, THE TEMPERATURE DIFFERENCE BETWEEN THE OUTDOOR COIL AND OUTDOOR AIR IS CALCULATED RESULTING IN A CLEAN COIL DELTA T (DT) AND IS USED AS AN INDICATOR OF UNIT PERFORMANCE AT DRY COIL CONDITIONS. OVER TIME, AS MOISTURE AND FROST ACCUMULATE ON THE COIL, THE COIL TEMPERATURE SHALL DROP, INCREASING THE TEMPERATURE DIFFERENCE. WHEN THE TEMPERATURE DIFFERENCE BETWEEN THE OUTDOOR COIL AND OUTDOOR AIR REACHES 1.8 X DT, A DEFROST CYCLE IS INITIATED. WHILE DEFROSTING, THE REVERSING VALVE(S) ARE IN THE COOLING POSITION, OUTDOOR FAN(S) ARE OFF, OUTDOOR DAMPER CLOSES, RETURN DAMPER OPENS, THE SUPPLY FAN RUNS AT MINIMUM, AND THE COMPRESSOR(S) CONTINUE TO OPERATE. IF THE OPTIONAL RETURN DAMPER IS NOT INSTALLED, THE OUTDOOR DAMPER SHALL REMAIN OPEN. THE DEFROST CYCLE IS TERMINATED WHEN THE COIL TEMPERATURE RISES HIGH ENOUGH TO INDICATE THAT THE FROST HAS BEEN ELIMINATED. TERMINATION OF THE DEFROST CYCLE INCLUDES A "SOFT START" DELAY. AT THE END OF EACH DEFROST CYCLE, THE OUTDOOR FAN COMES ON 5 SECONDS BEFORE THE REVERSING VALVE IS DE-ENERGIZED TO REDUCE NOISE. **PRE-COOL MODE:** DURING OPTIMAL START, IF THE SPACE TEMPERATURE IS ABOVE THE OCCUPIED COOLING SETPOINT, PRE-COOL MODE SHALL BE ACTIVATED. WHEN PRE-COOL IS INITIATED THE UNIT SHALL ENABLE THE FAN AND COOLING OR ECONOMIZER. THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED, UNLESS ECONOMIZING. WHEN THE SPACE TEMPERATURE REACHES OCCUPIED COOLING SETPOINT (ADJ.), THE UNIT SHALL TRANSITION TO THE OCCUPIED MODE.

OPTIMAL STOP:

THE BAS SHALL MONITOR THE SCHEDULED UNOCCUPIED TIME, OCCUPIED SETPOINTS AND SPACE TEMPERATURE TO CALCULATE WHEN THE OPTIMAL STOP OCCURS. WHEN THE OPTIMAL STOP MODE IS ACTIVE THE UNIT CONTROLLER SHALL MAINTAIN THE SPACE TEMPERATURE TO THE SPACE TEMPERATURE OFFSET SETPOINT.

OCCUPIED BYPASS:

THE BAS SHALL MONITOR THE STATUS OF THE "ON" AND "CANCEL" BUTTONS OF THE SPACE TEMPERATURE SENSOR. THE OCCUPANCY OVERRIDE BUTTON SHALL OVERRIDE OCCUPANCY REQUEST TO OCCUPIED MODE WHEN THE ON OR OCCUPIED BUTTON IS PRESSED. WHEN THE OFF OR UNOCCUPIED BUTTON IS PRESSED THE UNIT SHALL RETURN TO USING OCCUPIED REQUEST TO DETERMINE OCCUPANCY OF THE UNIT. OCCUPIED BYPASS TIME (FIELD ADJUSTABLE) IS SET TO 120 MINUTES. WHEN A OCCUPIED BYPASS REQUEST IS RECEIVED FROM THE SPACE SENSOR, THE UNIT SHALL TRANSITION FROM ITS CURRENT OCCUPANCY MODE TO OCCUPIED BYPASS MODE AND THE UNIT SHALL MAINTAIN THE SPACE TEMPERATURE TO THE OCCUPIED SETPOINTS (ADJ.).

DIGITAL COMPRESSORS: (OPTIONAL)

COOLING SHALL BE CONTROLLED AS DESCRIBED IN THE COOLING MODE AND DISCHARGE RESET, HOWEVER THE ANALOG OUTPUT SHALL BE SET TO A DIFFERENT RANGE.

UNOCCUPIED HEAT / COOL MODE ENABLE:

THE UNIT IGNORES THE OUTDOOR AIR CONDITIONS WHEN DETERMINING THE NIGHT HEAT/COOL MODE.

DISCHARGE AIR TEMPERATURE RESET CONTROL:

THE UNIT SHALL MAINTAIN THE SPACE TEMPERATURE SETPOINTS BASED ON THE HEATING OR COOLING MODE OF THE UNIT, BY RESETTING THE DISCHARGE AIR TEMPERATURE SETPOINT CALCULATED BY COMPARING THE ACTIVE SPACE TEMPERATURE AGAINST THE ACTIVE SPACE TEMPERATURE SETPOINT. THE BAS COMMUNICATED VALUE WILL TAKE PRIORITY OVER THE LOCALLY CALCULATED VALUE.

OCCUPIED DEHUMIDIFICATION:

DEHUMIDIFICATION MODE SHALL BE ENABLED WHEN NO CALL FOR HEATING MODE AND THE SPACE DEWPOINT OR OUTDOOR AIR DEWPOINT RISES ABOVE THE SPACE DEWPOINT SETPOINT OR THE OUTDOOR AIR DEWPOINT SETPOINT. DEHUMIDIFICATION SHALL REMAIN ACTIVE UNTIL THE OUTDOOR AIR DEWPOINT RISES ABOVE THE OUTDOOR AIR DEWPOINT SETPOINT BY 3.0 DEG. F. OR IF HEATING MODE IS ENABLED. COMPRESSOR CONTROL IS BASED ON EVAP LEAVING TEMPERATURE SETPOINT. IF EVAPORATOR LEAVING AIR TEMPERATURE IS ABOVE SETPOINT FIRST STAGE (COMPRESSOR 1) SHALL START. IF AFTER A 3-MINUTE MINIMUM DELAY THE EVAPORATOR LEAVING AIR TEMPERATURE IS STILL ABOVE SETPOINT, THE SECOND, THIRD, AND FOURTH STAGES (COMPRESSOR 2, 3, AND 4) SHALL BE STAGED ON SEQUENTIALLY FOLLOWING INDIVIDUAL 3-MINUTE MINIMUM DELAYS BETWEEN EACH CALL.

OCCUPIED HOT GAS REHEAT:

DURING THE DEHUMIDIFICATION CYCLE, THE HOT GAS REHEAT SHALL BE ENABLED AND SHALL MODULATE TO MAINTAIN THE DISCHARGE AIR SETPOINT. AS THE EVAPORATOR LEAVING TEMPERATURE APPROACHES THE EVAPORATOR LEAVING TEMPERATURE SETPOINT, COMPRESSORS 4, 3, AND 2 SHALL BE STAGED OFF SEQUENTIALLY WITH A 5 MINUTE DELAY IN BETWEEN. THE HOT GAS REHEAT COIL SHALL UNDERGO A PURGE CYCLE EVERY 30 MINUTES FOR 3 MINUTES. AS THE EVAPORATOR LEAVING TEMPERATURE FALLS BELOW EVAPORATOR LEAVING TEMPERATURE SETPOINT BY 1.0 DEG. F FOR 5 MINUTES, COOLING STAGE 1 WILL BE DISABLED. DURING THE PURGE CYCLE THE, HOT GAS REHEAT COIL IS BYPASSED 100%. SHOULD THE SPACE BEGIN TO BE OVER-COOLED, THE HGRH SHALL MODULATE TO MAINTAIN THE OCCUPIED COOLING SETPOINT. THE HEATING CYCLE IS DISABLED WHEN THE HOT GAS REHEAT CYCLE IS ENABLED.

OCCUPIED HOT GAS REHEAT PURGE:

FOLLOWING CONTINUOUS 30-MINUTE HOT GAS REHEAT OPERATION AT LESS THAN 100 PERCENT REHEAT CAPACITY A PURGE CYCLE SHALL BE INITIATED. DURING THE PURGE CYCLE, THE HOT GAS REHEAT SIGNAL IS SET AND HELD AT 100 PERCENT FOR A PERIOD OF 3 MINUTES. FOLLOWING THE PURGE CYCLE, NORMAL OPERATION RESUMES.

UNOCCUPIED DEHUMIDIFICATION:

UNOCCUPIED DEHUMIDIFICATION MODE SHALL BE ENABLED WHEN THE SPACE DEWPOINT IS GREATER THAN OR EQUAL TO THE UNOCCUPIED DEWPOINT SETPOINT AND NO CALL FOR UNOCCUPIED HEATING MODE. UNOCCUPIED DEHUMIDIFICATION SHALL REMAIN ACTIVE UNTIL THE SPACE DEWPOINT RISES ABOVE THE UNOCCUPIED DEWPOINT SETPOINT BY 2.0 DEG. F, OR IF UNOCCUPIED HEATING MODE IS ENABLED. WHEN UNOCCUPIED DEHUMIDIFICATION IS ENABLED, FIRST STAGE COOLING (COMPRESSOR 1) SHALL START. IF AFTER A 5-MINUTE DELAY IF THE EVAPORATOR LEAVING TEMPERATURE IS STILL HIGHER THAN THE EVAPORATOR LEAVING TEMPERATURE SETPOINT BY 2.0 DEG. F AND IF INSTALLED ON FIRST CIRCUIT) THE DIGITAL COMPRESSOR IS AT 100% CAPACITY, THE SECOND STAGE OF COOLING (COMPRESSOR 2) SHALL BE ENABLED WITH 5 MINUTES DELAY BETWEEN STAGES. WHEN EVAPORATOR LEAVING TEMPERATURE APPROACHES THE EVAPORATOR LEAVING TEMPERATURE SETPOINT, COMPRESSORS 2 SHALL BE STAGED OFF. AS THE EVAPORATOR LEAVING TEMPERATURE FALLS BELOW EVAPORATOR LEAVING TEMPERATURE SETPOINT BY 1.0 DEG. F FOR 5 MINUTES, COOLING STAGE 1 SHALL BE DISABLED.

UNOCCUPIED HOT GAS REHEAT:

DURING THE UNOCCUPIED DEHUMIDIFICATION CYCLE, THE HOT GAS REHEAT SHALL BE ENABLED AND SHALL MODULATE TO MAINTAIN THE UNOCCUPIED DISCHARGE AIR SETPOINT.

UNOCCUPIED HOT GAS REHEAT PURGE:

FOLLOWING CONTINUOUS 30-MINUTE HOT GAS REHEAT OPERATION AT LESS THAN 100 PERCENT REHEAT CAPACITY A PURGE CYCLE SHALL BE INITIATED.

OCCUPIED ECONOMIZER:

ECONOMIZER IS FIELD ADJUSTABLE BETWEEN ENTHALPY OR DRY BULB WITH THE BINARY VALUE ECONOMIZER CONTROL TYPE (DEFAULTED FROM FACTORY AS ENTHALPY).

OCCUPIED VENTILATION MODE:

VENTILATION MODE IS ENABLED BASE ON SPACE TEMPERATURE AND OUTDOOR AIR TEMPERATURE. DRY BULB ECONOMIZER IS BASED ON OUTDOOR AIR TEMPERATURE AND RETURN AIR TEMPERATURE. OPERATION IN VENTILATION MODE IS ENABLED WHEN THE SPACE TEMPERATURE AND THE OUTDOOR AIR TEMPERATURE IS WITHIN 2.0 DEG. F OF THE OCCUPIED COOLING SETPOINT. ECONOMIZER MODE IS ENABLED WHEN THE OUTDOOR AIR TEMPERATURE IS BELOW RETURN AIR TEMPERATURE AND CONTINUES UNTIL CONDITIONS CALL FOR DEHUMIDIFICATION OR WHEN THE OUTDOOR AIR TEMPERATURE IS ABOVE THE RETURN AIR TEMPERATURE BY 3.0 DEG. F. OPERATION IN VENTILATION MODE CONTINUES UNTIL CONDITIONS CALL FOR DEHUMIDIFICATION OR WHEN THE SPACE AND OUTDOOR AIR TEMPERATURE IS NOT WITHIN 2.0 DEG. F OF SETPOINT. WHEN THE OUTDOOR AIR TEMPERATURE IS MORE THAN 5.0 DEG. F BELOW THE EVAPORATOR LEAVING TEMPERATURE SETPOINT, THEN THE DX COOLING SHALL BE LOCKED OUT AND MODULATE TO MAINTAIN THE SPACE CO2 LEVEL SETPOINT. ON A CALL FOR ECONOMIZER COOLING, THE DAMPER MAY BE OPENED FURTHER TO SATISFY THE COOLING REQUEST. WHEN THE SPACE CO2 LEVEL IS LESS THAN OR EQUAL TO THE SPACE CO2 SETPOINT, THE OUTDOOR AIR DAMPER SHALL CLOSE TO THE MINIMUM OUTDOOR AIR DAMPER POSITION. ON A CALL FOR ECONOMIZER COOLING, THE DAMPER MAY BE MODULATED OPEN TO SATISFY THE COOLING REQUEST.

DEMAND CONTROL VENTILATION (DCV):

UNITS WITH SPACE CO2 SENSOR (FIELD SUPPLIED OR NETWORK COMMUNICATED) AND ECONOMIZER OPTIONS; THE UNIT CONTROLLER SHALL MONITOR SPACE CO2 LEVELS AND COMPARE THEM TO THE SPACE CO2 SETPOINT. WHEN THE SPACE CO2 LEVEL IS GREATER THAN OR EQUAL TO THE SPACE CO2 SETPOINT, THE OUTDOOR AIR DAMPER SHALL OPEN AND MODULATE TO MAINTAIN THE SPACE CO2 LEVEL SETPOINT. ON A CALL FOR ECONOMIZER COOLING, THE DAMPER MAY BE OPENED FURTHER TO SATISFY THE COOLING REQUEST. WHEN THE SPACE CO2 LEVEL IS LESS THAN OR EQUAL TO THE SPACE CO2 SETPOINT, THE OUTDOOR AIR DAMPER SHALL CLOSE TO THE MINIMUM OUTDOOR AIR DAMPER POSITION. ON A CALL FOR ECONOMIZER COOLING, THE DAMPER MAY BE MODULATED OPEN TO SATISFY THE COOLING REQUEST.

BUILDING PRESSURE CONTROL:

A DIFFERENTIAL PRESSURE TRANSDUCER SHALL ACTIVELY MONITOR THE DIFFERENCE IN PRESSURE BETWEEN THE BUILDING (INDOORS) AND OUTDOORS. IF THE BUILDING PRESSURE INCREASES ABOVE THE DESIRED SETPOINT, THE ASSOCIATED CONTROLLER SHALL MODULATE THE RELIEF FAN SPEED FASTER TO CONTROL BUILDING PRESSURE AT SETPOINT. IF THE BUILDING PRESSURE DECREASES BELOW THE DESIRED SETPOINT, THE ASSOCIATED CONTROLLER SHALL MODULATE THE RELIEF FAN SPEED SLOWER TO CONTROL BUILDING PRESSURE AT SETPOINT. A DIFFERENTIAL PRESSURE SWITCH SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE RELIEF AIR FAN. IF THE SWITCH IS DETECTED TO BE OPEN FOR 40 CONSECUTIVE SECONDS AFTER A REQUEST FOR RELIEF FAN OPERATION A FAN FAILURE ALARM SHALL ANNUNCIATE AT THE BAS AND THE RELIEF FAN SHALL STOP. A MANUAL RESET SHALL BE REQUIRED.

EXHAUST FAN STATUS:

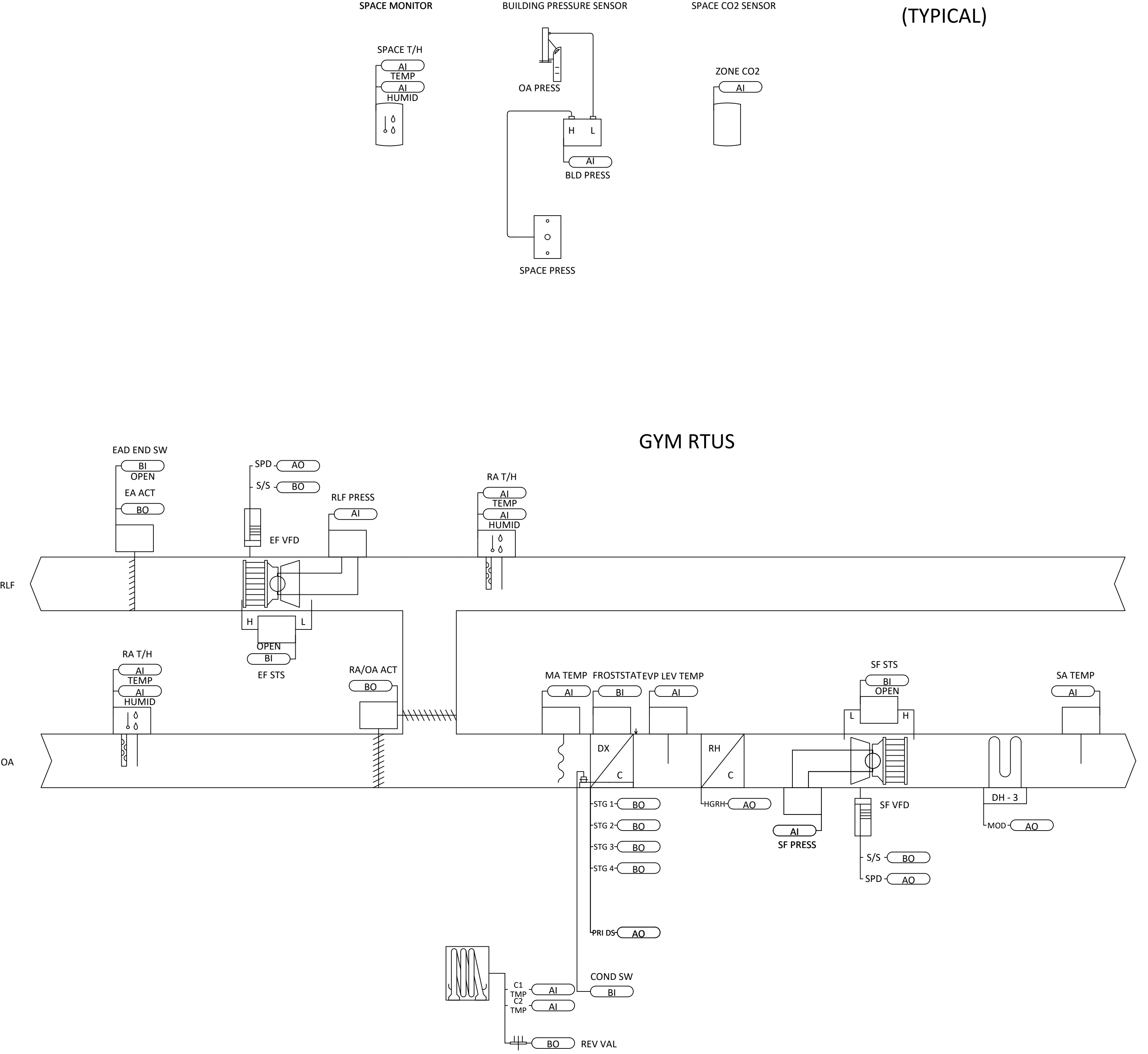
A DIFFERENTIAL PRESSURE SWITCH SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FAN.

EXHAUST WITH GRAVITY DAMPERS:

IN THE OCCUPIED MODE AND AFTER INDOOR FAN STATUS HAS BEEN PROVEN, THE OUTDOOR AIR DAMPER STATUS IS OPEN, AND NO UNIT ALARMS, THE ISOLATION DAMPERS SHALL BE POWERED AND THE POWER EXHAUST FAN SPEED SHALL MODULATE TO MAINTAIN A CONSTANT VOLUME OF AIRFLOW. IF THE SWITCH IS DETECTED TO BE OPEN FOR 30 SECONDS (ADJ.) AFTER A REQUEST FOR EXHAUST FAN OPERATION A FAN FAILURE ALARM SHALL BE ANNUNCIATED AT THE BAS AND THE EXHAUST FAN SHALL STOP. DURING UNOCCUPIED MODE THE POWERED EXHAUST SHALL BE DISABLED. A MANUAL RESET SHALL BE REQUIRED.

FILTER STATUS:

A DIFFERENTIAL PRESSURE SWITCH SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FILTER. IF THE SWITCH CLOSSES FOR 2 MINUTES DURING FAN OPERATION A FILTER MAINTENANCE ALARM SHALL BE ANNUNCIATED AT THE BAS.



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IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

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Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	
Date	03-04-25

Mechanical & Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 SYRACUSE, NY 13201 PH: 315-435-0000 FAX: 315-435-0001
Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 SYRACUSE, NY 13201

UNIVENT REPLACEMENT AT STONY POINT THEILLS, WEST HAVESTRAW ELEMENTARY SCHOOL	SDJ# 50-02-01-06-0-014-012 SDJ# 50-02-01-06-0-025-018 SDJ# 50-02-01-06-0-024-015
© GREENMAN, INC STONY POINT, NY 10980	RENTY RABY ROCKLAND COUNTY

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Drawing Title FLOW DIAGRAM AND SEQUENCE OF OPERATIONS - 2	Drawing No. SPES-M-302
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THE BUILDING AUTOMATION SYSTEM (BAS) SHALL SEND THE CONTROLLER OCCUPIED BYPASS, MORNING WARMUP, NIGHT PURGE, PRE-COOL, OCCUPIED / UNOCCUPIED AND HEAT / COOL MODES. IF A BAS IS NOT PRESENT, OR COMMUNICATION IS LOST WITH THE BAS, THE CONTROLLER SHALL OPERATE USING DEFAULT MODES AND SETPOINTS. THE BAS SHALL ALSO SEND THE CONTROLLER A RELATIVE HUMIDITY SETPOINT, AND DAMPER MINIMUM POSITION.

WHEN CONTACT CLOSURE AT TERMINALS TOAU-9 & 10 ARE OPEN, THE UNIT OPERATION SHALL BE IN ALARM STATUS AND AN ALARM SHALL BE GENERATED. UNIT SHALL REVERT TO NORMAL OPERATION UPON CLOSURE OF OAUTS 9 AND 10. IMPORTANT: CYCLING POWER TO UNIT MAY NOT RESOLVE ALARM CONDITION.

POWERING UNIT INITIALIZES VIA A 3 -MINUTE PROCESS. OCCUPIED MODE SHALL ENABLE VIA BAS SIGNAL OR CONTACT CLOSURE ACROSS ENABLE TERMINALS ON CUSTOMER SUPPLIED FIELD WIRING TERMINAL BOARD. WHEN ENABLED IN THE OCCUPIED MODE, THE OUTDOOR AIR AND RETURN AIR DAMPER SHALL BE COMMANDED TO PRESET OCCUPIED POSITION.

WHEN COOLING MODE IS ENABLED, THE UNIT USES THE EVAPORATOR COIL LEAVING AIR TEMPERATURE AND COOLING COIL LEAVING AIR TEMPERATURE SETPOINTS RESPECTIVELY.

ON A CALL FOR COOLING, THE COMPRESSOR(S) SHALL BE STAGED TO MAINTAIN THE ACTIVE COOL TEMPERATURE SETPOINT. TO PREVENT EXCESSIVE CYCLING, COMPRESSOR STAGING INCLUDES AN INTERSTAGE TIMER TO ALLOW AN ADDITIONAL COMPRESSOR TO START EVERY 3 MINUTES. DURING COOLING, THE COMPRESSOR STAGING CALCULATION MONITORS EVAPORATOR COIL LEAVING AIR TEMPERATURE AND DAMPER POSITION TO MAINTAIN THE ACTIVE COOL TEMPERATURE SETPOINT. AS THE TEMPERATURE APPROACHES 52.0 DEG. F (ADJ.) LEAVING THE EVAPORATOR COIL, THE DEMAND FOR COOLING SHALL BE REDUCED. IF ECONOMICIZING IS ENABLED THE OUTSIDE AIR DAMPER SHALL MODULATE TO MAINTAIN THE OCCUPIED SPACE TEMPERATURE SETPOINT.

DURING HEATING MODE, THE UNIT SHALL MODULATE THE HEATING OUTPUT TO MAINTAIN THE DISCHARGE AIR TEMPERATE AT THE DISCHARGE AIR SETPOINT ACTIVE.

AUXILIARY HEATING MODE SHALL BE ENABLED IF THE COMPRESSOR HEAT IS NOT ABLE TO MAINTAIN SETPOINT FOR MORE THAN 10 MINUTES, OR IF THE OUTDOOR AIR TEMPERATURE IS BELOW THE HEAT PUMP OUTDOOR AIR TEMPERATURE DISABLE SETPOINT (0.0 DEG. F ADJ.). THE UNIT SHALL USE THE INTERNAL HOT WATER HEATING COIL AS AUXILIARY HEAT.

OUTDOOR COIL DEFROSTING OCCURS ONLY WHEN OPERATING IN HEATING MODE WITH OUTDOOR AMBIENT TEMPERATURE BELOW 52.0 °F. WHEN THE TEMPERATURE OF THE OUTDOOR COIL REACHES 52.0 °F, THE AUXILIARY HEATING MODE SHALL DISABLE THE COMPRESSORS FROM RUNNING AND MODULATE THE HEATING OUTPUT TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT. THE FIRST DEFROST CYCLE SHALL BE INITIATED WHEN THE OUTDOOR COIL TEMPERATURE REACHES 48.0 °F AT THE REQUIRED CONDITIONS. IF NO AUXILIARY HEAT IS PROVIDED, UNIT SHALL NOT DISABLE THE HEAT AND SHALL PROVIDE AS MUCH HEAT AS POSSIBLE. TWELVE MINUTES AFTER COMPLETION OF THE DEFROST CYCLE, THE OUTDOOR COIL TEMPERATURE SHALL BE RECALCULATED AND OUTDOOR AIR IS CALCULATED RESULTING IN A CLEAN COIL DELTA T (DT) AND IS USED AS AN INDICATOR OF UNIT PERFORMANCE AT DRY COIL CONDITIONS. AUXILIARY HEATING MODE SHALL BE DISABLED WHEN THE OUTDOOR COIL TEMPERATURE REACHES 52.0 °F. THE REVERSING VALVE FROM DX HEATING TO AUXILIARY HEATING, OVER TIME, AS MOISTURE AND FROST ACCUMULATE ON THE COIL, THE COIL TEMPERATURE SHALL DROP, INCREASING THE TEMPERATURE DIFFERENCE. MAXIMUM TEMPERATURE DIFFERENCE BETWEEN THE OUTDOOR COIL AND RETURN AIR SHALL NOT EXCEED 125.0 DEG. F. WHEN THE TEMPERATURE DIFFERENCE BETWEEN THE OUTDOOR COIL AND OUTDOOR AIR REACHES 1.8 X DT, A DEFROST CYCLE IS INITIATED. WHILE DEFROSTING, THE REVERSING VALVES ARE IN THE HEATING POSITION. WHEN THE DEFROSTING CYCLE COMPLETION CLOSES, RETURN DAMPER OPENS, THE SUPPLY FAN RUNS AT MINIMUM, AND THE COMPRESSORS) CONTINUE TO OPERATE. IF THE OPTIONAL RETURN DAMPER IS NOT INSTALLED, THE OUTDOOR DAMPER SHALL CLOSE. WHEN THE OUTDOOR COIL TEMPERATURE REACHES 52.0 °F, THE TEMPERATURE RISES HIGH ENOUGH TO INDICATE THAT THE FROST HAS BEEN ELIMINATED. TERMINATION OF THE DEFROST CYCLE INCLUDES A "SOFT START" DELAY. AT THE END OF EACH DEFROST CYCLE, THE REVERSING VALVE FROM DX HEATING TO AUXILIARY HEATING REVERSES TO DE-ENERGIZED TO REDUCE NOISE.

WHEN UNOCCUPIED MODE ENABLED, THE OUTDOOR AIR DAMPER SHALL BE COMMANDED TO CLOSE AND RETURN DAMPERS TO OPEN; THE SUPPLY FAN SHALL BE COMMANDED TO START AND A PRESET SIGNAL OF 50% (50-100% ADJ.) IS SENT TO THE SUPPLY FAN VFD OR ECM. A DIFFERENTIAL PRESSURE SWITCH SHALL MONITOR THE DIFFERENTIAL TO ASSURE ACROSS THE FAN. THE SWITCH DOES NOT OPEN UNTIL THE FAN RUNS FOR 30 SECONDS. IF THE PRESSURE DIFFERENTIAL FALLS BELOW 100% (ADJ.) AFTER 30 SECONDS, THE DIFFERENTIAL PRESSURE SWITCH SHALL BE ANNUNCIATED AT THE BAS, THE UNIT SHALL STOP, REQUIRING A MANUAL RESET. ON UNITS EQUIPPED WITH MORE THAN TWO COMPRESSORS, ONLY STAGE 1 AND 2 ENABLED DURING UNOCCUPIED MODES.

DURING UNOCCUPIED COOLING MODE OUTDOOR AIR CONDITIONS ARE IGNORED AND ONLY SPACE TEMPERATURE USED IN CONTROL DECISIONS. UNOCCUPIED COOLING MODE INITIALIZED WHEN NO CALL FOR UNOCCUPIED DEHUMIDIFICATION OR UNOCCUPIED HEATING IS PRESENT AND THE ACTIVE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED SPACE COOLING SETPOINT (80 DEF F ADJ.). CONTROL SHALL REMAIN IN COOLING MODE UNTIL THE ACTIVE SPACE TEMPERATURE DROPS BELOW THE UNOCCUPIED COOLING SETPOINT MINUS THE UNOCCUPIED OFFSET. **NOTE:** IN UNOCCUPIED COOLING MODE, ONLY STAGES 1 AND 2 ARE ACTIVE STAGES. IF ECONOMIZING IS ENABLED THE OUTSIDE AIR DAMPER SHALL MODULATE TO MAINTAIN THE OCCUPIED SPACE TEMPERATURE SETPOINT.

OUTDOOR COIL DEFROSTING OCCURS ONLY WHEN OPERATING IN DX HEATING MODE WITH OUTDOOR AMBIENT TEMPERATURE BELOW 52.0 DEG. F AND THE OUTDOOR COIL TEMPERATURE BELOW 35.0 DEG. F. THE FIRST DEFROST CYCLE AFTER POWER-UP IS INITIATED BASED ON 30 MINUTES OPERATING TIME AT THE REQUIRED CONDITIONS. TWENTY MINUTES AFTER COMPLETION OF THE DEFROST CYCLE, THE TEMPERATURE DIFFERENCE BETWEEN THE OUTDOOR COIL AND OUTDOOR AIR IS CALCULATED RESULTING IN A CLEAN COIL DELTA T (DT) AND IS USED AS AN INDICATOR OF UNIT PERFORMANCE AT

ACCUMULATE ON THE COIL, THE COIL TEMPERATURE SHALL DROP, INCREASING THE TEMPERATURE DIFFERENCE. WHEN THE TEMPERATURE DIFFERENCE BETWEEN THE OUTDOOR COIL AND OUTDOOR AIR REACHES 1.8 X DT, A DEFROST CYCLE IS INITIATED. WHILE DEFROSTING, THE REVERSING VALVE(S) ARE IN THE COOLING POSITION, OUTDOOR FAN(S) ARE OFF, OUTDOOR DAMPER CLOSES, RETURN DAMPER OPENS, THE SUPPLY FAN RUNS AT MINIMUM, AND THE COMPRESSOR(S) CONTINUE TO OPERATE. IF THE OPTIONAL RETURN DAMPER IS

NOT INSTALLED, THE OUTDOOR DAMPER SHALL REMAIN OPEN. THE DEFROST CYCLE IS TERMINATED WHEN THE COIL TEMPERATURE RISES HIGH ENOUGH TO INDICATE THAT THE FROST HAS BEEN ELIMINATED. TERMINATION OF THE DEFROST CYCLE INCLUDES A "SOFT START" DELAY. AT THE END OF EACH DEFROST CYCLE, THE OUTDOOR FAN COMES ON 5 SECONDS BEFORE THE REVERSING VALVE IS DE-ENERGIZED TO REDUCE NOISE.

DURING OPTIMAL START, IF THE SPACE TEMPERATURE IS ABOVE THE OCCUPIED COOLING SETPOINT, PRE-COOL MODE SHALL BE ACTIVATED. WHEN PRE-COOL IS INITIATED THE UNIT SHALL ENABLE THE FAN AND COOLING OR ECONOMIZER. THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED, UNLESS ECONOMIZING. WHEN THE SPACE TEMPERATURE REACHES OCCUPIED COOLING SETPOINT (ADJ.), THE UNIT SHALL TRANSITION TO THE OCCUPIED MODE.

THE BAS SHALL MONITOR THE SCHEDULED UNOCCUPIED TIME, OCCUPIED SETPOINTS AND SPACE TEMPERATURE TO CALCULATE WHEN THE OPTIMAL STOP OCCURS. WHEN THE OPTIMAL STOP MODE IS ACTIVE THE UNIT CONTROLLER SHALL MAINTAIN THE SPACE TEMPERATURE TO THE SPACE TEMPERATURE OFFSET SETPOINT.

THE BAS SHALL MONITOR THE STATUS OF THE "ON" AND "CANCEL" BUTTONS OF THE SPACE TEMPERATURE SENSOR. THE OCCUPANCY OVERRIDE BUTTON SHALL OVERRIDE OCCUPANCY REQUEST TO OCCUPIED MODE WHEN THE ON OR OCCUPIED BUTTON IS PRESSED. WHEN THE OFF OR UNOCCUPIED BUTTON IS PRESSED THE UNIT SHALL RETURN TO USING OCCUPANCY REQUEST TO DETERMINE THE STATUS OF THE UNIT. OCCUPANCY BYPASS TIME (FIELD ADJUSTABLE) IS SET TO 120 MINUTES. WHEN A OCCUPIED BYPASS REQUEST IS RECEIVED FROM THE SPACE SENSOR, THE UNIT SHALL TRANSITION FROM ITS CURRENT OCCUPANCY MODE TO OCCUPIED BYPASS MODE AND THE UNIT SHALL MAINTAIN THE SPACE TEMPERATURE TO THE OCCUPIED SETPOINTS (ADJ.).

COOLING SHALL BE CONTROLLED AS DESCRIBED IN THE COOLING MODE AND DISCHARGE RESET, HOWEVER THE ANALOG OUTPUT SHALL BE SET TO A DIFFERENT RANGE.

THE UNIT IGNORES THE OUTDOOR AIR CONDITIONS WHEN DETERMINING THE NIGHT HEAT/COOL MODE.

THE UNIT SHALL MAINTAIN THE SPACE TEMPERATURE SETPOINTS BASED ON THE HEATING OR COOLING MODE OF THE UNIT, BY RESETTING THE DISCHARGE AIR TEMPERATURE SETPOINT CALCULATED BY COMPARING THE ACTIVE SPACE TEMPERATURE AGAINST THE ACTIVE SPACE TEMPERATURE SETPOINT. THE BAS COMMUNICATED VALUE WILL TAKE PRIORITY OVER THE LOCALLY CALCULATED VALUE.

DEHUMIDIFICATION MODE SHALL BE ENABLED WHEN NO CALL FOR HEATING MODE AND THE SPACE DEWPOINT OR OUTDOOR AIR DEWPOINT RISES ABOVE THE SPACE DEWPOINT SETPOINT OR THE OUTDOOR AIR DEWPOINT SETPOINT. DEHUMIDIFICATION SHALL REMAIN ENABLED UNTIL THE OUTDOOR AIR DEWPOINT RISES ABOVE THE OUTDOOR AIR DEWPOINT SETPOINT BY 3.0 DEG. F, OR IF HEATING MODE IS ENABLED. COMPRESSOR CONTROL IS BASED ON EVAP LEAVING TEMPERATURE SETPOINT. IF EVAPORATOR LEAVING AIR TEMPERATURE IS ABOVE SETPOINT FIRST STAGE (COMPRESSOR 1) SHALL START. IF AFTER A 3-MINUTE MINIMUM DELAY THE EVAPORATOR LEAVING AIR TEMPERATURE IS STILL ABOVE SETPOINT, SECOND STAGE (COMPRESSOR 2) SHALL START. AFTER A 3-MINUTE MINIMUM DELAY, THIRD AND FOURTH STAGES (COMPRESSOR 2, 3, AND 4) SHALL BE STAGED ON SEQUENTIALLY FOLLOWING INDIVIDUAL 3-MINUTE MINIMUM DELAYS BETWEEN EACH CALL.

DURING THE DEHUMIDIFICATION CYCLE, THE HOT GAS REHEAT SHALL BE ENABLED AND SHALL MODULATE TO MAINTAIN THE DISCHARGE AIR SETPOINT. AS THE EVAPORATOR LEAVING TEMPERATURE APPROACHES THE EVAPORATOR LEAVING TEMPERATURE SETPOINT, THE HOT GAS REHEAT SHALL BE DEENABLED. THE DELAY WITH A 5 MINUTE DELAY IN BETWEEN, THE HOT GAS REHEAT COIL SHALL UNDERGO A PURGE CYCLE EVERY 30 MINUTES FOR 3 MINUTES. AS THE EVAPORATOR LEAVING TEMPERATURE FALLS BELOW EVAPORATOR LEAVING TEMPERATURE SETPOINT BY 1.0 DEG. F FOR 5 MINUTES, COOLING STAGE 1 WILL BE INITIATED DURING THE PURGE CYCLE. THE HOT GAS REHEAT COIL SHALL PASSSE 100% SHOULD THE SPACE BEGIN TO COOL. THE HOT GAS REHEAT COIL SHALL MODULATE TO MAINTAIN THE OCCUPIED COOLING SETPOINT. THE HEATING CYCLE IS DISABLED WHEN THE HOT GAS REHEAT CYCLE IS ENABLED.

FOLLOWING CONTINUOUS 30-MINUTE HOT GAS REHEAT OPERATION AT LESS THAN 100 PERCENT REHEAT CAPACITY A PURGE CYCLE SHALL BE INITIATED. DURING THE PURGE CYCLE, THE HOT GAS REHEAT SIGNAL IS SET AND HELD AT 100 PERCENT FOR A PERIOD OF 3 MINUTES. FOLLOWING THE PURGE CYCLE, NORMAL OPERATION RESUMES.

UNOCCUPIED DEHUMIDIFICATION MODE SHALL BE ENABLED WHEN THE SPACE DEWPOINT IS GREATER THAN OR EQUAL TO THE UNOCCUPIED DEWPOINT SETPOINT AND NO CALL FOR UNOCCUPIED HEATING MODE. UNOCCUPIED DEHUMIDIFICATION SHALL REMAIN ACTIVE UNTIL THE SPACE DEWPOINT RISES ABOVE THE UNOCCUPIED DEWPOINT SETPOINT BY 2.0 DEG. F, OR IF UNOCCUPIED HEATING MODE IS ENABLED. WHEN UNOCCUPIED DEHUMIDIFICATION IS ENABLED, FIRST STAGE COOLING (COMPRESSOR 1) SHALL START. IF AFTER A 5-MINUTE DELAY IF THE EVAPORATOR LEAVING TEMPERATURE IS STILL HIGHER THAN THE EVAPORATOR LEAVING TEMPERATURE SETPOINT BY 2.0 DEG. F AND (IF INSTALLED ON FIRST CIRCUIT) THE DIGITAL COMPRESSOR IS AT 100% CAPACITY, THE SECOND STAGE OF COOLING

(COMPRESSOR 2) SHALL BE ENABLED WITH 5 MINUTES DELAY BETWEEN STAGES. WHEN EVAPORATOR LEAVING TEMPERATURE APPROACHES THE EVAPORATOR LEAVING TEMPERATURE SETPOINT, COMPRESSORS 2 SHALL BE STAGED OFF. AS THE EVAPORATOR LEAVING TEMPERATURE FALLS BELOW EVAPORATOR LEAVING TEMPERATURE SETPOINT BY 1.0 DEG. F FOR 5 MINUTES, COOLING STAGE 1 SHALL BE DISABLED.

DURING THE UNOCCUPIED DEHUMIDIFICATION CYCLE, THE HOT GAS REHEAT SHALL BE ENABLED AND SHALL MODULATE TO MAINTAIN THE UNOCCUPIED DISCHARGE AIR SETPOINT.

FOLLOWING CONTINUOUS 30-MINUTE HOT GAS REHEAT OPERATION AT LESS THAN 100 PERCENT REHEAT CAPACITY A PURGE CYCLE SHALL BE INITIATED.

ECONOMIZER IS FIELD ADJUSTABLE BETWEEN ENTHALPY OR DRY BULB WITH THE BINARY VALUE ECONOMIZER CONTROL TYPE (DEFAULTED FROM FACTORY AS ENTHALPY).

VENTILATION MODE IS ENABLED BASED ON SPACE TEMPERATURE AND OUTDOOR AIR TEMPERATURE. DRY BULB ECONOMIZER IS BASED ON OUTDOOR AIR TEMPERATURE AND RETURN AIR TEMPERATURE. OPERATION IN VENTILATION MODE IS ENABLED WHEN THE SPACE TEMPERATURE AND THE OUTDOOR AIR TEMPERATURE IS WITHIN 2.0 DEG. F OF THE OCCUPIED COOLING SETPOINT. ECONOMIZER MODE IS ENABLED WHEN THE OUTDOOR AIR

TEMPERATURE IS BELOW RETURN AIR
TEMPERATURE AND CONTINUES UNTIL CONDITIONS CALL FOR
DEHUMIDIFICATION OR WHEN THE OUTDOOR AIR TEMPERATURE IS
ABOVE THE RETURN AIR TEMPERATURE BY 3.0 DEG. F. OPERATION IN
VENTILATION MODE CONTINUES UNTIL CONDITIONS CALL FOR
DEHUMIDIFICATION OR WHEN THE SPACE AND OUTDOOR AIR
TEMPERATURE DIFFERENCE IS NOT MORE THAN 5.0 F OF SETPOINT. WHEN THE
OUTDOOR AIR TEMPERATURE IS MORE THAN 5.0 DEG. F BELOW THE
EVAPORATOR LEAVING TEMPERATURE SETPOINT, THEN THE DX COOLING
SHALL BE LOCKED OUT AND DAMPERS SHALL MODULATE TO MAINTAIN
THE EVAPORATOR LEAVING TEMPERATURE SETPOINT.

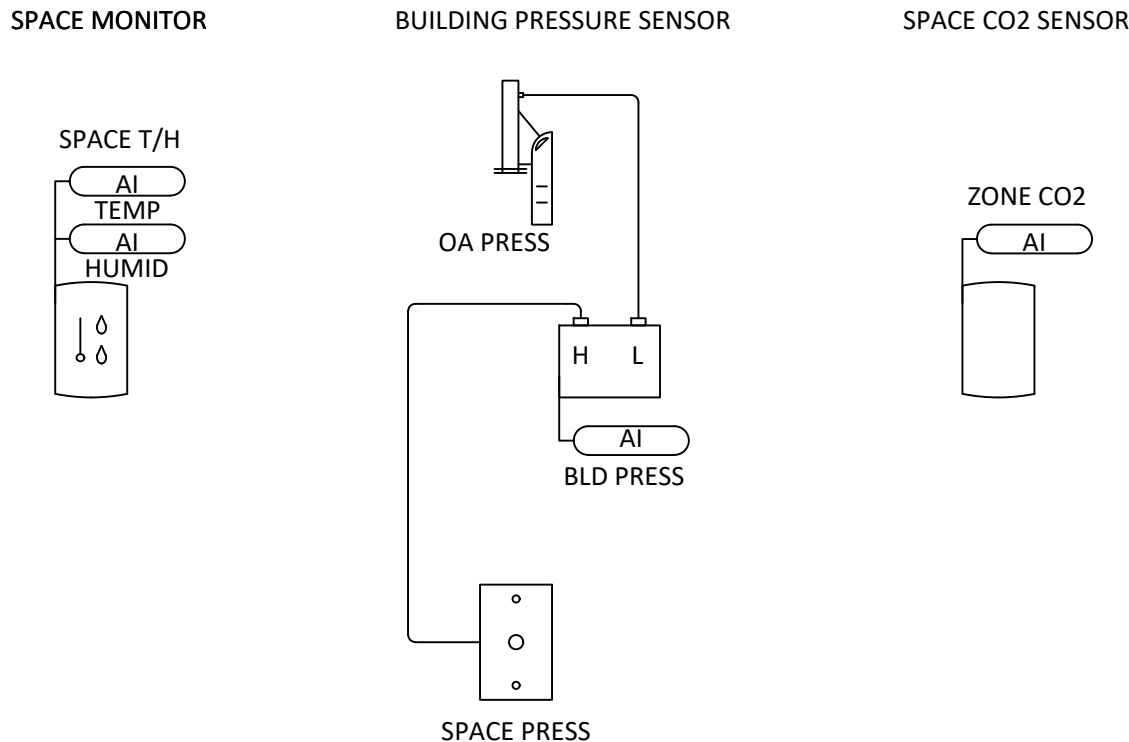
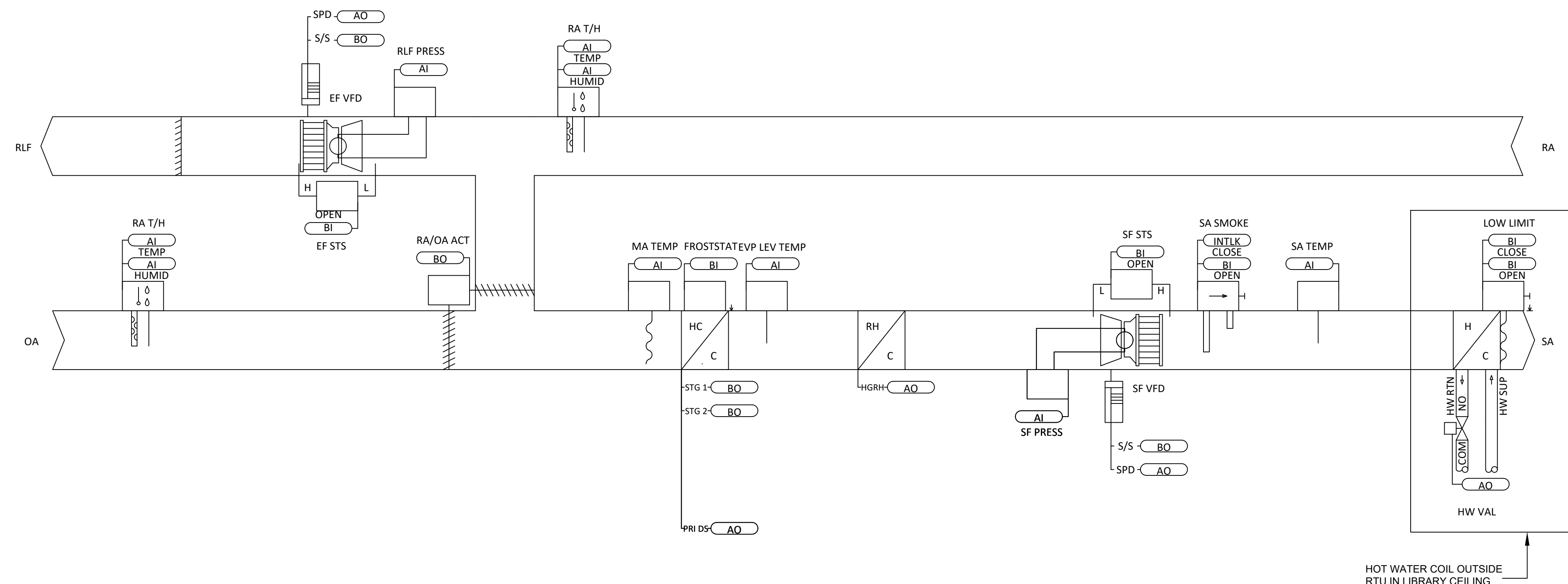
DURING VENTILATION MODE BOTH COOLING AND HEAT SHALL BE LOCKED OUT AND THE OUTDOOR AIR DAMPER SHALL MODULATE TO MAINTAIN THE OCCUPIED COOLING SETPOINT (IF EQUIPPED WITH OPTIONAL MODULATING DAMPERS). WHEN THE OUTDOOR AIR TEMPERATURE RISES ABOVE THE OCCUPIED EVAPORATOR LEAVING TEMPERATURE SETPOINT BY 1.0 DEG. F, THE OUTDOOR AIR DAMPER SHALL OPEN TO THE MAXIMUM DAMPER POSITION AND ALLOW DX COOLING TO STAGE, AS NECESSARY. DURING ECONOMIZER MODE THE FAN SHALL MODULATE TO MAINTAIN THE OCCUPIED COOLING SETPOINT.

UNITS WITH SPACE CO2 SENSOR (FIELD SUPPLIED OR NETWORK COMMUNICATED) AND ECONOMIZER OPTIONS; THE UNIT CONTROLLER SHALL MONITOR SPACE CO2 LEVELS AND COMPARE THEM TO THE SPACE CO2 SETPOINT. WHEN THE SPACE CO2 LEVEL IS GREATER THAN OR EQUAL TO THE SPACE CO2 SETPOINT, THE OUTDOOR AIR DAMPER SHALL OPEN AND MODULATE TO MAINTAIN THE SPACE CO2 LEVEL SETPOINT. ON A CALL FOR ECONOMIZER COOLING, THE DAMPER MAY BE OPENED FURTHER TO SATISFY THE COOLING REQUEST. WHEN THE SPACE CO2 LEVEL IS LESS THAN OR EQUAL TO THE SPACE CO2 SETPOINT, THE OUTDOOR AIR DAMPER SHALL CLOSE TO THE MINIMUM OUTDOOR AIR DAMPER POSITION. ON A CALL FOR ECONOMIZER COOLING, THE DAMPER MAY BE MODULATED OPEN TO SATISFY THE COOLING REQUEST.

A DIFFERENTIAL PRESSURE TRANSDUCER SHALL ACTIVELY MONITOR THE DIFFERENCE IN PRESSURE BETWEEN THE BUILDING (INDOORS) AND OUTDOORS. IF THE BUILDING PRESSURE INCREASES ABOVE THE DESIRED SETPOINT, THE ASSOCIATED CONTROLLER SHALL MODULATE THE RELIEF FAN SPEED FASTER TO CONTROL BUILDING PRESSURE AT SETPOINT. IF THE BUILDING PRESSURE DECREASES BELOW THE DESIRED SETPOINT, THE ASSOCIATED CONTROLLER SHALL MODULATE THE RELIEF FAN SPEED SLOWER TO CONTROL BUILDING PRESSURE AT SETPOINT. A DIFFERENTIAL PRESSURE SWITCH SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE RELIEF AIR FAN. IF THE SWITCH IS DETECTED TO BE OPEN FOR 400 CONSECUTIVE SECONDS AFTER A REQUEST FOR RELIEF FAN OPERATION A FAN FAILURE ALARM SHALL ANNUNCIATE AT THE BAS AND THE RELIEF FAN SHALL STOP. A MANUAL RESET SHALL BE REQUIRED.

A DIFFERENTIAL PRESSURE SWITCH SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FAN. **EXHAUST WITH GRAVITY DAMPERS:** IN THE OCCUPIED MODE AND AFTER INDOOR FAN STATUS HAS BEEN SET TO OFF, THE OUTDOOR AIR DAMPER STATUS IS OPEN, AND NO UNIT ALARMS, THE ISOLATION DAMPERS SHALL BE POWERED AND THE POWER EXHAUST FAN SPEED SHALL MODULATE TO MAINTAIN A CONSTANT VOLUME OF AIRFLOW. IF THE SWITCH IS DETECTED TO BE OPEN FOR 30 SECONDS (ADJ.) AFTER A REQUEST FOR EXHAUST FAN OPERATION A FAN FAILURE ALARM SHALL BE ANNUNCIATED AT THE BAS CONTROLS. IN THE UNOCCUPIED MODE, THE EXHAUST FAN SHALL BE POWERED EXHAUST SHALL BE DISABLED, A MANUAL RESET SHALL BE REQUIRED.

THE UNIT SHALL SHUT DOWN IN RESPONSE TO A SIGNAL FROM THE SMOKE DETECTOR INDICATING THE PRESENCE OF SMOKE. THE SMOKE DETECTOR SHALL BE INTERLOCKED TO THE UNIT THROUGH THE DRY CONTACTS OF THE SMOKE DETECTOR. A MANUAL RESET OF THE SMOKE DETECTOR SHALL BE REQUIRED TO RESTART THE UNIT.



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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

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Drawn by	VF/AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

Mechanical & Electrical Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 202 SUFFERN, NY 10901 PHONE NO. : NY-2300068.00
Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 202 SUFFERN, NY 10901

UNIVENT REPLACEMENT AT
STONY POINT, THIELS,
WEST HAVESTRAW
ELEMENTARY SCHOOL

SED# 50-02-01-06-0-014-012
SED# 50-02-01-06-0-025-018
SED# 50-02-01-06-0-024-015

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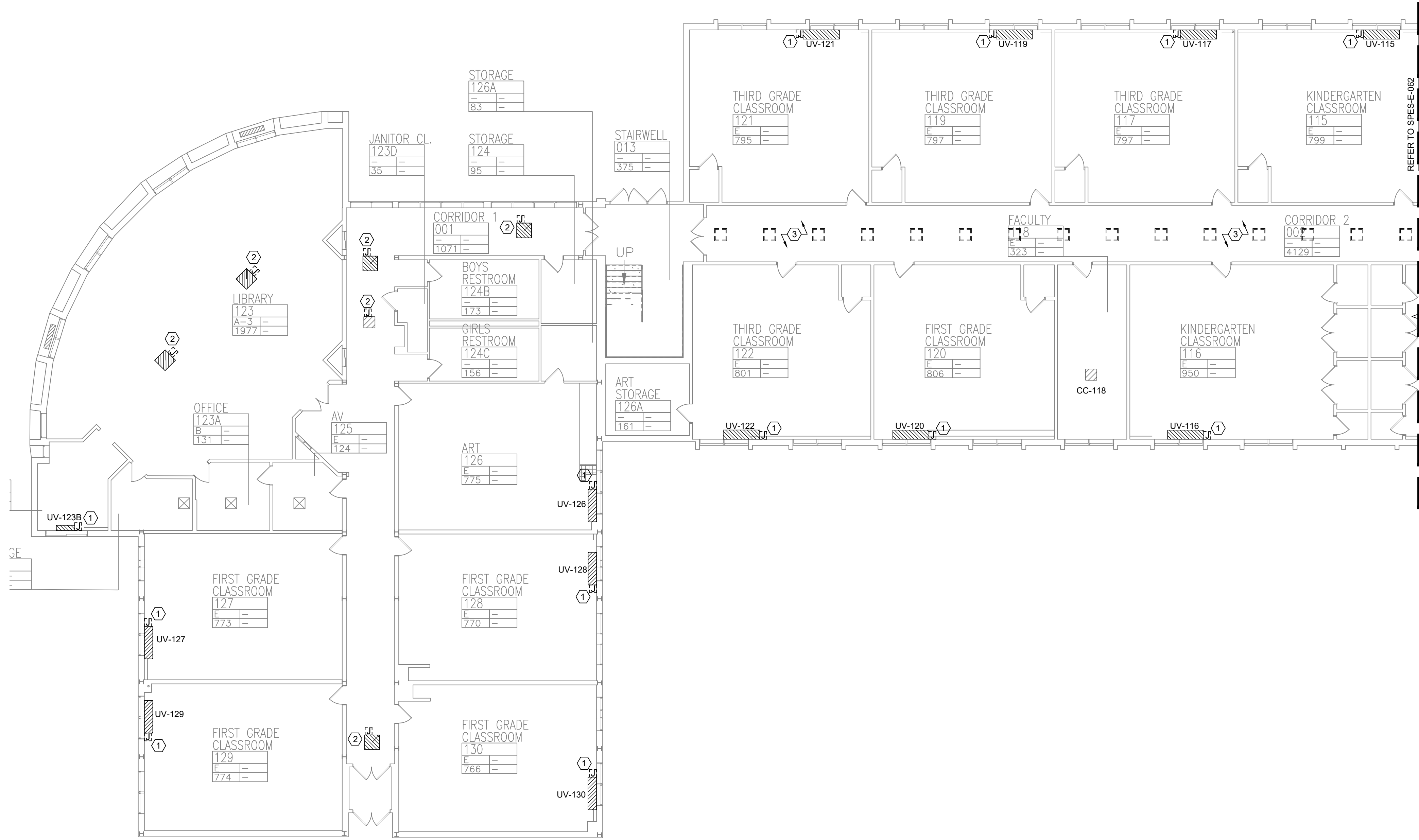
GURNEE DR,
STONY POINT, NY 10980

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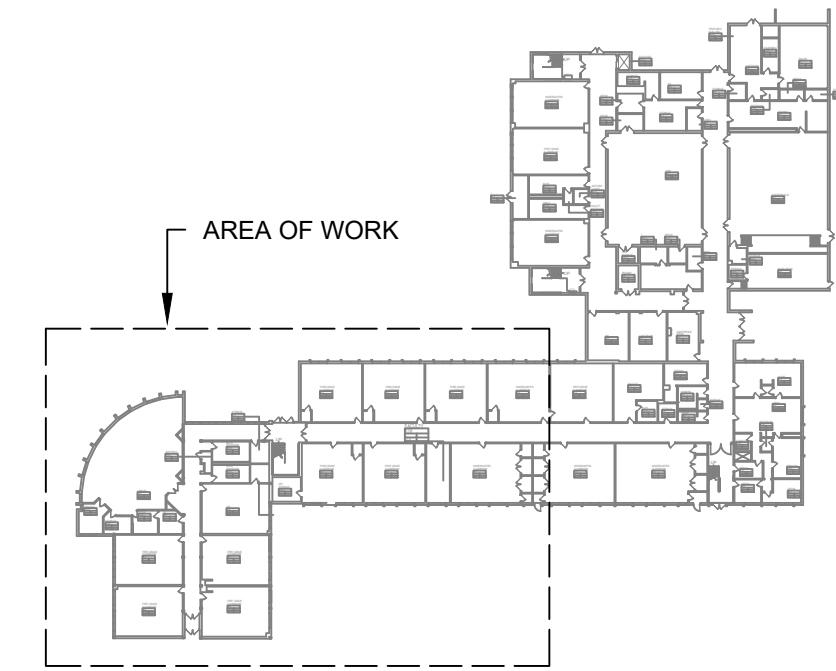
Drawing Title
**FLOW DIAGRAM AND
SEQUENCE OF
OPERATIONS - 3**

Drawing No.

SPES-M-303



1 FIRST FLOOR PARTIAL REMOVAL - ELECTRICAL - 1
SCALE: 3/32"=1'-0"



KEY PLAN



REMOVAL NOTES:

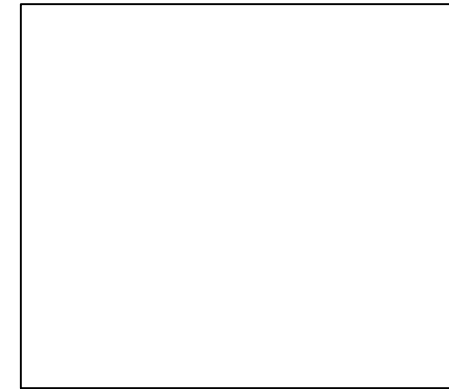
- FOR ELECTRICAL SYMBOLS & LEGENDS, GENERAL NOTES AND ABBREVIATIONS DRAWING LIST REFER TO DWG E001.00
- MAINTAIN CIRCUIT CONTINUITY TO AREAS NOT AFFECTED BY DEMOLITION.
- THE CONTRACTOR IS TO COORDINATE ALL SHUTDOWNS AND DISRUPTIONS TO NORMAL SERVICES WITH THE SCHOOLS FIELD REPRESENTATIVE AND THE FACILITY.
- COORDINATE REMOVAL OF POWER TO MECHANICAL EQUIPMENT WITH THE RESPECTIVE CONTRACTOR.
- CONTRACTOR MUST FIELD VERIFY ALL CONNECTIONS PRIOR TO REMOVAL. PROTECT ALL FEEDER AND BRANCH CIRCUITS SERVING OTHER AREAS. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY OUTAGES.

KEYED NOTES:

- ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO EXISTING UNIT VENTILATOR AND RETAIN EXISTING WIRING, JUNCTION BOXES TO EXISTING UNIT VENTILATORS. THE EXISTING UNIT VENTILATOR SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.
- ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO EXISTING CEILING CASSETTE AND REMOVE EXISTING WIRING, JUNCTION BOXES TO EXISTING CASSETTE BACK TO SOURCE. THE EXISTING CASSETTE SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.
- EXISTING LIGHTING FIXTURE IN CORRIDOR 2 SHALL BE DISCONNECTED AND REMOVED. EXISTING CIRCUIT SHALL REMAIN AND RECONNECTED TO THE NEW LIGHTING FIXTURES. EXTEND WIRING AND CONDUITS AS NECESSARY. REFER TO NEW PLANS FOR THE NEW LIGHTING FIXTURES EXACT LOCATION.

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IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981 PROJ. NO. : NY-5000080.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981
Mechanical Electrical Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVESTRAW ELEMENTARY SCHOOL	SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015
OWNER: NY STONY POINT, NY 10980	DESIGN: RANTY BROOKLAND FACILITY

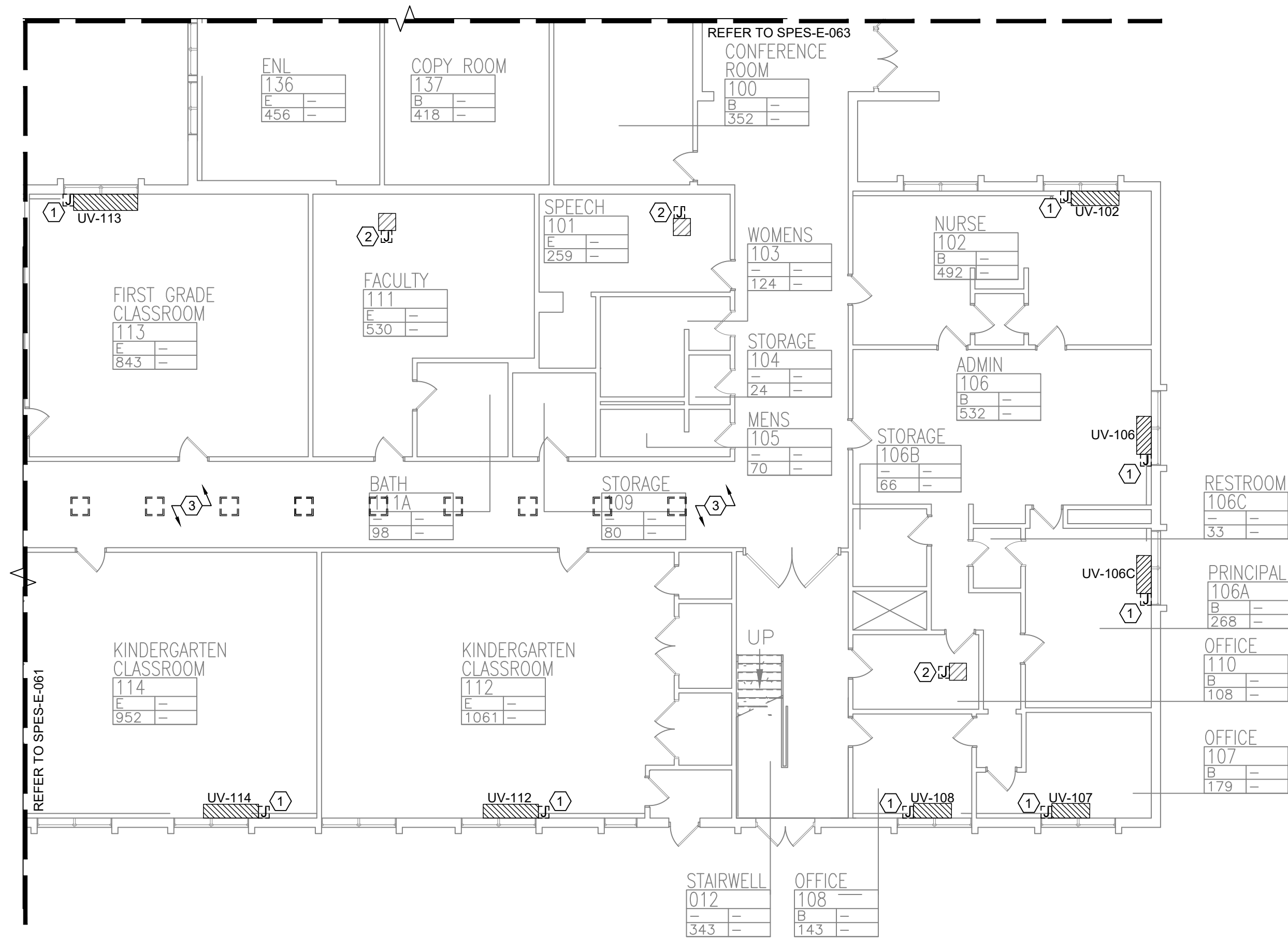


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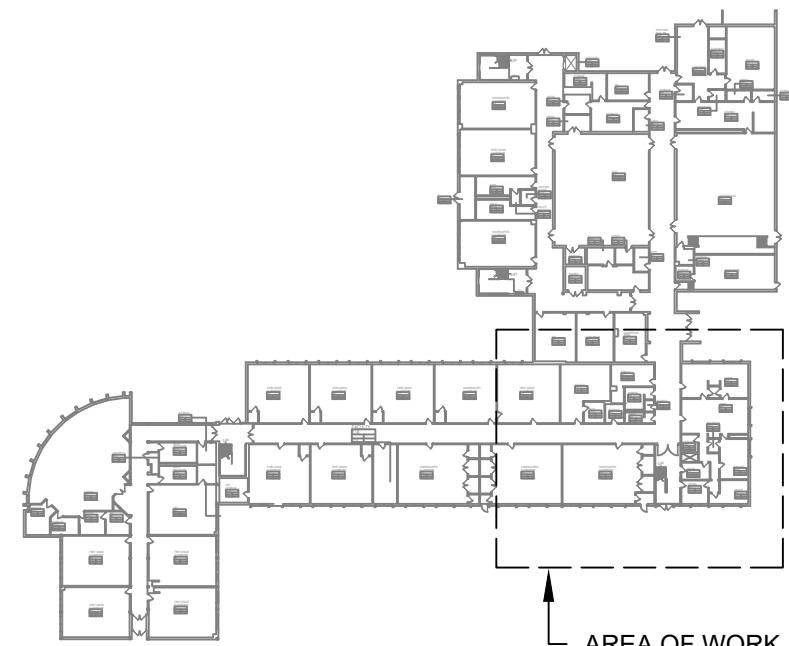
Drawing Title
**FIRST FLOOR PARTIAL
REMOVAL -
ELECTRICAL - 1**

Drawing No.
SPES-E-061

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1 FIRST FLOOR PARTIAL REMOVAL - ELECTRICAL - 2
SCALE: 3/32"=1'-0"



KEY PLAN



REMOVAL NOTES:

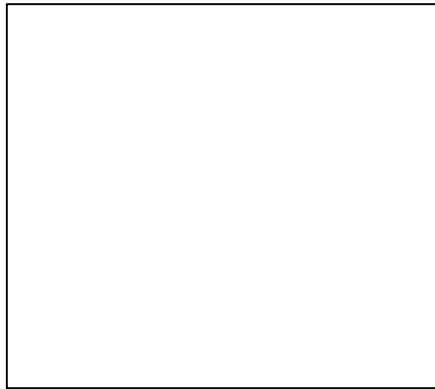
- FOR ELECTRICAL SYMBOLS & LEGENDS, GENERAL NOTES AND ABBREVIATIONS DRAWING LIST REFER TO DWG E001.00
- MAINTAIN CIRCUIT CONTINUITY TO AREAS NOT AFFECTED BY DEMOLITION.
- THE CONTRACTOR IS TO COORDINATE ALL SHUTDOWNS AND DISRUPTIONS TO NORMAL SERVICES WITH THE SCHOOLS FIELD REPRESENTATIVE AND THE FACILITY.
- COORDINATE REMOVAL OF POWER TO MECHANICAL EQUIPMENT WITH THE RESPECTIVE CONTRACTOR.
- CONTRACTOR MUST FIELD VERIFY ALL CONNECTIONS PRIOR TO REMOVAL. PROTECT ALL FEEDER AND BRANCH CIRCUITS SERVING OTHER AREAS. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY OUTAGES.

KEYED NOTES:

- ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO EXISTING UNIT VENTILATOR AND RETAIN EXISTING WIRING. JUNCTION BOXES TO EXISTING UNIT VENTILATORS, THE EXISTING UNIT VENTILATOR SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.
- ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO EXISTING CEILING CASSETTE AND REMOVE EXISTING WIRING. JUNCTION BOXES TO EXISTING CASSETTE BACK TO SOURCE. THE EXISTING CASSETTE SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.
- EXISTING LIGHTING FIXTURE IN CORRIDOR 2 SHALL BE DISCONNECTED AND REMOVED. EXISTING CIRCUIT SHALL REMAIN AND RECONNECTED TO THE NEW LIGHTING FIXTURES. EXTEND WIRING AND CONDUITS AS NECESSARY. REFER TO NEW PLANS FOR THE NEW LIGHTING FIXTURES EXACT LOCATION.



Revisions	
No.	Date
1	03-04-25
BIDDING DOCUMENTS	



Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 STONY POINT, NY 10981 PROJ. NO. : MNY-2000086.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 STONY POINT, NY 10981
Mechanical Electrical Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVESTRAW ELEMENTARY SCHOOL	SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-026-018 SED# 50-02-01-06-0-024-015
OWNER: NY STATE STONY POINT, NY 10980	DESIGN: RANBY ROCKLAND COUNTY

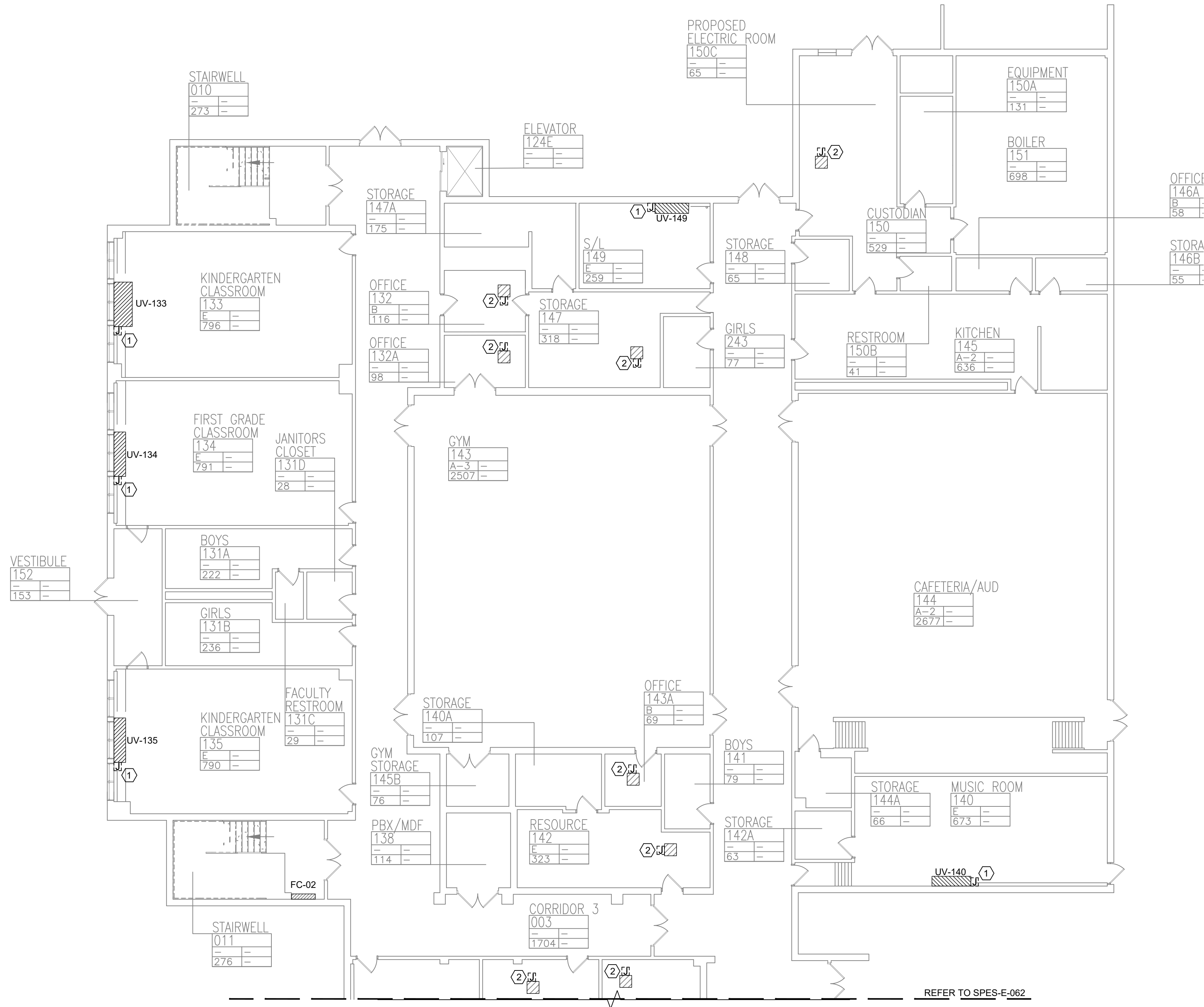


MICHAEL SHILAIE ARCHITECTS, LLP
140 Park Avenue New City, NY 10956 Tel 845-708-9200
www.shilale.com

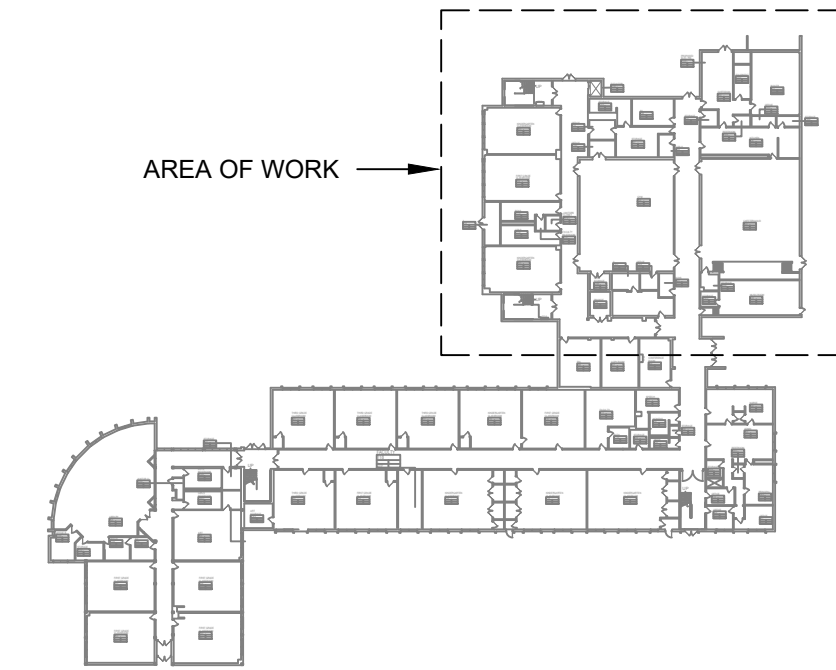
Drawing Title
FIRST FLOOR PARTIAL REMOVAL - ELECTRICAL - 2

Drawing No.
SPES-E-062

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1 FIRST FLOOR PARTIAL REMOVAL - ELECTRICAL - 3
SCALE: 3/32"=1'-0"



KEY PLAN



- REMOVAL NOTES:**
- FOR ELECTRICAL SYMBOLS & LEGENDS, GENERAL NOTES AND ABBREVIATIONS DRAWING LIST REFER TO DWG E001.00
 - MAINTAIN CIRCUIT CONTINUITY TO AREAS NOT AFFECTED BY DEMOLITION.
 - THE CONTRACTOR IS TO COORDINATE ALL SHUTDOWNS AND DISRUPTIONS TO NORMAL SERVICES WITH THE SCHOOLS FIELD REPRESENTATIVE AND THE FACILITY.
 - COORDINATE REMOVAL OF POWER TO MECHANICAL EQUIPMENT WITH THE RESPECTIVE CONTRACTOR.
 - CONTRACTOR MUST FIELD VERIFY ALL CONNECTIONS PRIOR TO REMOVAL. PROTECT ALL FEEDER AND BRANCH CIRCUITS SERVING OTHER AREAS. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY OUTAGES.

- KEYED NOTES:**
- ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO EXISTING UNIT VENTILATOR AND RETAIN EXISTING WIRING. JUNCTION BOXES TO EXISTING UNIT VENTILATORS. THE EXISTING UNIT VENTILATOR SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.
 - ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO EXISTING CEILING CASSETTE AND REMOVE EXISTING WIRING. JUNCTION BOXES TO EXISTING CASSETTE BACK TO SOURCE. THE EXISTING CASSETTE SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.



No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

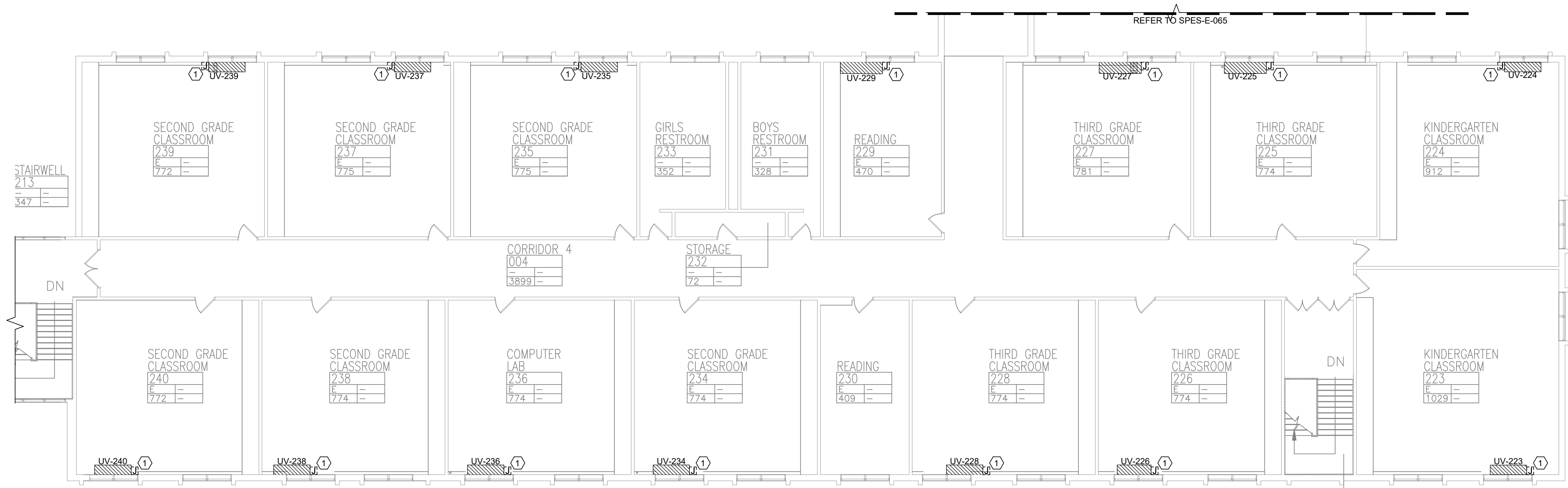
GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981 PROJ. NO. : MNY-5000008.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981
Mechanical Electrical Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVESTRAW ELEMENTARY SCHOOL SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015 STONY POINT, NY 10980
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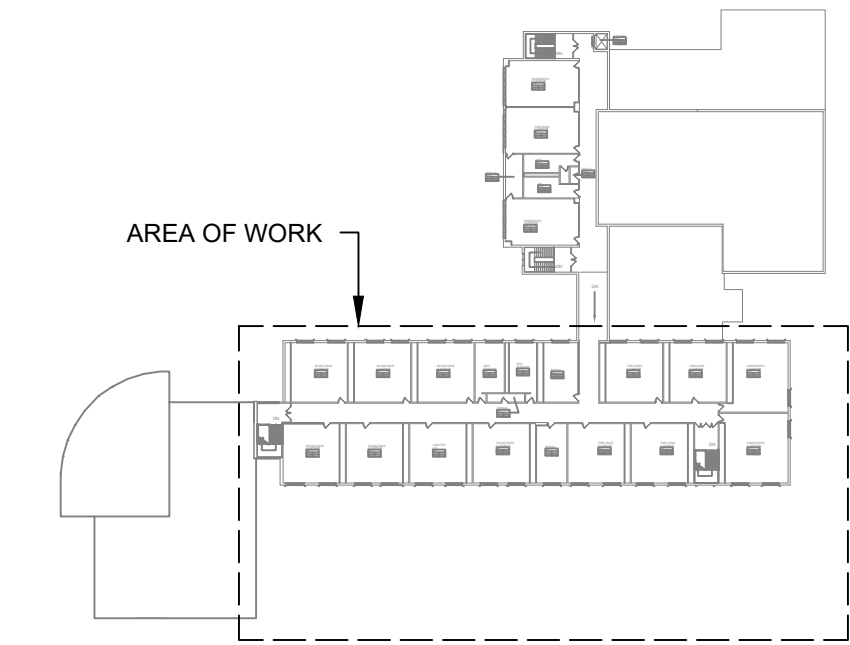


Drawing Title FIRST FLOOR PARTIAL REMOVAL - ELECTRICAL - 3	Drawing No. SPES-E-063
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1 SECOND FLOOR PARTIAL REMOVAL - ELECTRICAL - 1
SCALE: 3/32"=1'-0"



REMOVAL NOTES:

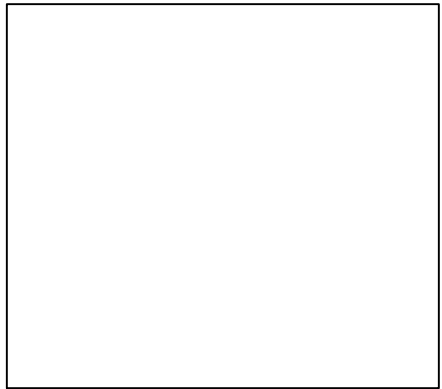
- FOR ELECTRICAL SYMBOLS & LEGENDS, GENERAL NOTES AND ABBREVIATIONS DRAWING LIST REFER TO DWG E001.00
- MAINTAIN CIRCUIT CONTINUITY TO AREAS NOT AFFECTED BY DEMOLITION.
- THE CONTRACTOR IS TO COORDINATE ALL SHUTDOWNS AND DISRUPTIONS TO NORMAL SERVICES WITH THE SCHOOLS FIELD REPRESENTATIVE AND THE FACILITY.
- COORDINATE REMOVAL OF POWER TO MECHANICAL EQUIPMENT WITH THE RESPECTIVE CONTRACTOR.
- CONTRACTOR MUST FIELD VERIFY ALL CONNECTIONS PRIOR TO REMOVAL. PROTECT ALL FEEDER AND BRANCH CIRCUITS SERVING OTHER AREAS. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY OUTAGES.

KEYED NOTES:

- ① ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO EXISTING UNIT VENTILATOR AND RETAIN EXISTING WIRING, JUNCTION BOXES TO EXISTING UNIT VENTILATORS. THE EXISTING UNIT VENTILATOR SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.



Revisions	
No.	Date
1	03-04-25
BIDDING DOCUMENTS	



Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981 PROJ. NO. : MNY-5000086.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981
Mechanical Electrical Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELLS, WEST HAVESTRAW ELEMENTARY SCHOOL	SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-026-018 SED# 50-02-01-06-0-024-015
OWNER: NY STATE STONY POINT, NY 10980	DESIGN: RANBY STONY POINT, NY 10980



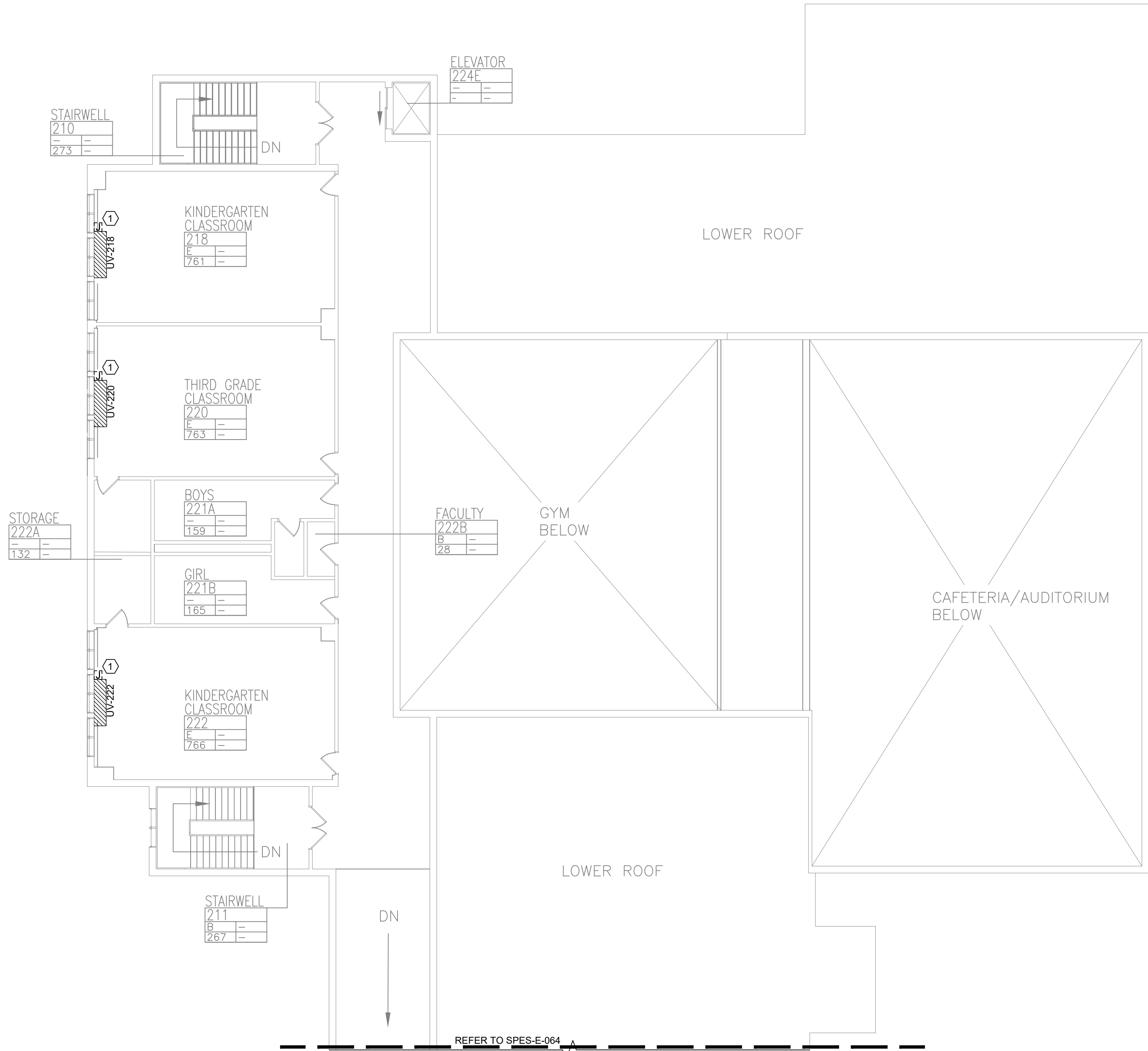
MICHAEL SHILALE ARCHITECTS, LLP
140 Park Avenue New City, NY 10956 Tel 845-708-9200
www.shilale.com

Drawing Title
**SECOND FLOOR
PARTIAL REMOVAL -
ELECTRICAL - 1**

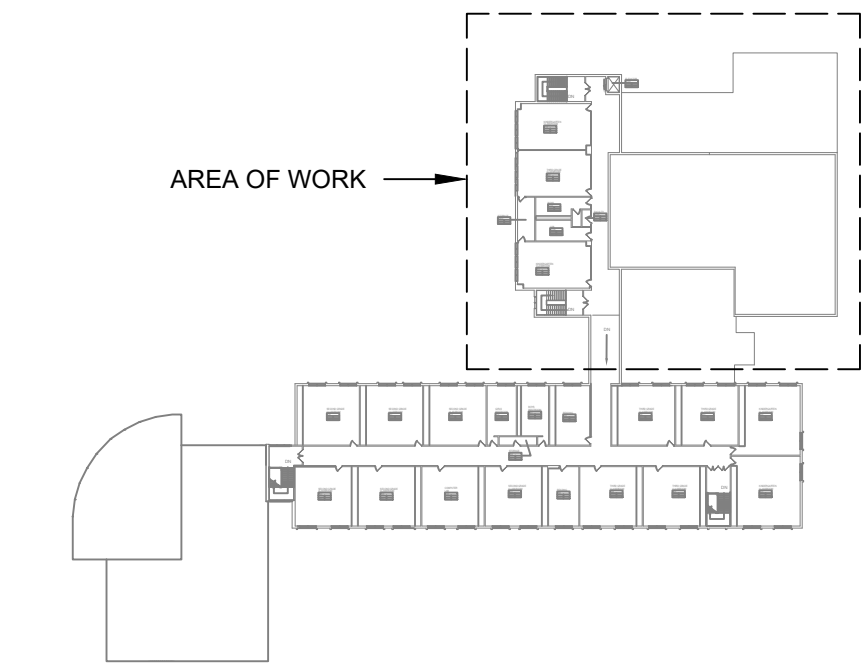
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1 SECOND FLOOR PARTIAL REMOVAL - ELECTRICAL - 2
SCALE: 3/32"=1'-0"



KEY PLAN



REMOVAL NOTES:

- FOR ELECTRICAL SYMBOLS & LEGENDS, GENERAL NOTES AND ABBREVIATIONS DRAWING LIST REFER TO DWG E001.00
- MAINTAIN CIRCUIT CONTINUITY TO AREAS NOT AFFECTED BY DEMOLITION.
- THE CONTRACTOR IS TO COORDINATE ALL SHUTDOWNS AND DISRUPTIONS TO NORMAL SERVICES WITH THE SCHOOLS FIELD REPRESENTATIVE AND THE FACILITY.
- COORDINATE REMOVAL OF POWER TO MECHANICAL EQUIPMENT WITH THE RESPECTIVE CONTRACTOR.
- CONTRACTOR MUST FIELD VERIFY ALL CONNECTIONS PRIOR TO REMOVAL. PROTECT ALL FEEDER AND BRANCH CIRCUITS SERVING OTHER AREAS. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY OUTAGES.

KEYED NOTES:

- ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO EXISTING UNIT VENTILATOR AND RETAIN EXISTING WIRING, JUNCTION BOXES TO EXISTING UNIT VENTILATORS. THE EXISTING UNIT VENTILATOR SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.

0 1/2 1
IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

Drawing Title
**SECOND FLOOR
PARTIAL REMOVAL -
ELECTRICAL - 2**

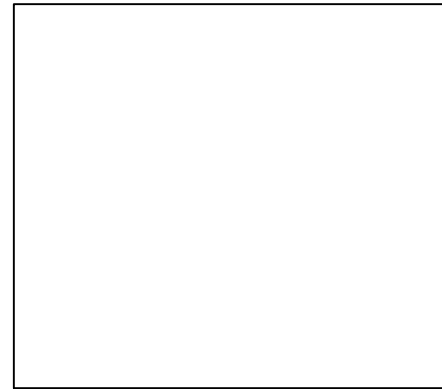
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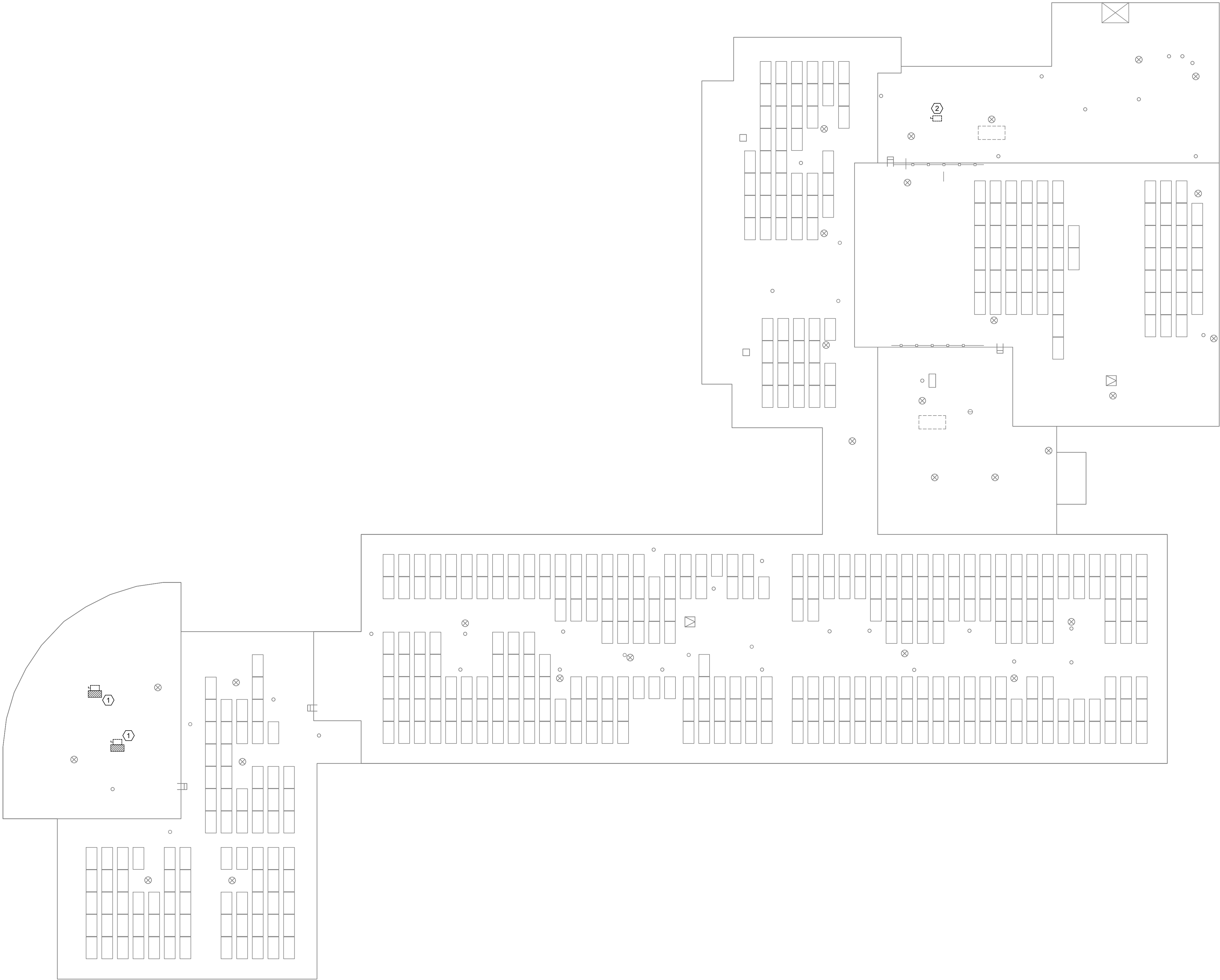
UNIVENT REPLACEMENT AT
STONY POINT, THIELLS,
WEST HAVESTRAW
ELEMENTARY SCHOOL
SED# 50-02-01-06-0-014-012
SED# 50-02-01-06-0-025-018
SED# 50-02-01-06-0-024-015
DESIGNED BY: MICHAEL SHILALE ARCHITECTS, LLP
STONY POINT, NY 10980
SEAL: RENEY R. RANNEY
REGISTERED ELECTRICAL ENGINEER
NO. 10980

Mechanical
Electrical
Engineer:
**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
STONY POINT, NY 10981
PROJ. NO. : MNY-5000086.00
Structural
Engineer:
**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
STONY POINT, NY 10981

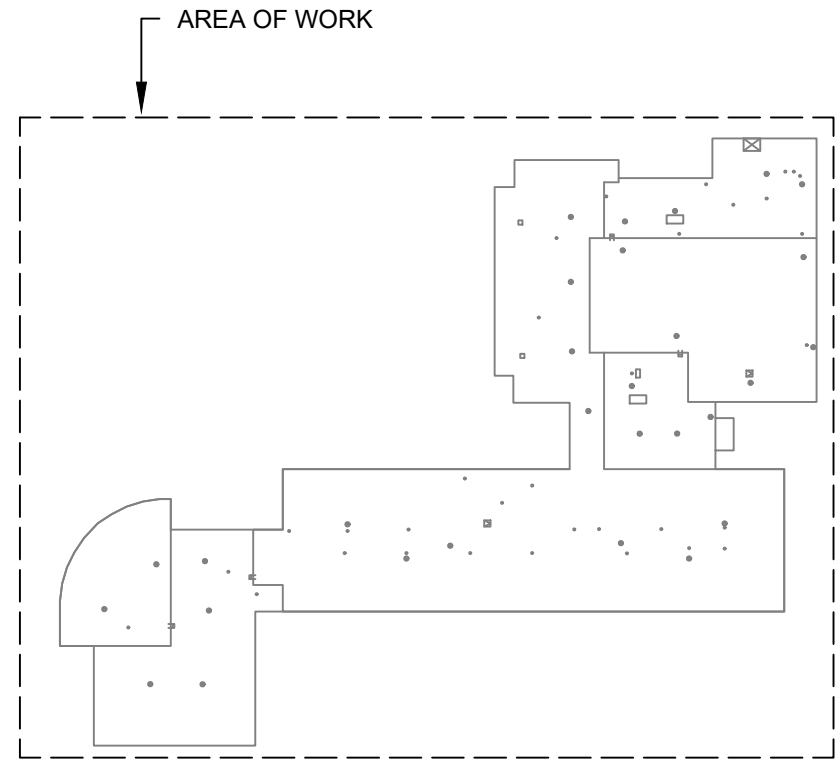
Drawn by DK/KD
Checked by SH
Project No. 43040
Scale AS NOTED
Date 03-04-25



No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



1 ROOF REMOVAL PLAN - ELECTRICAL
SCALE: 1/16"=1'-0"



AREA OF WORK

KEY PLAN



REMOVAL NOTES:

1. FOR ELECTRICAL SYMBOLS & LEGENDS, GENERAL NOTES AND ABBREVIATIONS DRAWING LIST REFER TO DWG E001.00
2. MAINTAIN CIRCUIT CONTINUITY TO AREAS NOT AFFECTED BY DEMOLITION.
3. THE CONTRACTOR IS TO COORDINATE ALL SHUTDOWNS AND DISRUPTIONS TO NORMAL SERVICES WITH THE SCHOOLS FIELD REPRESENTATIVE AND THE FACILITY.
4. COORDINATE REMOVAL OF POWER TO MECHANICAL EQUIPMENT WITH THE RESPECTIVE CONTRACTOR.
5. CONTRACTOR MUST FIELD VERIFY ALL CONNECTIONS PRIOR TO REMOVAL. PROTECT ALL FEEDER AND BRANCH CIRCUITS SERVING OTHER AREAS. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY OUTAGES.

KEYED NOTES:

1. ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO EXISTING CONDENSER UNIT AND RETAIN EXISTING WIRING. JUNCTION BOXES TO EXISTING UNIT VENTILATORS, THE EXISTING UNIT VENTILATOR SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.
2. ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE THE ELECTRICAL CONNECTION TO THE EXISTING EXHAUST FAN AND ALL ASSOCIATED DISCONNECT SWITCH, JUNCTION BOX, CONDUITS AND WIRING BACK TO SOURCE.



0 1/2 1
IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

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Drawing Title
**ROOF REMOVAL PLAN
- ELECTRICAL**

Drawing No.
SPES-E-066



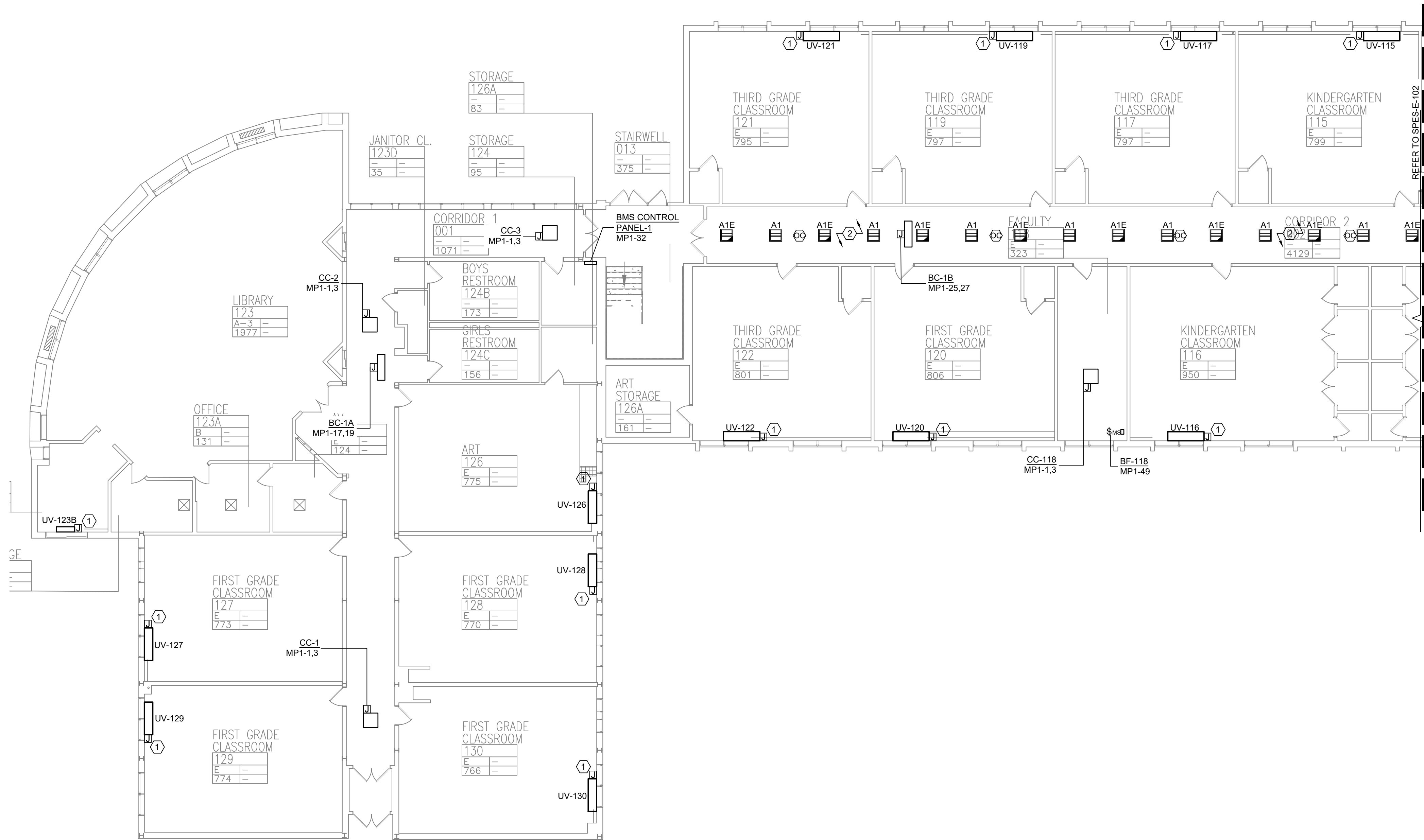
**UNIVENT REPLACEMENT AT
STONY POINT, THIELLS,
WEST HAVESTRAW
ELEMENTARY SCHOOL**
SED# 50-02-01-06-0-014-012
SED# 50-02-01-06-0-025-018
SED# 50-02-01-06-0-024-015
© GREENMAN PEDERSEN, INC.
STONY POINT, NY 10980
GENERAL CONTRACTOR
STONY POINT, NY 10980

Mechanical
Electrical
Engineer:
**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
STONY POINT, NY 10981
PROJ. NO. : MNY-2000086.00

Structural
Engineer:
**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
STONY POINT, NY 10981

Drawn by DK/KD
Checked by SH
Project No. 43040
Scale AS NOTED
Date 03-04-25

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



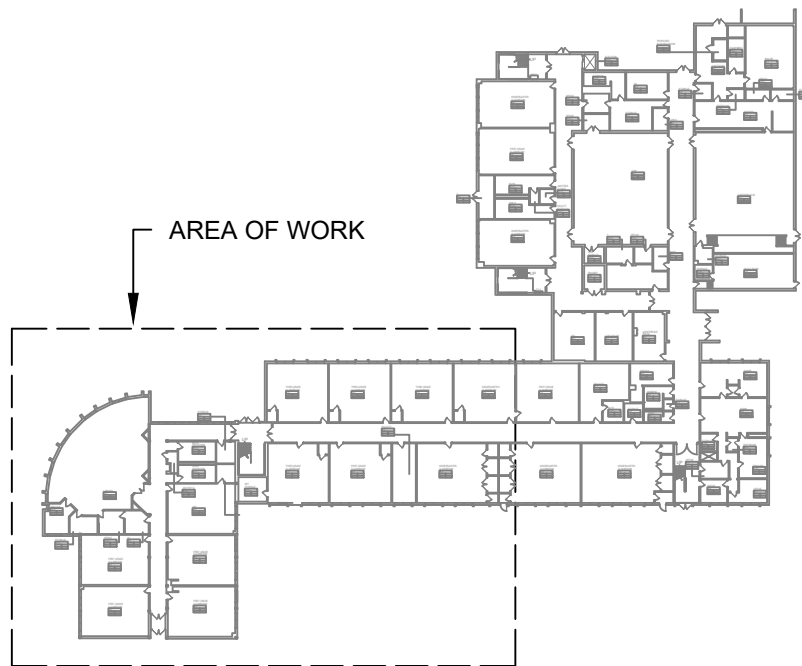
1 FIRST FLOOR PARTIAL PLAN - ELECTRICAL - 1
SCALE: 3/32"=1'-0"

PLAN NOTES:

1. REFER TO ADDITIONAL INSTALLATION NOTES ON DRAWING E-001.
2. ALL NEW BRANCH CIRCUIT SHALL BE RUN WITH MINIMUM OF #12+1#12G IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED. FOR LIGHTING AND POWER BRANCH CIRCUIT, MC CABLE SHALL BE INSTALLED FOR RECESSED INSTALLATION ONLY, EITHER IN NEW WALLS OR ABOVE HUNG CEILING WHERE POSSIBLE. REFER TO PANEL SCHEDULES IN DRAWING SPES-E-001 FOR ALL OTHER FEEDER AND BRANCH CIRCUIT SIZE INFORMATION.
3. PROVIDE LABELS ON ALL ELECTRICAL EQUIPMENT INDICATING CIRCUIT ORIGINATION.
4. UPDATE ALL EXISTING PANEL DIRECTORIES AFFECTED BY NEW WORK.
5. CONTRACTOR SHALL PERFORM AMP PROBE READINGS ON EXISTING SERVICE EQUIPMENT BEFORE AND AFTER WORK TO ENSURE EQUIPMENT WILL NOT BE LOADED BEYOND ITS MAX AMPACITY.
6. CONTRACTOR SHALL MAINTAIN CONTINUITY TO ALL EXISTING CIRCUITRY TO REMAIN WHICH ARE AFFECTED BY THE SCOPE OF WORK; CONTRACTOR SHALL FURNISH ALL NECESSARY JUNCTION BOXES, CONDUIT, AND WIRES AS REQUIRED TO KEEP CONTINUITY.
7. REFER TO MECHANICAL PLANS FOR EQUIPMENT TO BE SUPPLIED BY OTHER TRADES AND INSTALLED/WIRED UNDER THIS SECTION. COORDINATE LOCATION OF DEVICES WITH OTHER CONTRACTORS.
8. PROVIDE FIRESTOPPING FOR ALL PENETRATIONS TO MATCH EXISTING FIRE RATING WHERE APPLICABLE. ALL CORE DRILLS SHALL BE VERIFIED BY BUILDING REPRESENTATIVE PRIOR TO COMMENCING WORK. X-RAY ALL FLOOR SLABS PRIOR TO ROUGH-INS FOR CORE DRILL WORK.
9. THE CONTRACTOR SHALL FIELD ROUTE FEEDER FOR NEW POWER PANELS. COORDINATE EXACT ROUTING PATH WITH OWNER. SUBMIT A PROPOSED ROUTING PATH TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO RUNNING ANY CONDUIT OR WIRE ASSOCIATED WITH THIS FEEDER.
10. DISCONNECT SWITCH FOR UNIT VENTILATORS IS PROVIDED BY HVAC CONTRACTOR. COORDINATE WITH HVAC CONTRACTOR. COORDINATE WITH HVAC CONTRACTOR FOR DISCONNECT SWITCHES FOR ALL OTHER UNIT THAT ARE BEING PROVIDED BY THE HVAC CONTRACTOR.
11. ALL GROUNDING SHALL BE PROVIDED BY THE CONTRACTOR AS PER NEC 2017.
12. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENLARGE AND FUR OUT EXISTING OPENING FOR EXISTING PANELS AND WHERE REQUIRED. ACCOMMODATE THE NEW BACK BOXES AND HOUSING OF THE NEW RECESSED MOUNTED PANELS TO BE INSTALLED. THE ELECTRICAL CONTRACTOR SHALL ALSO ENGAGE THE GC TO RESTORE AND FINISH THE WALLS TO MATCH THE SURROUNDING WALLS OF THE AREA.

KEYED NOTES:

- ① RECONNECT EXISTING WIRING TO THE NEW UNIT VENTILATORS. EXTEND WIRING & CONDUIT IF NECESSARY.
- ② PROVIDE NEW 2" X 2" RECESSED LIGHTING FIXTURES AND NEW CEILING MOUNTED OCCUPANCY SENSORS IN THE CORRIDOR. THE NEW LIGHTING FIXTURES SHALL BE RECONNECTED TO THE EXISTING CORRIDOR CIRCUIT. EXTEND WIRING AND CONDUITS AS NECESSARY.



KEY PLAN



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Drawing Title
**FIRST FLOOR PARTIAL
PLAN - ELECTRICAL - 1**

Drawing No.

SPES-E-101

**UNIVENT REPLACEMENT AT
STONY POINT THIELLS,
WEST HAVESTRAW
ELEMENTARY SCHOOL**

SED# 50-02-01-06-0-014-012
SED# 50-02-01-06-0-025-018
SED# 50-02-01-06-0-024-015

DESIGNED BY
MICHAEL SHILALE ARCHITECTS, LLP
STONY POINT, NY 10980

PERMIT PLAN
PROVIDED FOR YOUR RECORD

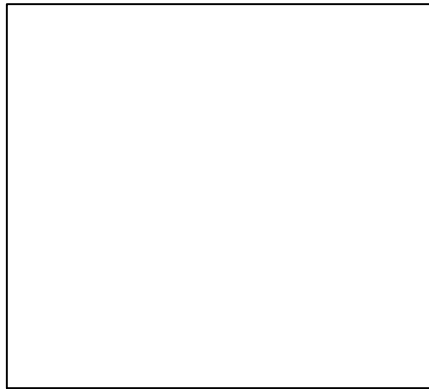
**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
STONY POINT, NY 10981
PROJ. NO. : MNY-2000080.00

Mechanical
& Electrical
Engineer:

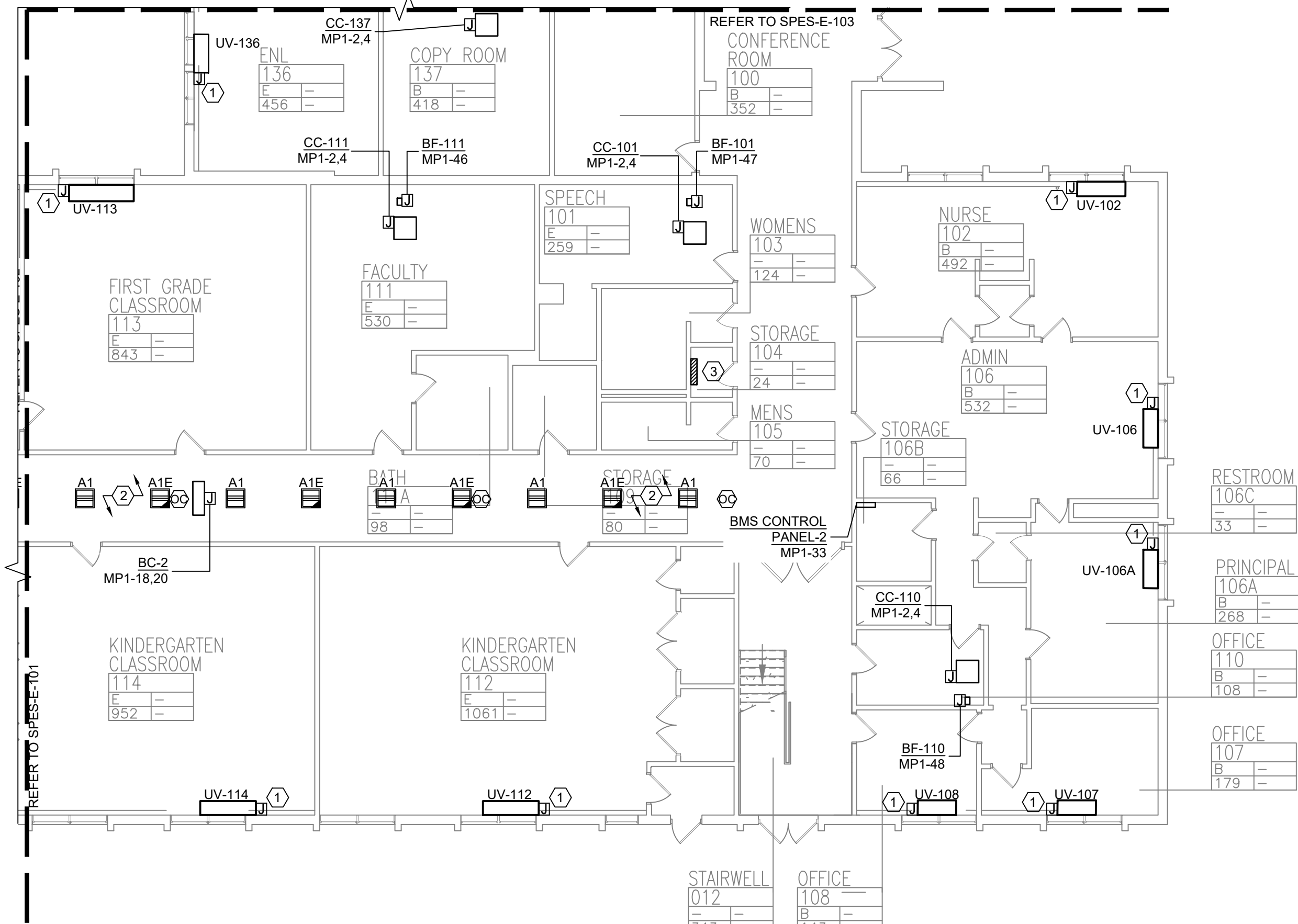
**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
STONY POINT, NY 10981

Structural
Engineer:

Drawn by DK/KD
Checked by SH
Project No. 43040
Scale AS NOTED
Date 03-04-25



No.	Date	Revisions
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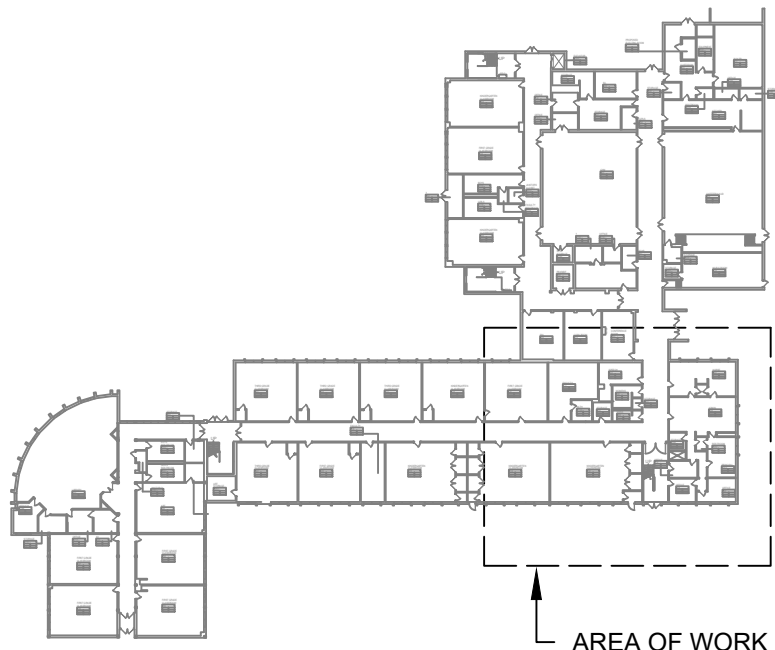
1 FIRST FLOOR PARTIAL PLAN - ELECTRICAL - 2
SCALE: 3/32"=1'-0"

PLAN NOTES:

- REFER TO ADDITIONAL INSTALLATION NOTES ON DRAWING E-001.
- ALL NEW BRANCH CIRCUIT SHALL BE RUN WITH MINIMUM OF 2#12+1#12G IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED. FOR LIGHTING AND POWER BRANCH CIRCUIT, MC CABLE SHALL BE INSTALLED FOR RECESSED INSTALLATION ONLY, EITHER IN NEW WALLS OR ABOVE HUNG CEILING WHERE POSSIBLE. REFER TO PANEL SCHEDULES IN DRAWING SPES-E-501 FOR ALL OTHER FEEDER AND BRANCH CIRCUIT SIZE INFORMATION.
- PROVIDE LABELS ON ALL ELECTRICAL EQUIPMENT INDICATING CIRCUIT ORIGINATION.
- UPDATE ALL EXISTING PANEL DIRECTORIES AFFECTED BY NEW WORK.
- CONTRACTOR SHALL PERFORM AMP PROBE READINGS ON EXISTING SERVICE EQUIPMENT BEFORE AND AFTER WORK TO ENSURE EQUIPMENT WILL NOT BE LOADED BEYOND ITS MAX AMPACITY.
- CONTRACTOR SHALL MAINTAIN CONTINUITY TO ALL EXISTING CIRCUITRY TO REMAIN WHICH ARE AFFECTED BY THE SCOPE OF WORK; CONTRACTOR SHALL FURNISH ALL NECESSARY JUNCTION BOXES, CONDUIT, AND WIRES AS REQUIRED TO KEEP CONTINUITY.
- REFER TO MECHANICAL PLANS FOR EQUIPMENT TO BE SUPPLIED BY OTHER TRADES AND INSTALLED/WIRED UNDER THIS SECTION. COORDINATE LOCATION OF DEVICES WITH OTHER CONTRACTORS.
- PROVIDE FIRESTOPPING FOR ALL PENETRATIONS TO MATCH EXISTING FIRE RATING WHERE APPLICABLE. ALL CORE DRILLS SHALL BE VERIFIED BY BUILDING REPRESENTATIVE PRIOR TO COMMENCING WORK. X-RAY ALL FLOOR SLABS PRIOR TO ROUGH-INS FOR CORE DRILL WORK.
- THE CONTRACTOR SHALL FIELD ROUTE FEEDER FOR NEW POWER PANELS. COORDINATE EXACT ROUTING PATH WITH OWNER. SUBMIT A PROPOSED ROUTING PATH TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO RUNNING ANY CONDUIT OR WIRE ASSOCIATED WITH THIS FEEDER.
- DISCONNECT SWITCH FOR UNIT VENTILATORS IS PROVIDED BY HVAC CONTRACTOR. COORDINATE WITH HVAC CONTRACTOR. COORDINATE WITH HVAC CONTRACTOR FOR DISCONNECT SWITCHES FOR ALL OTHER UNIT THAT ARE BEING PROVIDED BY THE HVAC CONTRACTOR.
- ALL GROUNDING SHALL BE PROVIDED BY THE CONTRACTOR AS PER NEC 2017.
- ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENLARGE AND FUR OUT EXISTING OPENING FOR EXISTING PANELS AND WHERE REQUIRED. ACCOMMODATE THE NEW BACK BOXES AND HOUSING OF THE NEW RECESSED MOUNTED PANELS TO BE INSTALLED. THE ELECTRICAL CONTRACTOR SHALL ALSO ENGAGE THE GC TO RESTORE AND FINISH THE WALLS TO MATCH THE SURROUNDING WALLS OF THE AREA.

KEYED NOTES:

- RECONNECT EXISTING WIRING TO THE NEW UNIT VENTILATORS. EXTEND WIRING & CONDUIT IF NECESSARY.
- PROVIDE NEW 2" X 2" RECESSED LIGHTING FIXTURES AND NEW CEILING MOUNTED OCCUPANCY SENSORS IN THE CORRIDOR. THE NEW LIGHTING FIXTURES SHALL BE RECONNECTED TO THE EXISTING CORRIDOR CIRCUIT. EXTEND WIRING AND CONDUITS AS NECESSARY.
- PROVIDE AND INSTALL A NEW 100A, 120/208V, 3PH, 4W PANEL MP1. PROVIDE NEW WIRING AND CONDUIT. REFER TO SPES-E-501 FOR PANEL SCHEDULE.



KEY PLAN



0 1/2 1
IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

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Drawing Title
**FIRST FLOOR PARTIAL
PLAN - ELECTRICAL - 2**

Drawing No.

SPES-E-102

**UNIVENT REPLACEMENT AT
STONY POINT THIEL'S
WEST HAVESTRAW
ELEMENTARY SCHOOL**

SED# 50-02-01-06-0-014-012
SED# 50-02-01-06-0-025-018
SED# 50-02-01-06-0-024-015

DESIGNED BY: MICHAEL SHILALE ARCHITECTS, LLP
STONY POINT, NY 10980
PROJECT NO. 10980

**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
STONY POINT, NY 10981
PROJ. NO. : MNY-2000086.00

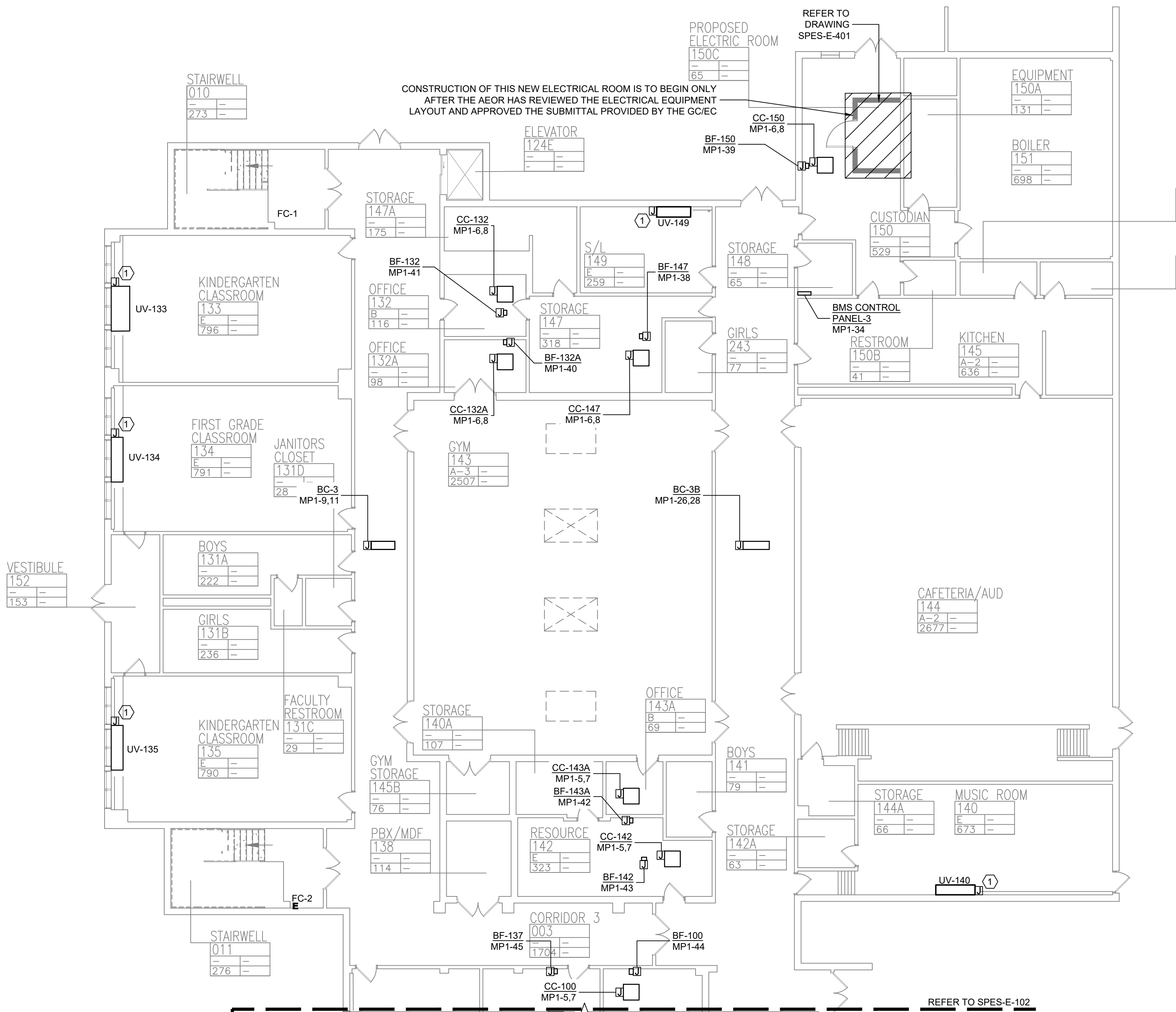
Mechanical
Electrical
Engineer:

**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
STONY POINT, NY 10981

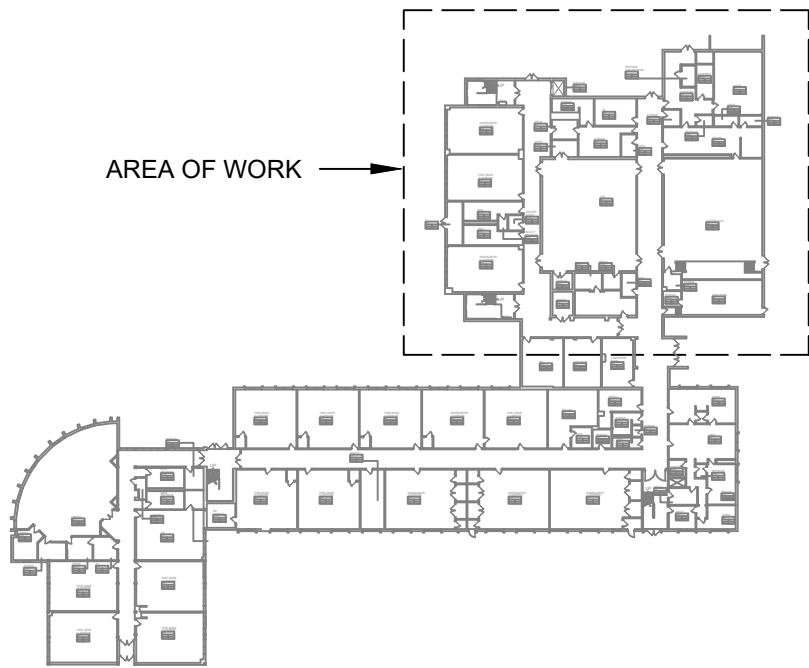
Structural
Engineer:

Drawn by DK/KD
Checked by SH
Project No. 43040
Scale AS NOTED
Date 03-04-25

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



1 FIRST FLOOR PARTIAL PLAN - ELECTRICAL - 3
SCALE: 3/32"=1'-0"



KEY PLAN



- PLAN NOTES:**
- REFER TO ADDITIONAL INSTALLATION NOTES ON DRAWING E-001.
 - ALL NEW BRANCH CIRCUIT SHALL BE RUN WITH MINIMUM OF 2#12+1#12G IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED. FOR LIGHTING AND POWER BRANCH CIRCUIT, MC CABLE SHALL BE INSTALLED FOR RECESSED INSTALLATION ONLY, EITHER IN NEW WALLS OR ABOVE HUNG CEILING WHERE POSSIBLE. REFER TO PANEL SCHEDULES IN DRAWING SPES-E-501 FOR ALL OTHER FEEDER AND BRANCH CIRCUIT SIZE INFORMATION.
 - PROVIDE LABELS ON ALL ELECTRICAL EQUIPMENT INDICATING CIRCUIT ORIGINATION.
 - UPDATE ALL EXISTING PANEL DIRECTORIES AFFECTED BY NEW WORK.
 - CONTRACTOR SHALL PERFORM AMP PROBE READINGS ON EXISTING SERVICE EQUIPMENT BEFORE AND AFTER WORK TO ENSURE EQUIPMENT WILL NOT BE LOADED BEYOND ITS MAX AMPACITY.
 - CONTRACTOR SHALL MAINTAIN CONTINUITY TO ALL EXISTING CIRCUITRY TO REMAIN WHICH ARE AFFECTED BY THE SCOPE OF WORK. CONTRACTOR SHALL FURNISH ALL NECESSARY JUNCTION BOXES, CONDUIT, AND WIRES AS REQUIRED TO KEEP CONTINUITY.
 - REFER TO MECHANICAL PLANS FOR EQUIPMENT TO BE SUPPLIED BY OTHER TRADES AND INSTALLED/WIRED UNDER THIS SECTION. COORDINATE LOCATION OF DEVICES WITH OTHER CONTRACTORS.
 - PROVIDE FIRESTOPPING FOR ALL PENETRATIONS TO MATCH EXISTING FIRE RATING WHERE APPLICABLE. ALL CORE DRILLS SHALL BE VERIFIED BY BUILDING REPRESENTATIVE PRIOR TO COMMENCING WORK. X-RAY ALL FLOOR SLABS PRIOR TO ROUGH-INS FOR CORE DRILL WORK.
 - THE CONTRACTOR SHALL FIELD ROUTE FEEDER FOR NEW POWER PANELS. COORDINATE EXACT ROUTING PATH WITH OWNER. SUBMIT A PROPOSED ROUTING PATH TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO RUNNING ANY CONDUIT OR WIRE ASSOCIATED WITH THIS FEEDER.
 - DISCONNECT SWITCH FOR UNIT VENTILATORS IS PROVIDED BY HVAC CONTRACTOR. COORDINATE WITH HVAC CONTRACTOR. COORDINATE WITH HVAC CONTRACTOR FOR DISCONNECT SWITCHES FOR ALL OTHER UNIT THAT ARE BEING PROVIDED BY THE HVAC CONTRACTOR.
 - ALL GROUNDING SHALL BE PROVIDED BY THE CONTRACTOR AS PER NEC 2017.
 - ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENLARGE AND FUR OUT EXISTING OPENING FOR EXISTING PANELS AND WHERE REQUIRED, ACCOMMODATE THE NEW BACK BOXES AND HOUSING OF THE NEW RECESSED MOUNTED PANELS TO BE INSTALLED. THE ELECTRICAL CONTRACTOR SHALL ALSO ENGAGE THE GC TO RESTORE AND FINISH THE WALLS TO MATCH THE SURROUNDING WALLS OF THE AREA.

- KEYED NOTES:**
- ① RECONNECT EXISTING WIRING TO THE NEW UNIT VENTILATORS. EXTEND WIRING & CONDUIT IF NECESSARY.

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981 PROJ. NO. : NY-2000080.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981
Mechanical Electrical Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT THIEL'S WEST HAVESTRAW ELEMENTARY SCHOOL	SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015
© GREENMAN PEDERSEN, INC STONY POINT, NY 10980	STONY POINT RECYCLED PAPER



MICHAEL SHILAIE ARCHITECTS, LLP
140 Park Avenue New City, NY 10956 Tel 845-708-9200
www.shilale.com

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Drawing Title
FIRST FLOOR PARTIAL PLAN - ELECTRICAL - 3

Drawing No.
SPES-E-103



1. REFER TO ADDITIONAL INSTALLATION NOTES ON DRAWING E-001.
2. ALL NEW BRANCH CIRCUIT SHALL BE RUN WITH MINIMUM OF 2H12-1H12S IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED. FOR LIGHTING AND POWER BRANCH CIRCUIT, MC CABLE SHALL BE INSTALLED FOR RECESSED INSTALLATION ONLY, EITHER IN NEW WALLS OR ABOVE HUNG CEILING WHERE POSSIBLE. REFER TO PANEL SCHEDULES IN DRAWING SPES-E-501 FOR ALL OTHER FEEDER AND BRANCH CIRCUIT SIZE INFORMATION.
3. PROVIDE LABELS ON ALL ELECTRICAL EQUIPMENT INDICATING CIRCUIT ORIGINATION.
4. UPDATE ALL EXISTING PANEL DIRECTORIES AFFECTED BY NEW WORK.
5. CONTRACTOR SHALL PERFORM AMP PROBE READINGS ON EXISTING SERVICE EQUIPMENT BEFORE AND AFTER WORK TO ENSURE EQUIPMENT WILL NOT BE LOADED BEYOND ITS MAX AMPACITY.
6. CONTRACTOR SHALL MAINTAIN CONTINUITY TO ALL EXISTING CIRCUITRY TO REMAIN WHICH ARE AFFECTED BY THE SCOPE OF WORK; CONTRACTOR SHALL FURNISH ALL NECESSARY JUNCTION BOXES, CONDUIT, AND WIRES AS REQUIRED TO KEEP CONTINUITY.
7. REFER TO MECHANICAL PLANS FOR EQUIPMENT TO BE SUPPLIED BY OTHER TRADES AND INSTALLED/WIRED UNDER THIS SECTION. COORDINATE LOCATION OF DEVICES WITH OTHER CONTRACTORS.
8. PROVIDE FIRESTOPPING FOR ALL PENETRATIONS TO MATCH EXISTING FIRE RATING WHERE APPLICABLE. ALL CORE DRILLS SHALL BE VERIFIED BY BUILDING REPRESENTATIVE PRIOR TO COMMENCING WORK. X-RAY ALL FLOOR SLABS PRIOR TO ROUGH-INS FOR CORE DRILL WORK.
9. THE CONTRACTOR SHALL FIELD ROUTE FEEDER FOR NEW POWER PANELS, COORDINATE EXACT ROUTING WITH OWNER. SUBMIT A PROPOSED ROUTING PATH TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO RUNNING ANY CONDUIT OR WIRE ASSOCIATED WITH THIS FEEDER.
10. DISCONNECT SWITCH FOR UNIT VENTILATORS IS PROVIDED BY HVAC CONTRACTOR. COORDINATE WITH HVAC CONTRACTOR. COORDINATE WITH HVAC CONTRACTOR FOR DISCONNECT SWITCHES FOR ALL OTHER UNIT THAT ARE BEING PROVIDED BY THE HVAC CONTRACTOR.
11. ALL GROUNDING SHALL BE PROVIDED BY THE CONTRACTOR AS PER NEC 2017.
12. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENLARGE AND FUR OUT EXISTING OPENING FOR EXISTING PANELS AND WHERE REQUIRED, ACCOMMODATE THE NEW BACK BOXES AND HOUSING OF THE NEW RECESSED MOUNTED PANELS TO BE INSTALLED. THE ELECTRICAL CONTRACTOR SHALL ALSO ENGAGE THE GC TO RESTORE AND FINISH THE WALLS TO MATCH THE SURROUNDING WALLS OF THE AREA.

1. RECONNECT EXISTING WIRING TO THE NEW UNIT VENTILATORS. EXTEND WIRING & CONDUIT IF NECESSARY.



**UNIVENT REPLACEMENT AT
STONY POINT, THIELS,
WEST HAVESTRAW
ELEMENTARY SCHOOL**

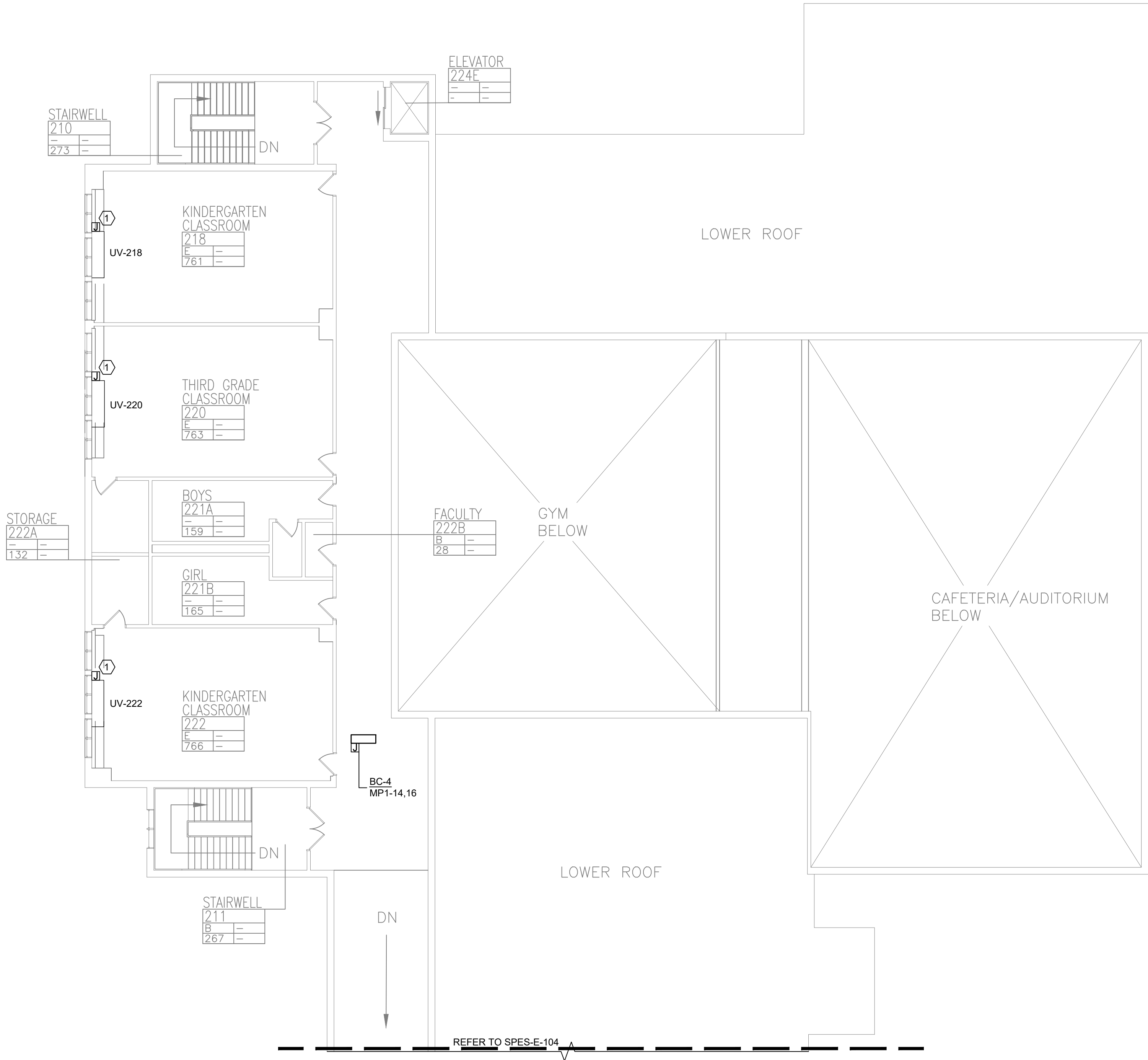
SED# 50-02-01-06-0-014-012
SED# 50-02-01-06-0-025-018
SED# 50-02-01-06-0-024-015

**© GUNNERS DR.
STONY POINT, NY 10980**

**STONY POINT
ROCKLAND COUNTY**



Drawing No. **SPES-E-104**



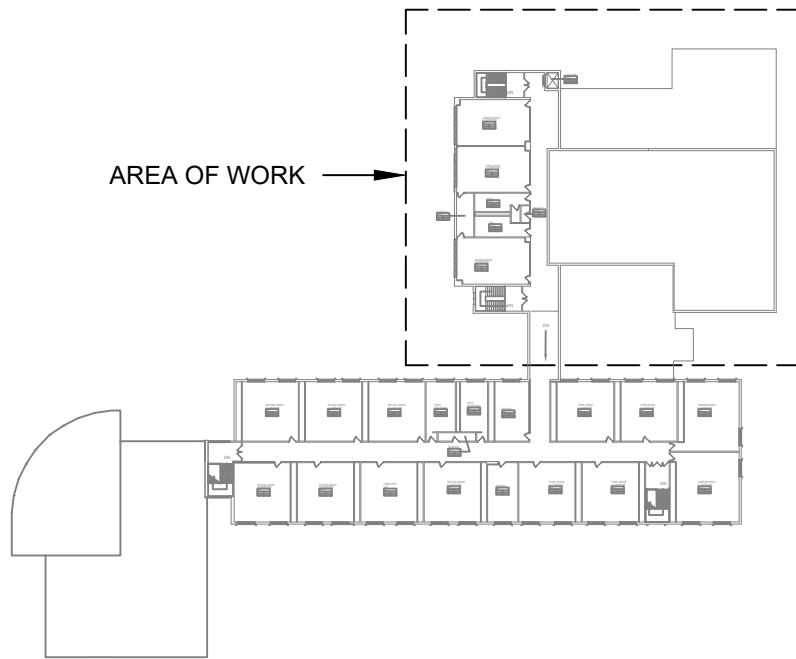
1 SECOND FLOOR PARTIAL PLAN - ELECTRICAL - 2
SCALE: 3/32"=1'-0"

PLAN NOTES:

1. REFER TO ADDITIONAL INSTALLATION NOTES ON DRAWING E-001.
2. ALL NEW BRANCH CIRCUIT SHALL BE RUN WITH MINIMUM OF 2#12+1#12G IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED. FOR LIGHTING AND POWER BRANCH CIRCUIT, MC CABLE SHALL BE INSTALLED FOR RECESSED INSTALLATION ONLY, EITHER IN NEW WALLS OR ABOVE HUNG CEILING WHERE POSSIBLE. REFER TO PANEL SCHEDULES IN DRAWING SPES-E-501 FOR ALL OTHER FEEDER AND BRANCH CIRCUIT SIZE INFORMATION.
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9. THE CONTRACTOR SHALL FIELD ROUTE FEEDER FOR NEW POWER PANELS. COORDINATE EXACT ROUTING PATH WITH OWNER. SUBMIT A PROPOSED ROUTING PATH TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO RUNNING ANY CONDUIT OR WIRE ASSOCIATED WITH THIS FEEDER.
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KEYED NOTES:

- ① RECONNECT EXISTING WIRING TO THE NEW UNIT VENTILATORS. EXTEND WIRING & CONDUIT IF NECESSARY.

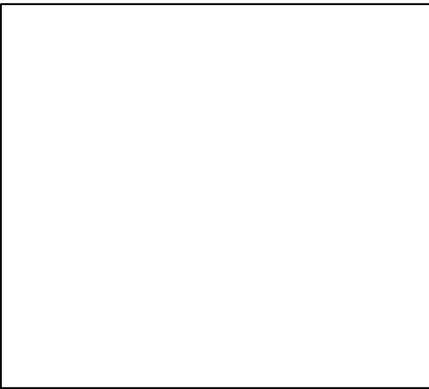


KEY PLAN



0 1/2 1
IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

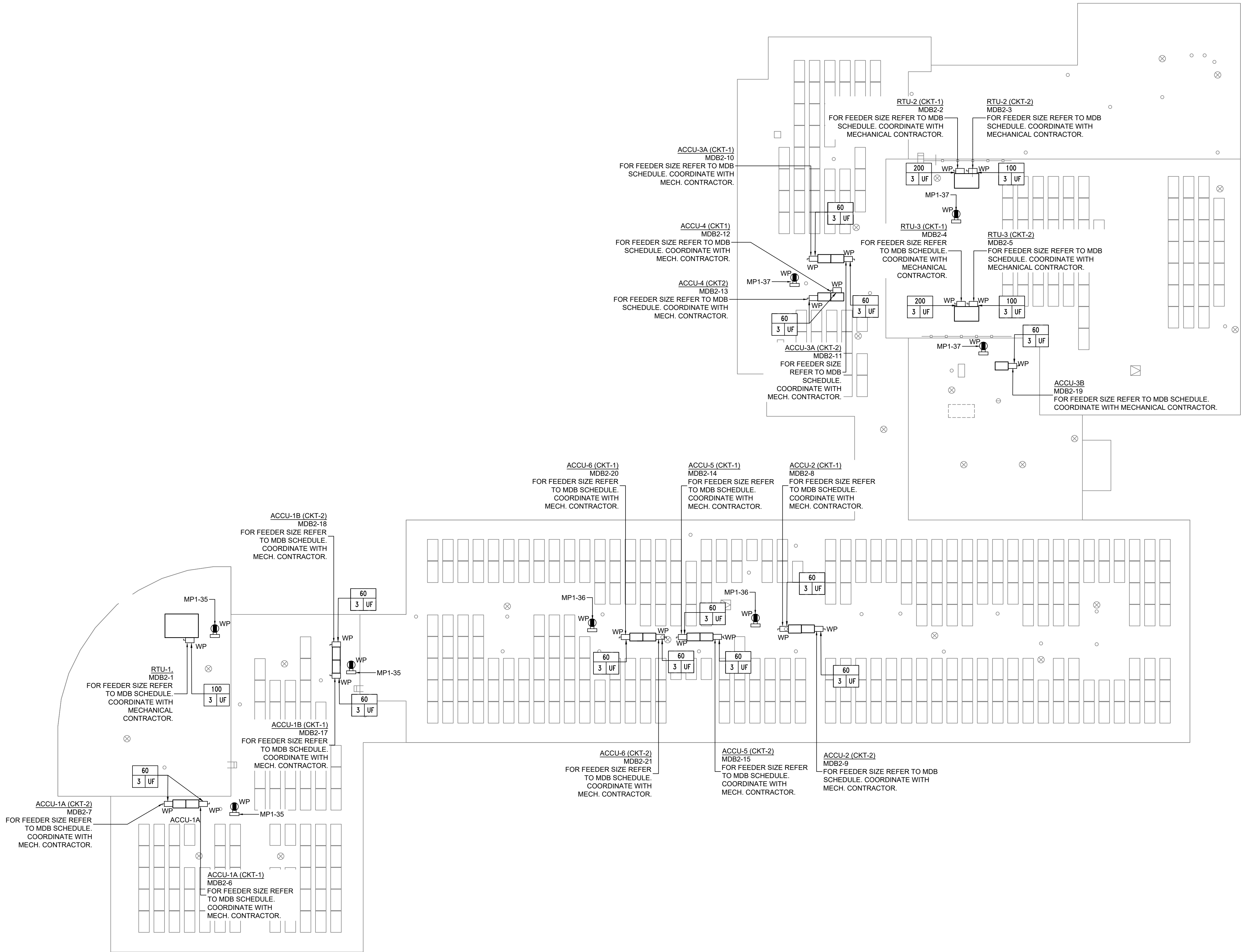
GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981 PROJ. NO. : MNY-5000086.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981
Mechanical Electrical Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELLS, WEST HAVESTRAW ELEMENTARY SCHOOL SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015 DESIGNED BY: MICHAEL SHILALE ARCHITECTS, LLP STONY POINT, NY 10980	SEAL AND SIGNATURE
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Drawing Title
SECOND FLOOR PARTIAL PLAN - ELECTRICAL - 2

Drawing No.
SPES-E-105

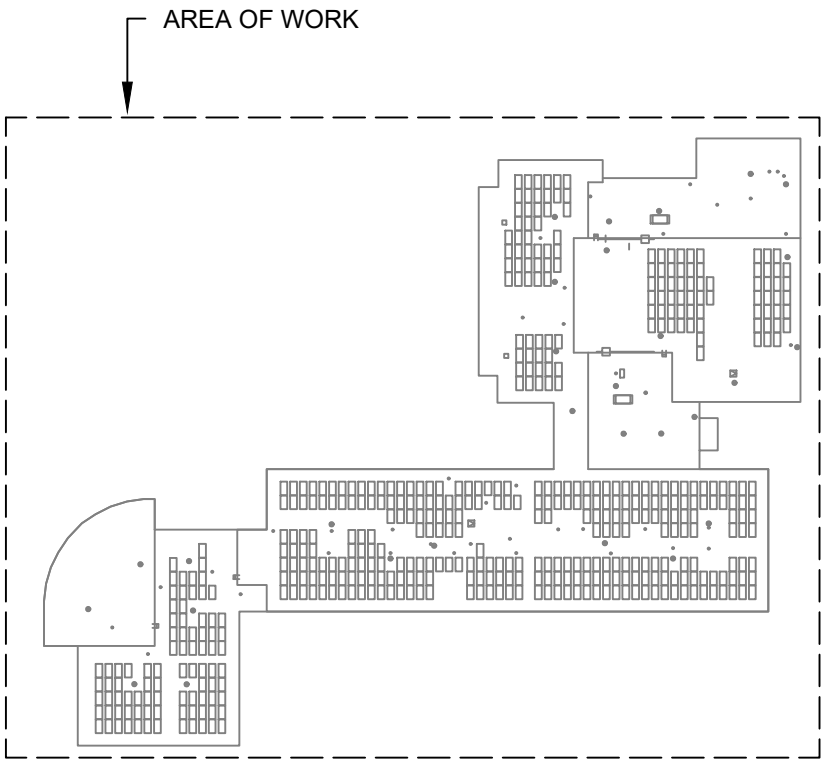


PLAN NOTES:

1. REFER TO ADDITIONAL INSTALLATION NOTES ON DRAWING E-001.
2. ALL NEW BRANCH CIRCUIT SHALL BE RUN WITH MINIMUM OF 2#12+1#12G IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED. FOR LIGHTING AND POWER BRANCH CIRCUIT, MC CABLE SHALL BE INSTALLED FOR RECESSED INSTALLATION ONLY, EITHER IN NEW WALLS OR ABOVE HUNG CEILING WHERE POSSIBLE. REFER TO PANEL SCHEDULES IN DRAWING SPES-E-501 FOR ALL OTHER FEEDER AND BRANCH CIRCUIT SIZE INFORMATION.
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KEYED NOTES:

1. RECONNECT EXISTING WIRING TO THE NEW UNIT VENTILATORS. EXTEND WIRING & CONDUIT IF NECESSARY.



KEY PLAN

1 ROOF PLAN - ELECTRICAL
SCALE: 1/16"=1'-0"

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

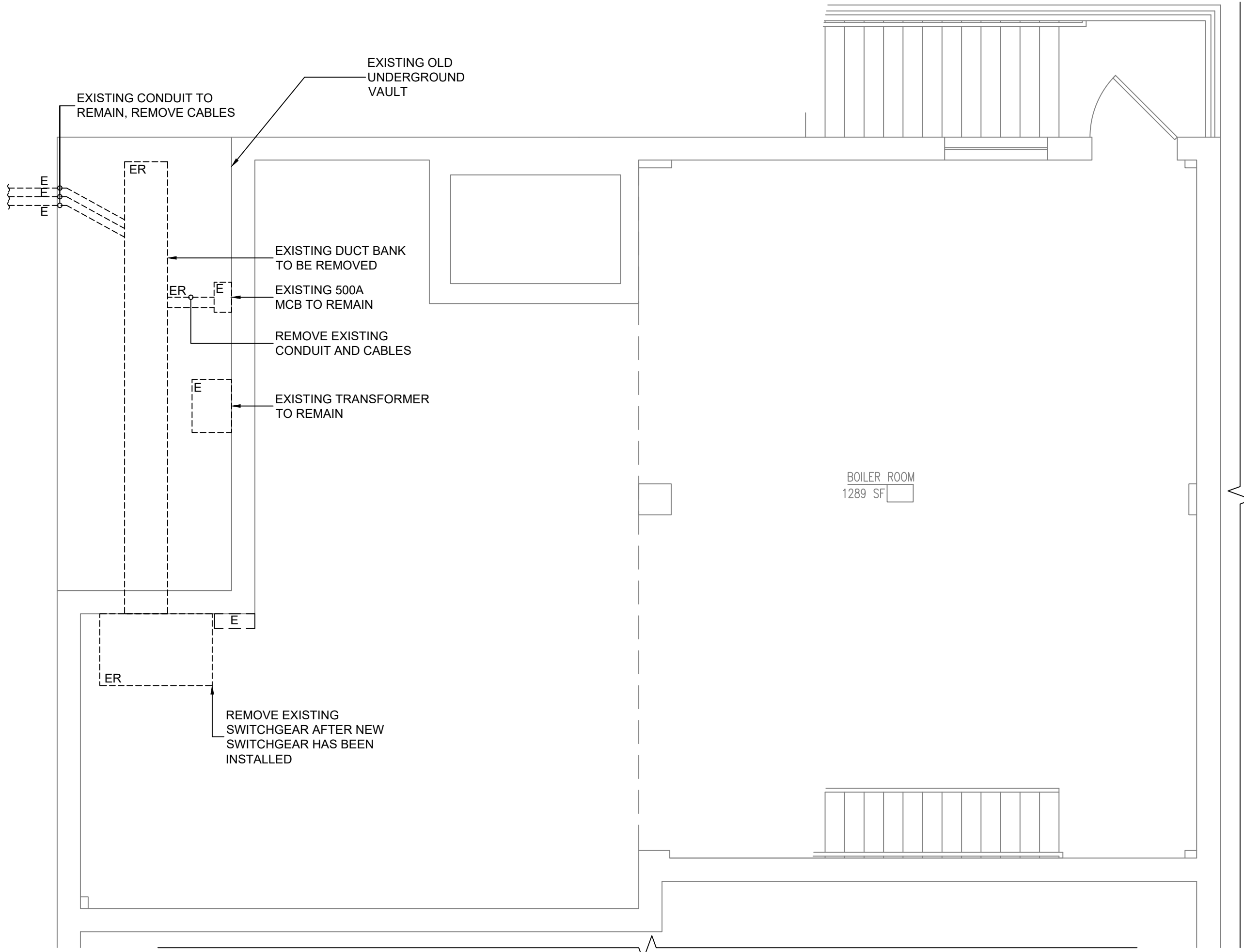
Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 STONY POINT, NY 10980 PROJ. NO. : NY-2000080.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 STONY POINT, NY 10980
Mechanical Electrical Engineer:	Structural Engineer:

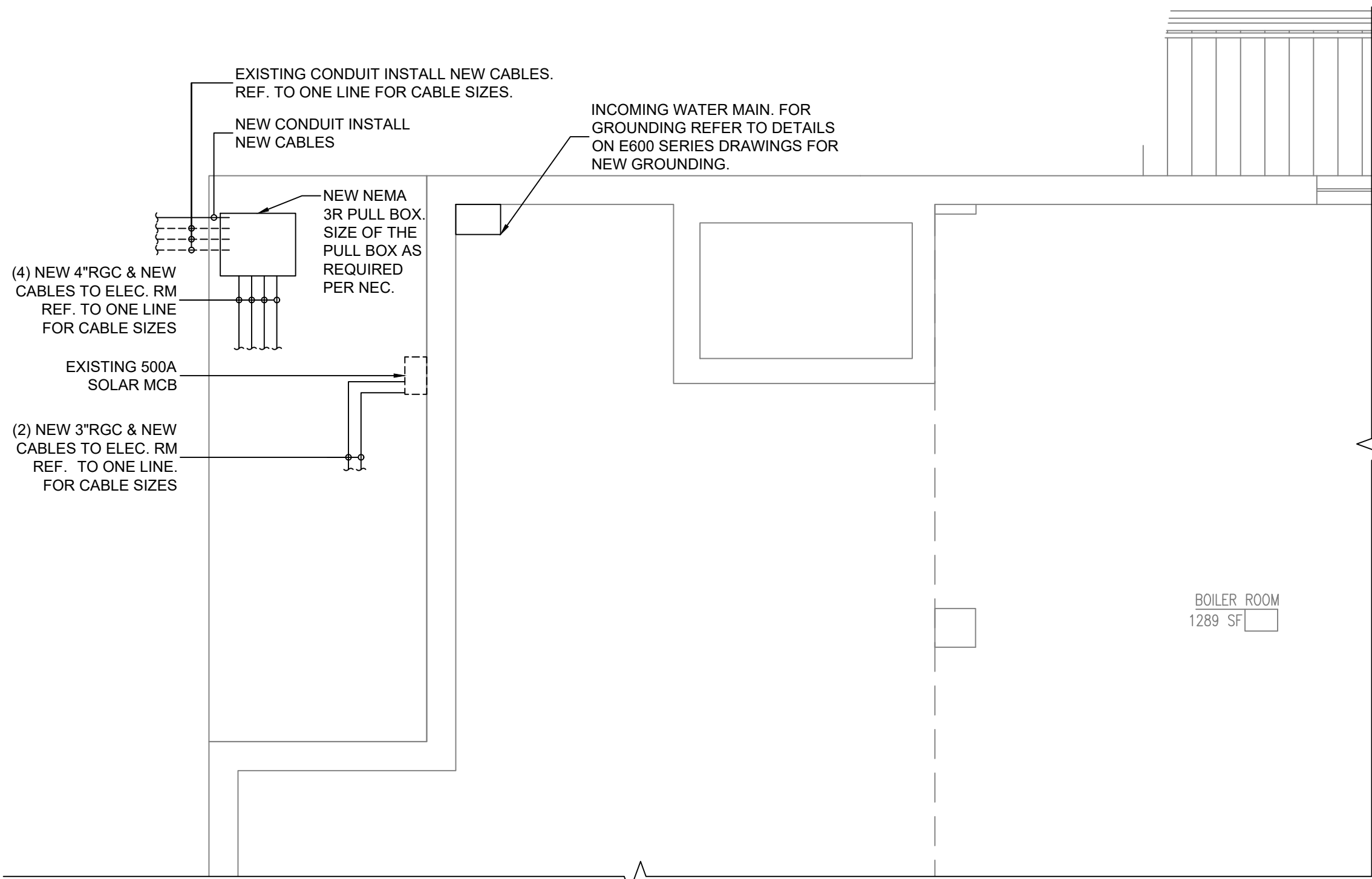
UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVESTRAW ELEMENTARY SCHOOL SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015 CONSULTING ENGINEER STONY POINT, NY 10980

MSA MICHAEL SHILALE ARCHITECTS, LLP 140 Park Avenue New City, NY 10956 Tel 845-708-9200 www.shilale.com

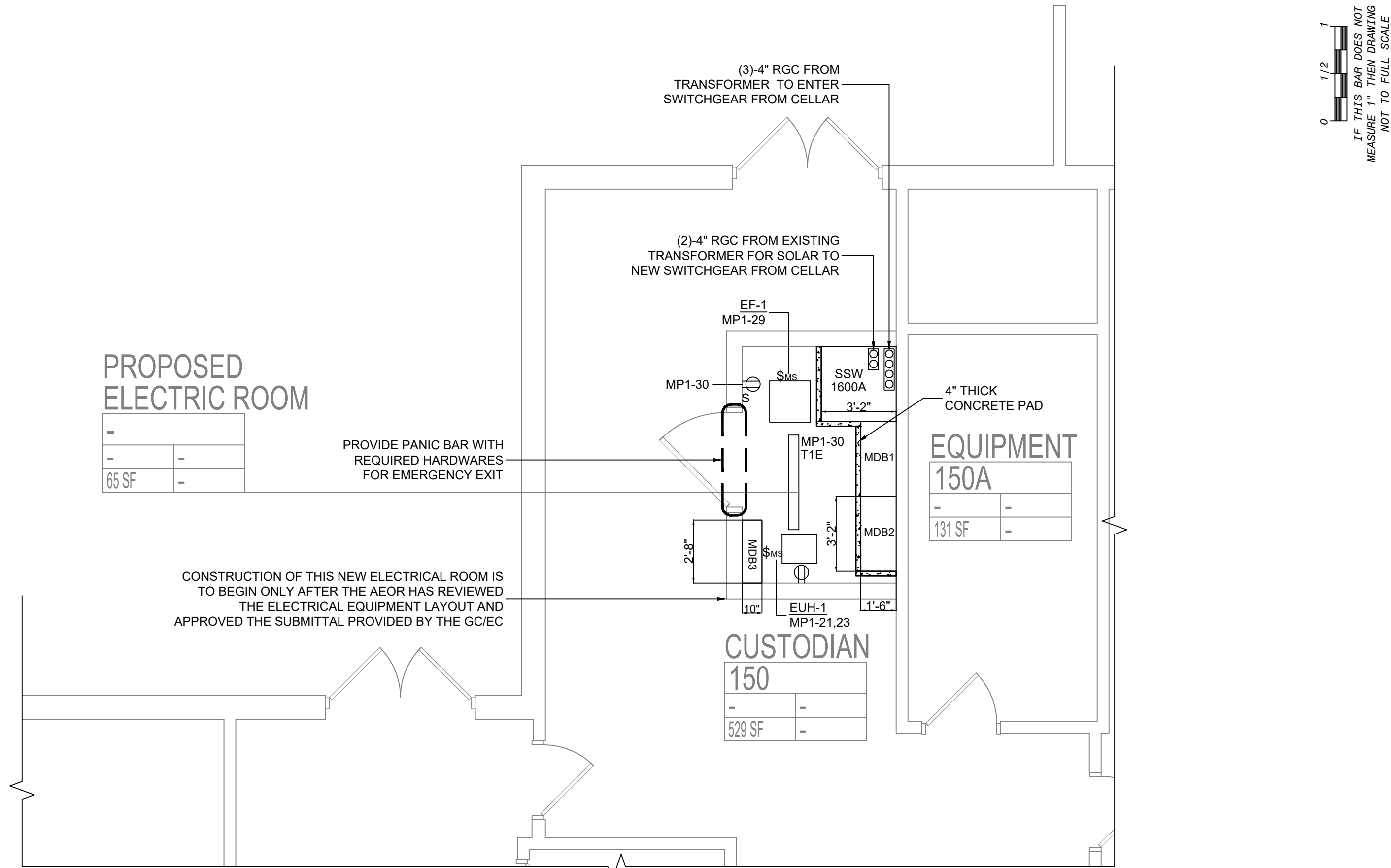
Drawing Title ROOF PLAN - ELECTRICAL	Drawing No. SPES-E-106
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1 EXISTING BASEMENT ELECTRICAL EQUIPMENT REMOVAL PLAN
SCALE: 1/4"=1'-0"



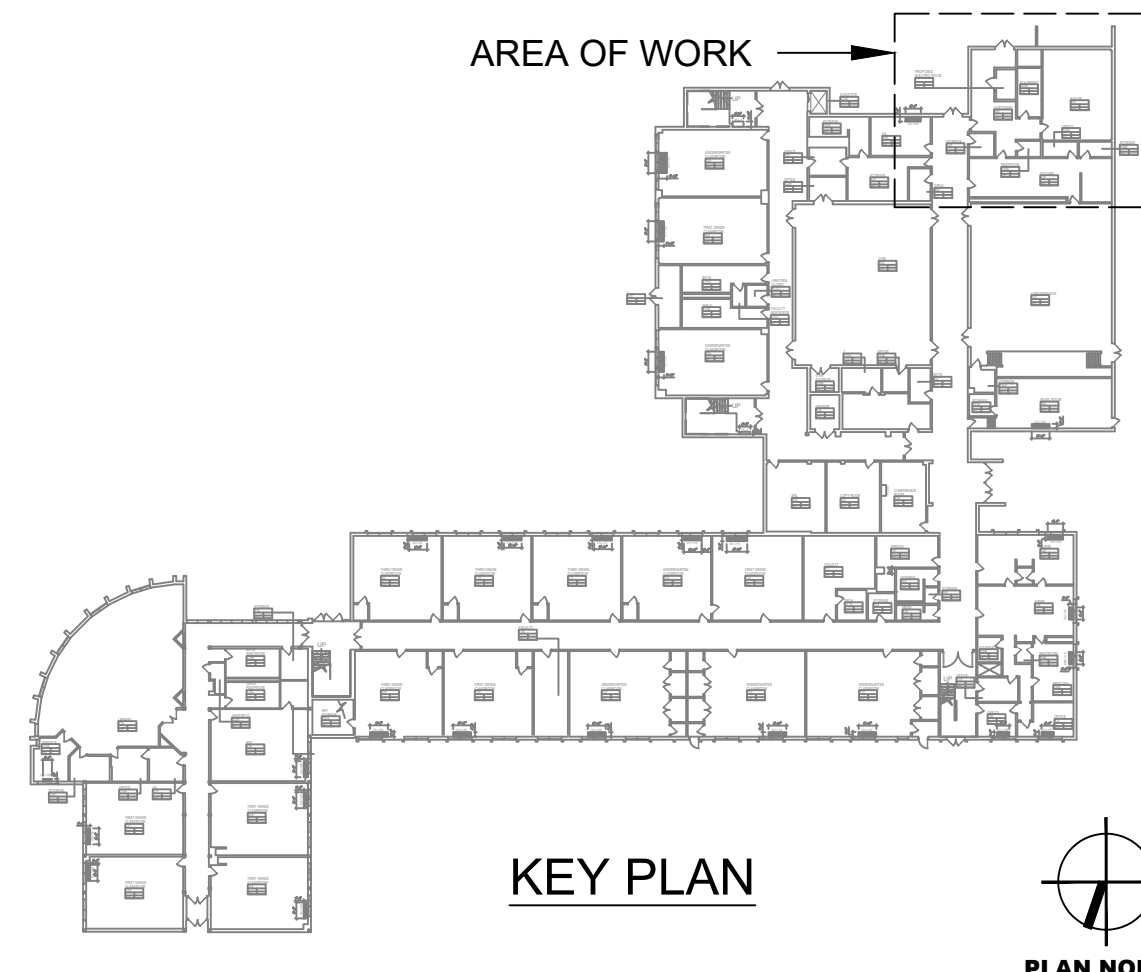
3 NEW ELECTRICAL BASEMENT PART PLAN
SCALE: 1/4"=1'-0"



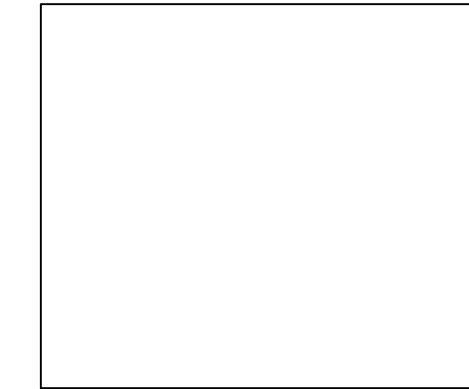
2 ELECTRICAL PROPOSED ELECTRICAL ROOM
SCALE: 1/4"=1'-0"

PLAN NOTES:

1. THE CONTRACTOR IS TO COORDINATE ALL SHUTDOWNS AND DISRUPTIONS TO NORMAL SERVICES WITH SBU, ALL OTHER TRADES AND THE FACILITY.
2. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY UNAUTHORIZED DISRUPTION AND POWER OUTAGES.
3. MAINTAIN CIRCUIT CONTINUITY TO AREAS NOT AFFECTED BY CONSTRUCTION WORK.
4. CONTRACTOR IS TO TRACE AND PROTECT ALL FEEDER & BRANCH CIRCUITS FOR ALL AREAS OF THE SITE AND ALL OTHER ELECTRICAL EQUIPMENT DURING DEMOLITION/CONSTRUCTION. ELECTRICAL CONTRACTOR IS REQUIRED TO COORDINATE THIS REQUIREMENT WITH THE GENERAL CONTRACTOR AND ALL OTHER TRADES.
5. ROUTING OF ELECTRICAL CONDUITS IF SHOWN IN THE DRAWINGS ARE TENTATIVE. THE CONTRACTOR IS RESPONSIBLE TO FINALIZE THE ROUTING OF ALL ELECTRICAL CONDUITS AT FIELD IN COORDINATION WITH ALL OTHER TRADES, EXISTING AND NEW BUILDING ELEMENTS, STRUCTURES, PIPES, EQUIPMENT, LANDSCAPING ETC., FOR CODE COMPLIANT INSTALLATION.
6. ALL ELECTRIC SERVICES AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS & THE NATIONAL ELECTRIC CODE (NEC).
7. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE CODE COMPLIANT GROUNDING OF THE CIRCUITS, EQUIPMENT AND CONDUITS AS PER NEC AND SPECIFICATION.
8. ALL UNDERGROUND CONDUITS SHALL BE RGC AND RUN 24" BELOW GRADE UNLESS OTHERWISE INDICATED.
9. ALL SPARE CONDUITS SHALL BE INSTALLED WITH DRAG LINES.
10. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR RESURFACING WORK.
11. THE CONTRACTOR SHALL PROVIDE MAGNETIC WARNING TAPE FOR EACH UNDERGROUND DUCT BANKS.
12. THE CONTRACTOR IS REQUIRED TO USE POLYWATER AFT-AEROSOL FOAM SEALANT OR EQUIVALENT TO SEAL BOTH ENDS OF SERVICE CONDUITS TO FILL THE GAP BETWEEN CABLES AND CONDUIT IN ORDER TO PREVENT ANY WATER PENETRATION THROUGH CONDUITS TO THE ELECTRICAL EQUIPMENT INSIDE THE BUILDING. THE CONDUIT OPENINGS (GAP BETWEEN CABLES AND CONDUIT) SHALL BE SEALED DEEP ENOUGH TO CONFIRM THAT NO WATER INFILTRATION IS TAKING PLACE.



No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



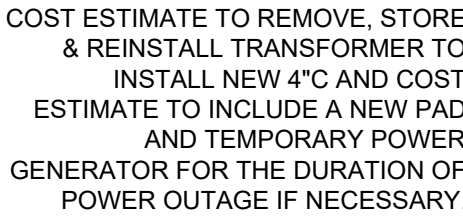
Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981 PROJ. No. : MNY-2000086.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981
Mechanical Electrical Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVESTRAW ELEMENTARY SCHOOL SD# 50-02-01-06-0-014-012 SD# 50-02-01-06-0-025-018 SD# 50-02-01-06-0-024-015	STONY POINT, NY 10980 STONY POINT, NY 10980
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Copyright, Michael Shilale Architects, All Rights Reserved. Drawing Title PART PLANS - ELECTRICAL	Drawing No. SPES-E-401
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SCALE: 1"=30'-0"

1. THE CONTRACTOR IS TO COORDINATE ALL SHUTDOWNS AND DISRUPTIONS TO NORMAL SERVICES WITH SBU, ALL OTHER TRADES AND THE FACILITY.
2. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY UNAUTHORIZED DISRUPTION AND POWER OUTAGES.
3. MAINTAIN CIRCUIT CONTINUITY TO AREAS NOT AFFECTED BY CONSTRUCTION WORK.
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PLAN

IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

SITE PLAN - ELECTRICAL

SPES-E-402

MICHAEL SHILALE ARCHITECTS, L.L.P.
140 Park Avenue New City, NY 10956 Tel 845-708-9200

SED# 50-02-01-06-0-014-012
SED# 50-02-01-06-0-025-018
SED# 50-02-01-06-0-024-015

7 GURNEE DR,
STONY POINT, NY 10080

**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
SUITE 202
SUFFERN, NY 10901
PROJ. NO. : MNY-2300088.00

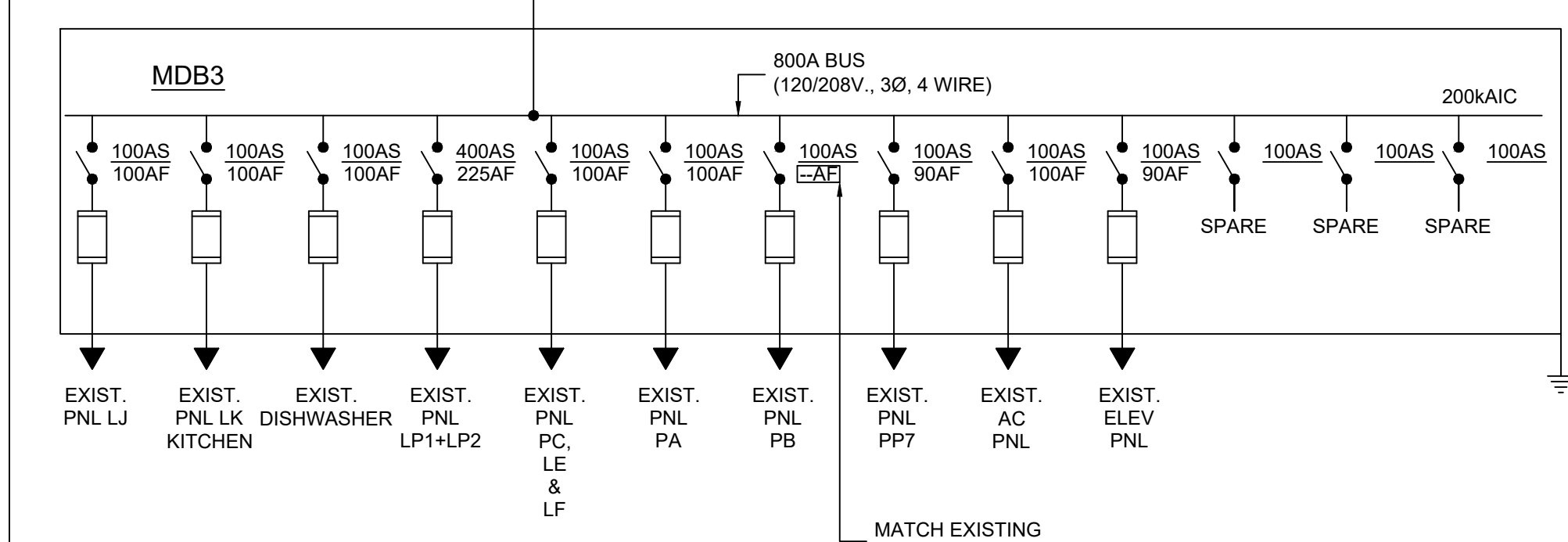
**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
SUITE 202
SUFFERN, NY 10901

Checked by

Project No.

Scale

Date 07-0



LIGHTING FIXTURE SCHEDULE					
MARK	FIXTURE WATTAGE	LOCATION	MANUFACTURER CATALOG NUMBER	VOLTAGE	REMARKS
A1	34W	CORRIDOR	SIGNIFY 2CAX-G-38L-835-2-DS-UNV-DIM	120V	2' X 2' RECESSED LED SOFT LIGHT
A1E	34W	CORRIDOR	SIGNIFY 2CAX-G-38L-835-2-DS-UNV-DIM-BSL10LST	120V	2' X 2' RECESSED LED SOFT LIGHT WITH INTEGRAL 90 MIN. BATTERY BACK UP
T1E	32W	ELECTRICAL ROOM	ORACLE 4-OIW-LED-4000L-DIM10-MVOLT-35K-85-0-EMG-LED-10W	120V	4' INDUSTRIAL LED WRAP AROUND WITH INTEGRAL 90 MIN. BATTERY BACK UP

<u>ABBREVIATIONS</u>	
MDB	MAIN DISTRIBUTION BOARD
AS	AMPERE SWITCH
AF	AMPERE FUSE
SW	SWITCH
EX.	EXISTING
FOR ALL OTHER ABBREVIATIONS REFER DWG E001	

DIST. BOARD: <u>MDB3</u>		VOLT: <u>120/208v, 3Ø, 4w.</u>			LOC. <u>ELEC. RM.</u>	
MOUNTING: <u>FLOOR</u>		AMP	RATING	<u>800A</u>	MAIN: <u>M.L.Q</u>	
DESIGN AMP: <u>430</u>		AIC	RATING	<u>200KA</u>	TYPE: <u>NEW</u>	
*INDICATES ESTIMATED CONNECTED LOAD OF CKT						
CIRCUIT No.	LOAD SVD	POLES	SWITCH	FUSE	LOAD	FEEDERS
1	EXIST PNL LJ*	3	100	100	40	MATCH EXIST. & EXTEND FEEDER FROM EXIST. SWITCHGEAR IN BASEMENT TO THIS CKT. (NOTE 2)
2	EXIST PNL LK*	3	100	100	10	MATCH EXIST. & EXTEND FEEDER FROM EXIST. SWITCHGEAR IN BASEMENT TO THIS CKT. (NOTE 2)
3	EXIST DISHWASH*	3	100	100	40	MATCH EXIST. & EXTEND FEEDER FROM EXIST. SWITCHGEAR IN BASEMENT TO THIS CKT. (NOTE 2)
4	EXIST PNL LP1+LP2*	3	400	225	100	MATCH EXIST. & EXTEND FEEDER FROM EXIST. SWITCHGEAR IN BASEMENT TO THIS CKT. (NOTE 1)
5	EXIST PNL* PC, LE, LF	3	100	100	40	MATCH EXIST. & EXTEND FEEDER FROM EXIST. SWITCHGEAR IN BASEMENT TO THIS CKT. (NOTE 2)
6	EXIST PNL PA*	3	100	100	30	MATCH EXIST. & EXTEND FEEDER FROM EXIST. SWITCHGEAR IN BASEMENT TO THIS CKT. (NOTE 2)
7	EXIST PNL PB*	3	100	MATCH EXIST BREAKER	40	MATCH EXIST. & EXTEND FEEDER FROM EXIST. SWITCHGEAR IN BASEMENT TO THIS CKT. (NOTE 2)
8	EXIST PNL PP*	3	100	90	40	MATCH EXIST. & EXTEND FEEDER FROM EXIST. SWITCHGEAR IN BASEMENT TO THIS CKT. (NOTE 2)
9	EXIST AC PNL*	3	100	100	50	MATCH EXIST. & EXTEND FEEDER FROM EXIST. SWITCHGEAR IN BASEMENT TO THIS CKT. (NOTE 2)
10	EXIST ELEV PNL*	3	100	90	40	MATCH EXIST. & EXTEND FEEDER FROM EXIST. SWITCHGEAR IN BASEMENT TO THIS CKT. (NOTE 2)
11	SPARE	3	100			
12	SPARE	3	100			
13	SPARE	3	100			
14	SPARE	3	100			

DIST. BOARD: <u>MDB2</u>		VOLT: <u>120/208y, 3Ø, 4W, LOC. NEW ELEC. RM.</u>				
MOUNTING: <u>FLOOR</u>		AMP	RATING <u>1600A</u>	MAIN: <u>COUPLED WITH</u>		
DESIGN AMP: <u>1059</u>		AIC	RATING <u>200KA</u>	TYPE: <u>NEW</u>		
		<u>MDB1</u>				
CIRCUIT No.	LOAD SVD	POLES	SWITCH	FUSE	LOAD	FEEDERS
1	RTU-1	3	100	90	74	3#3/0+1#6G IN 2"C
2	RTU-2 CKT-1	3	200	125	110	3#1+1#6G IN 1 1/2"C
3	RTU-2 CKT-2	3	100	70	42	5#4+1#8G IN 1 1/4"C
4	RTU-3 CKT-1	3	200	110	110	3#1/0+1#6G IN 2"C
5	RTU-3 CKT-2	3	100	70	42	3#4+1#8G IN 1 1/4"C
6	ACCU-1A CKT-1	3	60	60	49	3#3/0+1#6G IN 2"C
7	ACCU-1A CKT-2	3	60	60	41	3#2/0+1#6G IN 2"C
8	ACCU-2 CKT-1	3	60	60	49	3#1+1#6G IN 1 1/2"C
9	ACCU-2 CKT-2	3	60	60	49	3#1+1#6G IN 1 1/2"C
10	ACCU-3A CKT-1	3	60	60	49	3#1+1#6G IN 1 1/2"C
11	ACCU-3A CKT-2	3	60	45	44	3#2+1#8G IN 1 1/2"C
12	ACCU-4 CKT-1	3	60	45	44	3#2+1#8G IN 1 1/2"C
13	ACCU-4 CKT-2	3	60	45	31	3#2+1#8G IN 1 1/2"C
14	ACCU-5 CKT-1	3	60	45	31	3#2+1#8G IN 1 1/2"C
15	ACCU-5 CKT-2	3	60	45	31	3#2+1#8G IN 1 1/2"C
16	MP1	3	100	100	70	4#1/0+1#6G IN 2"C
17	ACCU-1B CKT-1	3	60	60	49	3#2/0+1#6G IN 2"C
18	ACCU-1B CKT-2	3	60	60	41	3#2/0+1#6G IN 2"C
19	ACCU-3B	3	60	45	31	5#4+1#8G IN 1 1/4"C
20	ACCU-6 CKT-1	3	60	60	41	3#1/0+1#6G IN 2"C
21	ACCU-6 CKT-2	3	60	45	31	3#1+1#6G IN 1 1/2"C
22	SPARE	3	60			

Drawing Title ELECTRICAL ONE LINE DIAGRAM AND PANEL SCHEDULES	Drawing No. SPES-E-501
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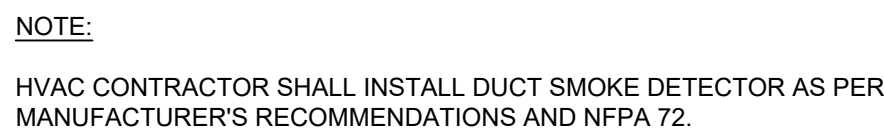
3. ALL WIRING, POWER, CONDUCTORS, CONDUITS ETC. SHALL MEET NYS ELECTRICAL CODE ARTICLE 760.
2. ALL WORK SHALL BE IN ACCORDANCE WITH THE NYS BUILDING CODE AND NFPA 72.
3. ALL FIRE ALARM CIRCUITS SHALL BE SIZED TO INCLUDE A MINIMUM OF 20% SPARE CAPACITY.
4. ALL FIRE ALARM EQUIPMENT SHALL BE INSTALLED WITH AESTHETICS IN MIND, AS FOLLOWS: PAINT ALL NEW CONDUIT AND BOXES TO MATCH EXISTING CONDITIONS, PATCH AND PAINT LOCATIONS OF REMOVED BOXES TO MATCH EXISTING.
5. ALL FIRE ALARM CABINETS SHALL BE CLEARLY LABELED WITH A LAMINATE ENGRAVED LABEL.
6. ALL FIRE ALARM WIRE SHALL BE CLEARLY LABELED IN JUNCTION BOXES AND CABINETS. ALL TERMINALS SHALL BE NUMBERED AND LABELED. ALL CONNECTIONS SHALL BE EITHER SOLDERED, APPROVED TERMINAL STRIPS OR SCOTCH LOCKS.
7. ALL FIRE ALARM CONDUCTORS SHALL BE PROTECTED BY EITHER BUILDING CONSTRUCTION OR CONDUIT. LOADING DOCKS, GARAGES, SUPPRESSION AND EXTINGUISHING SYSTEM WIRING, MECHANICAL AND ELECTRICAL ROOMS AND OTHER LOCATIONS SUBJECT TO MECHANICAL DAMAGE SHALL BE IN FULL RIGID CONDUIT. IN ALL AREAS, WIRING MUST MEET NEC ARTICLE 760.
8. FIRE ALARM CABLES SHALL NOT BE MIXED WITH NON FIRE ALARM CABLING. LOW VOLTAGE FIRE ALARM CABLING SHALL NOT BE MIXED OR WIRED NEAR ANY AC CIRCUIT.
9. ALL NOTIFICATION CIRCUITS SHALL BE A MINIMUM OF 12 AWG AND ALL OTHER LOW VOLTAGE FIRE ALARM CIRCUITS SHALL BE 14 AWG MINIMUM.
10. ALL WIRING SHALL BE INSPECTED TO ASSURE THERE ARE NO OPENS, SHORTS OR EARTH GROUNDS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY AND ALL ABANDONED FIRE ALARM CABINETS, DEVICES, AND WIRE. PAINT, PATCH AND CLEANUP SHALL ALSO BE INCLUDED.
12. FIRE ALARM PANEL SHALL PROVIDE CONTINUOUSLY SUPERVISED MONITORING OF ALL SYSTEMS FOR OPENS, SHORTS AND GROUNDS.
13. UPON ENTERING THE PANEL ALARM MODE, THE ALARM INDICATING DEVICE SHALL BE ACTIVATED, AND HVAC LOADS SHALL SHUT DOWN. THE DIGITAL COMMUNICATOR SHALL NOTIFY THE CENTRAL RECEIVING STATION.
14. CONTRACTOR SHALL PROVIDE ALL NECESSARY ADDITIONAL RELAY DEVICES OR POWER TRANSFORMERS FOR PROPER OPERATION OF ALL INTERLOCKED DEVICES WITH FIRE ALARM PANEL.
15. BATTERY BACKUP SHALL PROVIDE A MINIMUM OF 24 HRS OPERATION WITH A 10 MINUTE ALARM AT THE END OF 24 HRS.
16. ALL WIRING SHALL BE IN ACCORDANCE WITH NFPA CODES 70, 72, 72E, AS WELL AS LOCAL AND STATE CODE REQUIREMENTS.
17. FIRE ALARM SYSTEM SHALL BE TESTED IN ACCORDANCE WITH NFPA CODES 70, 72, 72E, AS WELL AS ALL LOCAL AND STATE CODE REQUIREMENTS.
18. ENTIRE FIRE DETECTION AND ALARM SYSTEM SHALL BE FURNISHED AND INSTALLED BY A N.Y. STATE LICENSED ALARM CONTRACTOR.
19. CONTRACTOR SHALL PROVIDE ALL ADDITIONAL APPURTENANCES AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM. MODEL NUMBERS GIVEN MAY NOT INCLUDE ALL SPECIFIC REQUIRED ACCESSORIES FOR COMPLETE INSTALLATION.
20. GENERAL LOCATIONS ARE SHOWN ON PLANS. DETECTORS SHALL NOT BE MOUNTED FURTHER THAN 30' APART AND THOSE ALONG WALLS SHALL NOT BE FURTHER THAN 15'-16" FROM THE WALL.
21. SMOKE DETECTORS MUST BE MOUNTED AT LEAST 3 FEET AWAY FROM ANY AIR REGISTER.
22. ALL CEILING MOUNT DEVICES MUST BE SECURELY FASTENED TO BUILDING CONSTRUCTION.
23. DEVICE LOCATIONS MUST BE READILY ACCESSIBLE TO ALLOW FOR MAINTENANCE AND REPAIR.
24. DUCT MOUNTED SMOKE DETECTORS SHALL BE MOUNTED ON THE DUCTWORK IN STRICT ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS. DETECTORS SHALL BE PROVIDED WITH A REMOTE LED.
25. ALL AUXILIARY RELAYS FOR FAN SHUTDOWN, ETC SHALL BE WIRED A MAXIMUM OF 3 FT FROM THE CONTROLLED DEVICE. THE AUXILIARY RELAY SHALL FUNCTION WITHIN THE REQUIRED VOLTAGE AND CURRENT OF THE CONTROLLED DEVICE. SLAVE OR INTERPOSING RELAYS SHALL BE INCLUDED AND POWERED BY THE FIRE ALARM CONTROL PANEL IN A FAIL-SAFE (FIRE FUNCTION) POSITION. POWER TO THE INTERPOSING RELAY SHALL BE MONITORED BY THE FIRE ALARM SYSTEM.
26. RISER DIAGRAM ON THIS DRAWING IS FOR DESIGN PURPOSE ONLY. FIRE ALARM CONTRACTOR SHALL PROVIDE A COMPLETE RISER DIAGRAM WITH ACTUAL FIELD WIRING REQUIRED.
27. THE CONTRACTOR IS TO RE-PROGRAM THE EXISTING FIRE ALARM SYSTEM TO MATCH THE EXISTING SEQUENCE OF OPERATION.

ABBREVIATION:	DESCRIPTION:
A	AMPERE
AC	ALTERNATING CURRENT
ACS	ADMINISTRATIVE CONTROL STATION
ADA	AMERICANS WITH DISABILITIES ACT
ADF	ABOVE FINISHED FLOOR
ARCH	ARCHITECTURAL
ATS	AUTOMATIC TRANSFER SWITCH
A/C	AIR CONDITIONING
C	CONDUIT
CAB	CABINET
CLG	CEILING
CB	CIRCUIT BREAKER
CKT(S)	CIRCUIT(S)
COL	COLUMN
DWG	DRAWING
EC	EMPTY CONDUIT
ELEC	ELECTRIC
EMR	ELEVATOR MECHANICAL ROOM
EMT	ELECTRIC METALLIC TUBING
EXH	EXHAUST
EXIST	EXISTING
FATB	FIRE ALARM TERMINAL BOX
FL	FLOOR
G	GUARD
GND	GROUND
GFI	GROUND FAULT INTERRUPTER
GLV	GALVANIZED RIGID CONDUIT
IG	ISOLATED GROUND
JB	JUNCTION BOX
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWH	KILOWATT HOUR
LP	120/208V PANEL
LS	LOUDSPEAKER
LTG	LIGHTING
MATV	MASTER TELEVISION
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MER	MECHANICAL EQUIPMENT ROOM
MIC	MICROPHONE
MTD	MOUNTED
N	NEUTRAL
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
O & R	ORANGE AND ROCKLAND
P	POLE(S)
PB	PULL BOX
PNL	PANEL
PP	277/480V PANEL
RC	REMOTE CONTROL
SP	SPARE
SSB	SOLID STATE BALLAST
STD	STANDARD
SW	SWITCH
SWBD	SWITCHBOARD
TEL	TELEPHONE
TV	TELEVISION
TYP	TYPICAL
V	VOLT
W	WATT
WP	WEATHERPROOF

THE WORK OF THIS PROJECT INCLUDES PROVIDING ELECTRICAL POWER TO THE HVAC UPGRADES AT STONY POINT ELEMENTARY SCHOOL. PROVIDE MATERIALS AND SERVICES AS FOLLOWS. THE FOLLOWING IS NOT INTENDED TO BE A COMPLETE DESCRIPTION OF THE WORK; PERFORM THE WORK AS HEREINAFTER DESCRIBED IN THESE CONTRACT DOCUMENTS.

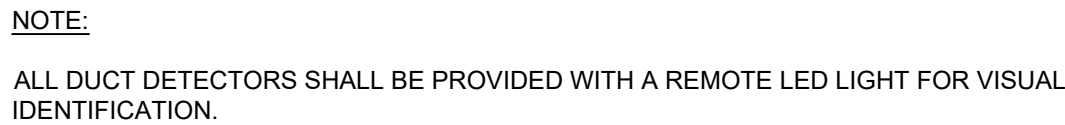
- A. DISCONNECT POWER TO EXISTING UNIT VENTILATORS AND RETAIN THE EXISTING CABLES AND CONDUIT.
- B. RECONNECT EXISTING ELECTRIC POWER TO THE NEW UNIT VENTILATORS THROUGHOUT THE BUILDING WHERE INDICATED.
- C. PROVIDE POWER TO ALL NEW HVAC VRF EQUIPMENT BY MAKING MODIFICATIONS TO THE EXISTING SWITCHGEAR IN THE ELECTRICAL ROOM.

	EXISTING FIRE ALARM SYSTEM CONTROL PANEL
	CONTROL MODULE. "WP" INDICATES WEATHERPROOF
	RELAY
	DUCT MOUNTED SMOKE DETECTOR
	FIRE SMOKE DAMPERS
	SMOKE DETECTOR



2 TYPICAL DUCT MOUNTED SMOKE DETECTOR DETAIL

SCALE: NTS



3 TYPICAL FAN SHUTDOWN DETAIL

SCALE: NTS

[illegible]

Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

Mechanical & Electrical Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 202 SUFFERN, NY 10901 PHOTO. NO. : NYT-3300068.00
Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 202 SUFFERN, NY 10901

UNIVENT REPLACEMENT AT
STONY POINT, THIELLS,
WEST HAVESTRAW
ELEMENTARY SCHOOL

SED# 50-02-01-06-0-014-012
SED# 50-02-01-06-0-025-018
SED# 50-02-01-06-0-024-015

7 SUMMER RD.
STONY POINT, NY 10980

STONY POINT
ROCKLAND COUNTY

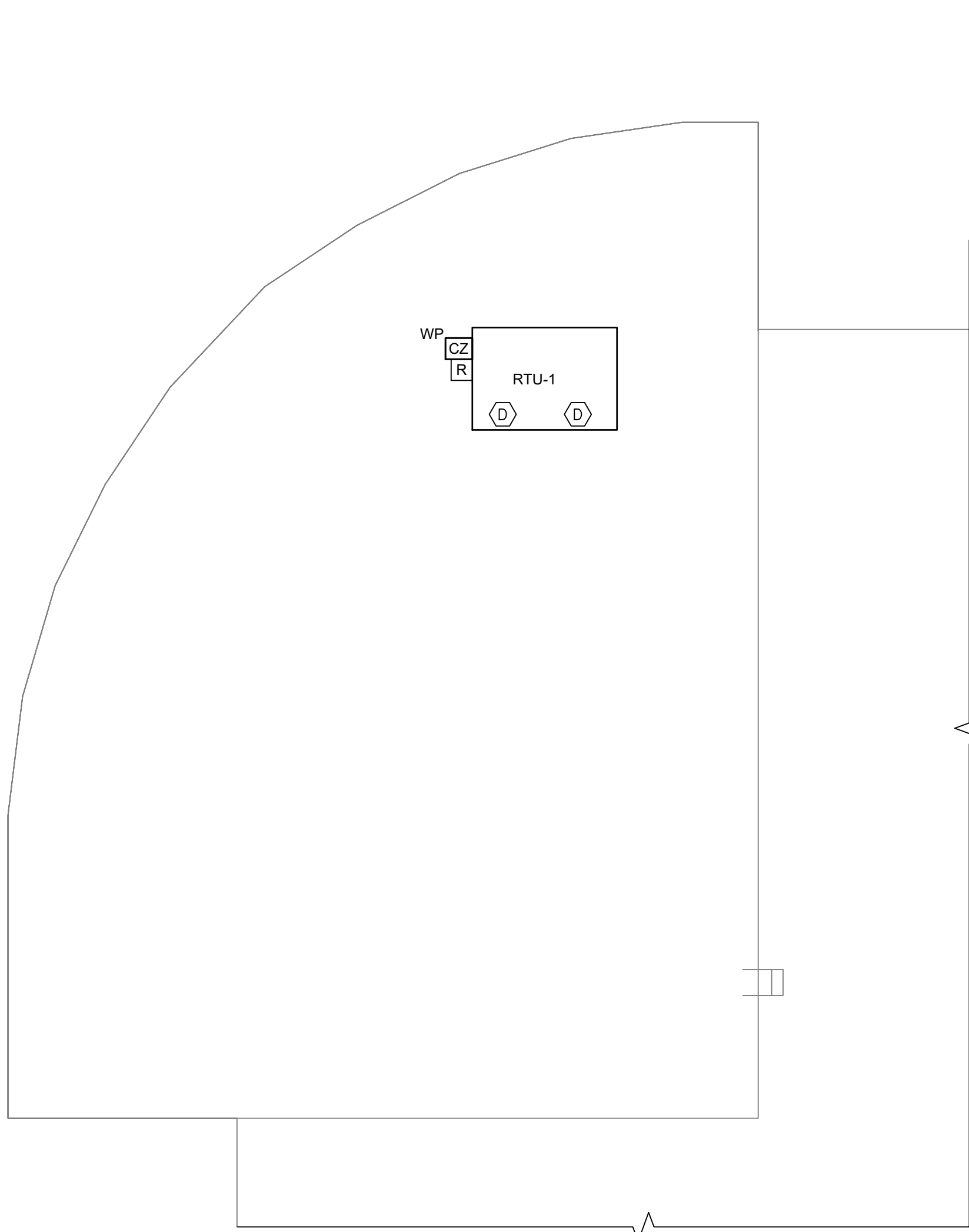
HSAA

MICHAEL SHILAE ARCHITECTS, L.L.P.

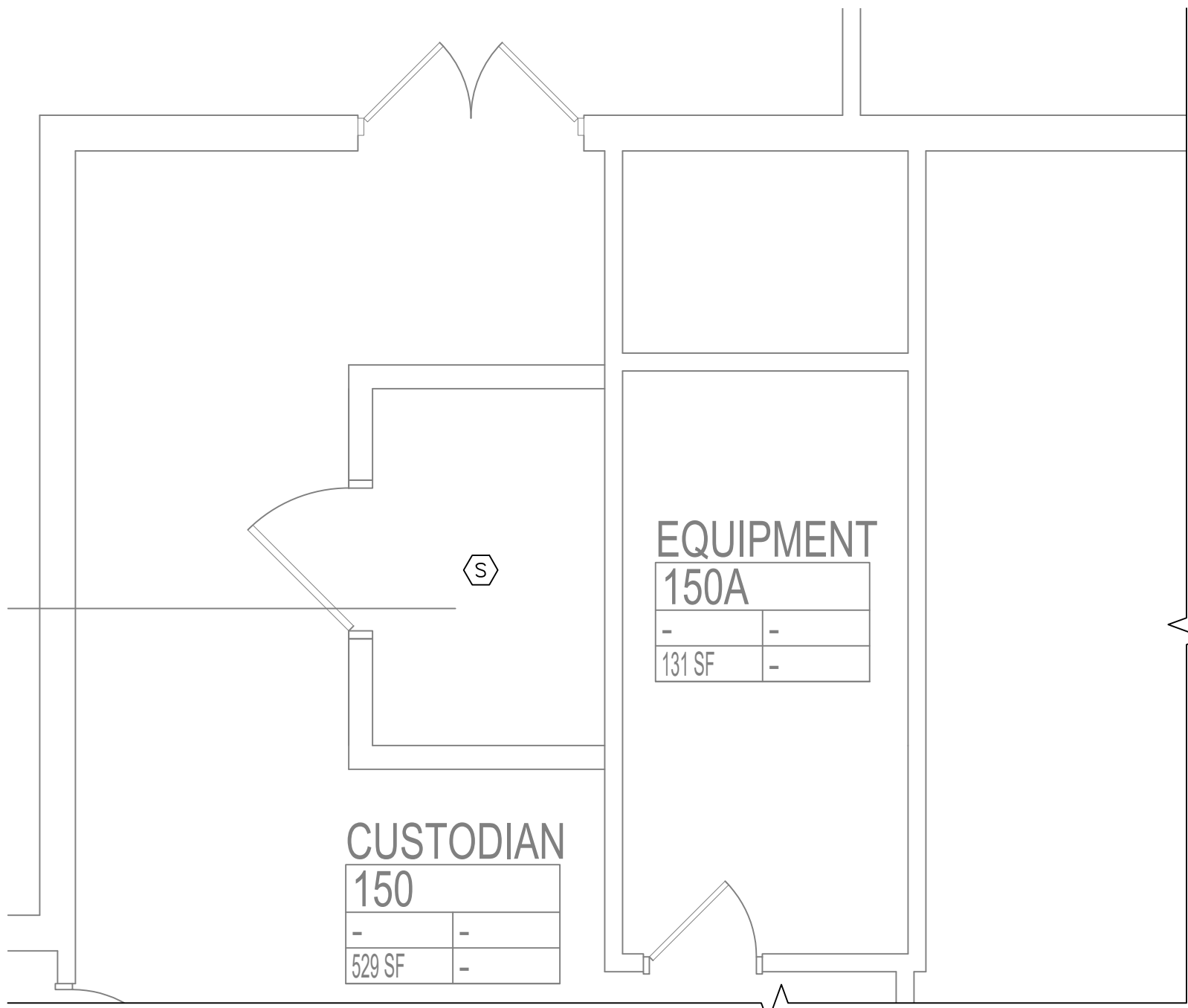
140 Park Avenue New City, NY 10956 Tel: 845-705-9200
www.hsaa.com

Drawing Title FIRE ALARM SYSTEM GENERAL NOTES, SYMBOL LIST AND ABBREVIATIONS	Drawing No. SPES-FA-001
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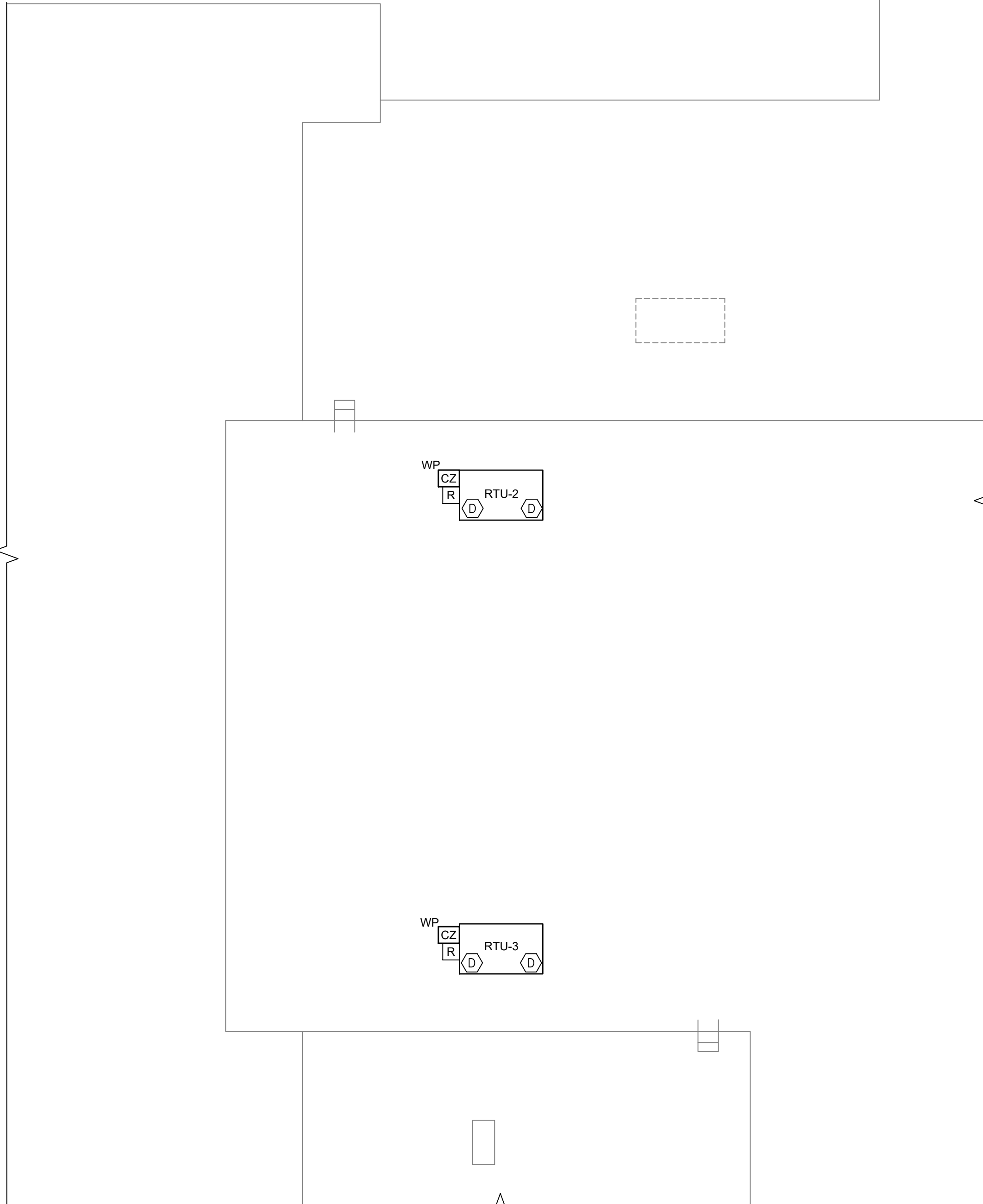
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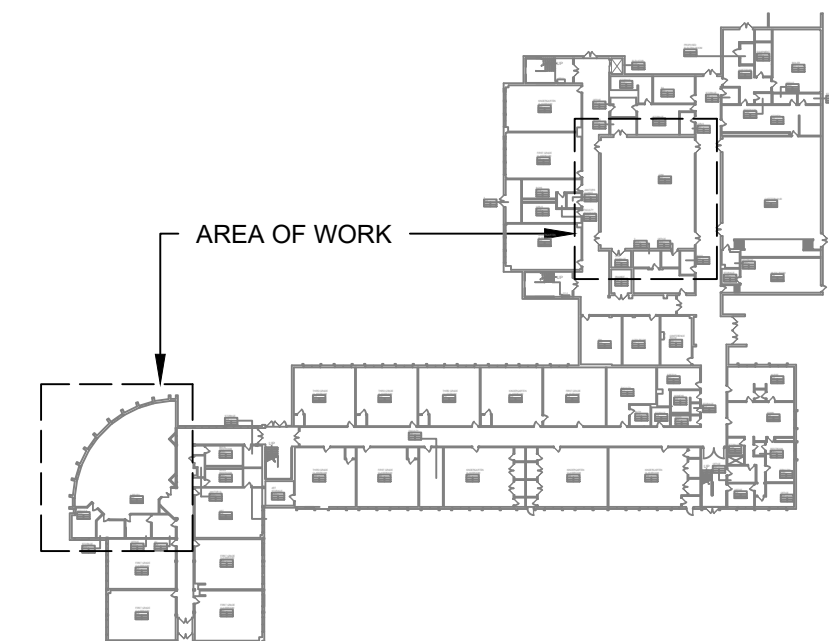
1 FIRE ALARM SYSTEM LIBRARY ROOF PART PLAN
SCALE: 3/32"=1'-0"



3 FIRE ALARM SYSTEM NEW ELECTRICAL ROOM PART PLAN
SCALE: 1/4"=1'-0"



2 FIRE ALARM SYSTEM GYMNASIUM ROOF PART PLAN
SCALE: 3/32"=1'-0"



KEY PLAN



PLAN NOTES:

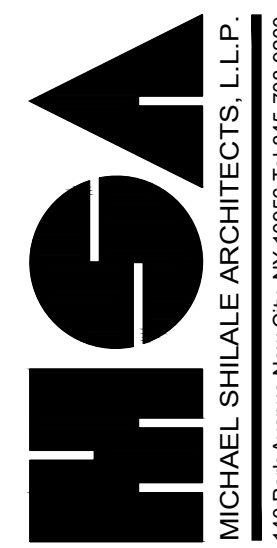
- FOR GENERAL NOTES, SYMBOL LIST, ABBREVIATIONS AND FIRE ALARM SYSTEM DRAWING LIST REFER TO DWG FA001.00.
- FOR EXACT LOCATION AND QUANTITIES OF MECHANICAL AND PLUMBING EQUIPMENT AND DEVICES REFER TO MECHANICAL AND PLUMBING DWGS.
- ALL CONDUIT PENETRATIONS THROUGH FIRE RATED PARTITIONS ARE TO BE PROVIDED WITH FIRE STOP SEALS AS REQUIRED BY CODE TO MAINTAIN FIRE RATING OF PARTITIONS.
- UNLESS OTHERWISE NOTED ON DRAWING MOUNTING HEIGHTS OUTLETS AND EQUIPMENT SHALL BE AS INDICATED ON SYMBOL LIST & SPECIFICATIONS.
- ACCESS SHALL BE PROVIDE TO EACH DETECTOR FOR PERIODIC INSPECTION, MAINTENANCE AND TESTING AS PER SECTION 907.12 OF N.Y.C. BUILDING CODE.

0 1/2 1
IF THIS BAR DOES NOT
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NOT TO FULL SCALE

Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

Mechanical Electrical Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981 PROJ. No.: MNY-5000086.00
Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981

UNIVENT REPLACEMENT AT STONY POINT, THIELLS, WEST HAVESTRAW ELEMENTARY SCHOOL	SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015	STONY POINT SCHOOL DISTRICT STONY POINT, NY 10980
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MICHAEL SHILALE ARCHITECTS, LLP
140 Park Avenue New City, NY 10956 Tel 845-708-9200
www.shilale.com

Drawing Title
**FIRE ALARM SYSTEM
ROOF PLAN**

Drawing No.
SPES-FA-101

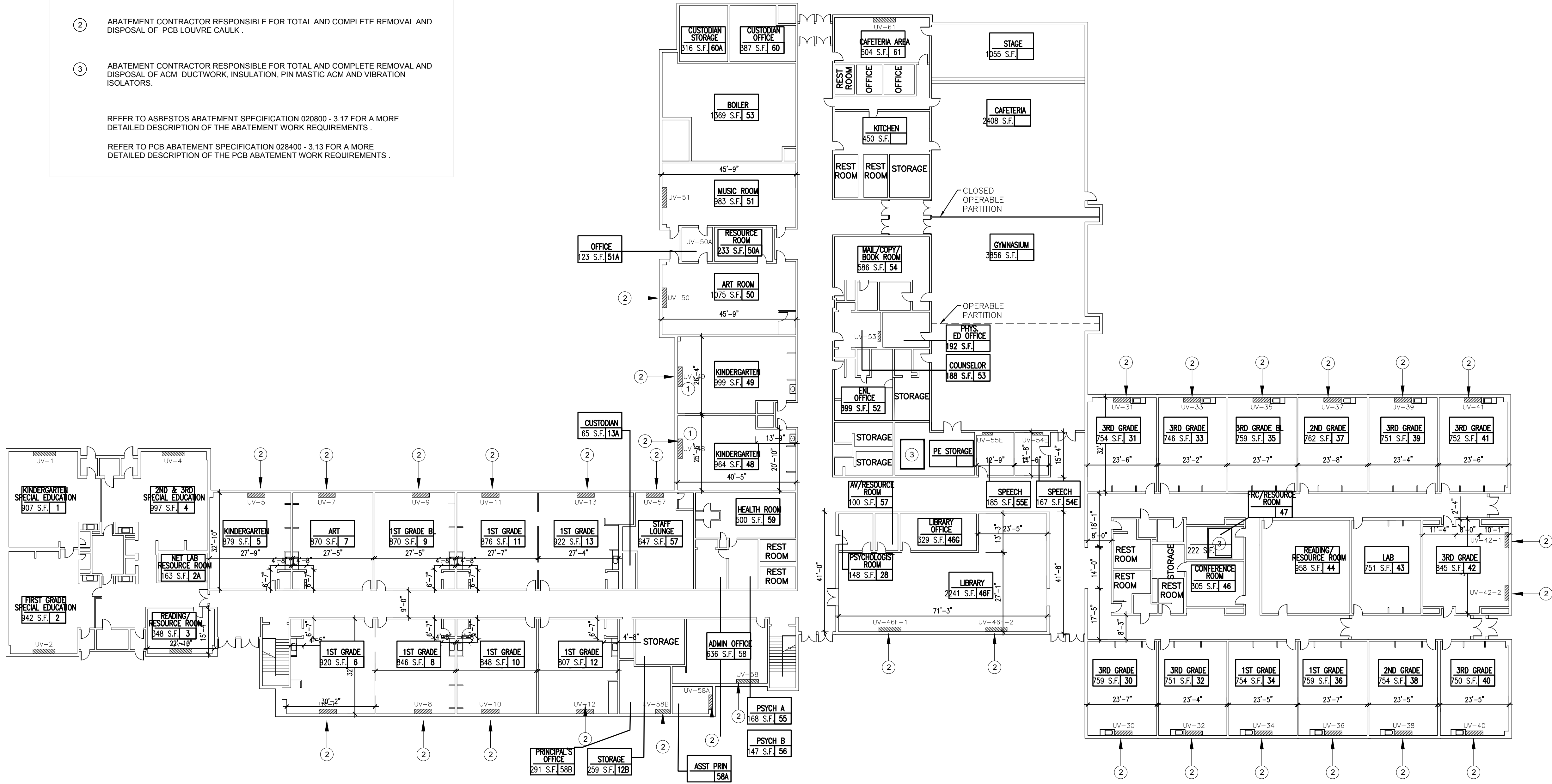
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ASBESTOS ABATEMENT LEGEND

- 1 ABATEMENT CONTRACTOR RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF ACM FLOOR TILES AND MASTIC.
- 2 ABATEMENT CONTRACTOR RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF PCB LOUVRE CAULK.
- 3 ABATEMENT CONTRACTOR RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF ACM DUCTWORK, INSULATION, PIN MASTIC ACM AND VIBRATION ISOLATORS.

REFER TO ASBESTOS ABATEMENT SPECIFICATION 020800 - 3.17 FOR A MORE DETAILED DESCRIPTION OF THE ABATEMENT WORK REQUIREMENTS.

REFER TO PCB ABATEMENT SPECIFICATION 028400 - 3.13 FOR A MORE DETAILED DESCRIPTION OF THE PCB ABATEMENT WORK REQUIREMENTS.



0 1/2 1
IF THIS DRAWING DOES NOT MEASURE TO FULL SCALE, NOT TO FULL SCALE

No.	Date	Revisions



Drawn by	AM
Checked by	RL
Project No.	43041
Scale	AS NOTED
Date	05-10-24

Mechanical & Electrical Engineer:	AM
Environmental Engineer:	RL
Project No.	43041
Scale	AS NOTED
Date	05-10-24

UNIVENT REPLACEMENT AT
STONY POINT, THIELS
& WEST HAVERSTRAW
ELEMENTARY SCHOOLS

PES SED# 50-02-01-06-0-003-012
TES SED# 50-02-01-06-0-025-018
WHES SED# 50-02-01-06-0-024-015

140 ROUTE 210, STONY POINT, NY 10980



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140 Park Avenue West, New York, NY 10036 Tel: 646-708-9200
www.shiale.com

FIRST FLOOR
ABATEMENT
PLAN

Drawing No.
**TES
HM-101**

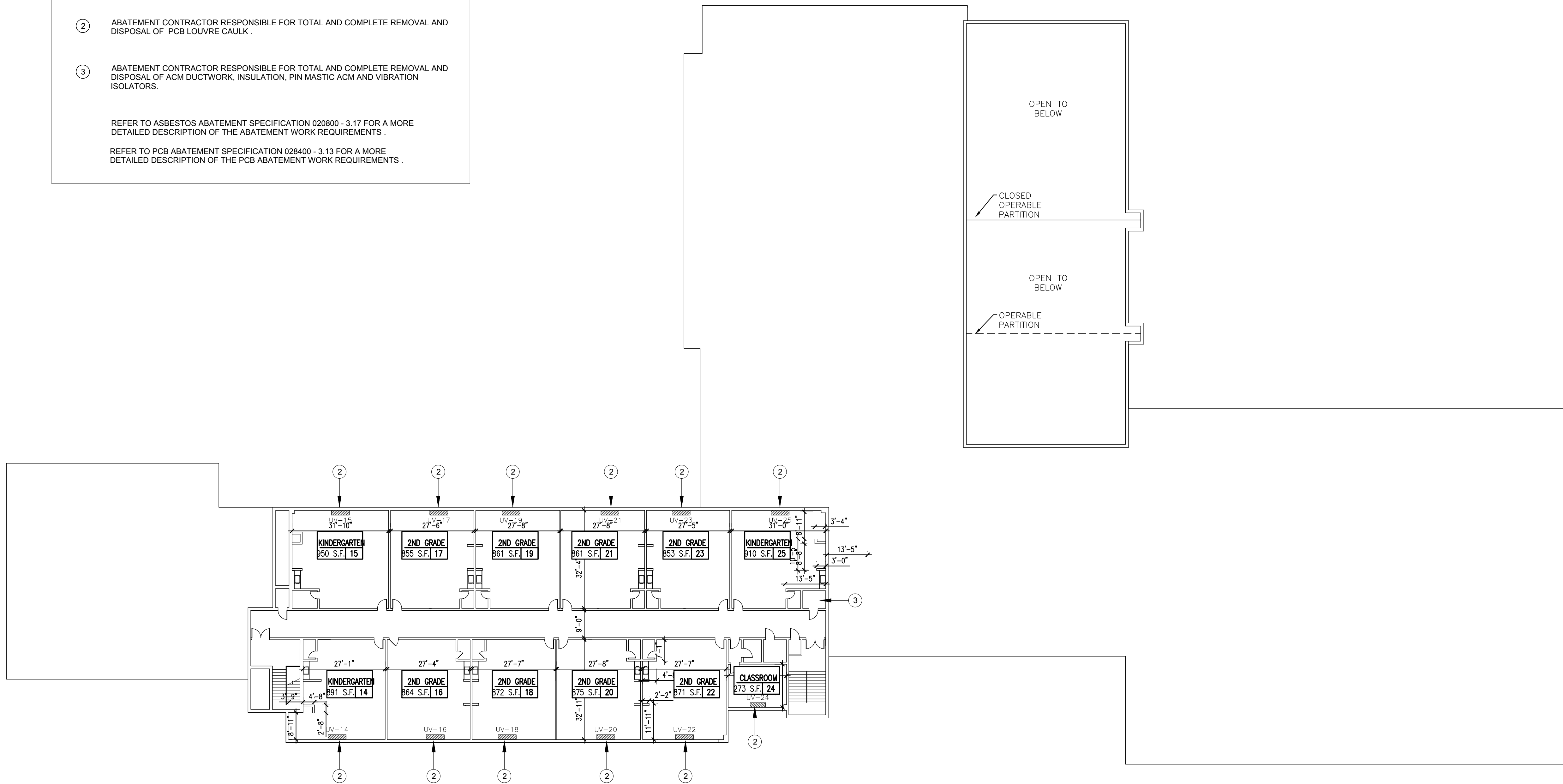
1 FIRST FLOOR ABATEMENT PLAN
SCALE: 1/16"=1'-0"

43041 EXIST FIRST FLOOR
PLAN
SCALE: 1"=1'-0"

- ① ABATEMENT CONTRACTOR RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF ACM FLOOR TILES AND MASTIC.
- ② ABATEMENT CONTRACTOR RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF PCB LOUVRE CAULK .
- ③ ABATEMENT CONTRACTOR RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF ACM DUCTWORK, INSULATION, PIN MASTIC ACM AND VIBRATION ISOLATORS.

REFER TO ASBESTOS ABATEMENT SPECIFICATION 020800 - 3.17 FOR A MORE DETAILED DESCRIPTION OF THE ABATEMENT WORK REQUIREMENTS .

REFER TO PCB ABATEMENT SPECIFICATION 028400 - 3.13 FOR A MORE DETAILED DESCRIPTION OF THE PCB ABATEMENT WORK REQUIREMENTS .



1 SECOND FLOOR ABATEMENT PLAN

SCALE: NTS



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SECOND FLOOR ABATEMENT PLAN



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TES
HM-102

UNIVENT REPLACEMENT AT
STONY POINT, THIELLS
& WEST HAVERSTRAW
ELEMENTARY SCHOOLS

FES SED# 50-02-01-06-0-003-012
TES SED# 50-02-01-06-0-025-018
WHES SED# 50-02-01-06-0-024-015

140 ROUTE 210,
STONY POINT, NY 10980

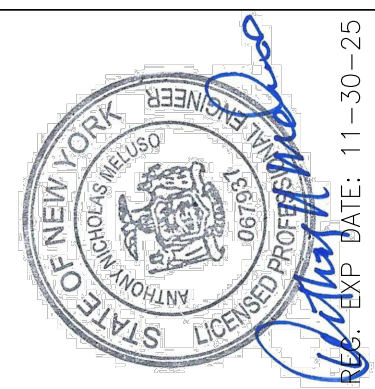
COUNTY OF ROCKLAND

Mechanical
& Electrical
Engineer:

Environmental Engineer

www.qualityenv.com

Drawn by	AM
Checked by	RL
Project No.	43041
Scale	AS NOTED
Date	05-10-24



REC. EXP. DATE: 11-30-25

[illegible]

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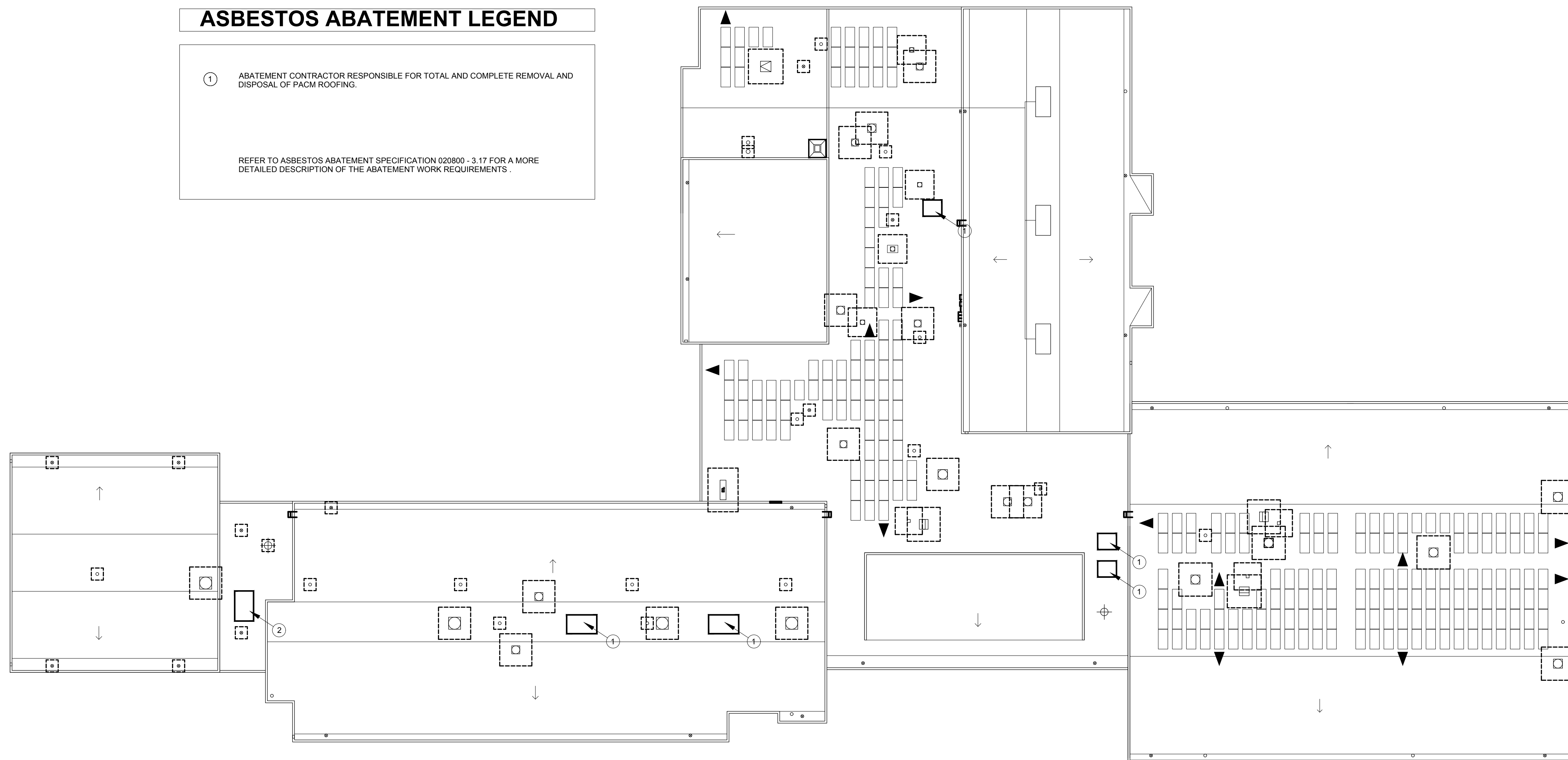
1 ROOF ABATEMENT PLAN

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



ROOF
ABATEMENT
PLAN

rawing No. **TES**
HM-103



ASBESTOS ABATEMENT LEGEND

- ① ABATEMENT CONTRACTOR RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF PACM ROOFING.

REFER TO ASBESTOS ABATEMENT SPECIFICATION 020800 - 3.17 FOR A MORE DETAILED DESCRIPTION OF THE ABATEMENT WORK REQUIREMENTS .

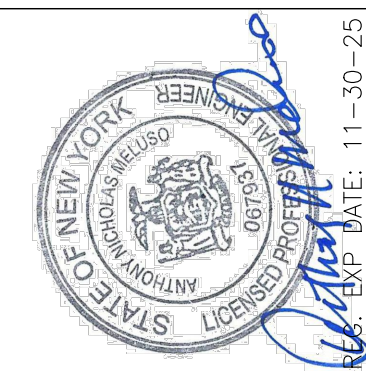


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UNIVENT REPLACEMENT AT
STONY POINT, THIELS
& WEST HAVERSTRAW
ELEMENTARY SCHOOLS

FES SED# 50-02-01-06-0-003-012
TES SED# 50-02-01-06-0-025-018
WHES SED# 50-02-01-06-0-024-015

140 ROUTE 210,
STONY POINT, NY 10980



Drawn by	AM
Checked by	RL
Project No.	43041
Scale	AS NOTED
Date	05-10-24

Mechanical & Electrical Engineer:	QuEST, Inc. 1376 Route 9 Wappingers Falls, NY 12590 845.286.6031 www.qualityenv.com
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[illegible]

0 1/2 1

IF THIS BAR DOES NOT
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NOT TO FULL SCALE



Energy Code:	2020 NYStretch Energy Code - 90.1 (2016) Standard
Project Title:	UNIVENT REPLACEMENT THIELLS ELEMENTARY SCHOOL
Location:	Thiells, New York
Climate Zone:	5a
Project Type:	Alteration

Owner/Agent:	Designer/Contractor:
NORTH ROCKLAND CENTRAL	GREENMAN-PEDERSEN
SCHOOL DISTRICT	2 EXECUTIVE BLVD
65 CHAPEL STREET	SUFFERN 10901
GARNERVILLE 10923	845-368-4050
845-942-3000	

Designer/Contractor:
GREENMAN-PEDERSEN INC
2 EXECUTIVE BLVD
SUFFERN 10901
845-368-4050

[illegible]

Quantity System Type & Description

4	Ceiling Cassette, 12 MBH Cooling: 4 each - VRF Zone Fan Unit, Capacity = 12 kBtu/h No minimum efficiency requirement applies
SYSTEM VERIFICATION REQUIRED.	
2	Ceiling Cassette, 8 MBH Cooling: 2 each - VRF Zone Fan Unit, Capacity = 8 kBtu/h No minimum efficiency requirement applies
SYSTEM VERIFICATION REQUIRED.	
4	Wall Mount, 6 MBH Cooling: 4 each - VRF Zone Fan Unit, Capacity = 6 kBtu/h No minimum efficiency requirement applies
SYSTEM VERIFICATION REQUIRED.	
10	Wall Mount, 24 MBH Cooling: 10 each - VRF Zone Fan Unit, Capacity = 24 kBtu/h No minimum efficiency requirement applies
SYSTEM VERIFICATION REQUIRED.	
1	100% OA unit Cooling: 1 each - VRF Zone Fan Unit, Capacity = 30 kBtu/h No minimum efficiency requirement applies
SYSTEM VERIFICATION REQUIRED.	
5	Ceiling Cassette, 5 MBH Cooling: 5 each - VRF Zone Fan Unit, Capacity = 5 kBtu/h No minimum efficiency requirement applies
SYSTEM VERIFICATION REQUIRED.	
1	100% OA unit Cooling: 1 each - VRF Zone Fan Unit, Capacity = 29 kBtu/h No minimum efficiency requirement applies
SYSTEM VERIFICATION REQUIRED.	
3	Wall Mount, 4 MBH Cooling: 3 each - VRF Zone Fan Unit, Capacity = 4 kBtu/h No minimum efficiency requirement applies
SYSTEM VERIFICATION REQUIRED.	

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2020 NYStretch Energy Code - 90.1 (2016) Standard requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Project Title:	UNIVENT REPLACEMENT THIELLS ELEMENTARY SCHOOL	Report date:	04/08/24
Data filename:		Page	2 of 8



Energy Code: 2020 NYStretch Energy Code - 90.1 (2016) Standard

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
4.2.2, 6.4.2.1, 6.7.2 [PR2]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	☐ Complies ☒ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met. Location on plans/spec: M-001
4.2.2, 8.7 [PR6]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the electrical systems and equipment and document where exceptions are claimed. Feeder connectors sized in accordance with approved plans and branch circuits sized for maximum drop of 5%.	☐ Complies ☒ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met.
6.7.2.4 [PR3]	Detailed instructions for HVAC systems commissioning included on the plans or specifications for projects >= 50,000 ft ² .	☐ Complies ☒ Does Not ☐ Not Observable ☐ Not Applicable	Requirement will be met. Location on plans/spec: M-001

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
6.4.3.7 [F09] ³	Freeze protection and snow/ice melting system sensors for future connection to controls.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	Exception: Requirement does not apply.

1 High Impact (Tier 1)
2 Medium Impact (Tier 2)
3 Low Impact (Tier 3)

Project Title: UNIVENT REPLACEMENT THIELLS ELEMENTARY SCHOOL Report date: 04/08/24
 Data filename: Page 3 of 8

1 High Impact (Tier 1)
2 Medium Impact (Tier 2)
3 Low Impact (Tier 3)

Project Title: UNIVENT REPLACEMENT THIELLS ELEMENTARY SCHOOL
 Report date: 04/08/24

Data filename:
 Page 4 of 8



Drawn by	VF/AW
Checked by	EF
Project No.	43040
Scale	.
Date	03-04-25

Mechanical & Electrical Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 202 SUFFERN, NY 10901 PHOTO. NO. : NYT-3300128.00
Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 202 SUFFERN, NY 10901

1 High Impact (Tier 1)
2 Medium Impact (Tier 2)
3 Low Impact (Tier 3)

Project Title: UNIVENT REPLACEMENT THIELLS ELEMENTARY SCHOOL
 Report date: 04/08/24

Data filename:
 Page 5 of 8

1 High Impact (Tier 1)
2 Medium Impact (Tier 2)
3 Low Impact (Tier 3)

Project Title: UNIVENT REPLACEMENT THIELLS ELEMENTARY SCHOOL Report date: 04/08/24
 Data filename: Page 6 of 8

1 High Impact (Tier 1)
2 Medium Impact (Tier 2)
3 Low Impact (Tier 3)

Project Title: UNIVENT REPLACEMENT THIELLS ELEMENTARY SCHOOL Report date: 04/08/24
 Data filename: Page 7 of 8

1 High Impact (Tier 1)
2 Medium Impact (Tier 2)
3 Low Impact (Tier 3)

Project Title: UNIVENT REPLACEMENT THIELLS ELEMENTARY SCHOOL Report date: 04/08/24
 Data filename: Page 8 of 8

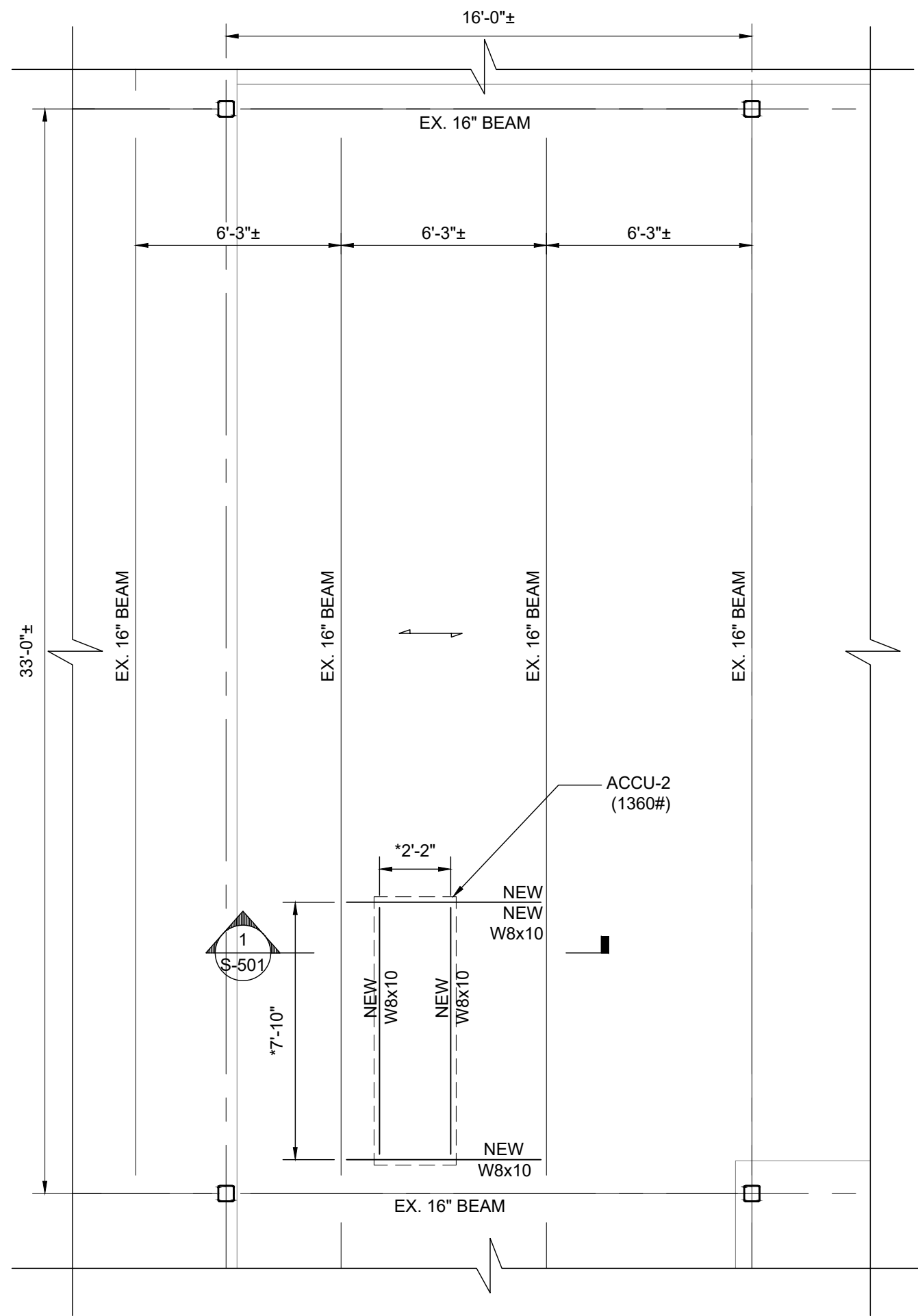
UNIVENT REPLACEMENT
AT STONY POINT,
THIELLS, WEST HAV,
ELEMENTARY SCHOOL
SED# 50-02-01-06-0-014-XXX
SED# 50-02-01-06-0-025-XXX
SED# 50-02-01-06-0-024-XXX
70 BORMAN RD.
THIELLS, NY 10984
ROCKLAND COUNTY
THIELLS



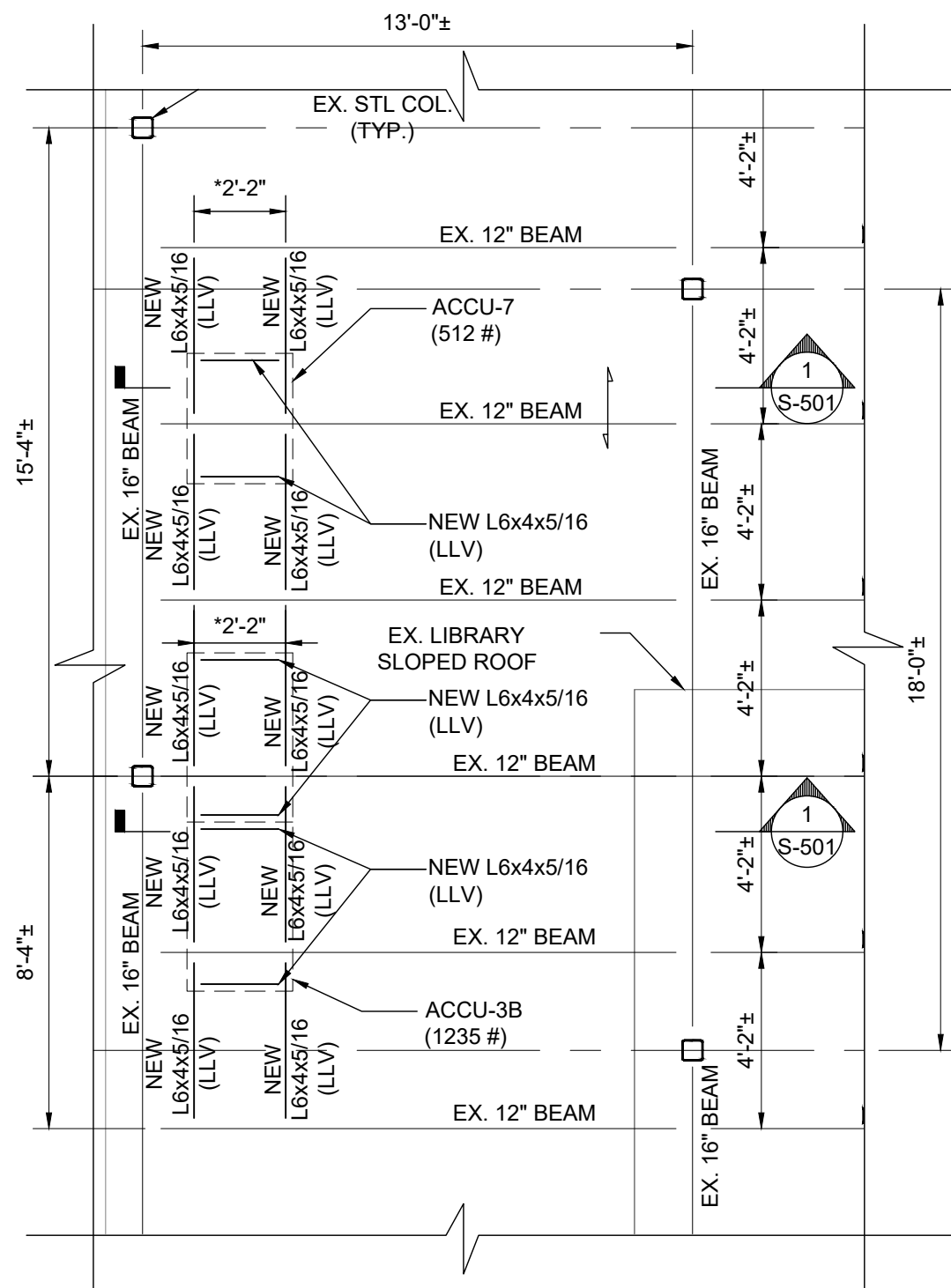
MICHAEL SHILALE ARCHITECTS, L.L.P.
140 Park Avenue New City, NY 10956 Tel 845-708-9200
www.shilale.com

TES-EN-001

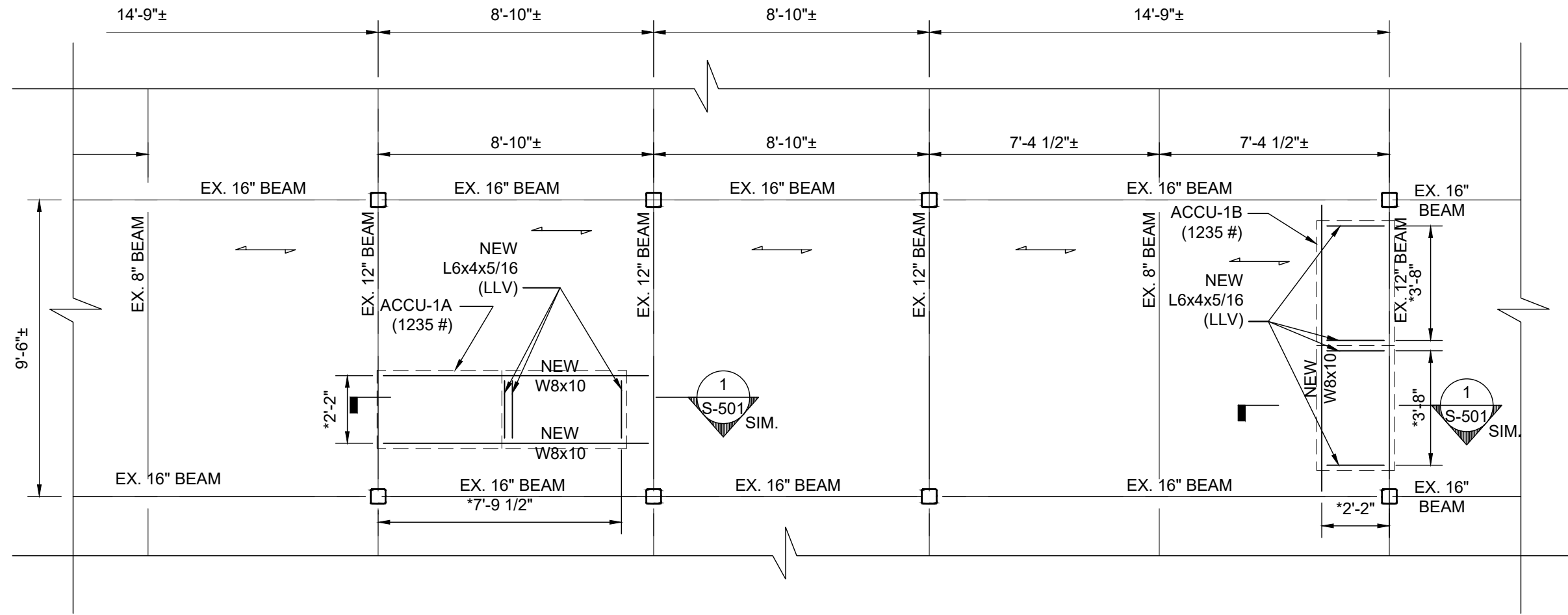
TES-EN-001



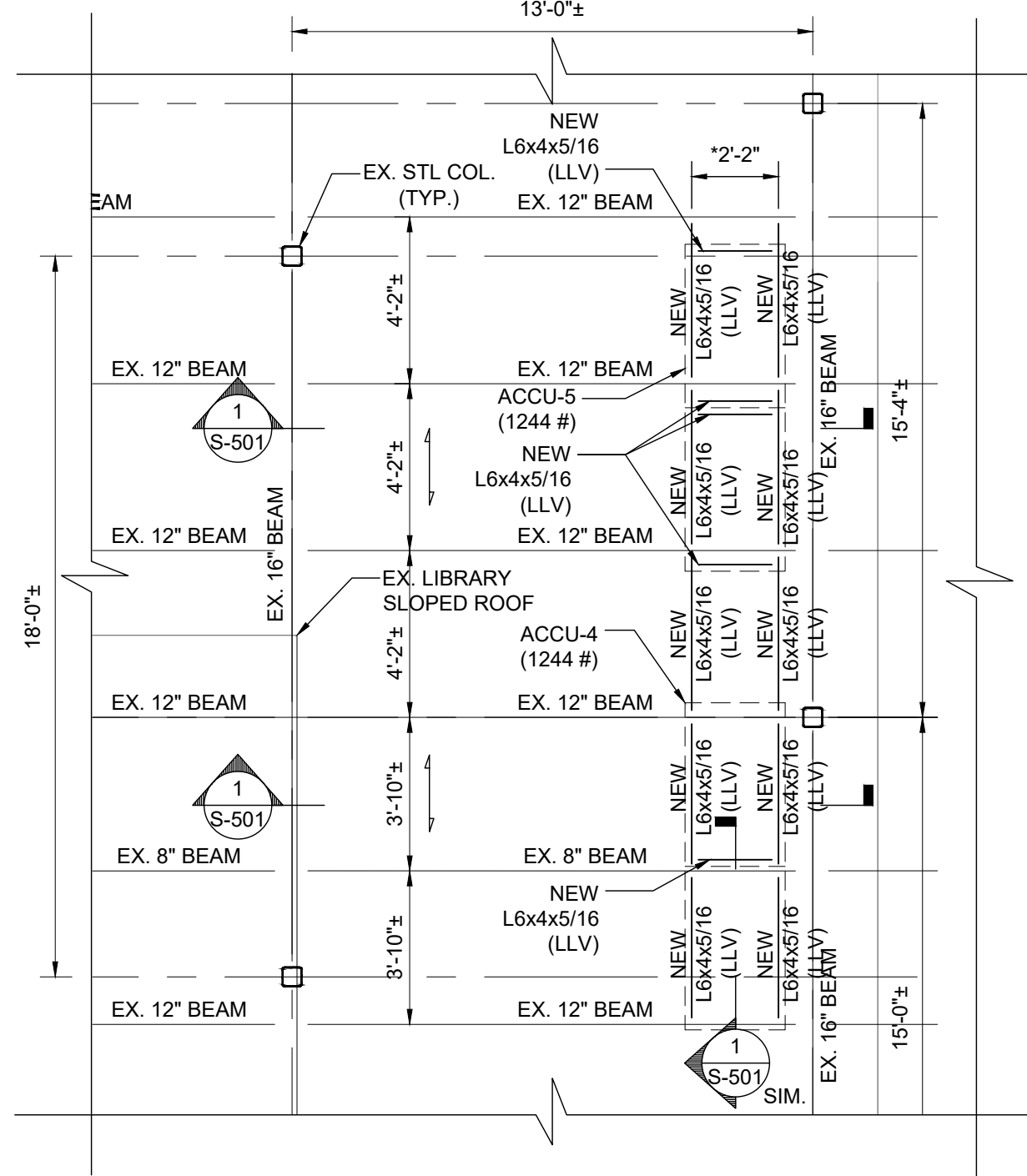
1 ROOF FRAMING PARTIAL PLAN
SCALE: 1/4" = 1'- 0"



4 ROOF FRAMING PARTIAL PLAN
SCALE: 1/4" = 1'- 0"



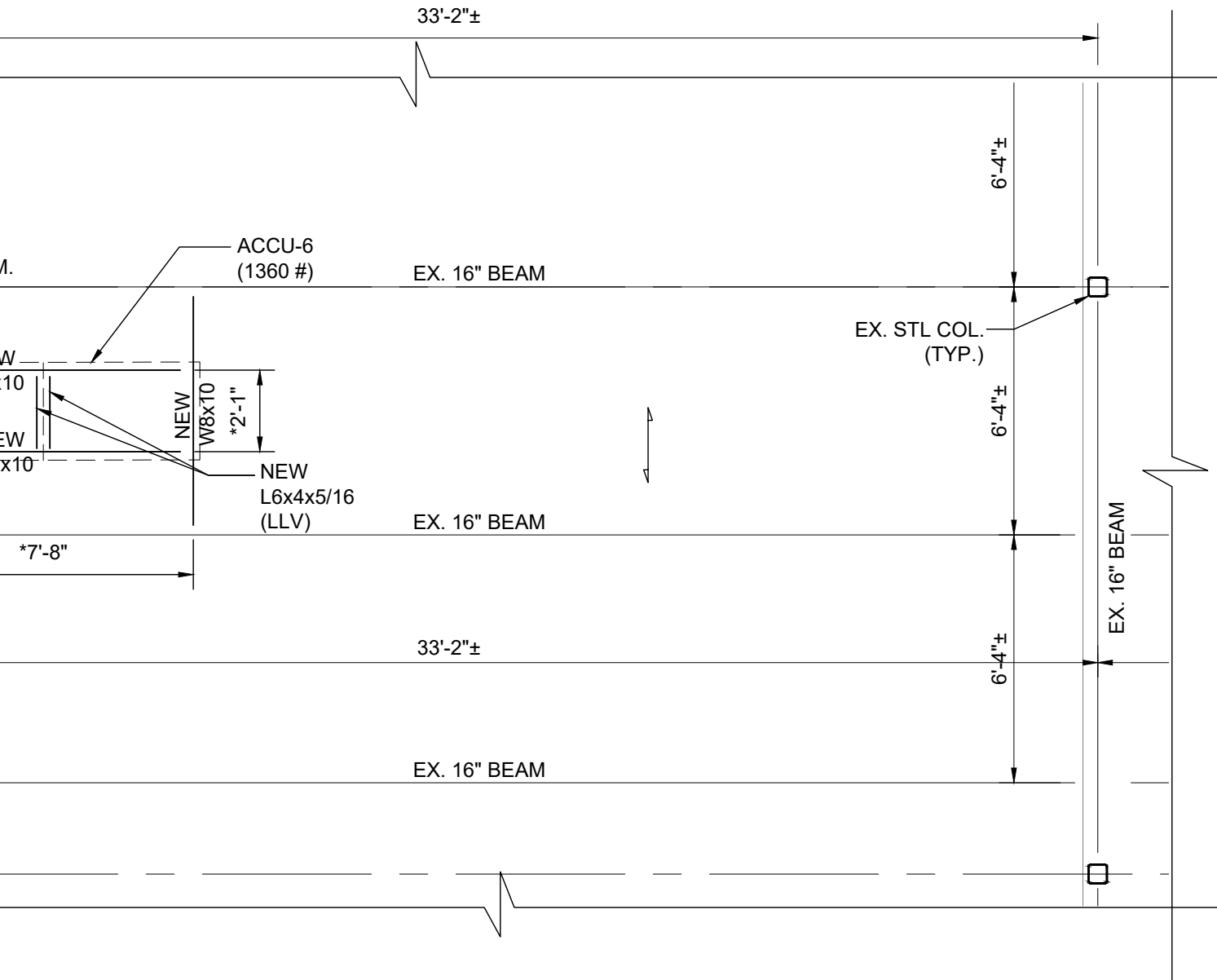
2 ROOF FRAMING PARTIAL PLAN
SCALE: 1/4" = 1'- 0"



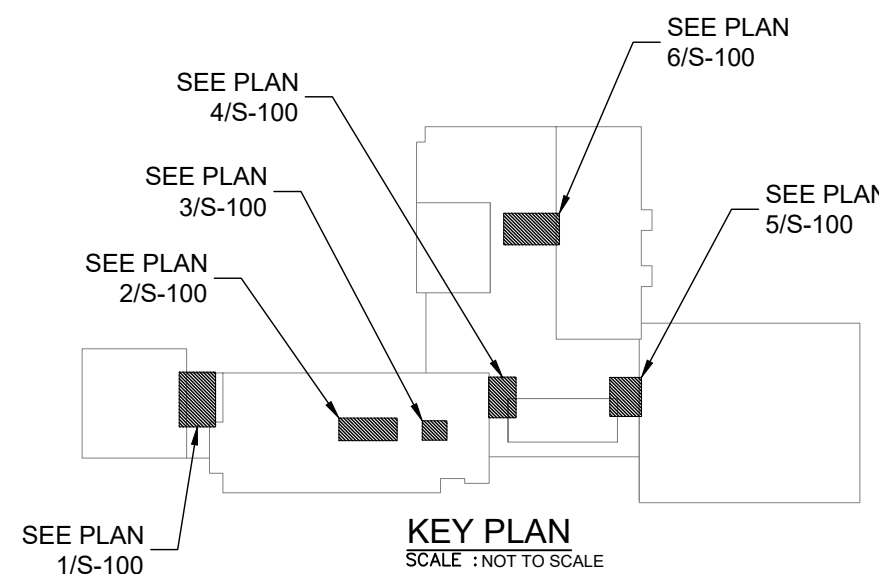
5 ROOF FRAMING PARTIAL PLAN
SCALE: 1/4" = 1'- 0"

- PLAN NOTES:
- EXISTING CONSTRUCTION IS THE BEST REPRESENTATION OF INFORMATION COMPILED FROM HISTORICAL DOCUMENTS. CONTRACTOR SHALL SURVEY AND CONFIRM EXISTING CONSTRUCTION PRIOR TO BEGINNING ANY WORK. NOTIFY THE ARCHITECT IF ANY DISCREPANCIES ARE DISCOVERED.
 - EXISTING STEEL COLUMNS AND BEAMS ARE NOT TO BE REMOVED.
 - CONTRACTOR SHALL BRACE, SHORE, PROTECT, ETC EXISTING CONSTRUCTION AS REQUIRED TO PROVIDE SAFE WORK ENVIRONMENT AND OVERALL BUILDING STABILITY.
 - CARE SHALL BE TAKEN NOT TO DISTURB OR DAMAGE EXISTING STRUCTURAL STEEL COLUMNS AND BEAMS ETC DURING CONSTRUCTION.
 - INDICATES SPAN DIRECTION OF EXISTING ROOF DECK.
 - EXISTING CONSTRUCTION AT THE ROOF CONSISTS OF CONCRETE OVER METAL DECK SPANNING OVER STEEL BEAMS.
 - * - COORDINATE SIZE AND LOCATION OF ALL ROOFTOP EQUIPMENT AND ROOF PENETRATIONS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.

ROOF LOAD SCHEDULE	
EXISTING DEAD LOAD	
3" LWT CONC. W/ 1 1/2" ROOF DECK	41 PSF
ROOFING/INSULATION	5 PSF
ROOF BEAMS	5 PSF
CEILING	4 PSF
MEP	5 PSF
TOTAL DEAD LOAD	60 PSF
LIVE LOAD:	
ROOF	20 PSF
+ WEIGHT OF MECHANICAL UNITS	



6 ROOF FRAMING PARTIAL PLAN
SCALE: 1/4" = 1'- 0"



No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

Drawn by	S.I.
Checked by	R.B.
Project No.	43040
Scale	AS NOTED
Date	03-04-25

Mechanical Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 SYRACUSE, NY 13201 PROJ. NO. : MNY-2000128.00
	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 SYRACUSE, NY 13201

UNIVENT REPLACEMENT
AT STONY POINT,
THIELS, WEST HAV
ELEMENTARY SCHOOL
SD# 50-02-01-06-0-014-XXX
SD# 50-02-01-06-0-025-XXX
SD# 50-02-01-06-0-024-XXX
100 N. GARDEN STREET
SYRACUSE, NY 13204

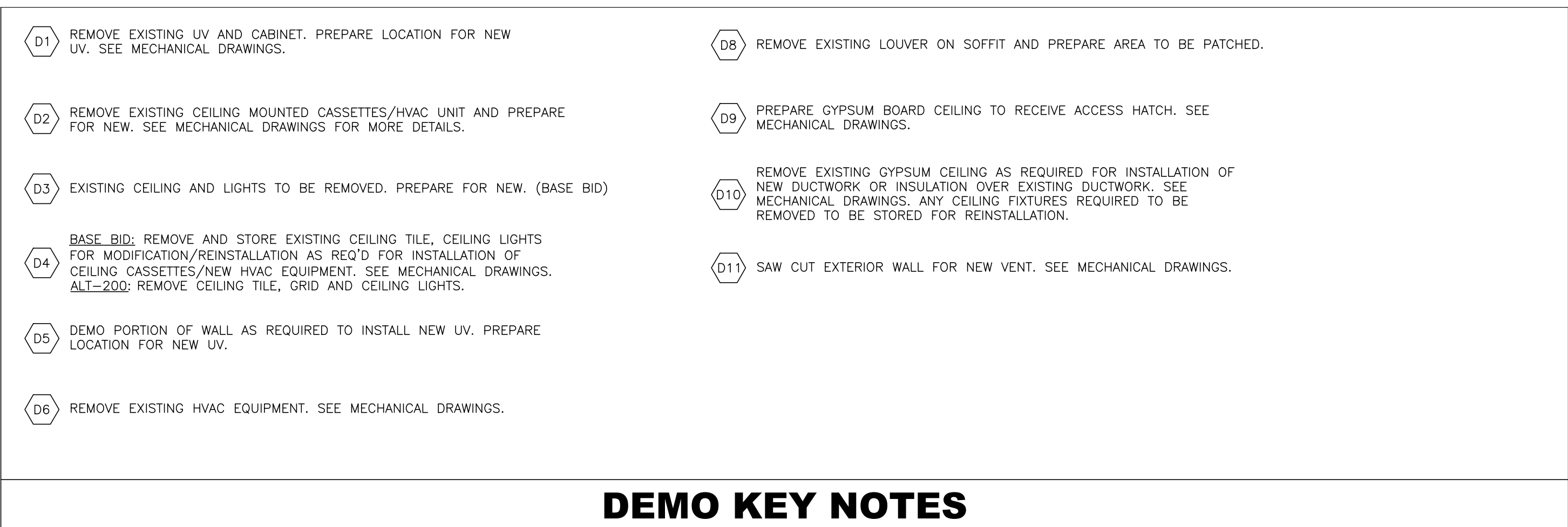


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140 Park Avenue New City, NY 10956 Tel 845-708-9200
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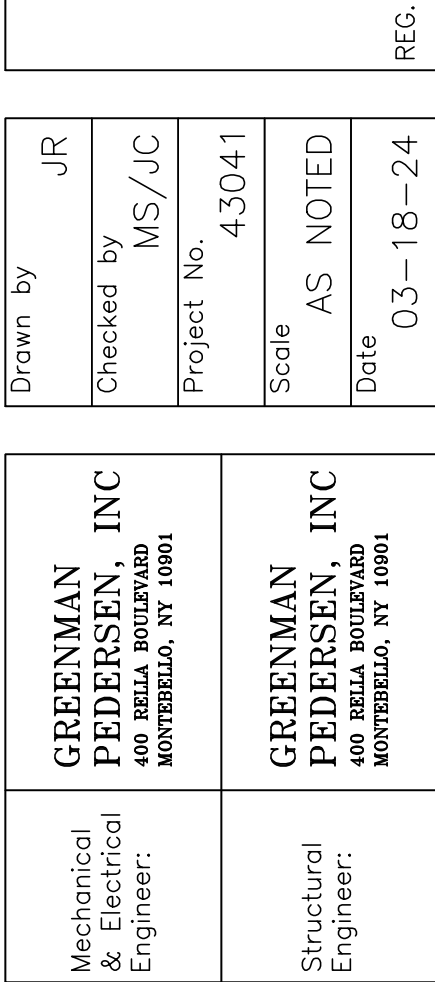
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Drawing Title
**STRUCTURAL ROOF
PLAN**

Drawing No.
TES-S-100



- [illegible]



UNIVENT REPLACEMENT AT
STONY POINT, THIELS
AND WEST HAVERSTRAW
ELEMENTARY SCHOOL

SPES SED# 50-02-01-06-0-014-012
TES SED# 50-02-01-06-0-023-018
WHES SED# 50-02-01-06-0-024-015

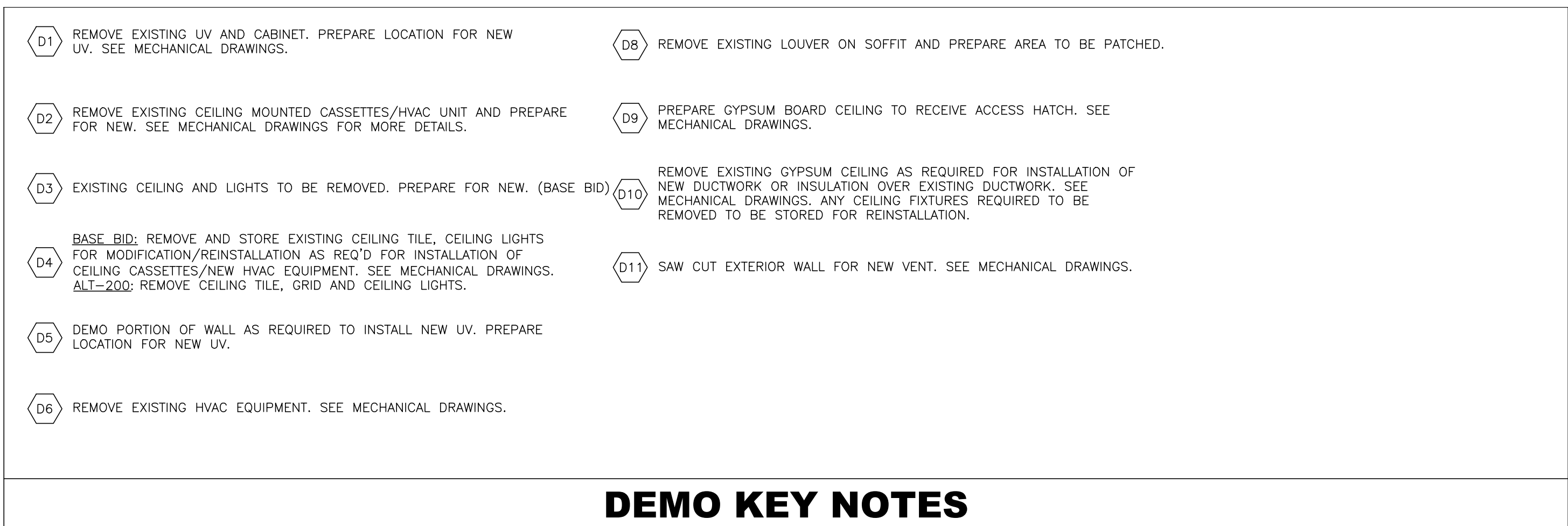
7 GUNNER DRIVE
STONY POINT, NY 10980

COUNTY OF ROCKLAND

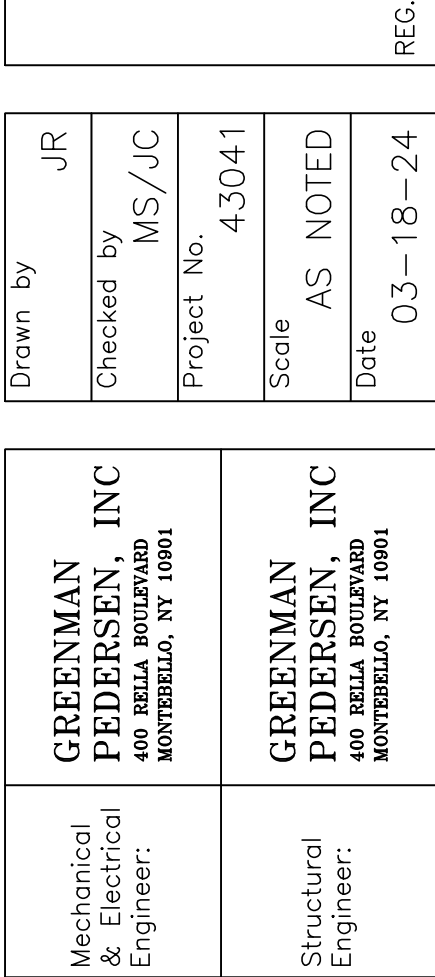


Drawing Title
**FIRST FLOOR
 DEMO PLAN**

Drawing No.
TES-D-101



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UNIVENT REPLACEMENT AT
STONY POINT, THIELLS
AND WEST HAVERSTRAW
ELEMENTARY SCHOOL

SPES SED# 50-02-01-06-0-014-012
TES SED# 50-02-01-06-0-023-018
WHES SED# 50-02-01-06-0-024-015

7 GUNNER DRIVE
STONY POINT, NY 10980

COUNTY OF ROCKLAND



Drawing Title
**SECOND
FLOOR DEMO
PLAN**

Drawing No.
TES-D-102



PLAN NORTH

Drawing No. **TES-D-103**

UNIVENT REPLACEMENT AT
STONY POINT, THIELLS
AND WEST HAVERSTRAW
ELEMENTARY SCHOOL

SPES SED# 50-02-01-06-0-014-012
TES SED# 50-02-01-06-0-025-018
WHES SED# 50-02-01-06-0-024-015

7 GURNEE DRIVE
STONY POINT, NY 10986

COUNTY OF ROCKLAND

Mechanical and Electrical Engineer:	GREENMAN PEDERSEN, INC 400 RELLA BOULEVARD MONTEBELLO, NY 10001
Structural Engineer:	GREENMAN PEDERSEN, INC 400 RELLA BOULEVARD MONTEBELLO, NY 10001

Drawn by	JR
Checked by	MS/JC
Project No.	43040
Scale	AS NOTED
Date	03-18-24

REG. EXP DATE: 12-31-25

[illegible]

1. CONTRACTOR SHALL BE REQUIRED TO CORE DRILL ALL HOLES IN WALLS, FLOORS AND CEILINGS TO FACILITATE NEW LINESETS, ELECTRICAL CONDUITS AND CONDENSATE LINES.
2. SALVAGE ALL FIRE ALARM, MOTION DETECTORS, AND CEILING MOUNTED DEVICES FOR RE-INSTALLATION

DEMO KEY NOTES

DEMOLITION NOTES

	EXISTING THROUGH WALL LOUVER		EXISTING UNIT VENT (TO BE REMOVED)
	SUPPLY REGISTER		EXISTING FIN TUBE ENCLOSURE TO REMAIN
	EXISTING HVAC EQUIPMENT TO BE REPLACED		EXISTING FAN COIL TO REMAIN
	AREA OF CEILING TILE AND LIGHTING FIXTURES REPLACEMENT (AS PER ALT. NO. 100)		EXISTING MECHANICAL EQUIPMENT
	EXISTING THROUGH WALL LOUVER		ROOF VENT
	EXISTING PIPE PENETRATION		EXISTING CHIMNEY
	EXISTING ROOF DRAIN		EXISTING EQUIPMENT PAD
	EXISTING VENTILATOR OR MECHANICAL PENETRATION		EXISTING ROOF HATCH
	EXISTING SKYLIGHT		EXISTING LADDER
	EXISTING SKYLIGHT		EXISTING FRESH AIR INTAKE
	EXISTING SKYLIGHT TO BE REMOVED		NEW ROOF PENETRATION FOR HVAC EQUIPMENT

LEGEND

020	REMOVE EXISTING SKYLIGHT AND CURB FOR INSTALLATION OF NEW HVAC EQUIPMENT. SEE MECHANICAL AND STRUCTURAL DRAWINGS.
021	REMOVE EXISTING CONDENSER UNIT AND PIPING. PREPARE FOR ROOF REPAIR.
022	REMOVE EXISTING EXHAUST FAN. PREPARE FOR ROOF REPAIR.
023	SAWCUT EXISTING ROOF FOR NEW RTU. COORDINATE WITH MECHANICAL AND STRUCTURAL DRAWINGS.
024	CORE DRILL ROOF DECK REQUIRED FOR POWER AND LINESETS FOR CONDENSER UNITS. COORDINATE LOCATIONS WITH DRAWING TES-M-109

1 ROOF DEMO PLAN

SCALE: 1"=20'-0"

LEGEND

KEY NOTES

GENERAL NOTES

IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

REG. EXP DATE: 12-31-25

03-18-24

7 GURNEE DRIVE
STONY POINT NY 10980

THROUGH WALL LOUVER

NEW UNIT VENT
UV-00

NEW FAN COIL UNIT
FC-00

NEW CEILING CASSETTE
CC-00

LF

LE

LINEAR FEET OF LINE
SET ENCLOSURE

FLOOR PATCHING TO MATCH
EXISTING PATTERN

SUPPLY REGISTER

RETURN

ACCESS PANEL

LEGEND

A1

INSTALL NEW UNIT VENTILATOR (UV). SEE MECHANICAL DRAWINGS

A2

VOID.

A3

INSTALL NEW AIR HANDLER UNIT (AHU). SEE MECHANICAL DRAWINGS

A4

INSTALL NEW CEILING CASSETTES (CC). SEE MECHANICAL DRAWINGS

A5

INSTALL NEW SUPPLY/RETURN DIFFUSER AND REPLACE CEILING TILES WHERE
REQUIRED. SEE MECHANICAL DRAWINGS FOR LOCATION OF DIFFUSERS.

A7

PATCH FLOOR AS REQUIRED WHERE HVAC UNIT WAS REMOVED.

A8

PATCH SOFFIT WHERE LOUVER WAS REMOVED AND MATCH FINISH TO EXISTING.

A9

PROVIDE NEW LOUVER L-1. SEE MECHANICAL DRAWINGS

A10

PATCH EXISTING FLOOR AND WALL WHERE EXISTING UV IS REMOVED

A11

VOID

A12

PROVIDE METAL LINE SET ENCLOSURES AS PER DETAIL 1/A-610. COORDINATE WITH MECHANICAL
DRAWINGS FOR LOCATIONS.

KEY NOTES

1. CONTRACTOR SHALL BE REQUIRED TO CORE DRILL ALL HOLES IN WALLS, FLOORS AND CEILINGS TO
FACILITATE NEW LINESETS, ELECTRICAL CONDUITS AND CONDENSATE LINES.

2. PATCH EXISTING VCT FLOORING AT BASE UNDER UNI-VENT TO MATCH EXIST. AS REQ'D.

3. PATCH EXISTING PLASTER/GYPSUM AT ALL UV LOCATIONS TO MATCH EXIST. AS REQ'D.

4. EXT'G CLG. TILE SHALL BE REMOVED AS REQ'D. TO ALLOW INSTALLATION AND REMOVAL OF HVAC
DEVICES, LINESETS, AND ELECTRICAL. AS REQ'D FOR THIS WORK. REINSTALLATION OF ALL CLG'S AS
REQ'D. COORDINATE WITH MECHANICAL DRAWINGS. COORDINATE WITH A-400 SERIES DRAWINGS;
REFLECTED CEILING PLANS.

5. FIRE ALARM DEVICES TO BE REMOVED, TEMPORARILY STORED AND RE-INSTALLED AS REQ'D.

6. PROVIDE SPLASH BLOCKS AT ALL UV'S IN FIRST FLOOR.

GENERAL NOTES

1

PROPOSED SECOND FLOOR PLAN

SCALE: 1"=20'-0"

0

1/2

7

IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

Drawn by

Checked by

Project No.

Scale

Date

JR

MS/JC

43041

AS NOTED

03-18-24

MECHANICAL
& ELECTRICAL
ENGINEER:

GREENMAN
PEDERSEN, INC
400 BELLA VILLEAVENUE
MONTEBELLO, NY 10901

STRUCTURAL
ENGINEER:

GREENMAN
PEDERSEN, INC
400 BELLA VILLEAVENUE
MONTEBELLO, NY 10901

UNIVENT REPLACEMENT AT
STONY POINT, THIELLS
AND WEST HAVERSTRAW
ELEMENTARY SCHOOL

SPS SED# 50-02-01-06-0-014-012
TSS SED# 50-02-01-06-0-025-018
WHS SED# 50-02-01-06-0-024-015
7 GUNNE DRIVE
STONY POINT, NY 10980

COUNTY OF ROCKLAND

MSA

MICHAEL SHIALE ARCHITECTS, L.L.P.
140 Park Avenue New City, NY 10656 Tel 914-708-9200
www.mshale.com

PROPOSED
SECOND
FLOOR PLAN

Drawing No.

TES-A-102

Revisions

0

03-04-25

BIDDING DOCUMENTS

No.

Date

REG. EXP DATE: 12-31-25

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EXISTING THROUGH WALL LOUVER

SUPPLY REGISTER

EXISTING SUPPLY REGISTER

NEW UNIT VENT
UV-00

NEW FAN COIL UNIT
FC-00

NEW CEILING CASSETTE
CC-00

NEW RELIEF VENT ENCLOSURE

2' X 2' SUSPENDED CLG GRID

2' X 2' RECESSED LIGHT

RETURN

CEILING ACCESS PANEL

CEILING ELEVATION

EXHAUST

LEGEND

A40

VOID.

A41

VOID

A42

INSTALL NEW 2X2 SUSPENDED ACT-1 CEILING. NEW CEILING HEIGHT TO MATCH EXISTING.

A43

INSTALL NEW 2X2 RECESSED LIGHTING IN NEW CEILING GRID.

A44

BASE BID: MODIFY AND REINSTALL EXISTING ACT CEILING/CEILING, CEILING LIGHTS FOR NEW HVAC EQUIPMENT AND REFRIGERANT PIPING AS REQUIRED.
ALTERNATE-200: REPLACE EXISTING CEILING/CEILING TILE, GRID AND LIGHTING WITH NEW ACT-1 AND LIGHTING

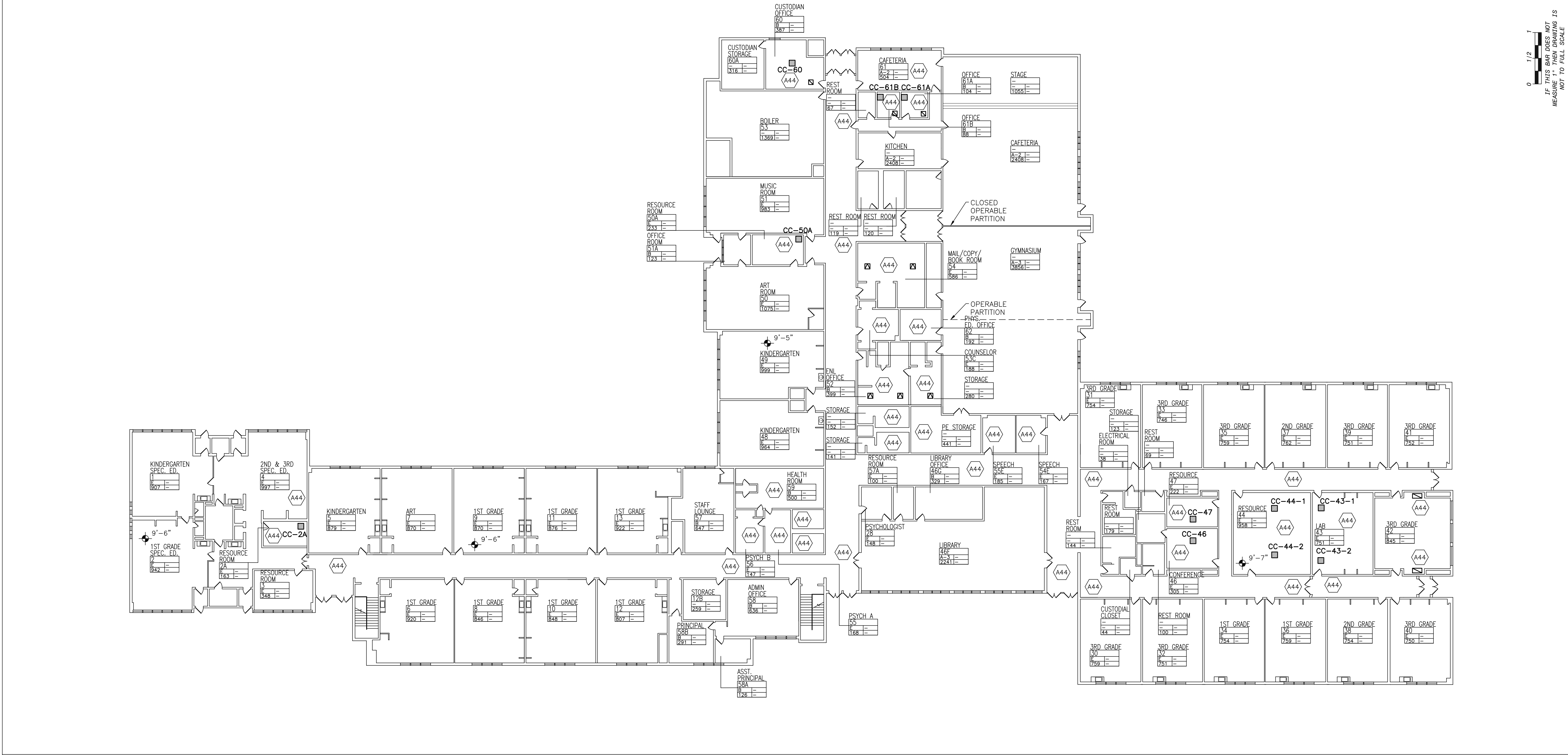
KEY NOTES

1. CONTRACTOR SHALL BE REQUIRED TO CORE DRILL ALL HOLES IN WALLS, FLOORS AND CEILINGS TO FACILITATE NEW LINESETS, ELECTRICAL CONDUITS AND CONDENSATE LINES.

2. EXT'G CLG. TILE SHALL BE REMOVED AS REQ'D. TO ALLOW INSTALLATION AND REMOVAL OF HVAC DEVICES, LINESETS, AND ELECTRICAL, AS REQ'D FOR THIS WORK. REINSTALLATION OF ALL CLG'S AS REQ'D. COORDINATE WITH MECHANICAL DRAWINGS.

3. FIRE ALARM DEVICES, SECURITY CAMERA, AND OTHER CEILING MOUNTED DEVICES TO BE REMOVED, TEMPORARILY STORED AND RE-INSTALLED AS REQ'D.

GENERAL NOTES



1

PROPOSED FIRST FLOOR RCP

SCALE: 1"=20'-0"

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Drawn by

Checked by

Project No.

Scale

Date

GREENMAN PEDERSEN, INC

400 BELLA BOULEVARD

MONTEBELLO, NY 10901

GREENMAN PEDERSEN, INC

400 BELLA BOULEVARD

MONTEBELLO, NY 10901

UNIVENT REPLACEMENT AT

STONY POINT, THIELLS

AND WEST HAVERSTRAW

ELEMENTARY SCHOOL

SPES SED# 50-02-01-08-0-014-012

TES SED# 50-02-01-08-0-025-018

WHES SED# 50-02-01-08-0-024-015

7 TURNER DRIVE

STONY POINT, NY 10980

COUNTY OF ROCKLAND

MSA

MICHAEL SHILALE ARCHITECTS, L.L.P.

140 Park Avenue North, 5th Fl., New York, NY 10018 Tel: 212-765-7620

www.shilale.com

Drawing Title

PROPOSED FIRST FLOOR RCP

Drawing No.

TES-A-401

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PLAN NORTH

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1", THEN DRAWING IS NOT TO FULL SCALE

—

EXISTING THROUGH WALL LOUVER

☒

SUPPLY REGISTER

☒

EXISTING SUPPLY REGISTER

NEW UNIT VENT
UV-00

NEW FAN COIL UNIT
FC-00

NEW CEILING CASSETTE
CC-00

RA

NEW RELIEF VENT ENCLOSURE

2' x 2' SUSPENDED CLG GRID

A

2' X 2' RECESSED LIGHT

RETURN

CEILING ACCESS PANEL

X'-X"

CEILING ELEVATION

EXHAUST

LEGEND

(A40)

VOID.

(A41)

VOID

(A42)

INSTALL NEW 2X2 SUSPENDED ACT-1 CEILING. NEW CEILING HEIGHT TO MATCH EXISTING.

(A43)

INSTALL NEW 2X2 RECESSED LIGHTING IN NEW CEILING GRID.

(A44)

BASE BID: MODIFY AND REINSTALL EXISTING ACT CEILING/CEILING, CEILING LIGHTS FOR NEW HVAC EQUIPMENT AND REFRIGERANT PIPING AS REQUIRED.
ALTERNATE-200: REPLACE EXISTING CEILING/CEILING TILE, GRID AND LIGHTING WITH NEW ACT-1 AND LIGHTING

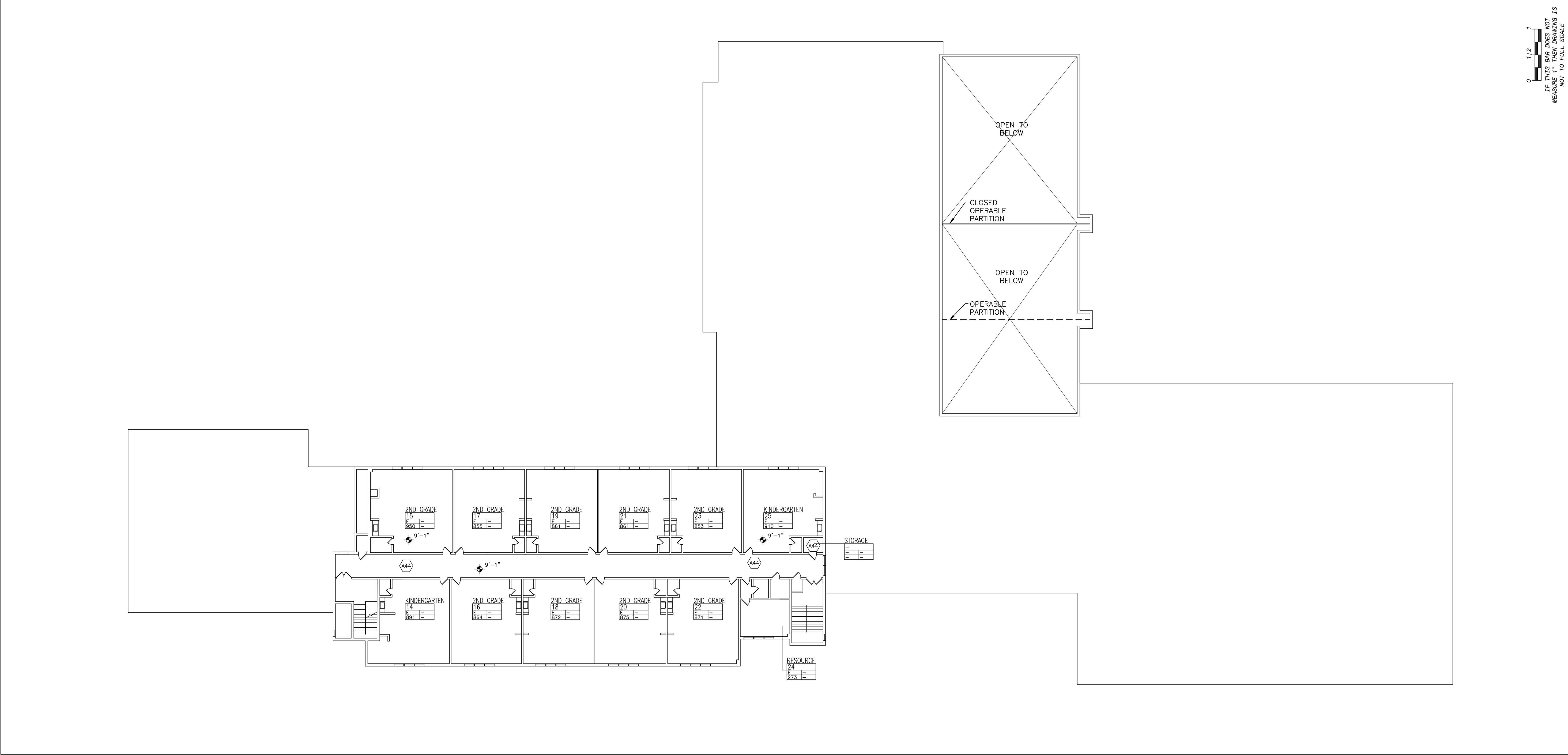
KEY NOTES

1. CONTRACTOR SHALL BE REQUIRED TO CORE DRILL ALL HOLES IN WALLS, FLOORS AND CEILINGS TO FACILITATE NEW LINESETS, ELECTRICAL CONDUITS AND CONDENSATE LINES.

2. EXT'G CLG. TILE SHALL BE REMOVED AS REQ'D. TO ALLOW INSTALLATION AND REMOVAL OF HVAC DEVICES, LINESETS, AND ELECTRICAL, AS REQ'D FOR THIS WORK. REINSTALLATION OF ALL CLG'S AS REQ'D. COORDINATE WITH MECHANICAL DRAWINGS.

3. FIRE ALARM DEVICES, SECURITY CAMERA, AND OTHER CEILING MOUNTED DEVICES TO BE REMOVED, TEMPORARILY STORED AND RE-INSTALLED AS REQ'D.

GENERAL NOTES



1

PROPOSED SECOND FLOOR REFLECTED CEILING PLAN

SCALE: 1"=20'-0"



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Drawing Title

PROPOSED
SECOND FLOOR
RCP PLAN

Drawing No.

TES-A-402

UNIVENT REPLACEMENT AT
STONY POINT, THIELLS
AND WEST HAVERSTRAW
ELEMENTARY SCHOOL

SPES SED# 50-02-01-08-0-014-012
TES SED# 50-02-01-08-0-025-018
WHES SED# 50-02-01-08-0-024-015
7 CURRIER DRIVE
STONY POINT, NY 10980
COUNTY OF ROCKLAND

GREENMAN
PEDERSEN, INC
400 BELLA BOULEVARD
MONTEBELLO, NY 10901

GREENMAN
PEDERSEN, INC
400 BELLA BOULEVARD
MONTEBELLO, NY 10901

Drawn by
JR

Checked by
MS/JC

Project No.

Scale

Date

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MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

0

1/2

1

0

1/2

1

0

1/2

1

REG. EXP DATE: 12-31-25

No.

Revisions

0 1/2 1

IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

1. NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB)
2. NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°F (WB)
3. EFFICIENCY VALUES FOR EER, IEEER, COP ARE BASED ON AHRI 1230 TEST METHOD FOR MIXTURE OF DUCTED & NON-DUCTED INDOOR UNITS.
4. FOR SYSTEMS WITH MULTIPLE MODULES, REFRIGERANT PIPE DIMENSIONS INDICATE TOTAL SYSTEM COMBINED PIPING DOWNSTREAM OF MODULE TWINNING
5. ADDED FIELD CHARGE LISTED IS IN ADDITION TO FACTORY CHARGE, THIS MUST BE UPDATED BASED UPON FINAL AS-BUILT PIPING LAYOUT.
6. ADD COLD WEATHER LOW AMBIENT KIT.

EXHAUST GRILL SCHEDULE

INDOOR VRF UNIT SCHEDULE

1. NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB)
2. NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°F (WB)
3. SEE SCHEMATIC PIPING/CONTROL DIAGRAM FOR INDICATION OF REQUIRED INDOOR UNIT REMOTE CONTROLLERS, SYSTEM CONTROLLERS, AND INTEGRATION DEVICES.
5. FULL DEMAND CORRECTED CAPACITY INCLUDES DE-RATE ASSOCIATED WITH INDOOR VS. OUTDOOR CONNECTED CAPACITY INDICATED ON OUTDOOR UNIT
6. PROVIDE UNIT MOUNTED DISCONNECT SWITCH.

OUTDOOR AIR UNIT SCHEDULE

1. NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB)
2. NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°F (WB)
3. SEE SCHEMATIC PIPING/CONTROL DIAGRAM FOR INDICATION OF REQUIRED INDOOR UNIT REMOTE CONTROLLERS, SYSTEM CONTROLLERS, AND INTEGRATION DEVICES.
4. FULL DEMAND CORRECTED CAPACITY INCLUDES DE-RATE ASSOCIATED WITH INDOOR VS. OUTDOOR CONNECTED CAPACITY INDICATED ON OUTDOOR UNIT SCHEDULE FOR ASSOCIATED SYSTEM.PARTIAL
5. CORRECTED CAPACITY ASSUMES SUFFICIENT DIVERSITY EXISTS SUCH THAT THE CONNECTED CAPACITY DE-RATE DOES NOT APPLY.IT IS THE DESIGNER'S RESPONSIBILITY TO ENSURE "DIAMOND SYSTEM
6. BUILDER" IS SET IN THE APPROPRIATE OUTPUT CAPACITY SETTING (FULL DEMAND/PARTIAL DEMAND) PRIOR TO GENERATING THIS SCHEDULE.
7. IT IS RECOMMENDED TO ALWAYS BASE HEATING CORRECTED CAPACITY ON FULL DEMAND.
8. MECHANICAL CONTRACTOR TO PROVIDE A FACTORY DISCONNECT. INSTALLATION BY ELECTRICAL CONTRACTOR.

BRANCH CONTROLLER SCHEDULE

1. INCLUDE DIAMONDBACK BALL VALVES BV-SERIES, 700PSIG WORKING PRESSURE, FULL PORT, 410A RATED.
2. FOR SUB BC CONTROLLER CMB-P-NU-GB1 OR -GB, THE TOTAL CONNECTABLE INDOOR UNIT CAPACITY CAN BE 126,000 BTUS OR LESS. IF TWO SUB BC CONTROLLERS ARE USED, THE TOTAL INDOOR UNIT CAPACITY CONNECTED TO BOTH SUB BC CONTROLLERS ALSO CANNOT EXCEED 126,000 BTUS. FOR SUB BC CONTROLLER CMB-P1016NU-HB1 THE TOTAL CONNECTABLE INDOOR UNIT CAPACITY CAN BE 126,000 BTUS OR LESS. HOWEVER, IF TWO SUB CONTROLLERS ARE USED, AND ONE OF THEM IS CMB-1016NU-HB1, THE TOTAL INDOOR UNIT CAPACITY CONNECTED TO BOTH SUB CONTROLLERS MUST NOT EXCEED 168,000 BTUS.

Revisions

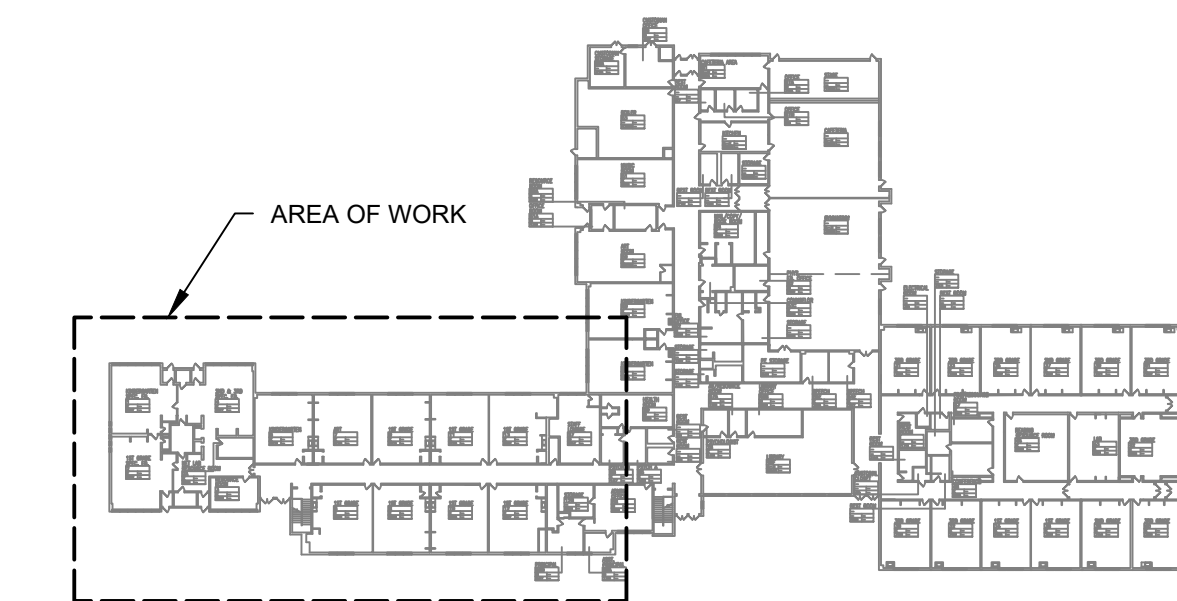
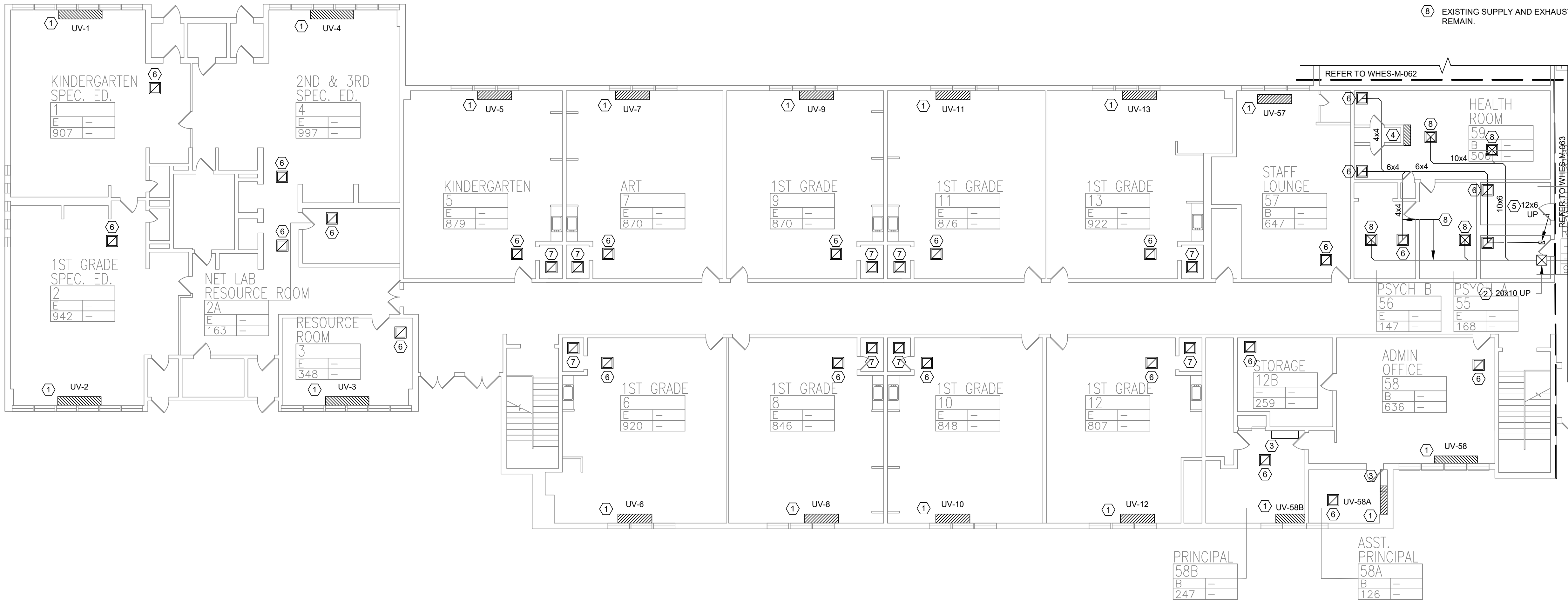
.....

REENMAN
EDERSEN, INC
EXECUTIVE BOULEVARD
SUITE 202
WESTFERN, NY 10801
TEL. NO. : MNY-2300128.00

AT STONY POINT,
THIELS, WEST HAV
ELEMENTARY SCHOOL



Drawing Title
MECHANICAL
SCHEDULES - 3



KEY PLAN



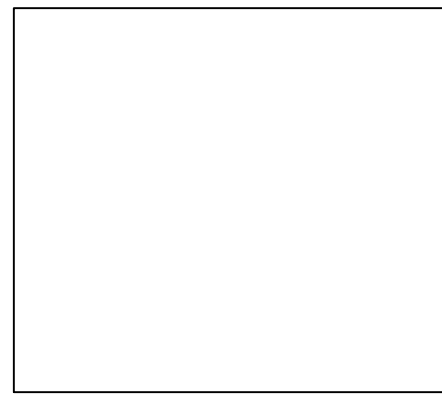
KEYED NOTES:

- 1 DISCONNECT, REMOVE UNIT VENTILATOR CUT AND CAP HOT WATER SUPPLY AND RETURN TEMPORARILY FOR REUSE. EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN. DISCONNECT ASSOCIATED THERMOSTAT. TYP. 13. SEE DETAIL 2/WHES-M-501.
- 2 EXISTING FRESH AIR DUCT UP TO SECOND FLOOR HEATING VENTILATOR UNIT TO REMAIN.
- 3 EXISTING WALL HUNG UNIT TO REMAIN.
- 4 DISCONNECT, REMOVE WALL HUNG UNIT, AND ASSOCIATED PIPING AND THERMOSTAT.
- 5 EXISTING EXHAUST TO UP TO ROOF FAN TO REMAIN.
- 6 EXISTING ROOM EXHAUST TO REMAIN.
- 7 EXISTING BATHROOM EXHAUST TO REMAIN.
- 8 EXISTING SUPPLY AND EXHAUST DISTRIBUTION SYSTEM TO REMAIN.

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IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

1 FIRST FLOOR PARTIAL REMOVAL - MECHANICAL - 1
SCALE: 3/32" = 1'-0"

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKLAND, NY 10961 PROJ. NO. : MNY-500128-00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKLAND, NY 10961
Mechanical Structural Engineer:	Structural Engineer:

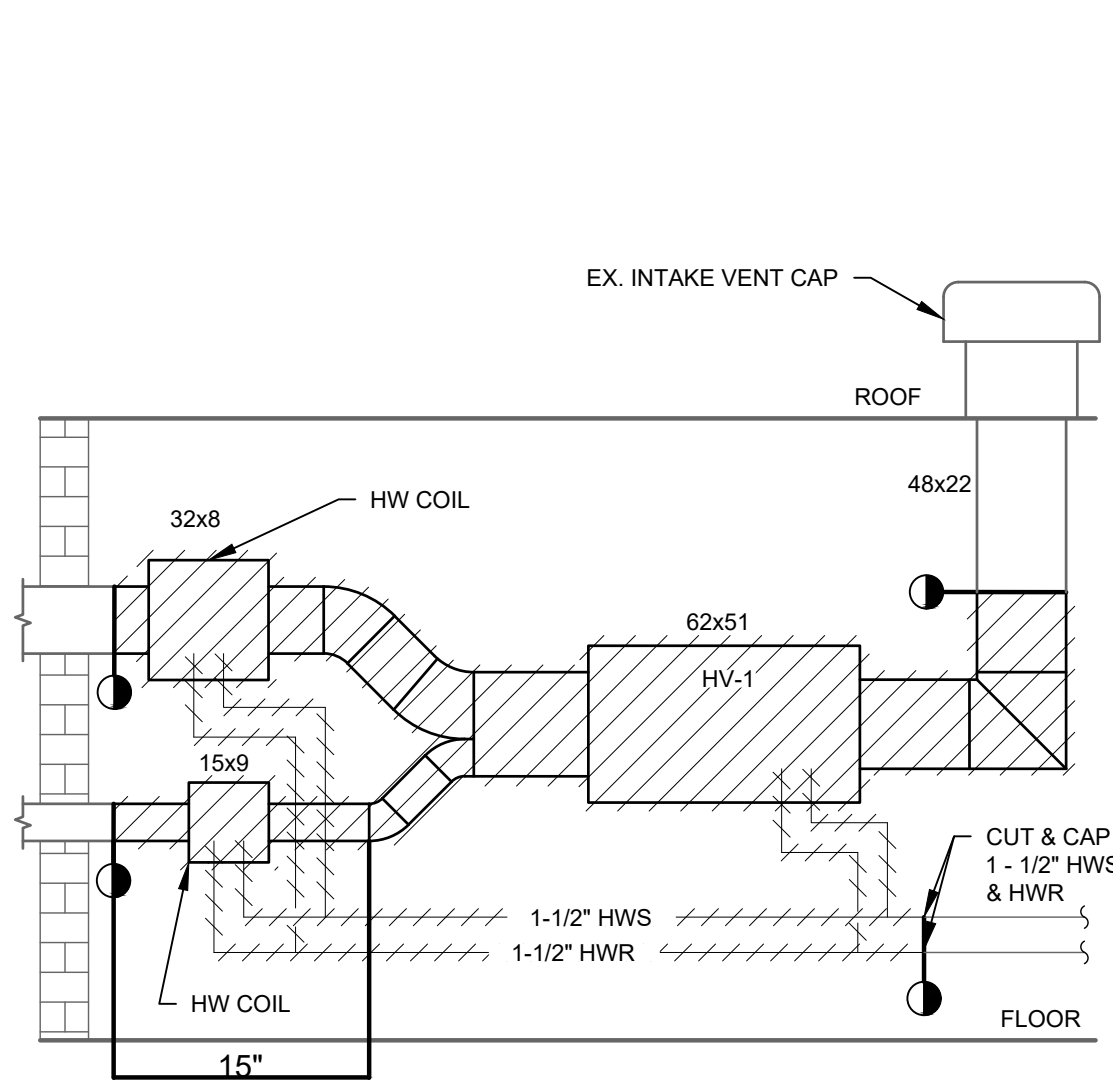
**UNIVENT REPLACEMENT
AT STONY POINT,
THIELS, WEST HAV
ELEMENTARY SCHOOL**
SSD# 50-02-01-06-0-014-XXX
SSD# 50-02-01-06-0-024-XXX
SSD# 50-02-01-06-0-024-XXX
NY 10961
BROOKLAND COUNTY



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140 Park Avenue New City, NY 10956 Tel 845-708-9200
www.shilale.com

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Drawing Title
**FIRST FLOOR PARTIAL
REMOVAL -
MECHANICAL - 1**

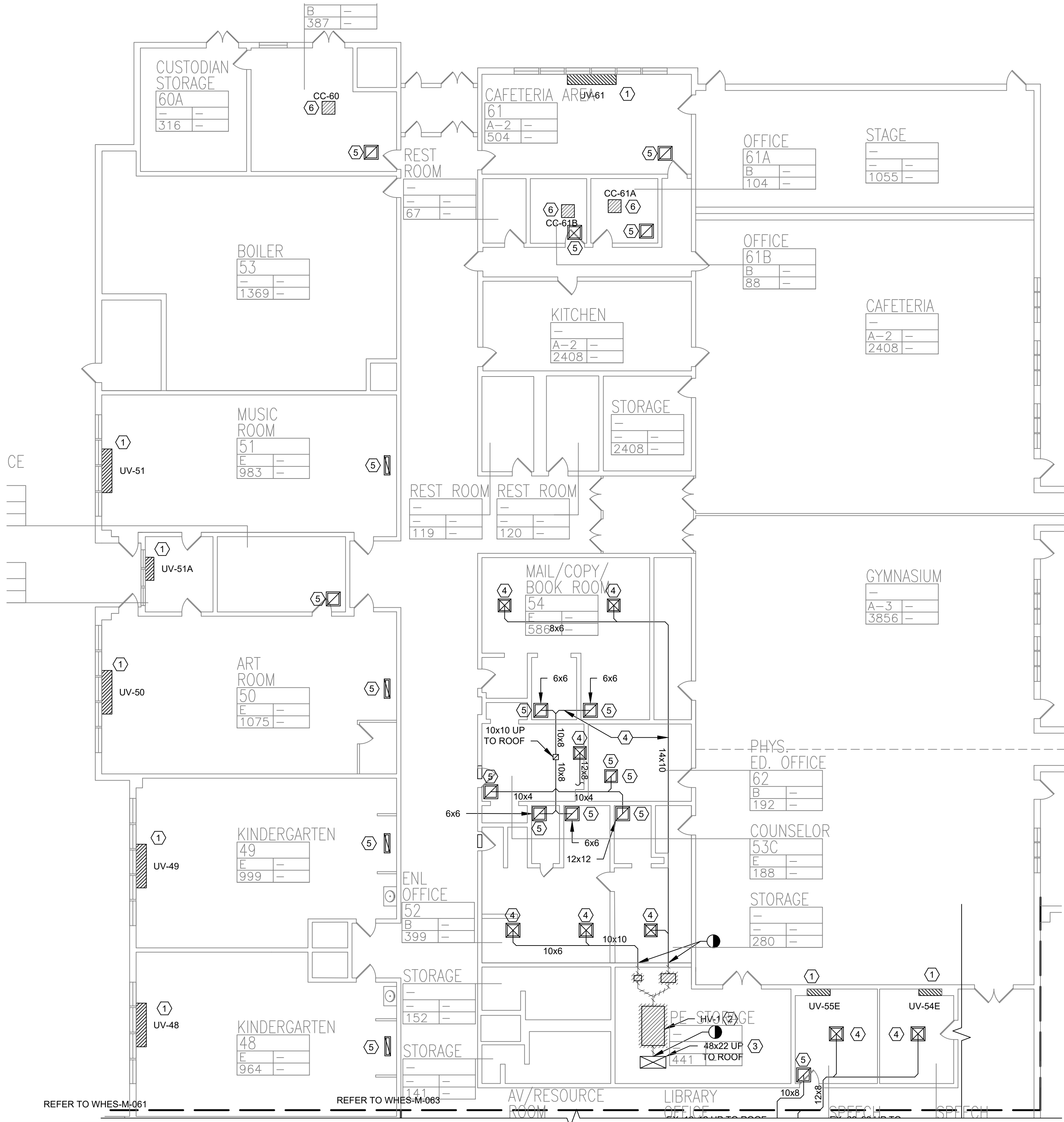
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TES-M-061



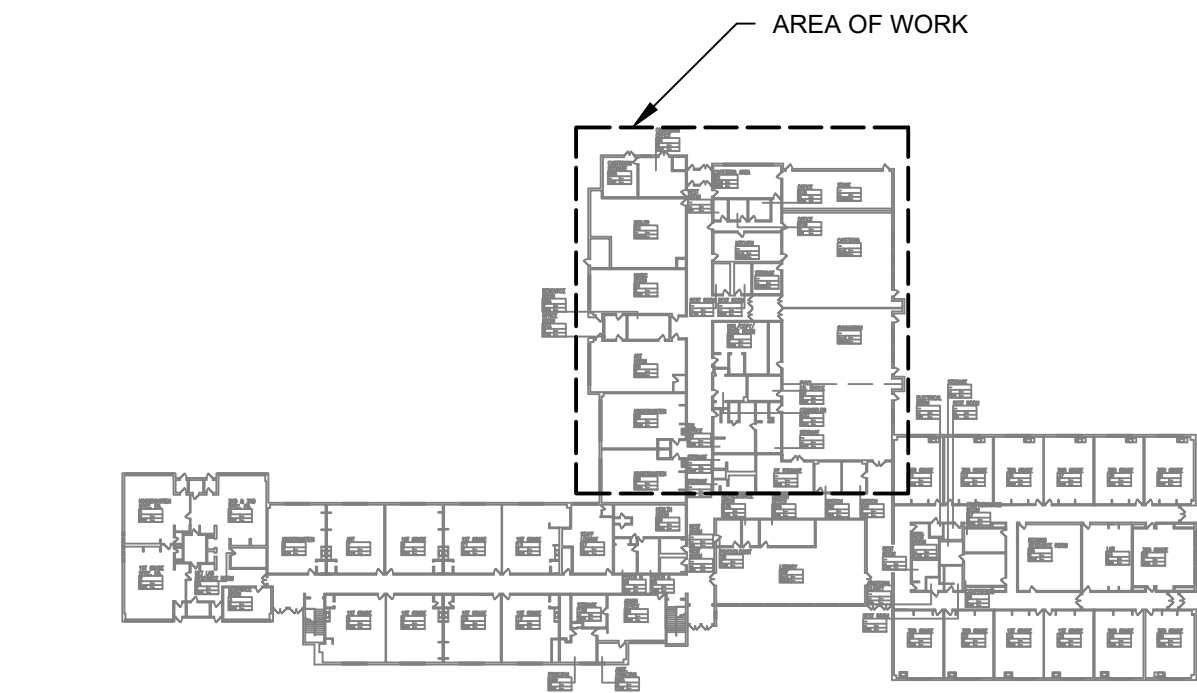
2 HV-1 REMOVAL DETAIL
SCALE: NOT TO SCALE



3 HV-1 REMOVAL IMAGE
SCALE: NOT TO SCALE



1 FIRST FLOOR PARTIAL REMOVAL - MECHANICAL - 2
SCALE: 3/32" = 1'-0"



KEY PLAN

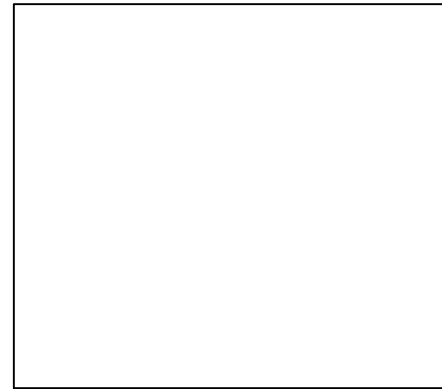


KEYED NOTES:

- 1 DISCONNECT, REMOVE UNIT VENTILATOR, CUT AND CAP HOT WATER SUPPLY AND RETURN TEMPORARILY FOR REUSE. EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN. DISCONNECT ASSOCIATED THERMOSTAT, TYP. 5. SEE DETAIL 2/M-051
- 2 DISCONNECT AND REMOVE EXISTING HEATING VENTILATOR BLOWER, ASSOCIATED DUCTWORK AND HEATING VENTILATOR COILS. CAP HWS AND HWR. SEE DETAIL 2/M062 CONTRACTOR TO RELOCATE STORED ITEMS LOCATED BELOW HEATING VENTILATOR BEFORE REMOVAL.
- 3 EXISTING FRESH AIR DUCT UP TO ROOF TO REMAIN.
- 4 EXISTING SUPPLY DIFFUSERS AND DUCTWORK TO REMAIN.
- 5 EXISTING ROOM EXHAUST AND DUCTWORK TO REMAIN.
- 6 DISCONNECT, REMOVE EXISTING CEILING CASSETTE, REMOVE ALL PIPING AND CONDENSATE UNIT ON ROOF. PATCH AS REQUIRED.

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IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

Revisions	
No.	Date
1	03-04-25
BIDDING DOCUMENTS	



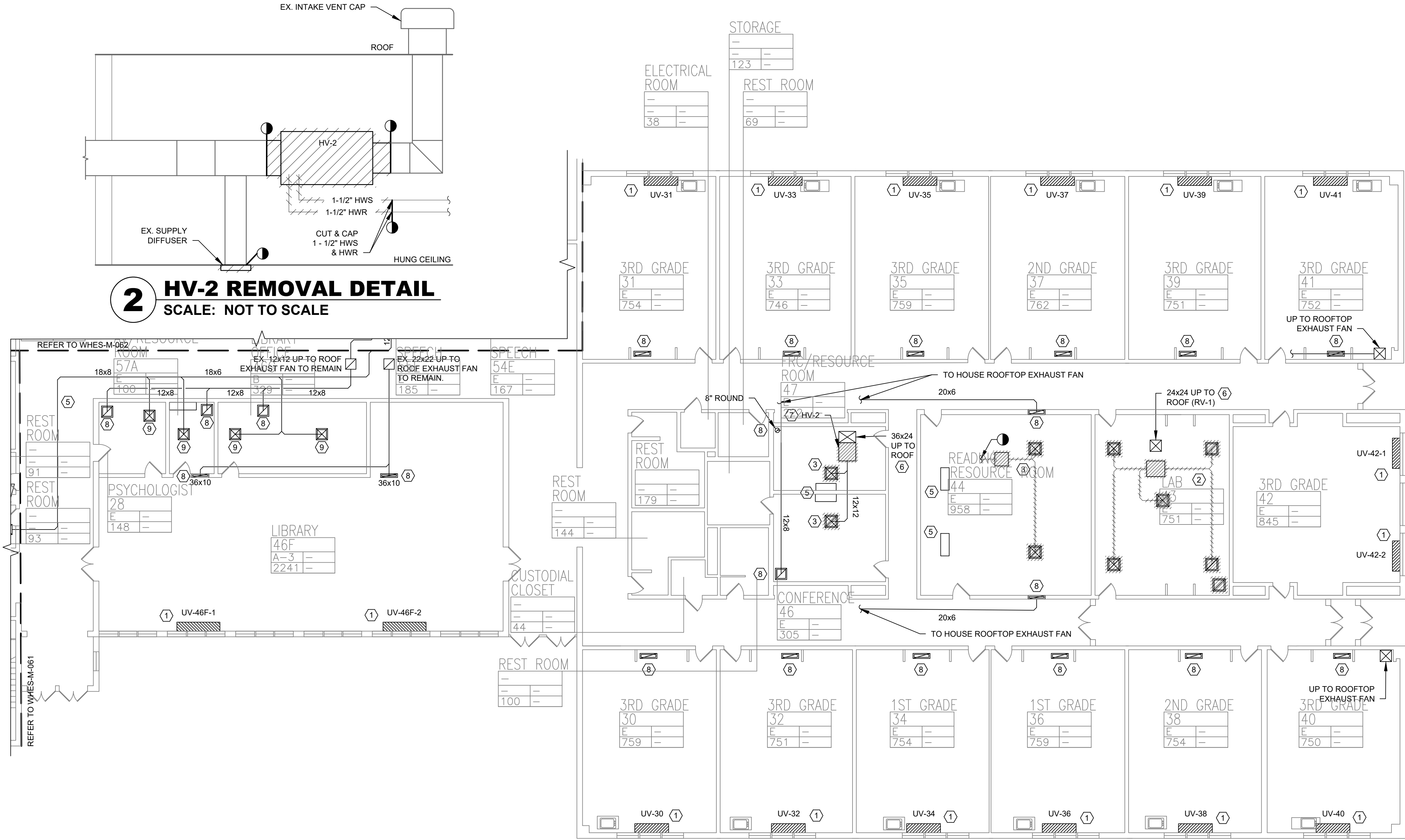
Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKLAND, NY 10961 PROJ. NO. : MNY-2000128.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKLAND, NY 10961
Mechanical Structural Engineer:	Structural Engineer:

**UNIVENT REPLACEMENT
AT STONY POINT,
THIELS, WEST HAV
ELEMENTARY SCHOOL**
SSD# 50-02-01-06-0-014-XXX
SSD# 50-02-01-06-0-025-XXX
SSD# 50-02-01-06-0-024-XXX
140 Park Avenue New City, NY 10956 Tel 845-708-9200
www.shilale.com
ROCKLAND COUNTY

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140 Park Avenue New City, NY 10956 Tel 845-708-9200
www.shilale.com

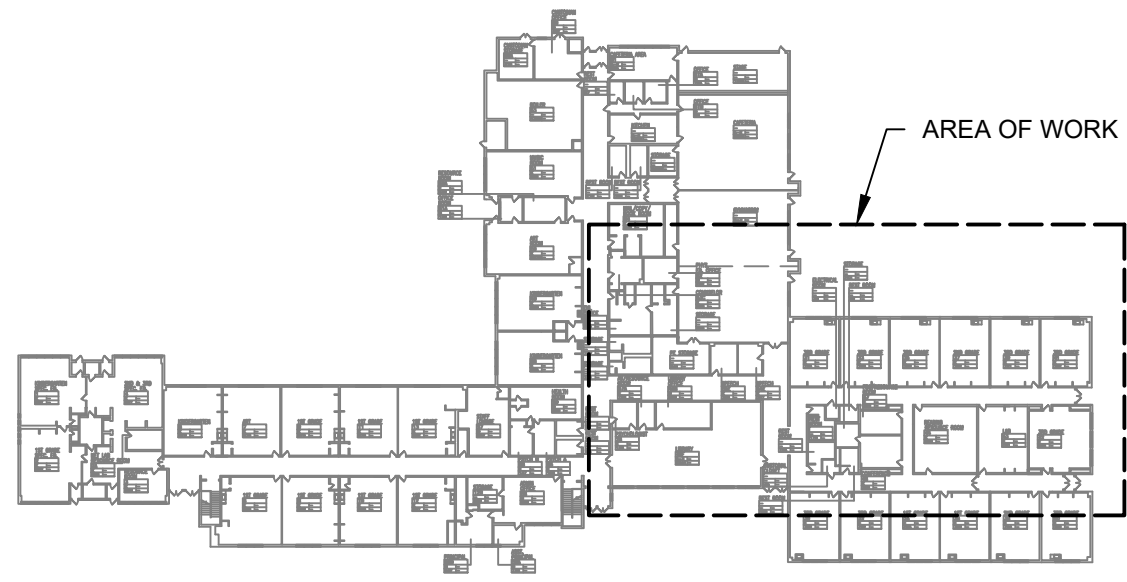
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**FIRST FLOOR PARTIAL
REMOVAL -
MECHANICAL - 2**
Drawing No.
TES-M-062



1 FIRST FLOOR PARTIAL REMOVAL - MECHANICAL - 3
SCALE: 3/32" = 1'-0"

KEYED NOTES:

- 1 DISCONNECT, REMOVE UNIT VENTILATOR CUT AND CAP HOT WATER SUPPLY AND RETURN TEMPORARILY FOR REUSE. EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN. DISCONNECT ASSOCIATED THERMOSTAT. TYP. 16. SEE DETAIL 2/M-501.
- 2 EXISTING RESERC. SYSTEM TO BE REMOVED.
- 3 EXISTING SUPPLY DIFFUSERS TO BE REMOVED.
- 4 EXISTING FRESH AIR DUCT TO REMAIN.
- 5 EXISTING WALL HUNG UNITS TO REMAIN.
- 6 EXISTING FRESH AIR INTAKE UP THROUGH ROOF TO REMAIN.
- 7 EXISTING HEATING VENTILATOR UNIT TO BE REMOVED. SEE DETAIL 2/M063.
- 8 EXISTING ROOM EXHAUST TO REMAIN.
- 9 EXISTING SUPPLY DIFFUSER AND SYSTEM TO REMAIN.



KEY PLAN



Revisions	
No.	Date
1	03-04-25 BIDDING DOCUMENTS



Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKLAND, NY 10961 PROJ. NO. : MNY-5000128.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKLAND, NY 10961
Mechanical Structural Engineer:	Structural Engineer:

**UNIVENT REPLACEMENT
AT STONY POINT,
THIELS, WEST HAV
ELEMENTARY SCHOOL**
SSD# 50-02-01-06-0-014-XXX
SSD# 50-02-01-06-0-025-XXX
SSD# 50-02-01-06-0-024-XXX
NY DESIGN NO. 10094
ROCKLAND COUNTY

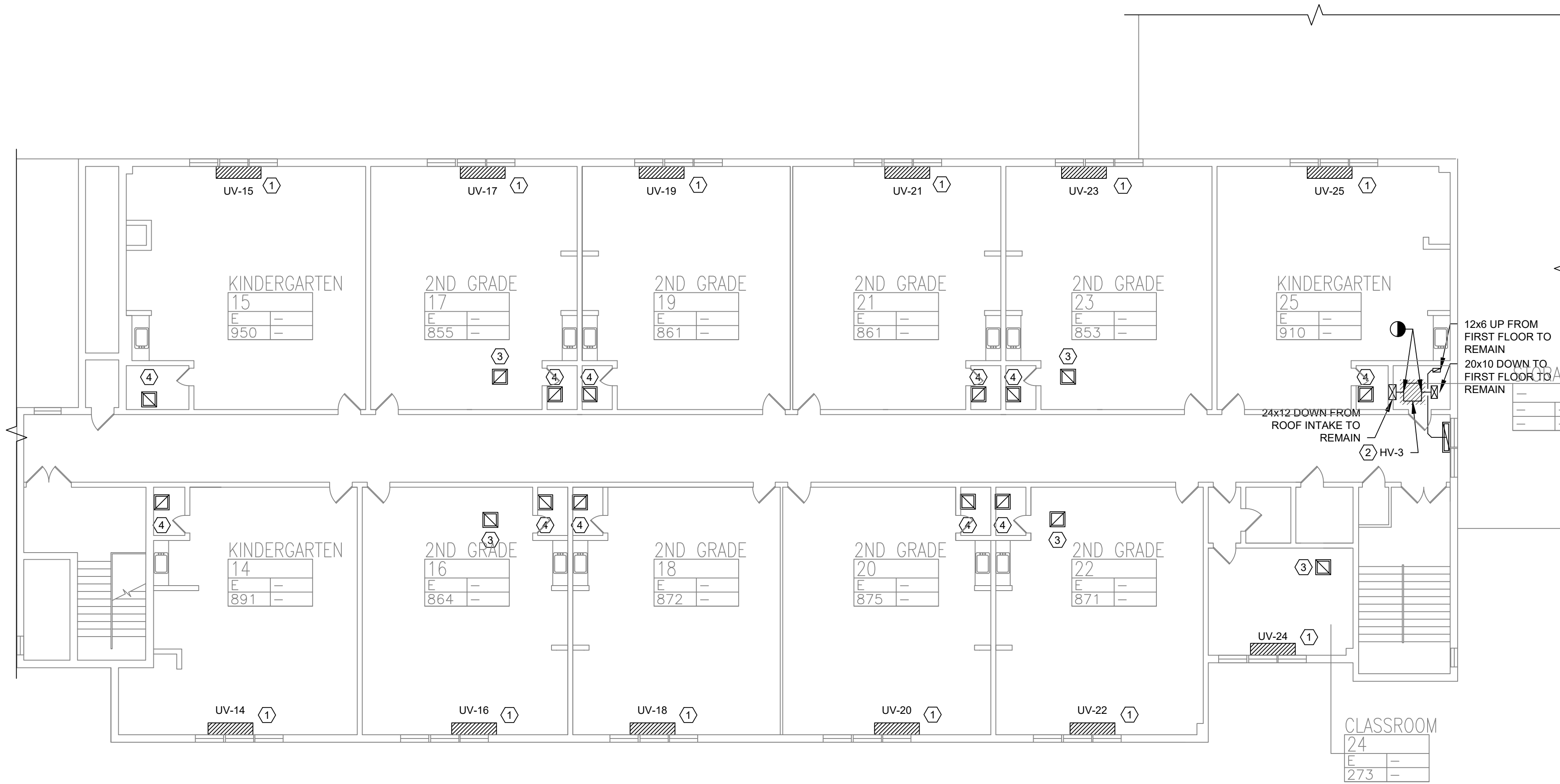


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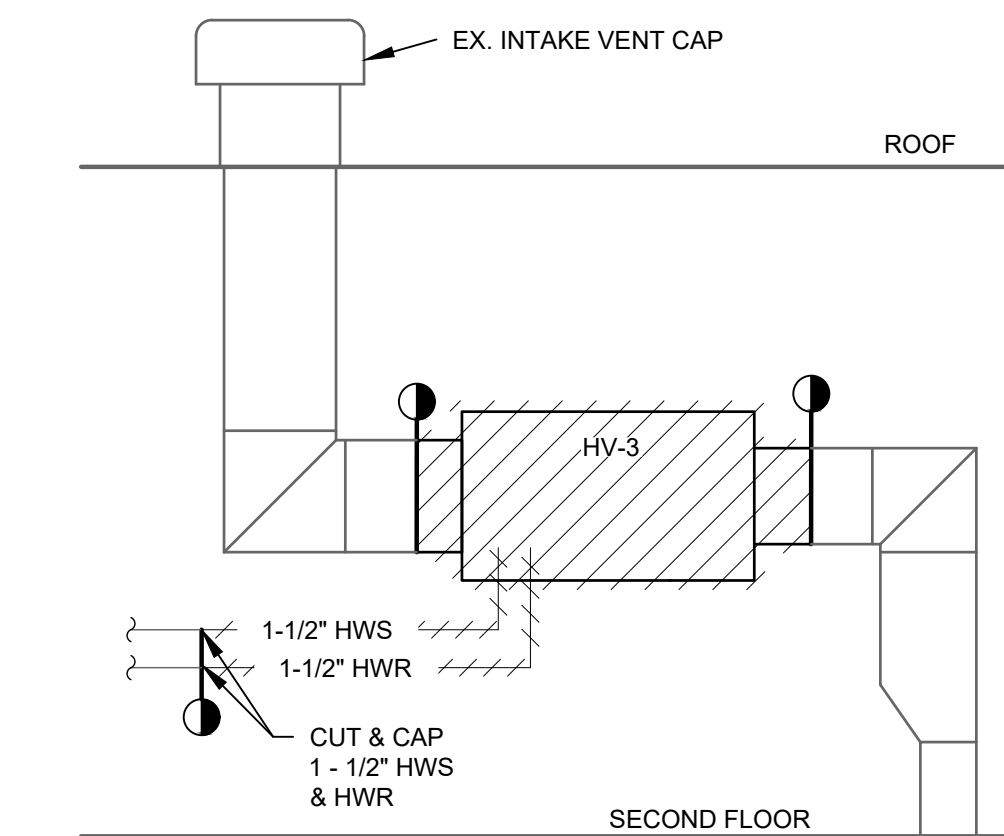
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**FIRST FLOOR PARTIAL
REMOVAL -
MECHANICAL - 3**

Drawing No.
TES-M-063

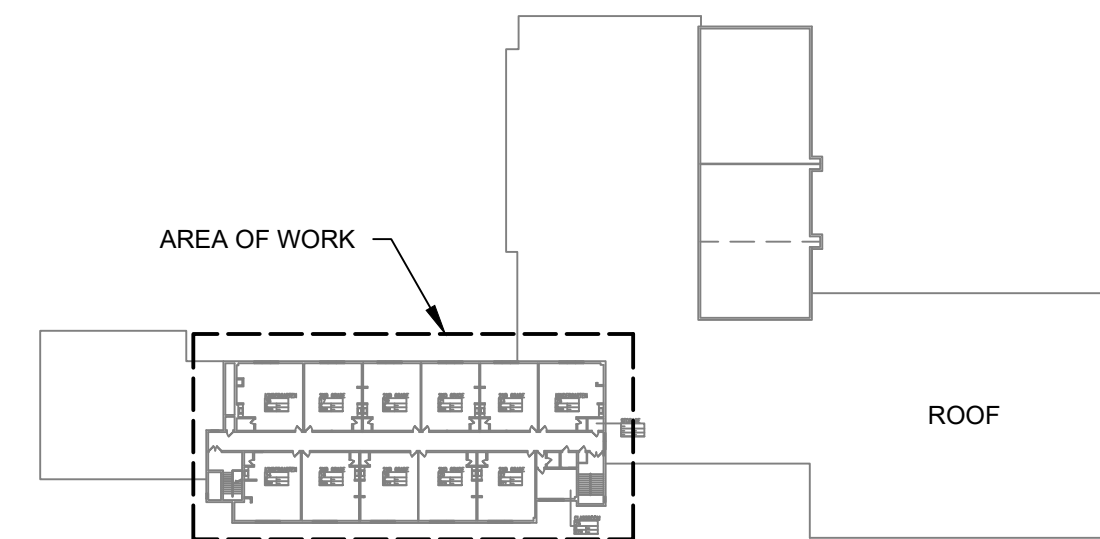
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1 SECOND FLOOR REMOVAL - MECHANICAL
SCALE: 3/32" = 1'-0"



2 HV-3 REMOVAL DETAIL
SCALE: NOT TO SCALE

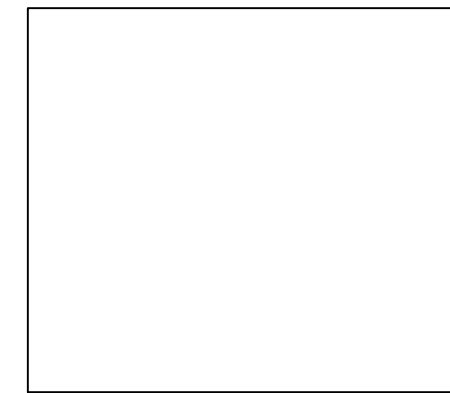


KEYED NOTES:

- 1 DISCONNECT, REMOVE UNIT VENTILATOR. CUT AND CAP HOT WATER SUPPLY AND RETURN TEMPORARILY FOR REUSE. EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN. DISCONNECT ASSOCIATED THERMOSTAT.
- 2 EXISTING H.V. UNIT TO BE REMOVED. SEE DETAIL 2/TES-M-064.
- 3 EXISTING ROOM EXHAUST TO REMAIN.
- 4 EXISTING BATHROOM EXHAUST TO REMAIN.

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IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



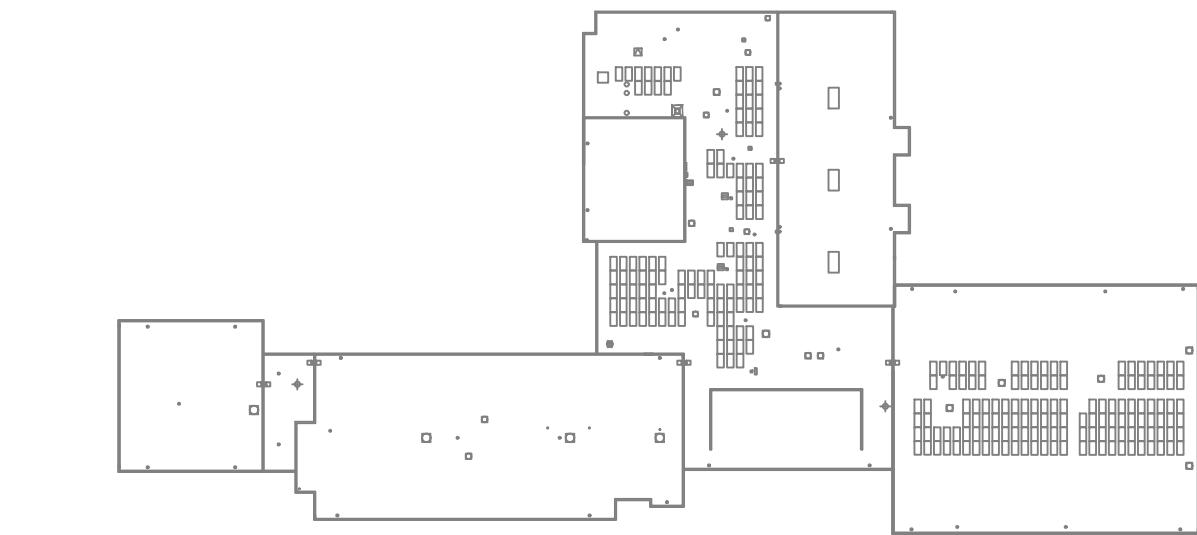
Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUFFERN, NY 10901 PROJ. NO. : MNY-5000128-00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUFFERN, NY 10901
Mechanical Structural Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAV ELEMENTARY SCHOOL SSD# 50-02-01-06-0-014-XXX SSD# 50-02-01-06-0-025-XXX SSD# 50-02-01-06-0-024-XXX NY DESIGN NO. 10094 BROOKLAND COUNTY
--

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SECOND FLOOR REMOVAL - MECHANICAL	TES-M-064
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KEY PLAN



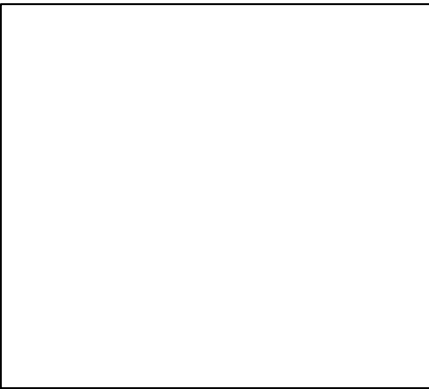
KEYED NOTES:

- ① EXHAUST FAN TO REMAIN AND BALANCE AS NECESSARY.
- ② FRESH AIR INTAKE FOR FRESH AIR SYSTEM TO REMAIN.
- ③ EXISTING CONDENSER FOR EXISTING WALL HUNG UNIT TO REMAIN.



1 ROOF REMOVAL - MECHANICAL
SCALE: 3/64" = 1'-0"

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD ROCKLAND, NY 10961 PROJ. NO. : MNY-5000128.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD ROCKLAND, NY 10961
Mechanical Structural Engineer:	Structural Engineer:

**UNIVENT REPLACEMENT
AT STONY POINT,
THIELS, WEST HAV
ELEMENTARY SCHOOL**
SSD# 50-02-01-06-0-014-XXX
SSD# 50-02-01-06-0-025-XXX
SSD# 50-02-01-06-0-024-XXX
100 HICKORY ROAD
ROCKLAND, NY 10964



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Drawing Title
**ROOF REMOVAL -
MECHANICAL**

Drawing No.
TES-M-065

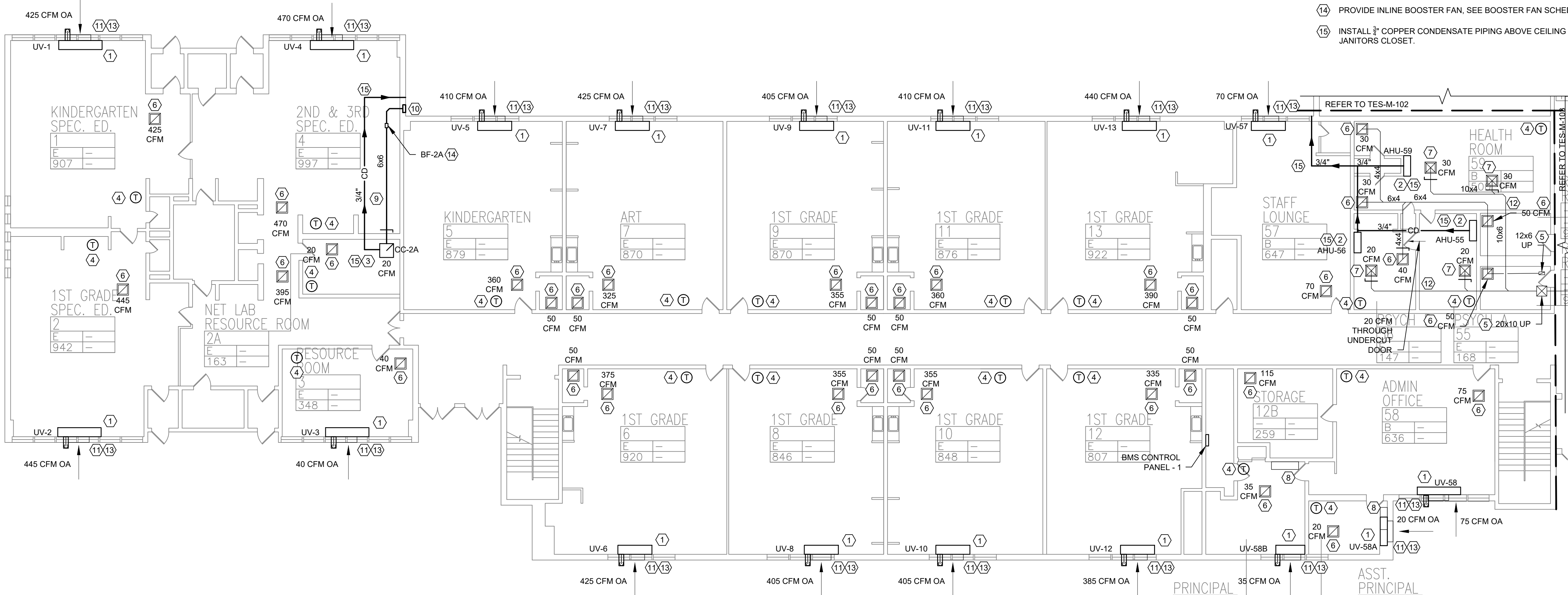
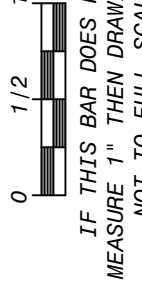
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GENERAL NOTES:

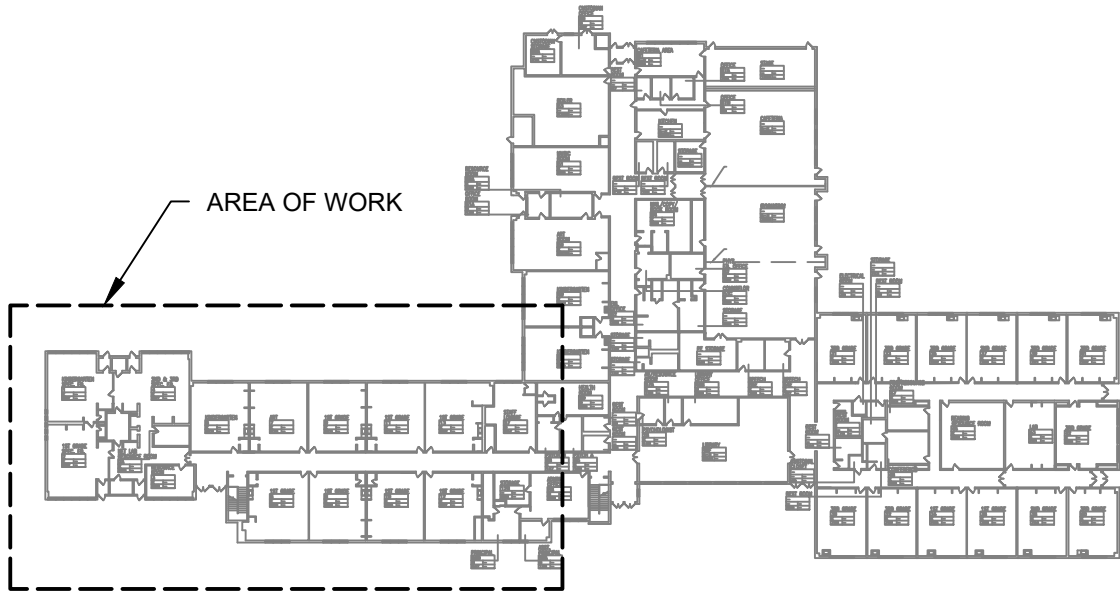
1. RELIEF PATH FOR OUTSIDE AIR IS VIA EXHAUST GRILLES IN EXHAUST ROOMS.

KEYED NOTES:

1. INSTALL AND CONNECT DX HEAT PUMP WITH HOT WATER BACKUP UNIT VENTILATOR. CONNECT HOT WATER SUPPLY AND RETURN TO EXISTING HOT WATER SYSTEM. CONNECT TO EXISTING OUTSIDE SLEEVE, PATCH AND MODIFY AS REQUIRED. SEE DETAILS 5/M501, 2/M502, 3/M502.
2. INSTALL AND CONNECT WALL HUNG AIR HANDLER, CONDENSATE PUMP AND DRAIN PIPING. SEE INSTALLATION MANUAL.
3. INSTALL AND CONNECT CEILING CASSETTE, CONDENSATE PUMP, AND FRESH AIR DUCT AS INDICATED. SEE DETAIL 1/M503.
4. INSTALL AND CONNECT SYSTEM THERMOSTAT.
5. EXISTING DUCTWORK UP TO NEW OAU-2 TO REMAIN.
6. BALANCE EXISTING ROOM AND BATHROOM EXHAUST.
7. BALANCE FRESH AIR SUPPLY.
8. EXISTING WALL HUNG UNITS TO REMAIN.
9. INSTALL 6"x6" INSULATED FRESH AIR DUCT IN SUSPENDED CEILING. SEE M502 AND M504 FOR INSTALLATION.
10. INSTALL NEW WALL LOUVER AND BIRD SCREEN, SEE DETAIL 5/M504.
11. EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN.
12. INSULATE ALL EXISTING DUCTWORK.
13. INSTALL 3/4" COPPER CONDENSATE PIPE TO RUN OUTSIDE ON SPLASH BLOCK.
14. PROVIDE INLINE BOOSTER FAN, SEE BOOSTER FAN SCHEDULE ON TES-M-003.
15. INSTALL 3/4" COPPER CONDENSATE PIPING ABOVE CEILING TO RUN OUTSIDE ON SPLASH OR NEAREST JANITORS CLOSET.



1 FIRST FLOOR PARTIAL PLAN - MECHANICAL - 1
SCALE: 3/32" = 1'-0"



KEY PLAN



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Drawing Title
**FIRST FLOOR PARTIAL
PLAN - MECHANICAL -
1**

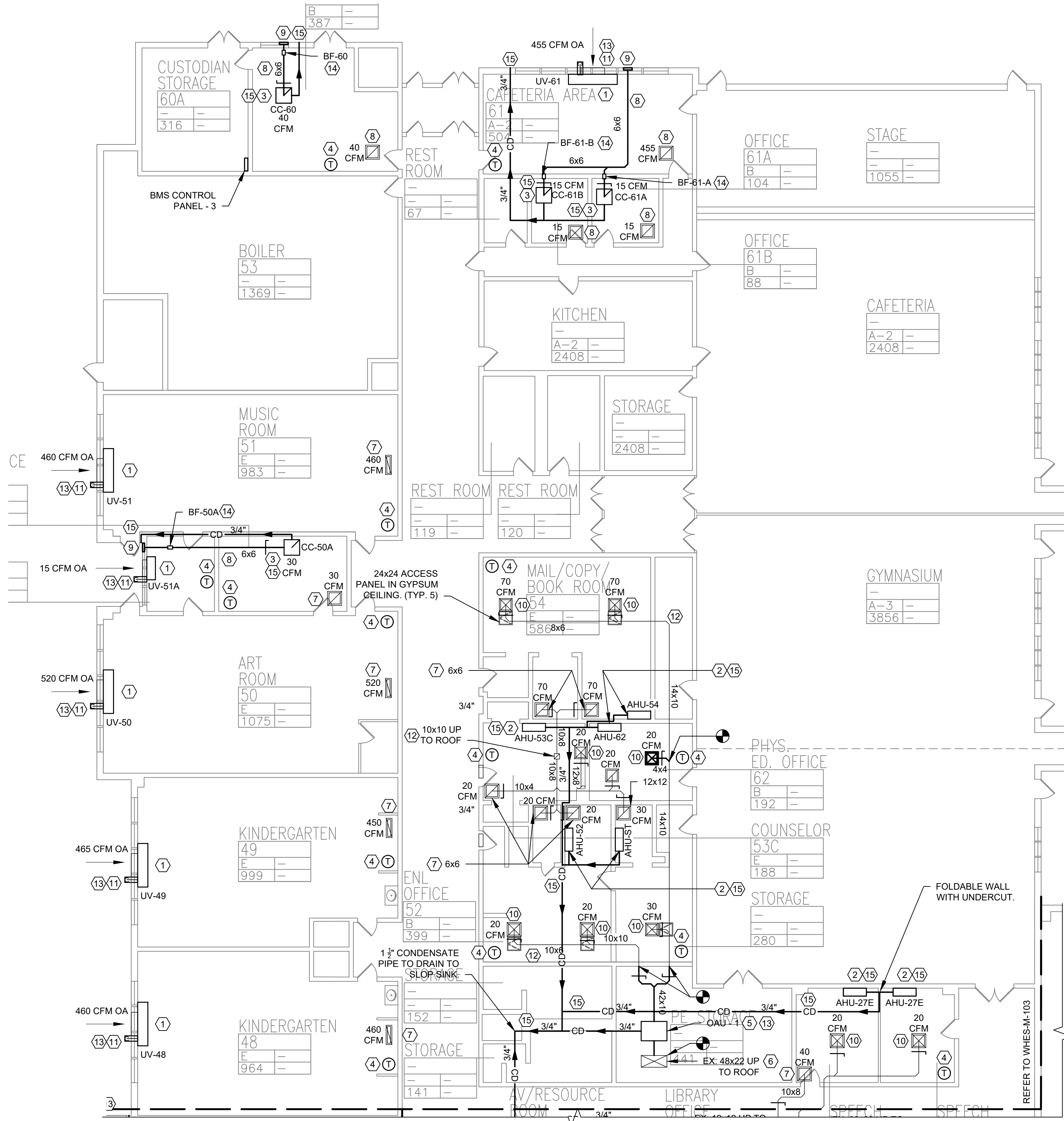
Drawing No.
TES-M-101

**UNIVENT REPLACEMENT
AT STONY POINT,
THIELS, WEST HAV
ELEMENTARY SCHOOL**
SSD# 50-02-01-06-0-014-XXX
SSD# 50-02-01-06-0-024-XXX
SSD# 50-02-01-06-0-024-XXX
MICHAEL SHILALE ARCHITECTS, LLP
140 Park Avenue New City, NY 10956 Tel 845-708-9200
www.shilale.com
FIREBURN, NY 10994

**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
SUITE 200
FIREBURN, NY 10991
PROJ. NO. : MNY-5000128-00
**MECHANICAL
ENGINEER:**
**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
SUITE 200
FIREBURN, NY 10991
**STRUCTURAL
ENGINEER:**

Drawn by VF /AW
Checked by EF
Project No. 43040
Scale AS NOTED
Date 03-04-25

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



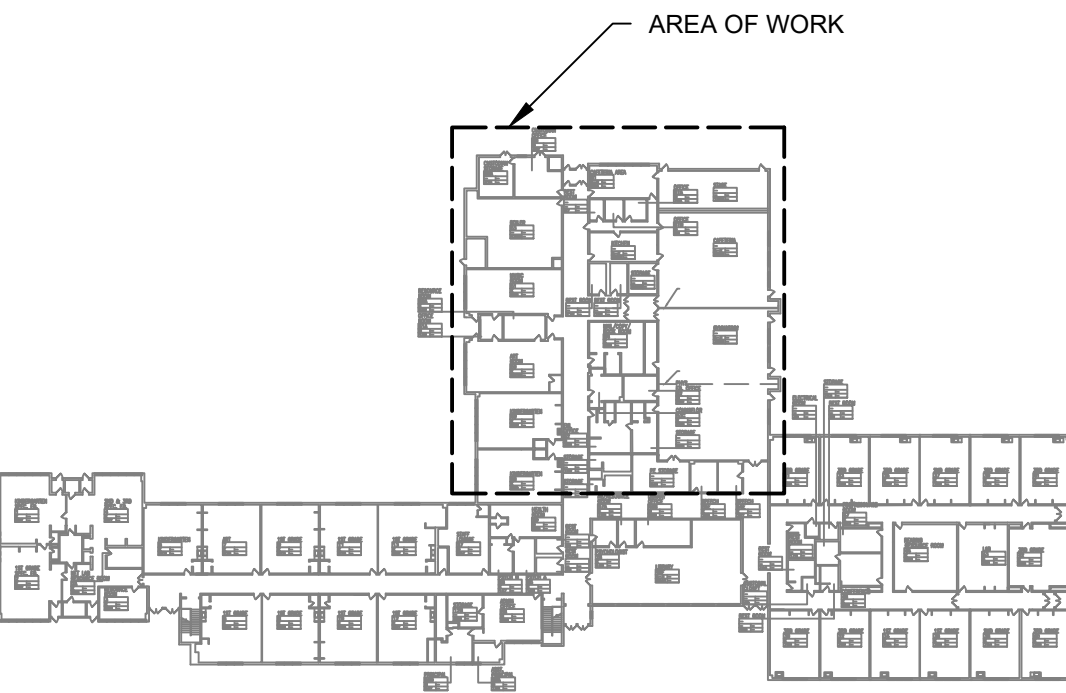
1 FIRST FLOOR PARTIAL PLAN - MECHANICAL - 2
SCALE: 3/32" = 1'-0"

KEYED NOTES:

1. INSTALL AND CONNECT DX HEAT PUMP WITH HOT WATER BACKUP UNIT VENTILATOR, CONNECT HOT WATER SUPPLY AND RETURN TO EXISTING HOT WATER SYSTEM. CONNECT TO EXISTING OUTSIDE SLEEVE, PATCH AND MODIFY AS REQUIRED. SEE DETAILS 5/M501, 2/M502, 3/M502.
2. INSTALL AND CONNECT WALL HUNG AIR HANDLER, CONDENSATE PUMP AND DRAIN PIPING. SEE INSTALLATION MANUAL.
3. INSTALL AND CONNECT CEILING CASSETTE AND FRESH AIR DUCT AS INDICATED. SEE DETAIL 1/M503.
4. INSTALL AND CONNECT SYSTEM THERMOSTAT.
5. INSTALL OAU - 1, CONNECT TO EXISTING FRESH AIR DISTRIBUTION SYSTEM. SEE DETAILS 4/M504.
6. FRESH AIR DUCT UP THROUGH ROOF TO REMAIN.
7. BALANCE EXISTING ROOM AND BATHROOM EXHAUST.
8. INSTALL 6"x6" FRESH AIR DUCT IN SUSPENDED CEILING. SEE 5/M504.
9. INSTALL NEW WALL LOUVER AND BIRD SCREEN, SEE DETAIL 5/M504.
10. BALANCE FRESH AIR SUPPLY.
11. EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN.
12. INSULATE ALL EXISTING DUCTWORK.
13. INSTALL 3/4" COPPER CONDENSATE PIPE TO RUN OUTSIDE ON SPLASH BLOCK.
14. PROVIDE INLINE BOOSTER FAN, SEE BOOSTER FAN SCHEDULE ON TES-M-003.
15. INSTALL 3/4" COPPER CONDENSATE PIPING ABOVE CEILING TO RUN OUTSIDE ON SPLASH OR NEAREST JANITORS CLOSET.

GENERAL NOTES:

1. RELIEF PATH FOR OUTSIDE AIR IS VIA EXHAUST GRILLES IN EXHAUST ROOMS.



KEY PLAN



No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUFFERN, NY 10901 PROJ. NO. : MNY-5000128-00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUFFERN, NY 10901
Mechanical & Electrical Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAV ELEMENTARY SCHOOL SSD# 50-02-01-06-0-014-XXX SSD# 50-02-01-06-0-025-XXX SSD# 50-02-01-06-0-024-XXX NY DESIGN NO. 10094 BROOKLAND COUNTY
--

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Drawing Title FIRST FLOOR PARTIAL PLAN - MECHANICAL - 2	Drawing No. TES-M-102
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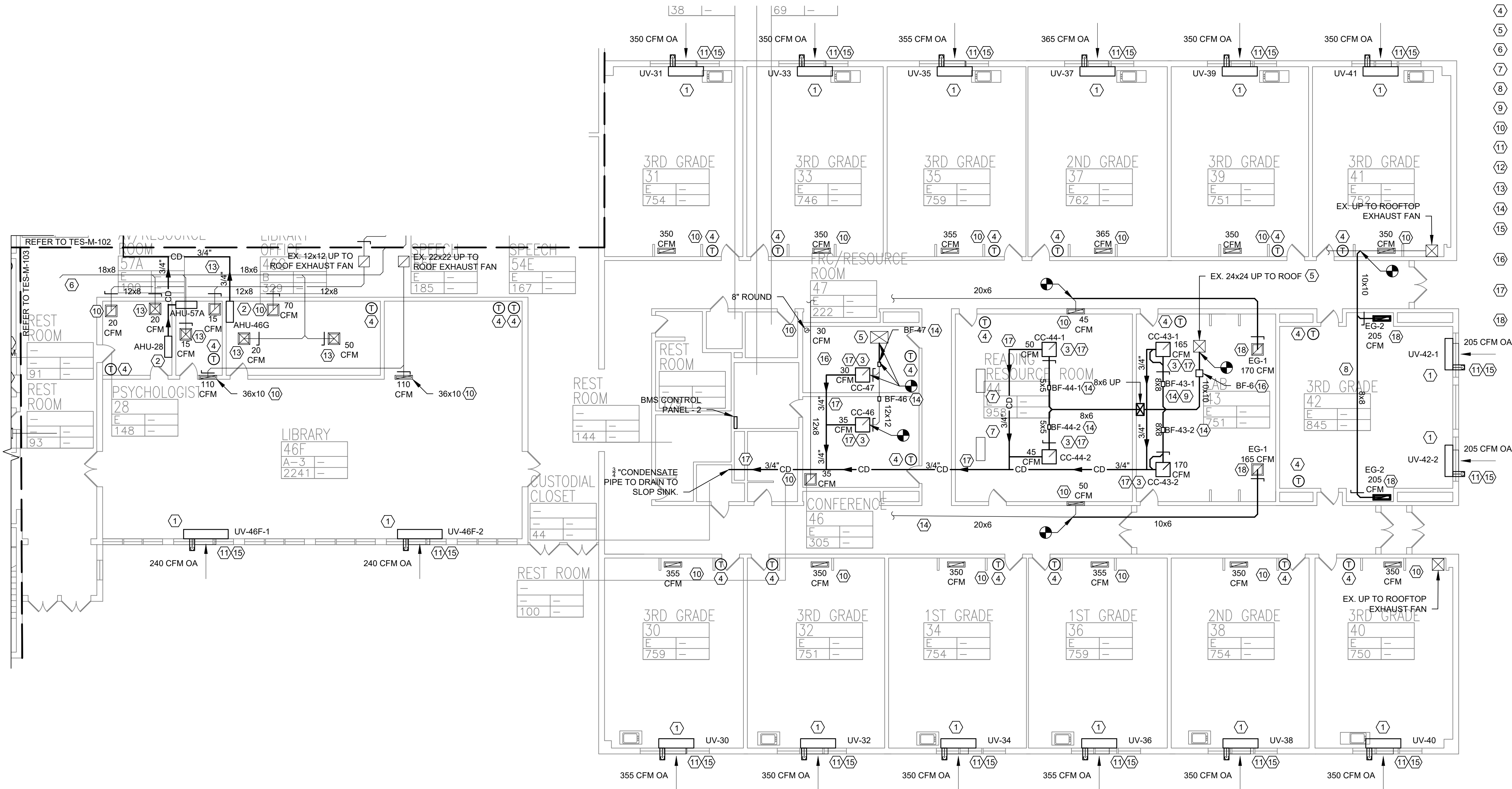
GENERAL NOTES:

1. RELIEF PATH FOR OUTSIDE AIR IS VIA EXHAUST GRILLES IN EXHAUST ROOMS.

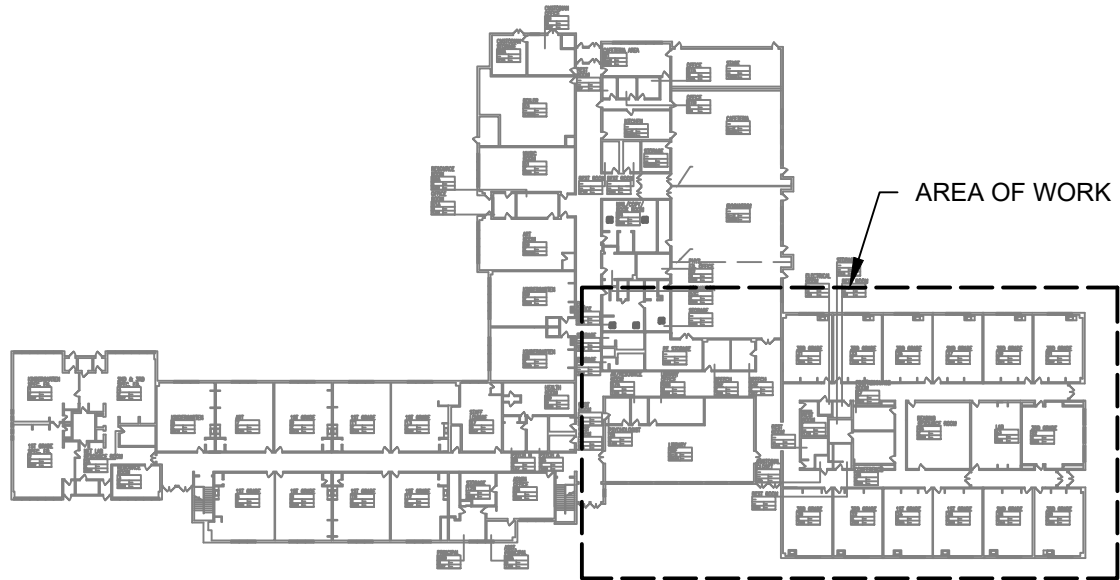
KEYED NOTES:

1. INSTALL AND CONNECT DX HEAT PUMP WITH HOT WATER BACKUP UNIT VENTILATOR. CONNECT HOT WATER SUPPLY AND RETURN TO EXISTING HOT WATER SYSTEM. CONNECT TO EXISTING OUTSIDE SLEEVE. PATCH AND MODIFY AS REQUIRED. SEE DETAILS 5/M501, 2/M502, 3/M502.
2. INSTALL AND CONNECT WALL HUNG AIR HANDLER. CONDENSATE PUMP AND DRAIN PIPING. SEE INSTALLATION MANUAL.
3. INSTALL AND CONNECT CEILING CASSETTE AND FRESH AIR DUCT AS INDICATED. SEE DETAIL 1/M503.
4. INSTALL AND CONNECT SYSTEM THERMOSTAT.
5. EXISTING UP DUCT UP TO FRESH AIR TO REMAIN.
6. EXISTING FRESH AIR DISTRIBUTION SYSTEM TO REMAIN.
7. EXISTING WALL HUNG UNITS TO REMAIN
8. INSTALL AND CONNECT NEW EXHAUST DUCT ABOVE CEILING.
9. INSTALL AND CONNECT FRESH AIR DUCT.
10. BALANCE EXISTING ROOM AND BATHROOM EXHAUST.
11. EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN.
12. BALANCE NEW EXHAUST.
13. BALANCE FRESH AIR.
14. INSULATE EXISTING DUCTWORK.
15. INSTALL 3/4" COPPER CONDENSATE PIPE TO RUN OUTSIDE ON SPLASH BLOCK
16. PROVIDE INLINE BOOSTER FAN, SEE BOOSTER FAN SCHEDULE ON TES-M-003.
17. INSTALL 3/4" COPPER CONDENSATE PIPING ABOVE CEILING TO RUN OUTSIDE ON SPLASH OR NEAREST JANITORS CLOSET.
18. INSTALL AND BALANCE NEW EXHAUST GRILLE/

0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE



1 FIRST FLOOR PARTIAL PLAN - MECHANICAL - 3
SCALE: 3/32" = 1'-0"



KEY PLAN



PLAN NORTH

Revisions	
No.	Date
1	03-04-25

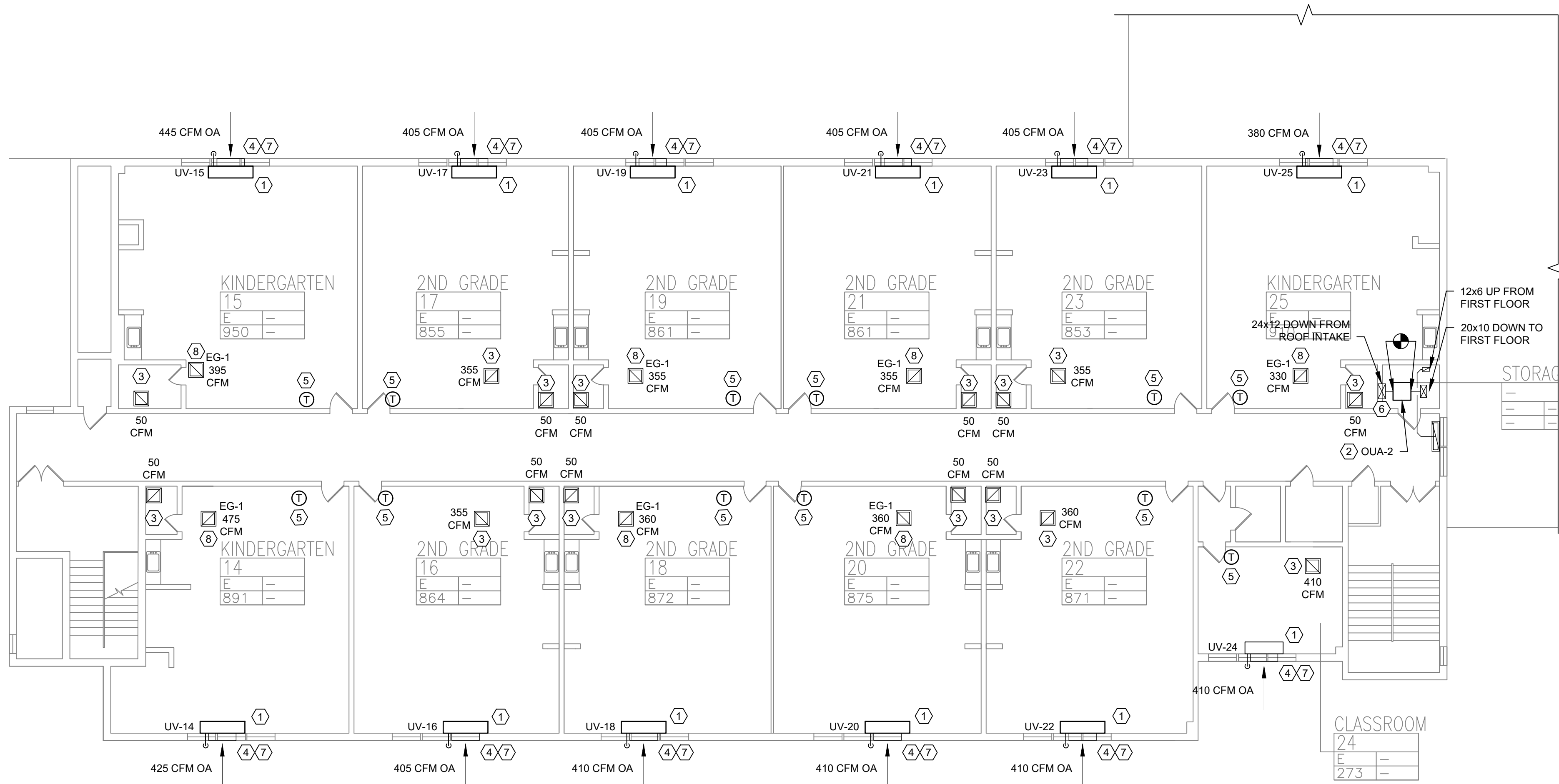
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Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

Mechanical Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD ROCKLAND COUNTY SUFFERN, NY 10901 PROJ. NO. : MTY-5000128-00
	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD ROCKLAND COUNTY SUFFERN, NY 10901

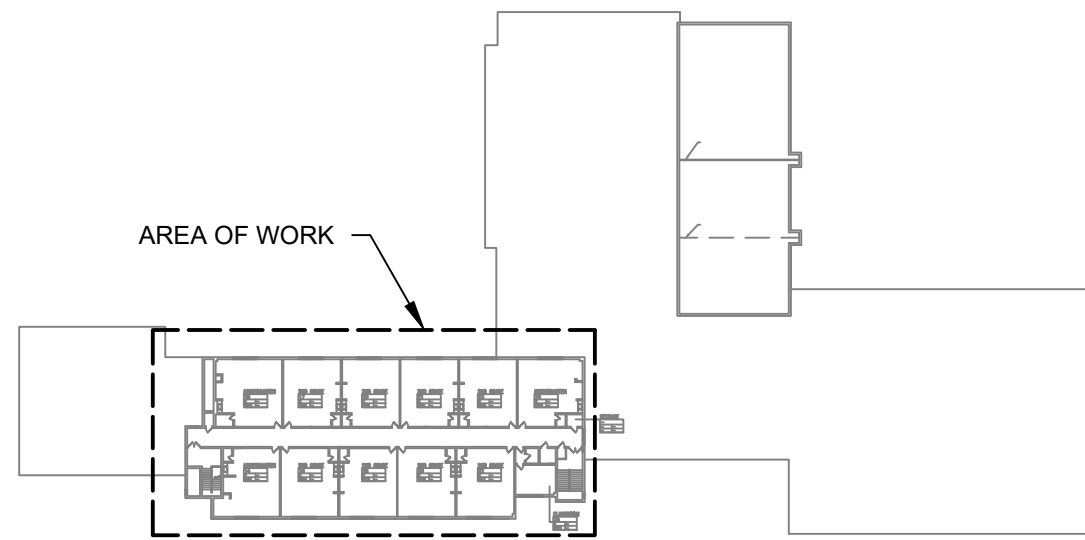
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Drawing Title FIRST FLOOR PARTIAL PLAN - MECHANICAL - 3	Drawing No. TES-M-103
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1 SECOND FLOOR PLAN - MECHANICAL - 1
SCALE: 3/32" = 1'-0"



KEY PLAN



KEYED NOTES:

1. INSTALL AND CONNECT DX HEAT PUMP WITH HOT WATER BACKUP UNIT VENTILATOR. CONNECT HOT WATER SUPPLY AND RETURN TO EXISTING HOT WATER SYSTEM. CONNECT TO EXISTING OUTSIDE SLEEVE, PATCH AND MODIFY AS REQUIRED. SEE DETAILS S/M501, 2/M502, 3/M502.
2. INSTALL OAU - 2, CONNECT TO EXISTING FRESH AIR DISTRIBUTION SYSTEM. SEE DETAILS 4/M504.
3. BALANCE EXISTING ROOM AND BATHROOM EXHAUST.
4. EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN.
5. INSTALL AND CONNECT SYSTEM THERMOSTAT.
6. INSULATE EXISTING DUCTWORK.
7. PROVIDE 3/8" COPPER CONDENSATE PIPE TO RUN OUTSIDE.
8. INSTALL AND BALANCE NEW EXHAUST GRILLE.

GENERAL NOTES:

1. RELIEF PATH FOR OUTSIDE AIR IS VIA EXHAUST GRILLES IN EXHAUST ROOMS.

0 1/2 1
IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

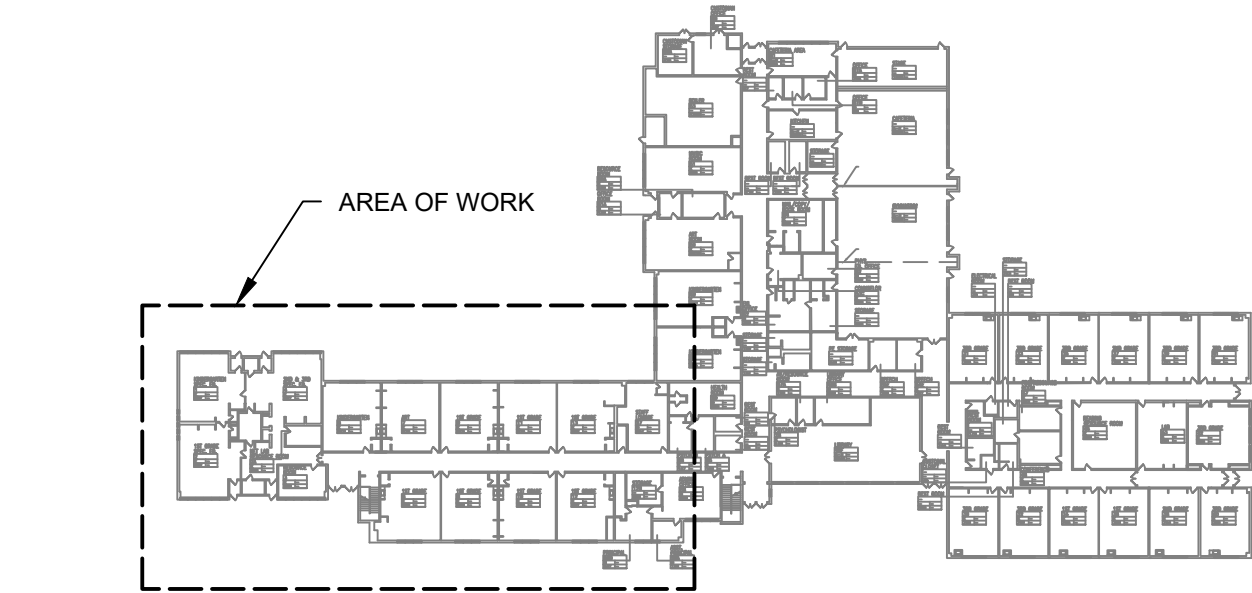
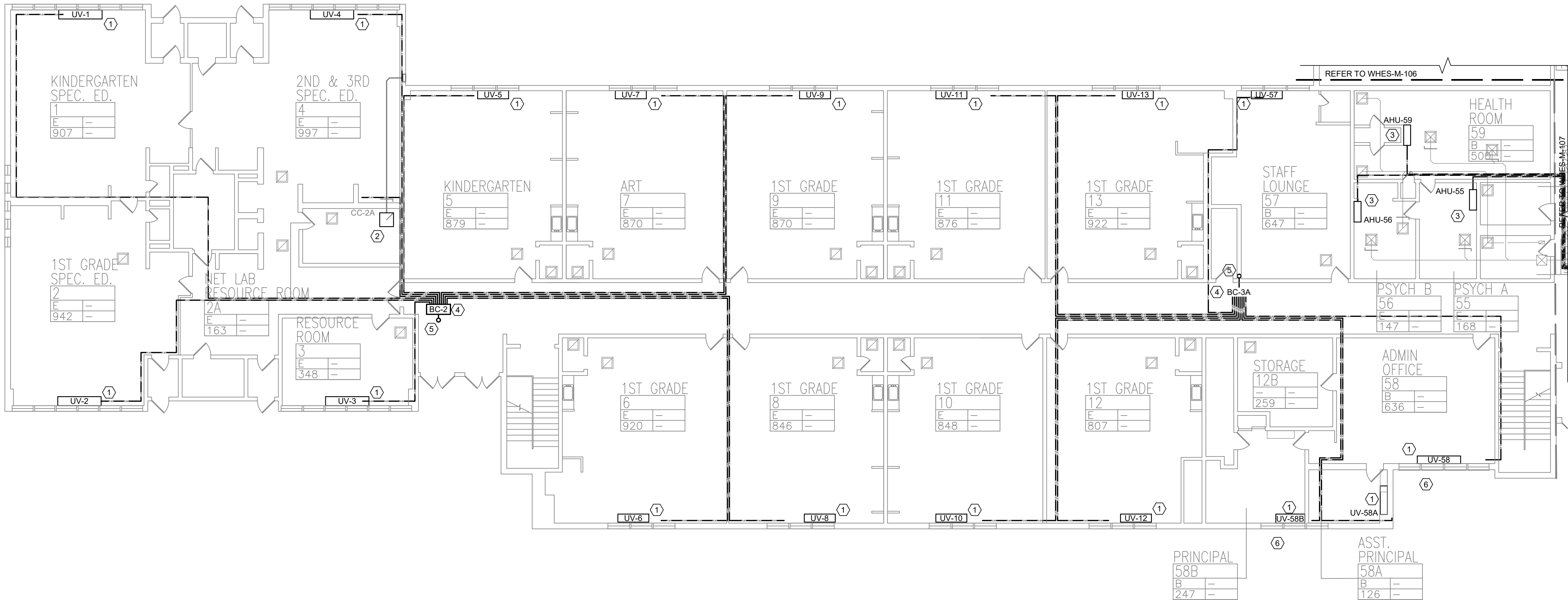
Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKLAND, NY 10961 PROJ. NO. : MNY-5000128.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKLAND, NY 10961
Mechanical Structural Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAV ELEMENTARY SCHOOL SSD# 50-02-01-06-0-014-XXX SSD# 50-02-01-06-0-025-XXX SSD# 50-02-01-06-0-024-XXX NY DESIGN NO. 10094 ROCKLAND COUNTY

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Drawing No. TES-M-104



KEY PLAN



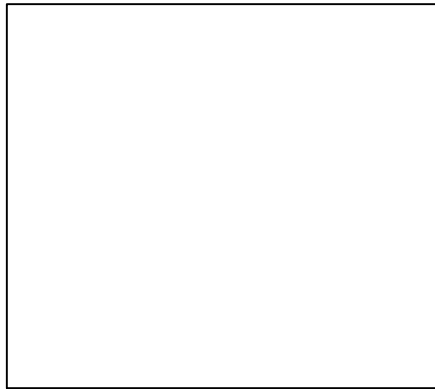
KEYED NOTES:

- 1 NEW UNIT VENTILATOR.
- 2 NEW CEILING CASSETTE.
- 3 NEW WALL HUNG AC UNIT.
- 4 INSTALL BRANCH CONTROLLER IN SUSPENDED CEILING. SEE DETAIL 5/M502.
- 5 INSTALL, ROUTE, AND CONNECT REFRIGERANT PIPING AS INDICATED ABOVE SUSPENDED CEILING. COORDINATE WITH ARCHITECT DRAWINGS .



1 FIRST FLOOR PARTIAL PLAN - REFRIGERANT PIPING - 1
SCALE: 3/32" = 1'- 0"

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKLAND, NY 10961 PROJ. NO. : MNY-5001128-00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKLAND, NY 10961
Mechanical Structural Engineer:	Structural Engineer:

**UNIVENT REPLACEMENT
AT STONY POINT,
THIELS, WEST HAV
ELEMENTARY SCHOOL**

SSD# 50-02-01-06-0-014-XXX
SSD# 50-02-01-06-0-024-XXX
SSD# 50-02-01-06-0-024-XXX

140 Park Avenue New City, NY 10956 Tel 845-708-9200
www.shilale.com

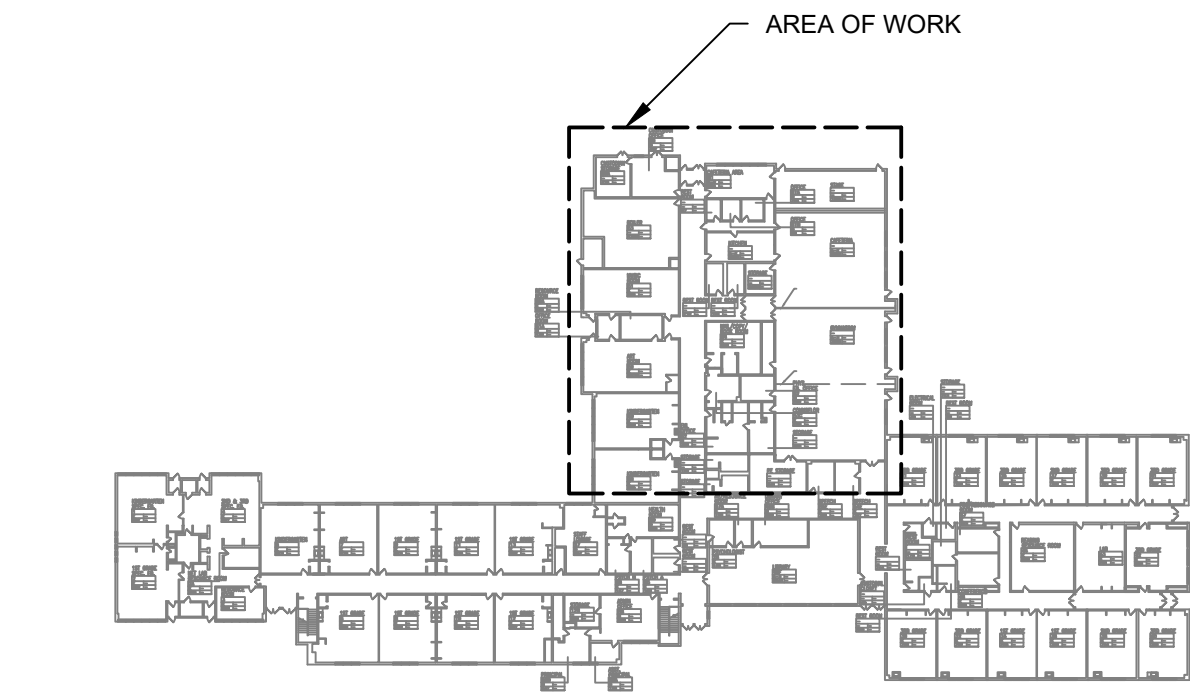
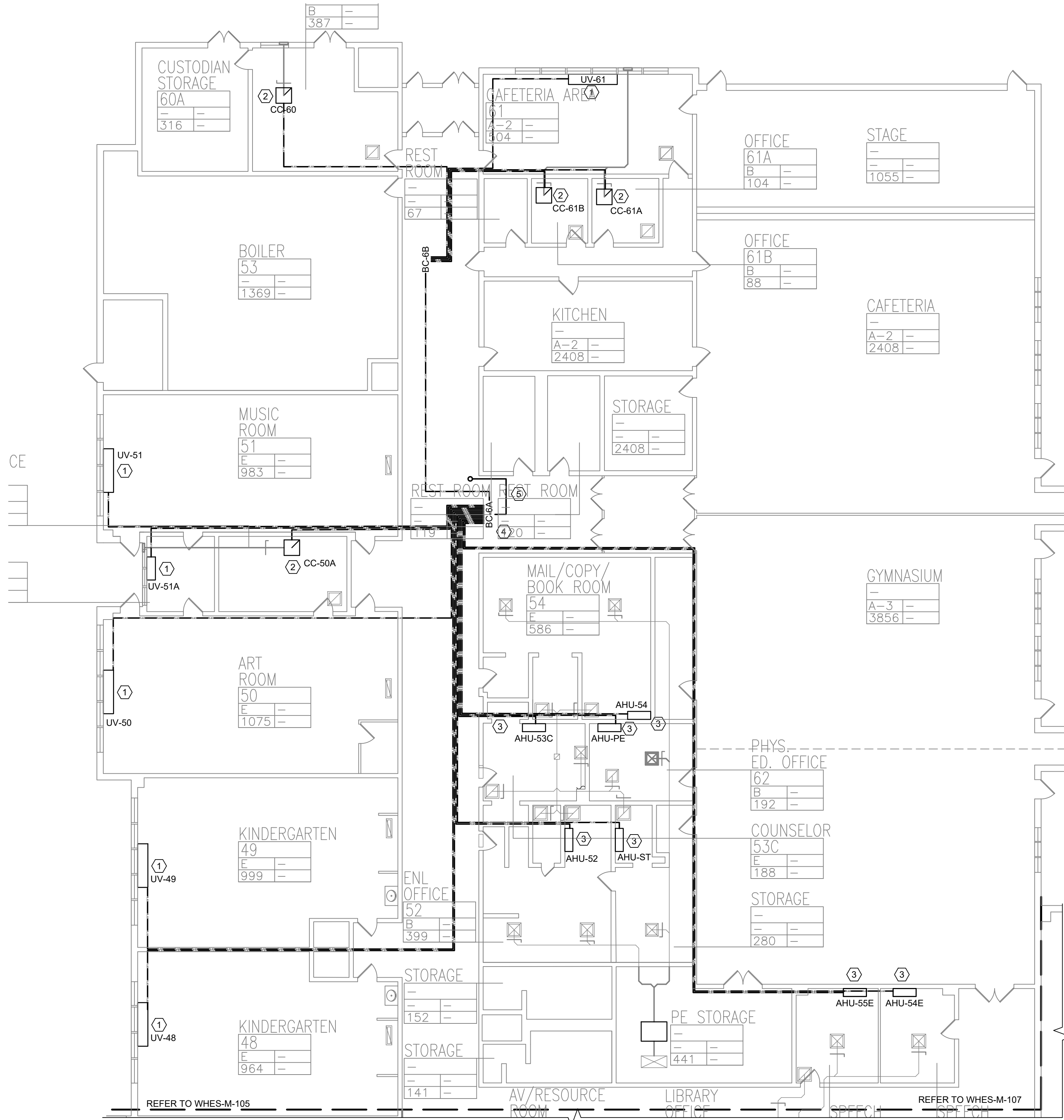
ROCKLAND COUNTY



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Drawing Title
**FIRST FLOOR PART.
PLAN - REFG. PIPING - 1**

Drawing No.
TES-M-105



KEYED NOTES:

- NEW UNIT VENTILATOR.
- NEW CEILING CASSETTE.
- NEW WALL HUNG AC UNIT.
- INSTALL BRANCH CONTROLLER IN SUSPENDED CEILING. SEE DETAIL 5/M502.
- INSTALL, ROUTE, AND CONNECT REFRIGERANT PIPING AS INDICATED ABOVE SUSPENDED CEILING. COORDINATE WITH ARCHITECT DRAWINGS

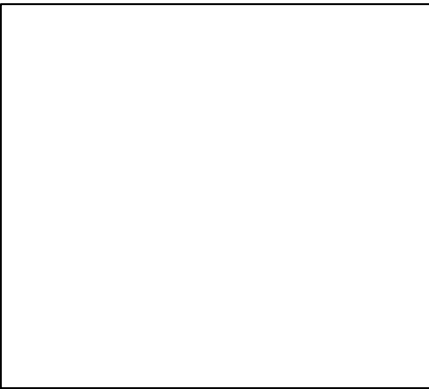


PLAN NORTH

0 1/2 1
IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

1 FIRST FLOOR PARTIAL PLAN - REFRIGERANT PIPING - 2
SCALE: 3/32" = 1'-0"

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

Mechanical & Electrical Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKLAND, NY 10961 PROJ. NO. : MNY-5000128.00
Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKLAND, NY 10961

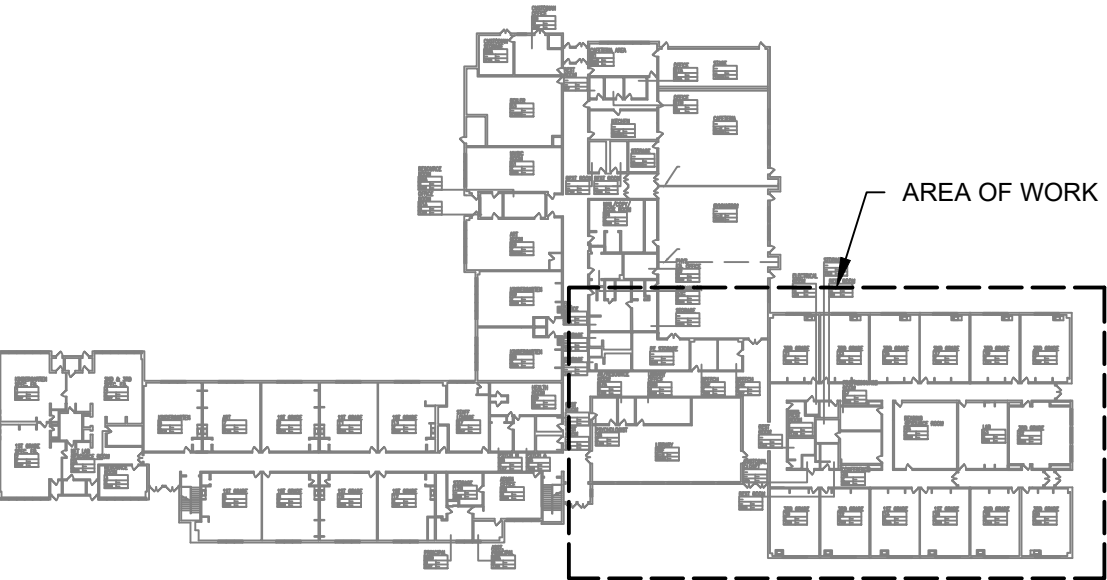
UNIVENT REPLACEMENT
AT STONY POINT,
THIELS, WEST HAV
ELEMENTARY SCHOOL
SSD# 50-02-01-06-0-014-XXX
SSD# 50-02-01-06-0-025-XXX
SSD# 50-02-01-06-0-024-XXX
NY DESIGN NO. 10094
ROCKLAND COUNTY



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Drawing Title
**FIRST FLOOR PART.
PLAN - REFG. PIPING - 2**

Drawing No.
TES-M-106

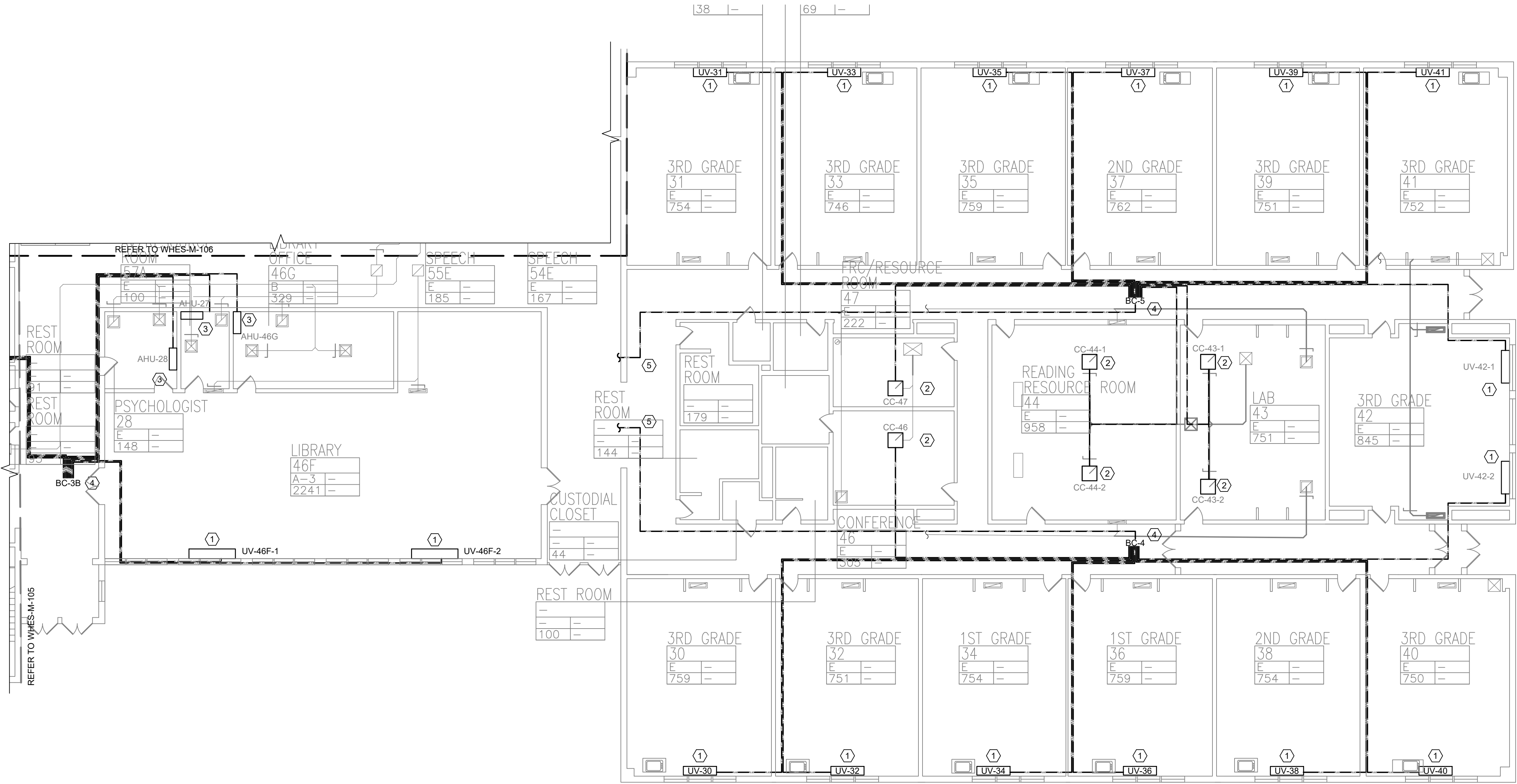


KEY PLAN



- KEYED NOTES:**
- ① NEW UNIT VENTILATOR.
 - ② NEW CEILING CASSETTE.
 - ③ NEW WALL HUNG AC UNIT.
 - ④ INSTALL BRANCH CONTROLLER IN SUSPENDED CEILING. SEE DETAIL 5/M502.
 - ⑤ INSTALL, ROUTE, AND CONNECT REFRIGERANT PIPING AS INDICATED ABOVE SUSPENDED CEILING. COORDINATE WITH ARCHITECT DRAWINGS .

0 1/2 1
IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE



1 **FIRST FLOOR PARTIAL PLAN - REFRIGERANT PIPING - 3**
SCALE: 3/32" = 1'- 0"

MSA
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140 Park Avenue New York, NY 10056 Tel 845-708-9200
www.shilale.com

Drawing Title
**FIRST FLOOR PART.
PLAN - REFG. PIPING -
3**

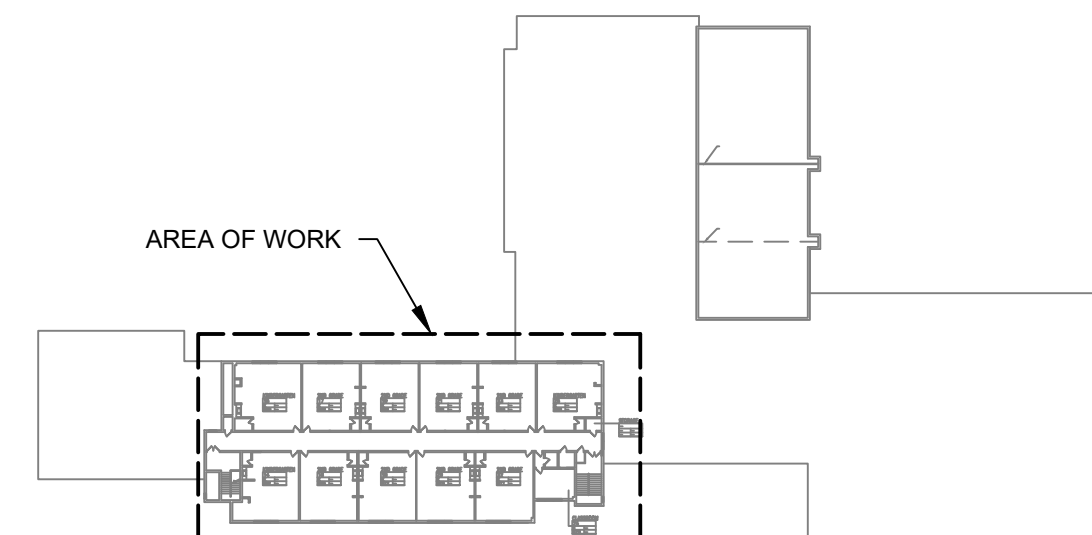
Drawing No.
TES-M-107

**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
SUITE 200
ROCKLAND, NY 10961
PROJ. No. : MNY-2000128.00

Mechanical
Structural
Engineer:

Drawn by VF /AW
Checked by EF
Project No. 43040
Scale AS NOTED
Date 03-04-25

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



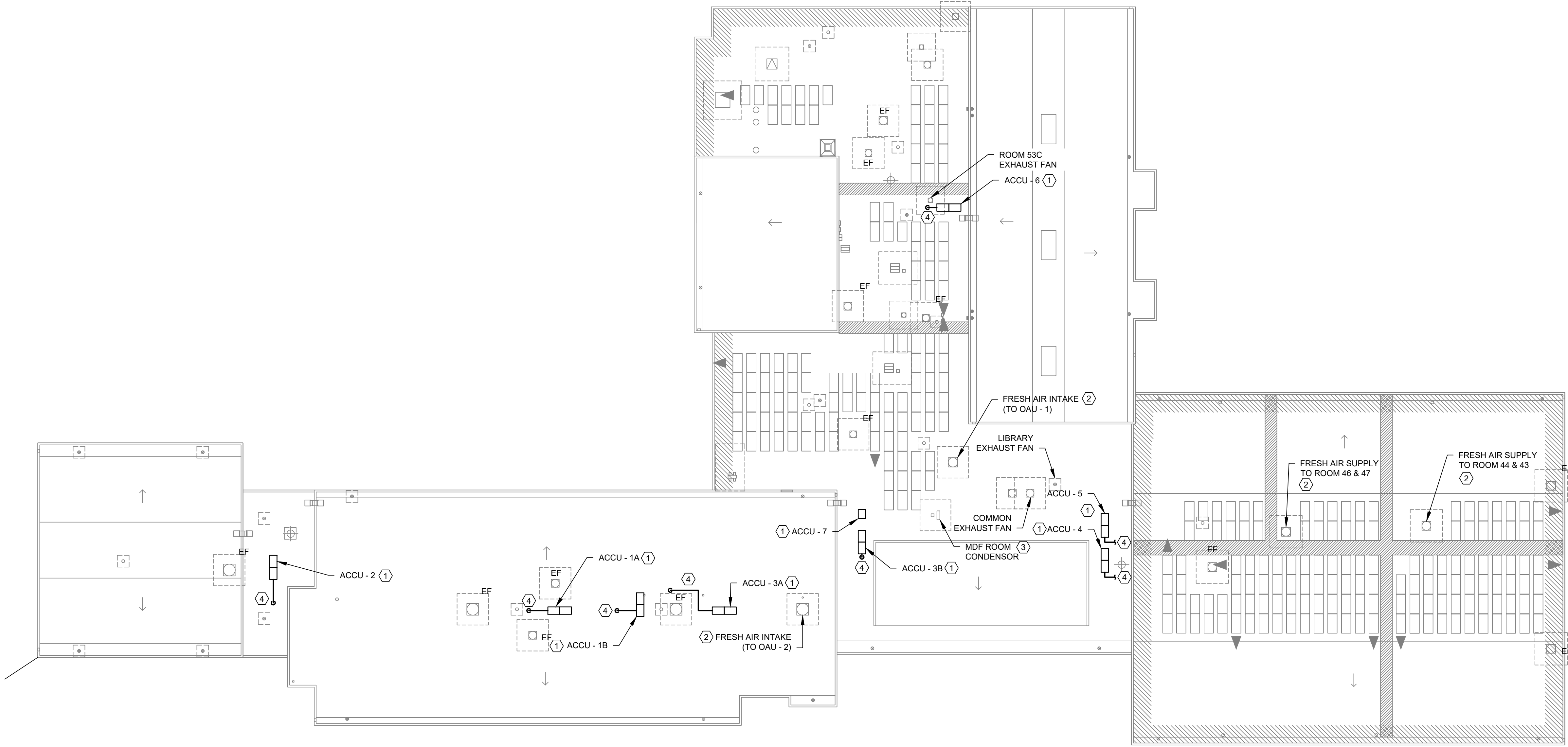
PLAN NORTH

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

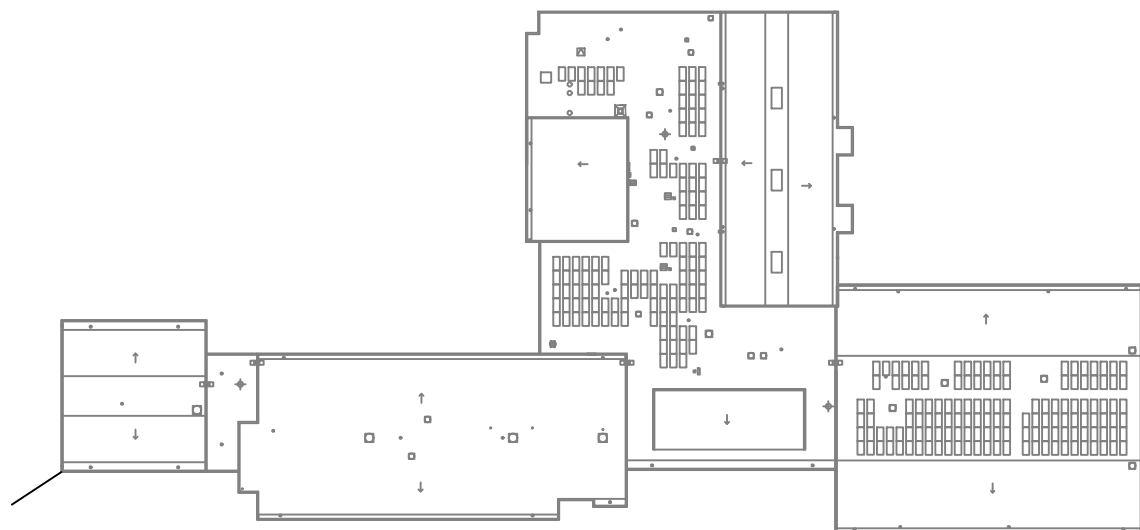
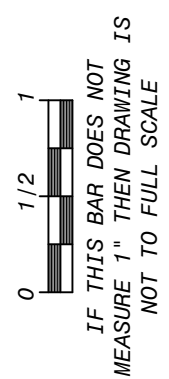
- 1 NEW UNIT VENTILATOR.
- 2 INSTALL BRANCH CONTROLLER IN SUSPENDED CEILING. SEE DETAIL 5/M502.
- 3 INSTALL, ROUTE, AND CONNECT REFRIGERANT PIPING AS INDICATED ABOVE SUSPENDED CEILING. COORDINATE WITH ARCHITECT DRAWINGS .



Drawing No. **TES-M-108**



- KEYED NOTES:**
- ① INSTALL AND CONNECT ACCU AS SHOWN. SEE STRUCTURAL DRAWINGS FOR COORDINATION AS REQUIRED. SEE DETAILS 1/M502, 2/M503, 3/M503, AND 4/M503.
 - ② FRESH AIR INTAKE FOR FRESH AIR SYSTEM TO REMAIN.
 - ③ EXISTING CONDENSER FOR EXISTING WALL HUNG UNIT TO REMAIN.
 - ④ REFRIGERANT LIQUID AND SUCTION PIPING.

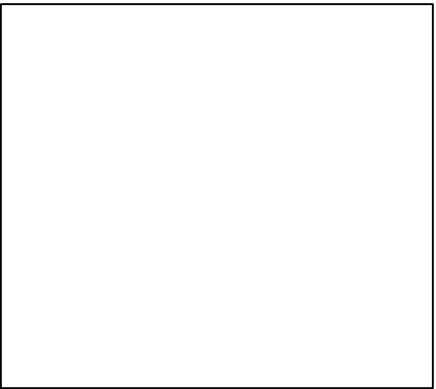


KEY PLAN



1 MECHANICAL ROOF PLAN
SCALE: 3/32" = 1'- 0"

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD ROCKLAND, NY 10961 PROJ. NO. : MNY-5000128.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD ROCKLAND, NY 10961
Mechanical Structural Engineer:	Structural Engineer:

**UNIVENT REPLACEMENT
AT STONY POINT,
THIELS, WEST HAV
ELEMENTARY SCHOOL**
SSD# 50-02-01-06-0-014-XXX
SSD# 50-02-01-06-0-024-XXX
SSD# 50-02-01-06-0-024-XXX
NY REG. NO. 10984
ROCKLAND COUNTY



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Drawing Title
**ROOF PLAN -
MECHANICAL**

Drawing No.
TES-M-109

FIN TUBE RADIATOR:
THE FIN TUBE RADIATOR WILL ACT AS SECOND STAGE OF HEAT.

2 VRF FLOW DIAGRAM & SEQUENCE OF OPERATIONS

UNIT VENTILATOR

REFRIGERANT SENSOR

REFRIGERANT SENSOR

AIR THERMISTOR

AIR THERMISTOR

LEV CONTROLLER
FIELD INSTALLED

208V POWER
BY DIV 26

FIELD INSTALLED
STEP-UP
TRANSFORMER

UNIT POWER
115V

FIELD INSTALLED
REFRIGERANT VALVE

CONTROL SIGNALS

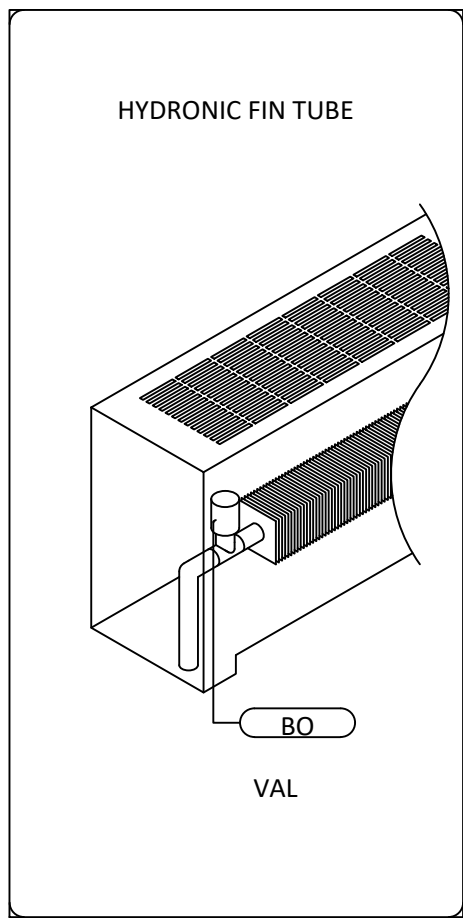
MISC. FIELD INSTALLED
DEVICES

FACTORY INSTALLED
HOT WATER VALVE

WIRELESS
COORDINATOR
FACTORY INSTALLED

SY400 DDC
CONTROLLER
FACTORY INSTALLED

ALL ITEMS DENOTED AS FIELD INSTALLED ARE TO BE
FIELD INSTALLED BY THE ATC CONTRACTOR. ATC
CONTRACTOR TO COORDINATE WITH EQUIPMENT
MANUFACTURER ON FURNISHING OF ITEMS



EXHAUST FAN FLOW DIAGRAM & SEQUENCE OF OPERATIONS

SCALE: NONE

UNIVENT REPLACEMENT AT
STONY POINT, THIELLS,
WEST HAVESTRAW
ELEMENTARY SCHOOL

SED# 50-02-01-06-0-014-012
SED# 50-02-01-06-0-025-018
SED# 50-02-01-06-0-024-015

700 BORMAN RD.
THIELLS, NY 10984

THIELLS
ROCKLAND COUNTY

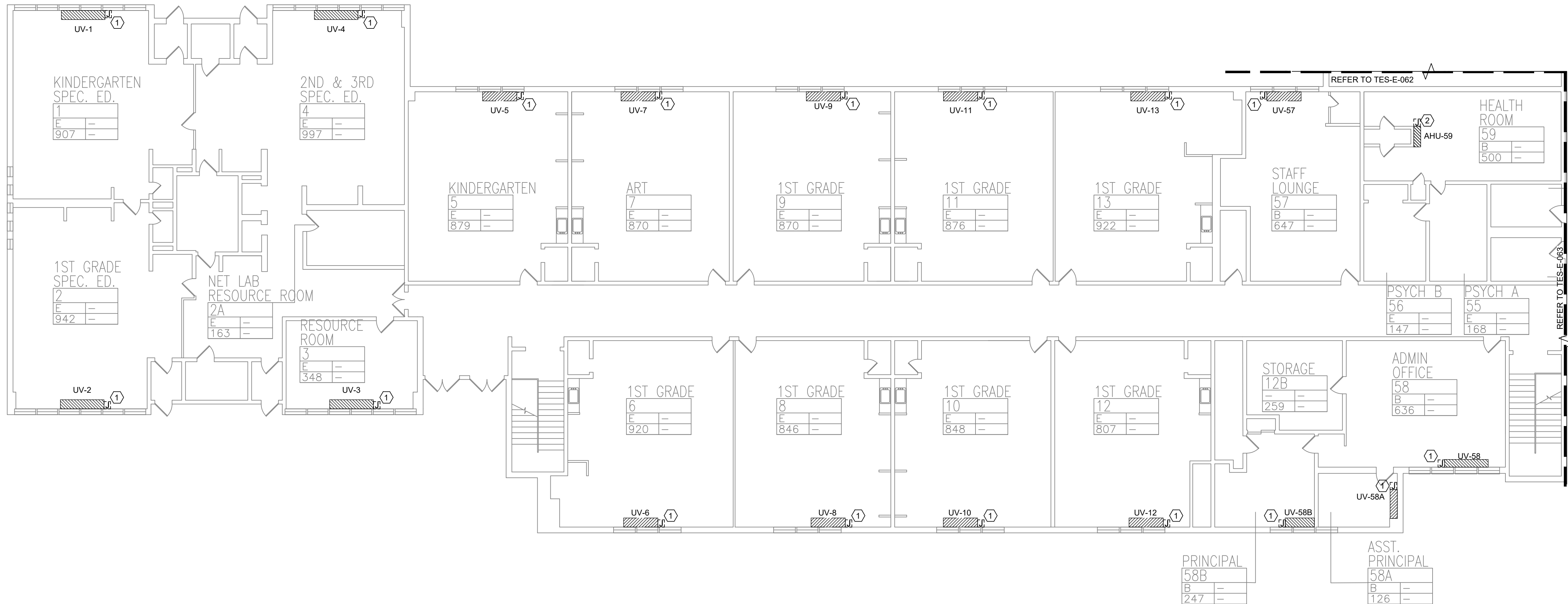
Drawing No.

TES-M-301

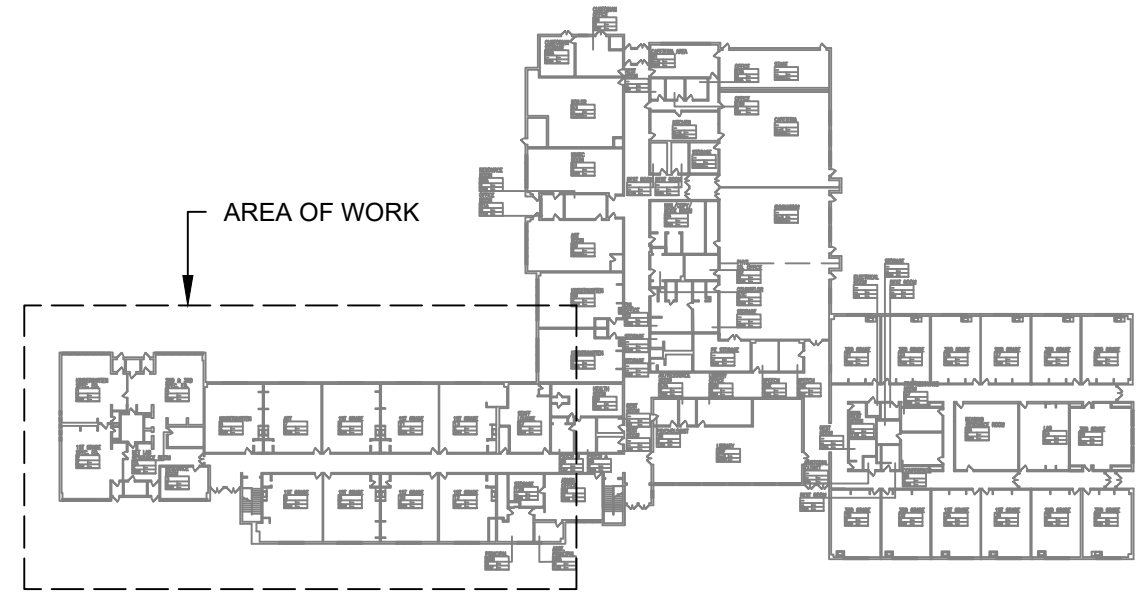
Drawing Title
**FLOW DIAGRAM AND
SEQUENCE OF
OPERATIONS**



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140 Park Avenue New City, NY 10956 Tel 845-708-9200
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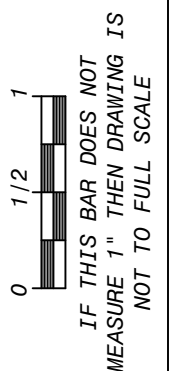
1 FIRST FLOOR PARTIAL REMOVAL - ELECTRICAL - 1
SCALE: 3/32"=1'-0"



KEY PLAN

- REMOVAL NOTES:**
- FOR ELECTRICAL SYMBOLS & LEGENDS, GENERAL NOTES AND ABBREVIATIONS DRAWING LIST REFER TO DWG E001.00
 - MAINTAIN CIRCUIT CONTINUITY TO AREAS NOT AFFECTED BY DEMOLITION.
 - THE CONTRACTOR IS TO COORDINATE ALL SHUTDOWNS AND DISRUPTIONS TO NORMAL SERVICES WITH THE SCHOOLS FIELD REPRESENTATIVE AND THE FACILITY.
 - COORDINATE REMOVAL OF POWER TO MECHANICAL EQUIPMENT WITH THE RESPECTIVE CONTRACTOR.
 - CONTRACTOR MUST FIELD VERIFY ALL CONNECTIONS PRIOR TO REMOVAL. PROTECT ALL FEEDER AND BRANCH CIRCUITS SERVING OTHER AREAS. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY OUTAGES.

- KEYED NOTES:**
- ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO EXISTING UNIT VENTILATOR AND RETAIN EXISTING WIRING. JUNCTION BOXES TO EXISTING UNIT VENTILATORS. THE EXISTING UNIT VENTILATOR SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.
 - ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE POWER TO EXISTING WALL HUNG UNIT ALONG WITH ALL ASSOCIATED WIRING, CONDUIT AND JUNCTION BOXES BACK TO SOURCE. THE EXISTING WALL HUNG UNIT SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.



No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKLAND, NY 10961 PROJ. NO. : MNY-5000128.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKLAND, NY 10961
Mechanical Electrical Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVEN ELEMENTARY SCHOOL
SSD# 50-02-01-06-0-014-XXX
SSD# 50-02-01-06-0-025-XXX
SSD# 50-02-01-06-0-024-XXX
NY ARCH. REG. NO. 10094
ROCKLAND COUNTY

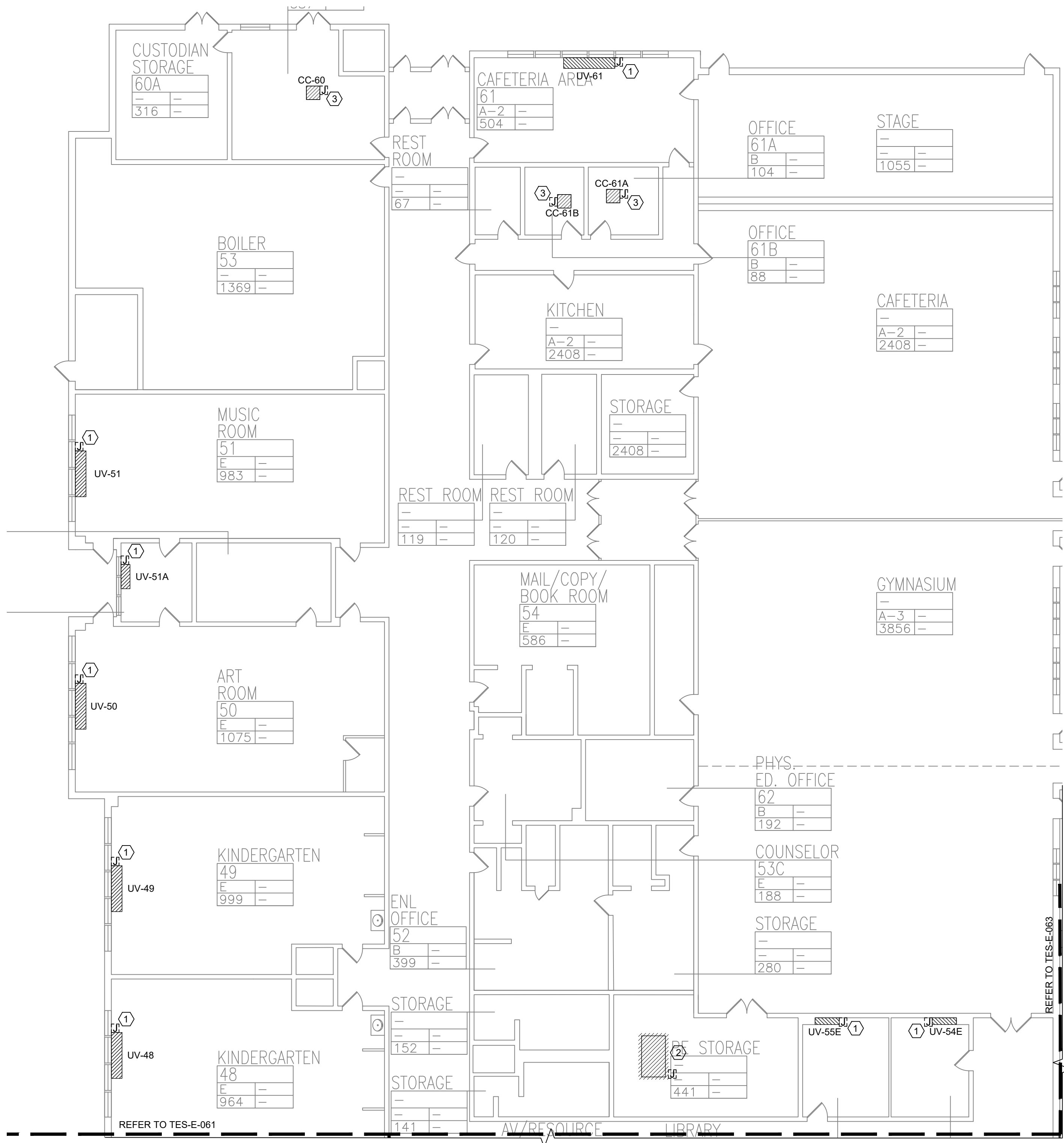


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www.shilale.com

Drawing Title
FIRST FLOOR PARTIAL REMOVAL - ELECTRICAL - 1

Drawing No.
TES-E-061

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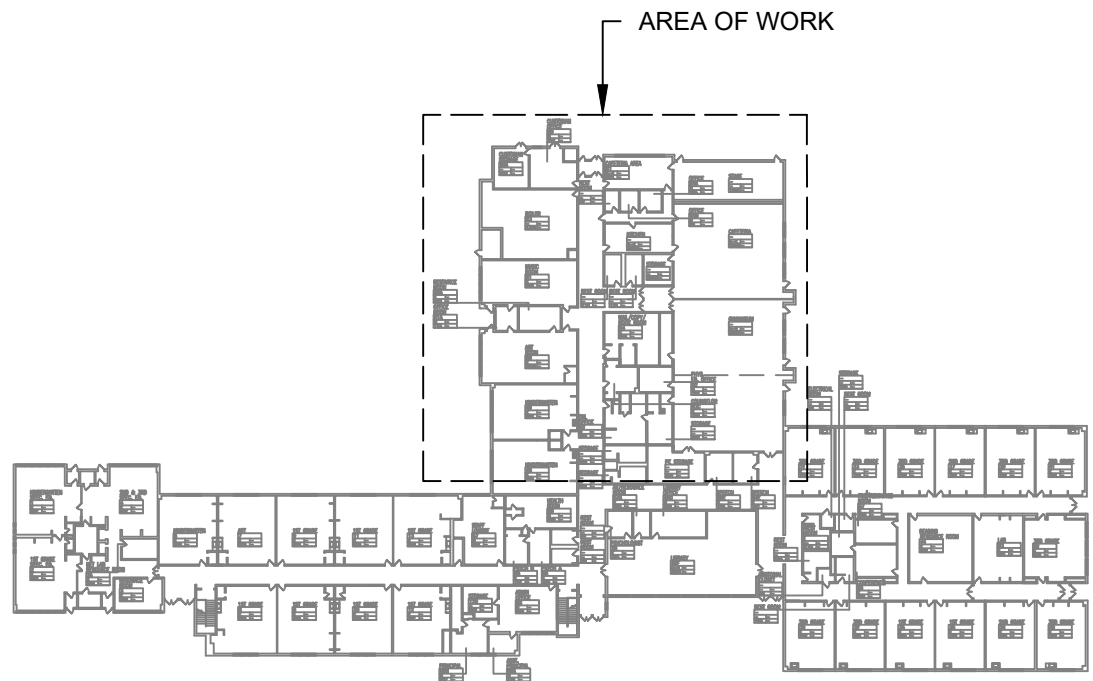
1 FIRST FLOOR PARTIAL REMOVAL - ELECTRICAL - 2
SCALE: 3/32"=1'-0"

REMOVAL NOTES:

- FOR ELECTRICAL SYMBOLS & LEGENDS, GENERAL NOTES AND ABBREVIATIONS DRAWING LIST REFER TO DWG E001.00
- MAINTAIN CIRCUIT CONTINUITY TO AREAS NOT AFFECTED BY DEMOLITION.
- THE CONTRACTOR IS TO COORDINATE ALL SHUTDOWNS AND DISRUPTIONS TO NORMAL SERVICES WITH THE SCHOOLS FIELD REPRESENTATIVE AND THE FACILITY.
- COORDINATE REMOVAL OF POWER TO MECHANICAL EQUIPMENT WITH THE RESPECTIVE CONTRACTOR.
- CONTRACTOR MUST FIELD VERIFY ALL CONNECTIONS PRIOR TO REMOVAL. PROTECT ALL FEEDER AND BRANCH CIRCUITS SERVING OTHER AREAS. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY OUTAGES.

KEYED NOTES:

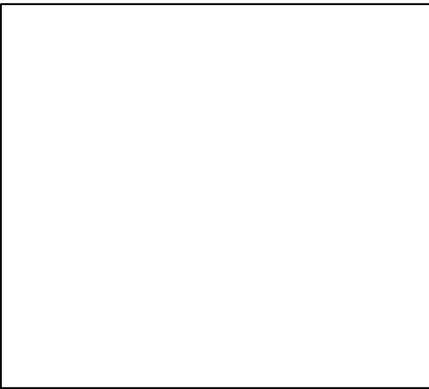
- ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO EXISTING UNIT VENTILATOR AND RETAIN EXISTING WIRING. JUNCTION BOXES TO EXISTING UNIT VENTILATORS. THE EXISTING UNIT VENTILATOR SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.
- ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE POWER TO EXISTING H.V. BLOWER ALONG WITH ALL ASSOCIATED WIRING, CONDUIT AND JUNCTION BOXES BACK TO SOURCE. THE EXISTING H.V BLOWER SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.
- ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO EXISTING CEILING CASSETTE AND REMOVE EXISTING WIRING. JUNCTION BOXES TO EXISTING CASSETTE BACK TO SOURCE. THE EXISTING CASSETTE SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.



KEY PLAN



Revisions	
No.	Date
1	03-04-25
	BIDDING DOCUMENTS



Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

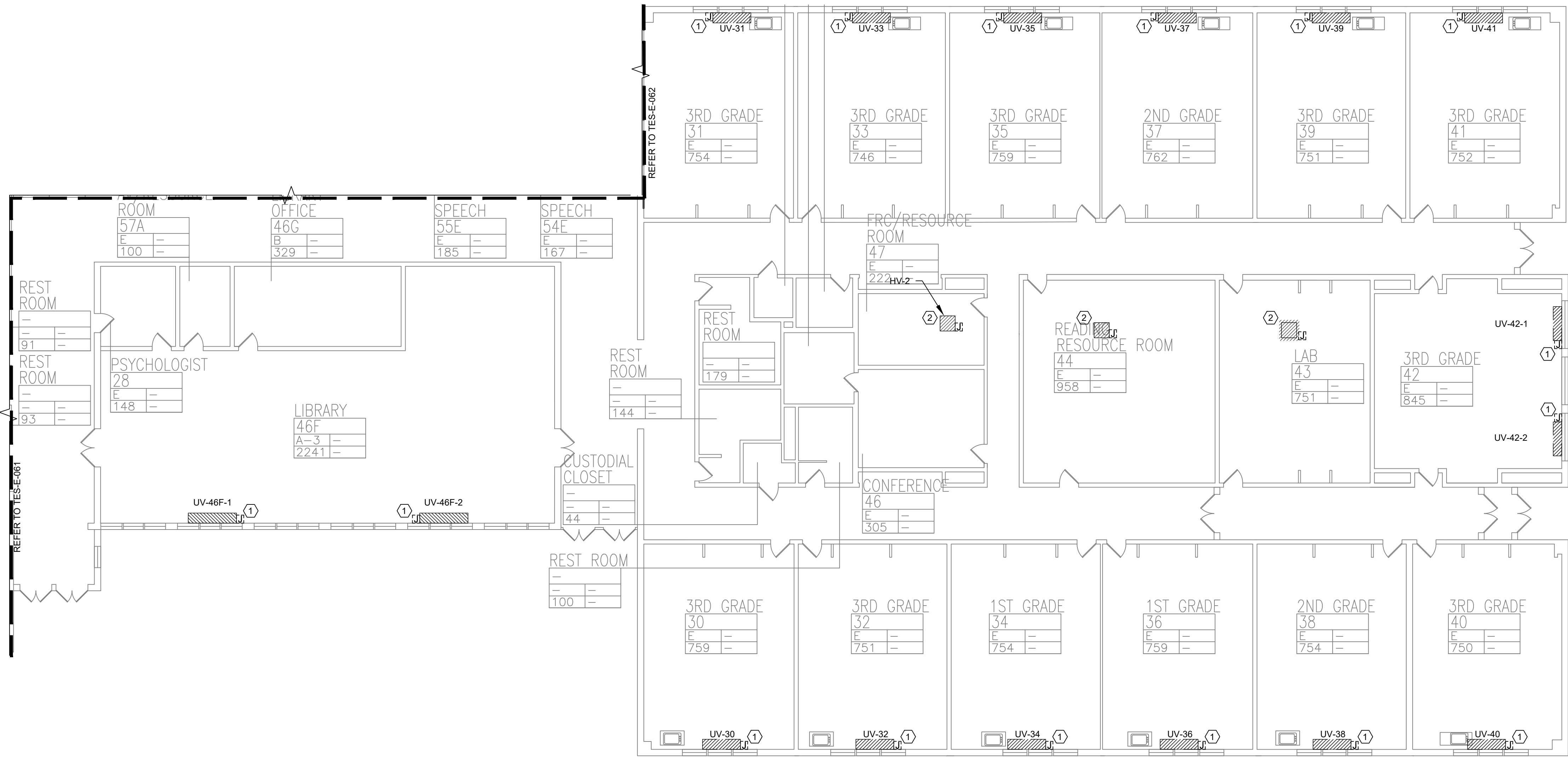
GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 FARMINGDALE, NY 11735 PROJ. NO. : MNY-5000128.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 FARMINGDALE, NY 11735
Mechanical Electrical Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVEN ELEMENTARY SCHOOL SSD# 50-02-01-06-0-014-XXX SSD# 50-02-01-06-0-025-XXX SSD# 50-02-01-06-0-024-XXX NY 10964 BROOKLAND COUNTY

MSA MICHAEL SHILALE ARCHITECTS, LLP 140 Park Avenue New City, NY 10956 Tel 845-708-9200 www.shilale.com

Drawing Title FIRST FLOOR PARTIAL REMOVAL - ELECTRICAL - 2	Drawing No. TES-E-062
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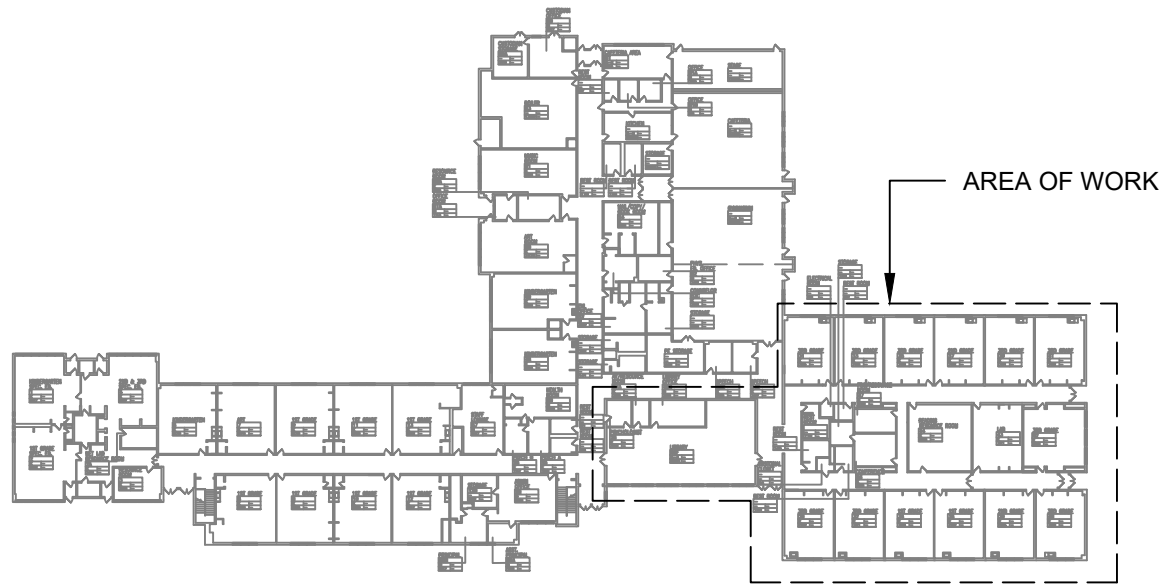
1 **ELECTRICAL FIRST FLOOR PARTIAL REMOVAL PLAN - 3**
SCALE: 3/32"=1'-0"

REMOVAL NOTES:

- FOR ELECTRICAL SYMBOLS & LEGENDS, GENERAL NOTES AND ABBREVIATIONS DRAWING LIST REFER TO DWG E001.00
- MAINTAIN CIRCUIT CONTINUITY TO AREAS NOT AFFECTED BY DEMOLITION.
- THE CONTRACTOR IS TO COORDINATE ALL SHUTDOWNS AND DISRUPTIONS TO NORMAL SERVICES WITH THE SCHOOLS FIELD REPRESENTATIVE AND THE FACILITY.
- COORDINATE REMOVAL OF POWER TO MECHANICAL EQUIPMENT WITH THE RESPECTIVE CONTRACTOR.
- CONTRACTOR MUST FIELD VERIFY ALL CONNECTIONS PRIOR TO REMOVAL. PROTECT ALL FEEDER AND BRANCH CIRCUITS SERVING OTHER AREAS. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY OUTAGES.

KEYED NOTES:

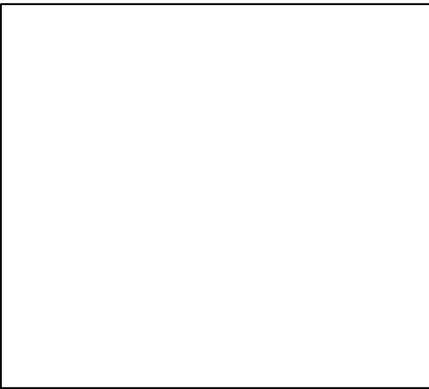
- ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO EXISTING UNIT VENTILATOR AND RETAIN EXISTING WIRING, JUNCTION BOXES TO EXISTING UNIT VENTILATORS. THE EXISTING UNIT VENTILATOR SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.
- ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE POWER TO EXISTING H.V. BLOWER ALONG WITH ALL ASSOCIATED WIRING, CONDUIT AND JUNCTION BOXES BACK TO SOURCE. THE EXISTING H.V. BLOWER SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.



KEY PLAN



Revisions	
No.	Date
1	03-04-25



Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKLAND, NY 10961 PROJ. NO. : MNY-5000128.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKLAND, NY 10961
Mechanical Electrical Engineer:	Structural Engineer:

**UNIVENT REPLACEMENT
AT STONY POINT,
THELLS, WEST HAV
ELEMENTARY SCHOOL**
SSD# 50-02-01-06-0-014-XXX
SSD# 50-02-01-06-0-025-XXX
SSD# 50-02-01-06-0-024-XXX
NY SCHOOL DISTRICT
ROCKLAND COUNTY

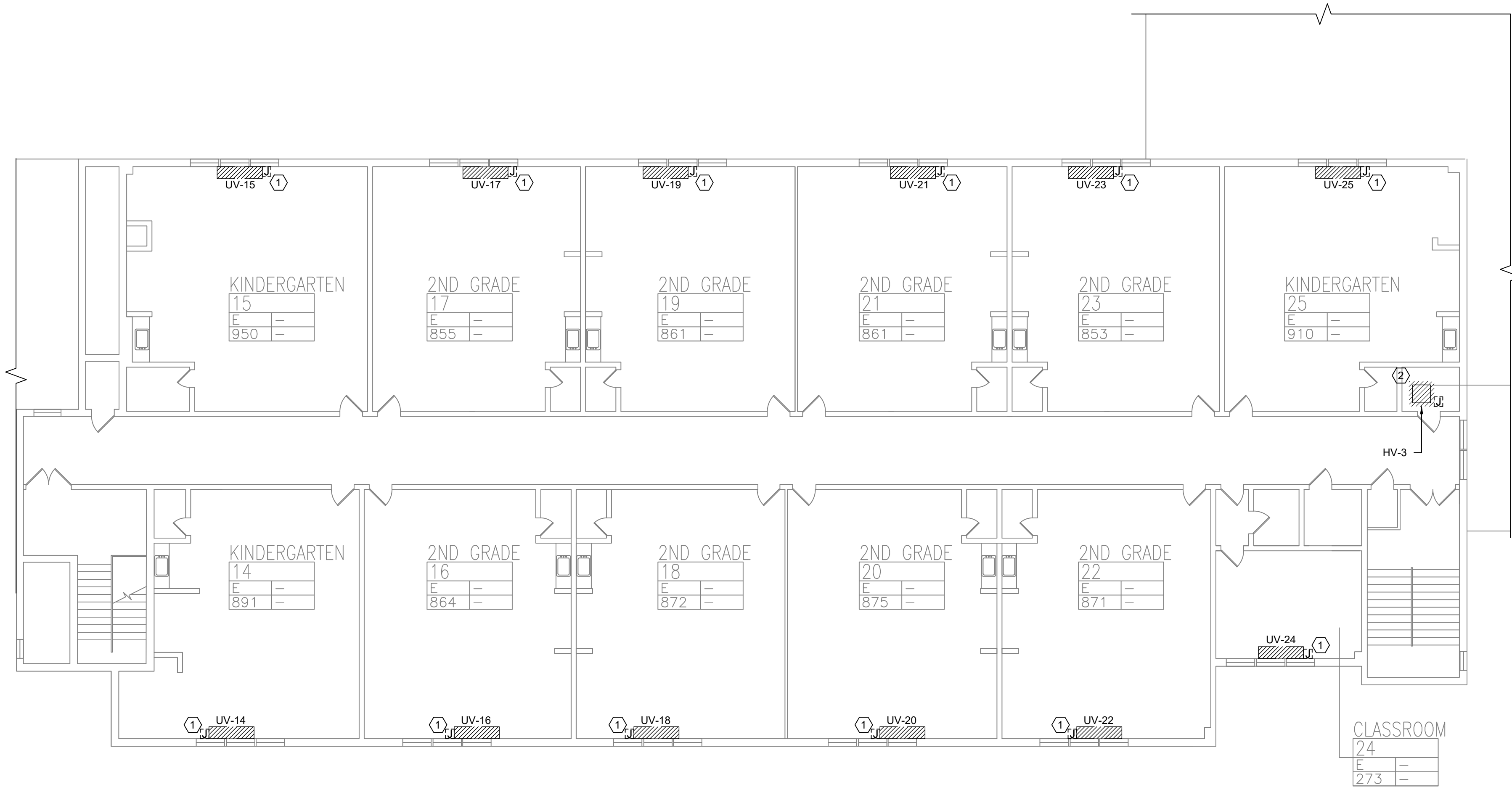


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140 Park Avenue New City, NY 10956 Tel 845-708-9200
www.shilale.com

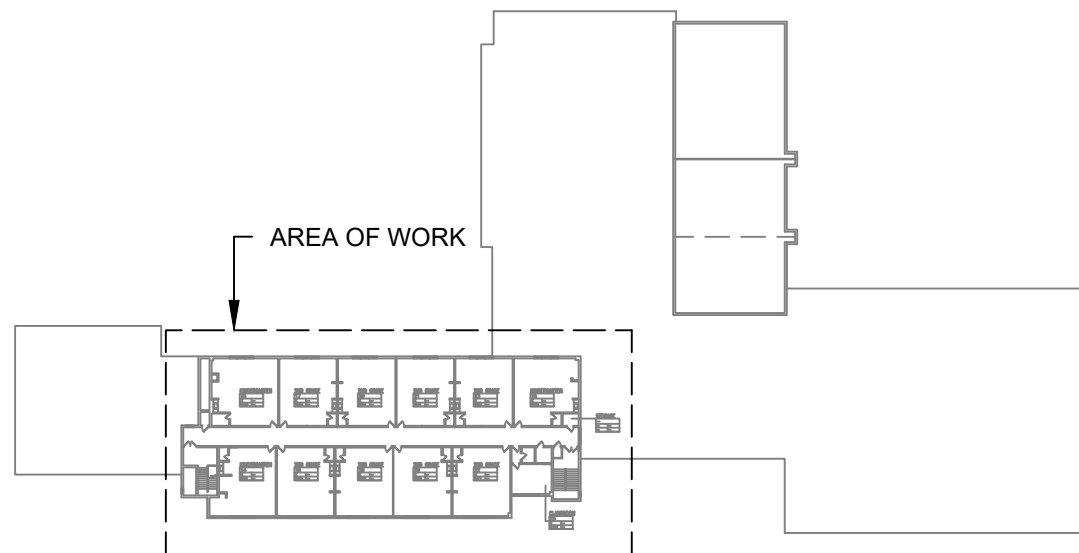
Drawing Title
**FIRST FLOOR PARTIAL
REMOVAL -
ELECTRICAL - 3**

Drawing No.
TES-E-063

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1 ELECTRICAL SECOND FLOOR REMOVAL PLAN
SCALE: 3/32"=1'-0"



KEY PLAN



REMOVAL NOTES:

- FOR ELECTRICAL SYMBOLS & LEGENDS, GENERAL NOTES AND ABBREVIATIONS DRAWING LIST REFER TO DWG E001.00
- MAINTAIN CIRCUIT CONTINUITY TO AREAS NOT AFFECTED BY DEMOLITION.
- THE CONTRACTOR IS TO COORDINATE ALL SHUTDOWNS AND DISRUPTIONS TO NORMAL SERVICES WITH THE SCHOOLS FIELD REPRESENTATIVE AND THE FACILITY.
- COORDINATE REMOVAL OF POWER TO MECHANICAL EQUIPMENT WITH THE RESPECTIVE CONTRACTOR.
- CONTRACTOR MUST FIELD VERIFY ALL CONNECTIONS PRIOR TO REMOVAL. PROTECT ALL FEEDER AND BRANCH CIRCUITS SERVING OTHER AREAS. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY OUTAGES.

KEYED NOTES:

- ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO EXISTING UNIT VENTILATOR AND RETAIN EXISTING WIRING. JUNCTION BOXES TO EXISTING UNIT VENTILATORS. THE EXISTING UNIT VENTILATOR SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.
- ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE POWER TO EXISTING H.V. BLOWER ALONG WITH ALL ASSOCIATED WIRING, CONDUIT AND JUNCTION BOXES BACK TO SOURCE. THE EXISTING H.V. BLOWER SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.

0 1/2 1
IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

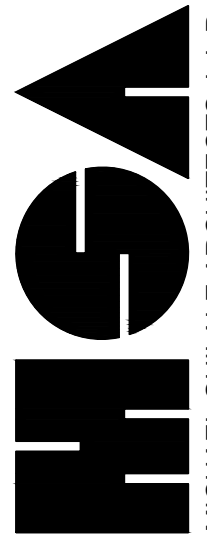
No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKLAND, NY 10961 PROJ. NO. : MNY-5000128.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKLAND, NY 10961
Mechanical Electrical Engineer:	Structural Engineer:

**UNIVENT REPLACEMENT
AT STONY POINT,
THIELS, WEST HAV
ELEMENTARY SCHOOL**
SSD# 50-02-01-06-0-014-XXX
SSD# 50-02-01-06-0-025-XXX
SSD# 50-02-01-06-0-024-XXX
NEW YORK, NY 10961
ROCKLAND COUNTY



MICHAEL SHILAIE ARCHITECTS, LLP
140 Park Avenue New City, NY 10956 Tel 845-708-9200
www.shilale.com

Drawing Title
**SECOND FLOOR
REMOVAL -
ELECTRICAL**

Drawing No.
TES-E-064

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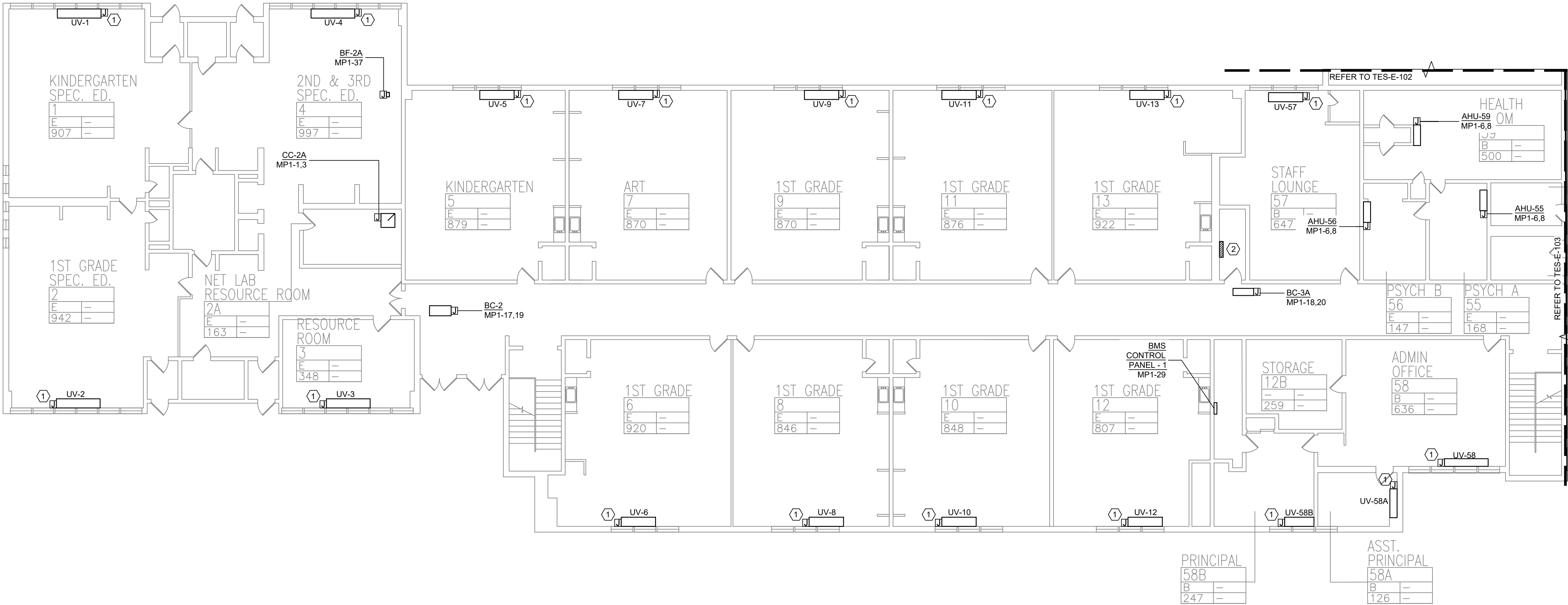
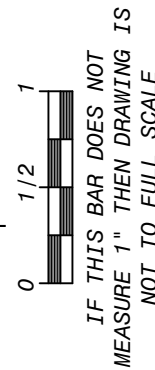
PLAN NOTES:

- REFER TO ADDITIONAL INSTALLATION NOTES ON DRAWING E-001.
- ALL NEW BRANCH CIRCUIT SHALL BE RUN WITH MINIMUM OF 2#12+1#12G IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED. FOR LIGHTING AND POWER BRANCH CIRCUIT, MC CABLE SHALL BE INSTALLED FOR RECESSED INSTALLATION ONLY, EITHER IN NEW WALLS OR ABOVE HUNG CEILING WHERE POSSIBLE. REFER TO PANEL SCHEDULES IN DRAWING TES-E-501 FOR ALL OTHER FEEDER AND BRANCH CIRCUIT SIZE INFORMATION.
- PROVIDE LABELS ON ALL ELECTRICAL EQUIPMENT INDICATING CIRCUIT ORIGINATION.
- UPDATE ALL EXISTING PANEL DIRECTORIES AFFECTED BY NEW WORK.
- CONTRACTOR SHALL PERFORM AMP PROBE READINGS ON EXISTING SERVICE EQUIPMENT BEFORE AND AFTER WORK TO ENSURE EQUIPMENT WILL NOT BE LOADED BEYOND ITS MAX AMPACITY.
- CONTRACTOR SHALL MAINTAIN CONTINUITY TO ALL EXISTING CIRCUITRY TO REMAIN WHICH ARE AFFECTED BY THE SCOPE OF WORK; CONTRACTOR SHALL FURNISH ALL NECESSARY JUNCTION BOXES, CONDUIT, AND WIRES AS REQUIRED TO KEEP CONTINUITY.
- REFER TO MECHANICAL PLANS FOR EQUIPMENT TO BE SUPPLIED BY OTHER TRADES AND INSTALLED/WIRED UNDER THIS SECTION. COORDINATE LOCATION OF DEVICES WITH OTHER CONTRACTORS.
- PROVIDE FIRESTOPPING FOR ALL PENETRATIONS TO MATCH EXISTING FIRE RATING WHERE APPLICABLE. ALL CORE DRILLS SHALL BE VERIFIED BY BUILDING REPRESENTATIVE PRIOR TO COMMENCING WORK. X-RAY ALL FLOOR SLABS PRIOR TO ROUGH-INS FOR CORE DRILL WORK.
- THE CONTRACTOR SHALL FIELD ROUTE FEEDER FOR NEW POWER PANELS. COORDINATE EXACT ROUTING PATH WITH OWNER. SUBMIT A PROPOSED ROUTING PATH TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO RUNNING ANY CONDUIT OR WIRE ASSOCIATED WITH THIS FEEDER.
- DISCONNECT SWITCH FOR UNIT VENTILATORS IS PROVIDED BY HVAC CONTRACTOR. COORDINATE WITH HVAC CONTRACTOR FOR DISCONNECT SWITCHES FOR ALL OTHER UNIT THAT ARE BEING PROVIDED BY THE HVAC CONTRACTOR.

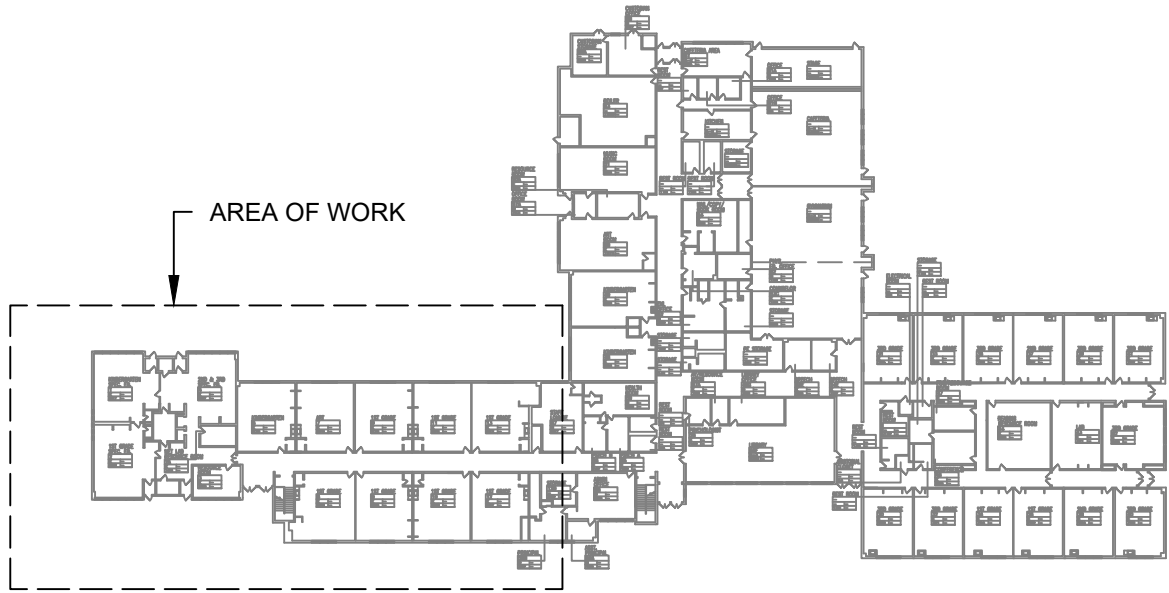
- ALL GROUNDING SHALL BE PROVIDED BY THE CONTRACTOR AS PER NEC 2017.
- ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENLARGE AND FUR OUT EXISTING OPENING FOR EXISTING PANELS AND WHERE REQUIRED. ACCOMMODATE THE NEW BACK BOXES AND HOUSING OF THE NEW RECESSED MOUNTED PANELS TO BE INSTALLED. THE ELECTRICAL CONTRACTOR SHALL ALSO ENGAGE THE GC TO RESTORE AND FINISH THE WALLS TO MATCH THE SURROUNDING WALLS OF THE AREA.

KEYED NOTES:

- RECONNECT EXISTING WIRING TO THE NEW UNIT VENTILATORS. EXTEND WIRING & CONDUIT IF NECESSARY.
- PROVIDE AND INSTALL A NEW 100A, 120/208V, 3PH, 4W PANEL MP1. PROVIDE NEW WIRING AND CONDUIT. REFER TO TES-E-501 FOR PANEL SCHEDULE.



1 FIRST FLOOR PARTIAL PLAN - ELECTRICAL - 1
SCALE: 3/32"=1'-0"



KEY PLAN



PLAN NORTH

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Drawing Title
**FIRST FLOOR PARTIAL
PLAN - ELECTRICAL - 1**

Drawing No.

TES-E-101

**GREENMAN
PEDERSEN, INC**

2 EXECUTIVE BOULEVARD
ROCKLAND, NY 10961
PROJ. NO. : MNY-5000127.00

Mechanical
Electrical
Engineer:

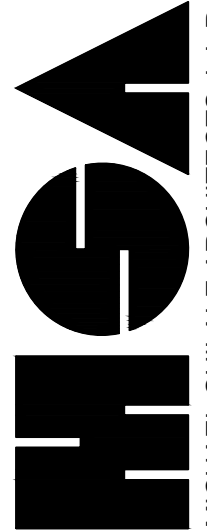
**GREENMAN
PEDERSEN, INC**

2 EXECUTIVE BOULEVARD
ROCKLAND, NY 10961

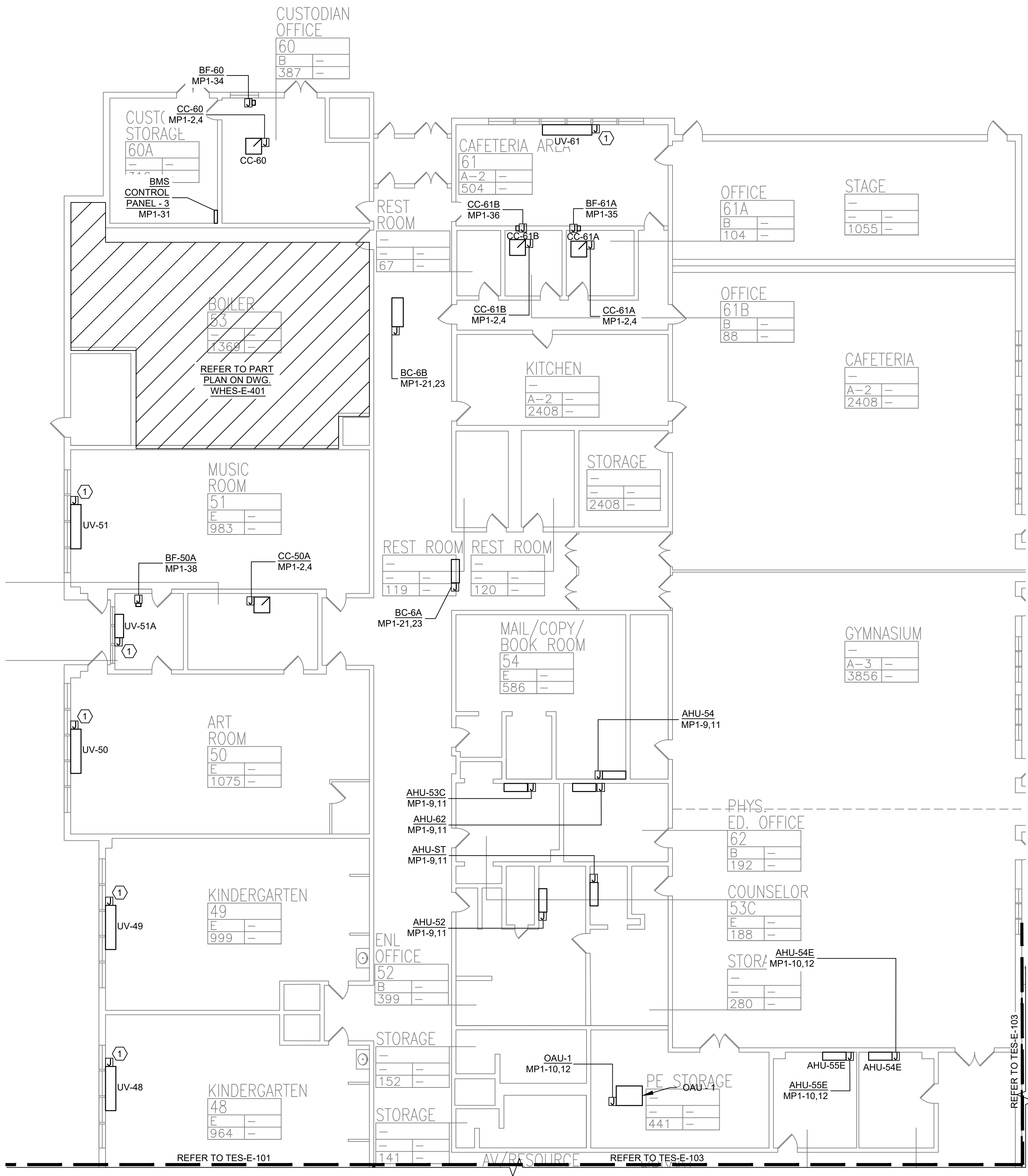
Structural
Engineer:

**UNIVENT REPLACEMENT
AT STONY POINT, HAV
THIELS, WEST HAV
ELEMENTARY SCHOOL**

SSD# 50-02-01-06-0-014-XXX
SSD# 50-02-01-06-0-024-XXX
SSD# 50-02-01-06-0-024-XXX
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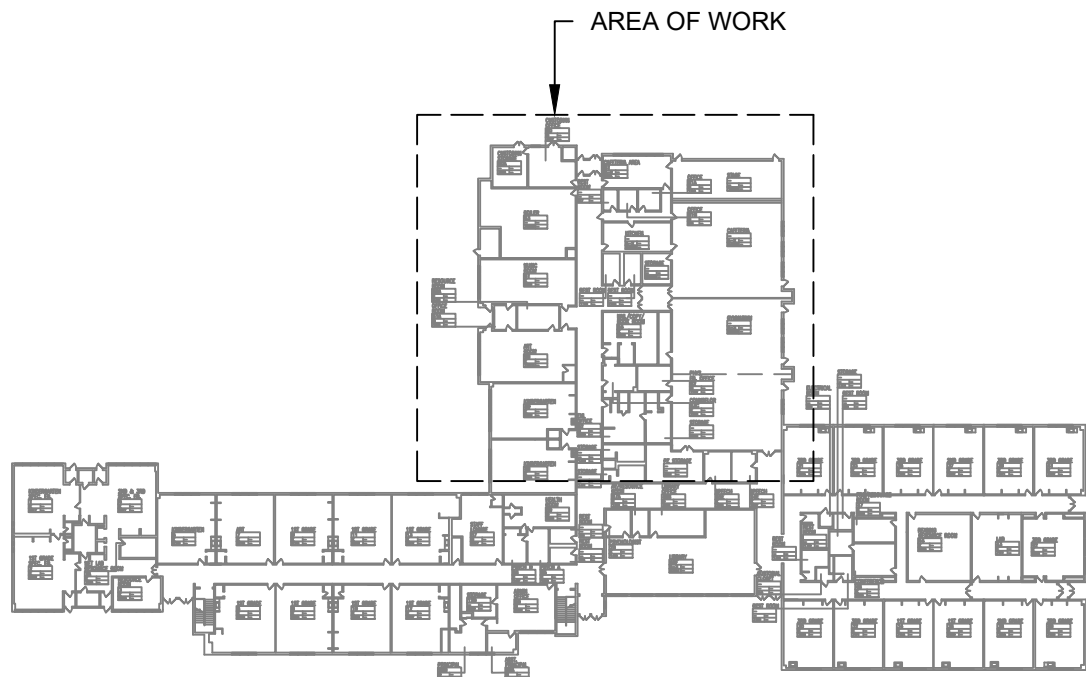
1 FIRST FLOOR PARTIAL PLAN - ELECTRICAL - 2
SCALE: 3/32"=1'-0"

PLAN NOTES:

1. REFER TO ADDITIONAL INSTALLATION NOTES ON DRAWING E-001.
2. ALL NEW BRANCH CIRCUIT SHALL BE RUN WITH MINIMUM OF 2#12+1#12G IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED. FOR LIGHTING AND POWER BRANCH CIRCUIT, MC CABLE SHALL BE INSTALLED FOR RECESSED INSTALLATION ONLY, EITHER IN NEW WALLS OR ABOVE HUNG CEILING WHERE POSSIBLE. REFER TO PANEL SCHEDULES IN DRAWING TES-E-501 FOR ALL OTHER FEEDER AND BRANCH CIRCUIT SIZE INFORMATION.
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5. CONTRACTOR SHALL PERFORM AMP PROBE READINGS ON EXISTING SERVICE EQUIPMENT BEFORE AND AFTER WORK TO ENSURE EQUIPMENT WILL NOT BE LOADED BEYOND ITS MAX AMPACITY.
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KEYED NOTES:

- ① RECONNECT EXISTING WIRING TO THE NEW UNIT VENTILATORS. EXTEND WIRING & CONDUIT IF NECESSARY.



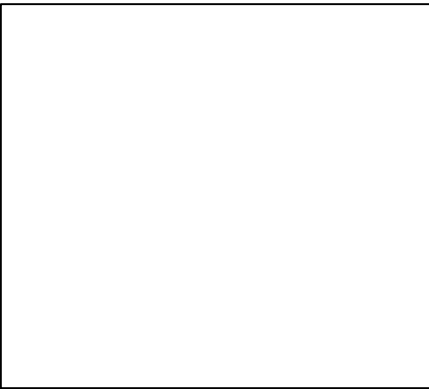
KEY PLAN



PLAN NORTH



Revisions	
No.	Date
1	03-04-25
	BIDDING DOCUMENTS



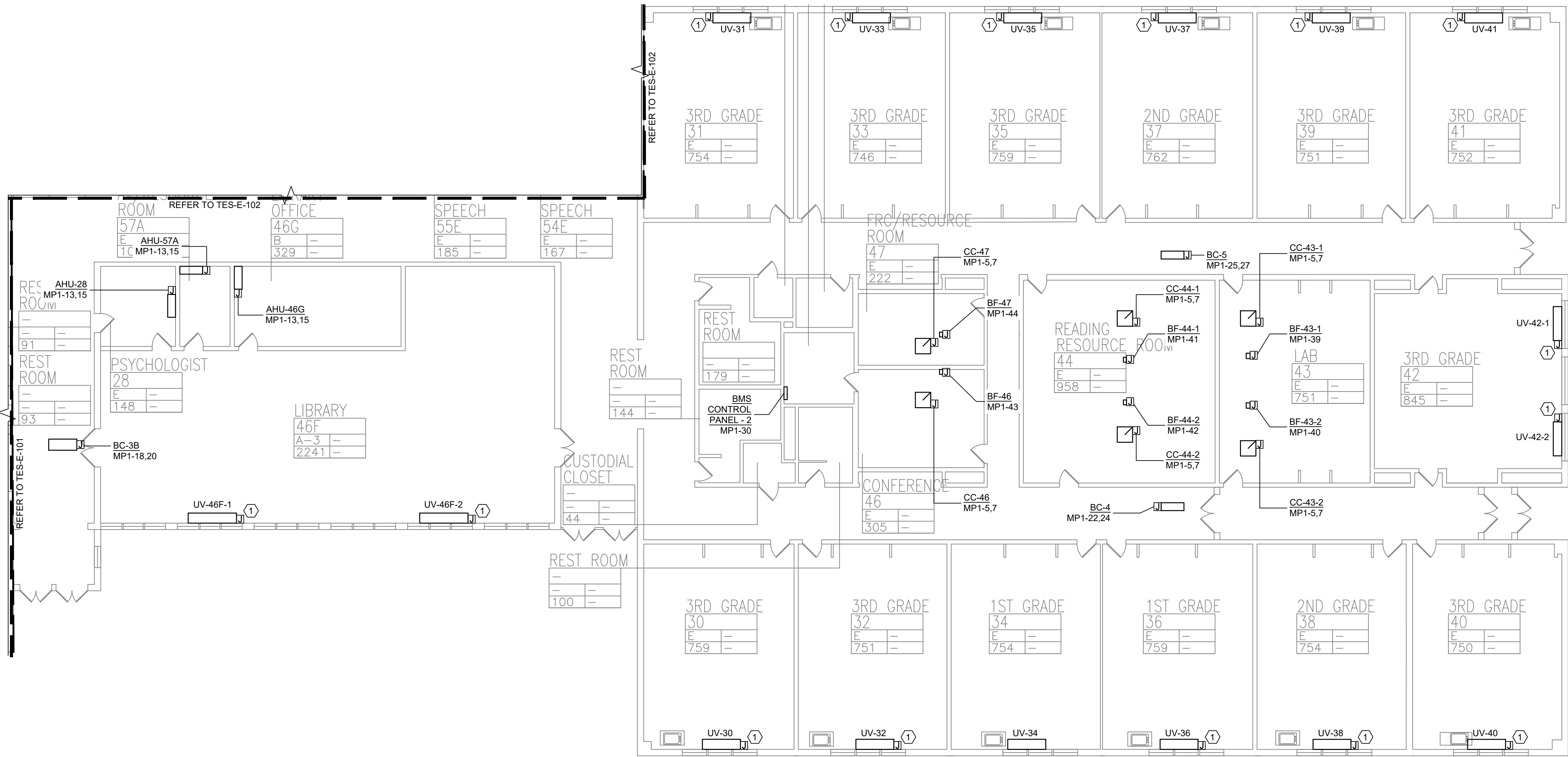
Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 SYRACUSE, NY 13201 PROJ. NO. : MNY-5000127.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 SYRACUSE, NY 13201
Mechanical Electrical Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELLS, WEST HAVEN ELEMENTARY SCHOOL
SSD# 50-02-01-06-0-014-XXX
SSD# 50-02-01-06-0-025-XXX
SSD# 50-02-01-06-0-024-XXX
NY DESIGN PROFESSIONAL SEAL NO. 10894
SYRACUSE, NY 13204



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Drawing Title
FIRST FLOOR PARTIAL PLAN - ELECTRICAL - 2
Drawing No.
TES-E-102



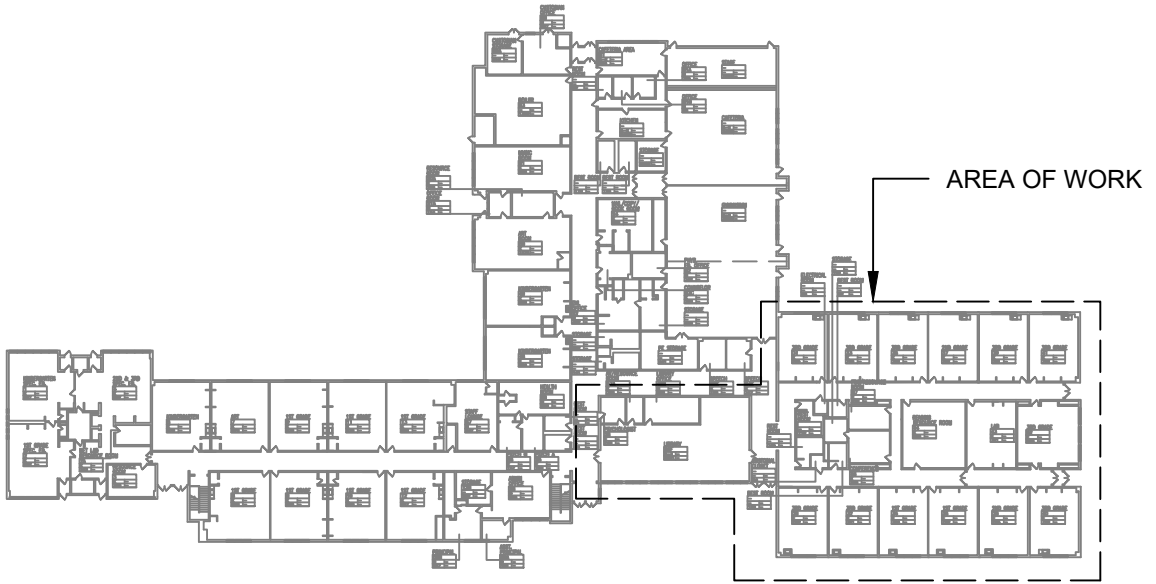
1 FIRST FLOOR PARTIAL PLAN - ELECTRICAL - 3
SCALE: 3/32"=1'-0"

PLAN NOTES:

1. REFER TO ADDITIONAL INSTALLATION NOTES ON DRAWING E-001.
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KEYED NOTES:

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KEY PLAN



Revisions	
No.	Date
1	03-04-25

Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKLAND, NY 10961 PROJ. NO. : NY-200127-00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKLAND, NY 10961
Mechanical Electrical Engineer:	Structural Engineer:

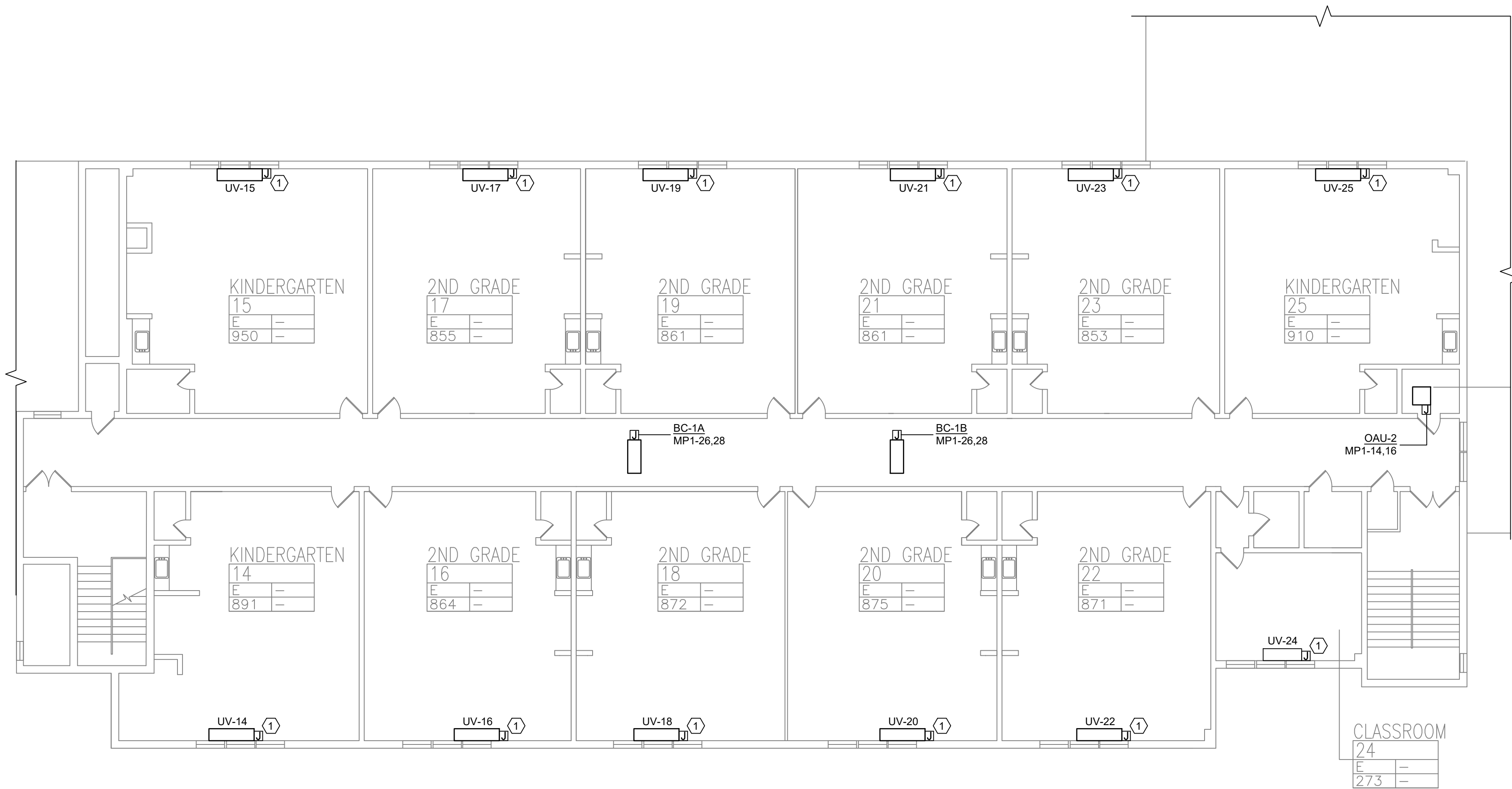
UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVEN ELEMENTARY SCHOOL SSD# 50-02-01-06-0-014-XXX SSD# 50-02-01-06-0-025-XXX SSD# 50-02-01-06-0-024-XXX NY REG. NO. 10994 ROCKLAND COUNTY



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Drawing Title
FIRST FLOOR PARTIAL PLAN - ELECTRICAL - 3

Drawing No.
TES-E-103



1 SECOND FLOOR PLAN - ELECTRICAL
SCALE: 3/32"=1'-0"

PLAN NOTES:

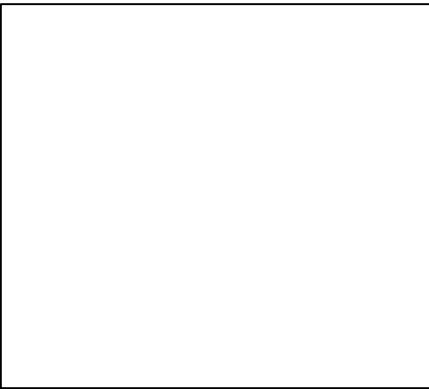
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No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

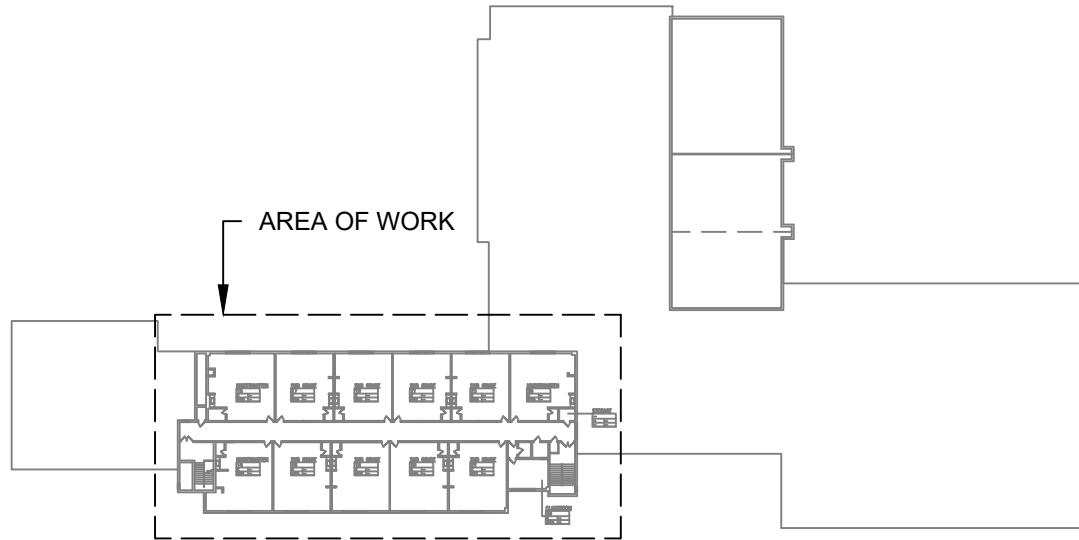


Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 SYRACUSE, NY 13201 PROJ. NO. : MNY-5000127.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 SYRACUSE, NY 13201
Mechanical Electrical Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVEN ELEMENTARY SCHOOL
SSD# 50-02-01-06-0-014-XXX
SSD# 50-02-01-06-0-025-XXX
SSD# 50-02-01-06-0-024-XXX
NY DESIGN NO. 10094
BROOKLAND COUNTY

MSA
MICHAEL SHILALE ARCHITECTS, LLP
140 Park Avenue New York, NY 10056 Tel 845-708-9200
www.shilale.com



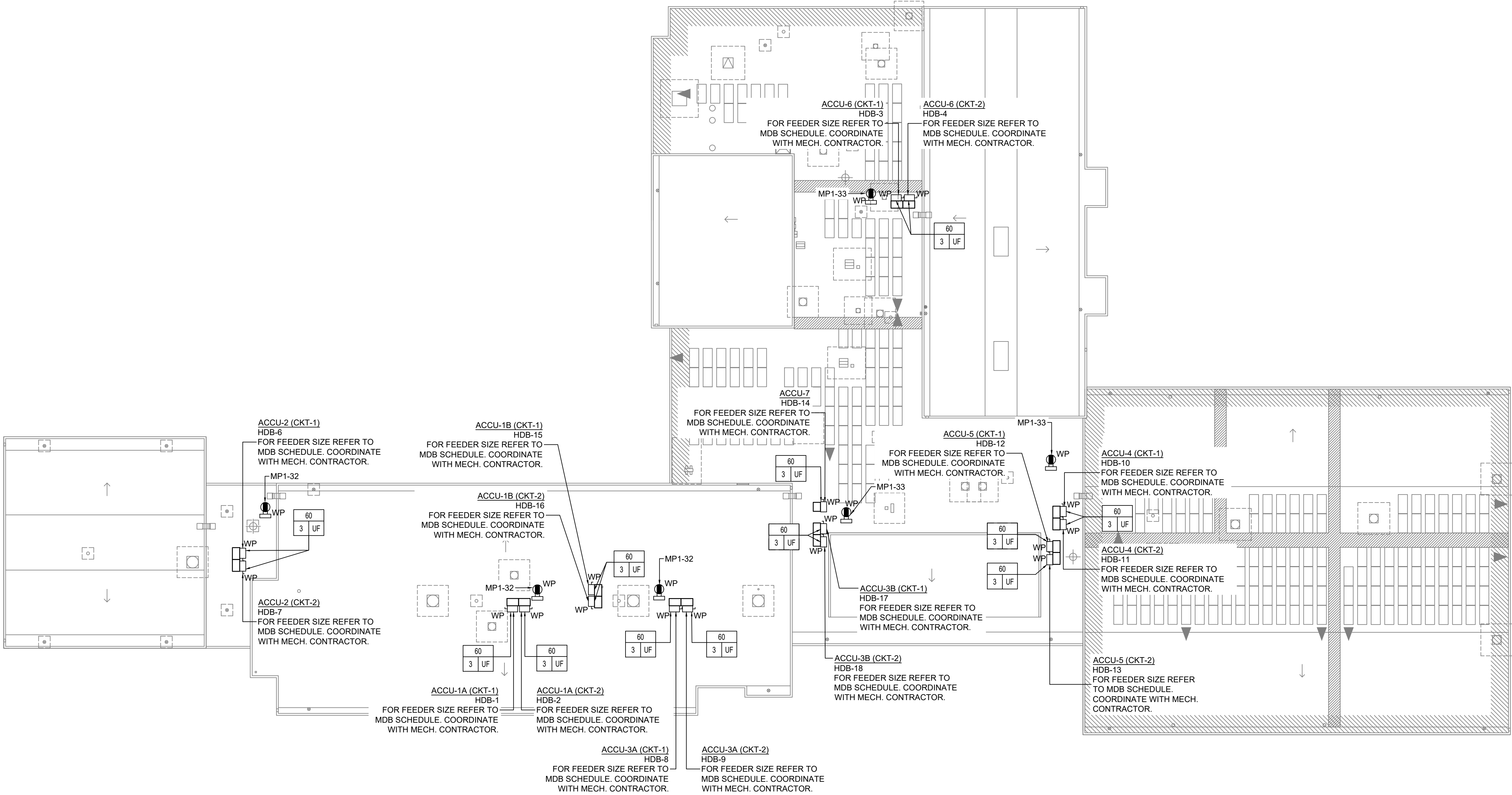
KEY PLAN



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Drawing Title
SECOND FLOOR PLAN - ELECTRICAL

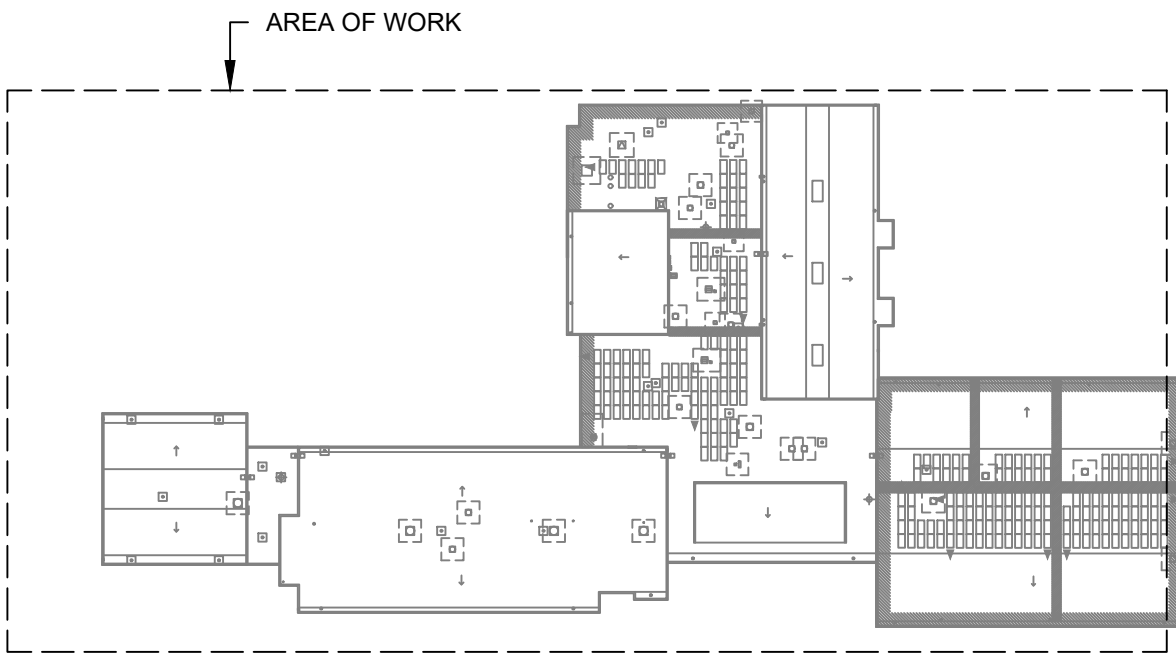
Drawing No.
TES-E-104



1 ROOF PLAN - ELECTRICAL
SCALE: 3/64"=1'-0"

PLAN NOTES:

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KEY PLAN



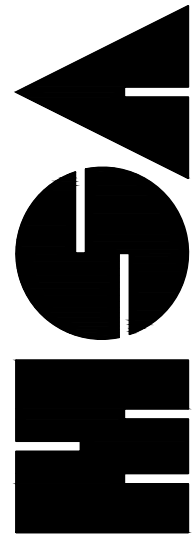
PLAN NORTH

Revisions	
No.	Date
1	03-04-25
BIDDING DOCUMENTS	

Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 SYRACUSE, NY 13201 PH: 315-486-1270	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 SYRACUSE, NY 13201
Mechanical Electrical Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVEN ELEMENTARY SCHOOL
SSD# 50-02-01-06-0-014-XXX
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www.shilale.com
BROOKLAND COUNTY, MARYLAND

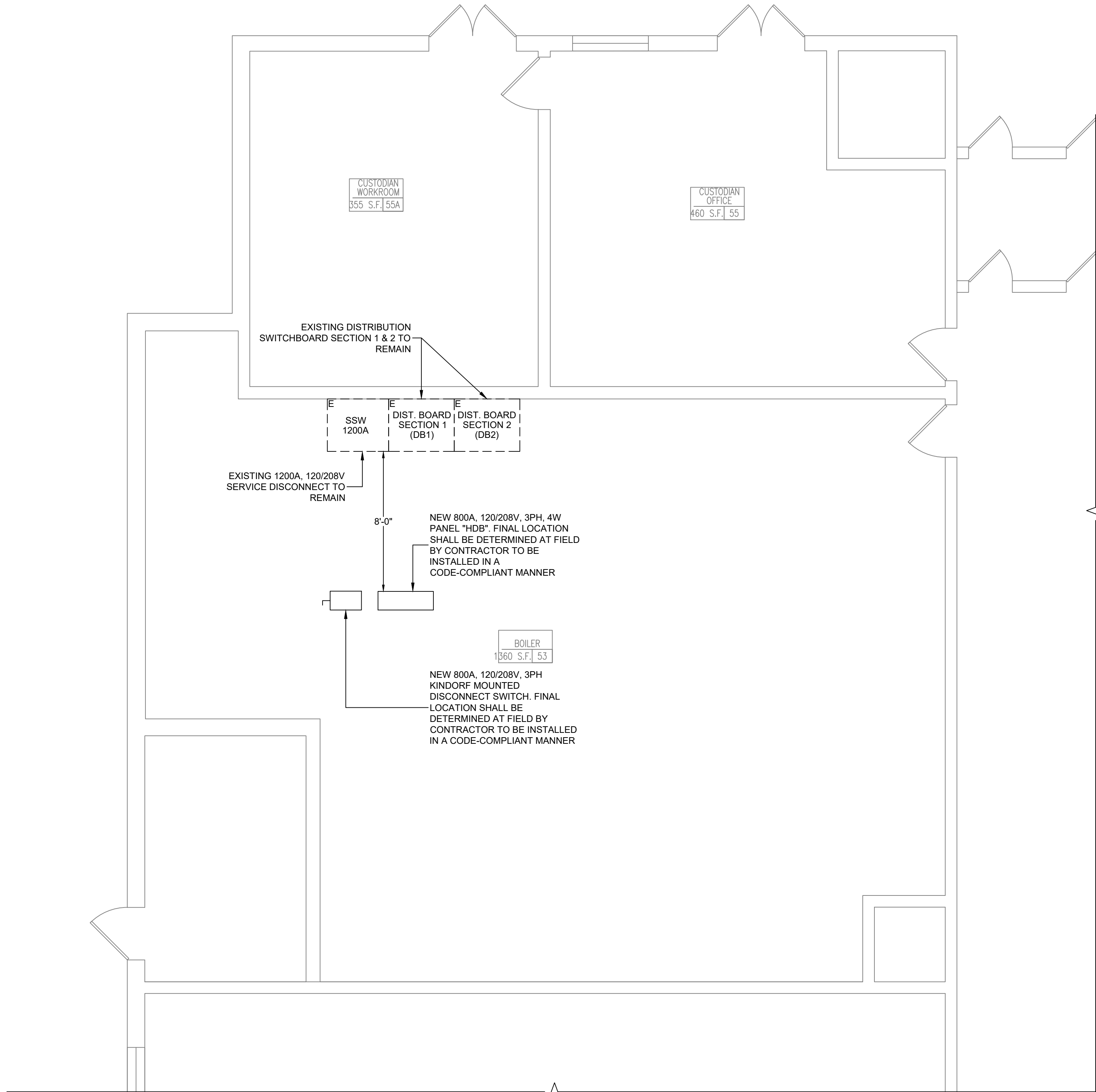


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Drawing Title
ROOF PLAN - ELECTRICAL

Drawing No.
TES-E-105

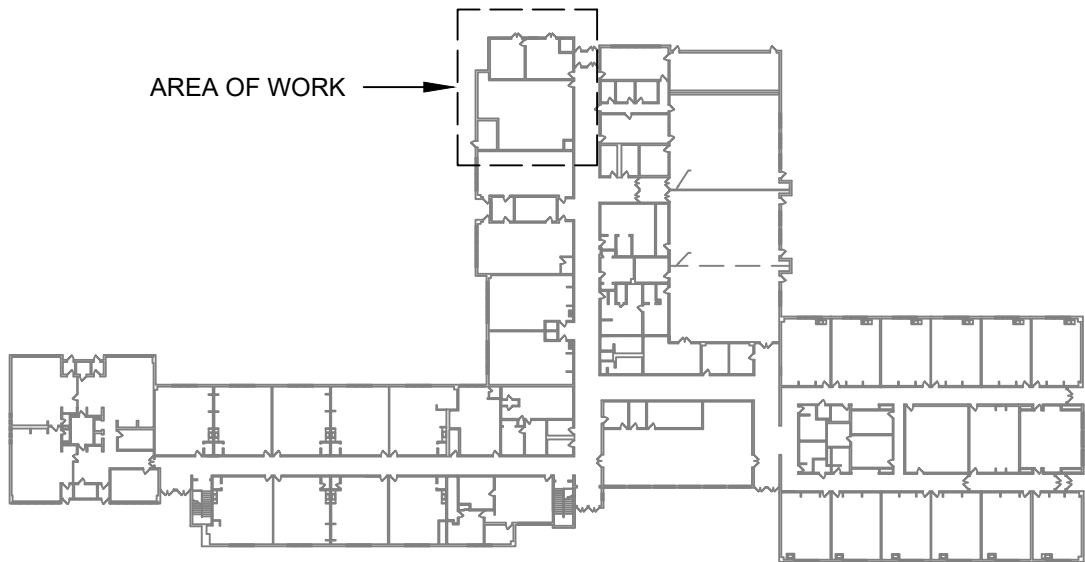
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1 BOILER ROOM PART PLAN - ELECTRICAL
SCALE: 1/4"=1'-0"

PLAN NOTES:

1. THE CONTRACTOR IS TO COORDINATE ALL SHUTDOWNS AND DISRUPTIONS TO NORMAL SERVICES WITH SBU, ALL OTHER TRADES AND THE FACILITY.
2. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY UNAUTHORIZED DISRUPTION AND POWER OUTAGES.
3. MAINTAIN CIRCUIT CONTINUITY TO AREAS NOT AFFECTED BY CONSTRUCTION WORK.
4. CONTRACTOR IS TO TRACE AND PROTECT ALL FEEDER & BRANCH CIRCUITS FOR ALL AREAS OF THE SITE AND ALL OTHER ELECTRICAL EQUIPMENT DURING DEMOLITION/CONSTRUCTION. ELECTRICAL CONTRACTOR IS REQUIRED TO COORDINATE THIS REQUIREMENT WITH THE GENERAL CONTRACTOR AND ALL OTHER TRADES.
5. ROUTING OF ELECTRICAL CONDUITS IF SHOWN IN THE DRAWINGS ARE TENTATIVE. THE CONTRACTOR IS RESPONSIBLE TO FINALIZE THE ROUTING OF ALL ELECTRICAL CONDUITS AT FIELD IN COORDINATION WITH ALL OTHER TRADES. EXISTING AND NEW BUILDING ELEMENTS, STRUCTURES, PIPES, EQUIPMENT, LANDSCAPING ETC., FOR CODE COMPLIANT INSTALLATION.
6. ALL ELECTRIC SERVICES AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS & THE NATIONAL ELECTRIC CODE (NEC).
7. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE CODE COMPLIANT GROUNDING OF THE CIRCUITS, EQUIPMENT AND CONDUITS AS PER NEC AND SPECIFICATION.
8. ALL SPARE CONDUITS SHALL BE INSTALLED WITH DRAG LINES.



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Drawing Title
**BOILER ROOM PART
PLAN - ELECTRICAL**



Drawing No.
TES-E-401

**UNIVENT REPLACEMENT
AT STONY POINT,
THIELS, WEST HAV
ELEMENTARY SCHOOL**
SSD# 50-02-01-06-0-014-XXX
SSD# 50-02-01-06-0-025-XXX
SSD# 50-02-01-06-0-024-XXX
NY License No. 00000000000000000000
FREDRICK, NY 12094

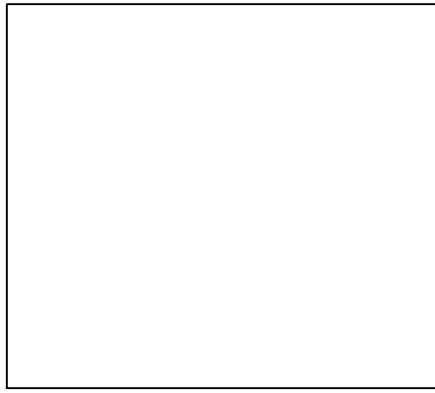
Mechanical
& Electrical
Engineer:

**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
SUITE 200
SUFFERN, NY 10901
PROJ. No. : MNY-2000128.00

Structural
Engineer:

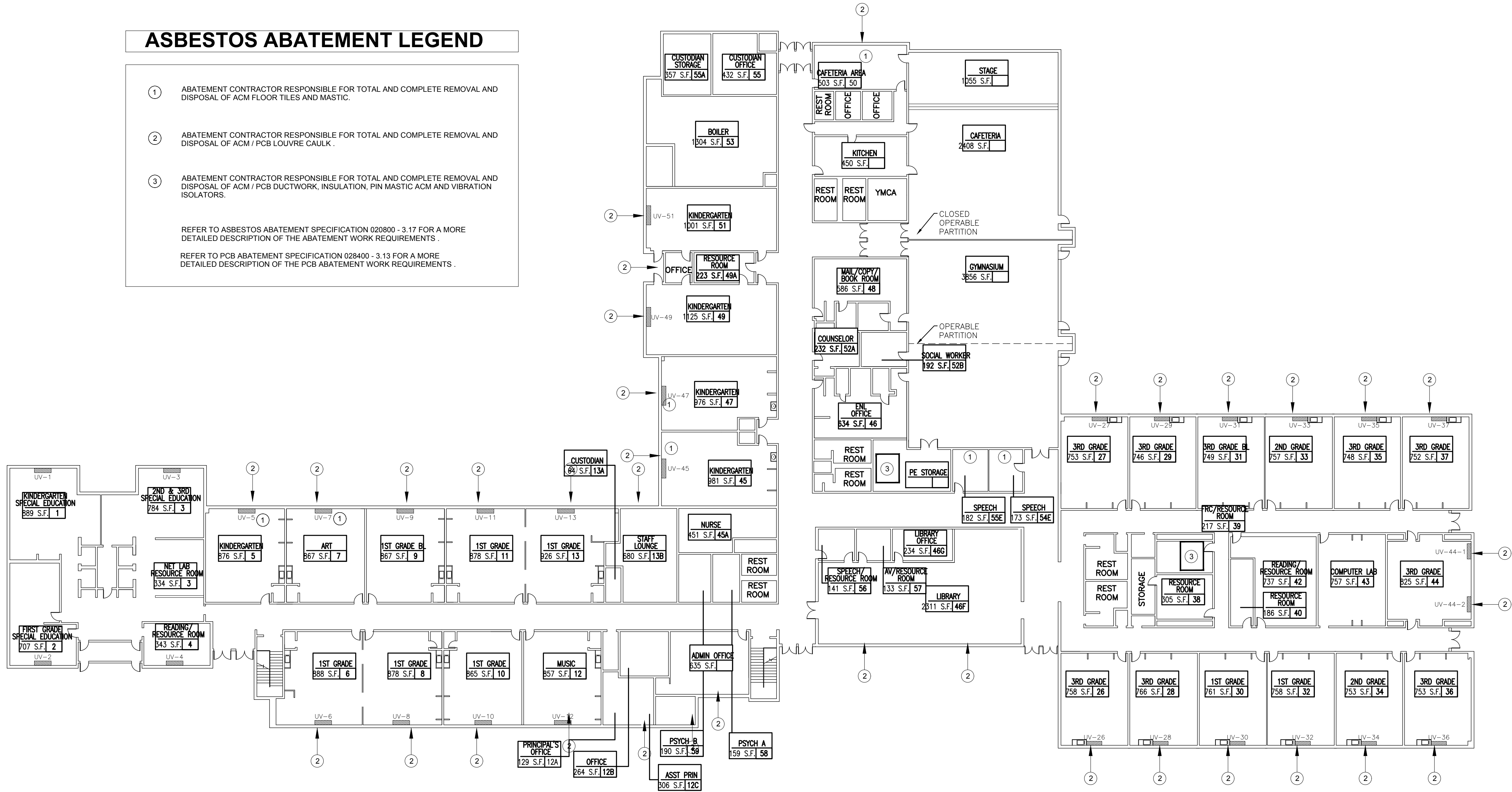
**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
SUITE 200
SUFFERN, NY 10901

Drawn by DK/KD
Checked by SH
Project No. 43040
Scale AS NOTED
Date 03-04-25



No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

1 FIRST FLOOR ABATEMENT PLAN
SCALE: NTS



**FIRST FLOOR
ABATEMENT
PLAN**

Drawn by: **WHES
HM-101**

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MSA
MICHAEL SHILALE ARCHITECTS, L.L.P.
140 Park Avenue New York, NY 10022 Tel: 845-709-8200
www.shilale.com

UNIVENT REPLACEMENT AT
STONY POINT, THIELS
& WEST HAYERSTRAW
ELEMENTARY SCHOOLS
FES SED# 50-02-01-06-0-009-012
TES SED# 50-02-01-06-0-025-018
WHES SED# 50-02-01-06-0-024-015
140 ROUTE 210,
STONY POINT, NY 10980
COUNTY OF ROCKLAND

Mechanical
& Electrical
Engineer:
QuESAT, Inc.
1378 Route 9
Stamford, NY 12580
845-236-6031
www.qualityenv.com

Drawn by: SP/MAL
Checked by: MS/JC
Project No.: 43042
Scale: AS NOTED
Date: 05-10-24

Professional Engineer
State of New York
No. 11-30-25
Date: 11-30-25
Revisions:

0 1/2 1
IF THIS SCALE DOES NOT
MEASURE 1" THEN GRADING IS
NOT TO FULL SCALE

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, TO ALTER AN ITEM IN ANY WAY.

1 SECOND FLOOR ABATEMENT PLAN
SCALE: NTS



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**SECOND FLOOR
ABATEMENT
PLAN**

Drawn by
**WHES
HM-102**

MSA
MICHAEL SHIALE ARCHITECTS, L.L.P.
140 Park Avenue New City, NY 10956 Tel 845 708-7020
www.shiale.com

UNIVENT REPLACEMENT AT
STONY POINT, THIELS
& WEST HAVERSTRAW
ELEMENTARY SCHOOLS
FES SED# 50-02-01-06-0-003-012
TES SED# 50-02-01-06-0-025-018
WHES SED# 50-02-01-06-0-024-015
140 ROUTE 90,
STONY POINT, NY 10980
COUNTY OF ROCKLAND

Mechanical
& Electrical
Engineer:

Environmental
Engineer:
QUES&T, Inc.
1376 Route 9
Wappingers Falls, NY 12590
www.quesandt.com

Drawn by AM
Checked by RL
Project No. 43042
Scale AS NOTED
Date 05-10-24



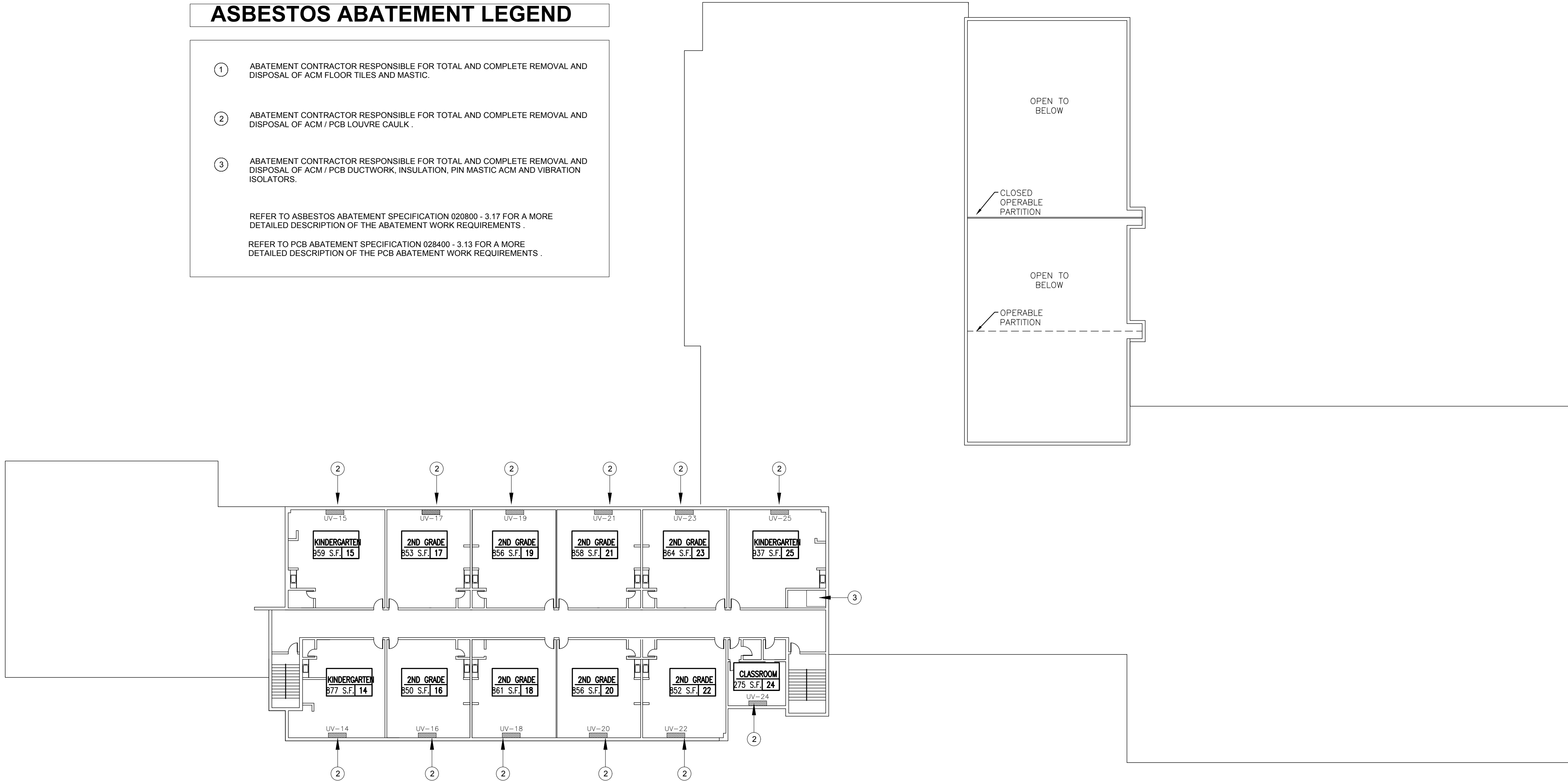
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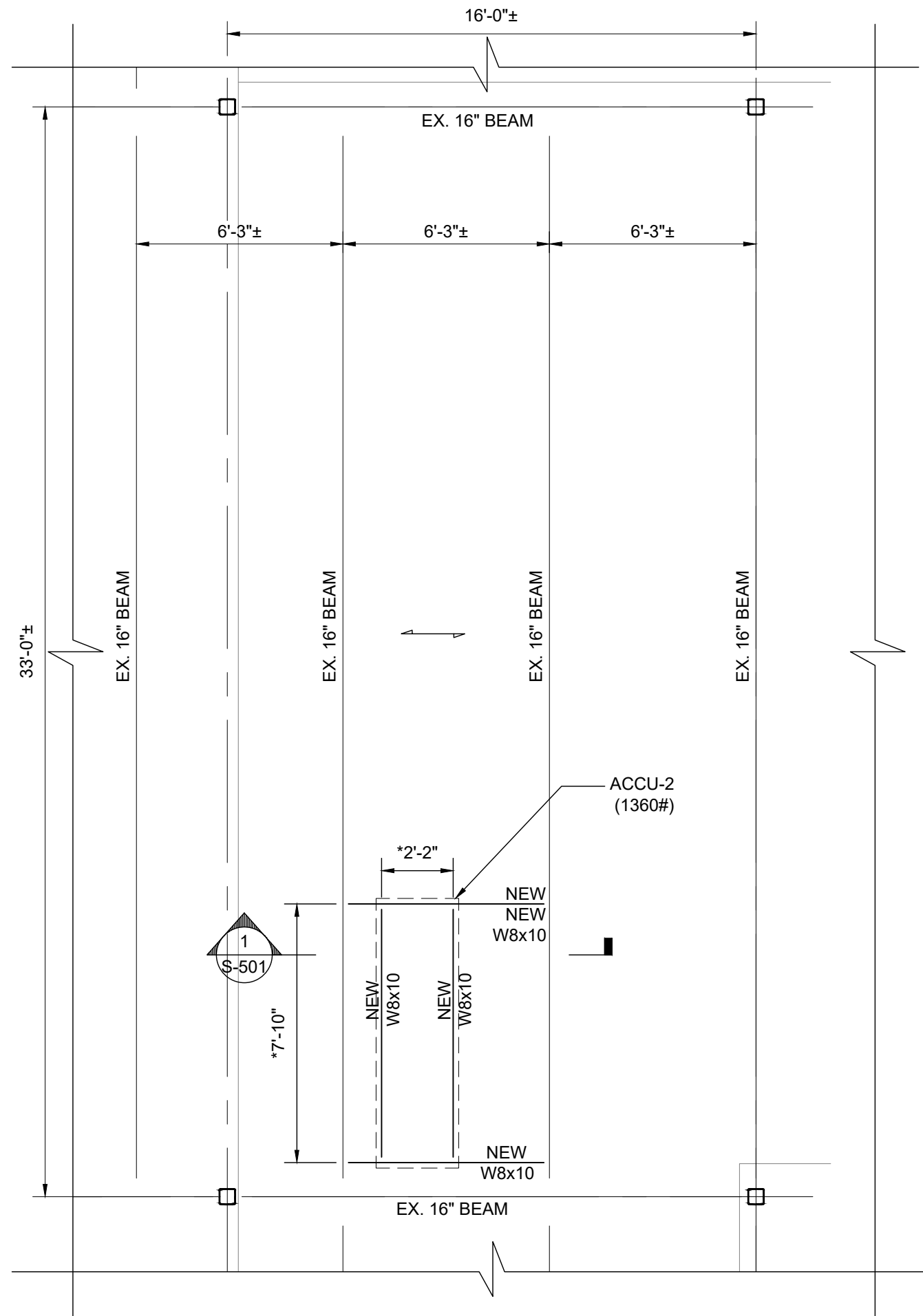
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1"
IF THIS DRAWING DOES NOT
MEASURE TO FULL SCALE
NOT TO FULL SCALE

ASBESTOS ABATEMENT LEGEND

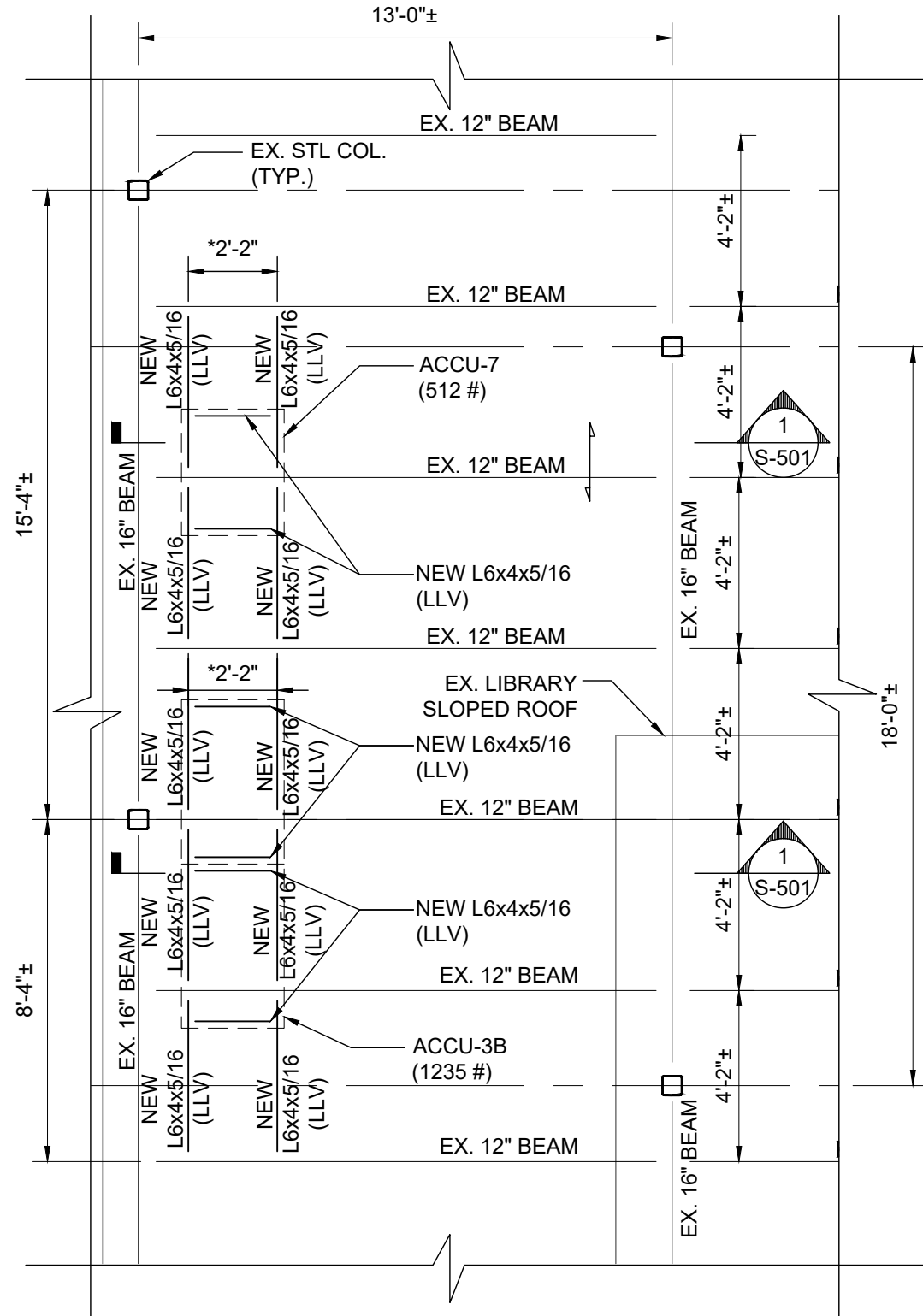
- 1 ABATEMENT CONTRACTOR RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF ACM FLOOR TILES AND MASTIC.
- 2 ABATEMENT CONTRACTOR RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF ACM / PCB LOUVRE CAULK.
- 3 ABATEMENT CONTRACTOR RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF ACM / PCB DUCTWORK, INSULATION, PIN MASTIC ACM AND VIBRATION ISOLATORS.

REFER TO ASBESTOS ABATEMENT SPECIFICATION 020800 - 3.17 FOR A MORE DETAILED DESCRIPTION OF THE ABATEMENT WORK REQUIREMENTS .
REFER TO PCB ABATEMENT SPECIFICATION 028400 - 3.13 FOR A MORE DETAILED DESCRIPTION OF THE PCB ABATEMENT WORK REQUIREMENTS .

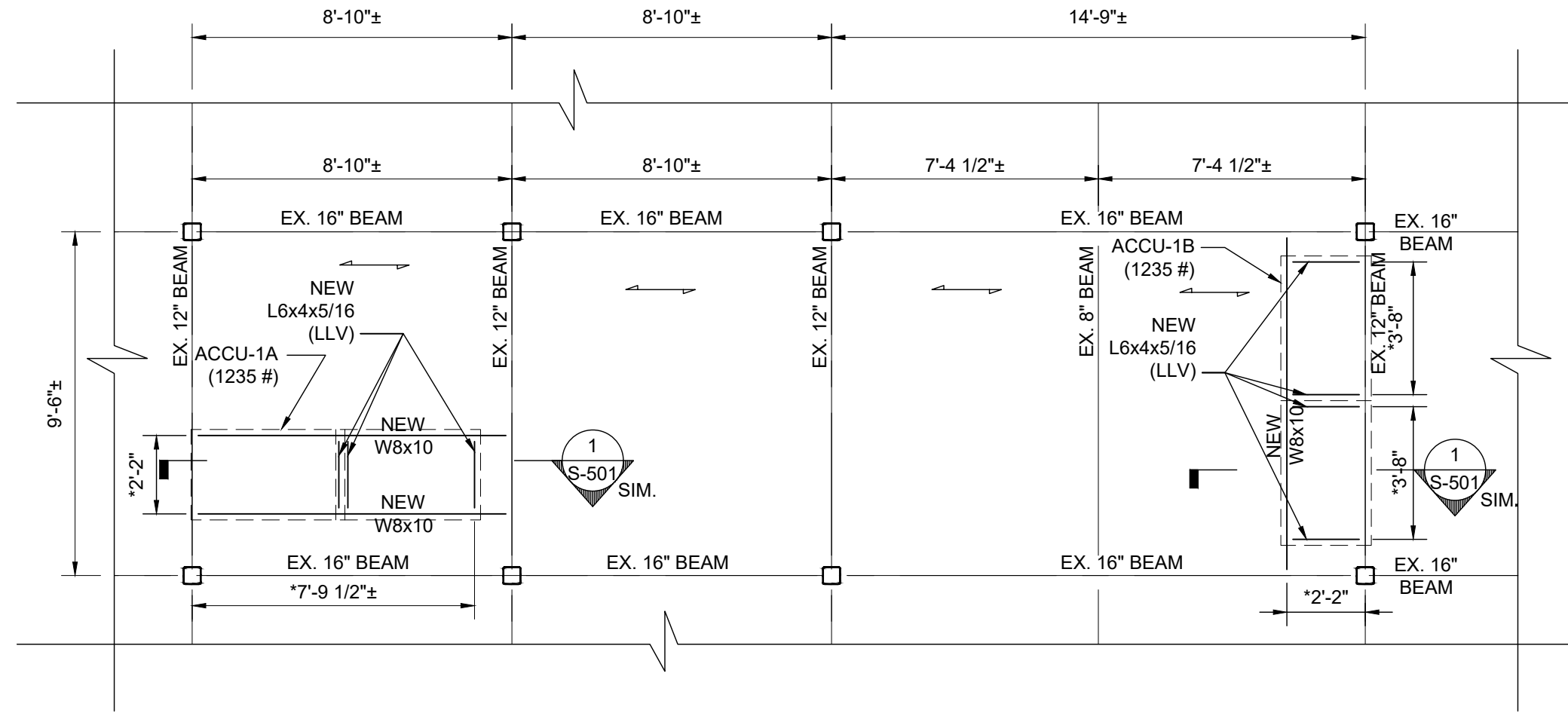




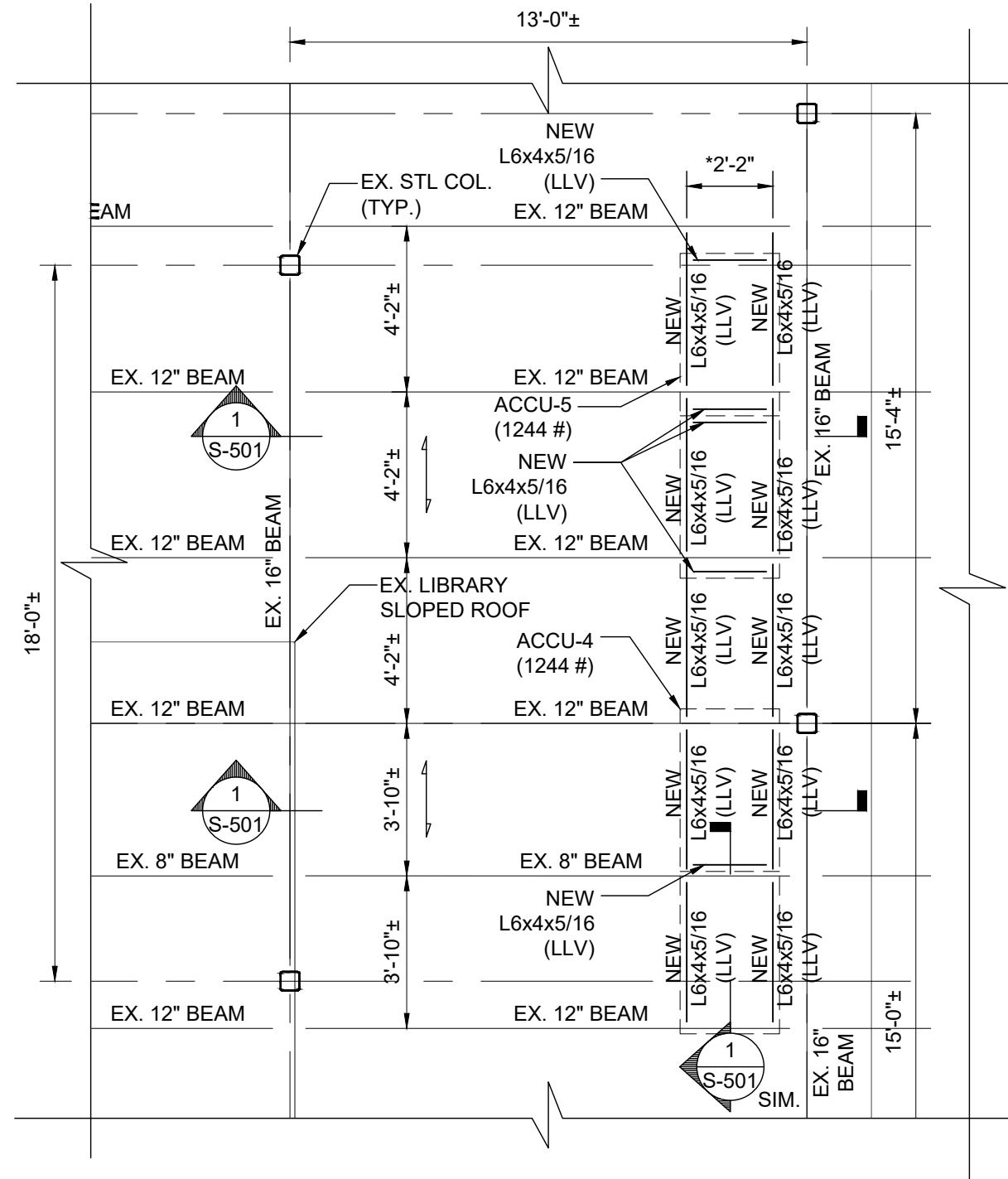
1 ROOF FRAMING PARTIAL PLAN
SCALE: 1/4" = 1'- 0"



4 ROOF FRAMING PARTIAL PLAN
SCALE: 1/4" = 1'- 0"



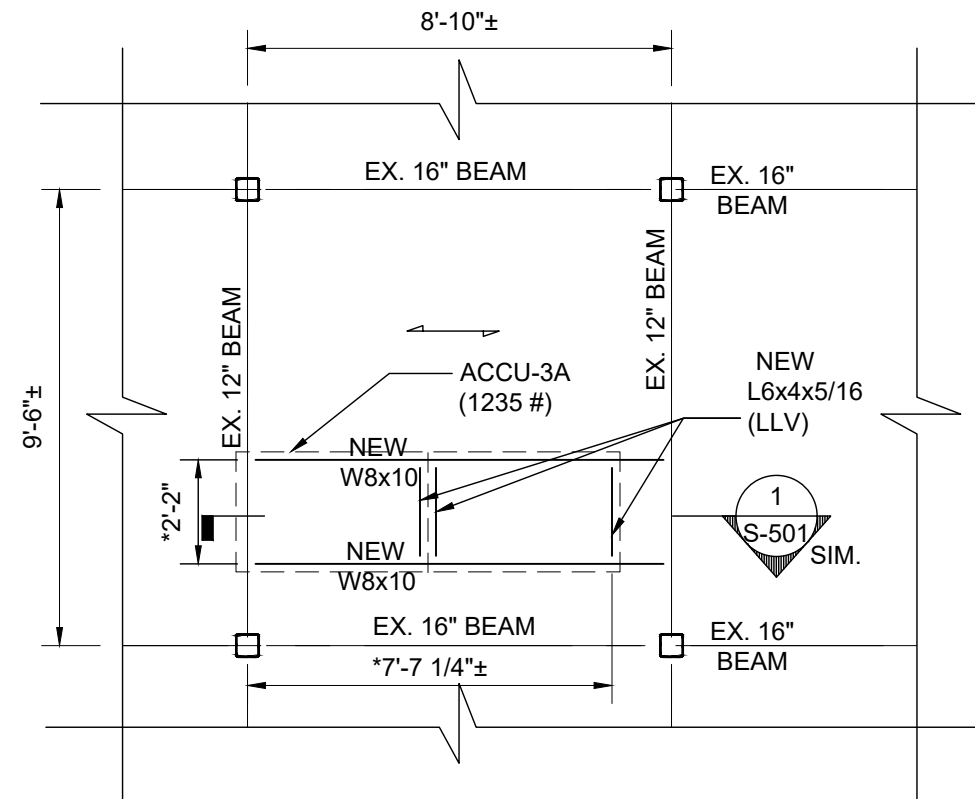
2 ROOF FRAMING PARTIAL PLAN
SCALE: 1/4" = 1'- 0"



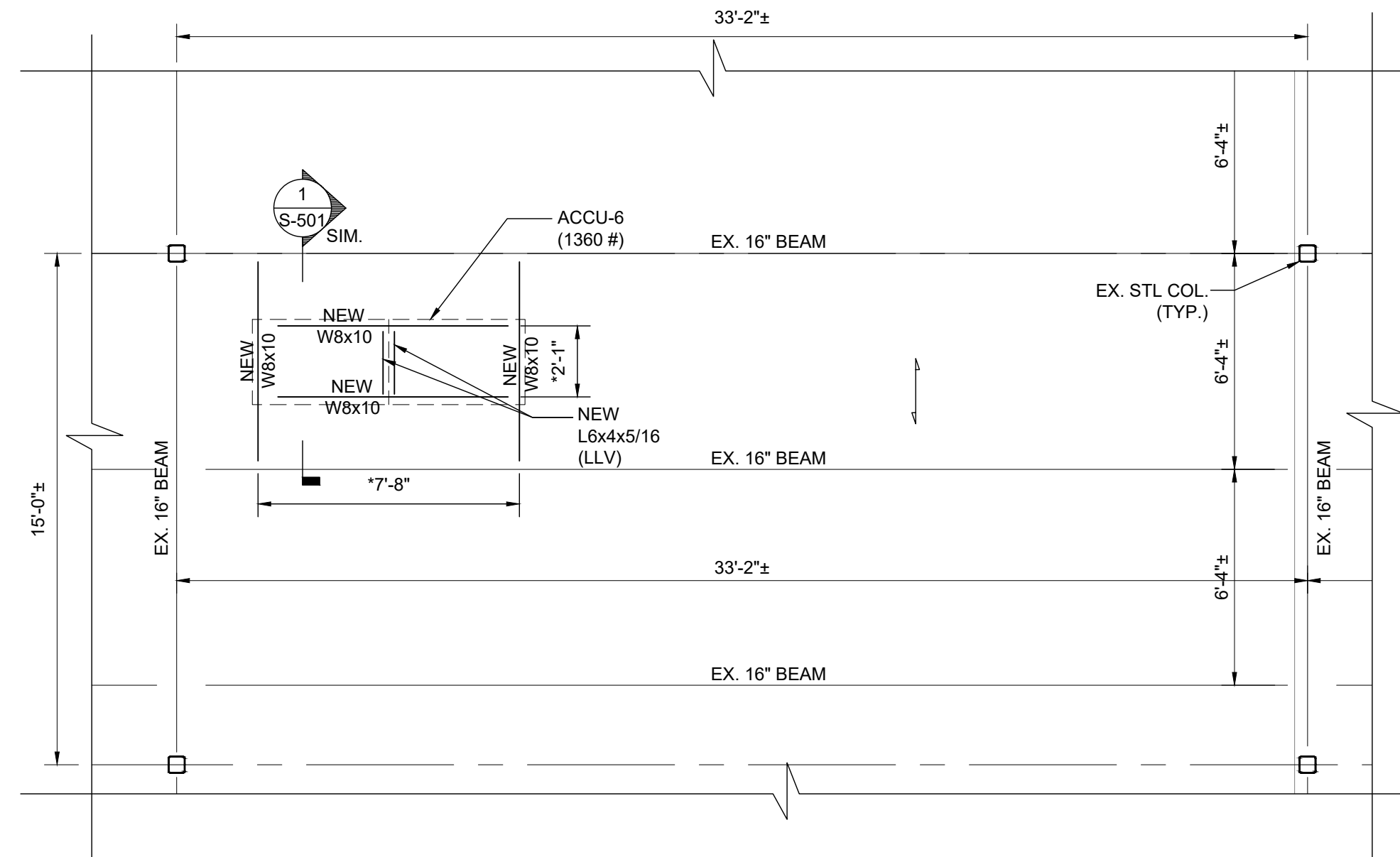
5 ROOF FRAMING PARTIAL PLAN
SCALE: 1/4" = 1'- 0"

- PLAN NOTES:
- EXISTING CONSTRUCTION IS THE BEST REPRESENTATION OF INFORMATION COMPILED FROM HISTORICAL DOCUMENTS. CONTRACTOR SHALL SURVEY AND CONFIRM EXISTING CONSTRUCTION PRIOR TO BEGINNING ANY WORK. NOTIFY THE ARCHITECT IF ANY DISCREPANCIES ARE DISCOVERED.
 - EXISTING STEEL COLUMNS AND BEAMS ARE NOT TO BE REMOVED.
 - CONTRACTOR SHALL BRACE, SHORE, PROTECT, ETC EXISTING CONSTRUCTION AS REQUIRED TO PROVIDE SAFE WORK ENVIRONMENT AND OVERALL BUILDING STABILITY.
 - CARE SHALL BE TAKEN NOT TO DISTURB OR DAMAGE EXISTING STRUCTURAL STEEL COLUMNS AND BEAMS ETC DURING CONSTRUCTION.
 - INDICATES SPAN DIRECTION OF EXISTING ROOF DECK.
 - EXISTING CONSTRUCTION AT THE ROOF CONSISTS OF CONCRETE OVER METAL DECK SPANNING OVER STEEL BEAMS.
 - * - COORDINATE SIZE AND LOCATION OF ALL ROOFTOP EQUIPMENT AND ROOF PENETRATIONS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.

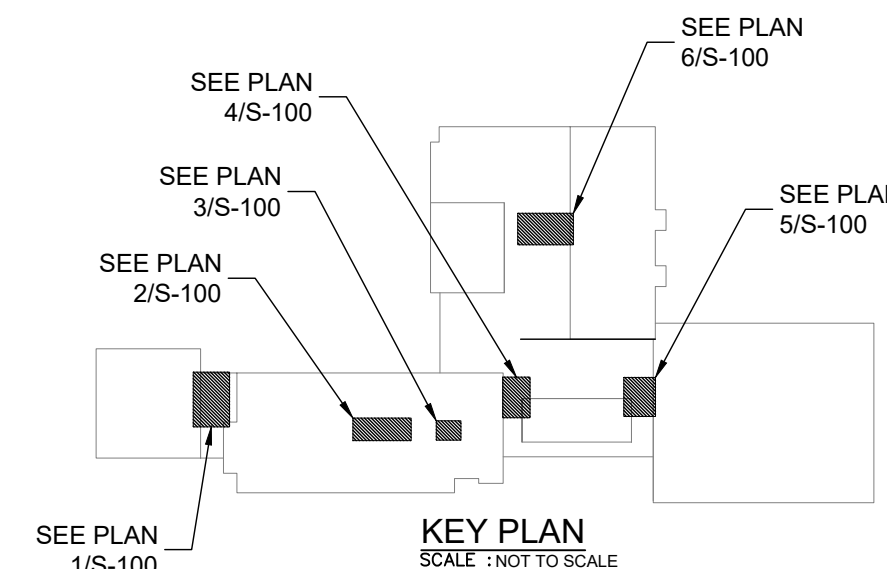
ROOF LOAD SCHEDULE	
EXISTING DEAD LOAD	
3" LWT CONC. W/ 1 1/2" ROOF DECK	41 PSF
ROOFING/INSULATION	5 PSF
ROOF BEAMS	5 PSF
CEILING	4 PSF
MEP	5 PSF
TOTAL DEAD LOAD	60 PSF
LIVE LOAD:	
ROOF	20 PSF
+ WEIGHT OF MECHANICAL UNITS	



3 ROOF FRAMING PARTIAL PLAN
SCALE: 1/4" = 1'- 0"



6 ROOF FRAMING PARTIAL PLAN
SCALE: 1/4" = 1'- 0"



0 1/2 1
IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

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Drawing Title
STRUCTURAL ROOF PLAN

Drawing No.

WHES-S-100

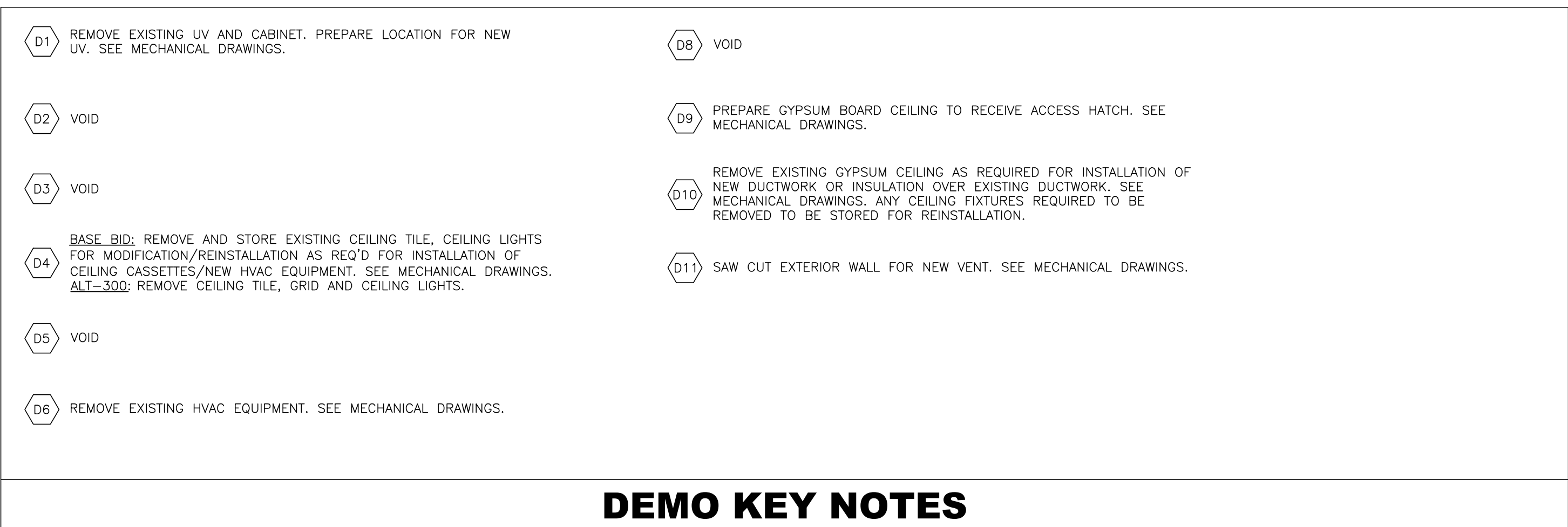
**UNIVENT REPLACEMENT
AT STONY POINT,
THIELS, WEST HAV
ELEMENTARY SCHOOL**
SD# 50-02-01-06-0-014-XXX
SD# 50-02-01-06-0-025-XXX
SD# 50-02-01-06-0-024-XXX
100 Park Avenue New York, NY 10065
www.shilale.com

MSA
MICHAEL SHILALE ARCHITECTS, LLP
140 Park Avenue New York, NY 10065
Tel 845-708-9200
www.shilale.com

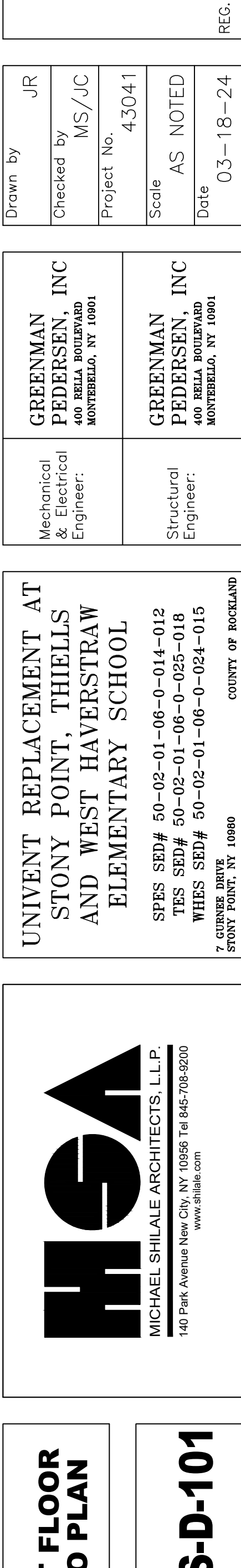
GREENMAN PEDERSEN, INC
2 EXECUTIVE BOULEVARD
SUITE 200
SUFFERN, NY 10901
PROJ. NO.: WHES-S-100
MECHANICAL ENGINEER

Drawn by S.I.
Checked by R.B.
Project No. 43040
Scale AS NOTED
Date 03-04-25
BIDDING DOCUMENTS

Revisions



- [illegible]

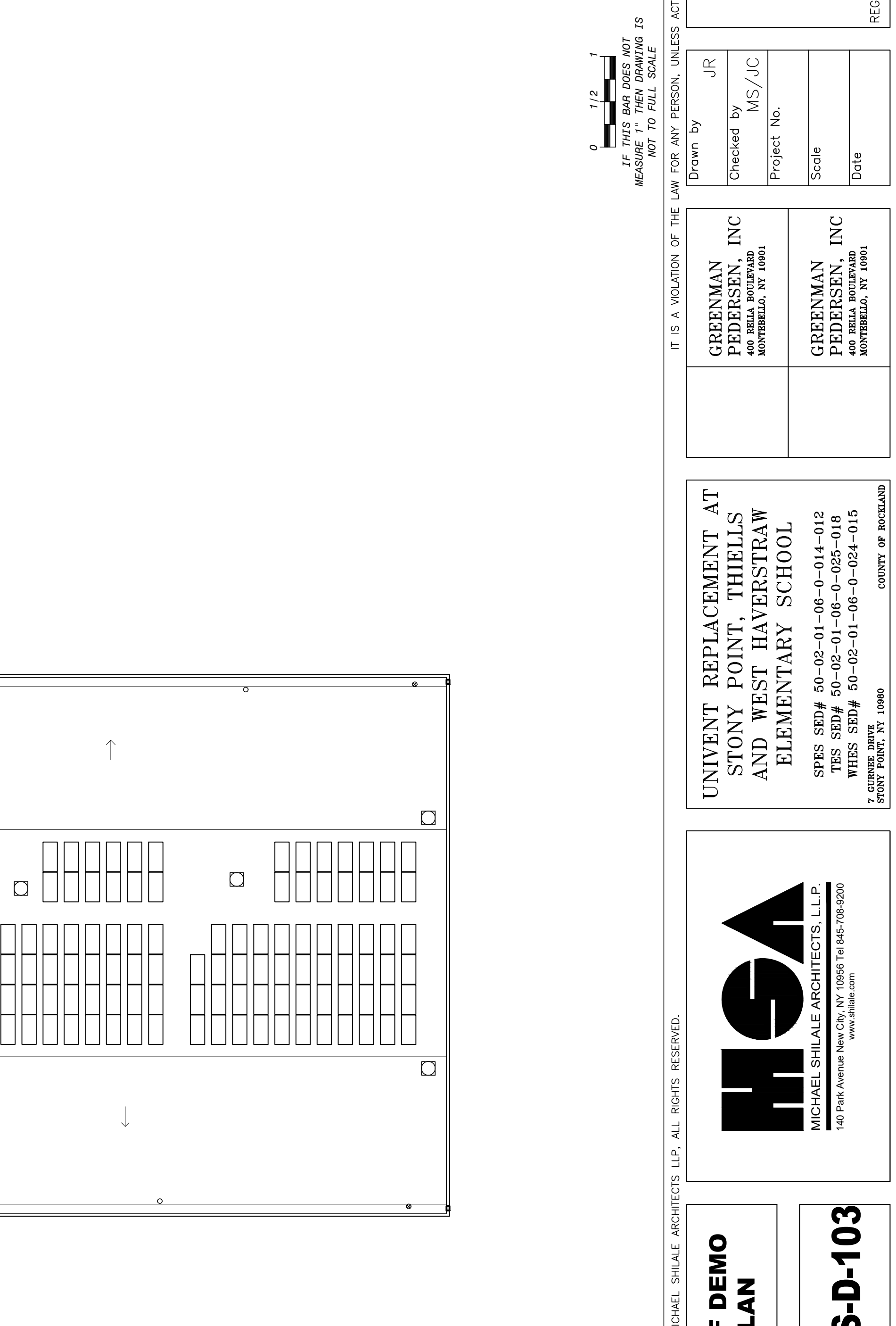
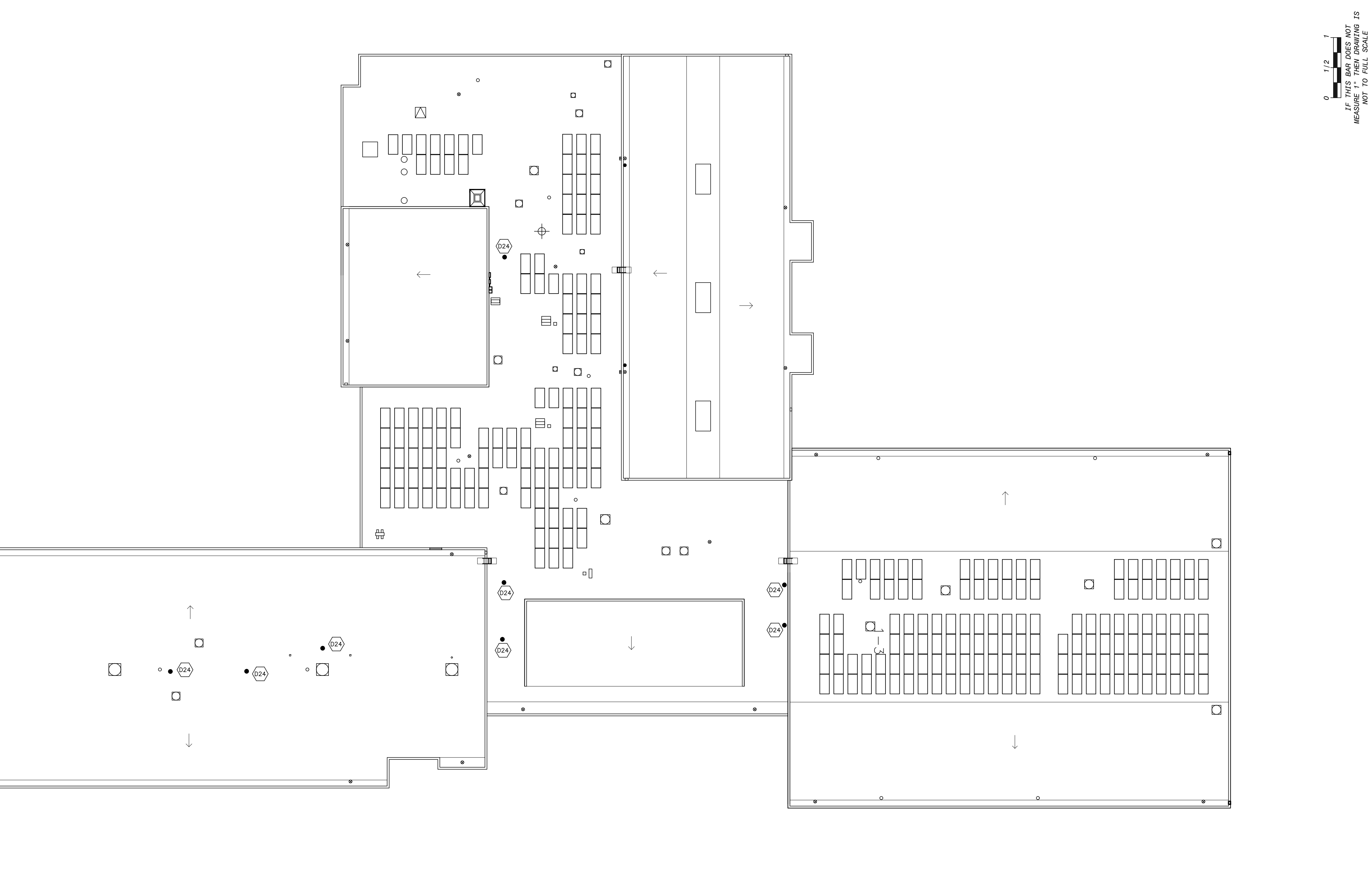
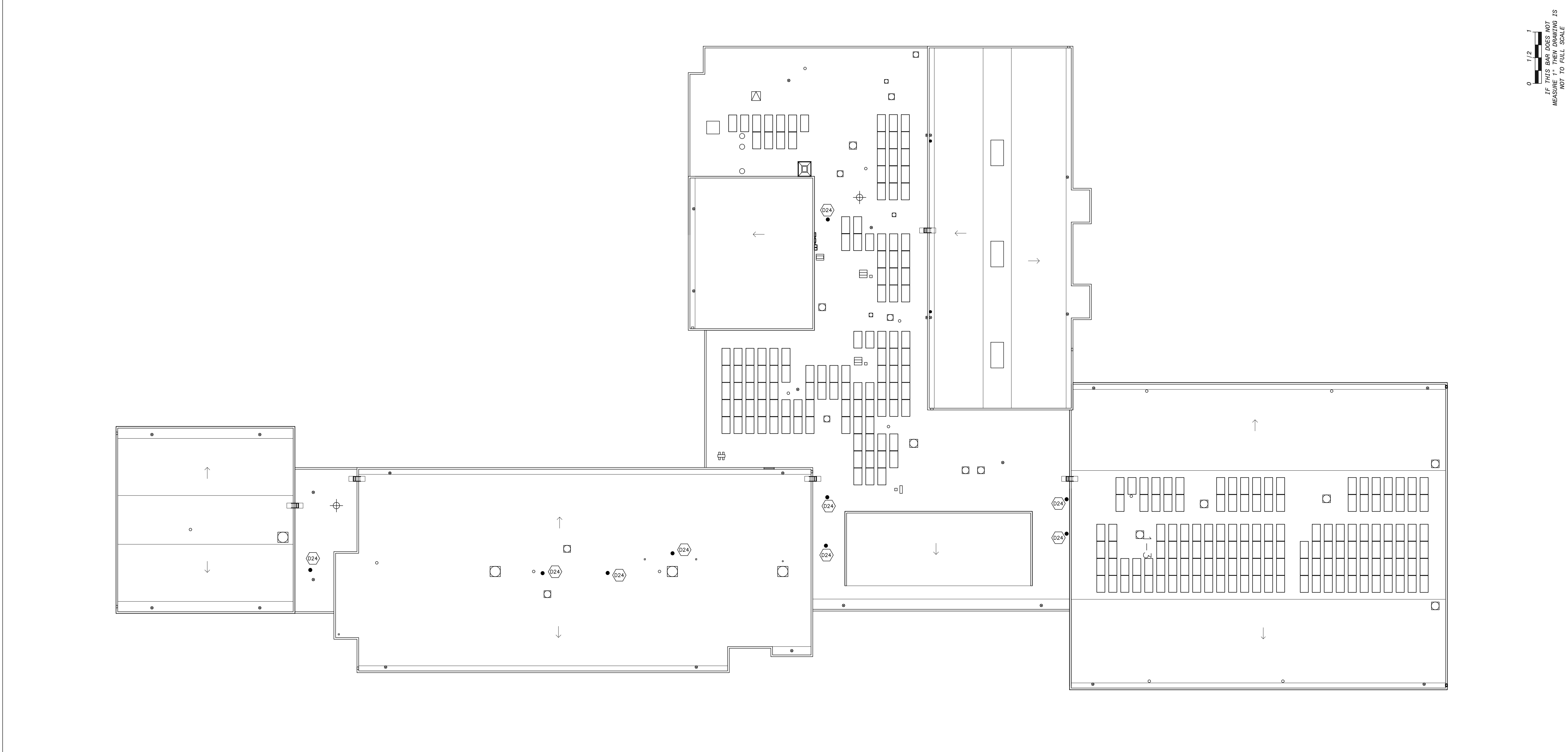


PLAN NORTH

Drawing Title

FIRST FLOOR DEMO PLAN

Drawing No. **WHES-D-101**



THROUGH WALL LOUVER

NEW UNIT VENT
UV-00

NEW FAN COIL UNIT
FC-00

NEW CEILING CASSETTE
CC-00

LINEAR FEET OF LINE SET ENCLOSURE

FLOOR PATCHING TO MATCH EXISTING PATTERN

SUPPLY REGISTER

RETURN

ACCESS PANEL

LEGEND

A1

INSTALL NEW UNIT VENTILATOR (UV). SEE MECHANICAL DRAWINGS

A2

VOID.

A3

INSTALL NEW AIR HANDLER UNIT (AHU). SEE MECHANICAL DRAWINGS

A4

INSTALL NEW CEILING CASSETTES (CC). SEE MECHANICAL DRAWINGS

A5

INSTALL NEW SUPPLY/RETURN DIFFUSER AND REPLACE CEILING TILES WHERE REQUIRED. SEE MECHANICAL DRAWINGS FOR LOCATION OF DIFFUSERS.

A7

PATCH FLOOR AS REQUIRED WHERE HVAC UNIT WAS REMOVED.

A8

PATCH SOFFIT WHERE LOUVER WAS REMOVED AND MATCH FINISH TO EXISTING.

A9

PROVIDE NEW LOUVER L-1. SEE MECHANICAL DRAWINGS

A10

PATCH EXISTING FLOOR AND WALL WHERE EXISTING UV IS REMOVED

A11

VOID

A12

PROVIDE METAL LINE SET ENCLOSURES AS PER DETAIL 1/A-610. COORDINATE WITH MECHANICAL DRAWINGS FOR LOCATIONS.

KEY NOTES

1. CONTRACTOR SHALL BE REQUIRED TO CORE DRILL ALL HOLES IN WALLS, FLOORS AND CEILINGS TO FACILITATE NEW LINESETS, ELECTRICAL CONDUITS AND CONDENSATE LINES.

2. PATCH EXISTING VCT FLOORING AT BASE UNDER UNI-VENT TO MATCH EXIST. AS REQ'D.

3. PATCH EXISTING PLASTER/GYPSUM AT ALL UV LOCATIONS TO MATCH EXIST. AS REQ'D.

4. EXT'G CLG. TILE SHALL BE REMOVED AS REQ'D. TO ALLOW INSTALLATION AND REMOVAL OF HVAC DEVICES, LINESETS, AND ELECTRICAL, AS REQ'D FOR THIS WORK. REINSTALLATION OF ALL CLG'S AS REQ'D. COORDINATE WITH MECHANICAL DRAWINGS. COORDINATE WITH A-400 SERIES DRAWINGS; REFLECTED CEILING PLANS.

5. FIRE ALARM DEVICES TO BE REMOVED, TEMPORARILY STORED AND RE-INSTALLED AS REQ'D.

6. PROVIDE SPLASH BLOCKS AT ALL UV'S IN FIRST FLOOR.

GENERAL NOTES

1

PROPOSED FIRST FLOOR PLAN

SCALE: 1"=20'-0"

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PLAN NORTH

UNIVENT REPLACEMENT AT
STONY POINT, THIELLS
AND WEST HAVERSTRAW
ELEMENTARY SCHOOL

SPBS SED# 50-02-01-06-0-014-012
TES SED# 50-02-01-06-0-025-018
WHES SED# 50-02-01-06-0-024-015

7 GUNNERS ROAD
STONY POINT, NY 10980

PROPOSED
FIRST FLOOR
PLAN

Drawing No.
WHES-A-101

GREENMAN
PEDERSEN, INC
MONTEBELLA, NY 10901

Mechanical
& Electrical
Engineer:

GREENMAN
PEDERSEN, INC
MONTEBELLA, NY 10901

Structural
Engineer:

Drawn by
JR

Checked by
MS/JC

Project No.
43041

Scale
AS NOTED

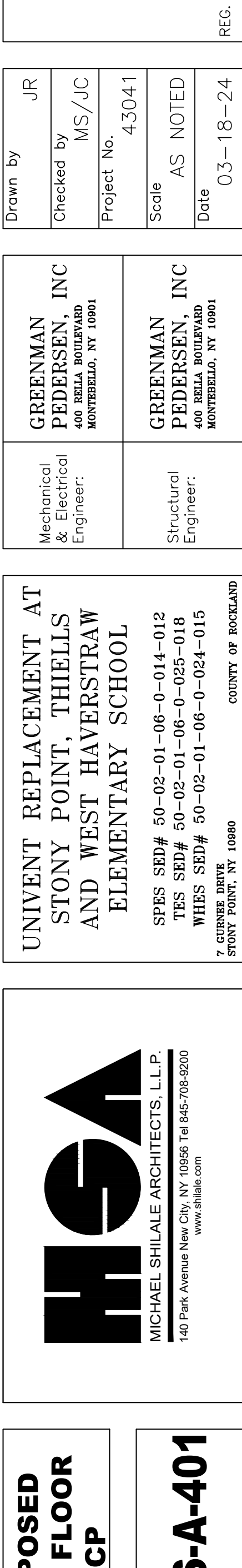
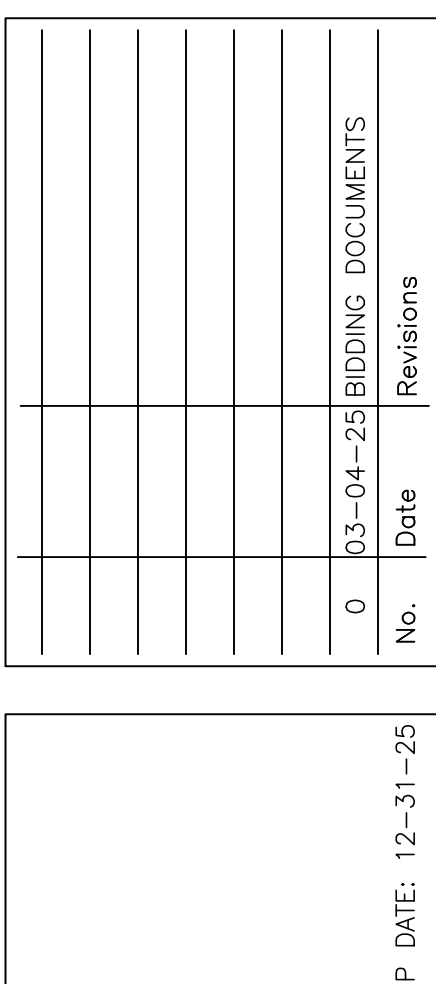
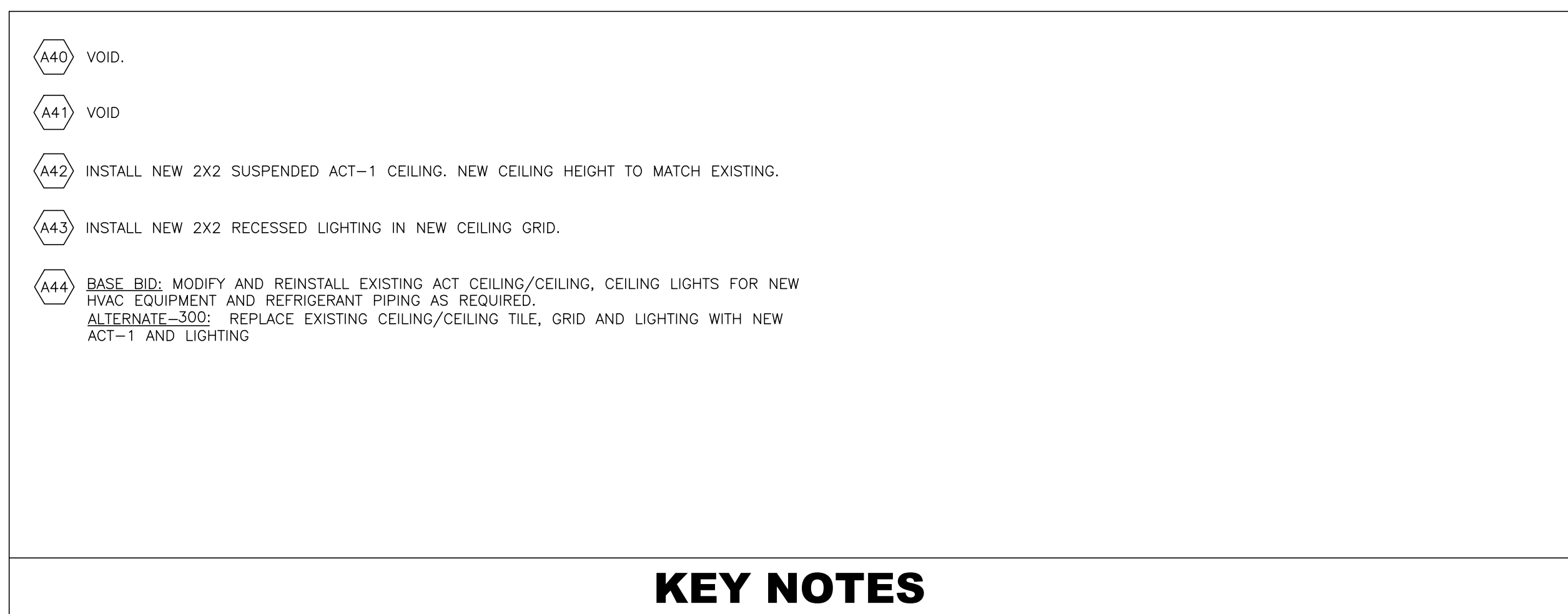
Date
03-18-24

REG. EXP DATE: 12-31-25

Revisions

0 03-04-25 BIDDING DOCUMENTS

No. Date



MECHANICAL VENTILATION SCHEDULE															
ROOM	OCCUPANY CLASSIFICATION	FLOOR AREA (FT^2)	ROOM VOLUME (FT^3)	OCCUPANCY CLASSIFICATION	OCCUPANT LOAD (OCCUPANT/1,000 FT^2)	# OF OCCUPANTS	REQUIRED CFM/OCCUPANT	REQUIRED CFM/FT^2	BREATHING ZONE OUTDOOR AIRFLOW (CFM)	ZONE DISTRIBUTION EFFECTIVENESS		TOTAL ROOM OUTDOOR AIR REQUIRED (CFM)		ACTUAL ROOM OUTDOOR AIRFLOW RATE (CFM)	
										COOLING	HEATING	COOLING	HEATING	COOLING	HEATING
1	KINDERGARTEN SPECIAL EDUCATION	889	8890	CLASSROOMS (AGES 5-8)	25	23	10	0.12	337	0.8	0.8	421	421	425	425
2	FIRST GRADE SPECIAL EDUCATION	707	7070	CLASSROOMS (AGES 5-8)	25	18	10	0.12	265	0.8	0.8	331	331	340	340
3	2ND & 3RD SPECIAL EDUCATION	784	7840	CLASSROOMS (AGES 5-8)	25	20	10	0.12	294	0.8	0.8	368	368	370	370
4	READING/RESOURCE ROOM	343	3430	OFFICE SPACES	5	2	5	0.06	31	0.8	0.8	39	39	40	40
5	KINDERGARTEN	876	8760	CLASSROOMS (AGES 5-8)	25	22	10	0.12	325	0.8	0.8	406	406	410	410
6	KINDERGARTEN	888	8880	CLASSROOMS (AGES 5-8)	25	23	10	0.12	337	0.8	0.8	421	421	425	425
7	KINDERGARTEN	867	8670	CLASSROOMS (AGES 5-8)	25	22	10	0.12	324	0.8	0.8	405	405	405	405
8	KINDERGARTEN	878	8780	CLASSROOMS (AGES 5-8)	25	22	10	0.12	325	0.8	0.8	406	406	410	410
9	KINDERGARTEN	867	8670	CLASSROOMS (AGES 5-8)	25	22	10	0.12	324	0.8	0.8	405	405	405	405
10	1ST GRADE	865	8650	CLASSROOMS (AGES 5-8)	25	22	10	0.12	324	0.8	0.8	405	405	405	405
11	KINDERGARTEN	872	8720	CLASSROOMS (AGES 5-8)	25	22	10	0.12	325	0.8	0.8	406	406	410	410
12	1ST GRADE	857	8570	CLASSROOMS (AGES 5-8)	25	22	10	0.12	323	0.8	0.8	404	404	405	405
13	KINDERGARTEN	926	9260	CLASSROOMS (AGES 5-8)	25	24	10	0.12	351	0.8	0.8	439	439	440	440
14	KINDERGARTEN	877	8770	CLASSROOMS (AGES 5-8)	25	22	10	0.12	325	0.8	0.8	406	406	410	410
15	KINDERGARTEN	959	9590	CLASSROOMS (AGES 5-8)	25	24	10	0.12	355	0.8	0.8	444	444	445	445
16	2ND GRADE	850	8500	CLASSROOMS (AGES 5-8)	25	22	10	0.12	322	0.8	0.8	403	403	405	405
17	2ND GRADE	853	8530	CLASSROOMS (AGES 5-8)	25	22	10	0.12	322	0.8	0.8	403	403	405	405
18	2ND GRADE	861	8610	CLASSROOMS (AGES 5-8)	25	22	10	0.12	323	0.8	0.8	404	404	405	405
19	2ND GRADE	856	8560	CLASSROOMS (AGES 5-8)	25	22	10	0.12	323	0.8	0.8	404	404	405	405
20	2ND GRADE	856	8560	CLASSROOMS (AGES 5-8)	25	22	10	0.12	323	0.8	0.8	404	404	405	405
21	2ND GRADE	858	8580	CLASSROOMS (AGES 5-8)	25	22	10	0.12	323	0.8	0.8	404	404	405	405
22	2ND GRADE	852	8520	CLASSROOMS (AGES 5-8)	25	22	10	0.12	322	0.8	0.8	403	403	405	405
23	2ND GRADE	864	8640	CLASSROOMS (AGES 5-8)	25	22	10	0.12	324	0.8	0.8	405	405	405	405
24	CLASSROOM	275	2750	CLASSROOMS (AGES 5-8)	25	7	10	0.12	103	0.8	0.8	129	129	130	130
25	KINDERGARTEN	937	9370	CLASSROOMS (AGES 5-8)	25	24	10	0.12	352	0.8	0.8	440	440	440	440
26	3RD GRADE	758	7580	CLASSROOMS (AGES 5-8)	25	19	10	0.12	281	0.8	0.8	351	351	355	355
27	3RD GRADE	753	7530	CLASSROOMS (AGES 5-8)	25	19	10	0.12	280	0.8	0.8	350	350	350	350
28	3RD GRADE	766	7660	CLASSROOMS (AGES 5-8)	25	20	10	0.12	292	0.8	0.8	365	365	365	365
29	3RD GRADE	746	7460	CLASSROOMS (AGES 5-8)	25	19	10	0.12	280	0.8	0.8	350	350	350	350
30	3RD GRADE	761	7610	CLASSROOMS (AGES 5-8)	25	20	10	0.12	291	0.8	0.8	364	364	365	365
31	3RD GRADE BL	757	7570	CLASSROOMS (AGES 5-8)	25	19	10	0.12	281	0.8	0.8	351	351	355	355
32	2ND GRADE	758	7580	CLASSROOMS (AGES 5-8)	25	19	10	0.12	281	0.8	0.8	351	351	355	355
33	2ND GRADE	757	7570	CLASSROOMS (AGES 5-8)	25	19	10	0.12	281	0.8	0.8	351	351	355	355
34	2ND GRADE	753	7530	CLASSROOMS (AGES 5-8)	25	19	10	0.12	280	0.8	0.8	350	350	350	350
35	3RD GRADE	748	7480	CLASSROOMS (AGES 5-8)	25	19	10	0.12	280	0.8	0.8	350	350	350	350
36	2ND GRADE	753	7530	CLASSROOMS (AGES 5-8)	25	19	10	0.12	280	0.8	0.8	350	350	350	350
37	3RD GRADE	752	7520	CONFERENCE ROOMS	50	38	5	0.06	235	0.8	0.8	294	294	295	295
38	RESOURCE ROOM	305	3050	OFFICE SPACES	5	2	5	0.06	28	0.8	0.8	35	35	35	35
39	FRC/RESOURCE ROOM	217	2170	OFFICE SPACES	5	2	5	0.06	23	0.8	0.8	29	29	30	30
43	COMPUTER LAB	757	7570	COMPUTER LAB	25	19	10	0.12	281	0.8	0.8	351	351	355	355
44	3RD GRADE	825	8250	CLASSROOMS (AGES 5-8)	25	21	10	0.12	309	0.8	0.8	386	386	390	390
45	KINDERGARTEN	981	9810	CLASSROOMS (AGES 5-8)	25	25	10	0.12	368	0.8	0.8	460	460	460	460
46	ENL OFFICE	634	6340	CLASSROOMS (AGES 5-8)	25	16	10	0.12	236	0.8	0.8	295	295	295	295
47	KINDERGARTEN	976	9760	CLASSROOMS (AGES 5-8)	25	25	10	0.12	367	0.8	0.8	459	459	460	460
48	MAIL/COPY/BOOK ROOM	586	5860	OFFICE SPACES	5	3	5	0.06	50	0.8	0.8	63	63	65	65
49	ART	1125	11250	ART CLASSROOM	20	23	10	0.18	433	0.8	0.8	541	541	545	545
51	KINDERGARTEN	1001	10010	CLASSROOMS (AGES 5-8)	25	25	10	0.12	370	0.8	0.8	463	463	465	465
55	CUSTODIAN OFFICE	432	4320	OFFICE SPACES	5	3	5	0.06	41	0.8	0.8	51	51	55	55
56	SPEECH/RESOURCE ROOM	141	1410	OFFICE SPACES	5	1	5	0.06	13	0.8	0.8	16	16	20	20
57	AV/RESOURCE ROOM	133	1330	OFFICE SPACES	5	1	5	0.06	13	0.8	0.8	16	16	20	20
58	PSYCH A	159	1590	OFFICE SPACES	5	1	5	0.06	15	0.8	0.8	19	19	20	20
59	PSYCH B	190	1900	OFFICE SPACES	5	1	5	0.06	16	0.8	0.8	20	20	20	20
61	CAFETERIA AREA	503	5030	CAFETERIA	100	51	7.5	0.18	473	0.8	0.8	591	591	595	595
61A	OFFICE	88	880	OFFICE SPACES	5	1	5	0.06	10	0.8	0.8	13	13	15	15
61B	OFFICE	104	1040	OFFICE SPACES	5	1	5	0.06	11	0.8	0.8	14	14	15	15
12A	PRINCIPLES OFFICE	306	3060	OFFICE SPACES	5	2	5	0.06	28	0.8	0.8	35	35	35	35
12C	ASSIT. PRIN.	139	1390	OFFICE SPACES	5	1	5	0.06	13	0.8	0.8	16	16	20	20
12D	ADMIN OFFICE	926	9260	OFFICE SPACES	5	5	5	0.06	81	0.8	0.8	101	101	105	105
13B	STAFF LOUNGE	680	6800	OFFICE SPACES	5	4	5	0.06	61	0.8	0.8	76	76	80	80
1A	NET LAB RESOURCE ROOM	334	3340	OFFICE SPACES	5	2	5	0.06	30	0.8	0.8	38	38	40	40
40 & 42	READING/RESOURCE ROOM	923	9230	OFFICE SPACES	5	5	5	0.06	80	0.8	0.8	100	100	100	100
45A	NURSE	451	4510	OFFICE SPACES	5	3	5	0.06	42	0.8	0.8	53	53	55	55
45B	NURSE OFFICE	62	620	OFFICE SPACES	5	1	5	0.06	9	0.8	0.8	11	11	15	15
46A	OFFICE	152	1520	OFFICE SPACES	5	1	5	0.06	14	0.8	0.8	18	18	20	20
46B	CONFRENCE ROOM	152	1520	CONFERENCE ROOMS	50	8	5	0.06	49	0.8	0.8	61	61	65	65
46F	LIBRARY	2311	36976	MEDIA CENTER	10	24	5	0.12	397	0.8	0.8	496	496	500	500
46G	LIBRARY OFFICE	234	2340	OFFICE SPACES	5	2	5	0.06	24	0.8	0.8	30	30	30	30
46H	LIBRARY OFFICE	67	670	OFFICE SPACES	5	1	5	0.06	9	0.8	0.8	11	11	15	15
49A	RESOURCE ROOM	223	2230	OFFICE SPACES	5	2	5	0.06	23	0.8	0.8	29	29	30	30
49B	OFFICE	114	1140	OFFICE SPACES	5	1	5	0.06	12	0.8	0.8	15	15	15	15
52A	COUNSELOR	232	2320	OFFICE SPACES	5	2	5	0.06	24	0.8	0.8	30	30	30	30
52B	SOCIAL WORKER	192	1920	OFFICE SPACES	5	1	5	0.06	17	0.8	0.8	21	21	25	25
54E	SPEECH	173	1730	OFFICE SPACES	5	1	5	0.06	15	0.8	0.8	19	19	20	20
55E	SPEECH	182	1820	OFFICE SPACES	5	1	5	0.06	16	0.8	0.8	20	20	20	20

BOOSTER FAN SCHEDULE										
UNIT TAG	SERVES	FAN						BASIS OF DESIGN		NOTES
		TYPE	DRIVE	AIRFLOW (CFM)	ESP (IN WC)	MOTOR HP	V/PH/H Z	MANUFATURER	MODEL NUMBER	
BF-1A	CC-1A	INLINE	DIRECT	35	0.25	0.45	120/1/60	S&P	TD-100	SEE NOTES
BF-38	CC-38	INLINE	DIRECT	30	0.25	0.45	120/1/60	S&P	TD-100	SEE NOTES
BF-39	CC-38	INLINE	DIRECT	35	0.25	0.45	120/1/60	S&P	TD-100	SEE NOTES
BF-42-1	CC-42-1	INLINE	DIRECT	50	0.25	0.45	120/1/60	S&P	TD-100	SEE NOTES
BF-42-2	CC-42-2	INLINE	DIRECT	45	0.25	0.45	120/1/60	S&P	TD-100	SEE NOTES
BF-43-1	CC-43-1	INLINE	DIRECT	165	0.25	0.75	120/1/60	S&P	TD-150	SEE NOTES
BF-43-2	CC-43-2	INLINE	DIRECT	170	0.25	0.75	120/1/60	S&P	TD-150	SEE NOTES
BF-50	CC-50	INLINE	DIRECT	30	0.25	0.45	120/1/60	S&P	TD-100	SEE NOTES
BF-55	CC-55	INLINE	DIRECT	50	0.25	0.45	120/1/60	S&P	TD-100	SEE NOTES
BF-61A	CC-61A	INLINE	DIRECT	15	0.25	0.45	120/1/60	S&P	TD-100	SEE NOTES
BF-61B	CC-61B	INLINE	DIRECT	15	0.25	0.45	120/1/60	S&P	TD-100	SEE NOTES

BOOSTER FAN SCHEDULE NOTES:
1. PROVIDE ELECTONICALLY COMMUTATED MOTOR, DISCONNECT SWITCH, MOTORIZED BACKDRAFT DAMPER, AND PROGRAMABLE TIMELOCK.

BRANCH CONTROLLER SCHEDULE									
UNIT TAG	MODEL NUMBER	TYPE (DOUBLE / MAIN / SUB)	NUMBER OF PORTS	CONNECTED CAPACITY TO BC (BTU/H)	V/PH/HZ	POWER COOLING (KW)	POWER HEATING (KW)	MCA	NOTES
BC-1A	TCMBM0108JA11N4	MAIN	8	288,000.0	208/1/60	0.66	0.37	0.8	NOTES
BC-1B	TCMBM0108JA11N4	MAIN	8	264,000.0	208/1/60	0.66	0.37	0.8	NOTES
BC-2	TCMBM1012JA11N4	MAIN	12	414,000.0	208/1/60	0.95	0.52	1.2	NOTES
BC-3A	TCMBM1012JA11N4	MAIN	12	288,000.0	208/1/60	0.95	0.52	1.2	NOTES
BC-3B	TCMBM1012JA11N4	MAIN	12	288,000.0	208/1/60	0.95	0.52	1.2	NOTES
BC-4	TCMBM1012JA11N4	MAIN	12	306,000.0	208/1/60	0.95	0.52	1.2	NOTES
BC-5	TCMBM1012JA11N4	MAIN	12	318,000.0	208/1/60	0.95	0.52	1.2	NOTES
BC-6A	TCMBM1016KA11N4	MAIN	16	408,000.0	208/1/60	1.25	0.66	1.6	NOTES
BC-6B	TCMBS0104KB11N4	SUB	4	66,000.0	208/1/60	0.3	0.15	0.4	NOTES

UNIT VENTILATOR SCHEDULE																								
UNIT TAG	LOCATION	CONFIGURATION	TOTAL SUPPLY AIRFLOW (CFM)	MINIMUM OUTSIDE AIRFLOW		COOLING					HEATING			FILTER	ELECTRICAL			UNIT WEIGHT LBS	UNIT DIMENSION S (LxH, IN)	UNIT DEPTH (IN)	BASIS OF DESIGN		NOTES	
						COOLING	HEATING	EADB (°F)	EAWB (°F)	LADB (°F)	LAWB (°F)	MIN TOTAL CAPACITY (CFM)	EADB (°F)		LADB (°F)	REQUIRED TOTAL CAPACITY (MBH)	MERV				MCA	MAX FUSE SIZE		V/PH/HZ
UV-1	ROOM-1	VERTICAL	1500	425	425	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-2	ROOM-2	VERTICAL	1500	340	340	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-3	ROOM-3	VERTICAL	1500	370	370	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-4	ROOM-4	VERTICAL	750	40	40	80.0	67.0	54.76	51.26	22,300	45.0	95	63.8	13	3.5	15	115/1/60	320	69 x 30	21-1/8	TRANE	VUVE07500Z0N1DJA2B00FFBA0C430A5C524600Y023	SEE NOTES	
UV-5	ROOM-5	VERTICAL	1500	410	410	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-6	ROOM-6	VERTICAL	1500	425	425	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-7	ROOM-7	VERTICAL	1500	405	405	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-8	ROOM-8	VERTICAL	1500	410	410	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-9	ROOM-9	VERTICAL	1500	405	405	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-10	ROOM-10	VERTICAL	1500	405	405	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-11	ROOM-11	VERTICAL	1500	410	410	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-12	ROOM-12	VERTICAL	1500	405	405	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-O-12	ROOM-O-12	VERTICAL	750	105	105	80.0	67.0	54.76	51.26	22,300	45.0	95	63.8	13	3.5	15	115/1/60	320	69 x 30	21-1/8	TRANE	VUVE07500Z0N1DJA2B00FFBA0C430A5C524600Y023	SEE NOTES	
UV-13	ROOM-13	VERTICAL	1500	440	440	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-14	ROOM-14	VERTICAL	1500	410	410	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-15	ROOM-15	VERTICAL	1500	445	445	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-16	ROOM-16	VERTICAL	1500	405	405	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-17	ROOM-17	VERTICAL	1500	405	405	80.0	67.0	54.76	51.26	44,600	45.0	95	55.36	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-18	ROOM-18	VERTICAL	1500	405	405	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-19	ROOM-19	VERTICAL	1500	405	405	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-20	ROOM-20	VERTICAL	1500	405	405	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-21	ROOM-21	VERTICAL	1500	405	405	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-22	ROOM-22	VERTICAL	1500	405	405	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-23	ROOM-23	VERTICAL	1500	405	405	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-24	ROOM-24	VERTICAL	750	130	130	80.0	67.0	54.76	51.26	22,300	45.0	95	63.8	13	3.5	15	115/1/60	320	69 x 30	21-1/8	TRANE	VUVE07500Z0N1DJA2B00FFBA0C430A5C524600Y023	SEE NOTES	
UV-25	ROOM-25	VERTICAL	1500	440	440	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-26	ROOM-26	VERTICAL	1250	355	355	80.0	67.0	54.76	51.26	37,100	45.0	95	63.8	13	4.38	15	115/1/60	420	93 x 30	21-1/8	TRANE	VUVE12500Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-27	ROOM-27	VERTICAL	1250	350	350	80.0	67.0	54.76	51.26	37,100	45.0	95	63.8	13	4.38	15	115/1/60	420	93 x 30	21-1/8	TRANE	VUVE12500Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-28	ROOM-28	VERTICAL	1500	365	365	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-29	ROOM-29	VERTICAL	1250	350	350	80.0	67.0	54.76	51.26	37,100	45.0	95	55.36	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE12500Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-30	ROOM-30	VERTICAL	1500	365	365	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-31	ROOM-31	VERTICAL	1250	355	355	80.0	67.0	54.76	51.26	37,100	45.0	95	63.8	13	4.38	15	115/1/60	420	93 x 30	21-1/8	TRANE	VUVE12500Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-32	ROOM-32	VERTICAL	1250	355	355	80.0	67.0	54.76	51.26	37,100	45.0	95	63.8	13	4.38	15	115/1/60	420	93 x 30	21-1/8	TRANE	VUVE12500Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-33	ROOM-33	VERTICAL	1250	355	355	80.0	67.0	54.76	51.26	37,100	45.0	95	63.8	13	4.38	15	115/1/60	420	93 x 30	21-1/8	TRANE	VUVE12500Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-34	ROOM-34	VERTICAL	1250	350	350	80.0	67.0	54.76	51.26	37,100	45.0	95	63.8	13	4.38	15	115/1/60	420	93 x 30	21-1/8	TRANE	VUVE12500Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-35	ROOM-35	VERTICAL	1250	350	350	80.0	67.0	54.76	51.26	37,100	45.0	95	63.8	13	4.38	15	115/1/60	420	93 x 30	21-1/8	TRANE	VUVE12500Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-36	ROOM-36	VERTICAL	1500	350	350	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-37	ROOM-37	VERTICAL	1250	295	295	80.0	67.0	54.76	51.26	37,100	45.0	95	63.8	13	4.38	15	115/1/60	420	93 x 30	21-1/8	TRANE	VUVE12500Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-44-1	ROOM-44	VERTICAL	1500	350	350	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-44-2	ROOM-44	VERTICAL	1500	175	175	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-45	ROOM-45	VERTICAL	1500	460	460	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-47	ROOM-47	VERTICAL	1500	410	410	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-49	ROOM-49	VERTICAL	1500	535	535	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-51	ROOM-51	VERTICAL	1500	465	465	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-61	ROOM-61	VERTICAL	1500	455	455	80.0	67.0	54.76	51.26	44,600	45.0	95	63.8	13	4.38	15	115/1/60	470	105 x 30	21-1/8	TRANE	VUVE15000Z0N1DJA2B00FFBA0C430A5C524600Y033	SEE NOTES	
UV-12A	ROOM-12A	VERTICAL	750	35	35	80.0	67.0	54.76	51.26	22,300	45.0	95	63.8	13	3.5	15	115/1/60	320	69 x 30	21-1/8	TRANE	VUVE07500Z0N1DJA2B00FFBA0C430A5C524600Y023	SEE NOTES	
UV-12C	ROOM-12C	VERTICAL	750	15	15	80.0	67.0	54.76	51.26	22,300	45.0	95	63.8	13	3.5	15	115/1/60	320	69 x 30	21-1/8	TRANE	VUVE07500Z0N1DJA2B00FFBA0C430A5C524600Y023	SEE NOTES	
UV-13B	ROOM-13B	VERTICAL	750	70	70	80.0	67.0	54.76	51.26	22,300	45.0	95	63.8	13	3.5	15	115/1/60	320	69 x 30	21-1/8	TRANE	VUVE07500Z0N1DJA2B00FFBA0C430A5C524600Y023	SEE NOTES	
UV-46F-1	ROOM-46F	VERTICAL																						

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

Drawn by	VF/AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

**UNIVENT REPLACEMENT
AT STONY POINT,
THIELS, WEST HAV
ELEMENTARY SCHOOL**

SED# 50-02-01-06-0-014-XXX
SED# 50-02-01-06-0-025-XXX
SED# 50-02-01-06-0-024-XXX

WEST HAV
ROCKLAND COUNTY
NY 10963

HSA

MICHAEL SHILAE ARCHITECTS, L.L.P.

140 Park Avenue New City, NY 10856 Tel 845-708-9200
www.hsainc.com

Drawing Title

MECHANICAL
SCHEDULES - 2

Drawing No.

WHES-M-004

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OUTDOOR CONDENSING UNIT SCHEDULE																						
UNIT #	LOCATION	TOTAL CAPACITY COOLING CAPACITY (MBH)	HEATING CAPACITY (MBH)	EER	IEER	REFRIGERANT	REFRIGERANT SAFETY CLASS	REFRIGERANT CHARGE (LBS)	HEATING TYPE	CONDENSER EA DB °F (COOLING/HEATING)	COMPRESSOR TYPE (QUANTITY)	ELECTRICAL					UNIT WEIGHT (LBS)	BASIS OF DESIGN		REMARKS		
												VOLTS	PHASE	Hz	CIRCUIT 1 MOCP FUSE (A)	CIRCUIT 1 MCA (A)		CIRCUIT 2 MOCP FUSE (A)	CIRCUIT 2 MCA (A)		MANUFACTURER	MODEL #
ACCU-1A	ROOF	216,000	243,000	12.2	24.6	R410A	A1	35.250	HEAT PUMP	90/11	SCROLL (2)	208	3	60	60	56	45	44	1,235	TRANE	TURYE2163BN41AN	SEE NOTES
ACCU-1B	ROOF	216,000	243,000	12.2	24.6	R410A	A1	35.250	HEAT PUMP	90/11	SCROLL (2)	208	3	60	60	56	45	44	1,235	TRANE	TURYE2163BN41AN	SEE NOTES
ACCU-2	ROOF	288,000	323,000	10.9	23.1	R410A	A1	47.5	HEAT PUMP	90/11	SCROLL (2)	208	3	60	60	60	60	60	1,360	TRANE	TURYE2883BN41AN	SEE NOTES
ACCU-3A	ROOF	216,000	243,000	12.2	24.6	R410A	A1	35.250	HEAT PUMP	90/11	SCROLL (2)	208	3	60	60	56	45	44	1,235	TRANE	TURYE2163BN41AN	SEE NOTES
ACCU-3B	ROOF	216,000	243,000	12.2	24.6	R410A	A1	35.250	HEAT PUMP	90/11	SCROLL (2)	208	3	60	60	56	45	44	1,235	TRANE	TURYE2163BN41AN	SEE NOTES
ACCU-4	ROOF	240,000	270,000	11.7	23.9	R410A	A1	35.250	HEAT PUMP	90/11	SCROLL (2)	208	3	60	60	56	60	56	1,244	TRANE	TURYE2403BN41AN	SEE NOTES
ACCU-5	ROOF	240,000	270,000	11.7	23.9	R410A	A1	35.250	HEAT PUMP	90/11	SCROLL (2)	208	3	60	60	56	60	56	1,244	TRANE	TURYE2403BN41AN	SEE NOTES
ACCU-6	ROOF	288,000	323,000	10.9	23.1	R410A	A1	47.5	HEAT PUMP	90/11	SCROLL (2)	208	3	60	60	60	60	60	1,360	TRANE	TURYE2883BN41AN	SEE NOTES
ACCU-7	ROOF	72,000	80,000	13.5	25.3	R410A	A1	14.313	HEAT PUMP	90/11	SCROLL (2)	208	3	60	35	32	-	-	512	TRANE	TUHYE0723AN41AN	SEE NOTES

OUTDOOR CONDENSING UNIT SCHEDULE NOTES:

1. NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB)
2. NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°F (WB)
3. EFFICIENCY VALUES FOR EER, IEER, COP ARE BASED ON AHRI 1230 TEST METHOD FOR MIXTURE OF DUCTED & NON-DUCTED INDOOR UNITS.
4. FOR SYSTEMS WITH MULTIPLE MODULES, REFRIGERANT PIPE DIMENSIONS INDICATE TOTAL SYSTEM COMBINED PIPING DOWNSTREAM OF MODULE TWINNING.
5. ADDED FIELD CHARGE LISTED IS IN ADDITION TO FACTORY CHARGE, THIS MUST BE UPDATED BASED UPON FINAL AS-BUILT PIPING LAYOUT.
6. ADD COLD WEATHER LOW AMBIENT KIT.

[illegible]

INDOOR VRF UNIT SCHEDULE																		
UNIT TAG	LOCATION	CONFIGURATION	TOTAL SUPPLY AIRFLOW (CFM)	CAPACITY (BTU/H)		REFRIDGERANT	REFRIGERANT SAFTEY CLASS	V/PH/Hz	POWER COOLING (KW)	POWER HEATING (KW)	MCA	MFS	UNIT WEIGHT LBS	UNIT DIMENSIONS (LxH, IN)	UNIT DEPTH (IN)	BASIS OF DESIGN		NOTES
				COOLING	HEATING											MANUFACTURER	MODEL NUMBER	
AHU-46	ROOM-46	WALL-MOUNTED	920	24,000	27,000	R410A	A1	208/1/60	0.07	0.07	0.63	15	46	46-1/16 x 14-3/8	11-5/8	TRANE	TPKFYP024KM142A	SEE NOTES
AHU-53	ROOM-53	WALL-MOUNTED	191	6,000	6,700	R410A	A1	208/1/60	0.02	0.01	0.24	15	24.5	30-7/16 x 11-25/32	9-11/32	TRANE	TPKFYP006LM140A	SEE NOTES
AHU-53A	ROOM-53A	WALL-MOUNTED	191	6,000	6,700	R410A	A1	208/1/60	0.02	0.01	0.24	15	24.5	30-7/16 x 11-25/32	9-11/32	TRANE	TPKFYP006LM140A	SEE NOTES
AHU-46G	ROOM-46G	WALL-MOUNTED	920	24,000	27,000	R410A	A1	208/1/60	0.07	0.07	0.63	15	46	46-1/16 x 14-3/8	11-5/8	TRANE	TPKFYP024KM142A	SEE NOTES
AHU-46H	ROOM-46H	WALL-MOUNTED	191	6,000	6,700	R410A	A1	208/1/60	0.02	0.01	0.24	15	24.5	30-7/16 x 11-25/32	9-11/32	TRANE	TPKFYP006LM140A	SEE NOTES
AHU-48	ROOM-49	WALL-MOUNTED	920	24,000	27,000	R410A	A1	208/1/60	0.07	0.07	0.63	15	46	46-1/16 x 14-3/8	11-5/8	TRANE	TPKFYP024KM142A	SEE NOTES
AHU-52	ROOM-52	WALL-MOUNTED	920	24,000	27,000	R410A	A1	208/1/60	0.07	0.07	0.63	15	46	46-1/16 x 14-3/8	11-5/8	TRANE	TPKFYP024KM142A	SEE NOTES
AHU-52B	ROOM-52B	WALL-MOUNTED	920	24,000	27,000	R410A	A1	208/1/60	0.07	0.07	0.63	15	46	46-1/16 x 14-3/8	11-5/8	TRANE	TPKFYP024KM142A	SEE NOTES
AHU-56	ROOM-56	WALL-MOUNTED	920	24,000	27,000	R410A	A1	208/1/60	0.07	0.07	0.63	15	46	46-1/16 x 14-3/8	11-5/8	TRANE	TPKFYP024KM142A	SEE NOTES
AHU-57	ROOM-57	WALL-MOUNTED	920	24,000	27,000	R410A	A1	208/1/60	0.07	0.07	0.63	15	46	46-1/16 x 14-3/8	11-5/8	TRANE	TPKFYP024KM142A	SEE NOTES
AHU-58	ROOM-58	WALL-MOUNTED	920	24,000	27,000	R410A	A1	208/1/60	0.07	0.07	0.63	15	46	46-1/16 x 14-3/8	11-5/8	TRANE	TPKFYP024KM142A	SEE NOTES
AHU-59	ROOM-59	WALL-MOUNTED	920	24,000	27,000	R410A	A1	208/1/60	0.07	0.07	0.63	15	46	46-1/16 x 14-3/8	11-5/8	TRANE	TPKFYP024KM142A	SEE NOTES
AHU-60	ROOM-60	WALL-MOUNTED	920	24,000	27,000	R410A	A1	208/1/60	0.07	0.07	0.63	15	46	46-1/16 x 14-3/8	11-5/8	TRANE	TPKFYP024KM142A	SEE NOTES
AHU-61	ROOM-61	WALL-MOUNTED	191	6,000	6,700	R410A	A1	208/1/60	0.02	0.01	0.24	15	24.5	30-7/16 x 11-25/32	9-11/32	TRANE	TPKFYP006LM140A	SEE NOTES
CC-1A	ROOM-1A	CEILING-CASSETTE	459	6,000	6,700	R410A	A1	208/1/60	0.02	0.02	0.24	15	46	33-3/32 x 33-3/32	10-3/16	TRANE	TPLFYP006EM140B	SEE NOTES
CC-38	ROOM-38	CEILING-CASSETTE	459	6,000	6,700	R410A	A1	208/1/60	0.02	0.02	0.24	15	46	33-3/32 x 33-3/32	10-3/16	TRANE	TPLFYP006EM140B	SEE NOTES
CC-39	ROOM-39	CEILING-CASSETTE	459	6,000	6,700	R410A	A1	208/1/60	0.02	0.02	0.24	15	46	33-3/32 x 33-3/32	10-3/16	TRANE	TPLFYP006EM140B	SEE NOTES
CC-42-1	ROOM-42	CEILING-CASSETTE	565	12,000	13,500	R410A	A1	208/1/60	0.03	0.02	0.39	15	46	33-3/32 x 33-3/32	10-3/16	TRANE	TPLFYP012EM140B	SEE NOTES
CC-42-2	ROOM-42	CEILING-CASSETTE	565	12,000	13,500	R410A	A1	208/1/60	0.03	0.02	0.39	15	46	33-3/32 x 33-3/32	10-3/16	TRANE	TPLFYP012EM140B	SEE NOTES
CC-43-1	ROOM-43	CEILING-CASSETTE	565	12,000	13,500	R410A	A1	208/1/60	0.03	0.02	0.39	15	46	33-3/32 x 33-3/32	10-3/16	TRANE	TPLFYP012EM140B	SEE NOTES
CC-43-2	ROOM-43	CEILING-CASSETTE	565	12,000	13,500	R410A	A1	208/1/60	0.03	0.02	0.39	15	46	33-3/32 x 33-3/32	10-3/16	TRANE	TPLFYP012EM140B	SEE NOTES
CC-50	ROOM-50	CEILING-CASSETTE	459	6,000	6,700	R410A	A1	208/1/60	0.02	0.02	0.24	15	46	33-3/32 x 33-3/32	10-3/16	TRANE	TPLFYP006EM140B	SEE NOTES
CC-55	ROOM-50	CEILING-CASSETTE	459	6,000	6,700	R410A	A1	208/1/60	0.02	0.02	0.24	15	46	33-3/32 x 33-3/32	10-3/16	TRANE	TPLFYP006EM140B	SEE NOTES
CC-61A	ROOM-50	CEILING-CASSETTE	459	6,000	6,700	R410A	A1	208/1/60	0.02	0.02	0.24	15	46	33-3/32 x 33-3/32	10-3/16	TRANE	TPLFYP006EM140B	SEE NOTES
CC-61B	ROOM-50	CEILING-CASSETTE	459	6,000	6,700	R410A	A1	208/1/60	0.02	0.02	0.24	15	46	33-3/32 x 33-3/32	10-3/16	TRANE	TPLFYP006EM140B	SEE NOTES
AHU-54E	ROOM-54E	WALL-MOUNTED	191	6,000	6,700	R410A	A1	208/1/60	0.02	0.01	0.24	15	24.5	30-7/16 x 11-25/32	9-11/32	TRANE	TPKFYP006LM140A	SEE NOTES
AHU-55E	ROOM-55E	WALL-MOUNTED	191	6,000	6,700	R410A	A1	208/1/60	0.02	0.01	0.24	15	24.5	30-7/16 x 11-25/32	9-11/32	TRANE	TPKFYP006LM140A	SEE NOTES
OAU-1	GYM STOR.	OUTSIDE AIR UNIT	450	36,000	21,000	R410A	A1	208/1/60	-	-	3.3	15	109	35-7/16 x 47-1/16	15	TRANE	TPEFYP036OA140A	SEE NOTES
OAU-2	ELEC. CLOSET	OUTSIDE AIR UNIT	450	36,000	21,000	R410A	A1	208/1/60	-	-	3.3	15	109	35-7/16 x 47-1/16	15	TRANE	TPEFYP036OA140A	SEE NOTES

INDOOR VRF UNIT SCHEDULE NOTES:

1. NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB)
2. NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°F (WB)
3. SEE OUTDOOR UNIT SCHEDULE FOR OUTDOOR AMBIENT CONDITIONS, CONNECTED CAPACITY, AND OTHER FACTORS ASSOCIATED WITH CORRECTED CAPACITIES.
4. SEE SCHEMATIC PIPING/CONTROL DIAGRAM FOR INDICATION OF REQUIRED INDOOR UNIT REMOTE CONTROLLERS, SYSTEM CONTROLLERS, AND INTEGRATION
5. FULL DEMAND CORRECTED CAPACITY INCLUDES DE-RATE ASSOCIATED WITH INDOOR VS. OUTDOOR CONNECTED CAPACITY INDICATED ON OUTDOOR UNIT SCHEDULE FOR ASSOCIATED SYSTEM. PARTIAL CORRECTED CAPACITY ASSUMES SUFFICIENT DIVERSITY EXISTS SUCH THAT THE CONNECTED CAPACITY DE-RATE DOES NOT APPLY. IT IS THE DESIGNER'S RESPONSIBILITY TO ENSURE "DIAMOND SYSTEM BUILDER" IS SET IN THE APPROPRIATE OUTPUT CAPACITY SETTING (FULL DEMAND/PARTIAL DEMAND) PRIOR TO GENERATING THIS SCHEDULE.
6. IT IS RECOMMENDED TO ALWAYS BASE HEATING CORRECTED CAPACITY ON FULL DEMAND.
7. PROVIDE MULTI-FUNCTION CASEMENT (PAC-SJ41TM-E) WITH HIGH EFFICIENCY FILTER ELEMENT (PAC-SH59KF-E).
8. MECHANICAL CONTRACTOR TO PROVIDE A FACTORY DISCONNECT. INSTALLATION BY ELECTRICAL CONTRACTOR.
9. PROVIDE UNIT MOUNTED DISCONNECT SWITCH.

OUTDOOR AIR UNIT SCHEDULE															
UNIT TAG	LOCATION	TOTAL SUPPLY AIRFLOW (CFM)	CAPACITY (BTU/H)		REFRIDGERANT	REFRIGERANT SAFTEY CLASS	V/PH/Hz	MCA	MFS	UNIT WEIGHT LBS	UNIT DIMENSIONS (LxH, IN)	UNIT DEPTH (IN)	BASIS OF DESIGN		NOTES
			COOLING	HEATING									MANUFACTURER	MODEL NUMBER	
OAU-1	PE STORAGE	400	36,000	21,000	R410A	A1	208/1/60	3.3	15	109	47-1/16 x 35-7/16	15	TRANE	TPEFY036OA140A	SEE NOTES
OAU-2	2ND FL STORAGE	400	36,000	21,000	R410A	A1	208/1/60	3.3	15	109	47-1/16 x 35-7/16	15	TRANE	TPEFY036OA140A	SEE NOTES

OUTDOOR AIR UNIT SCHEDULE NOTES:

1. NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB)
2. NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°F (WB)
3. SEE OUTDOOR UNIT SCHEDULE FOR OUTDOOR AMBIENT CONDITIONS, CONNECTED CAPACITY, AND OTHER FACTORS ASSOCIATED WITH CORRECTED CAPACITIES.
4. SEE SCHEMATIC PIPING/CONTROL DIAGRAM FOR INDICATION OF REQUIRED INDOOR UNIT REMOTE CONTROLLERS, SYSTEM CONTROLLERS, AND INTEGRATION DEVICES.
5. FULL DEMAND CORRECTED CAPACITY INCLUDES DE-RATE ASSOCIATED WITH INDOOR VS. OUTDOOR CONNECTED CAPACITY INDICATED ON OUTDOOR UNIT SCHEDULE FOR ASSOCIATED SYSTEM. PARTIAL CORRECTED CAPACITY ASSUMES SUFFICIENT DIVERSITY EXISTS SUCH THAT THE CONNECTED CAPACITY DE-RATE DOES NOT APPLY. IT IS THE DESIGNER'S RESPONSIBILITY TO ENSURE "DIAMOND SYSTEM BUILDER" IS SET IN THE APPROPRIATE OUTPUT CAPACITY SETTING (FULL DEMAND/PARTIAL DEMAND) PRIOR TO GENERATING THIS SCHEDULE.
6. IT IS RECOMMENDED TO ALWAYS BASE HEATING CORRECTED CAPACITY ON FULL DEMAND.
7. MECHANICAL CONTRACTOR TO PROVIDE A FACTORY DISCONNECT. INSTALLATION BY ELECTRICAL CONTRACTOR.

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Drawing Title
**MECHANICAL
SCHEDULES - 3**

Drawing No. **WHES-M-005**

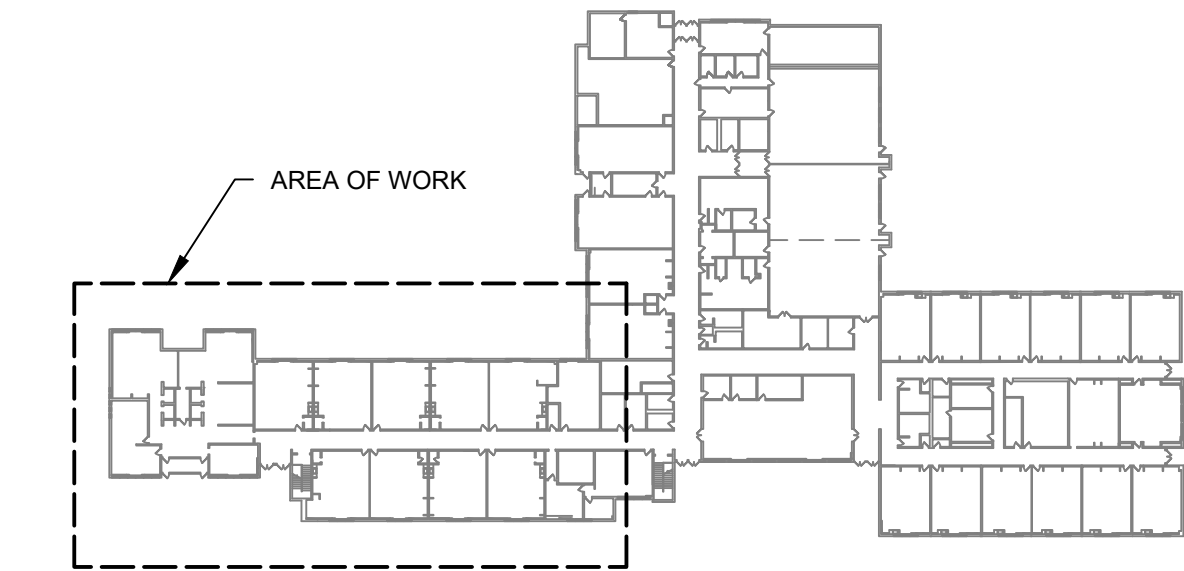
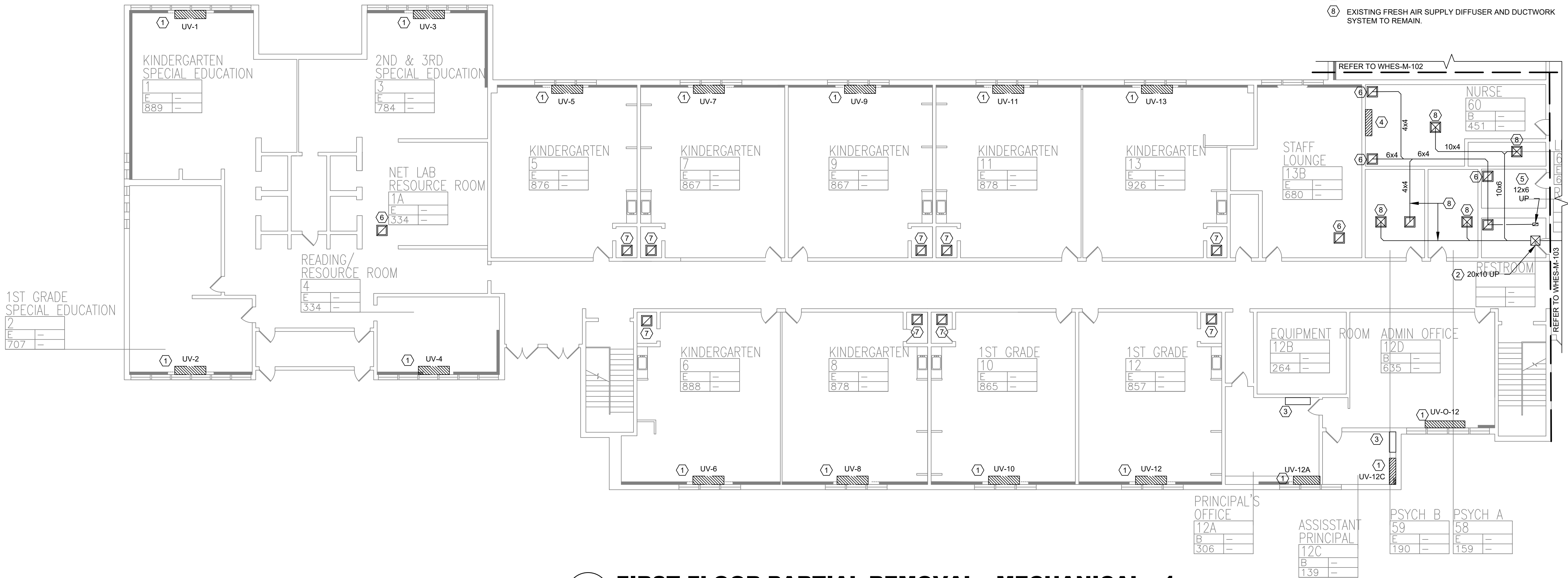
UNIVENT REPLACEMENT
AT STONY POINT,
THIELLS, WEST HAV,
ELEMENTARY SCHOOL

SED# 50-02-01-06-0-014-XXX
SED# 50-02-01-06-0-025-XXX
SED# 50-02-01-06-0-026-XXX
SED# 50-02-01-06-0-024-XXX

WEST HAVENSTRA
ROGLAND COUNTY
100603

Drawn by	VF/AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

Mechanical & Electrical Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 202 SUFFERN, NY 10901 PHON. NO.: N.Y.T-3300127.00
Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 202 SUFFERN, NY 10901



KEY PLAN

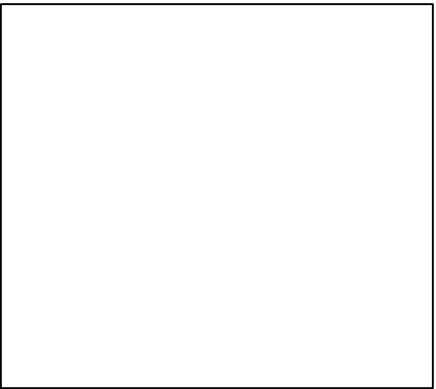
KEYED NOTES:

- 1 DISCONNECT, REMOVE UNIT VENTILATOR, CUT AND CAP HOT WATER SUPPLY AND RETURN PIPING TEMPORARILY FOR REUSE. EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN. DISCONNECT ASSOCIATED THERMOSTAT. SEE 2/M-501.
- 2 EXISTING FRESH AIR DUCT UP TO SECOND FLOOR H.V. UNIT TO REMAIN.
- 3 EXISTING WALL HUNG UNIT TO REMAIN.
- 4 DISCONNECT, REMOVE WALL HUNG UNIT, AND ASSOCIATED PIPING AND THERMOSTAT.
- 5 EXISTING EXHAUST TO UP TO ROOF FAN TO REMAIN.
- 6 EXISTING GRILL AND DUCTWORK SYSTEM TO REMAIN.
- 7 EXISTING BATHROOM EXHAUST GRILL TO REMAIN.
- 8 EXISTING FRESH AIR SUPPLY DIFFUSER AND DUCTWORK SYSTEM TO REMAIN.

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IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

1 FIRST FLOOR PARTIAL REMOVAL - MECHANICAL - 1
SCALE: 3/32" = 1'-0"

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

Mechanical Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-514-1100 FAX: 860-514-1101 WWW.GPMI.COM
Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-514-1100 FAX: 860-514-1101 WWW.GPMI.COM

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAV ELEMENTARY SCHOOL
SSD# 50-02-01-06-0-014-XXX SSD# 50-02-01-06-0-025-XXX SSD# 50-02-01-06-0-024-XXX
100 PARK AVENUE, NEW YORK, NY 10065 TEL: 212-693-1000 FAX: 212-693-1001 WWW.MSHALE.COM



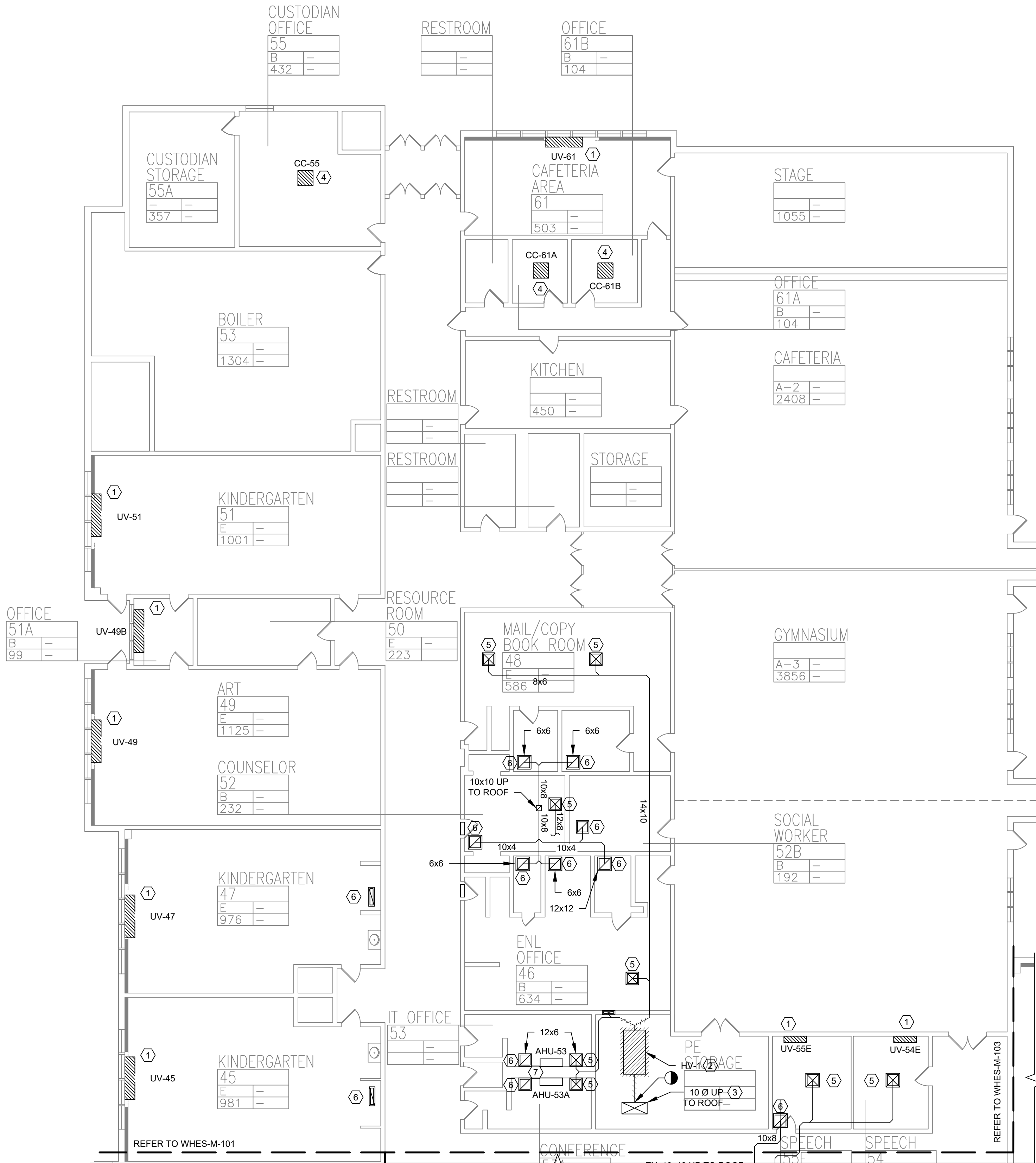
MICHAEL SHILAIE ARCHITECTS, LLP
140 Park Avenue New York, NY 10065 Tel: 845-708-9200
www.shilale.com

Drawing Title
**FIRST FLOOR PARTIAL
REMOVAL -
MECHANICAL - 1**

Drawing No.
WHES-M-061



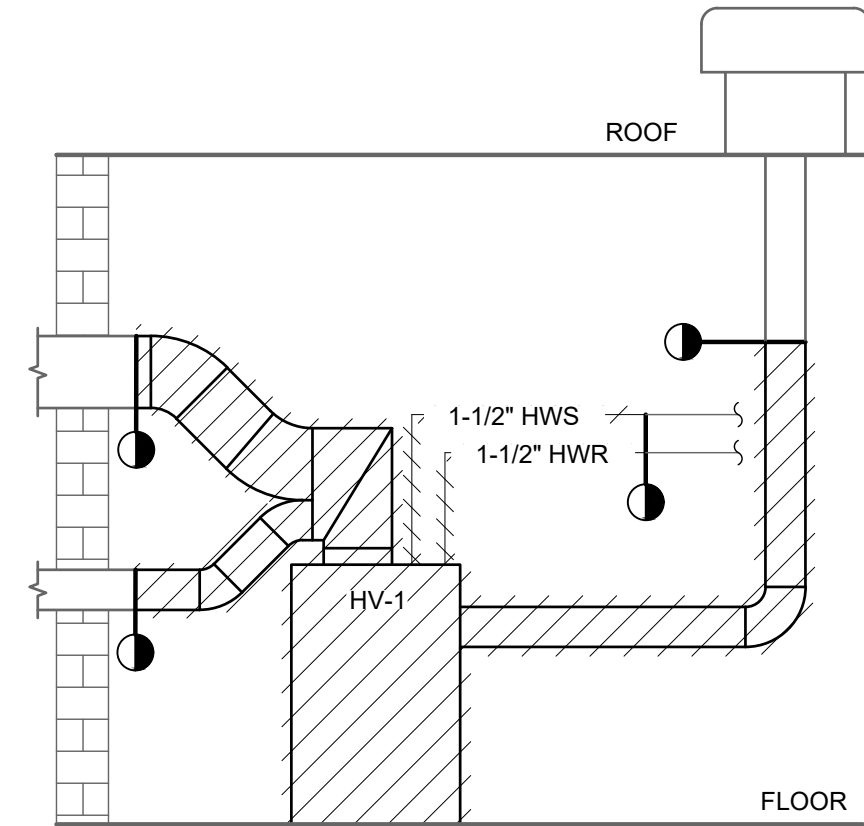
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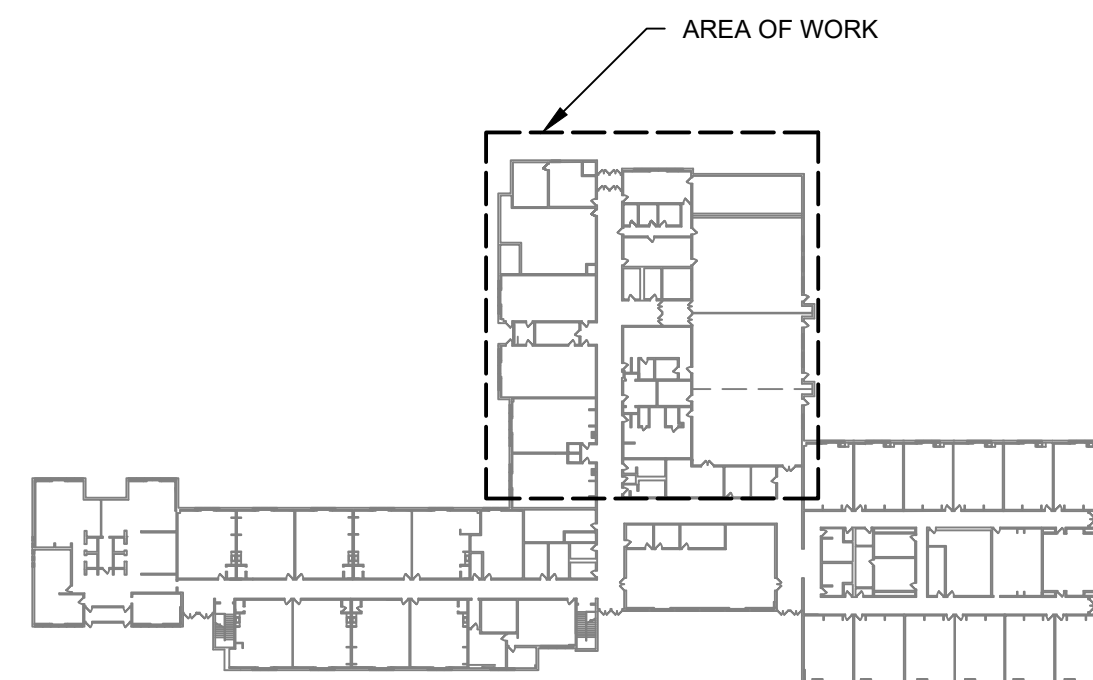
1 FIRST FLOOR PARTIAL REMOVAL - MECHANICAL - 2
SCALE: 3/32" = 1'-0"

KEYED NOTES:

- 1 DISCONNECT, REMOVE UNIT VENTILATOR, CUT AND CAP HOT WATER SUPPLY AND RETURN TEMPORARILY FOR REUSE, EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN, DISCONNECT ASSOCIATED THERMOSTAT. SEE DETAIL 2/WHES-M-501
- 2 DISCONNECT AND REMOVE EXISTING HEATING VENTILATOR BLOWER, ASSOCIATED DUCTWORK AND HW COILS. CAP HWS AND HWR, SEE DETAIL 2/WHES-M-062.
- 3 EXISTING FRESH AIR DUCT UP TO ROOF TO REMAIN.
- 4 DISCONNECT, REMOVE EXISTING CEILING CASSETTE, REMOVE ALL PIPING AND CONDENSING UNIT ON ROOF, PATCH AS REQUIRED.
- 5 EXISTING SUPPLY DIFFUSER AND DUCTWORK SYSTEM TO REMAIN.
- 6 EXISTING ROOM EXHAUST TO REMAIN AND DUCTWORK SYSTEM TO REMAIN.
- 7 EXISTING WALL HUNG UNITS TO REMAIN.



2 HV-1 REMOVAL DETAIL
SCALE: NOT TO SCALE

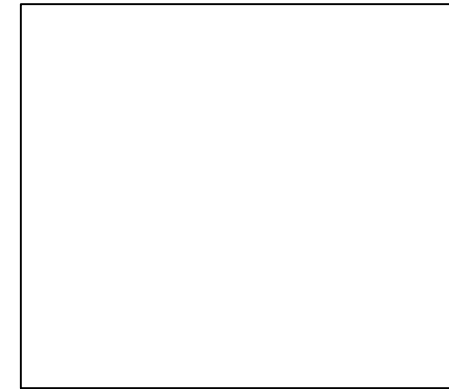


KEY PLAN



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IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

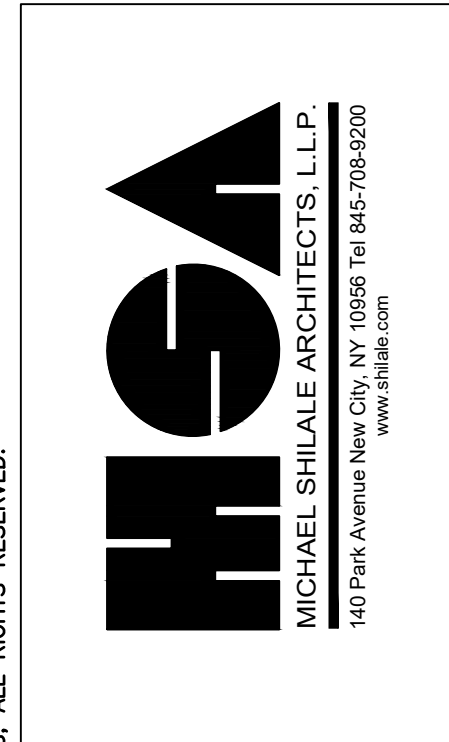
No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

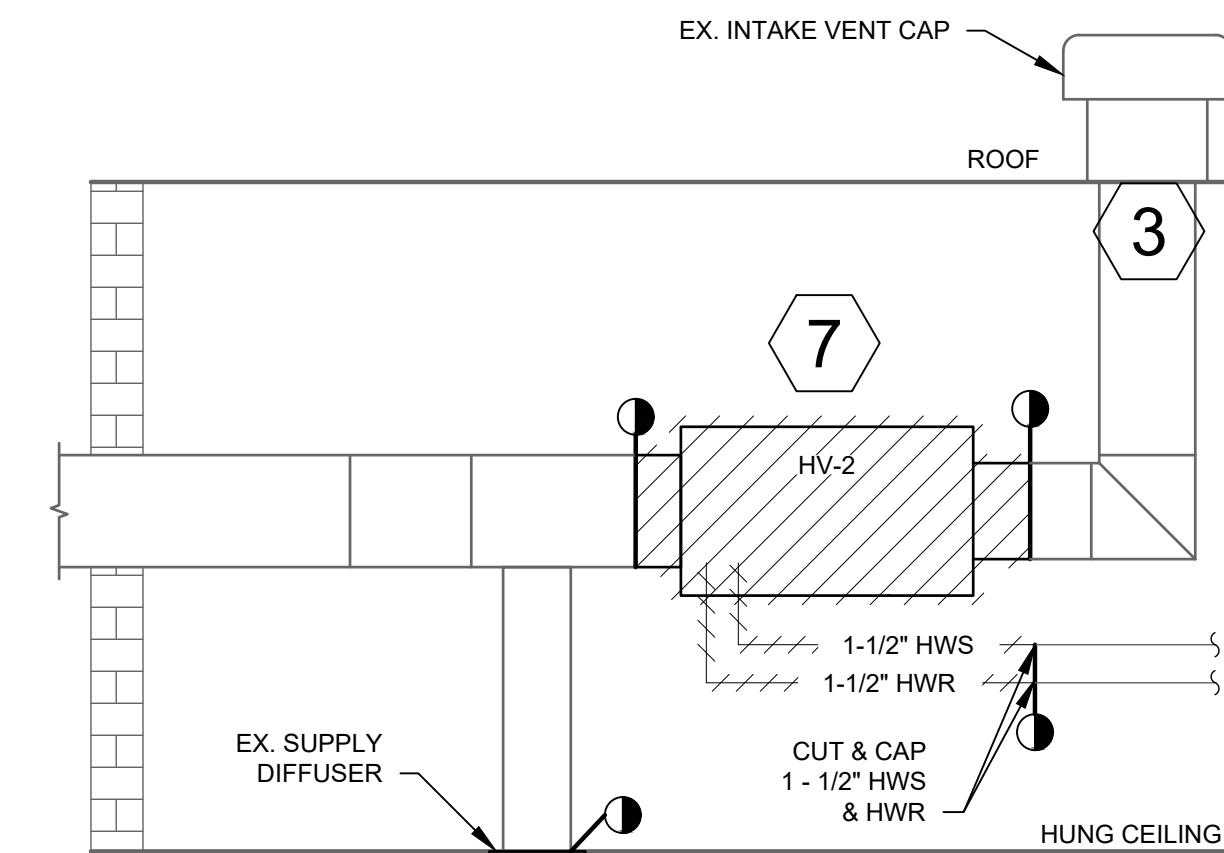
GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUFFERN, NY 10901 PROJ. NO. : MNY-5000127.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUFFERN, NY 10901
Mechanical Structural Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAV ELEMENTARY SCHOOL SSD# 50-02-01-06-0-014-XXX SSD# 50-02-01-06-0-025-XXX SSD# 50-02-01-06-0-024-XXX NY STATE ARCHITECTS REG. NO. 10993 MICHAEL SHILALE ARCHITECTS, LLP
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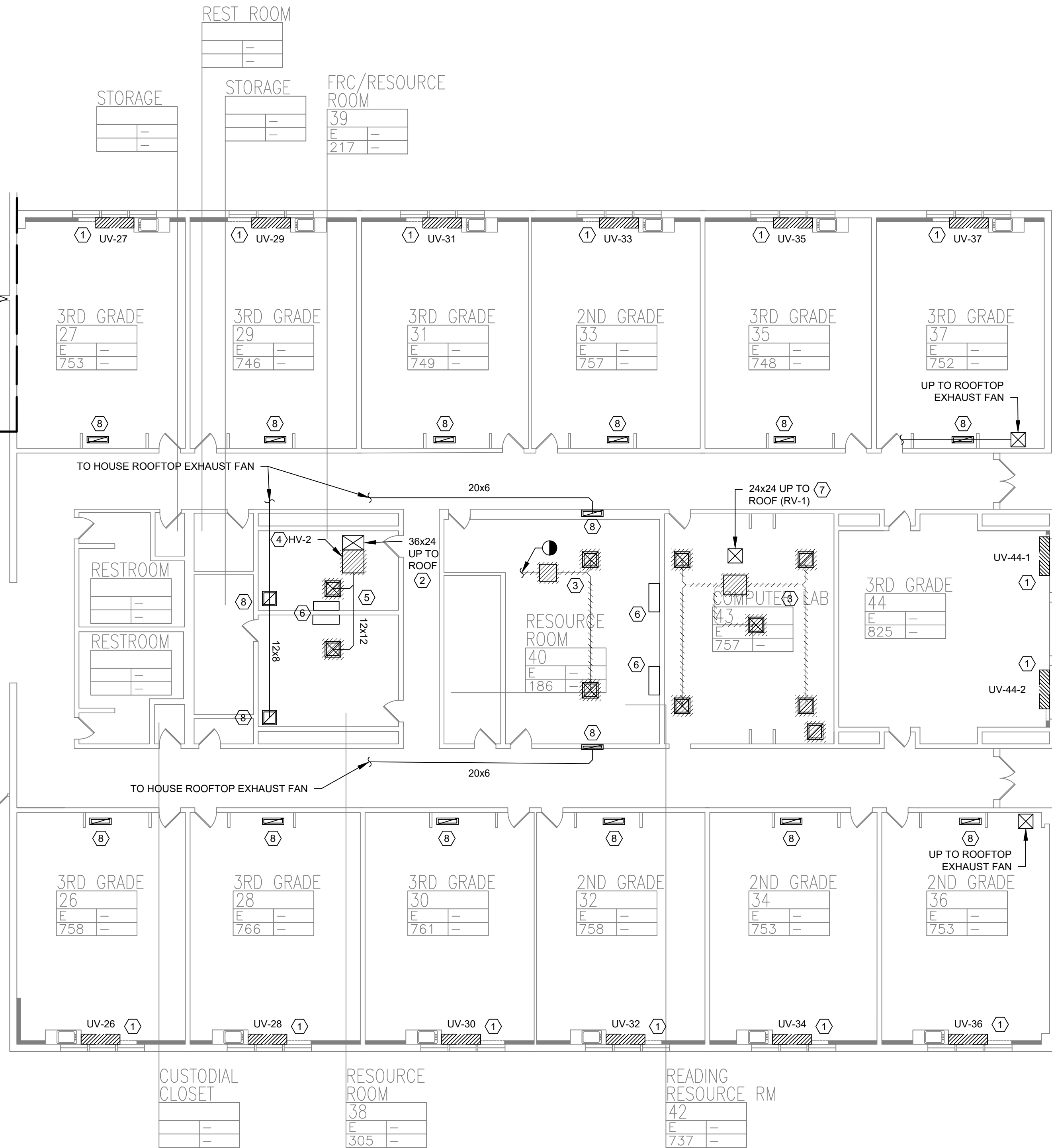
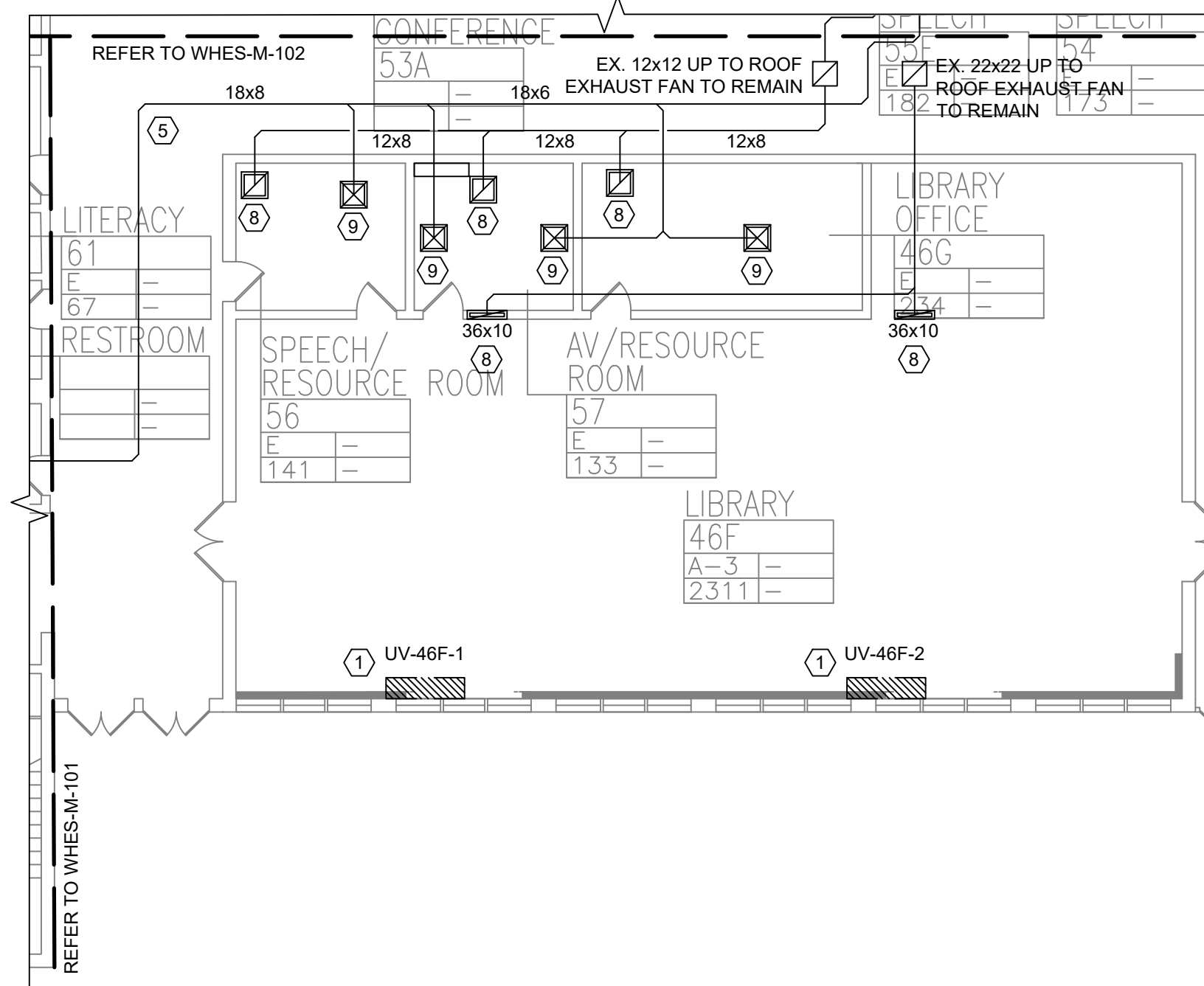


Drawing No.	WHES-M-062
Drawing Title	FIRST FLOOR PARTIAL REMOVAL - MECHANICAL - 2

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2 HV-2 REMOVAL DETAIL
SCALE: NOT TO SCALE



1 FIRST FLOOR PARTIAL REMOVAL - MECHANICAL - 3
SCALE: 3/32" = 1'-0"

KEYED NOTES:

- 1 DISCONNECT, REMOVE UNIT VENTILATOR, BUT AND CAP HOT WATER SUPPLY AND RETURN TEMPORARILY FOR REUSE. EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN. DISCONNECT ASSOCIATED THERMOSTAT.TYP. 16. SEE DETAIL 2 /WHES-M-501
- 2 EXISTING FRESH AIR DUCT UP TO SECOND FLOOR HEATING VENTILATION UNIT TO REMAIN.
- 3 REMOVE SUPPLY AND EXHAUST DUCT.
- 4 DISCONNECT AND REMOVE H.V. BLOWER ABOVE HUNG CEILING. SEE DETAIL 2/WHES-M-063.
- 5 EXISTING FRESH AIR DUCT TO REMAIN.
- 6 EXISTING WALL HUNG UNITS TO REMAIN.
- 7 EXISTING FRESH AIR INTAKE UP THROUGH ROOF TO REMAIN.
- 8 EXISTING ROOM EXHAUST AND SYSTEM TO REMAIN.
- 9 EXISTING SUPPLY DIFFUSER AND SYSTEMS TO REMAIN.

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IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE



KEY PLAN



PLAN NORTH

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



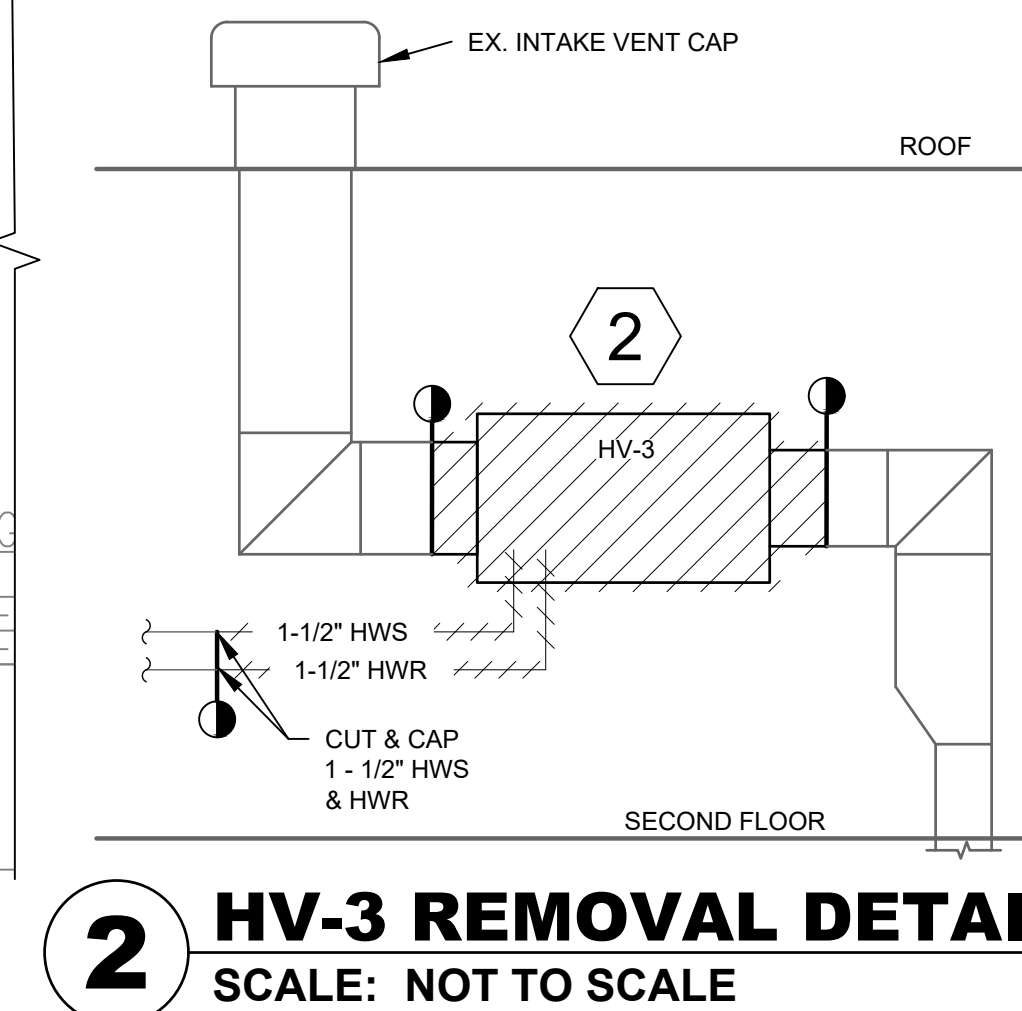
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Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC. 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-514-1100 FAX: 860-514-1101 WWW.GREENMANPEDERSEN.COM	GREENMAN PEDERSEN, INC. 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-514-1100 FAX: 860-514-1101 WWW.GREENMANPEDERSEN.COM
--	--

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAV ELEMENTARY SCHOOL SSD# 50-02-01-06-0-014-XXX SSD# 50-02-01-06-0-025-XXX SSD# 50-02-01-06-0-024-XXX TEL: 860-514-1100 FAX: 860-514-1101 WWW.GREENMANPEDERSEN.COM

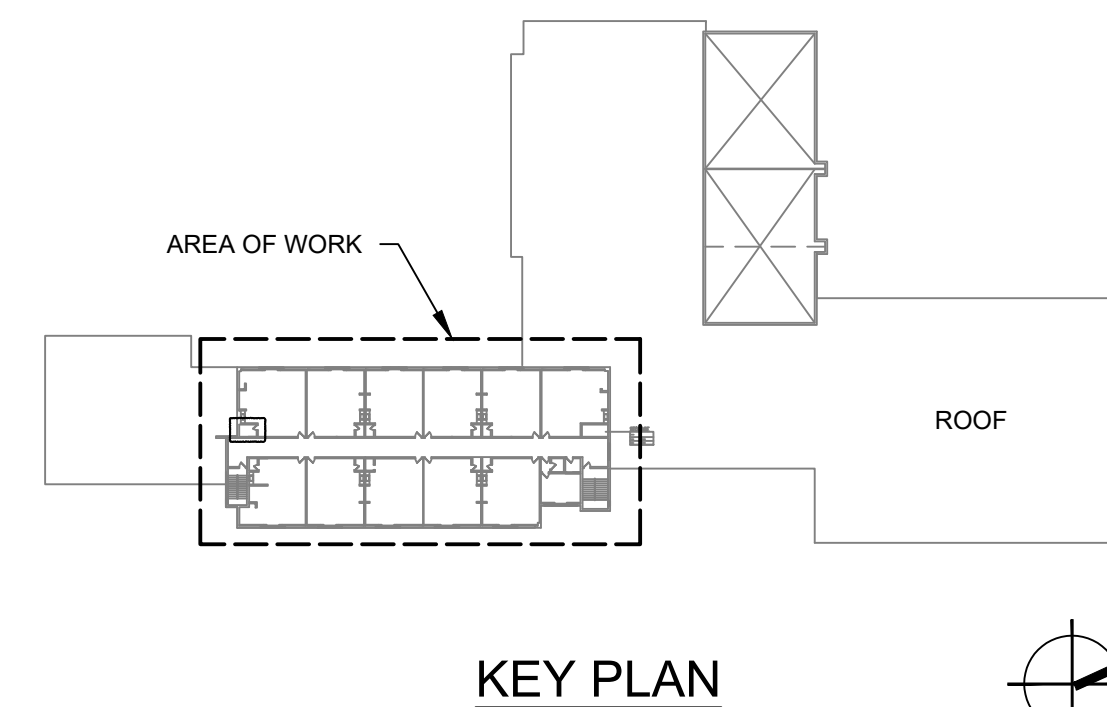
MSA MICHAEL SHILALE ARCHITECTS, LLP 140 Park Avenue New York, NY 10050 Tel: 845-708-9200 www.shilale.com

First Floor Partial Removal - Mechanical - 3	WHES-M-063
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2 HV-3 REMOVAL DETAIL

SCALE: NOT TO SCALE



IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

- ① DISCONNECT, REMOVE UNIT VENTILATOR. BUT AND CAP HOT WATER SUPPLY AND RETURN TEMPORARILY FOR REUSE. EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN DISCONNECT ASSOCIATED THERMOSTAT. TYPICAL 5 SEE DETAIL 2/WHES-M-501
- ② EXISTING HEATING VENTILATOR. UNIT TO BE REMOVED. SEE DETAIL 2/WHES-M-064.
- ③ EXISTING EXHAUST GRILLE IN CLASSROOM TO REMAIN.
- ④ EXISTING EXHAUST GRILLE IN CLOSET TO REMAIN.

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Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

Mechanical and Electrical Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 202 SUPPERN, NY 10901 PROJ. NO. : MNY-2300127.00
Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 202 SUPPERN, NY 10901

UNIVENT REPLACEMENT
AT STONY POINT,
THIELLS, WEST HAV
ELEMENTARY SCHOOL
SED# 50-02-01-06-0-014-XXX
SED# 50-02-01-06-0-025-XXX
SED# 50-02-01-06-0-024-XXX
UNIVENT REPLACEMENT
AT STONY POINT,
THIELLS, WEST HAV
ELEMENTARY SCHOOL
SED# 50-02-01-06-0-014-XXX
SED# 50-02-01-06-0-025-XXX
SED# 50-02-01-06-0-024-XXX



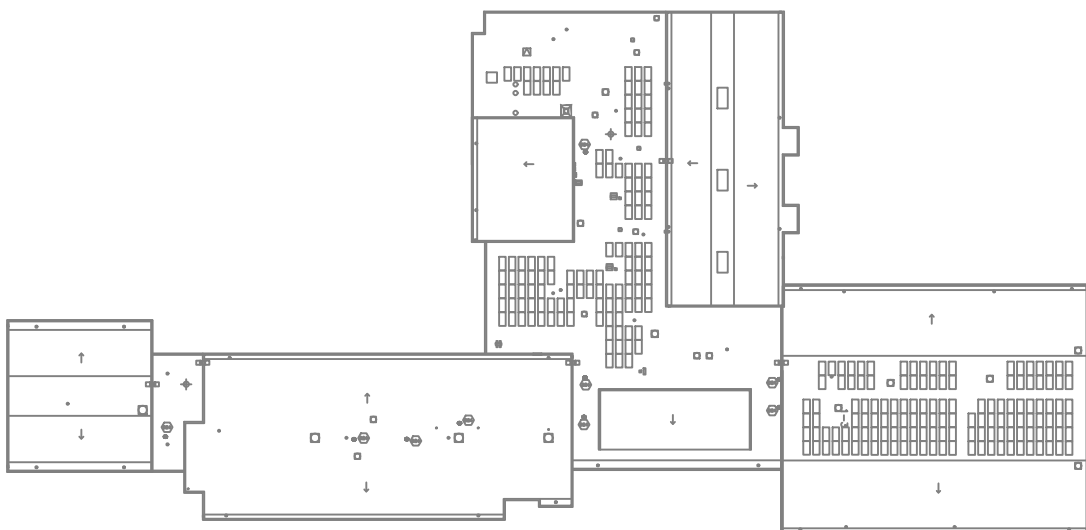
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140 Park Avenue New City, NY 10956 Tel 845-708-9200

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Drawing Title
**SECOND FLOOR
REMOVAL -
MECHANICAL**

Drawing No.

WHES-M-064



PLAN NORT

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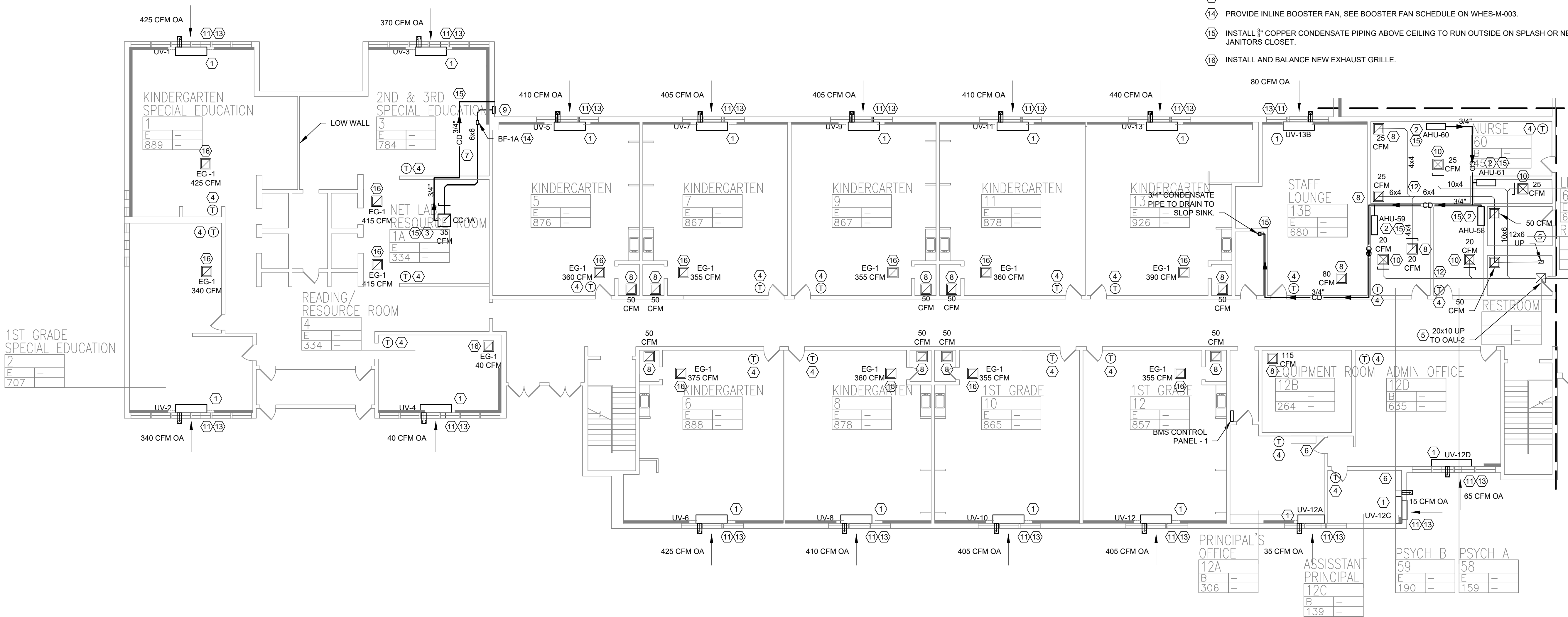
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140 Park Avenue New City, NY 10956 Tel 845-708-9200

- 1 EXISTING EXHAUST FAN TO REMAIN AND BALANCED AS NECESSARY
- 2 FRESH AIR INTAKE FOR FRESH AIR SYSTEM TO REMAIN.
- 3 EXISTING CONDENSER FOR EXISTING WALL HUNG UNIT TO REMAIN.

UNIVENT REPLACEMENT
AT STONY POINT,
THIELLS, WEST HAV,
ELEMENTARY SCHOOL

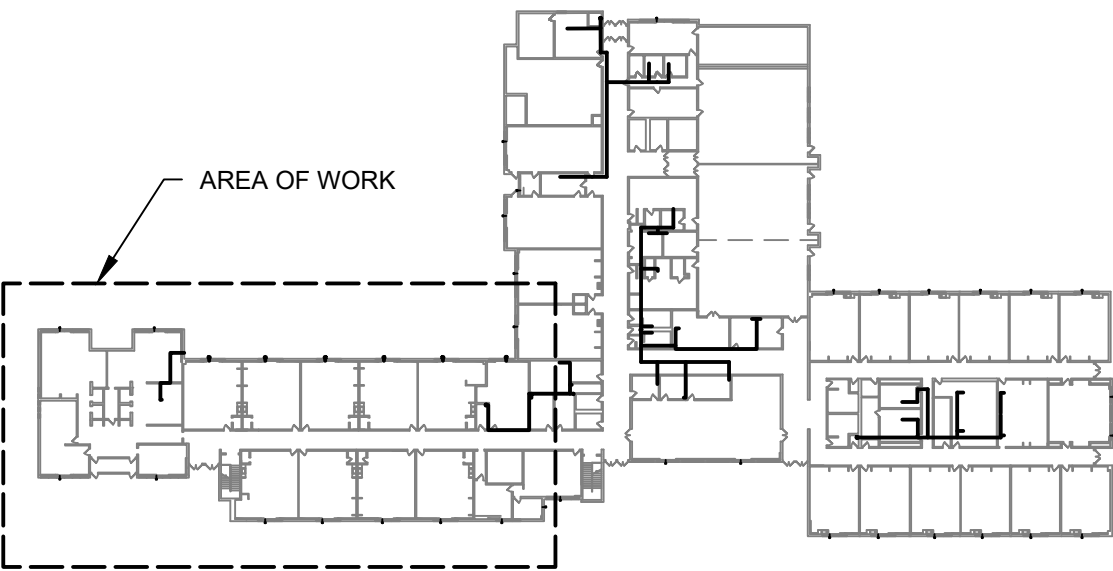
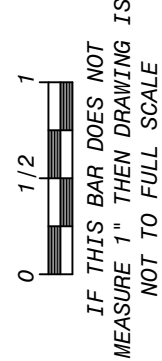
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SED# 50-02-01-06-0-024-XXX

WEST HAVEN
HARTFORD
NEW HAVEN
NEW BRITAIN
ROCKLAND COUNTY



KEYED NOTES:

1. INSTALL AND CONNECT DX HEAT PUMP WITH HOT WATER BACKUP UNIT VENTILATOR, CONNECT HOT WATER SUPPLY AND RETURN TO EXISTING HOT WATER SYSTEM. CONNECT TO EXISTING OUTSIDE SLEEVE, PATCH AND MODIFY AS REQUIRED. SEE DETAILS 5/M501, 2/M502, 3/M502.
2. INSTALL AND CONNECT WALL HUNG AIR HANDLER, CONDENSATE PUMP AND DRAIN PIPING. SEE INSTALLATION MANUAL.
3. INSTALL AND CONNECT CEILING CASSETTE, CONDENSATE PUMP, AND FRESH AIR DUCT AS INDICATED. SEE DETAIL 1/M503.
4. INSTALL AND CONNECT SYSTEM THERMOSTAT.
5. EXISTING DUCTWORK UP TO NEW OAU-2 TO REMAIN.
6. EXISTING WALL HUNG UNITS TO REMAIN.
7. INSTALL 6"x6" INSULATED FRESH AIR DUCT IN SUSPENDED CEILING. SEE M502 AND M504 FOR DUCTWORK INSTALLATION DETAILS.
8. BALANCE EXISTING ROOM AND BATHROOM EXHAUST.
9. INSTALL NEW WALL LOUVER AND BIRD SCREEN, SEE DETAIL 5/M504.
10. BALANCE FRESH AIR SUPPLY.
11. EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN.
12. INSULATE ALL EXISTING DUCTWORK.
13. INSTALL 3/4" COPPER CONDENSATE PIPE TO RUN OUTSIDE ON SPLASH BLOCK.
14. PROVIDE INLINE BOOSTER FAN, SEE BOOSTER FAN SCHEDULE ON WHES-M-003.
15. INSTALL 3/4" COPPER CONDENSATE PIPING ABOVE CEILING TO RUN OUTSIDE ON SPLASH OR NEAREST JANITORS CLOSET.
16. INSTALL AND BALANCE NEW EXHAUST GRILLE.

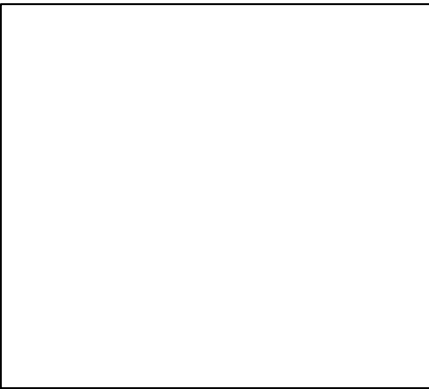


KEY PLAN



1 FIRST FLOOR PARTIAL PLAN - MECHANICAL - 1
SCALE: 3/32" = 1'-0"

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



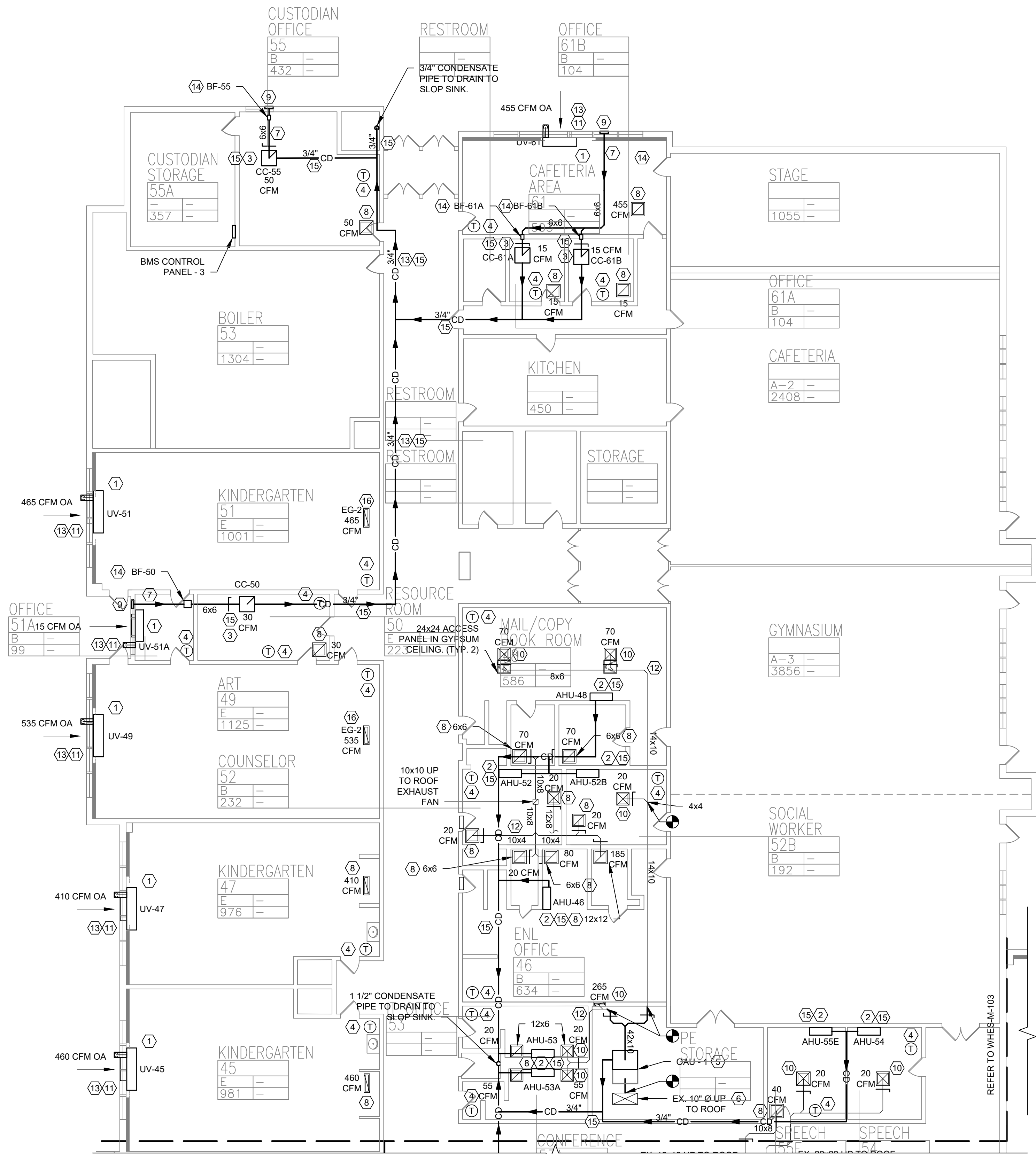
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Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-514-1100 FAX: 860-514-1101 WWW.GREENMANPEDERSEN.COM	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-514-1100 FAX: 860-514-1101 WWW.GREENMANPEDERSEN.COM
Mechanical Engineer	Structural Engineer

UNIVENT REPLACEMENT AT STONY POINT, HAV THIELS, WEST HAV ELEMENTARY SCHOOL SSD# 50-02-01-06-0-014-XXX SSD# 50-02-01-06-0-025-XXX SSD# 50-02-01-06-0-024-XXX NY STATE ARCHITECTURAL BOARD REGISTERED ARCHITECT MICHAEL SHILALE ARCHITECTS, LLP
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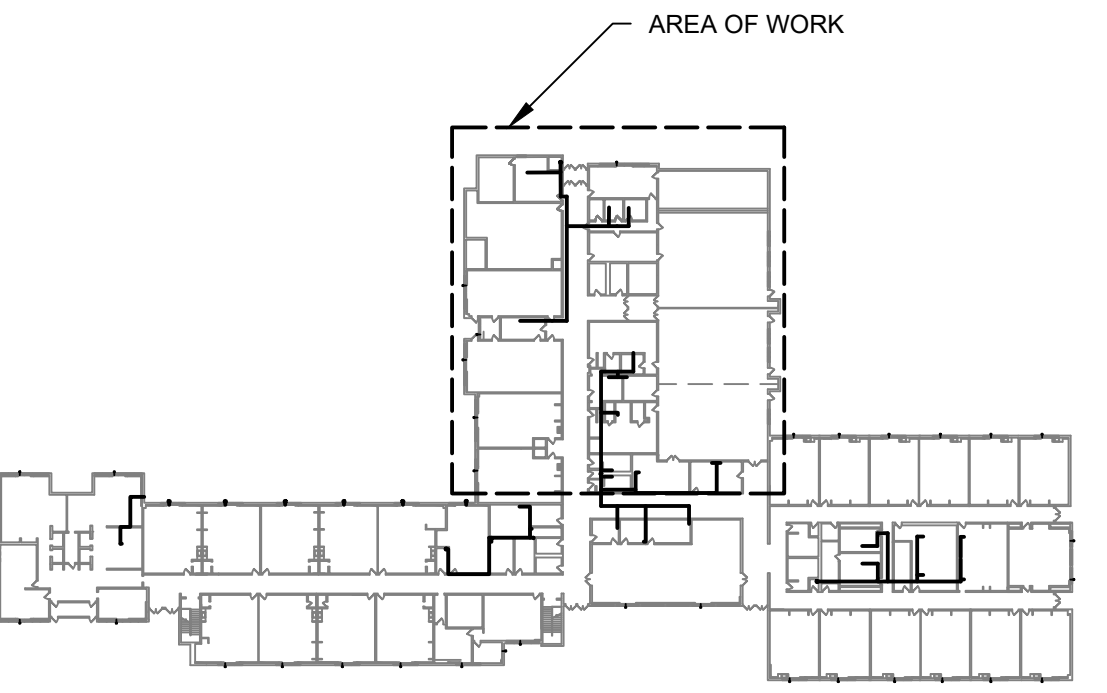
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Drawing Title FIRST FLOOR PARTIAL PLAN - MECHANICAL - 1	



1 FIRST FLOOR PARTIAL PLAN - MECHANICAL - 2
SCALE: 3/32" = 1'-0"

- KEYED NOTES:**
1. INSTALL AND CONNECT DX HEAT PUMP WITH HOT WATER BACKUP UNIT VENTILATOR, CONNECT HOT WATER SUPPLY AND RETURN TO EXISTING HOT WATER SYSTEM. CONNECT TO EXISTING OUTSIDE SLEEVE, PATCH AND MODIFY AS REQUIRED. SEE DETAILS 5/M501, 2/M502, 3/M502.
 2. INSTALL AND CONNECT WALL HUNG AIR HANDLER, CONDENSATE PUMP AND DRAIN PIPING. SEE INSTALLATION MANUAL.
 3. INSTALL AND CONNECT CEILING, CONDENSATE PUMP, AND FRESH AIR DUCT AS INDICATED. SEE DETAIL 1/M503.
 4. INSTALL AND CONNECT SYSTEM THERMOSTAT.
 5. INSTALL OAU - 1, CONNECT TO EXISTING FRESH AIR DISTRIBUTION SYSTEM. SEE DETAIL 4/M504.
 6. FRESH AIR DUCT UP THROUGH ROOF TO REMAIN.
 7. INSTALL 6"x6" FRESH AIR DUCT IN SUSPENDED CEILING. SEE M502 AND M504 FOR DUCTWORK INSTALLATION DETAILS.
 8. BALANCE EXISTING ROOM AND BATHROOM EXHAUST.
 9. INSTALL NEW WALL LOUVER AND BIRD SCREEN, SEE DETAIL 5/M504.
 10. BALANCE FRESH AIR SUPPLY.
 11. CONNECT EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN.
 12. INSULATED ALL EXISTING DUCTWORK.
 13. INSTALL 3/4" COPPER CONDENSATE PIPE TO RUN OUTSIDE ON SPLASH BLOCK.
 14. PROVIDE INLINE BOOSTER FAN, SEE BOOSTER FAN SCHEDULE ON WHES-M-003.
 15. INSTALL 3/4" COPPER CONDENSATE PIPING ABOVE CEILING TO RUN OUTSIDE ON SPLASH OR NEAREST JANITORS CLOSET.
 16. INSTALL AND BALANCE NEW EXHAUST GRILLE.

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KEY PLAN



No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

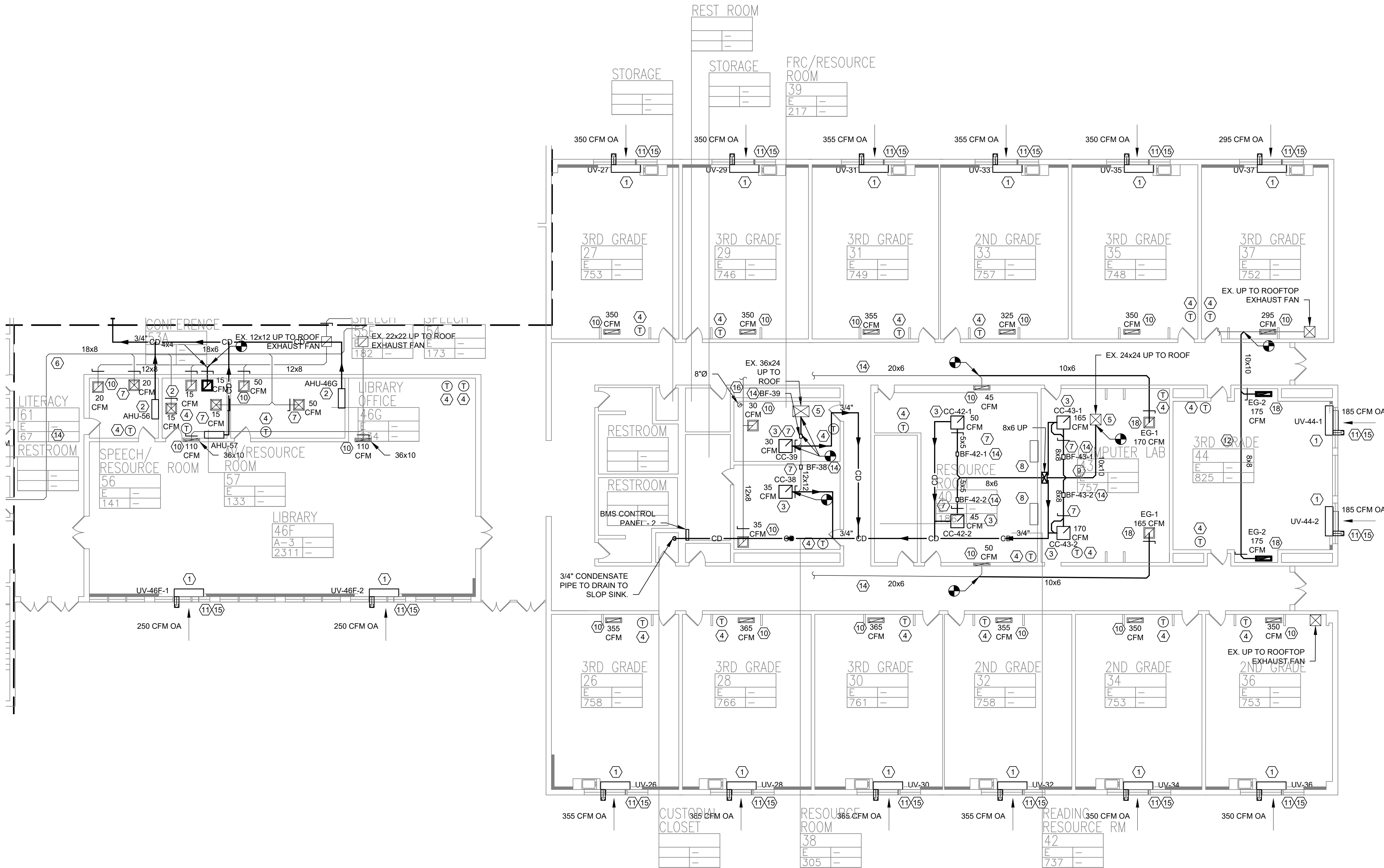
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Scale	AS NOTED
Date	03-04-25

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UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAV ELEMENTARY SCHOOL SSD# 50-02-01-06-0-014-XXX SSD# 50-02-01-06-0-025-XXX SSD# 50-02-01-06-0-024-XXX TEL: 860-514-1100 FAX: 860-514-1101

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First Floor Partial Plan - Mechanical - 2	WHES-M-102
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KEYED NOTES:

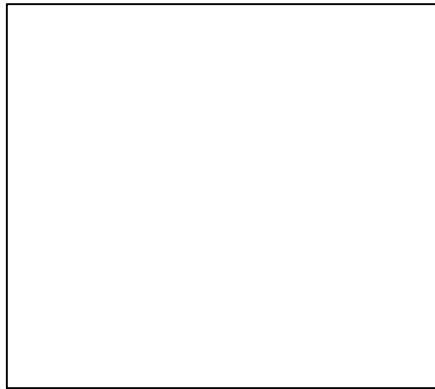
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2. INSTALL AND CONNECT WALL HUNG AIR HANDLER, CONDENSATE PUMP AND DRAIN PIPING. SEE INSTALLATION MANUAL.
3. INSTALL AND CONNECT CEILING CASSETTE, CONDENSATE PIPE, AND FRESH AIR DUCT AS INDICATED. SEE DETAIL 1/M503.
4. INSTALL AND CONNECT SYSTEM THERMOSTAT.
5. EXISTING UP DUCT UP TO FRESH AIR TO REMAIN.
6. EXISTING FRESH AIR DISTRIBUTION SYSTEM TO REMAIN.
7. BALANCE FRESH AIR.
8. EXISTING WALL HUNG UNITS TO REMAIN.
9. INSTALL AND CONNECT FRESH AIR DUCT SEE M502 AND M504 FOR DUCTWORK INSTALLATION DETAILS.
10. BALANCE EXISTING ROOM AND BATHROOM EXHAUST.
11. CONNECT EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN.
12. INSTALL AND CONNECT NEW EXHAUST DUCT ABOVE CEILING. SEE M502 AND M504 FOR DUCTWORK INSTALLATION DETAILS.
13. BALANCE NEW EXHAUST.
14. INSULATE ALL EXISTING DUCTWORK.
15. INSTALL 3/4" COPPER CONDENSATE PIPE TO RUN OUTSIDE ON SPLASH BLOCK.
16. PROVIDE INLINE BOOSTER FAN, SE BOOSTER FAN SCHEDULE ON WHES-M-003.
17. INSTALL 3/4" COPPER CONDENSATE PIPING ABOVE CEILING TO RUN OUTSIDE ON SPLASH OR NEAREST JANITORS CLOSET.
18. INSTALL AND BALANCE NEW EXHAUST GRILLE.



KEY PLAN



Revisions	
No.	Date
1	03-04-25
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Mechanical & Electrical Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-514-1100 FAX: 860-514-1101
	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-514-1100 FAX: 860-514-1101

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SSD# 50-02-01-06-0-014-XXX SSD# 50-02-01-06-0-024-XXX SSD# 50-02-01-06-0-024-XXX
100 PARK AVENUE, NEW YORK, NY 10065 TEL: 212-693-1000 FAX: 212-693-1001

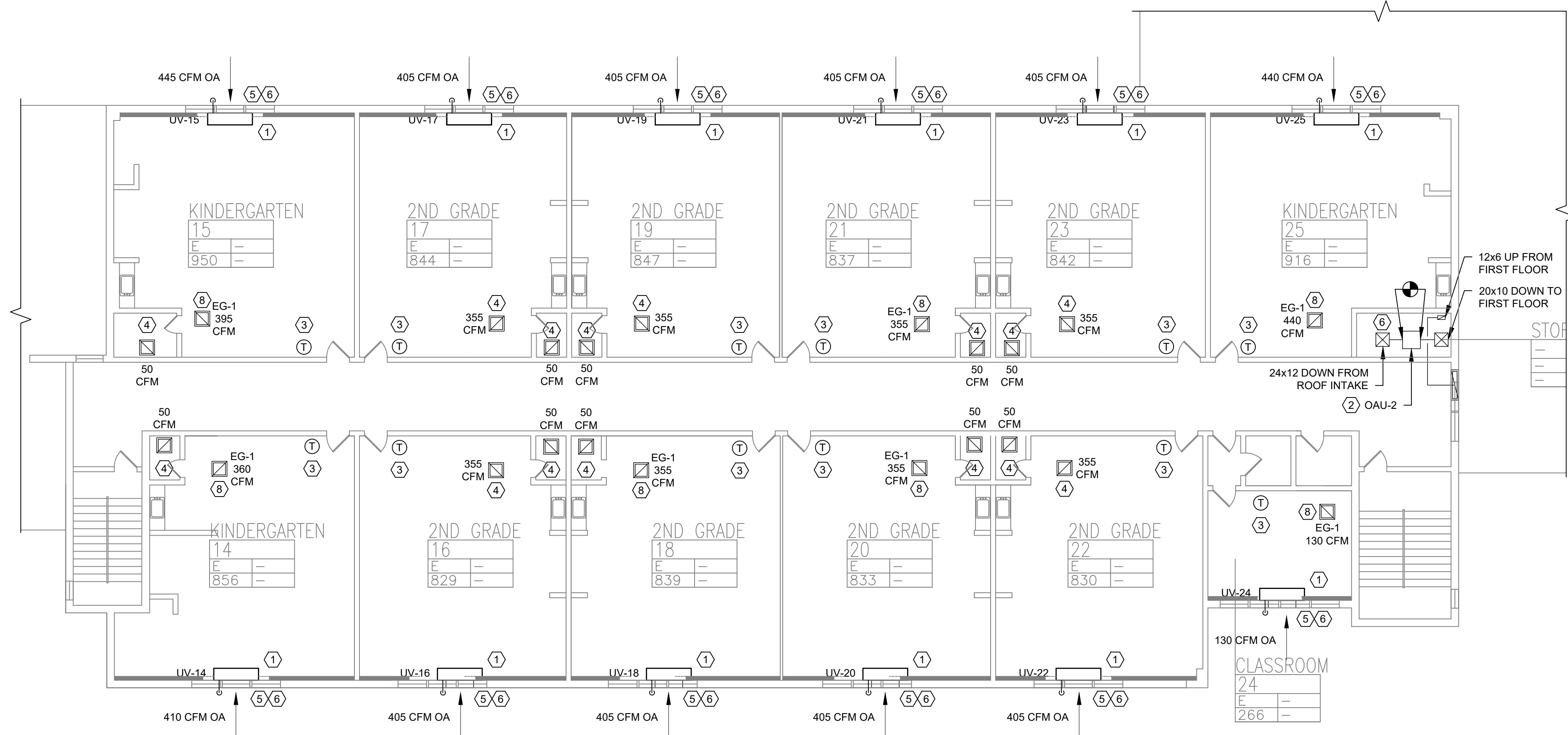


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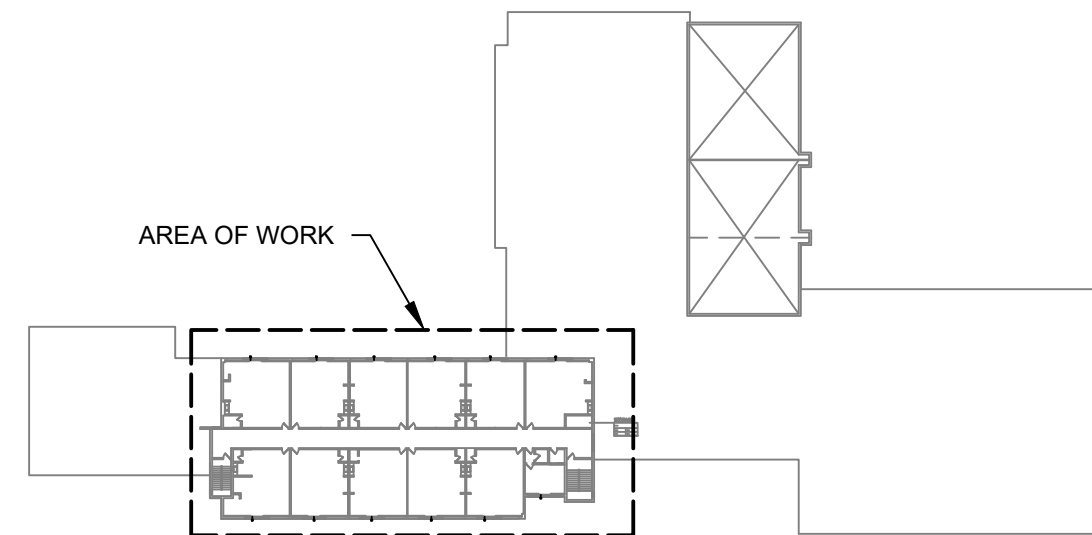
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Drawing Title
**FIRST FLOOR PARTIAL
PLAN - MECHANICAL -**
3

Drawing No.
WHES-M-103



1 SECOND FLOOR PARTIAL PLAN - MECHANICAL - 1
SCALE: 3/32" = 1'- 0"



KEY PLAN



KEYED NOTES:

- 1 INSTALL AND CONNECT DX HEAT PUMP WITH HOT WATER BACKUP UNIT VENTILATOR, CONNECT HOT WATER SUPPLY AND RETURN TO EXISTING HOT WATER SYSTEM. CONNECT TO EXISTING OUTSIDE SLEEVE, PATCH AND MODIFY AS REQUIRED. SEE DETAILS 5/M501, 2/M502, 3/M502.
- 2 INSTALL OAU - 2, CONNECT TO EXISTING FRESH AIR DISTRIBUTION SYSTEM. SEE DETAIL 4/M504.
- 3 INSTALL AND CONNECT SYSTEM THERMOSTAT.
- 4 BALANCE EXISTING ROOM AND BATHROOM EXHAUST.
- 5 CONNECT EXISTING OUTSIDE LOUVER AND SLEEVE TO REMAIN.
- 6 INSULATE ALL EXISTING DUCTWORK.
- 7 INSTALL 3/4" COPPER CONDENSATE PIPE TO RUN OUTSIDE
- 8 INSTALL AND BALANCE NEW EXHAUST GRILLE.

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IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

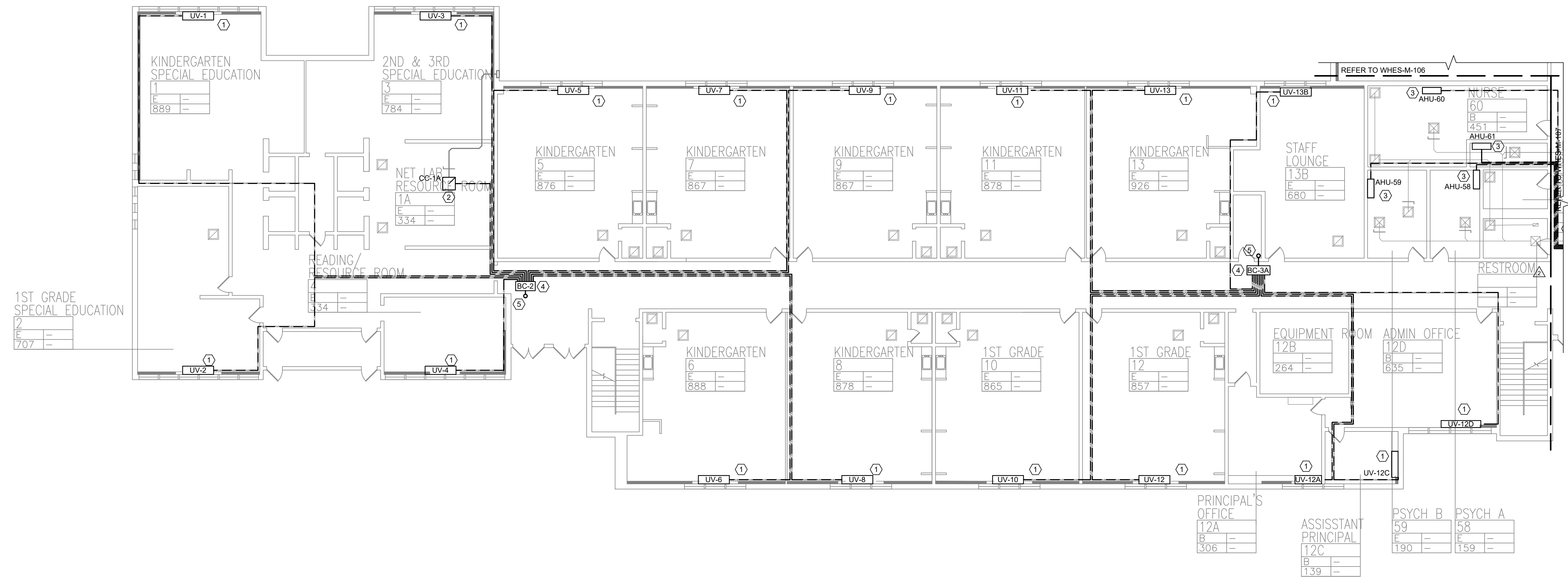
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Date	03-04-25

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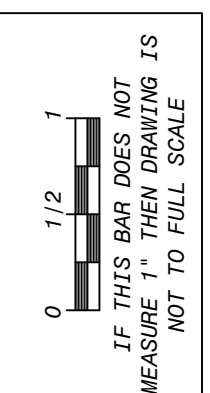
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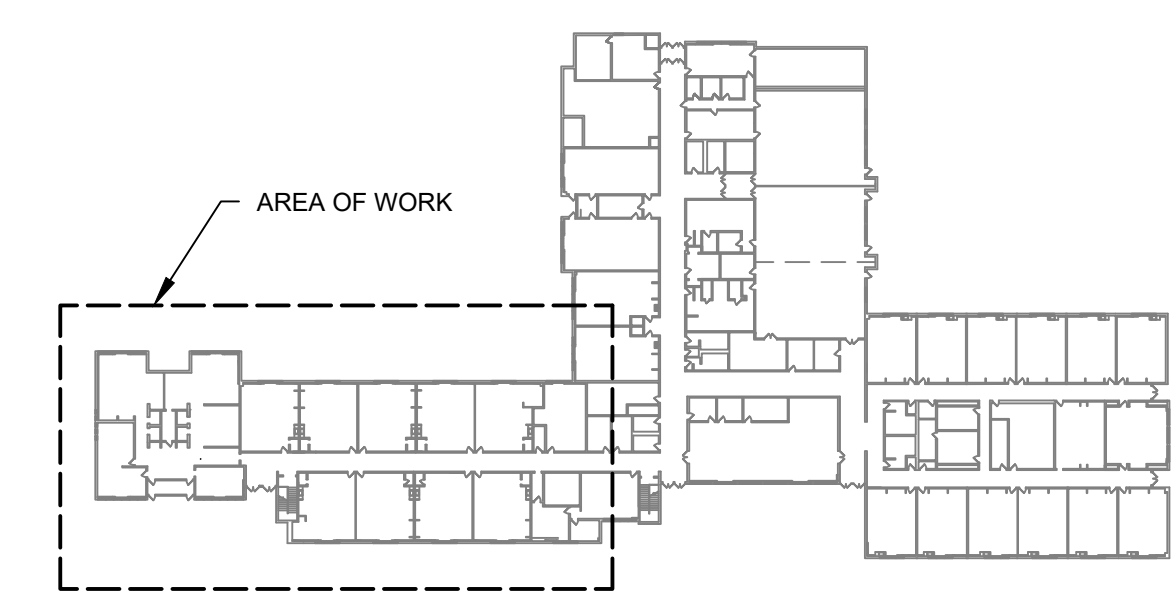
SECOND FLOOR PLAN - MECHANICAL	WHES-M-104
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- KEYED NOTES:**
- ① NEW UNIT VENTILATOR.
 - ② NEW CEILING CASSETTE.
 - ③ NEW WALL HUNG AC UNIT.
 - ④ INSTALL BRANCH CONTROLLER IN SUSPENDED CEILING. SEE DETAIL 5/M502.
 - ⑤ INSTALL, ROUTE, AND CONNECT REFRIGERANT PIPING AS INDICATED ABOVE SUSPENDED CEILING.



1 MECHANICAL FIRST FLOOR PARTIAL PLAN - REFRIGERANT PLAN - 1
SCALE: 3/32" = 1'-0"



KEY PLAN



No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

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Scale	AS NOTED
Date	03-04-25

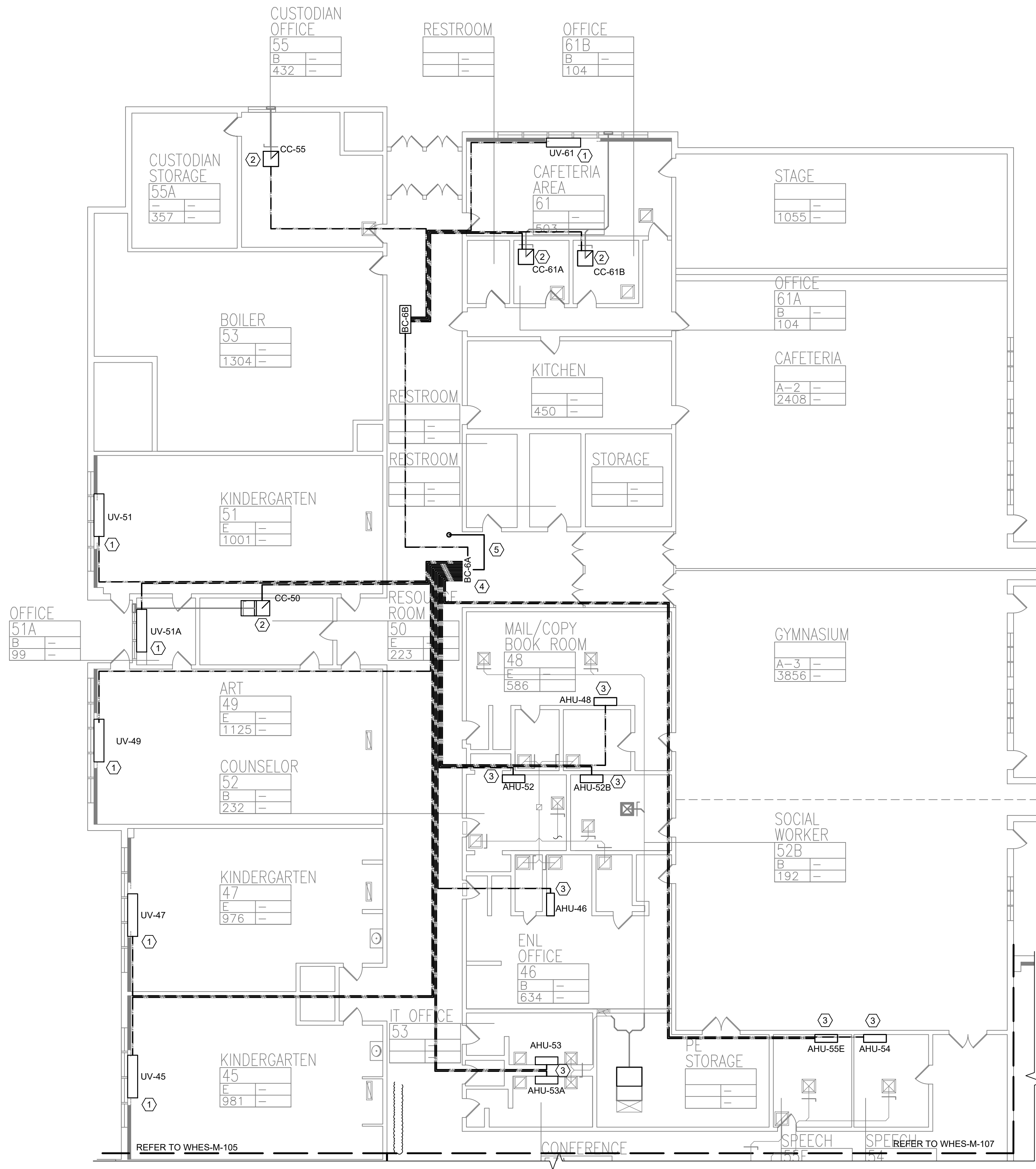
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Mechanical Electrical Engineer:	Structural Engineer:

**UNIVENT REPLACEMENT
AT STONY POINT,
THIELS, WEST HAV
ELEMENTARY SCHOOL**
SSD# 50-02-01-06-0-014-XXX
SSD# 50-02-01-06-0-025-XXX
SSD# 50-02-01-06-0-024-XXX
100 WEST HAVEN AVENUE
STONY POINT, CT 06424

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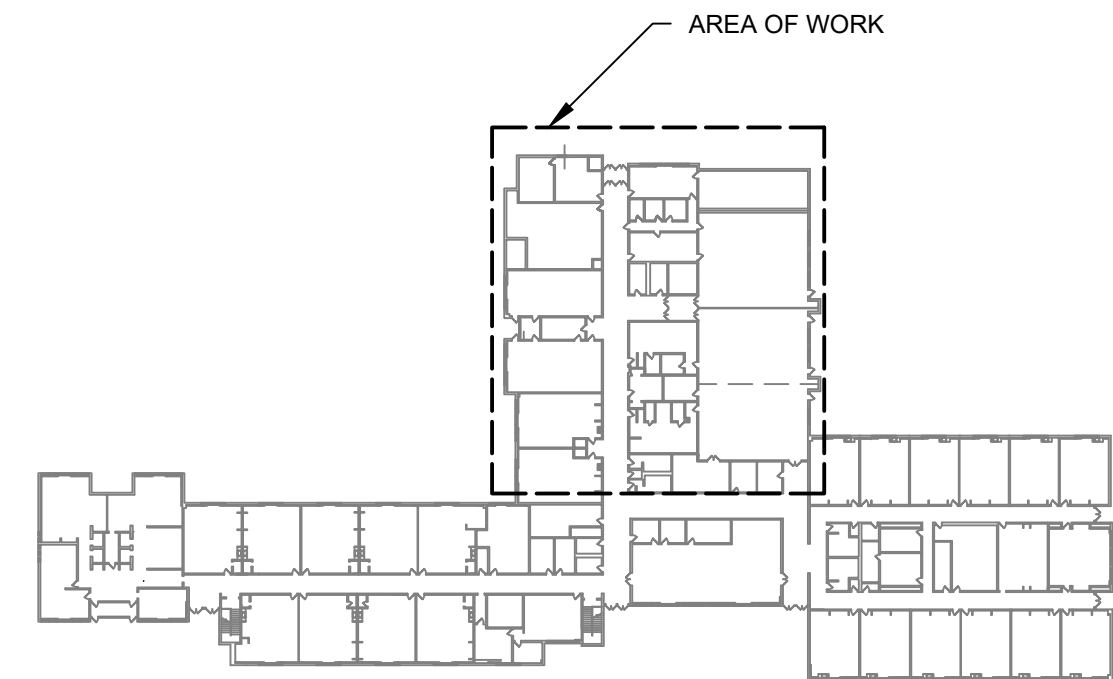
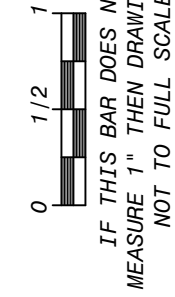
Mechanical First Floor Part. Plan - Refg. Piping - 1
Drawing No. **WHES-M-105**

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KEYED NOTES:

- 1 NEW UNIT VENTILATOR.
- 2 NEW CEILING CASSETTE.
- 3 NEW WALL HUNG AC UNIT.
- 4 INSTALL BRANCH CONTROLLER IN SUSPENDED CEILING. SEE DETAIL 5/M502.
- 5 INSTALL, ROUTE, AND CONNECT REFRIGERANT PIPING AS INDICATED ABOVE SUSPENDED CEILING.



KEY PLAN



1 MECHANICAL FIRST FLOOR PARTIAL PLAN - REFRIGERANT PLAN - 2
SCALE: 3/32" = 1'-0"

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



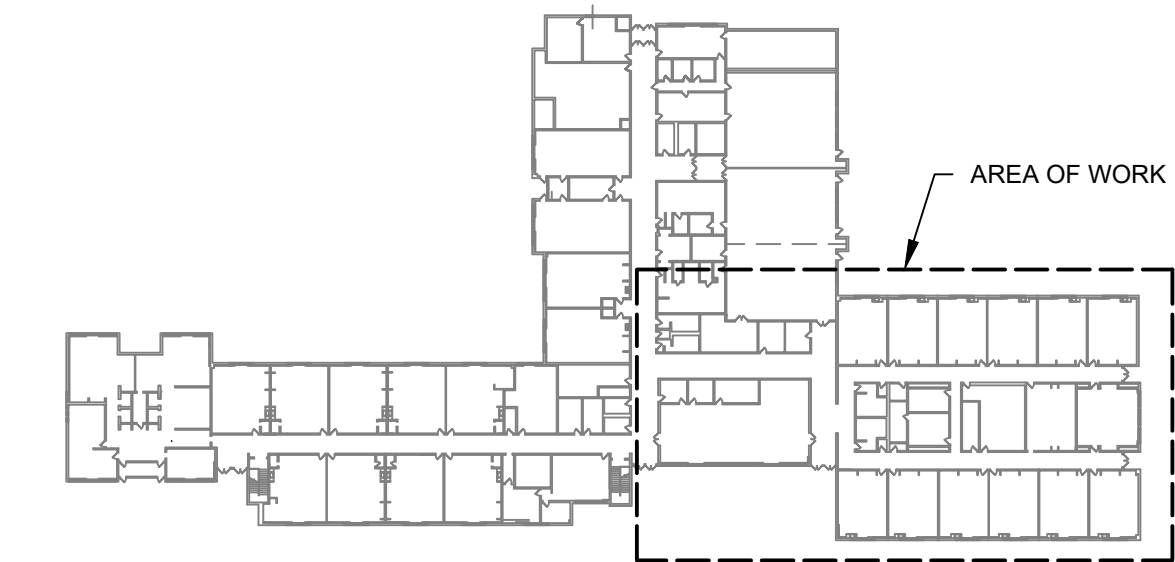
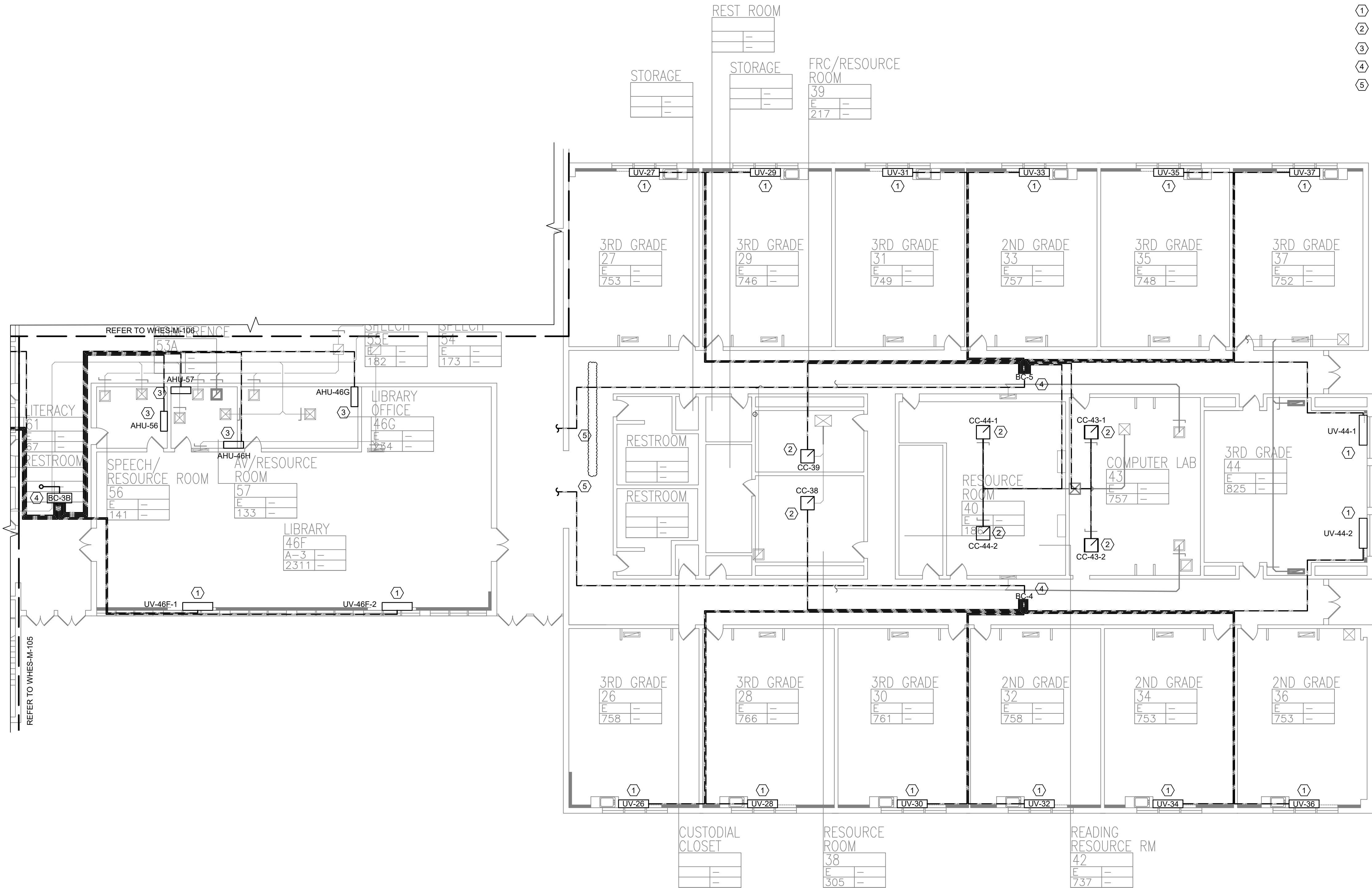
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Date	03-04-25

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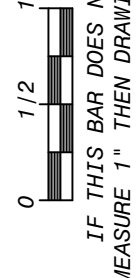
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Drawing No. WHES-M-106



- KEYED NOTES:**
- ① NEW UNIT VENTILATOR.
 - ② NEW CEILING CASSETTE.
 - ③ NEW WALL HUNG AC UNIT.
 - ④ INSTALL BRANCH CONTROLLER IN SUSPENDED CEILING. SEE DETAIL 5/M502.
 - ⑤ INSTALL, ROUTE, AND CONNECT REFRIGERANT PIPING AS INDICATED ABOVE SUSPENDED CEILING.



1 MECHANICAL FIRST FLOOR PARTIAL PLAN - REFRIGERANT PLAN - 3
SCALE: 3/32" = 1'-0"

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



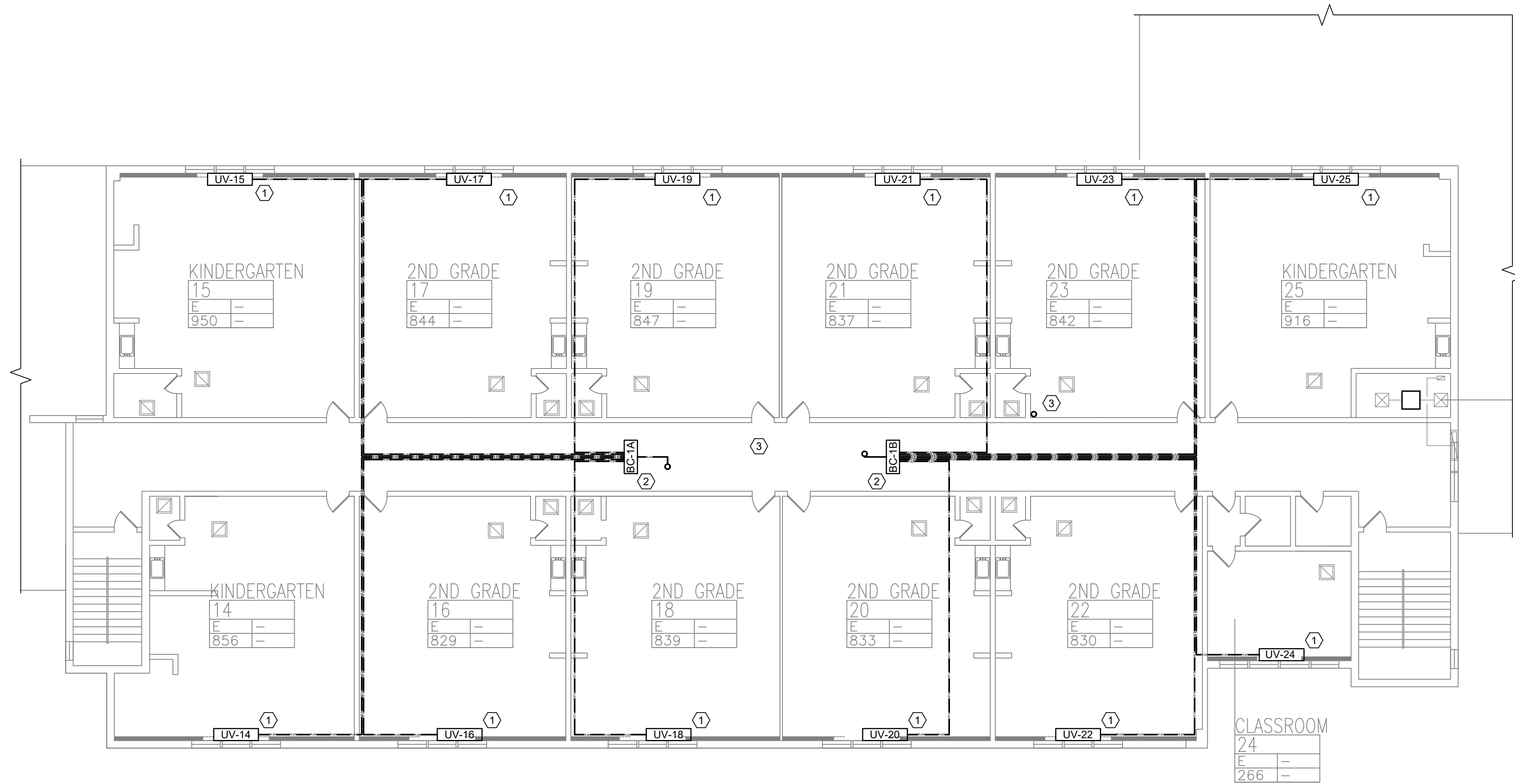
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GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-514-1100 FAX: 860-514-1101 WWW.GREENMANPEDERSEN.COM	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-514-1100 FAX: 860-514-1101 WWW.GREENMANPEDERSEN.COM
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UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVEN ELEMENTARY SCHOOL SSD# 50-02-01-06-0-014-XXX SSD# 50-02-01-06-0-025-XXX SSD# 50-02-01-06-0-024-XXX TEL: 860-514-1100 FAX: 860-514-1101 WWW.GREENMANPEDERSEN.COM

MSA MICHAEL SHILALE ARCHITECTS, LLP 140 Park Avenue New York, NY 10050 Tel: 845-708-9200 www.shilale.com

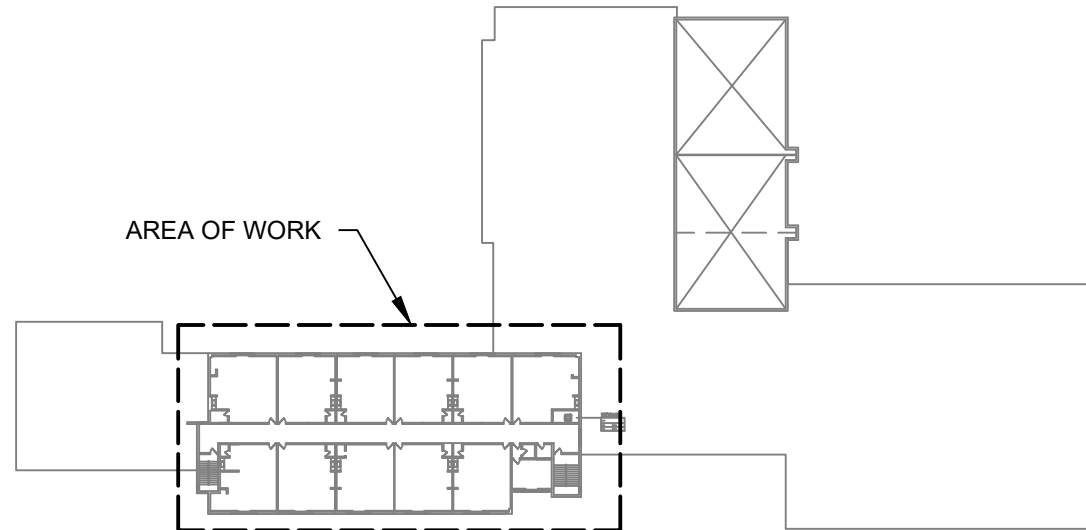
First Floor Part. PLAN - REFG. PIPING - 3	WHES-M-107
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1 MECHANICAL SECOND FLOOR PARTIAL PLAN - REFRIGERANT PLAN - 1
SCALE: 3/32" = 1'-0"

KEYED NOTES:

- ① NEW UNIT VENTILATOR.
- ② INSTALL BRANCH CONTROLLER IN SUSPENDED CEILING. SEE DETAIL 5/M502.
- ③ INSTALL, ROUTE, AND CONNECT REFRIGERANT PIPING AS INDICATED ABOVE SUSPENDED CEILING.



KEY PLAN



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Drawing Title
**SECOND FLOOR PLAN -
REFG. PIPING**



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Drawing No.

WHES-M-108

Mechanical
Electrical
Engineer:

**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
SUITE 200
SUFFERN, NY 10901
PROJ. No. : MNY-5000127.00

Drawn by VF /AW

Checked by EF

Project No. 43040

Scale AS NOTED

Date 03-04-25

Structural
Engineer:

**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
SUITE 200
SUFFERN, NY 10901

**UNIVENT REPLACEMENT
AT STONY POINT,
THIELS, WEST HAV
ELEMENTARY SCHOOL**

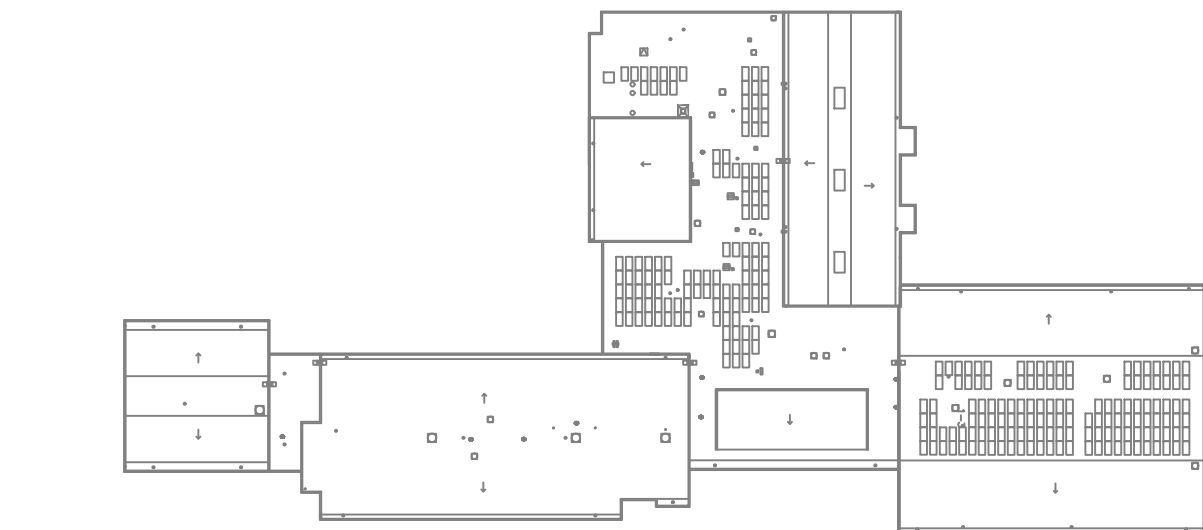
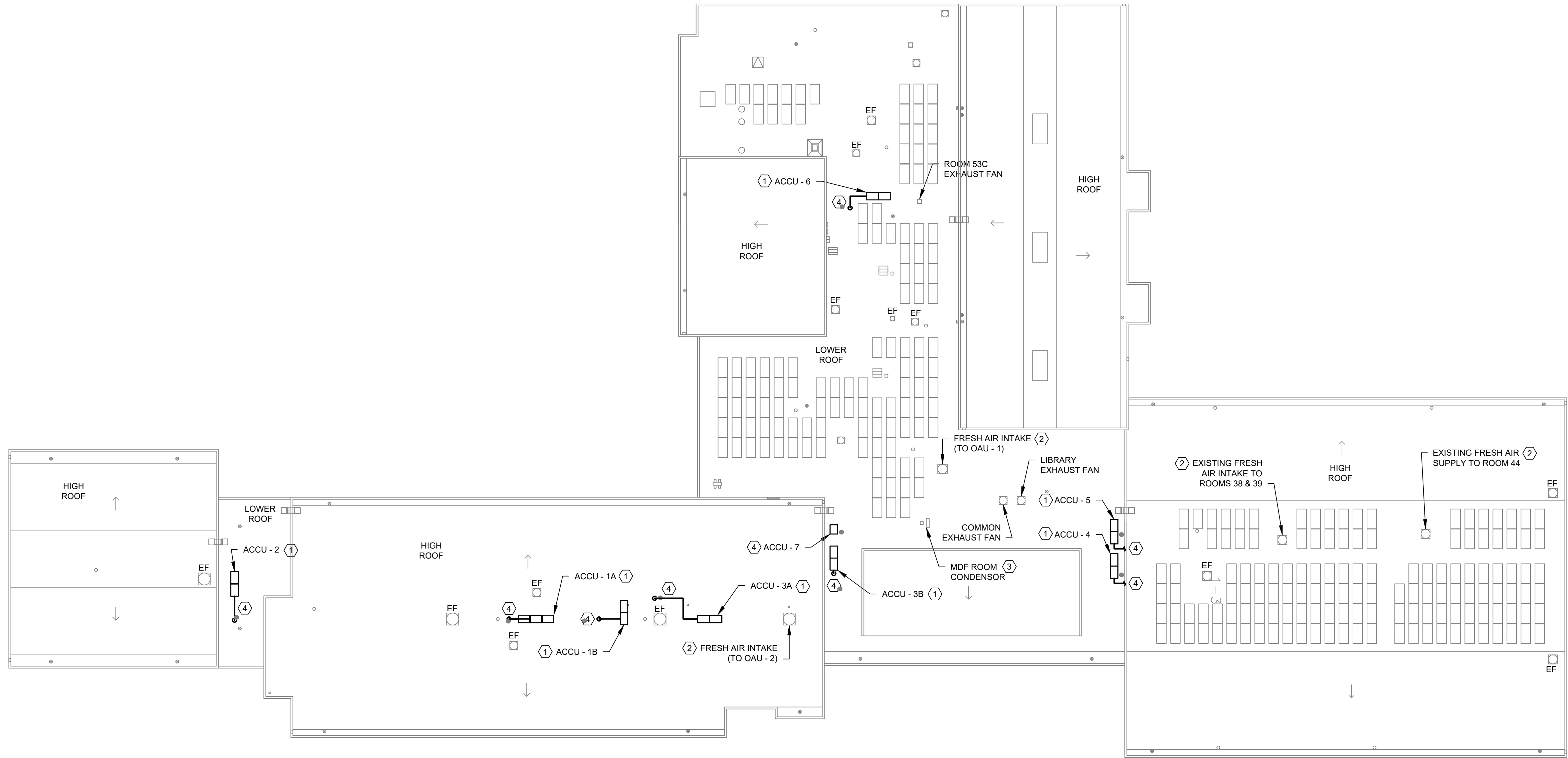
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SSD# 50-02-01-06-0-024-XXX
NY REG. NO. 00000000000000000000
HARRISBURG, NY 10950

Revisions

No.

Date

1	03-04-25	BIDDING DOCUMENTS
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KEY PLAN



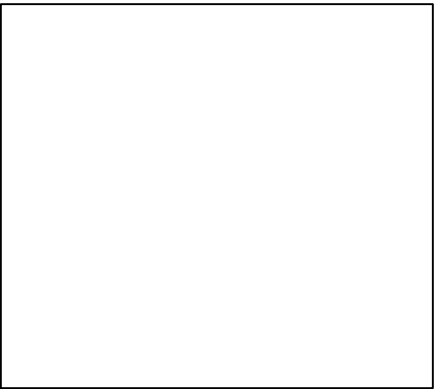
KEYED NOTES:

- 1 INSTALL AND CONNECT ACCU AS SHOWN. SEE STRUCTURAL DRAWINGS FOR COORDINATION AS REQUIRED. SEE DETAILS 1/M502, 2/M503, 3/M503, AND 4/M503.
- 2 FRESH AIR INTAKE FOR FRESH AIR SYSTEM TO REMAIN.
- 3 EXISTING CONDENSER FOR EXISTING WALL HUNG UNIT TO REMAIN.
- 4 REFRIGERANT LIQUID AND SUCTION PIPING.



1 MECHANICAL ROOF PLAN
SCALE: 3/64" = 1'-0"

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

Mechanical Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 SUFFERN, NY 10901 PROJ. NO. : MNY-5000127.00
Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 SUFFERN, NY 10901

UNIVENT REPLACEMENT
AT STONY POINT,
THIELS, WEST HAV
ELEMENTARY SCHOOL
SSD# 50-02-01-06-0-014-XXX
SSD# 50-02-01-06-0-024-XXX
SSD# 50-02-01-06-0-024-XXX
NY STATE ARCHITECTURAL BOARD
HARRISBURG, NY 10993



Drawing Title
ROOF PLAN -
MECHANICAL

Drawing No.
WHES-M-109

SEQUENCE OF OPERATIONS
UNIT VENTILATOR

BUILDING AUTOMATION SYSTEM INTERFACE:

THE BUILDING AUTOMATION SYSTEM (BAS) SHALL SEND THE CONTROLLER OCCUPIED BYPASS, MORNING WARM-UP / PRE-COOL, OCCUPIED / UNOCCUPIED AND HEAT / COOL MODES. IF A BAS IS NOT PRESENT, OR COMMUNICATION IS LOST WITH THE BAS THE CONTROLLER SHALL OPERATE USING DEFAULT MODES AND SETPOINTS.

OCCUPIED MODE:

DURING OCCUPIED PERIODS THE SUPPLY FAN WILL RUN CONTINUOUSLY AND THE OUTSIDE AIR DAMPER WILL OPEN TO MAINTAIN MINIMUM VENTILATION REQUIREMENTS. VRF HEATING/COOLING OR THE HOT WATER COIL VALVE WILL OPERATE TO MAINTAIN THE ACTIVE SPACE TEMPERATURE SETPOINT. VRF HEATING WILL OPERATE AS THE FIRST FORM OF HEAT. THE UNIT WILL UTILIZE HOT WATER HEAT AND FIN TUBE RADIATION IN CONDITIONS WHERE VRF HEAT IS NOT ABLE TO MEET THE HEATING DEMAND.

UNOCCUPIED MODE:

WHEN THE SPACE TEMPERATURE IS BELOW THE UNOCCUPIED HEATING SETPOINT OF 60.0 DEG. F (ADJ.), THE SUPPLY FAN WILL START, THE OUTSIDE AIR DAMPER WILL REMAIN CLOSED AND HEATING WILL BE ENABLED. WHEN THE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED HEATING SETPOINT OF 60.0 DEG. F (ADJ.) PLUS THE UNOCCUPIED DIFFERENTIAL OF 2.0 DEG. F (ADJ.) THE SUPPLY FAN WILL STOP AND HEATING WILL BE DISABLED. WHEN THE SPACE TEMPERATURE IS ABOVE THE UNOCCUPIED COOLING SETPOINT OF 85.0 DEG. F (ADJ.), THE SUPPLY FAN WILL START, THE OUTSIDE AIR DAMPER WILL OPEN IF ECONOMIZING IS ENABLED AND REMAIN CLOSED IF ECONOMIZING IS DISABLED AND COOLING WILL MODULATE TO MAINTAIN SPACE TEMPERATURE. WHEN THE SPACE TEMPERATURE FALLS BELOW THE UNOCCUPIED COOLING SETPOINT MINUS THE UNOCCUPIED DIFFERENTIAL OF 4.0 DEG. F (ADJ.) THE SUPPLY FAN WILL STOP, COOLING WILL BE DISABLED AND THE OUTSIDE AIR DAMPER WILL CLOSE.

OPTIMAL START:

THE BAS SHALL MONITOR THE SCHEDULED OCCUPIED TIME, OCCUPIED SPACE SETPOINTS AND SPACE TEMPERATURE TO CALCULATE WHEN THE OPTIMAL START OCCURS.

MORNING WARM-UP MODE:

DURING OPTIMAL START, WHEN THE SPACE TEMPERATURE IS BELOW THE OCCUPIED HEATING SETPOINT, A MORNING WARM-UP MODE WILL BE ACTIVATED. WHEN MORNING WARM-UP IS INITIATED, THE UNIT WILL ENABLE THE HEATING AND SUPPLY FAN. THE OUTSIDE AIR DAMPER WILL REMAIN CLOSED. WHEN THE SPACE TEMPERATURE REACHES THE OCCUPIED HEATING SETPOINT (ADJ.), THE UNIT WILL TRANSITION TO THE OCCUPIED MODE.

PRE-COOL MODE:

DURING OPTIMAL START, WHEN THE SPACE TEMPERATURE IS ABOVE THE OCCUPIED COOLING SETPOINT, PRE-COOL MODE WILL BE ACTIVATED. WHEN PRE-COOL IS INITIATED, THE UNIT WILL ENABLE THE FAN AND COOLING OR ECONOMIZER. THE OUTSIDE AIR DAMPER WILL REMAIN CLOSED, UNLESS ECONOMIZING. WHEN THE SPACE TEMPERATURE REACHES OCCUPIED COOLING SETPOINT (ADJ.), THE UNIT WILL TRANSITION TO THE OCCUPIED MODE.

OCCUPIED BYPASS:

THE BAS SHALL MONITOR THE STATUS OF THE "ON" AND "CANCEL" BUTTONS OF THE SPACE TEMPERATURE SENSOR OR MOVEMENT AS DETECTED BY A SPACE OCCUPANCY SENSOR. WHEN AN OCCUPIED BYPASS REQUEST IS RECEIVED FROM A SPACE SENSOR, THE UNIT SHALL TRANSITION FROM ITS CURRENT OCCUPANCY MODE TO OCCUPIED BYPASS MODE AND THE UNIT SHALL MAINTAIN THE SPACE TEMPERATURE TO THE OCCUPIED SETPOINTS (ADJ.).

SPACE TEMPERATURE CONTROL:

CASCADE ZONE CONTROL WILL BE USED IN THE OCCUPIED, OCCUPIED BYPASS, AND OCCUPIED STANDBY MODES. IT MAINTAINS ZONE TEMPERATURE BY CONTROLLING THE DISCHARGE AIR TEMPERATURE TO VNTROL THE ZONE TEMPERATURE WHILE MINIMIZING THE FAN SPEED. THE SPACE TEMPERATURE WILL BE MAINTAINED BETWEEN THE OCCUPIED COOLING SETPOINT OF 74.0 DEG. F (ADJ.) AND THE OCCUPIED HEATING SETPOINT OF 71.0 DEG. F (ADJ.). THE UNIT WILL TRANSITION TO THE COOLING MODE WHEN THE SPACE TEMPERATURE RISES ONE DEGREE ABOVE THE OCCUPIED COOLING SETPOINT OF 74.0 DEG. F (ADJ.). THE UNIT WILL TRANSITION TO THE HEATING MODE WHEN THE SPACE TEMPERATURE DROPS ONE DEGREE BELOW THE OCCUPIED HEATING SETPOINT OF 74.0 DEG. F (ADJ.).

ECONOMIZER CONTROL:

ECONOMIZING WILL BE ENABLED WHEN THE OUTDOOR AIR TEMPERATURE IS BELOW THE ECONOMIZING ENABLE SETPOINT OF 65.0 DEG. F (ADJ.). ECONOMIZING WILL BE DISABLED WHEN THE OUTDOOR AIR TEMPERATURE IS GREATER THAN 5.0 DEG. F ABOVE THE ECONOMIZER ENABLE SETPOINT. WHEN ECONOMIZING IS ENABLED THE OUTSIDE AIR DAMPER WILL MODULATE BETWEEN THE MINIMUM DAMPER POSITION AND 100% OPEN TO MAINTAIN THE OCCUPIED COOLING SETPOINT. IF THE OUTDOOR AIR TEMPERATURE SENSOR FAILS,

ECONOMIZING WILL BE DISABLED AND AN ALARM WILL BE ANNUNCIATED AT THE BAS.

SUPPLY FAN OPERATION:

THE SUPPLY FAN SHALL CYCLE ON DEMAND DURING THE UNOCCUPIED MODE. WHEN THE CONTROLLER TRANSITIONS TO THE OCCUPIED MODE, THE SUPPLY FAN SHALL START AT HIGH SPEED BEFORE TRANSITIONING TO CONTINUOUS OPERATION AT THE SELECTED SPEED. THE SUPPLY FAN STATUS SHALL BE MONITORED BY A DIFFERENTIAL PRESSURE SWITCH. IF THE SUPPLY FAN FAILS THE FAN SHALL BE COMMANDED OFF AND AN ALARM WILL BE ANNUNCIATED AT THE BAS. A MANUAL RESET SHALL BE REQUIRED TO RESTART THE FAN.

FREEZE PROTECTION:

A HARDWIRED, LOW LIMIT TEMPERATURE SWITCH WILL BE ELECTRICALLY INTERLOCKED WITH THE SAFETY CIRCUIT. IF THE LOW LIMIT TEMPERATURE SWITCH IS TRIPPED 38.0 DEG. F (ADJ.), THE SUPPLY FAN WILL BE COMMANDED OFF. WATER VALVES WILL OPEN TO 100% OUTSIDE AIR DAMPER WILL CLOSE, AND AN ALARM WILL BE ANNUNCIATED AT THE BAS. THE CONTROLLER WILL AUTOMATICALLY ATTEMPT TO RESTART THE UNIT AFTER 30 MINUTES. IF THE UNIT RESTARTS SUCCESSFULLY WITH NO LOW TEMPERATURE CONDITION, THE DIAGNOSTIC IS CLEARED. IF A SECOND LOW TEMPERATURE CONDITION OCCURS WITHIN A 24 HOUR PERIOD THE UNIT WILL BE LOCKED OUT UNTIL MANUALLY RESET.

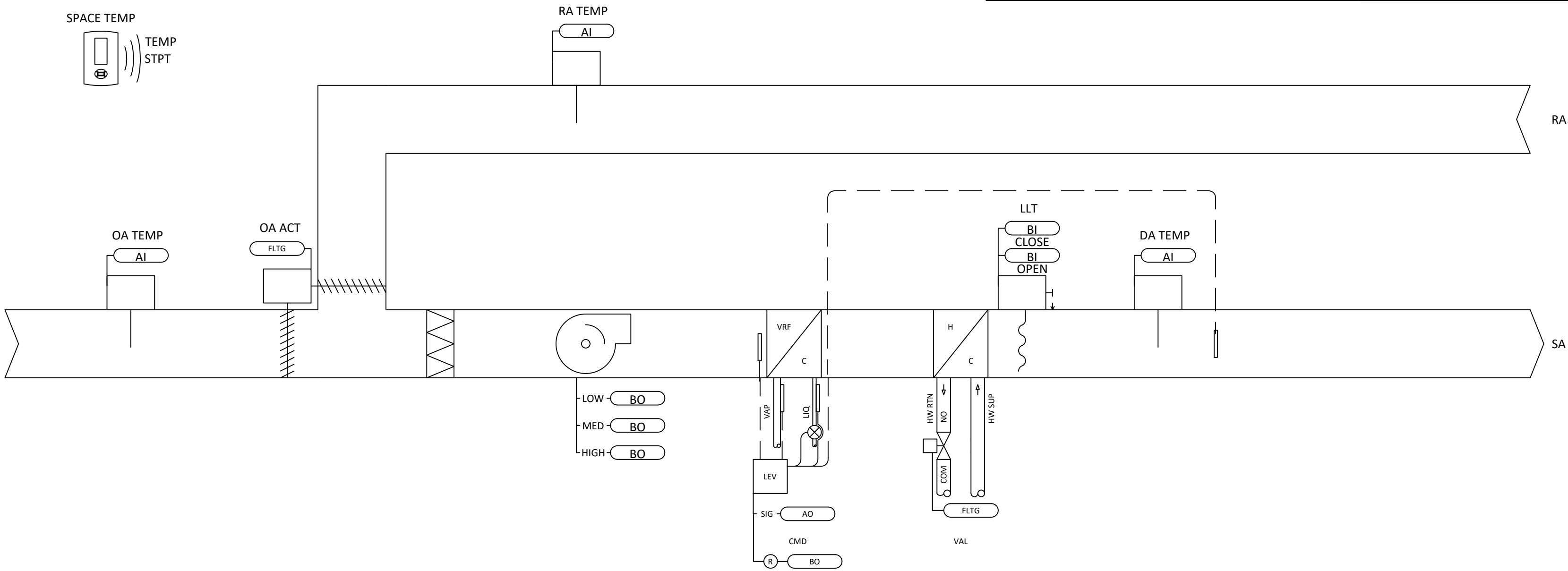
FILTER TIMER:

THE FAN-RUN TIME (HRS) WILL BE COMPARED TO THE FILTER MAINTENANCE TIMER SETPOINT. ONCE THE SETPOINT IS REACHED A FILTER TIMER ALARM DIAGNOSTIC WILL BE ANNUNCIATED AT THE BAS. WHEN THE DIAGNOSTIC IS CLEARED, THE FILTER-MAINTENANCE TIMER IS RESET TO ZERO, AND THE TIMER BEGINS ACCUMULATING FAN-RUN TIME AGAIN.

FIN TUBE RADIATOR:

THE FIN TUBE RADIATOR WILL ACT AS SECOND STAGE OF HEAT.

UNIT VENTILATOR W/ VRF LEV



1 UNIT VENTILATOR FLOW DIAGRAM & SEQUENCE OF OPERATIONS
SCALE: NONE

SEQUENCE OF OPERATIONS
VRF INDOOR UNITS

BUILDING AUTOMATION SYSTEM INTERFACE:

THE BUILDING AUTOMATION SYSTEM (BAS) WILL SEND THE CONTROLLER OCCUPIED / UNOCCUPIED MODES AND SETPOINTS. IF A BAS IS NOT PRESENT, OR COMMUNICATION IS LOST WITH THE BAS THE CONTROLLER WILL OPERATE USING DEFAULT MODES AND SETPOINTS .

OCCUPIED MODE:

DURING OCCUPIED PERIODS, THE SUPPLY FAN WILL RUN CONTINUOUSLY. VRF HEATING OR COOLING WILL MODULATE TO MAINTAIN THE OCCUPIED SPACE TEMPERATURE SETPOINT.

UNOCCUPIED MODE:

WHEN THE SPACE TEMPERATURE FALLS BELOW THE UNOCCUPIED HEATING SETPOINT OF 60.0 DEG. F (ADJ.), THE SUPPLY FAN WILL START AND VRF HEATING WILL BE ENABLED. WHEN THE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED HEATING SETPOINT PLUS THE UNOCCUPIED DIFFERENTIAL OF 4.0 DEG. F (ADJ.), THE SUPPLY FAN WILL STOP AND THE VRF HEATING WILL BE DISABLED. WHEN THE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED COOLING SETPOINT OF 85.0 DEG. F (ADJ.), THE SUPPLY FAN WILL START AND VRF COOLING WILL BE ENABLED. WHEN THE SPACE TEMPERATURE FALLS BELOW THE UNOCCUPIED COOLING SETPOINT MINUS THE UNOCCUPIED DIFFERENTIAL OF 4.0 DEG. F (ADJ.), THE SUPPLY FAN WILL STOP AND THE VRF COOLING WILL BE DISABLED.

COOLING MODE:

THE UNIT CONTROLLER WILL USE SPACE TEMPERATURE AND SPACE TEMPERATURE SETPOINT TO DETERMINE WHEN TO INITIATE REQUESTS FOR COOLING. WHEN THE SPACE TEMPERATURE RISES ABOVE THE SETPOINT, THE UNIT CONTROLLER WILL MODULATE VRF COOLING AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE SETPOINT. ONCE THE SPACE TEMPERATURE FALLS BELOW THE SETPOINT, VRF COOLING WILL BE DISABLED.

HEATING MODE:

THE UNIT CONTROLLER WILL USE SPACE TEMPERATURE AND SPACE TEMPERATURE SETPOINT TO DETERMINE WHEN TO INITIATE REQUESTS FOR HEATING. WHEN THE SPACE TEMPERATURE FALLS BELOW THE SETPOINT, THE UNIT CONTROLLER WILL MODULATE VRF HEATING AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE SETPOINT. ONCE THE SPACE TEMPERATURE RISES ABOVE THE SETPOINT, VRF HEATING WILL BE DISABLED.

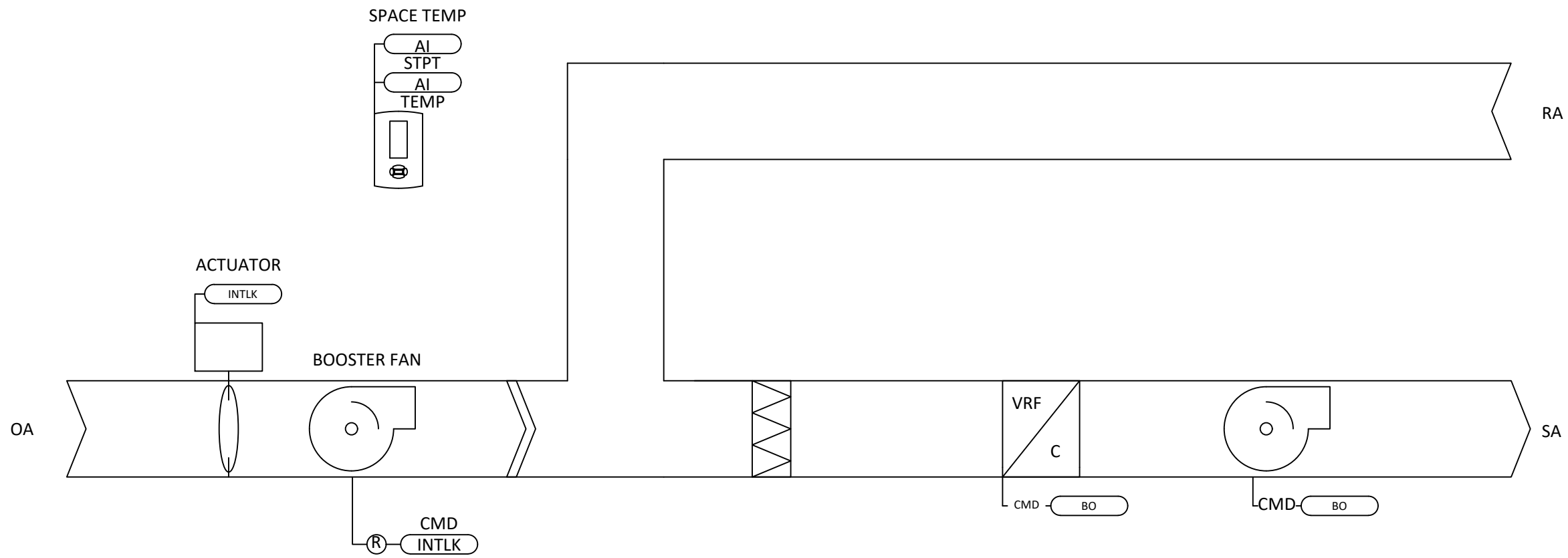
BOOSTER FAN:

THE BOOSTER FAN WILL BE INTERLOCKED WITH THE INDOOR UNIT. THE FAN WILL RUN WHEN THE UNIT SUPPLY FAN IS RUNNING.

OUTDOOR AIR DAMPER:

THE OUTDOOR AIR DAMPER WILL BE INTERLOCKED WITH THE INDOOR UNIT. THE FAN WILL BE OPEN WHEN THE UNIT SUPPLY FAN IS RUNNING.

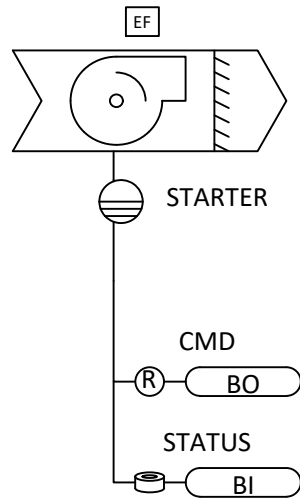
2 VRF FLOW DIAGRAM & SEQUENCE OF OPERATIONS
SCALE: NONE



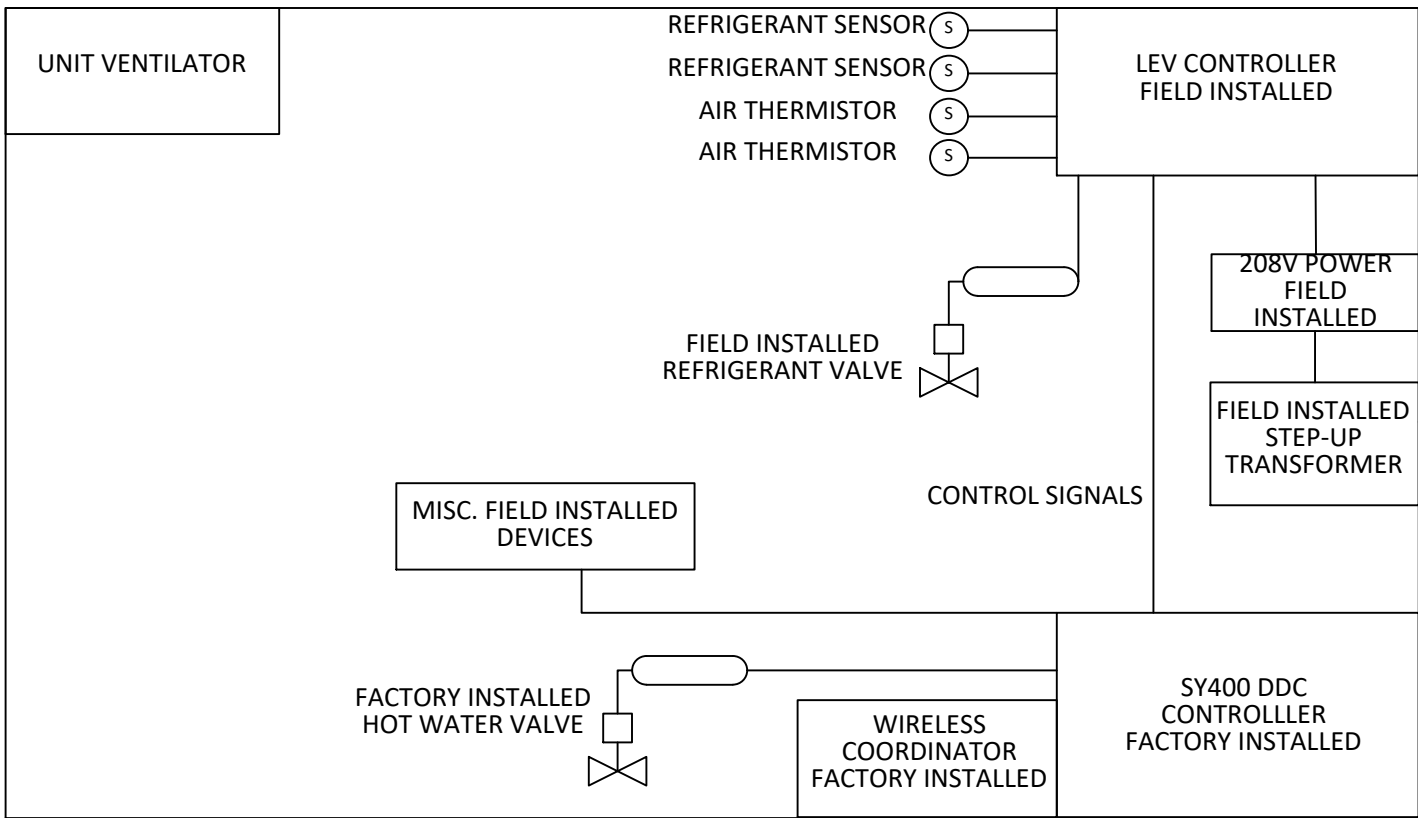
SEQUENCE OF OPERATIONS
EXHAUST FANS

OCCUPANCY CONTROL:
THE EXHAUST FANS WILL BE ENABLED WHEN THE CONTROLLER IS IN THE OCCUPIED MODE AND DISABLED IN THE UNOCCUPIED MODE. THE BAS WILL MONITOR FAN STATUS FOR ALARMING PURPOSES.

3 EXHAUST FAN FLOW DIAGRAM & SEQUENCE OF OPERATIONS
SCALE: NONE



(UNIT VENTILATOR W/ VRF LEV)



ALL ITEMS DENOTED AS FIELD INSTALLED ARE TO BE INSTALLED BY THE ATC CONTRACTOR. ATC CONTRACTOR TO COORDINATE WITH EQUIPMENT MANUFACTURER ON FURNISHING OF ITEMS

0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 WEST HAVESTRAW, NY 10991 PH: 845-888-0000 FAX: 845-888-0001	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 WEST HAVESTRAW, NY 10991
Mechanical Engineer	Structural Engineer

UNIVENT REPLACEMENT AT STONY POINT, THIELLS, WEST HAVESTRAW ELEMENTARY SCHOOL	SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015
NY, NJ, AND CT HARRISTOWN, NY 10991	NY, NJ, AND CT HARRISTOWN, NY 10991

MSA MICHAEL SHIALE ARCHITECTS, LLP 140 Park Avenue New City, NY 10956 Tel 845-708-9200 www.shiale.com

FLOW DIAGRAM AND SEQUENCE OF OPERATIONS	Drawing No. WHES-M-301
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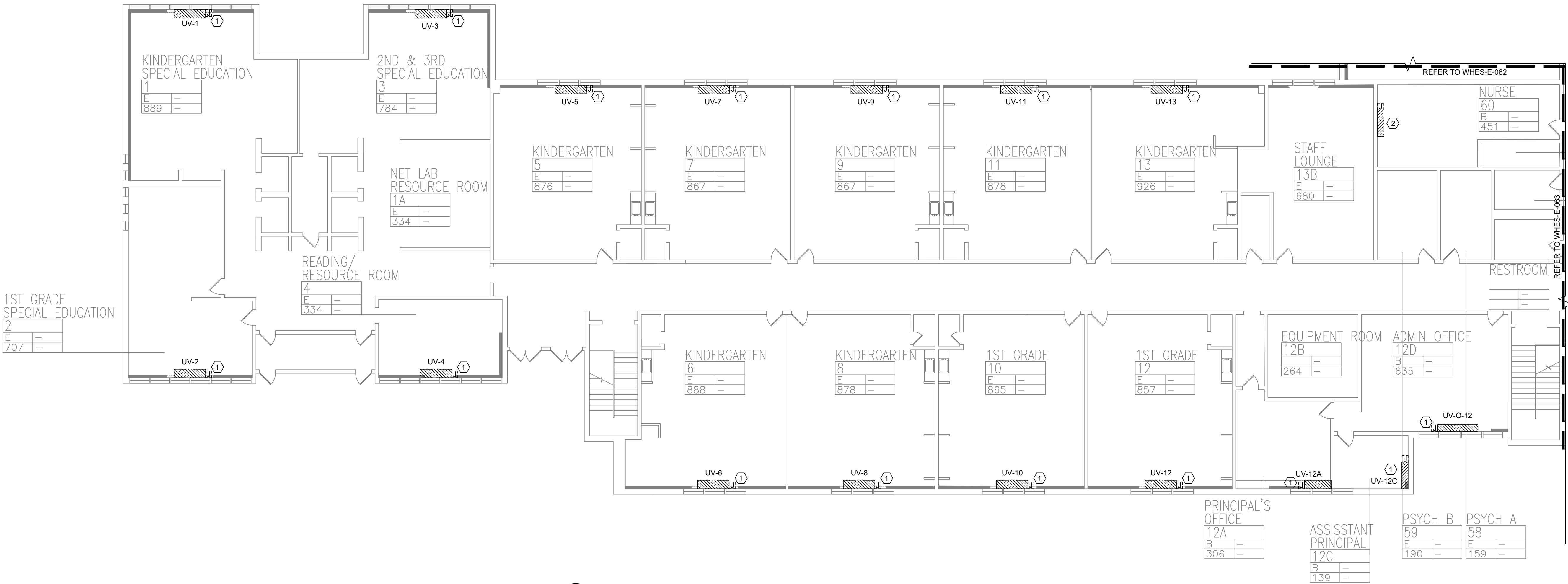
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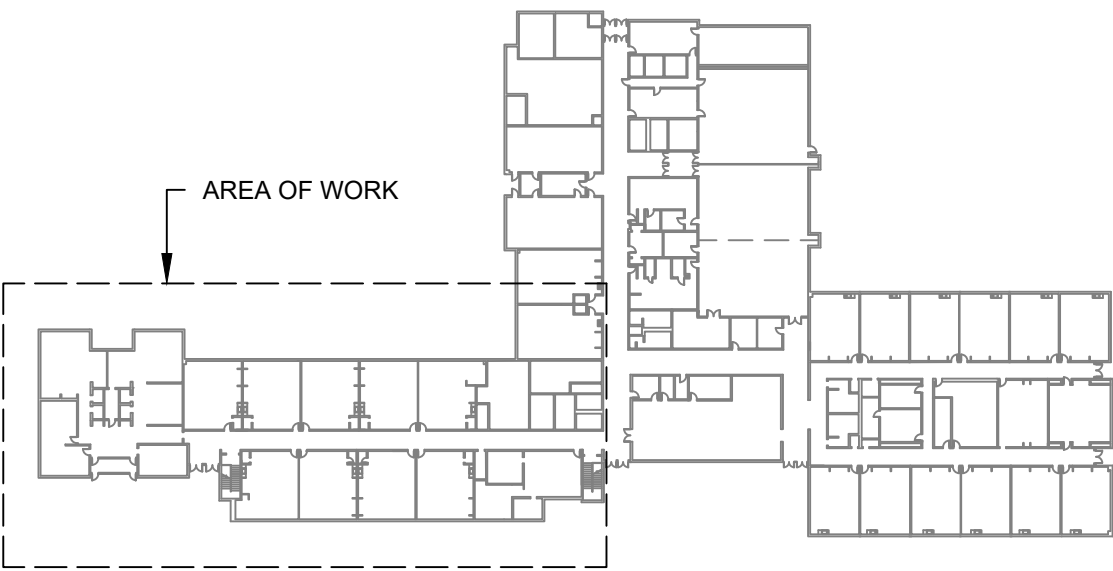
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- 2. MAINTAIN CIRCUIT CONTINUITY TO AREAS NOT AFFECTED BY DEMOLITION.
- 3. THE CONTRACTOR IS TO COORDINATE ALL SHUTDOWNS AND DISRUPTIONS TO NORMAL SERVICES WITH THE SCHOOLS FIELD REPRESENTATIVE AND THE FACILITY.
- 4. COORDINATE REMOVAL OF POWER TO MECHANICAL EQUIPMENT WITH THE RESPECTIVE CONTRACTOR.
- 5. CONTRACTOR MUST FIELD VERIFY ALL CONNECTIONS PRIOR TO REMOVAL. PROTECT ALL FEEDER AND BRANCH CIRCUITS SERVING OTHER AREAS. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY OUTAGES.

KEYED NOTES:

- 1 ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO EXISTING UNIT VENTILATOR AND RETAIN EXISTING WIRING. JUNCTION BOXES TO EXISTING UNIT VENTILATORS. THE EXISTING UNIT VENTILATOR SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.
- 2 ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE POWER TO EXISTING WALL HUNG UNIT ALONG WITH ALL ASSOCIATED WIRING, CONDUIT AND JUNCTION BOXES BACK TO SOURCE. THE EXISTING WALL HUNG UNIT SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.



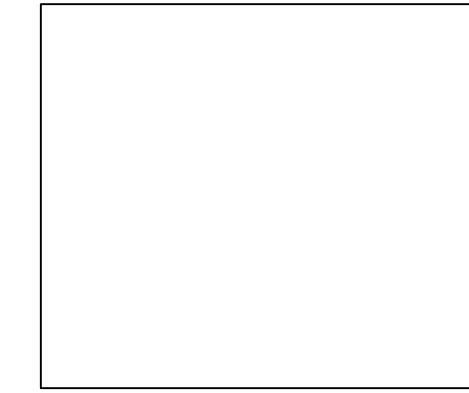
1 FIRST FLOOR PARTIAL REMOVAL - ELECTRICAL - 1
SCALE: 3/32"=1'-0"



KEY PLAN



No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 SYRACUSE, NY 13201 PROJ. NO. : MNY-5000127.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 SYRACUSE, NY 13201
Mechanical Electrical Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVEN ELEMENTARY SCHOOL

SSD# 50-02-01-06-0-014-XXX
SSD# 50-02-01-06-0-025-XXX
SSD# 50-02-01-06-0-024-XXX

NY REG. NO. 00000000000000000000
HARRISBURG, NY 16003

MSA

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140 Park Avenue New City, NY 10956 Tel 845-708-9200
www.shilale.com

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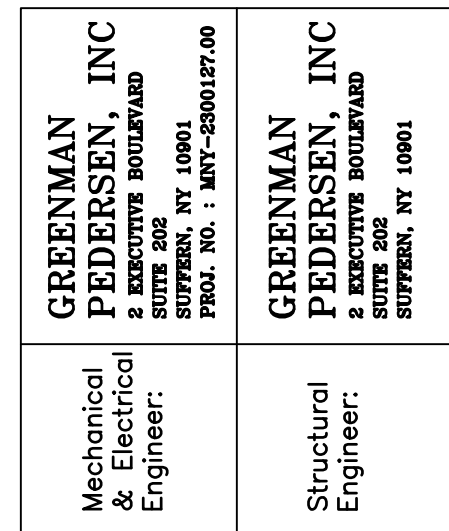
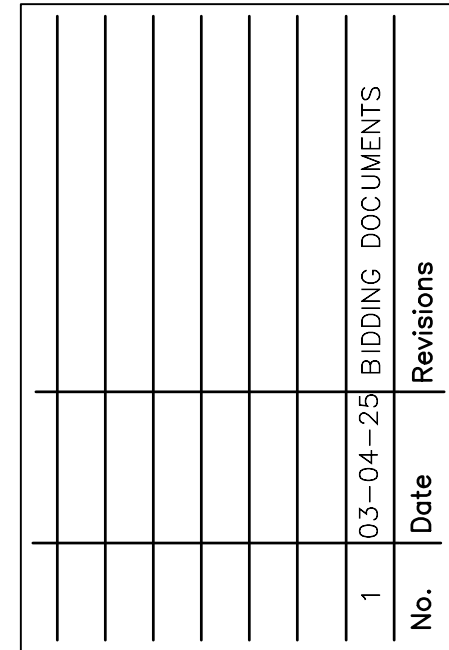
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FIRST FLOOR PARTIAL REMOVAL - ELECTRICAL - 1

Drawing No.
WHES-E-061



1. FOR ELECTRICAL SYMBOLS & LEGENDS, GENERAL NOTES AND ABBREVIATIONS DRAWING LIST REFERS TO DWG E001.00
2. MAINTAIN CIRCUIT CONTINUITY TO AREAS NOT AFFECTED BY DEMOLITION.
3. THE CONTRACTOR IS TO COORDINATE ALL SHUTDOWNS AND DISRUPTIONS TO NORMAL SERVICES WITH THE SCHOOLS FIELD REPRESENTATIVE AND THE FACILITY.
4. COORDINATE REMOVAL OF POWER TO MECHANICAL EQUIPMENT WITH THE RESPECTIVE CONTRACTOR.
5. CONTRACTOR MUST FIELD VERIFY ALL CONNECTIONS PRIOR TO REMOVAL. PROTECT ALL FEEDER AND BRANCH CIRCUITS SERVING OTHER AREAS. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY OUTAGES.

- ① ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO EXISTING UNIT VENTILATOR AND RETAIN EXISTING WIRING, JUNCTION BOXES TO EXISTING UNIT VENTILATORS. THE EXISTING UNIT VENTILATOR SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.
- ② ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE POWER TO EXISTING UNIT VENTILATOR ALONG WITH ALL ASSOCIATED WIRING, CONDUIT AND JUNCTION BOXES BACK TO SOURCE. THE EXISTING UNIT VENTILATOR SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.
- ③ ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE POWER TO EXISTING H.V. BLOWER ALONG WITH ALL ASSOCIATED WIRING, CONDUIT AND JUNCTION BOXES BACK TO SOURCE. THE EXISTING H.V. BLOWER SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.
- ④ ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO EXISTING CEILING CASSETTE AND REMOVE EXISTING WIRING, JUNCTION BOXES TO EXISTING CASSETTE BACK TO SOURCE. THE EXISTING CASSETTE SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.



**UNIVENT REPLACEMENT
AT STONY POINT,
THIELLS, WEST HAV
ELEMENTARY SCHOOL**

SED# 50-02-01-06-0-014-XXX
SED# 50-02-01-06-0-025-XXX
SED# 50-02-01-06-0-024-XXX

NEW YORK STATE
DEPARTMENT OF
EDUCATION
ALBANY, NY 12242
TELEPHONE (518) 474-2000



WHES-E-062



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1 FIRST FLOOR PARTIAL REMOVAL - ELECTRICAL - 3
SCALE: 3/32"=1'-0"

REMOVAL NOTES:

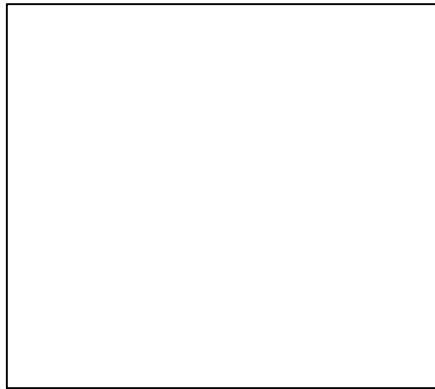
- FOR ELECTRICAL SYMBOLS & LEGENDS, GENERAL NOTES AND ABBREVIATIONS DRAWING LIST REFER TO DWG E001.00
- MAINTAIN CIRCUIT CONTINUITY TO AREAS NOT AFFECTED BY DEMOLITION.
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KEYED NOTES:

- ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO EXISTING UNIT VENTILATOR AND RETAIN EXISTING WIRING. JUNCTION BOXES TO EXISTING UNIT VENTILATORS. THE EXISTING UNIT VENTILATOR SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.
- ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE POWER TO H.V. BLOWER ALONG WITH ALL ASSOCIATED WIRING, CONDUIT AND JUNCTION BOXES BACK TO SOURCE. THE EXISTING H.V. BLOWER SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.



No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

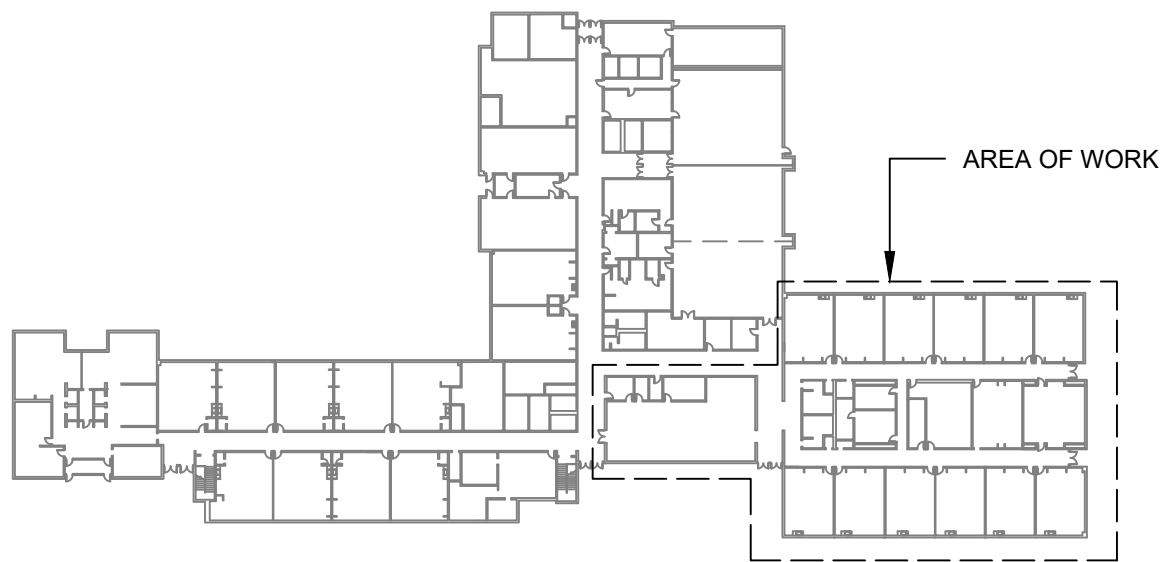


Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-514-1100 FAX: 860-514-1101 WWW.GPM-ARCH.COM	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-514-1100 FAX: 860-514-1101 WWW.GPM-ARCH.COM
Mechanical Electrical Engineer	Structural Engineer

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVEN ELEMENTARY SCHOOL SSD# 50-02-01-06-0-014-XXX SSD# 50-02-01-06-0-025-XXX SSD# 50-02-01-06-0-024-XXX SSD# 50-02-01-06-0-024-XXX TEL: 860-514-1100 FAX: 860-514-1101 WWW.GPM-ARCH.COM

MSA MICHAEL SHILALE ARCHITECTS, LLP 140 Park Avenue New York, NY 10055 Tel: 845-708-9200 www.shilale.com

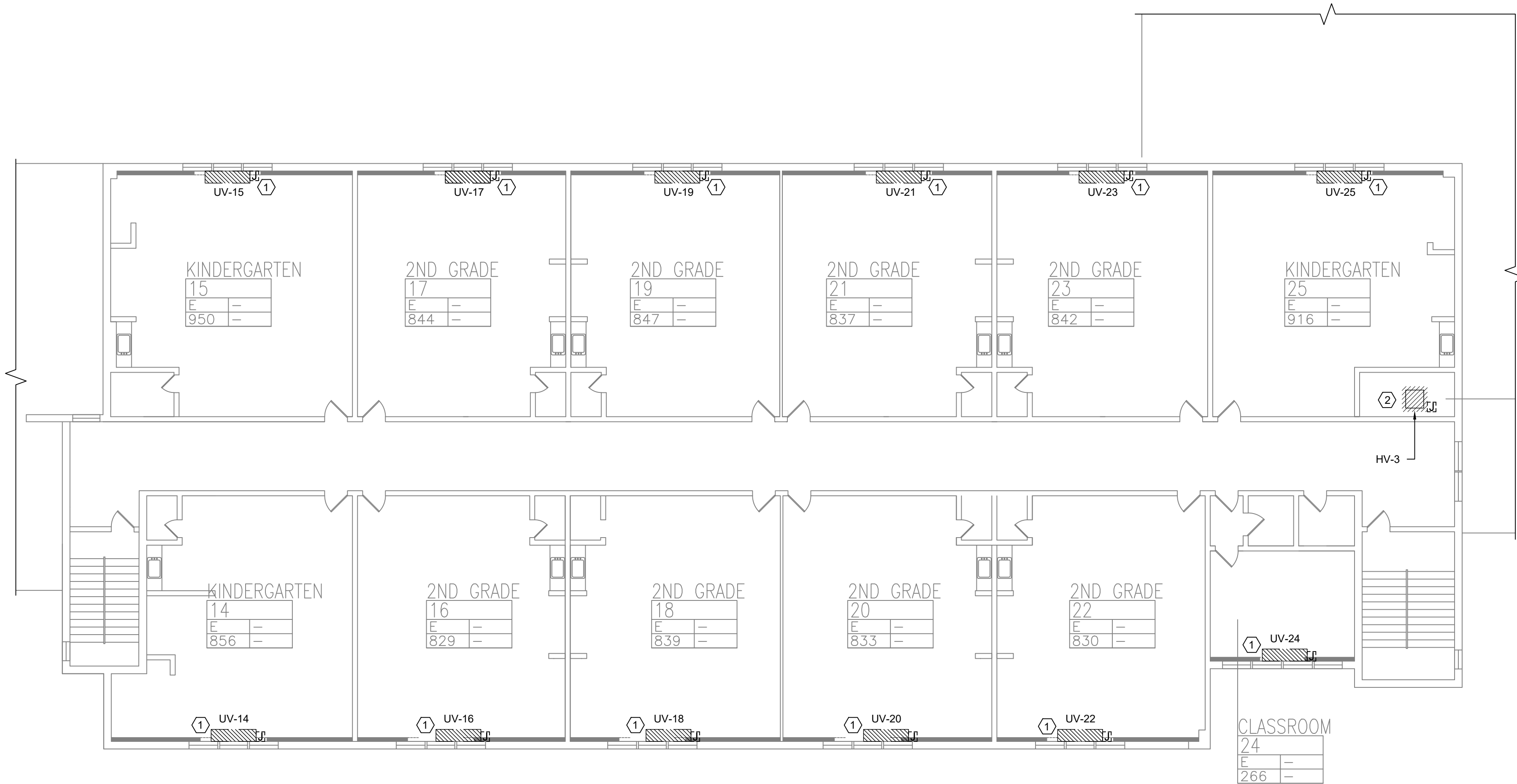


KEY PLAN



Drawing Title FIRST FLOOR PARTIAL REMOVAL - ELECTRICAL - 3	Drawing No. WHES-E-063
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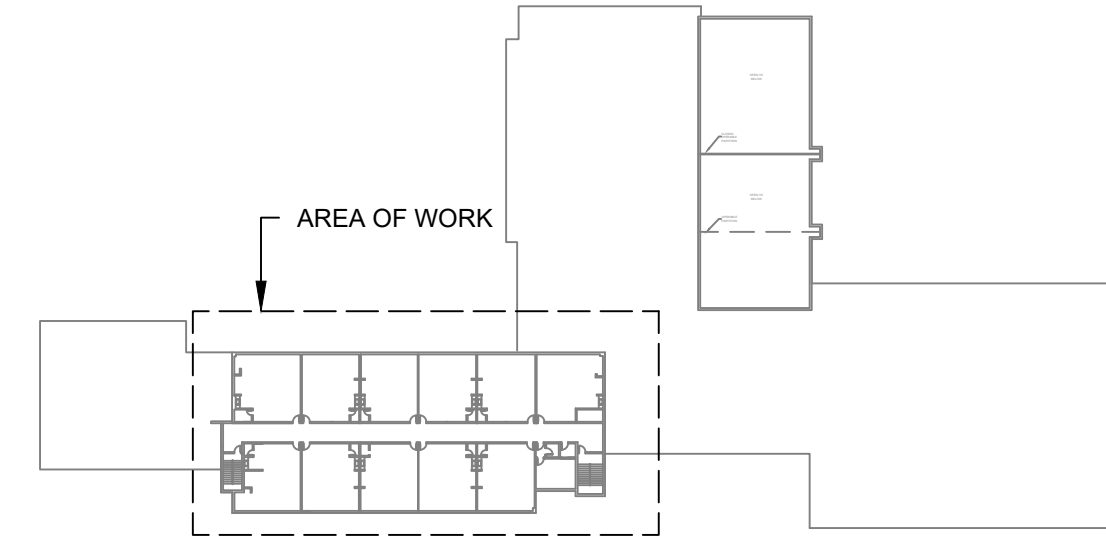
1 SECOND FLOOR REMOVAL - ELECTRICAL
SCALE: 3/32"=1'-0"

REMOVAL NOTES:

- FOR ELECTRICAL SYMBOLS & LEGENDS, GENERAL NOTES AND ABBREVIATIONS DRAWING LIST REFER TO DWG E001.00
- MAINTAIN CIRCUIT CONTINUITY TO AREAS NOT AFFECTED BY DEMOLITION.
- THE CONTRACTOR IS TO COORDINATE ALL SHUTDOWNS AND DISRUPTIONS TO NORMAL SERVICES WITH THE SCHOOLS FIELD REPRESENTATIVE AND THE FACILITY.
- COORDINATE REMOVAL OF POWER TO MECHANICAL EQUIPMENT WITH THE RESPECTIVE CONTRACTOR.
- CONTRACTOR MUST FIELD VERIFY ALL CONNECTIONS PRIOR TO REMOVAL. PROTECT ALL FEEDER AND BRANCH CIRCUITS SERVING OTHER AREAS. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY OUTAGES.

KEYED NOTES:

- ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO EXISTING UNIT VENTILATOR AND RETAIN EXISTING WIRING, JUNCTION BOXES TO EXISTING UNIT VENTILATORS. THE EXISTING UNIT VENTILATOR SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.
- ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE POWER TO H.V. BLOWER ALONG WITH ALL ASSOCIATED WIRING, CONDUIT AND JUNCTION BOXES BACK TO SOURCE. THE EXISTING H.V. BLOWER SHALL BE REMOVED BY THE MECHANICAL CONTRACTOR.



KEY PLAN



Revisions	
No.	Date
1	03-04-25

Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-514-1100 FAX: 860-514-1101 WWW.GPM-ARCHITECTS.COM	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-514-1100 FAX: 860-514-1101 WWW.GPM-ARCHITECTS.COM
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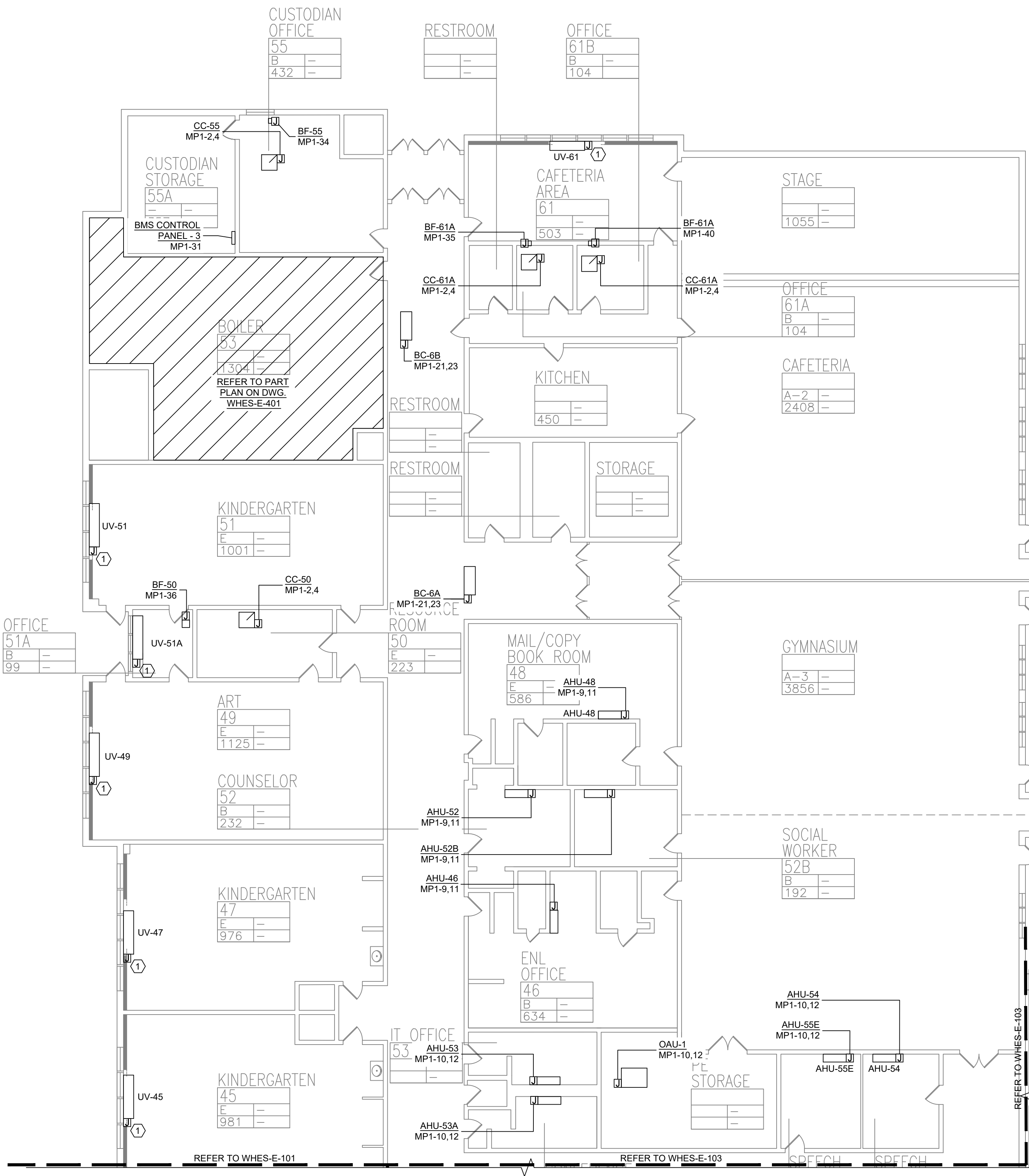
UNIVENT REPLACEMENT AT STONY POINT, HAV ELEMENTARY SCHOOL SSD# 50-02-01-06-0-014-XXX SSD# 50-02-01-06-0-024-XXX SSD# 50-02-01-06-0-024-XXX TEL: 845-708-9200 FAX: 845-708-9201 WWW.MSA-ARCHITECTS.COM
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MSA MICHAEL SHILALE ARCHITECTS, LLP 140 Park Avenue New City, NY 10956 Tel: 845-708-9200 www.shilale.com

SECOND FLOOR REMOVAL - ELECTRICAL	WHES-E-064
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140 Park Avenue New City, NY 10956 Tel 845-708-9200
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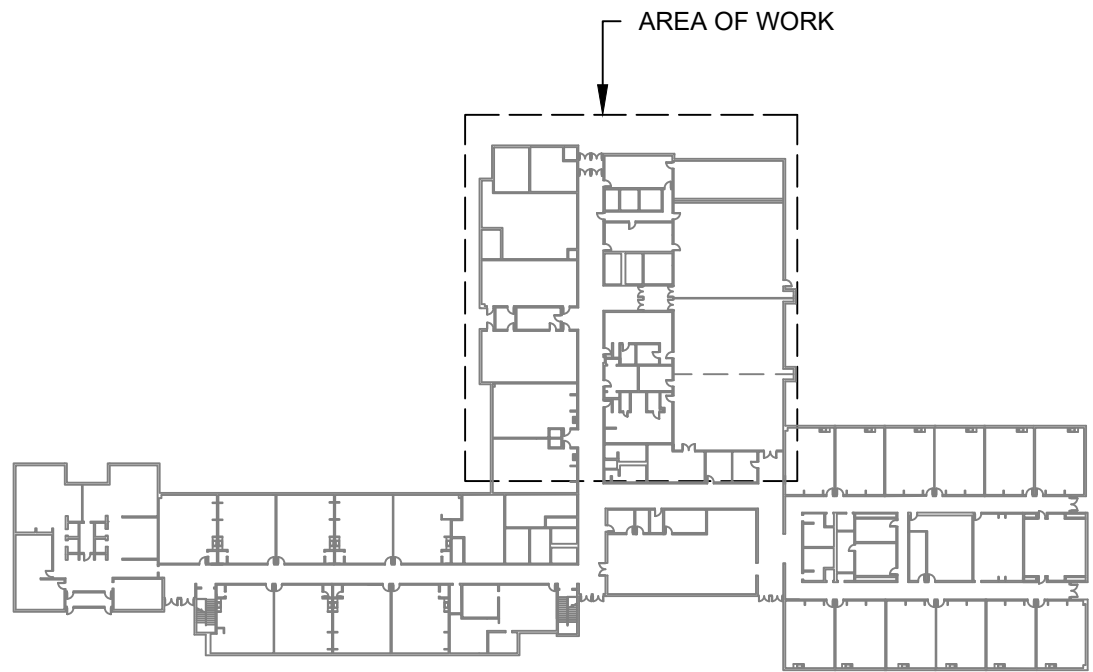
1 FIRST FLOOR PARTIAL PLAN - ELECTRICAL - 2
SCALE: 3/32"=1'-0"

PLAN NOTES:

1. REFER TO ADDITIONAL INSTALLATION NOTES ON DRAWING E-001.
2. ALL NEW BRANCH CIRCUIT SHALL BE RUN WITH MINIMUM OF 2#12+1#12G IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED. FOR LIGHTING AND POWER BRANCH CIRCUIT, MC CABLE SHALL BE INSTALLED FOR RECESSED INSTALLATION ONLY, EITHER IN NEW WALLS OR ABOVE HUNG CEILING WHERE POSSIBLE. REFER TO PANEL SCHEDULES IN DRAWING WHES-E-501 FOR ALL OTHER FEEDER AND BRANCH CIRCUIT SIZE INFORMATION.
3. PROVIDE LABELS ON ALL ELECTRICAL EQUIPMENT INDICATING CIRCUIT ORIGINATION.
4. UPDATE ALL EXISTING PANEL DIRECTORIES AFFECTED BY NEW WORK.
5. CONTRACTOR SHALL PERFORM AMP PROBE READINGS ON EXISTING SERVICE EQUIPMENT BEFORE AND AFTER WORK TO ENSURE EQUIPMENT WILL NOT BE LOADED BEYOND ITS MAX AMPACITY.
6. CONTRACTOR SHALL MAINTAIN CONTINUITY TO ALL EXISTING CIRCUITRY TO REMAIN WHICH ARE AFFECTED BY THE SCOPE OF WORK. CONTRACTOR SHALL FURNISH ALL NECESSARY JUNCTION BOXES, CONDUIT, AND WIRES AS REQUIRED TO KEEP CONTINUITY.
7. REFER TO MECHANICAL PLANS FOR EQUIPMENT TO BE SUPPLIED BY OTHER TRADES AND INSTALLED/WIRED UNDER THIS SECTION. COORDINATE LOCATION OF DEVICES WITH OTHER CONTRACTORS.
8. PROVIDE FIRESTOPPING FOR ALL PENETRATIONS TO MATCH EXISTING FIRE RATING WHERE APPLICABLE. ALL CORE DRILLS SHALL BE VERIFIED BY BUILDING REPRESENTATIVE PRIOR TO COMMENCING WORK. X-RAY ALL FLOOR SLABS PRIOR TO ROUGH-INS FOR CORE DRILL WORK.
9. THE CONTRACTOR SHALL FIELD ROUTE FEEDER FOR NEW POWER PANELS. COORDINATE EXACT ROUTING PATH WITH OWNER. SUBMIT A PROPOSED ROUTING PATH TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO RUNNING ANY CONDUIT OR WIRE ASSOCIATED WITH THIS FEEDER.
10. DISCONNECT SWITCH FOR UNIT VENTILATORS IS PROVIDED BY HVAC CONTRACTOR. COORDINATE WITH HVAC CONTRACTOR FOR DISCONNECT SWITCHES FOR ALL OTHER UNIT THAT ARE BEING PROVIDED BY THE HVAC CONTRACTOR.
11. ALL GROUNDING SHALL BE PROVIDED BY THE CONTRACTOR AS PER NEC 2017.
12. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENLARGE AND FUR OUT EXISTING OPENING FOR EXISTING PANELS AND WHERE REQUIRED. ACCOMMODATE THE NEW BACK BOXES AND HOUSING OF THE NEW RECESSED MOUNTED PANELS TO BE INSTALLED. THE ELECTRICAL CONTRACTOR SHALL ALSO ENGAGE THE GC TO RESTORE AND FINISH THE WALLS TO MATCH THE SURROUNDING WALLS OF THE AREA.

KEYED NOTES:

- ① RECONNECT EXISTING WIRING TO THE NEW UNIT VENTILATORS. EXTEND WIRING & CONDUIT IF NECESSARY.



KEY PLAN



PLAN NORTH



Revisions	
No.	Date
1	03-04-25

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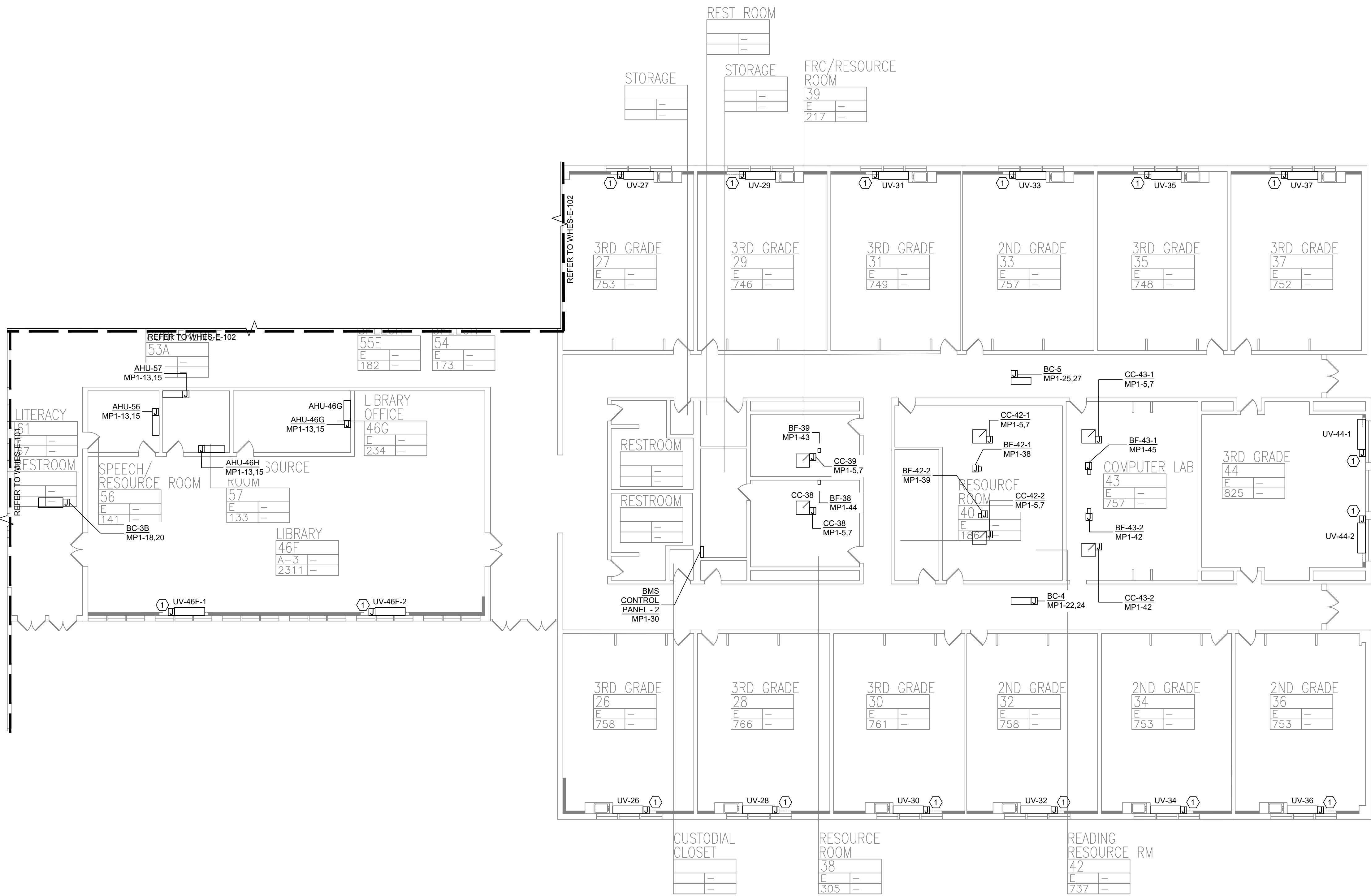
Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 SYRACUSE, NY 13201 PROJ. NO. : MNY-2000127.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 SYRACUSE, NY 13201
Mechanical Electrical Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVEN ELEMENTARY SCHOOL SSD# 50-02-01-06-0-014-XXX SSD# 50-02-01-06-0-025-XXX SSD# 50-02-01-06-0-024-XXX NY STATE OF NEW YORK HARRISBURG, NY 13093

MSA MICHAEL SHILALE ARCHITECTS, LLP 140 Park Avenue New York, NY 10056 Tel 845-708-9200 www.shilale.com

Drawing Title FIRST FLOOR PARTIAL PLAN - ELECTRICAL - 2	Drawing No. WHES-E-102
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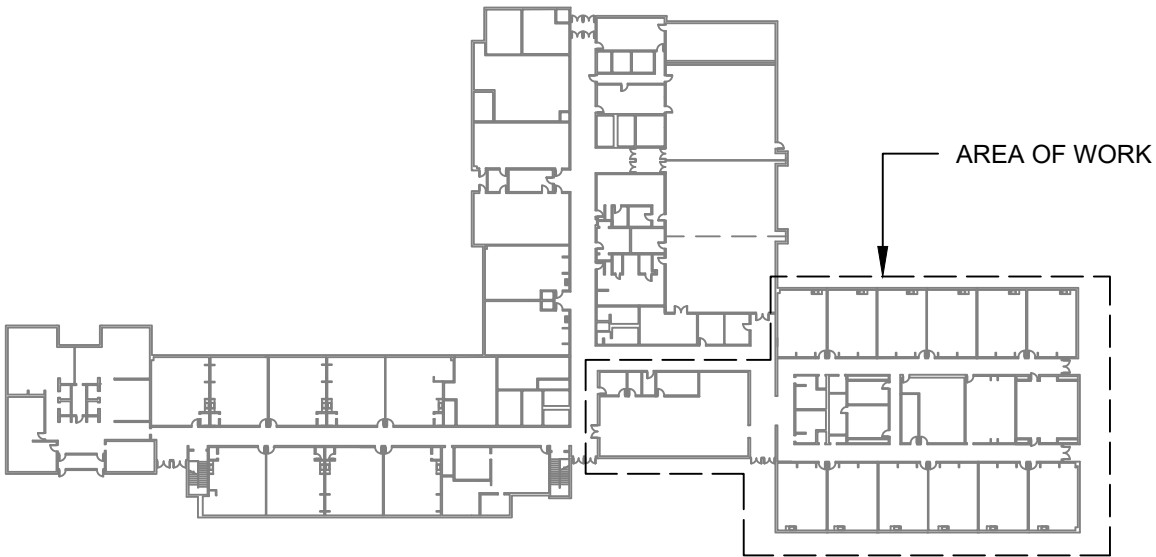
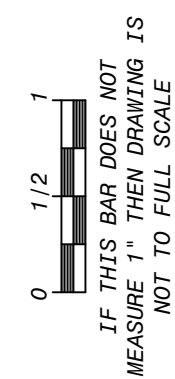
1 FIRST FLOOR PARTIAL PLAN - ELECTRICAL - 3
SCALE: 3/32"=1'-0"

PLAN NOTES:

1. REFER TO ADDITIONAL INSTALLATION NOTES ON DRAWING E-001.
2. ALL NEW BRANCH CIRCUIT SHALL BE RUN WITH MINIMUM OF 2#12-1#12G IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED. FOR LIGHTING AND POWER BRANCH CIRCUIT, MC CABLE SHALL BE INSTALLED FOR RECESSED INSTALLATION ONLY, EITHER IN NEW WALLS OR ABOVE HUNG CEILING WHERE POSSIBLE. REFER TO PANEL SCHEDULES IN DRAWING WHES-E-501 FOR ALL OTHER FEEDER AND BRANCH CIRCUIT SIZE INFORMATION.
3. PROVIDE LABELS ON ALL ELECTRICAL EQUIPMENT INDICATING CIRCUIT ORIGINATION.
4. UPDATE ALL EXISTING PANEL DIRECTORIES AFFECTED BY NEW WORK.
5. CONTRACTOR SHALL PERFORM AMP PROBE READINGS ON EXISTING SERVICE EQUIPMENT BEFORE AND AFTER WORK TO ENSURE EQUIPMENT WILL NOT BE LOADED BEYOND ITS MAX AMPACITY.
6. CONTRACTOR SHALL MAINTAIN CONTINUITY TO ALL EXISTING CIRCUITRY TO REMAIN WHICH ARE AFFECTED BY THE SCOPE OF WORK; CONTRACTOR SHALL FURNISH ALL NECESSARY JUNCTION BOXES, CONDUIT, AND WIRES AS REQUIRED TO KEEP CONTINUITY.
7. REFER TO MECHANICAL PLANS FOR EQUIPMENT TO BE SUPPLIED BY OTHER TRADES AND INSTALLED/WIRED UNDER THIS SECTION. COORDINATE LOCATION OF DEVICES WITH OTHER CONTRACTORS.
8. PROVIDE FIRESTOPPING FOR ALL PENETRATIONS TO MATCH EXISTING FIRE RATING WHERE APPLICABLE. ALL CORE DRILLS SHALL BE VERIFIED BY BUILDING REPRESENTATIVE PRIOR TO COMMENCING WORK. X-RAY ALL FLOOR SLABS PRIOR TO ROUGH-INS FOR CORE DRILL WORK.
9. THE CONTRACTOR SHALL FIELD ROUTE FEEDER FOR NEW POWER PANELS. COORDINATE EXACT ROUTING PATH WITH OWNER. SUBMIT A PROPOSED ROUTING PATH TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO RUNNING ANY CONDUIT OR WIRE ASSOCIATED WITH THIS FEEDER.
10. DISCONNECT SWITCH FOR UNIT VENTILATORS IS PROVIDED BY HVAC CONTRACTOR. COORDINATE WITH HVAC CONTRACTOR FOR DISCONNECT SWITCHES FOR ALL OTHER UNIT THAT ARE BEING PROVIDED BY THE HVAC CONTRACTOR.
11. ALL GROUNDING SHALL BE PROVIDED BY THE CONTRACTOR AS PER NEC 2017.
12. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENLARGE AND FUR OUT EXISTING OPENING FOR EXISTING PANELS AND WHERE REQUIRED. ACCOMMODATE THE NEW BACK BOXES AND HOUSING OF THE NEW RECESSED MOUNTED PANELS TO BE INSTALLED. THE ELECTRICAL CONTRACTOR SHALL ALSO ENGAGE THE GC TO RESTORE AND FINISH THE WALLS TO MATCH THE SURROUNDING WALLS OF THE AREA.

KEYED NOTES:

- ① RECONNECT EXISTING WIRING TO THE NEW UNIT VENTILATORS. EXTEND WIRING & CONDUIT IF NECESSARY.



KEY PLAN



Revisions	
No.	Date
1	03-04-25

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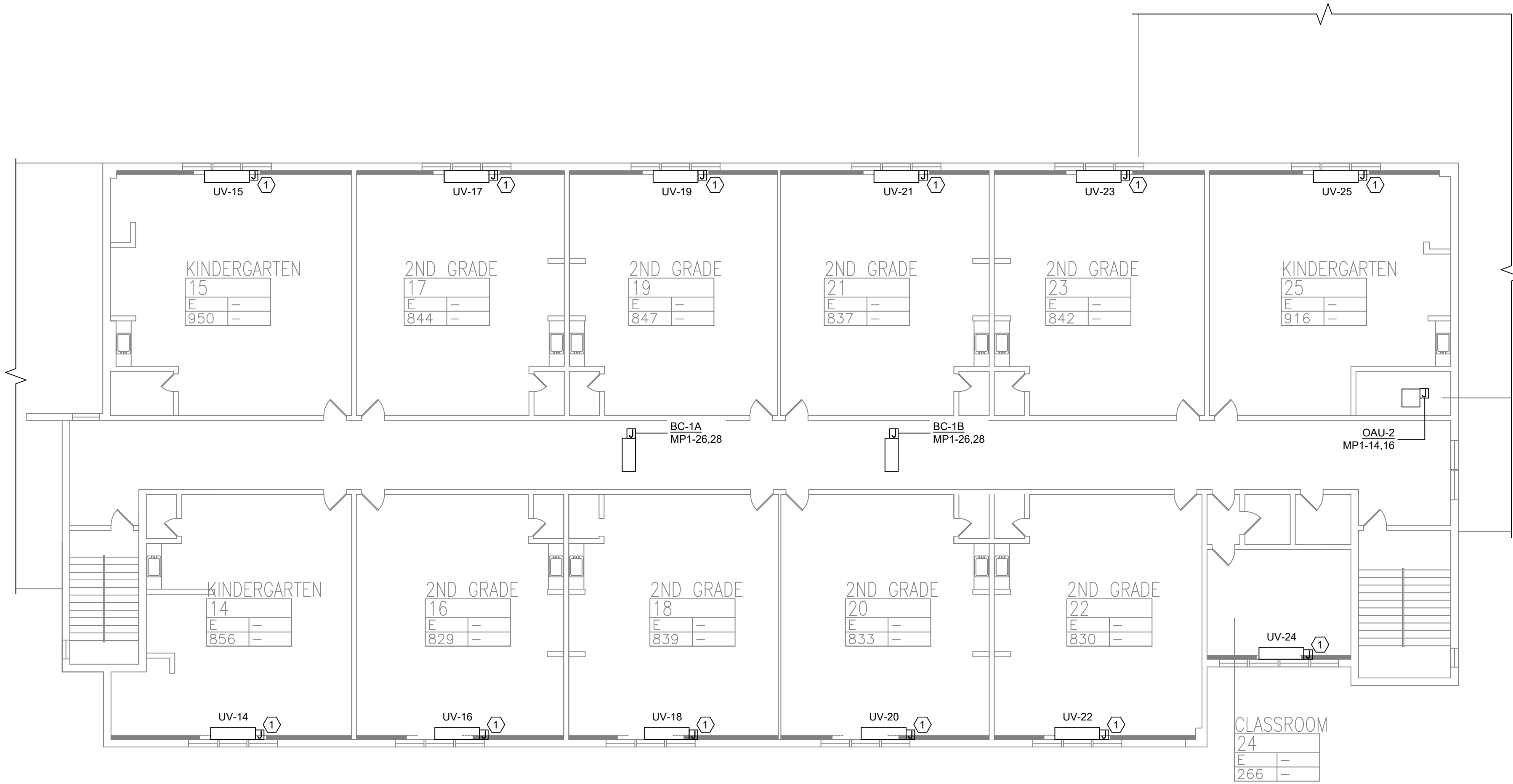
Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-514-1100 FAX: 860-514-1101 WWW.GREENMANP.COM	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-514-1100 FAX: 860-514-1101 WWW.GREENMANP.COM
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UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVEN ELEMENTARY SCHOOL SSD# 50-02-01-06-0-014-XXX SSD# 50-02-01-06-0-025-XXX SSD# 50-02-01-06-0-024-XXX SSD# 50-02-01-06-0-024-XXX TEL: 860-514-1100 FAX: 860-514-1101 WWW.GREENMANP.COM
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MSA MICHAEL SHILALE ARCHITECTS, LLP 140 Park Avenue New York, NY 10056 Tel: 845-708-9200 www.shilale.com
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First Floor Partial PLAN - ELECTRICAL - 3	WHES-E-103
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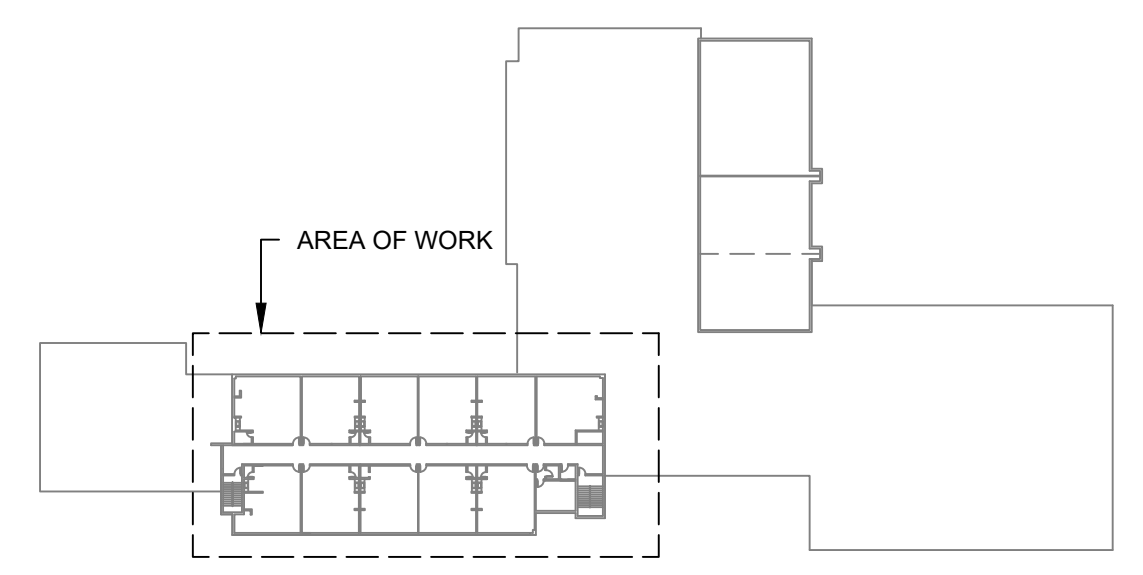
1 SECOND FLOOR PLAN - ELECTRICAL
SCALE: 3/32"=1'-0"

PLAN NOTES:

1. REFER TO ADDITIONAL INSTALLATION NOTES ON DRAWING E-001.
2. ALL NEW BRANCH CIRCUIT SHALL BE RUN WITH MINIMUM OF 2#12+1#12G IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED. FOR LIGHTING AND POWER BRANCH CIRCUIT, MC CABLE SHALL BE INSTALLED FOR RECESSED INSTALLATION ONLY, EITHER IN NEW WALLS OR ABOVE HUNG CEILING WHERE POSSIBLE. REFER TO PANEL SCHEDULES IN DRAWING WHES-E-501 FOR ALL OTHER FEEDER AND BRANCH CIRCUIT SIZE INFORMATION.
3. PROVIDE LABELS ON ALL ELECTRICAL EQUIPMENT INDICATING CIRCUIT ORIGINATION.
4. UPDATE ALL EXISTING PANEL DIRECTORIES AFFECTED BY NEW WORK.
5. CONTRACTOR SHALL PERFORM AMP PROBE READINGS ON EXISTING SERVICE EQUIPMENT BEFORE AND AFTER WORK TO ENSURE EQUIPMENT WILL NOT BE LOADED BEYOND ITS MAX AMPACITY.
6. CONTRACTOR SHALL MAINTAIN CONTINUITY TO ALL EXISTING CIRCUITRY TO REMAIN WHICH ARE AFFECTED BY THE SCOPE OF WORK; CONTRACTOR SHALL FURNISH ALL NECESSARY JUNCTION BOXES, CONDUIT, AND WIRES AS REQUIRED TO KEEP CONTINUITY.
7. REFER TO MECHANICAL PLANS FOR EQUIPMENT TO BE SUPPLIED BY OTHER TRADES AND INSTALLED/WIRED UNDER THIS SECTION. COORDINATE LOCATION OF DEVICES WITH OTHER CONTRACTORS.
8. PROVIDE FIRESTOPPING FOR ALL PENETRATIONS TO MATCH EXISTING FIRE RATING WHERE APPLICABLE. ALL CORE DRILLS SHALL BE VERIFIED BY BUILDING REPRESENTATIVE PRIOR TO COMMENCING WORK. X-RAY ALL FLOOR SLABS PRIOR TO ROUGH-INS FOR CORE DRILL WORK.
9. THE CONTRACTOR SHALL FIELD ROUTE FEEDER FOR NEW POWER PANELS. COORDINATE EXACT ROUTING PATH WITH OWNER. SUBMIT A PROPOSED ROUTING PATH TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO RUNNING ANY CONDUIT OR WIRE ASSOCIATED WITH THIS FEEDER.
10. DISCONNECT SWITCH FOR UNIT VENTILATORS IS PROVIDED BY HVAC CONTRACTOR. COORDINATE WITH HVAC CONTRACTOR FOR DISCONNECT SWITCHES FOR ALL OTHER UNIT THAT ARE BEING PROVIDED BY THE HVAC CONTRACTOR.
11. ALL GROUNDING SHALL BE PROVIDED BY THE CONTRACTOR AS PER NEC 2017.
12. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENLARGE AND FUR OUT EXISTING OPENING FOR EXISTING PANELS AND WHERE REQUIRED, ACCOMMODATE THE NEW BACK BOXES AND HOUSING OF THE NEW RECESSED MOUNTED PANELS TO BE INSTALLED. THE ELECTRICAL CONTRACTOR SHALL ALSO ENGAGE THE GC TO RESTORE AND FINISH THE WALLS TO MATCH THE SURROUNDING WALLS OF THE AREA.

KEYED NOTES:

- ① RECONNECT EXISTING WIRING TO THE NEW UNIT VENTILATORS. EXTEND WIRING & CONDUIT IF NECESSARY.



KEY PLAN



PLAN NORTH

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Drawing Title
SECOND FLOOR PLAN - ELECTRICAL



Drawing No.
WHES-E-104

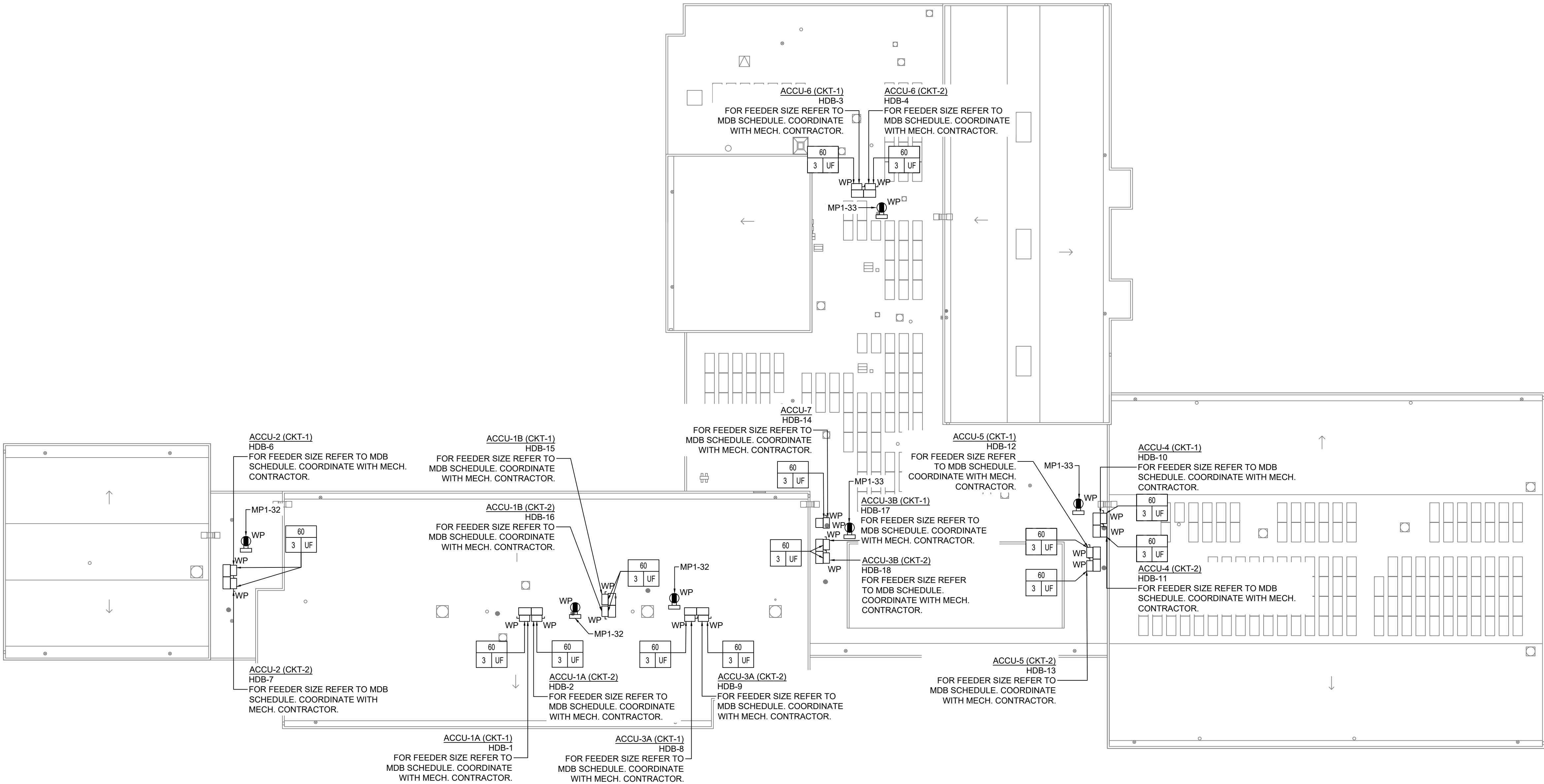
Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-514-1100 FAX: 860-514-1101 PROJ. NO.: MNY-2000127.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067
Mechanical Electrical Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVEN ELEMENTARY SCHOOL SSD# 50-02-01-06-0-014-XXX SSD# 50-02-01-06-0-025-XXX SSD# 50-02-01-06-0-024-XXX MICHAEL SHILALE ARCHITECTS, LLP 140 PARK AVENUE NEW YORK, NY 10095

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

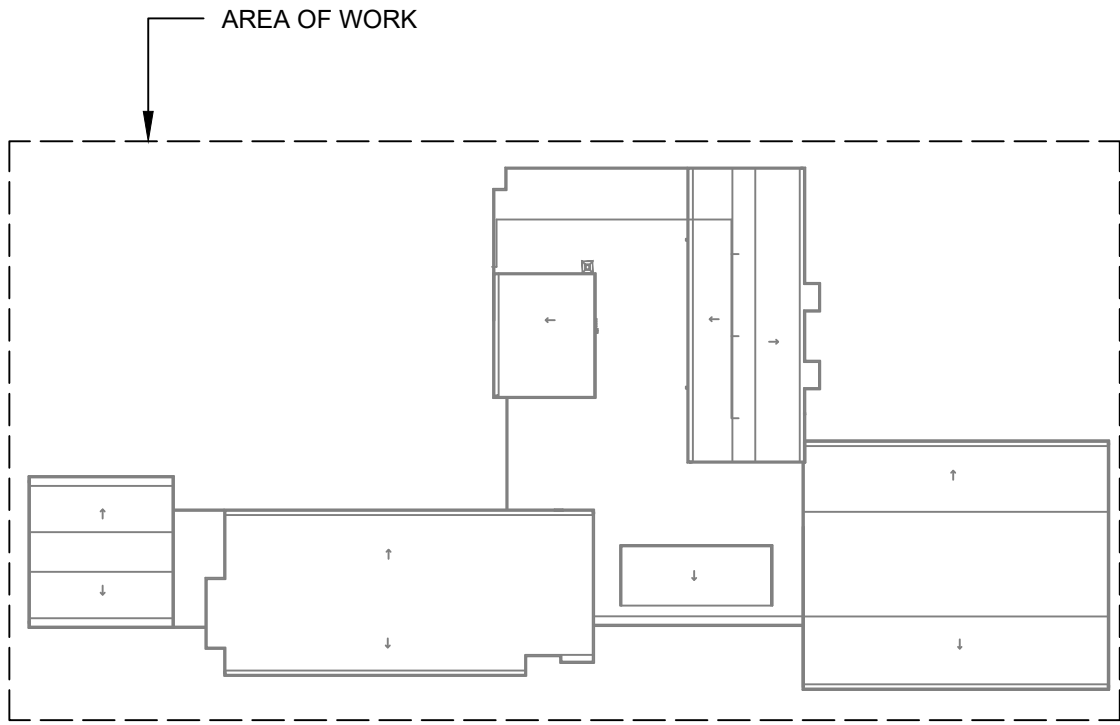
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE



1 ROOF PLAN - ELECTRICAL
SCALE: 3/64"=1'-0"

PLAN NOTES:

1. REFER TO ADDITIONAL INSTALLATION NOTES ON DRAWING E-001.
2. ALL NEW BRANCH CIRCUIT SHALL BE RUN WITH MINIMUM OF 2#12+1#12G IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED. FOR LIGHTING AND POWER BRANCH CIRCUIT, MC CABLE SHALL BE INSTALLED FOR RECESSED INSTALLATION ONLY, EITHER IN NEW WALLS OR ABOVE HUNG CEILING WHERE POSSIBLE. REFER TO PANEL SCHEDULES IN DRAWING WHES-E-501 FOR ALL OTHER FEEDER AND BRANCH CIRCUIT SIZE INFORMATION.
3. PROVIDE LABELS ON ALL ELECTRICAL EQUIPMENT INDICATING CIRCUIT ORIGINATION.
4. UPDATE ALL EXISTING PANEL DIRECTORIES AFFECTED BY NEW WORK.
5. CONTRACTOR SHALL PERFORM AMP PROBE READINGS ON EXISTING SERVICE EQUIPMENT BEFORE AND AFTER WORK TO ENSURE EQUIPMENT WILL NOT BE LOADED BEYOND ITS MAX AMPACITY.
6. CONTRACTOR SHALL MAINTAIN CONTINUITY TO ALL EXISTING CIRCUITRY TO REMAIN WHICH ARE AFFECTED BY THE SCOPE OF WORK. CONTRACTOR SHALL FURNISH ALL NECESSARY JUNCTION BOXES, CONDUIT, AND WIRES AS REQUIRED TO KEEP CONTINUITY.
7. REFER TO MECHANICAL PLANS FOR EQUIPMENT TO BE SUPPLIED BY OTHER TRADES AND INSTALLED/WIRED UNDER THIS SECTION. COORDINATE LOCATION OF DEVICES WITH OTHER CONTRACTORS.
8. PROVIDE FIRESTOPPING FOR ALL PENETRATIONS TO MATCH EXISTING FIRE RATING WHERE APPLICABLE. ALL CORE DRILLS SHALL BE VERIFIED BY BUILDING REPRESENTATIVE PRIOR TO COMMENCING WORK. X-RAY ALL FLOOR SLABS PRIOR TO ROUGH-INS FOR CORE DRILL WORK.
9. THE CONTRACTOR SHALL FIELD ROUTE FEEDER FOR NEW POWER PANELS. COORDINATE EXACT ROUTING PATH WITH OWNER. SUBMIT A PROPOSED ROUTING PATH TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO RUNNING ANY CONDUIT OR WIRE ASSOCIATED WITH THIS FEEDER.
10. DISCONNECT SWITCH FOR UNIT VENTILATORS IS PROVIDED BY HVAC CONTRACTOR. COORDINATE WITH HVAC CONTRACTOR FOR DISCONNECT SWITCHES FOR ALL OTHER UNIT THAT ARE BEING PROVIDED BY THE HVAC CONTRACTOR.
11. ALL GROUNDING SHALL BE PROVIDED BY THE CONTRACTOR AS PER NEC 2017.
12. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENLARGE AND FUR OUT EXISTING OPENING FOR EXISTING PANELS AND WHERE REQUIRED. ACCOMMODATE THE NEW BACK BOXES AND HOUSING OF THE NEW RECESSED MOUNTED PANELS TO BE INSTALLED. THE ELECTRICAL CONTRACTOR SHALL ALSO ENGAGE THE GC TO RESTORE AND FINISH THE WALLS TO MATCH THE SURROUNDING WALLS OF THE AREA.



Revisions	
No.	Date
1	03-04-25
BIDDING DOCUMENTS	

Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 SYRACUSE, NY 13201 PROJ. NO. : MNY-5000127.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 SYRACUSE, NY 13201
Mechanical Electrical Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVEN ELEMENTARY SCHOOL SSD# 50-02-01-06-0-014-XXX SSD# 50-02-01-06-0-025-XXX SSD# 50-02-01-06-0-024-XXX NY STATE ELECTIONS DIVISION HARRISBURG, NY 13093
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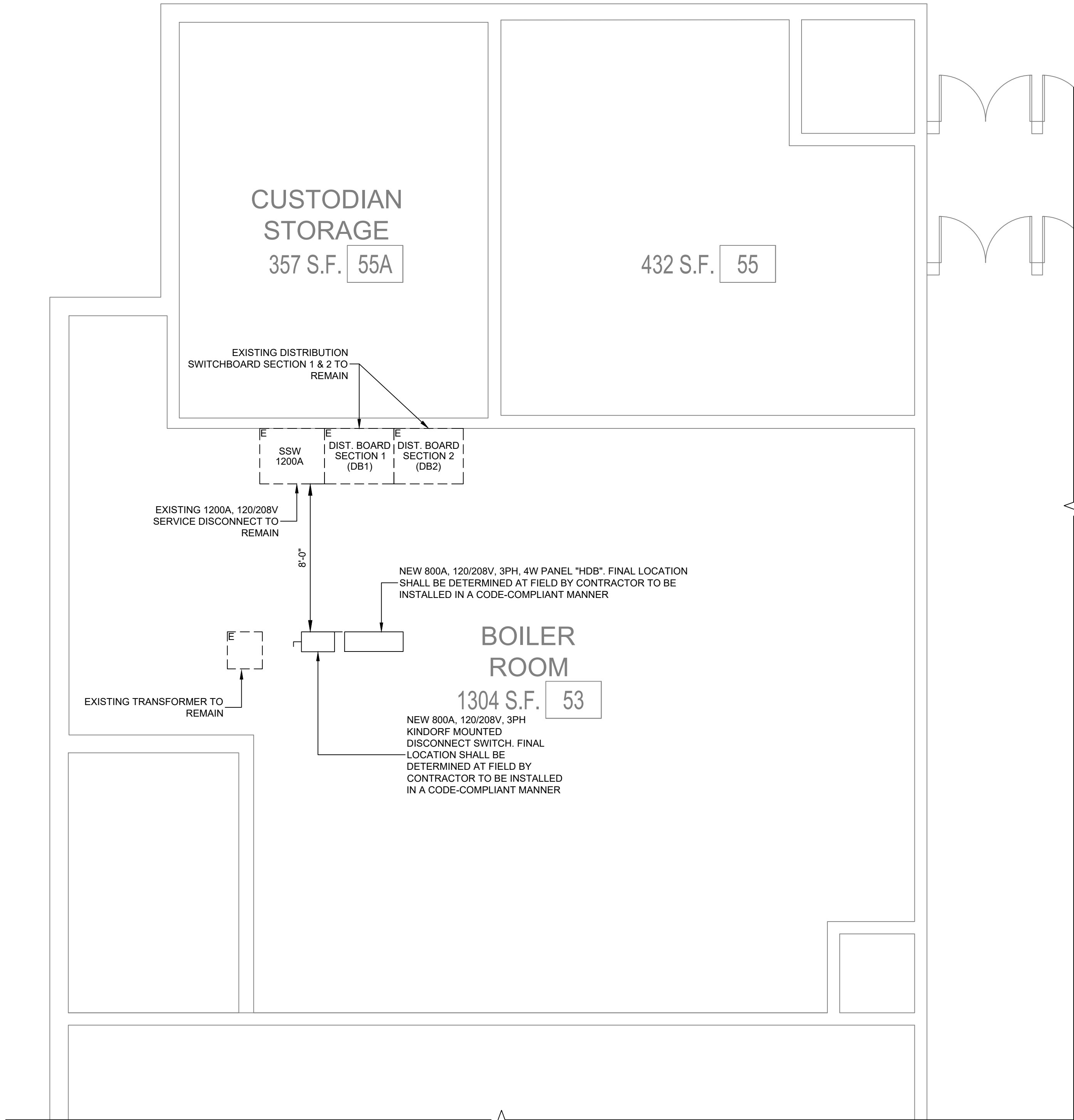


MICHAEL SHILALE ARCHITECTS, LLP
140 Park Avenue New York, NY 10050 Tel 845-708-9200
www.shilale.com

Drawing Title
ROOF PLAN - ELECTRICAL

Drawing No.
WHES-E-105

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1 BOILER ROOM PART PLAN - ELECTRICAL
SCALE: 1/4"=1'-0"

PLAN NOTES:

1. THE CONTRACTOR IS TO COORDINATE ALL SHUTDOWNS AND DISRUPTIONS TO NORMAL SERVICES WITH SBU, ALL OTHER TRADES AND THE FACILITY.
2. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY UNAUTHORIZED DISRUPTION AND POWER OUTAGES.
3. MAINTAIN CIRCUIT CONTINUITY TO AREAS NOT AFFECTED BY CONSTRUCTION WORK.
4. CONTRACTOR IS TO TRACE AND PROTECT ALL FEEDER & BRANCH CIRCUITS FOR ALL AREAS OF THE SITE AND ALL OTHER ELECTRICAL EQUIPMENT DURING DEMOLITION/CONSTRUCTION. ELECTRICAL CONTRACTOR IS REQUIRED TO COORDINATE THIS REQUIREMENT WITH THE GENERAL CONTRACTOR AND ALL OTHER TRADES.
5. ROUTING OF ELECTRICAL CONDUITS IF SHOWN IN THE DRAWINGS ARE TENTATIVE. THE CONTRACTOR IS RESPONSIBLE TO FINALIZE THE ROUTING OF ALL ELECTRICAL CONDUITS AT FIELD IN COORDINATION WITH ALL OTHER TRADES, EXISTING AND NEW BUILDING ELEMENTS, STRUCTURES, PIPES, EQUIPMENT, LANDSCAPING ETC., FOR CODE COMPLIANT INSTALLATION.
6. ALL ELECTRIC SERVICES AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS & THE NATIONAL ELECTRIC CODE (NEC).
7. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE CODE COMPLIANT GROUNDING OF THE CIRCUITS, EQUIPMENT AND CONDUITS AS PER NEC AND SPECIFICATION.
8. ALL SPARE CONDUITS SHALL BE INSTALLED WITH DRAG LINES.



KEY PLAN



0 1/2 1
IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

Drawing Title
**BOILER ROOM PART
PLAN - ELECTRICAL**

Drawing No.
WHES-E-401

MSA
MICHAEL SHILALE ARCHITECTS, LLP
140 Park Avenue New City, NY 10956 Tel 845-708-9200
www.shilale.com

**UNIVENT REPLACEMENT
AT STONY POINT,
THIELS, WEST HAV
ELEMENTARY SCHOOL**
SSD# 50-02-01-06-0-014-XXX
SSD# 50-02-01-06-0-025-XXX
SSD# 50-02-01-06-0-024-XXX
NY REG. NO. 00000000000000000000
HARRISBURG, NY 16993

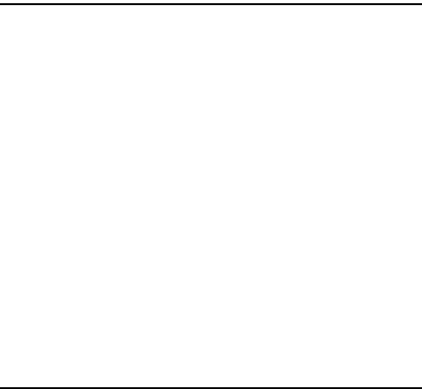
Mechanical
Electrical
&
Structural
Engineer:

**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
HARRISBURG, NY 16901
PROJ. No. : MNY-2000127.00

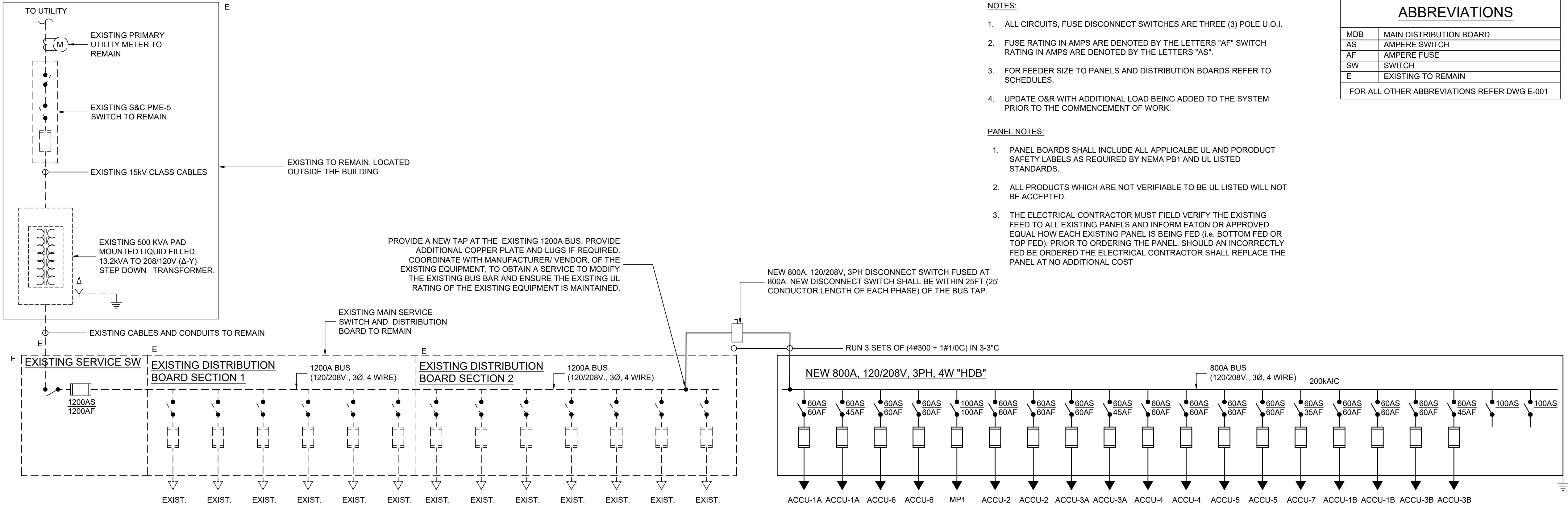
Structural
Engineer:

**GREENMAN
PEDERSEN, INC**
2 EXECUTIVE BOULEVARD
HARRISBURG, NY 16901

Drawn by DK/KD
Checked by SH
Project No. 43040
Scale AS NOTED
Date 03-04-25



No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS



1 ELECTRICAL ONE LINE DIAGRAM
SCALE: N.T.S.

DIST. BOARD: <u>HDB</u>		VOLT: <u>120/208v, 3Ø, 4W.</u>		LOC. <u>BOILER ROOM</u>	
MOUNTING: <u>FLOOR</u>		AMP RATING <u>800A</u>		MAIN: <u>MLO</u>	
DESIGN AMP: <u>727</u>		AIC RATING <u>200kAIC</u>		TYPE: <u>NEW</u>	
CIRCUIT No.	LOAD SVD	POLES	SWITCH	FUSE	LOAD FEEDERS
1	ACCU-1A CKT-1	3	60	60	41 3#1+1#6 IN 1 1/2"
2	ACCU-1A CKT-2	3	60	45	31 3#2+1#6 IN 1 1/2"
3	ACCU-6 CKT-1	3	60	60	49 3#4+1#8G IN 1 1/4"
4	ACCU-6 CKT-2	3	60	60	49 3#4+1#8G IN 1 1/4"
5	MP1	3	100	100	56 4#2/0+1#6G IN 2"
6	ACCU-2 CKT-1	3	60	60	49 3#2/0+1#6G IN 2"
7	ACCU-2 CKT-2	3	60	60	49 3#2/0+1#6G IN 2"
8	ACCU-3A CKT-1	3	60	60	41 3#1+1#6G IN 1 1/2"
9	ACCU-3A CKT-2	3	60	45	31 3#1+1#6G IN 1 1/2"
10	ACCU-4 CKT-1	3	60	60	41 3#1+1#6G IN 1 1/2"
11	ACCU-4 CKT-2	3	60	60	41 3#1+1#6G IN 1 1/2"
12	ACCU-5 CKT-1	3	60	60	41 3#1+1#6G IN 1 1/2"
13	ACCU-5 CKT-2	3	60	60	41 3#1+1#6G IN 1 1/2"
14	ACCU-7	3	60	35	23 3#4+1#8G IN 1 1/4"
15	ACCU-1B CKT-1	3	60	60	41 3#2/0+1#6G IN 2"
16	ACCU-1B CKT-2	3	60	45	31 3#1/0+1#6G IN 2"
17	ACCU-3B CKT-1	3	60	60	41 3#2+1#8G IN 1 1/2"
18	ACCU-3B CKT-2	3	60	45	31 3#4+1#8G IN 1 1/4"
19	SPARE	3	100		
20	SPARE	3	100		

2 ELECTRICAL PANEL SCHEDULES
SCALE: N.T.S.

PANEL SCHEDULE											
PANEL NAME:	MP1	LOCATION:	CLOSET			MOUNTING:		SURFACE			
VOLTAGE/PHASE:	120/208V, 3 Phase, 4W & G	PANEL (AMP)	100A			FREQUENCY:		60 Hz			
PANEL SHORT CIRCUIT RATING(KA):	22 KA	FEEDER SIZE	4#2/0+1#6G IN 2"C			FEEDING SOURCE:		HDB			
MAIN BREAKER TYPE	MLO	MAIN BREAKER RATING (A):	100A			BRANCH C.B TYPE		MCB			
Load Designation	Wiring	Phase Load in VA					Wiring	Load Designation			
		C/B (A)	CT NO	AØ	BØ	CØ			CT NO	C/B (A)	
CC-1A	2#12+1#12G-3/4"C	20	1	50			2	2#12+1#12G-3/4"C	CC-55,61A,61B,50		
			3	200			4				
			5		50						
			7	300			300				
CC-38,39,42-1,42-2, 43-1,43-2	2#12+1#12G-3/4"C	20				310	6	2#12+1#12G-3/4"C	AHU-58,59,60,61		
						700				8	
										10	
						310				12	
AHU-46,48,52,52B	2#12+1#12G-3/4"C	20				310		2#12+1#12G-3/4"C	AHU-53,53A,54,55E & OUA-1		
						700					
AHU-46G,46H,56,57	2#12+1#12G-3/4"C	20						2#12+1#12G-3/4"C	OAU-2		
BC-2	2#12+1#12G-3/4"C	20						2#12+1#12G-3/4"C	BC-3A,3B		
BC-6A,6B	2#12+1#12G-3/4"C	20						2#12+1#12G-3/4"C	BC-4		
BC-5	2#12+1#12G-3/4"C	20						2#12+1#12G-3/4"C	BC-1A,1B		
BMS CONTROL PANEL-1	2#12+1#12G-3/4"C	20						2#12+1#12G-3/4"C	BMS CONTROL PANEL-2		
BMS CONTROL PANEL-3	2#12+1#12G-3/4"C	20						2#12+1#12G-3/4"C	ROOF RECEPTACLES		
ROOF RECEPTACLES	2#12+1#12G-3/4"C	20						2#8+1#10G-3/4"C	BF-55		
BF-61A	2#10+1#12G-3/4"C	20						2#10+1#12G-3/4"C	BF-50		
BF-1A	2#10+1#12G-3/4"C	20						2#10+1#12G-3/4"C	BF-42-1		
BF-42-2	2#10+1#12G-3/4"C	35						2#10+1#12G-3/4"C	BF-61B		
SPARE		20						2#10+1#12G-3/4"C	BF-43-2		
BF-39	2#10+1#12G-3/4"C	20						2#10+1#12G-3/4"C	BF-38		
BF-43-1	2#10+1#12G-3/4"C	20							SPARE		
SPARE		20							SPARE		
SPARE		20							SPARE		
SPARE		20							SPARE		
SPARE		20							SPARE		
CONNECTED LOAD PER PHASE IN VA				7880	8606	7136	PANEL TYPE: NEMA 1 MOUNTING: SURFACE				
TOTAL CONNECTED LOAD IN KVA				23.622			COPPER BUS, EQUIP. GROUND BAR				
TOTAL LOAD IN AMPS				65.57			DOOR: INDOOR TYPE				

- NOTES:
- ALL CIRCUITS, FUSE DISCONNECT SWITCHES ARE THREE (3) POLE U.O.I.
 - FUSE RATING IN AMPS ARE DENOTED BY THE LETTERS "AF" SWITCH RATING IN AMPS ARE DENOTED BY THE LETTERS "AS".
 - FOR FEEDER SIZE TO PANELS AND DISTRIBUTION BOARDS REFER TO SCHEDULES.
 - UPDATE O&R WITH ADDITIONAL LOAD BEING ADDED TO THE SYSTEM PRIOR TO THE COMMENCEMENT OF WORK.

- PANEL NOTES:
- PANEL BOARDS SHALL INCLUDE ALL APPLICABLE UL AND PRODUCT SAFETY LABELS AS REQUIRED BY NEMA PB1 AND UL LISTED STANDARDS.
 - ALL PRODUCTS WHICH ARE NOT VERIFIABLE TO BE UL LISTED WILL NOT BE ACCEPTED.
 - THE ELECTRICAL CONTRACTOR MUST FIELD VERIFY THE EXISTING FEED TO ALL EXISTING PANELS AND INFORM EATON OR APPROVED EQUAL HOW EACH EXISTING PANEL IS BEING FED (i.e. BOTTOM FED OR TOP FED). PRIOR TO ORDERING THE PANEL, SHOULD AN INCORRECTLY FED BE ORDERED THE ELECTRICAL CONTRACTOR SHALL REPLACE THE PANEL AT NO ADDITIONAL COST

ABBREVIATIONS	
MDB	MAIN DISTRIBUTION BOARD
AS	AMPERE SWITCH
AF	AMPERE FUSE
SW	SWITCH
E	EXISTING TO REMAIN
FOR ALL OTHER ABBREVIATIONS REFER DWG E-001	

0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

Revisions	
No.	Date

Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	05-03-24

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-514-1100 FAX: 860-514-1101	MECHANICAL ELECTRICAL ENGINEER
GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-514-1100 FAX: 860-514-1101	STRUCTURAL ENGINEER

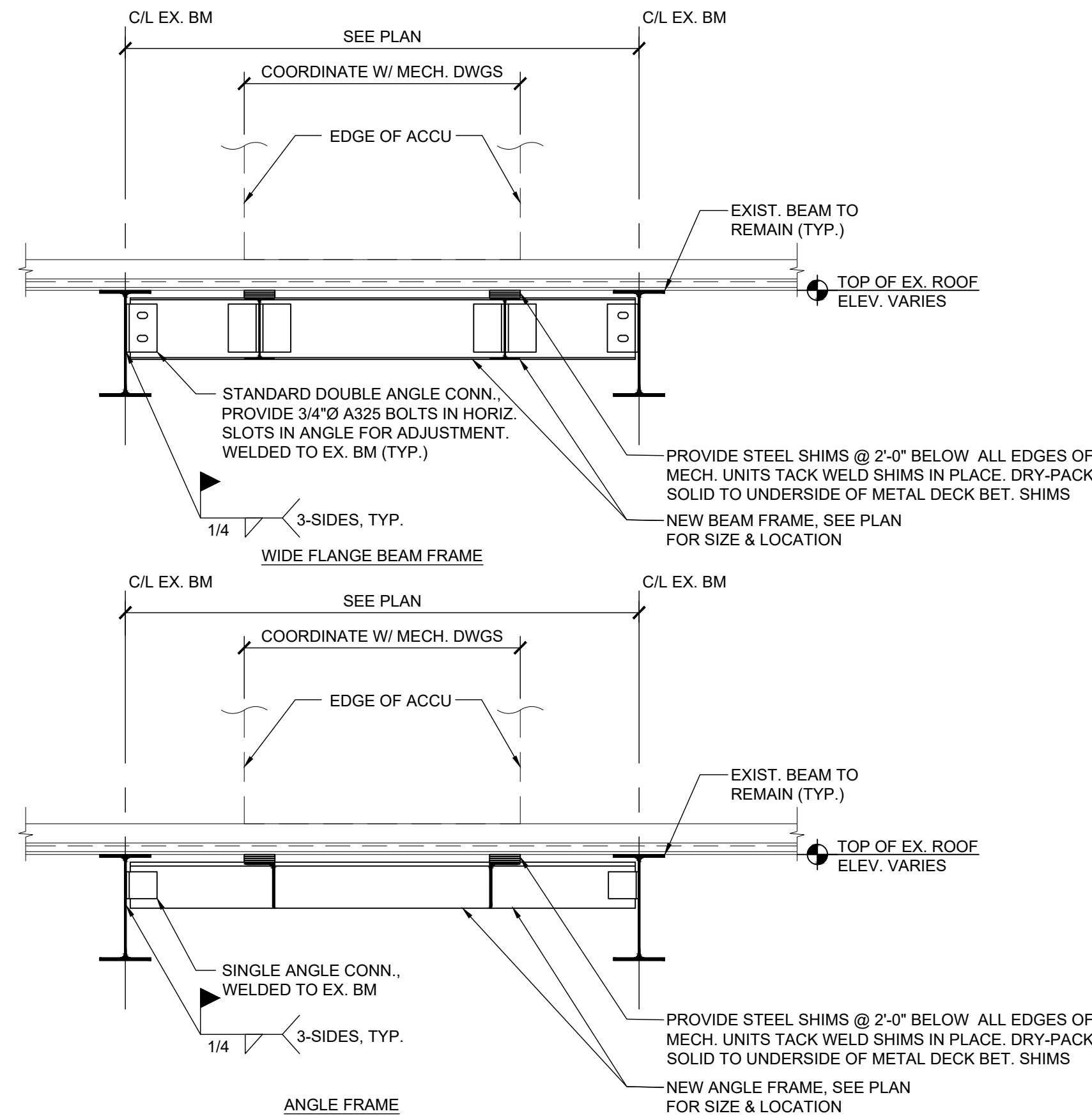
UNIVENT REPLACEMENT
AT STONY POINT,
THIELS, WEST HAV
ELEMENTARY SCHOOL

SED# 50-02-01-06-0-014-XXX
SED# 50-02-01-06-0-025-XXX
SED# 50-02-01-06-0-024-XXX

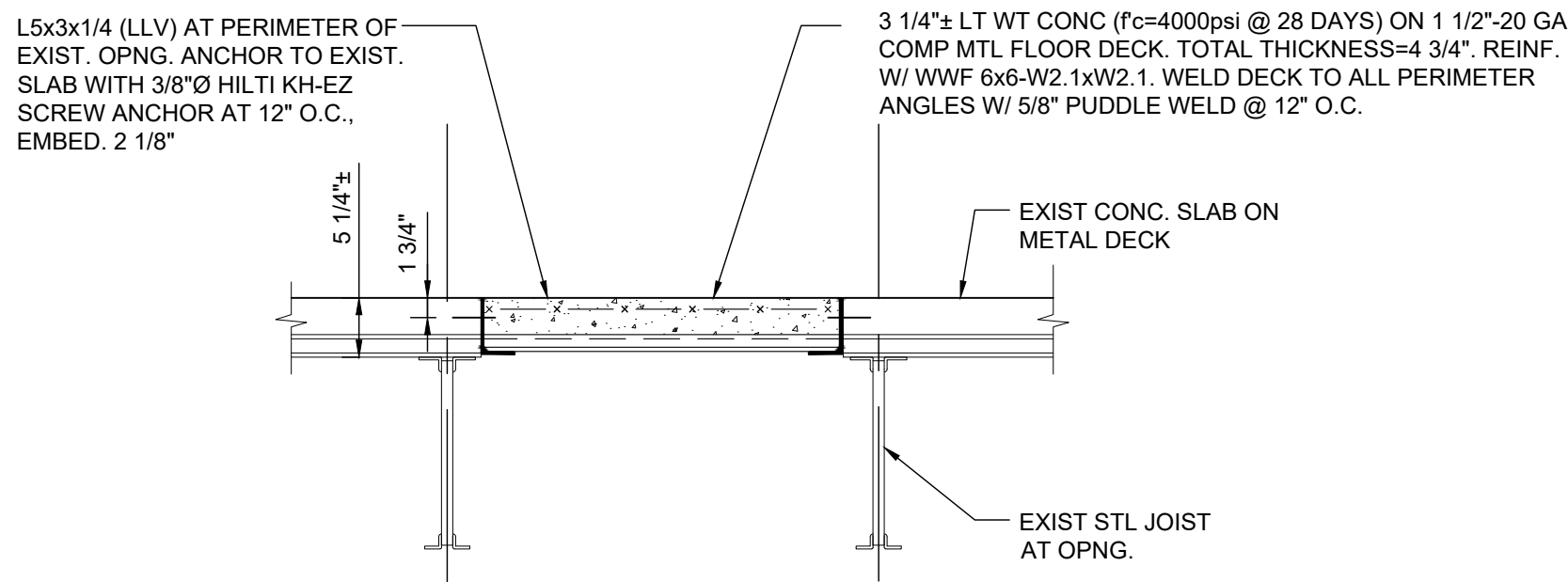
WEST HARVESTOWN
ROCKLAND COUNTY
71 BLAUVELT AVE. WEST
HARVESTOWN, NY 10995

MSA	MICHAEL SHALE ARCHITECTS, LLP 140 Park Avenue New City, NY 10956 Tel 845-708-9200 www.shale.com

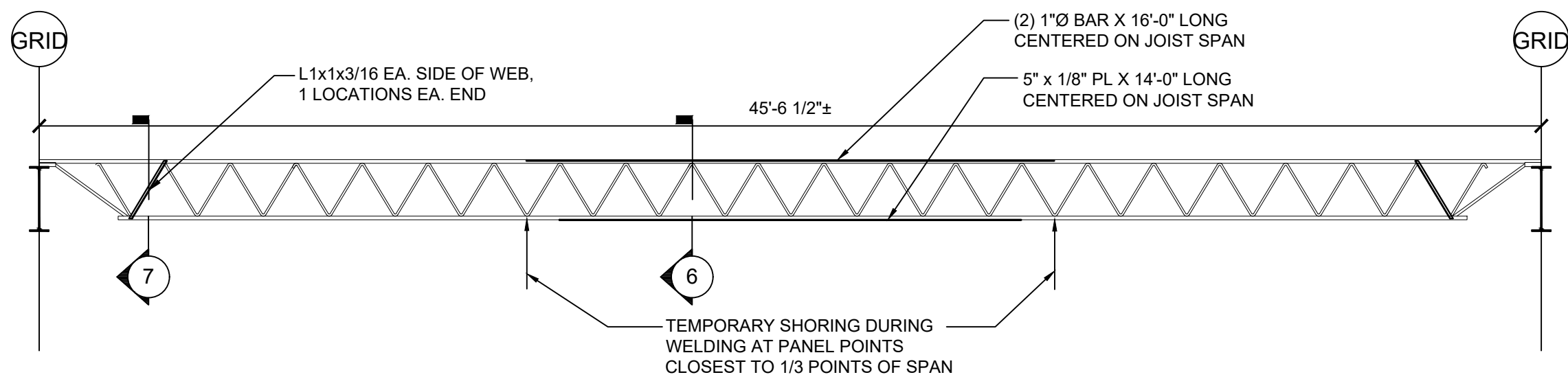
Drawing Title ELECTRICAL ONE LINE DIAGRAM AND PANEL SCHEDULES	Drawing No. WHES-E-501



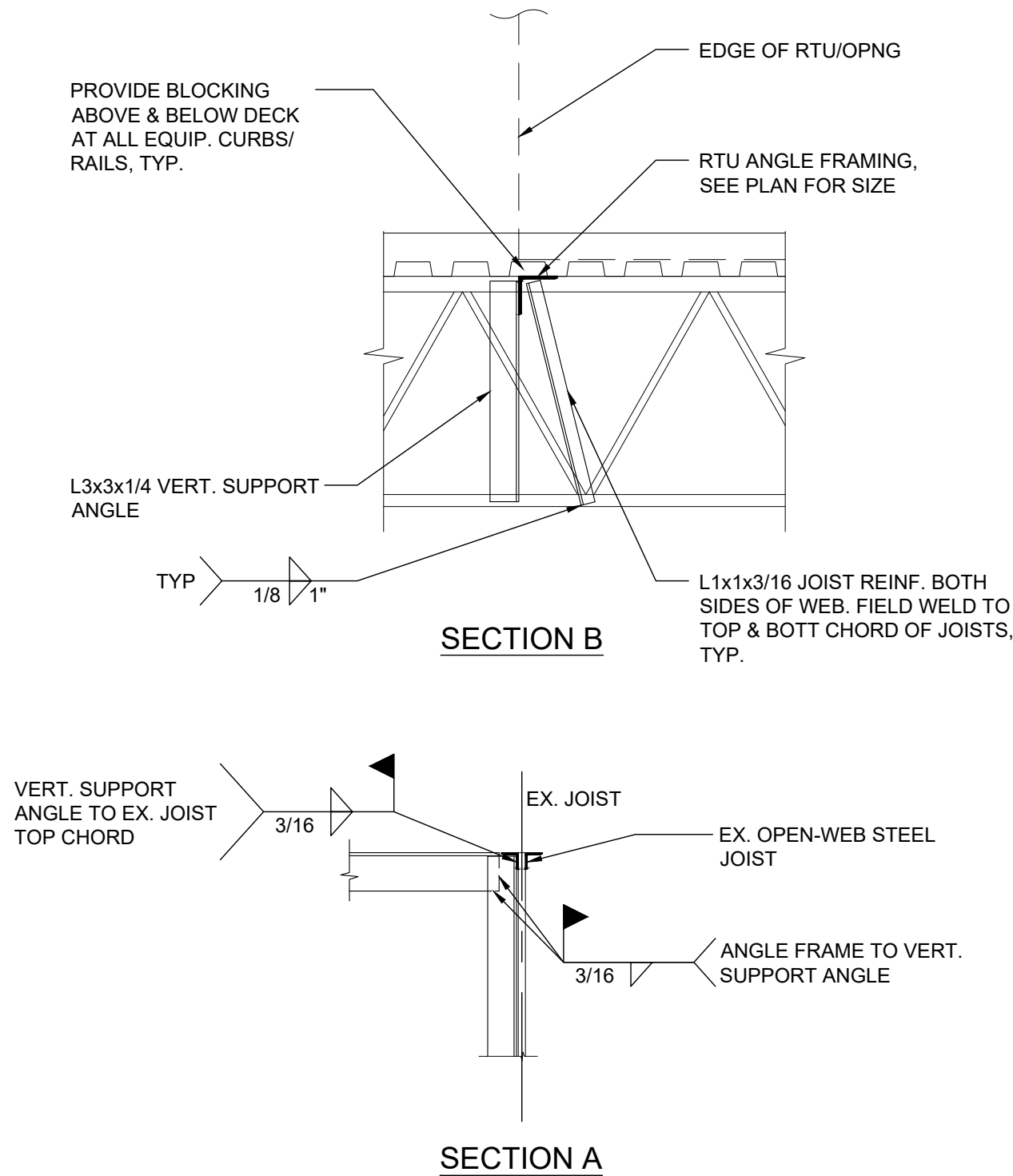
1 **TYPICAL SECTION AT ROOFTOP UNIT FRAME**
SCALE: 3/4" = 1'-0"



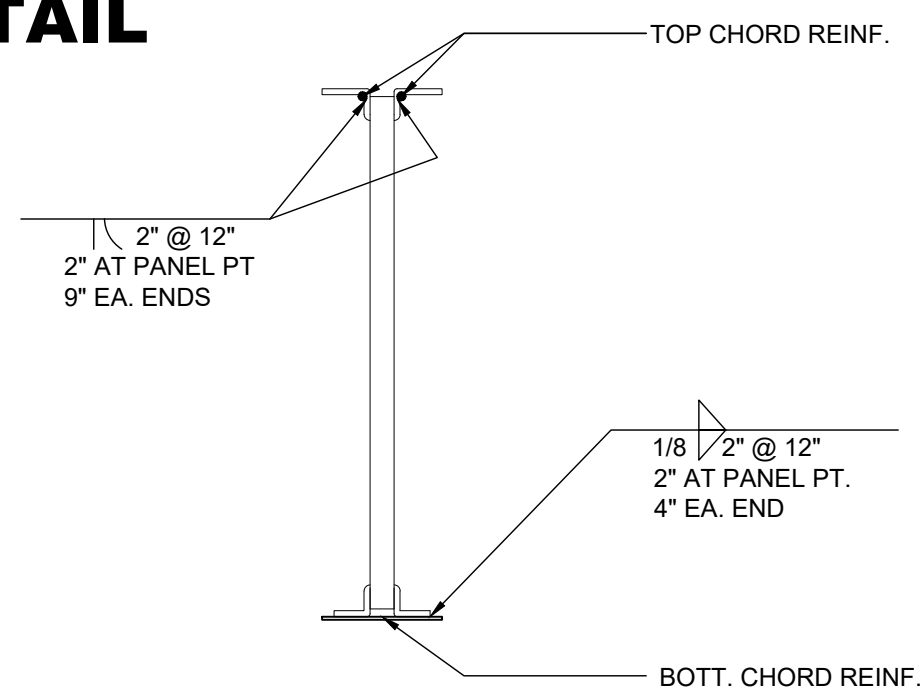
2 **EXIST. ROOF OPENING INFILL DETAIL**
SCALE: 1/4" = 1'-0"



5 **EXISTING JOIST REINFORCING ELEVATION**
SCALE: 1/4" = 1'-0"

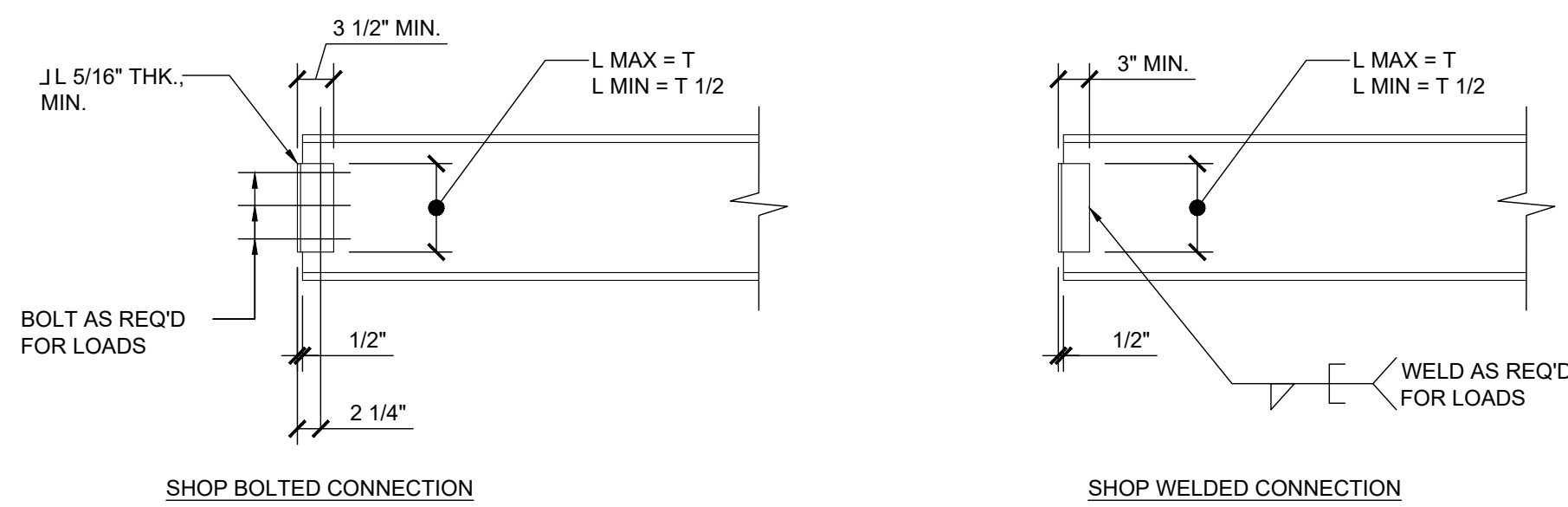


3 **NEW ROOF OPNG & ROOFTOP EQUIP. SUPPORT FRAME DETAIL**
SCALE: 3/4" = 1'-0"



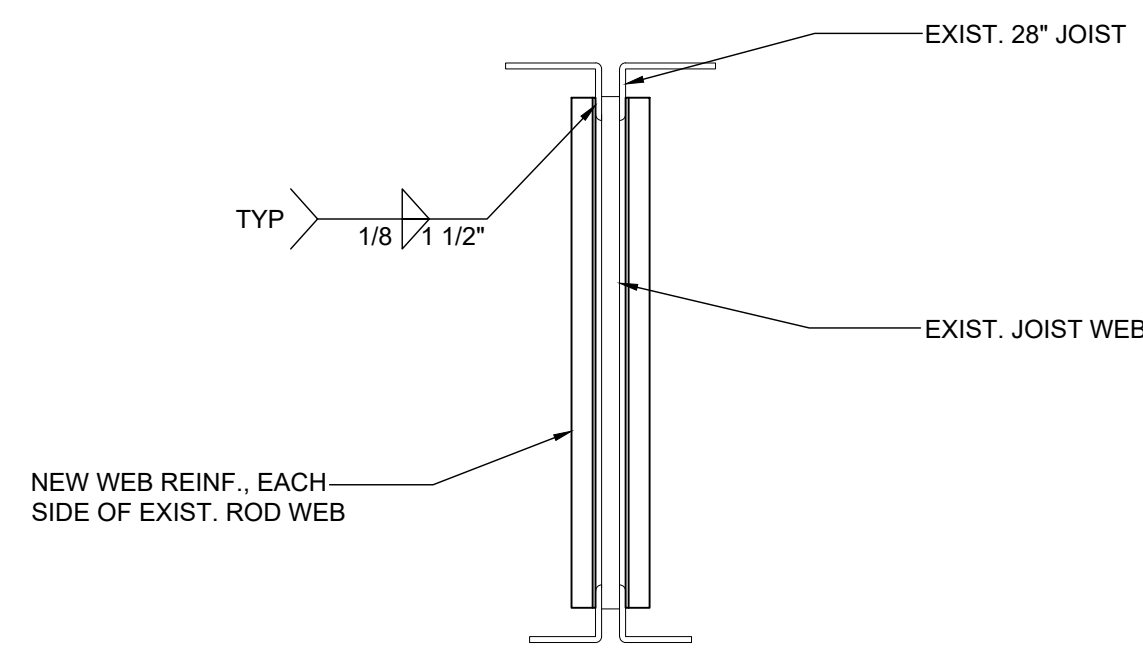
6 **CHORD REINFORCING DETAIL**
SCALE: 3/4" = 1'-0"

NOTE:
INSTALL ALL JOIST REINFORCING PRIOR TO INSTALLING NEW ELEMENTS TO BE SUPPORTED BY EXISTING JOISTS. SHORE AS NOTED ON ELEVATION DURING WELDING



- NOTES:
1. ALL CONNECTIONS SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST AISC SPECIFICATIONS USING ALLOWABLE STRESS DESIGN.
 2. REACTIONS SHOWN ON PLAN ARE DUE TO UNFACTORED SERVICE LOADS.
 3. FABRICATOR SHALL SUBMIT STANDARD CONNECTION DETAILS FOR APPROVAL WITH STEEL ERECTION DRAWING SUBMISSION.
 4. AT CONNECTION OF BEAM TO END OF CANTILEVER BEAM, PROVIDE STANDARD DOUBLE ANGLE CONNECTION WITH CAPACITY FOR REQUIRED LOADS.
 5. WHERE BEAMS FRAME TO FITTED STIFFENERS AT COLUMNS, PROVIDE SHEAR PLATE CONNECTION WITH CAPACITY FOR REQUIRED LOADS.
 6. ALL BOLTS TO BE A325 HIGH STRENGTH BOLTS, IN BEARING TYPE 'N' CONNECTION, UNLESS OTHERWISE NOTED ON DRAWINGS.
 7. ALL WELDING ELECTRODES TO BE E70XX.
 8. USE DOUBLE BENT PLATE CONNECTION AS REQUIRED FOR SKEWED FRAMING CONDITIONS.
 9. WHERE SINGLE PLATE CONNECTIONS ARE USED AT BEAM TO COLUMN CONNECTIONS, DESIGN TO ELIMINATE MOMENT DUE TO ECCENTRICITY TRANSFER TO COLUMN (I.E. EXTENDED SINGLE-PLATE SHEAR CONNECTION PROCEDURE.)

4 **STANDARD BEAM CONNECTION DETAIL**
SCALE: 3/4" = 1'-0"



7 **WEB REINFORCING DETAIL**
SCALE: 3/4" = 1'-0"

0 1/2 1
IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

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Drawn by	S.I.
Checked by	R.B.
Project No.	43040
Scale	AS NOTED
Date	03-04-25

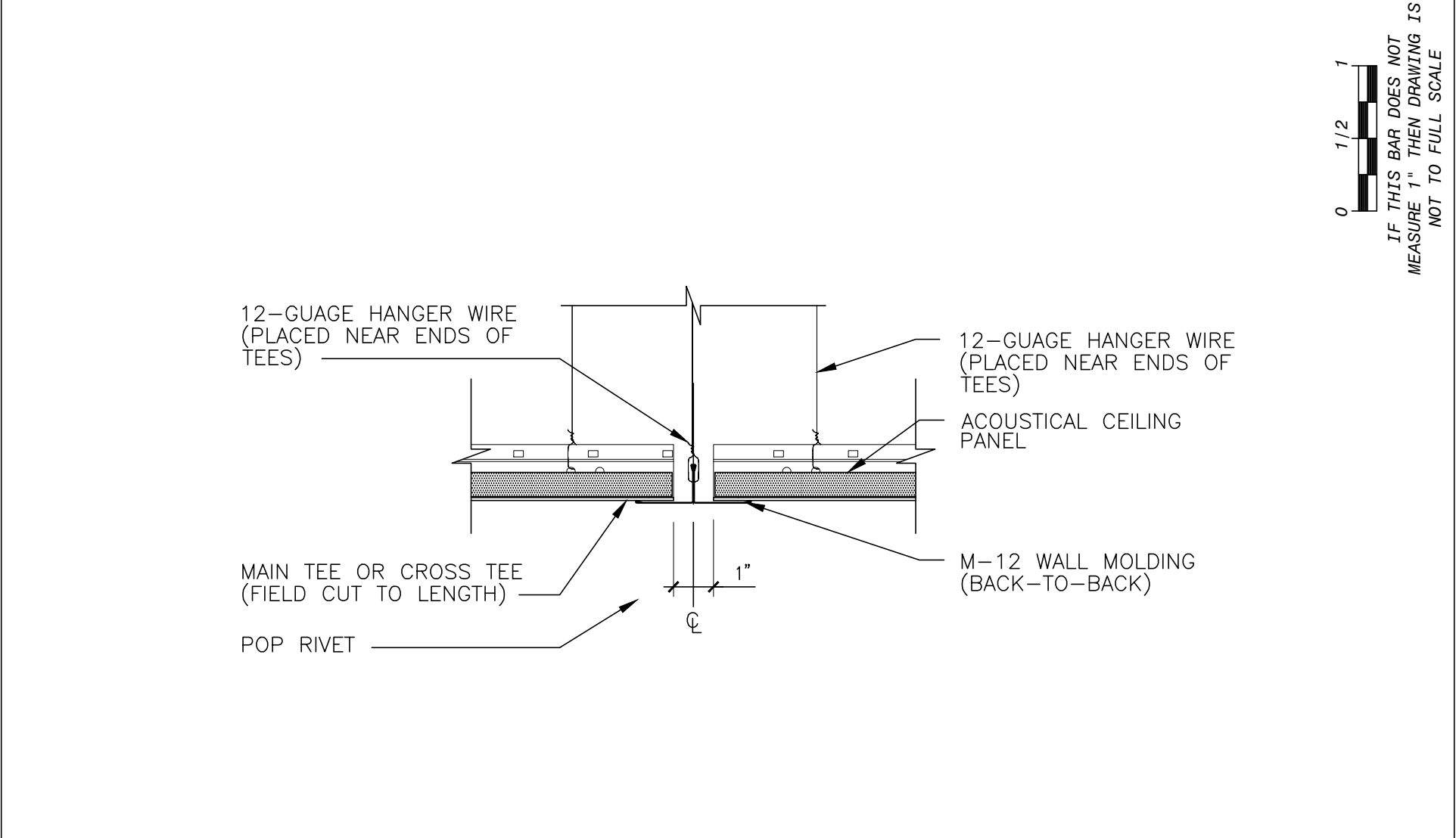
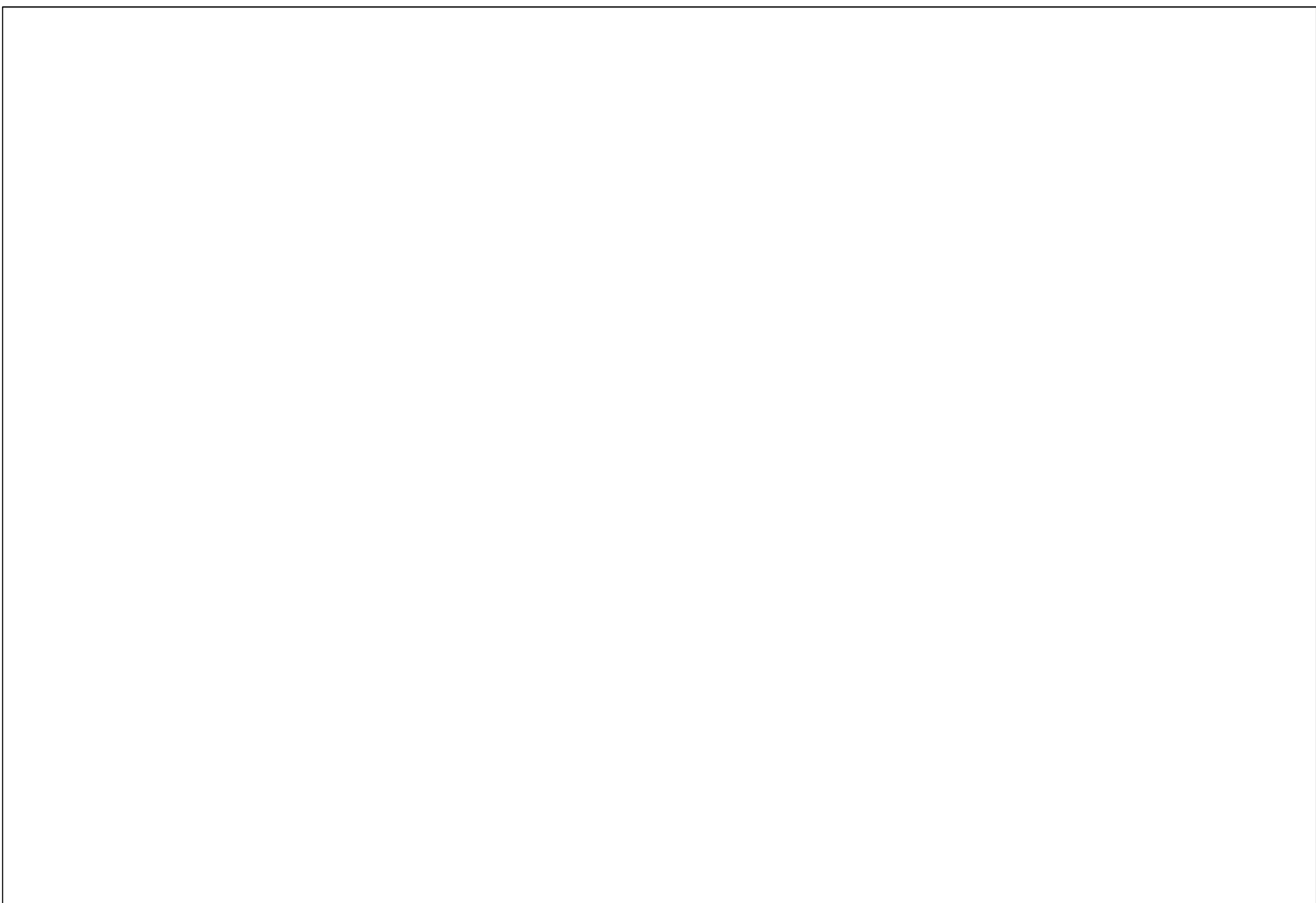
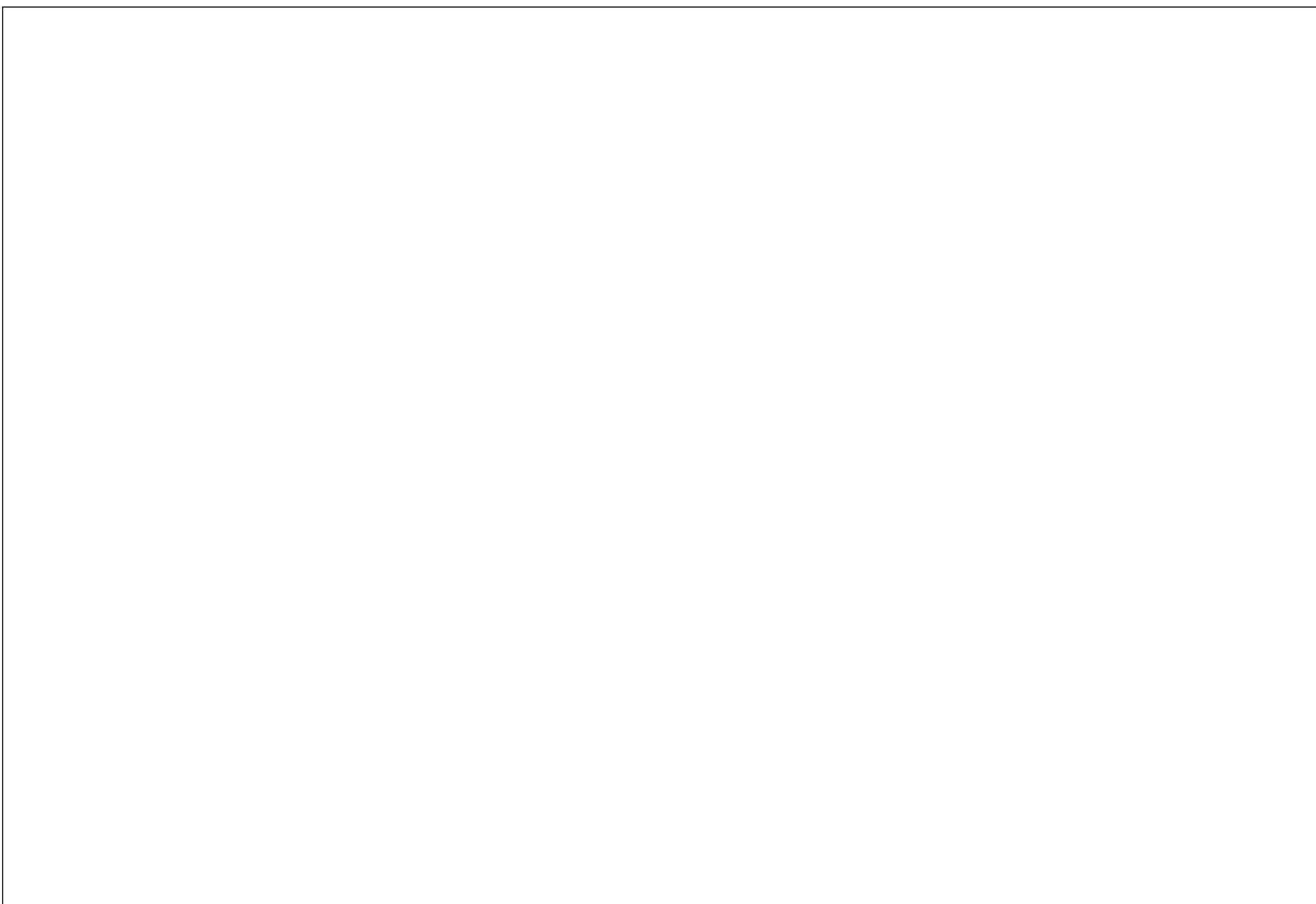
GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981 PROJ. NO.: MNY-5000086.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD STONY POINT, NY 10981
Mechanical Structural Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVESTRAW ELEMENTARY SCHOOL SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015 MICHAEL SHILALE ARCHITECTS, L.L.P. 140 Park Avenue New York, NY 10056 Tel 845-708-9200 www.shilale.com	STONY POINT, NY 10980 PROJECT AND LOCATION
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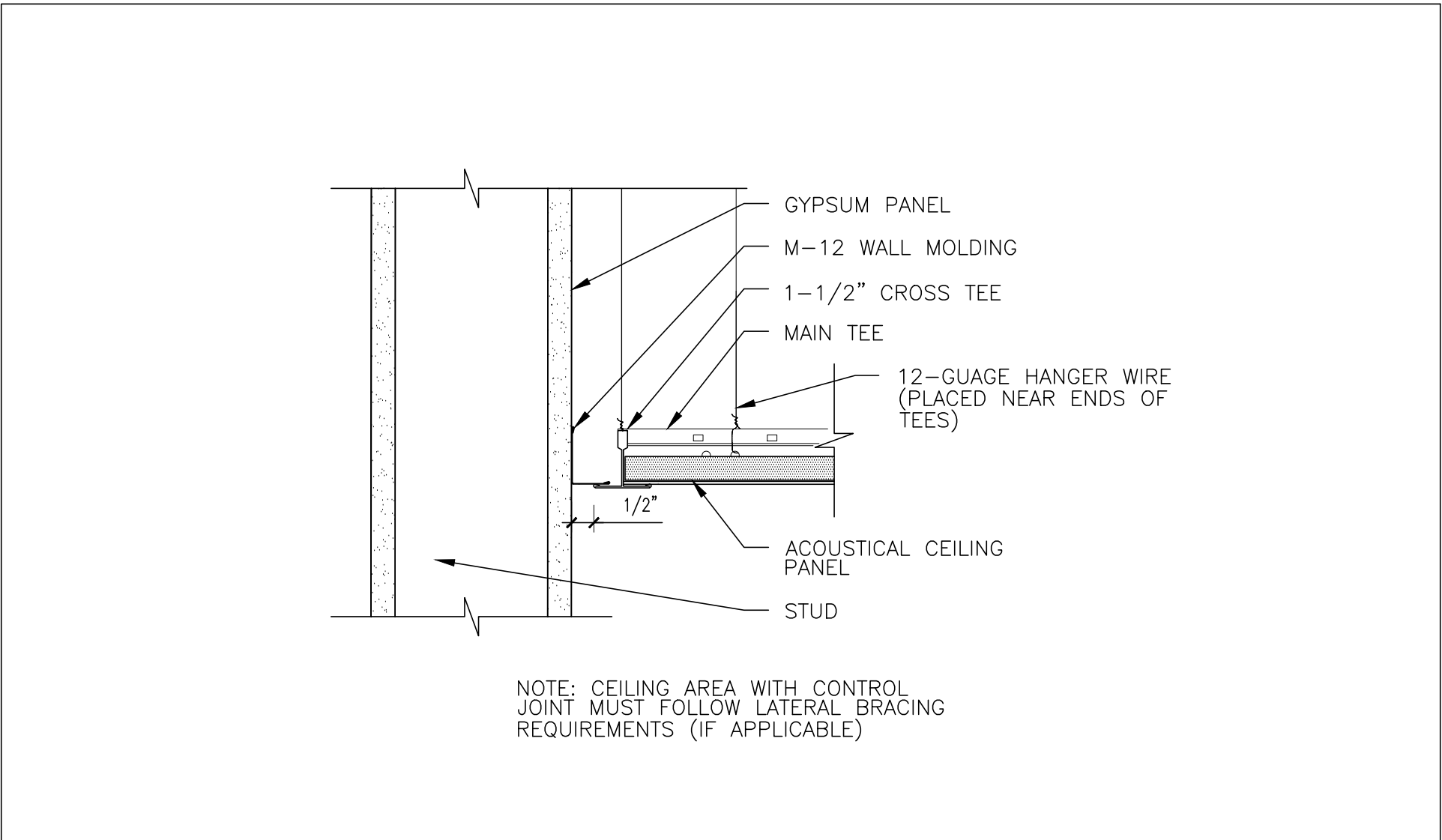
MSA MICHAEL SHILALE ARCHITECTS, L.L.P. 140 Park Avenue New York, NY 10056 Tel 845-708-9200 www.shilale.com
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STRUCTURAL DETAILS	Drawing No. S-501
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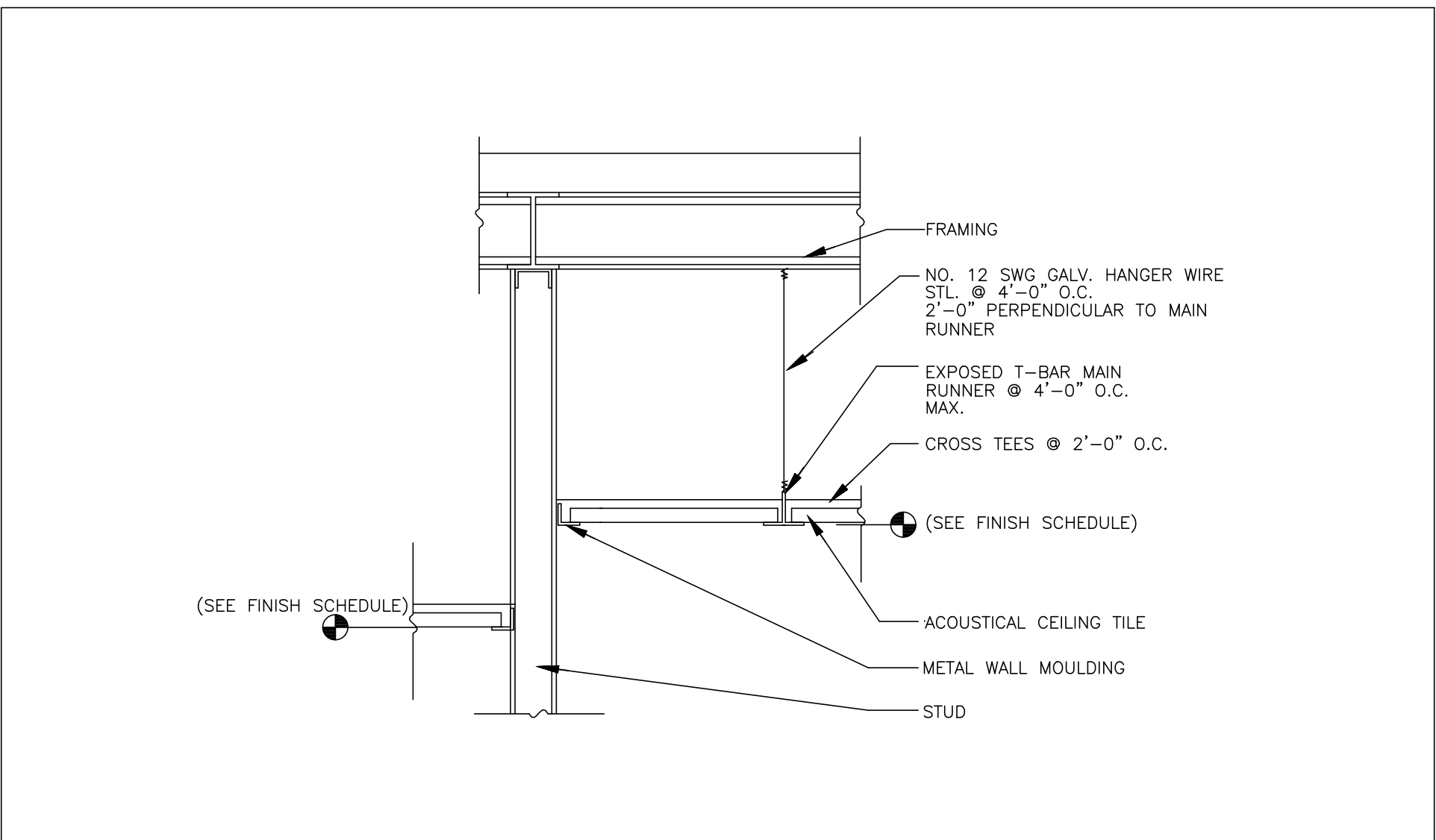
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3 ACT CLG EXPANSION JOINT DETAIL
SCALE: NTS



2 ACT CLG @ WALL EXPANSION JOINT DETAIL
SCALE: NTS



1 ACT DETAIL (TYP.)
SCALE: NTS

Down by	JR
Checked by	MS/JC
Project No.	43040
Scale	AS NOTED
Date	03-18-24

Mechanical & Electrical Engineer:	GREENMAN PEDERSEN, INC 400 BELLA BOULEVARD MONTEBELLO, NY 10601
Structural Engineer:	GREENMAN PEDERSEN, INC 400 BELLA BOULEVARD MONTEBELLO, NY 10601

UNIVENT REPLACEMENT AT
STONY POINT, THIELS
AND WEST HAVERSTRAW
ELEMENTARY SCHOOL
SPES SED# 50-02-01-08-0-014-012
TES SED# 50-02-01-06-0-025-018
WHES SED# 50-02-01-06-0-024-015
7 TURNER DRIVE
STONY POINT, NY 10980
COUNTY OF ROCKLAND



MICHAEL SHILALE ARCHITECTS, L.L.P.
140 Park Avenue New York, NY 10022 Tel 945-7053600
info@shilale.com

REFLECTED
CEILING PLAN
DETAILS

Drawing No.
A-410

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Drawing Title

**ROOF
DETAILS**

Drawing No.

A-500

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[illegible]

8

NEW UNIVENT ELEVATION (CONDITION: FINTUBE ON BOTH SIDES)
SCALE: 1/2" = 1'-0"

7

NEW UNIVENT ELEVATION (CONDITION: CASEWORK ONE SIDE, FINTUBE ONE SIDE)
SCALE: 1/2" = 1'-0"

6

NEW UNIVENT ELEVATION (CONDITION: CASEWORK ON BOTH SIDES)
SCALE: 1/2" = 1'-0"

4

EXISTING UNIVENT REMOVAL ELEVATION (CONDITION: FINTUBE ON BOTH SIDES)
SCALE: 1/2" = 1'-0"

3

EXISTING UNIVENT REMOVAL ELEVATION (CONDITION: CASEWORK ONE SIDE, FINTUBE ONE SIDE)
SCALE: 1/2" = 1'-0"

2

EXISTING UNIVENT REMOVAL ELEVATION (CONDITION: CASEWORK ON BOTH SIDES)
SCALE: 1/2" = 1'-0"

1

EXISTING UNIVENT REMOVAL ELEVATION (CONDITION: FREE STANDING UNIT)
SCALE: 1/2" = 1'-0"



SP	Down by
MS/JC	Checked by
43040	Project No.
AS NOTED	Scale
03-18-24	Date

GREENMAN PEDERSEN INC 400 BELLA BOULEVARD MONTEBELLO, NY 10601	GREENMAN PEDERSEN INC 400 BELLA BOULEVARD MONTEBELLO, NY 10601
Mechanical & Electrical Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS AND WEST HAVERSTRAW ELEMENTARY SCHOOL SPES SED# 50-02-01-08-0-014-012 YES SED# 50-02-01-06-0-025-018 WHES SED# 50-02-01-08-0-024-015 7 CURNER DRIVE STONY POINT, NY 10980 COUNTY OF ROCKLAND
--

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TYPICAL UV ELEVATIONS	A-600
Drawing No.	

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[illegible]

REG. EXP. DATE: 12-31-25

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Checked by	MS/JC
Project No.	43040
Scale	AS NOTED
Date	03-18-24

Mechanical & Electrical Engineer:	GREENMAN PERDSEN, INC 400 BELLA BOULEVARD MONTEBELLO, NY 10901	IT IS A VIOLATION OF THE
Structural Engineer:	GREENMAN PERDSEN, INC 400 BELLA BOULEVARD MONTEBELLO, NY 10901	

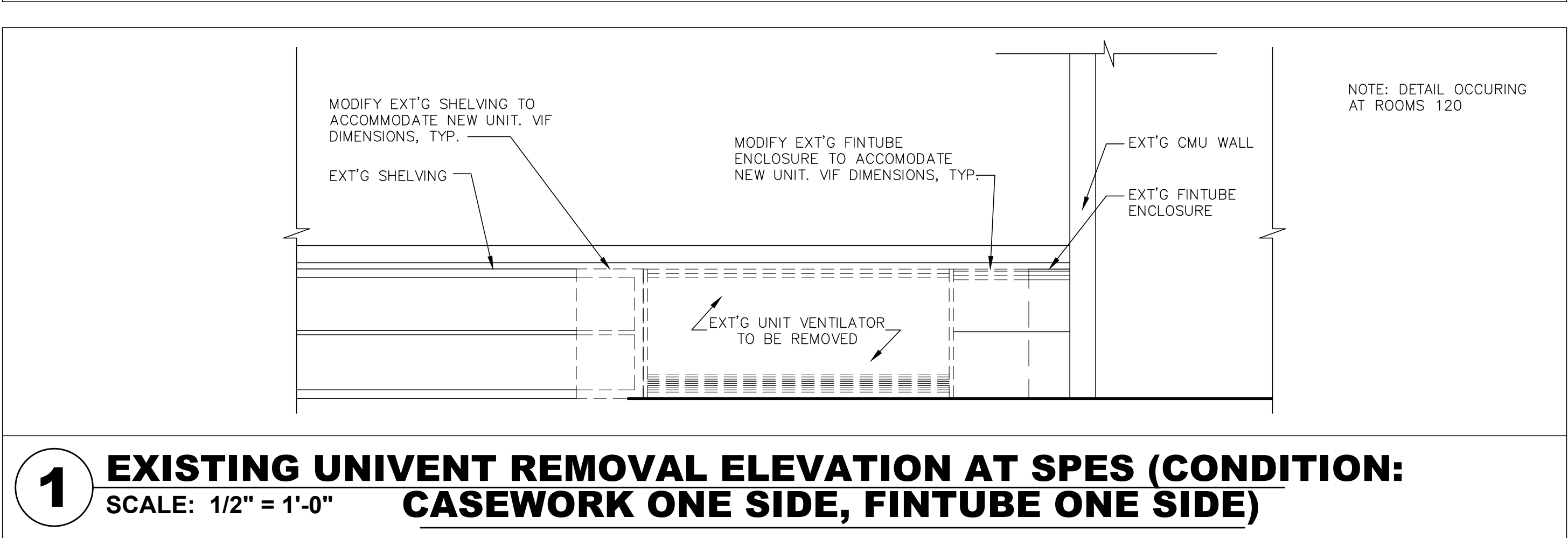
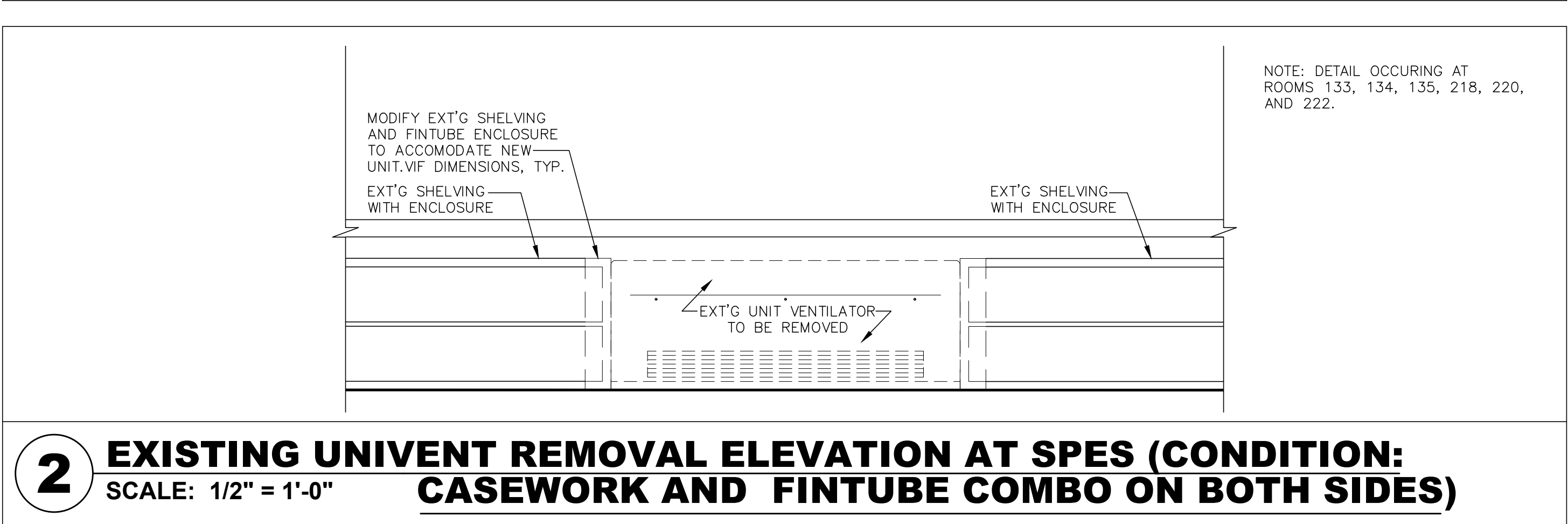
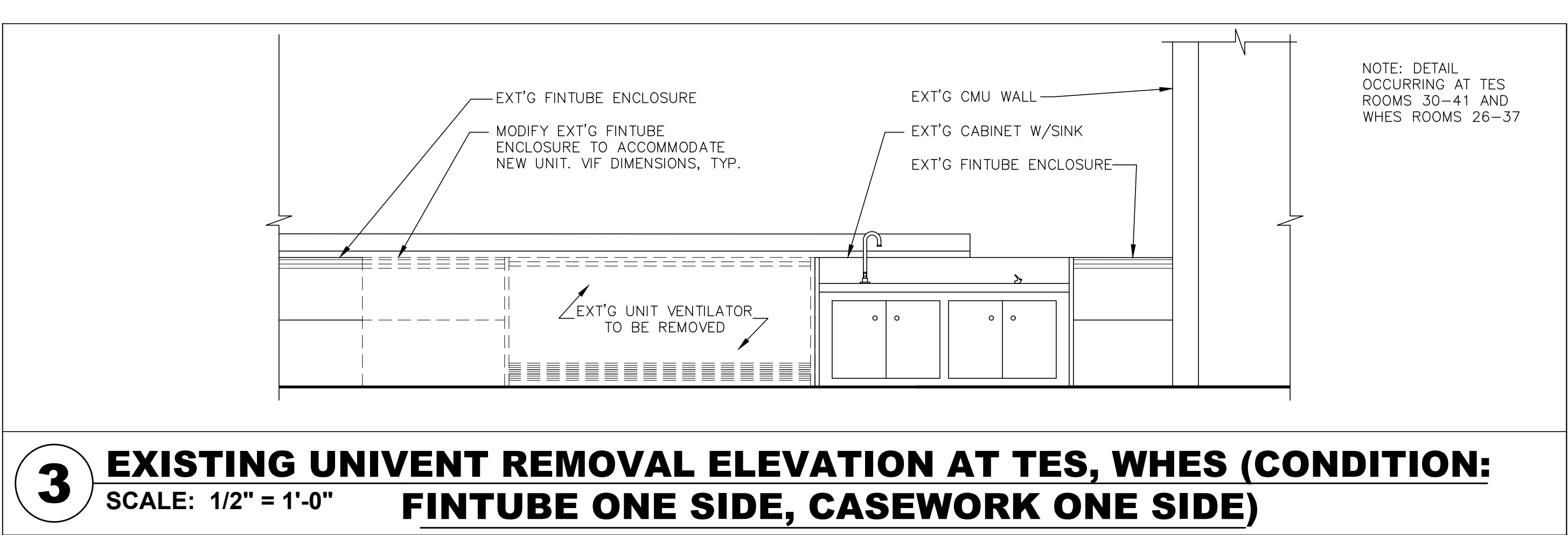
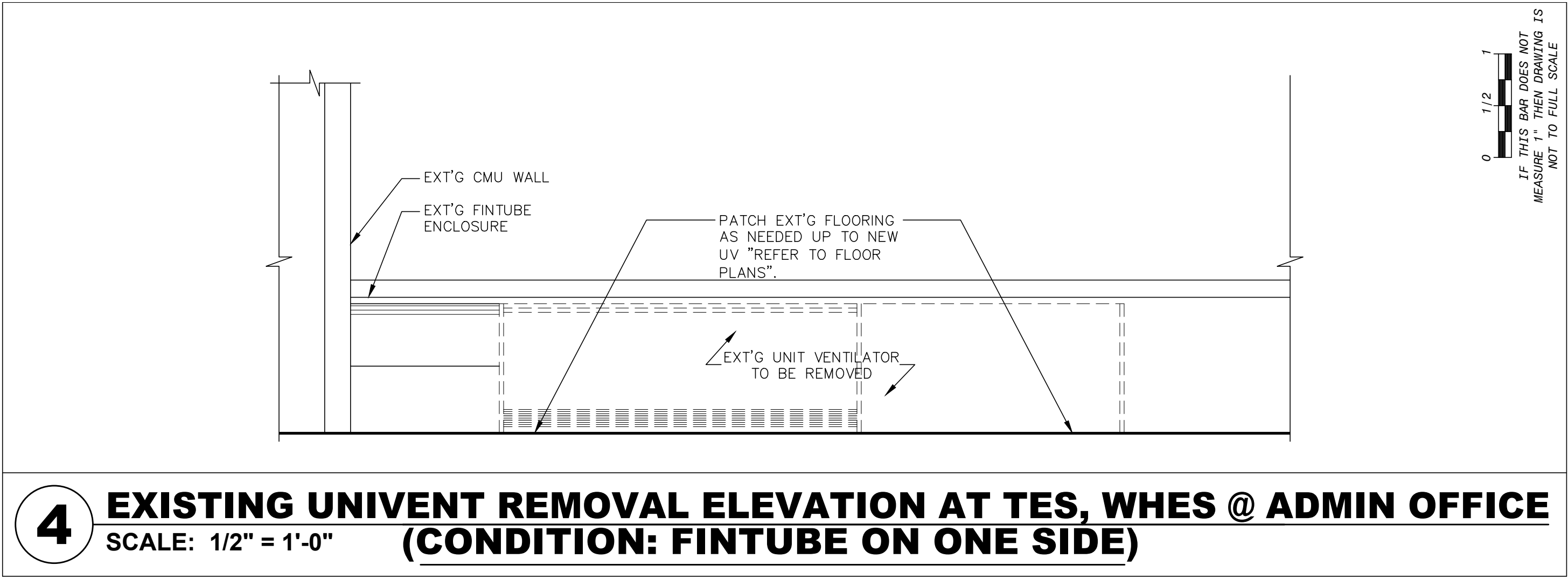
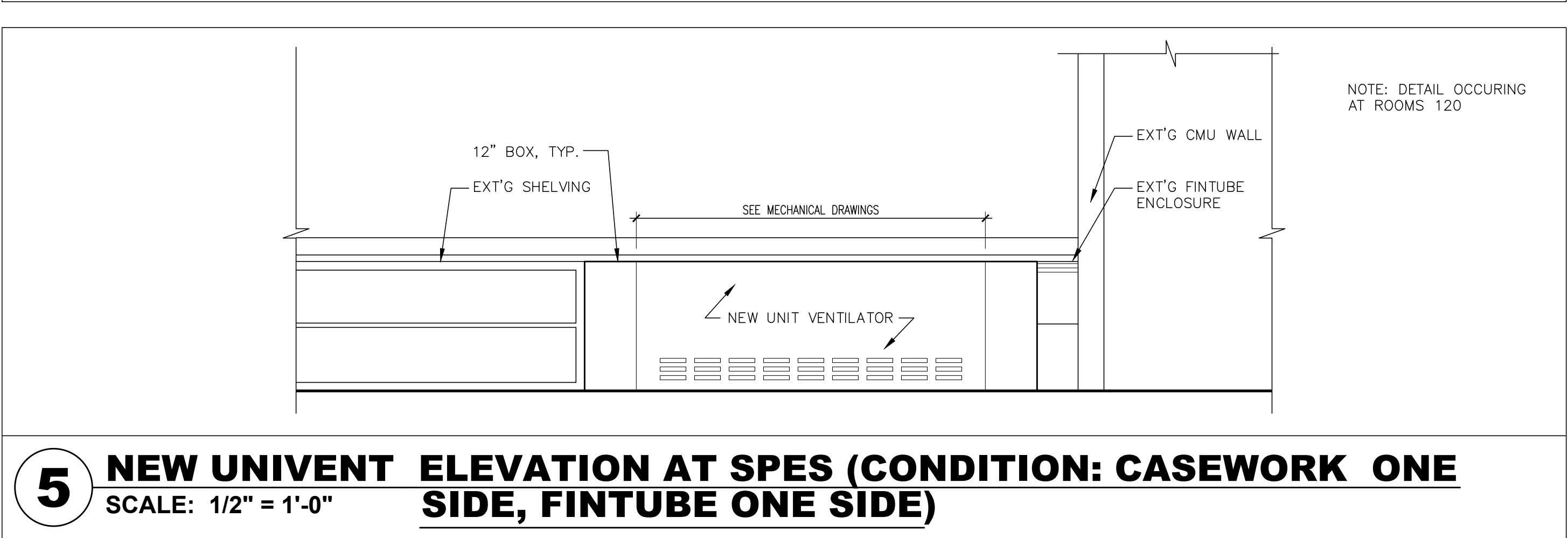
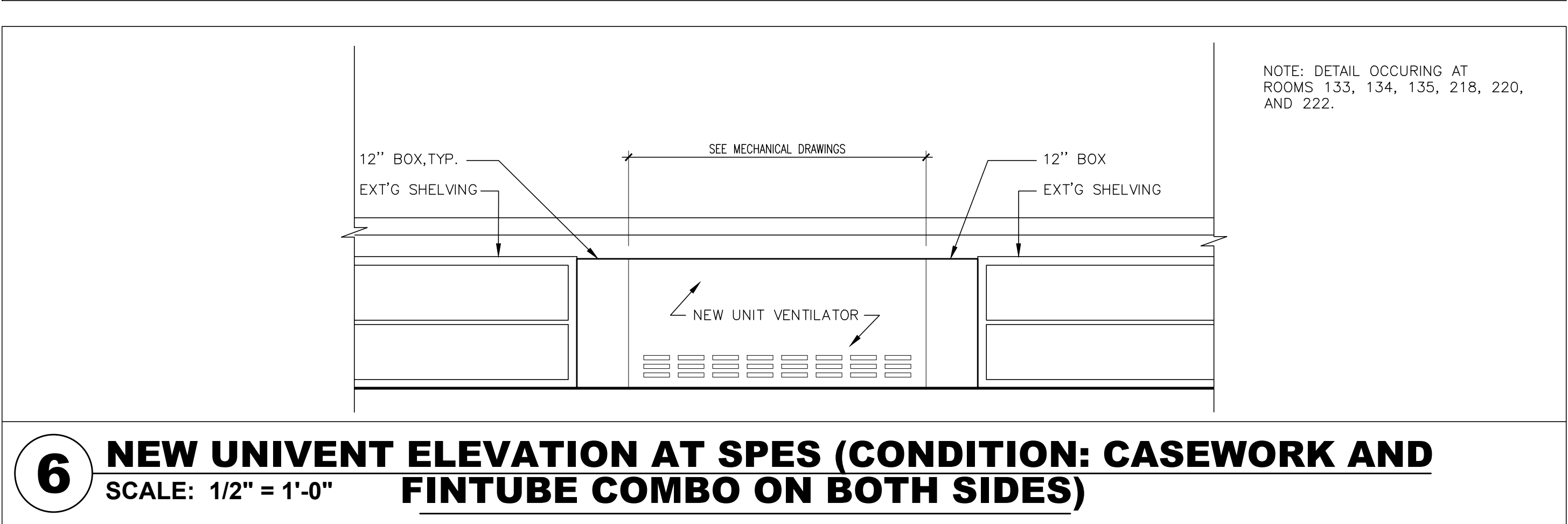
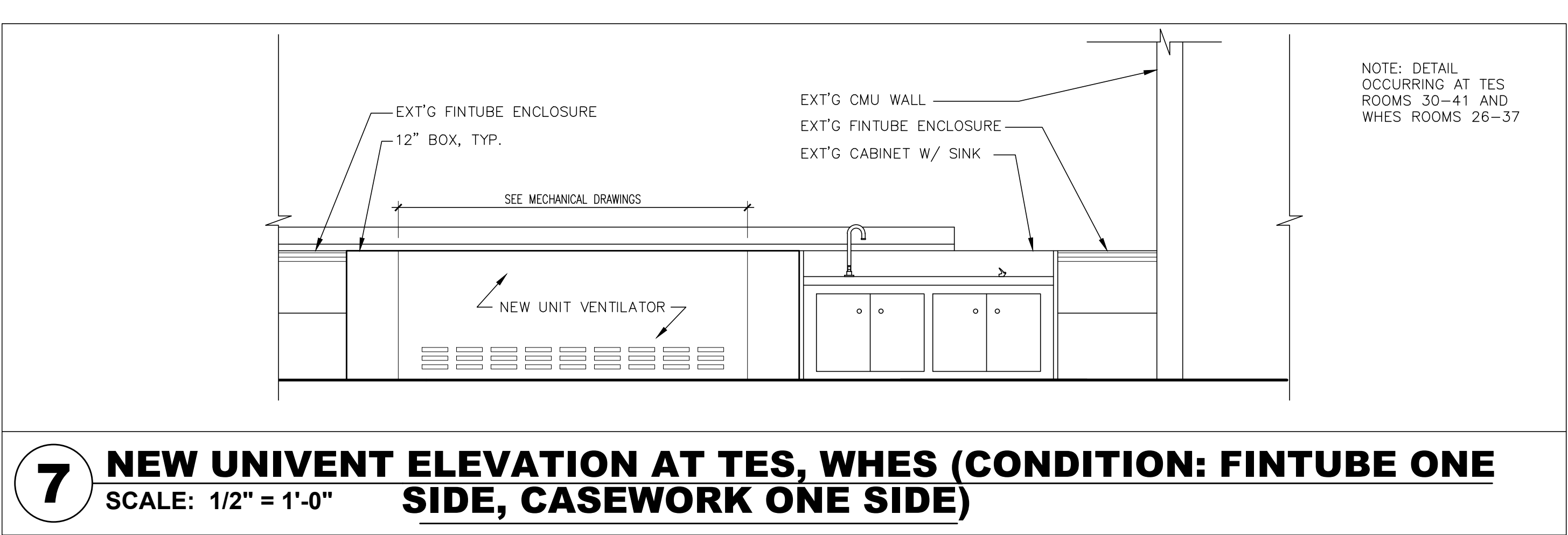
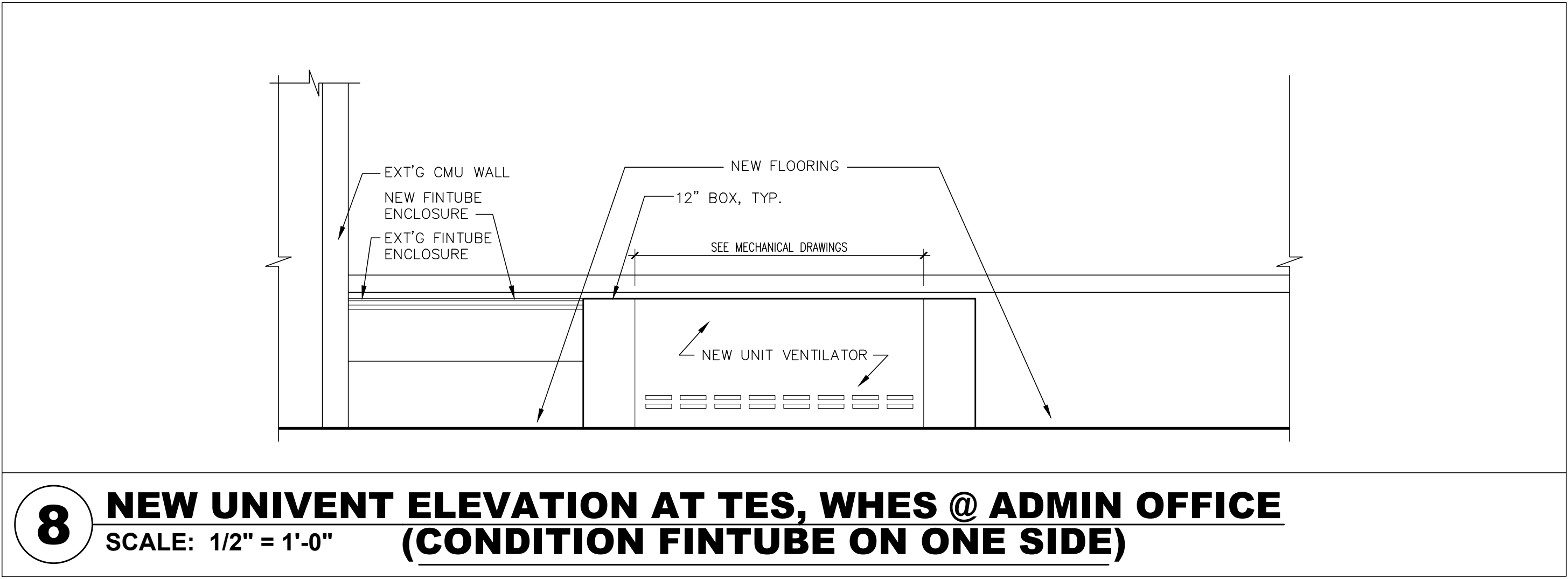
UNIVENT REPLACEMENT AT
STONY POINT, THIELS
AND WEST HAVERSTRAW
ELEMENTARY SCHOOL
SPES SED# 50-02-01-06-0-014-012
TES SED# 50-02-01-06-0-025-018
WHES SED# 50-02-01-06-0-024-015
COUNTY OF ROCKLAND
100860
STONY POINT, NY 10980
CHURCH DRIVE

HS A
MICHAEL SHILAE ARCHITECTS, L.L.P.
140 Park Avenue New City, NY 10956 Tel 845-798-9200
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Drawing Title	Drawing No.
TYPICAL UV ELEVATIONS	A-601

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Checked by	MS/JC
Project No.	43040
Scale	AS NOTED
Date	03-18-24

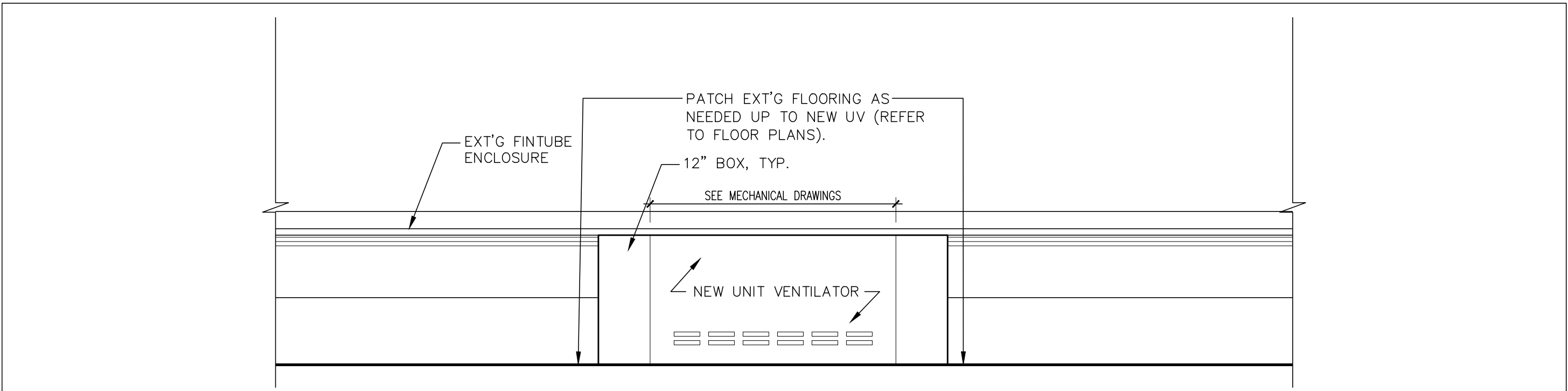
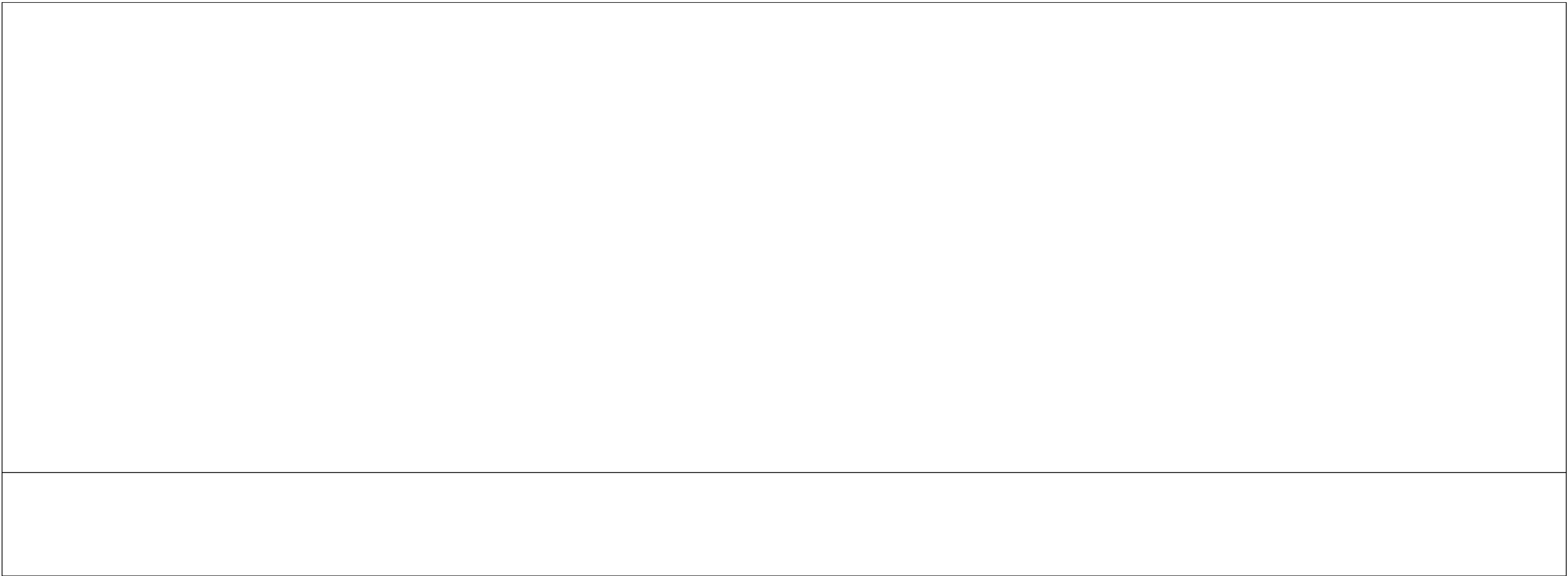
Mechanical & Electrical Engineer:	GREENMAN PEDERSEN, INC 400 BELLA BOULEVARD MONTEBELLO, NY 10601
Structural Engineer:	GREENMAN PEDERSEN, INC 400 BELLA BOULEVARD MONTEBELLO, NY 10601

UNIVENT REPLACEMENT AT STONY POINT, THIELS AND WEST HAVERSTRAW ELEMENTARY SCHOOL
SPES SED# 50-02-01-08-0-014-012 TES SED# 50-02-01-06-0-025-018 WHES SED# 50-02-01-08-0-024-015
7 GIBNEY DRIVE STONY POINT, NY 10680
COUNTY OF ROCKLAND

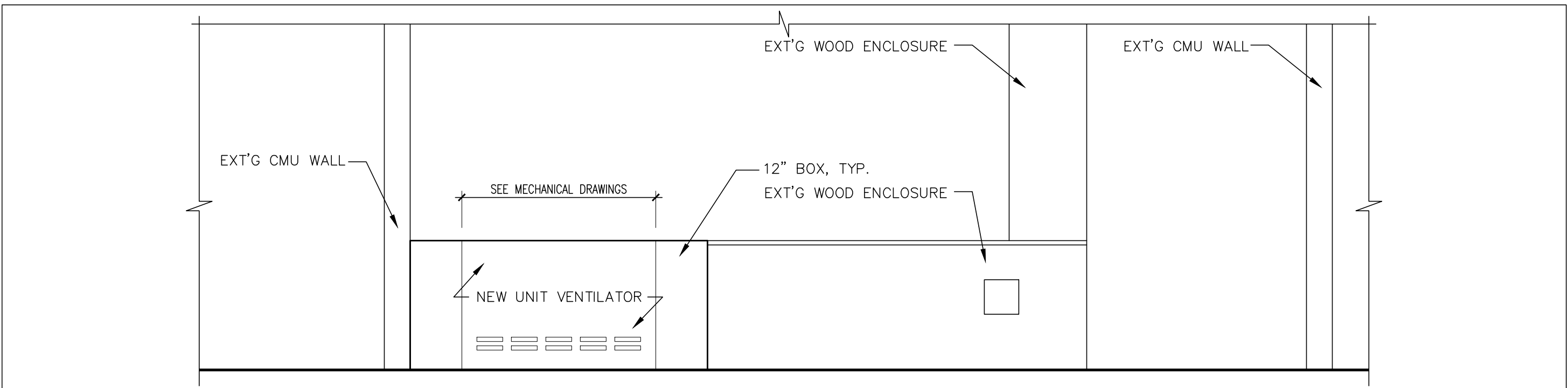
HSA
MICHAEL SHILALE ARCHITECTS, L.L.P. 140 Park Avenue New York, NY 10022 Tel 945-0056000 info@hsa.com

TYPICAL UV ELEVATIONS
Drawing No. A-602

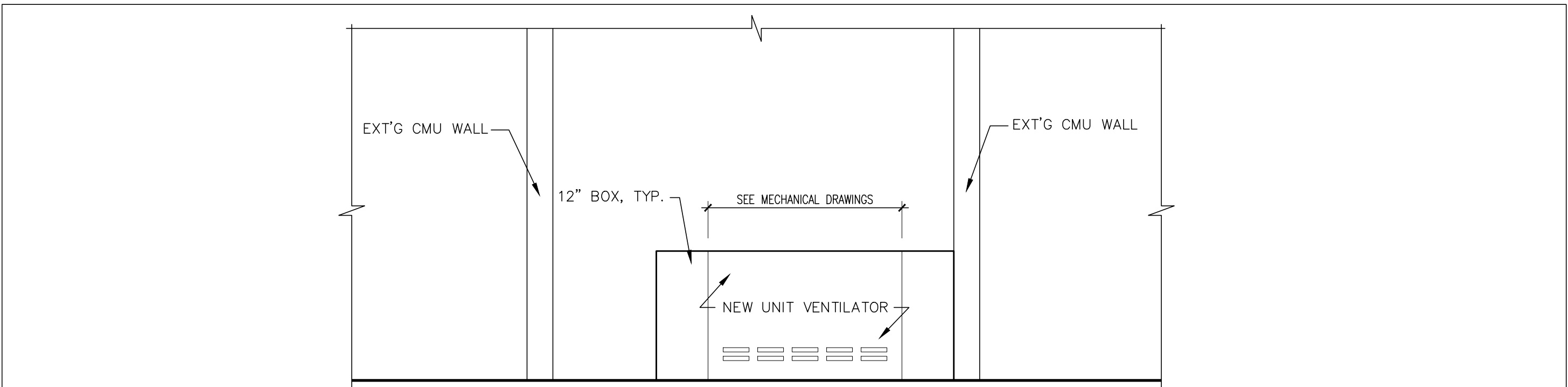
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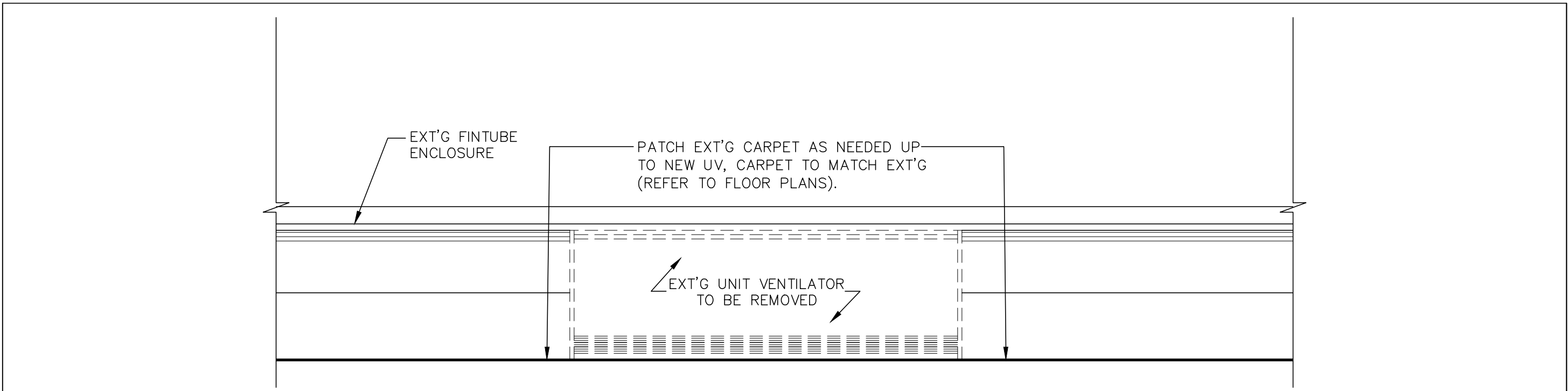
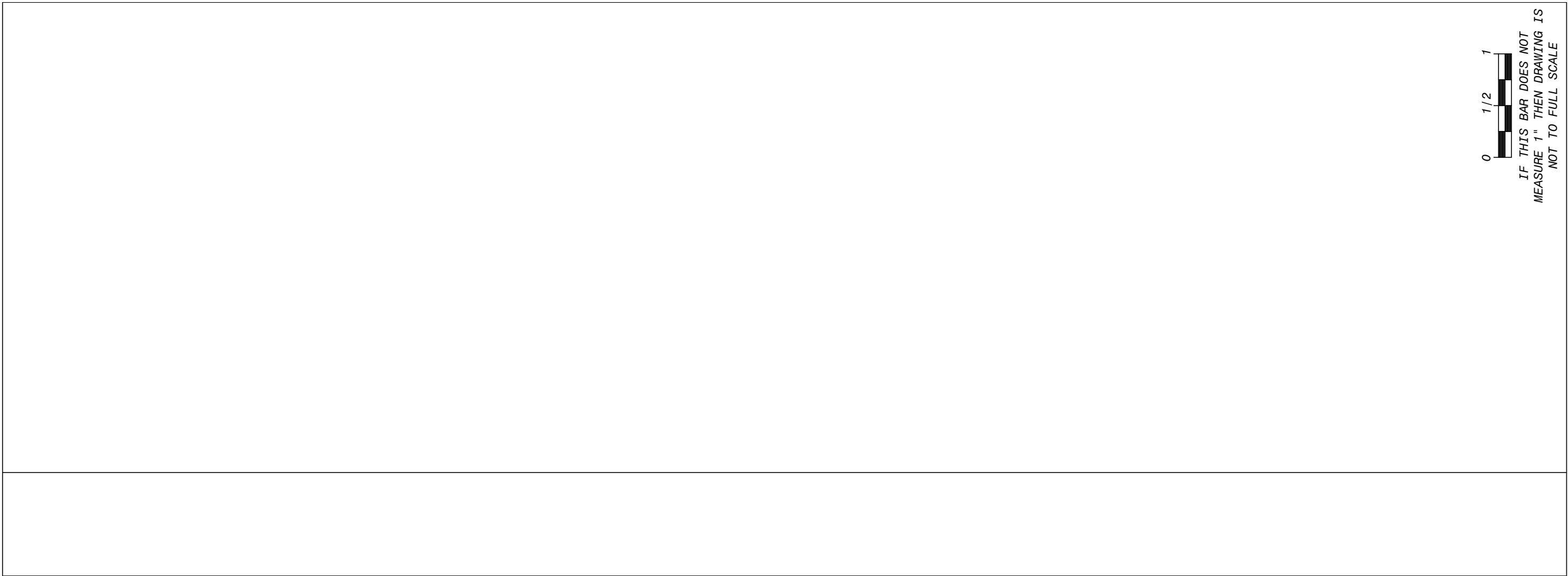
6 NEW UNIVENT ELEVATION @ LIBRARY (CONDITION: FINTUBE ON BOTH SIDES)
SCALE: 1/2" = 1'-0"



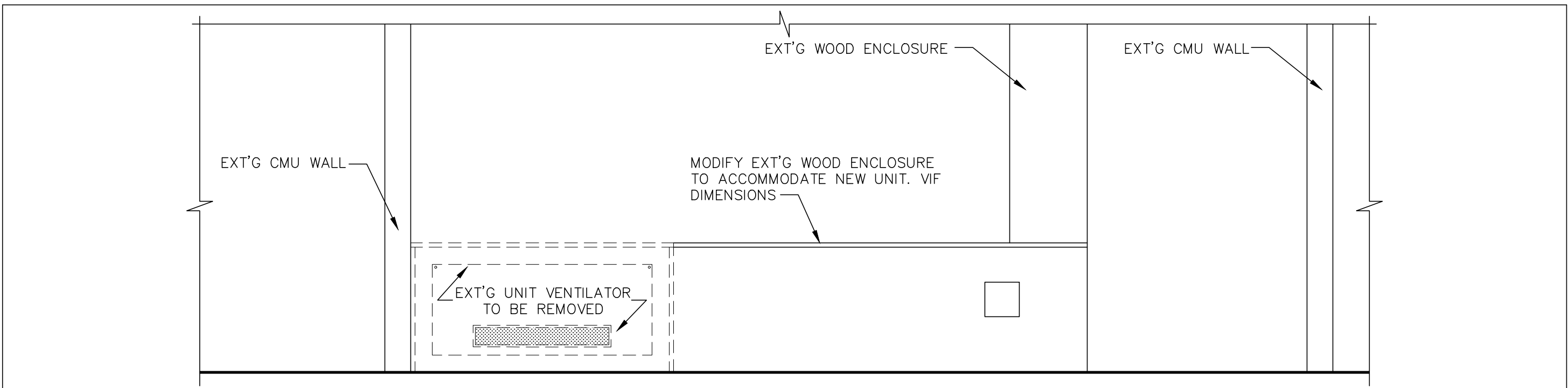
5 NEW UNIVENT ELEVATION AT TES, WHES @ PRINCIPAL'S OFFICE (CONDITION: CASEWORK ONE SIDE)
SCALE: 1/2" = 1'-0"



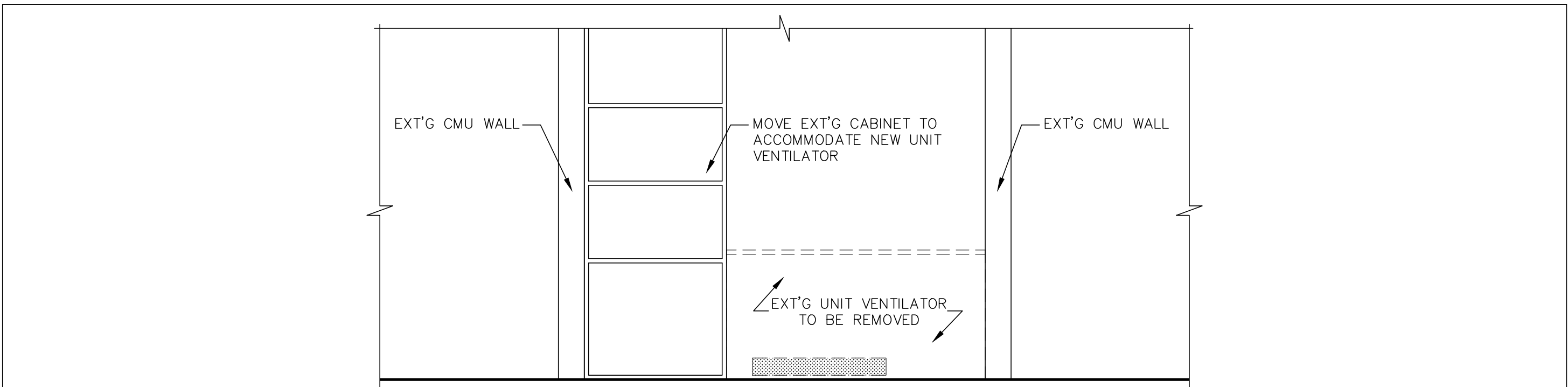
4 NEW UNIVENT ELEVATION AT TES, WHES @ ASST. PRINCIPAL'S OFFICE
SCALE: 1/2" = 1'-0"



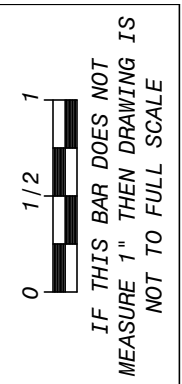
3 EXISTING UNIVENT REMOVAL ELEVATION AT TES, WHES @ LIBRARY (CONDITION: FINTUBE ON BOTH SIDES)
SCALE: 1/2" = 1'-0"



2 EXISTING UNIVENT REMOVAL ELEVATION AT TES, WHES @ PRINCIPAL'S OFFICE (CONDITION: CASEWORK ONE SIDE)
SCALE: 1/2" = 1'-0"



1 EXISTING UNIVENT REMOVAL ELEVATION AT TES, WHES @ ASST. PRINCIPAL'S OFFICE
SCALE: 1/2" = 1'-0"



IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

Drawn by	JR
Checked by	MS/JC
Project No.	43040
Scale	AS NOTED
Date	03-18-24

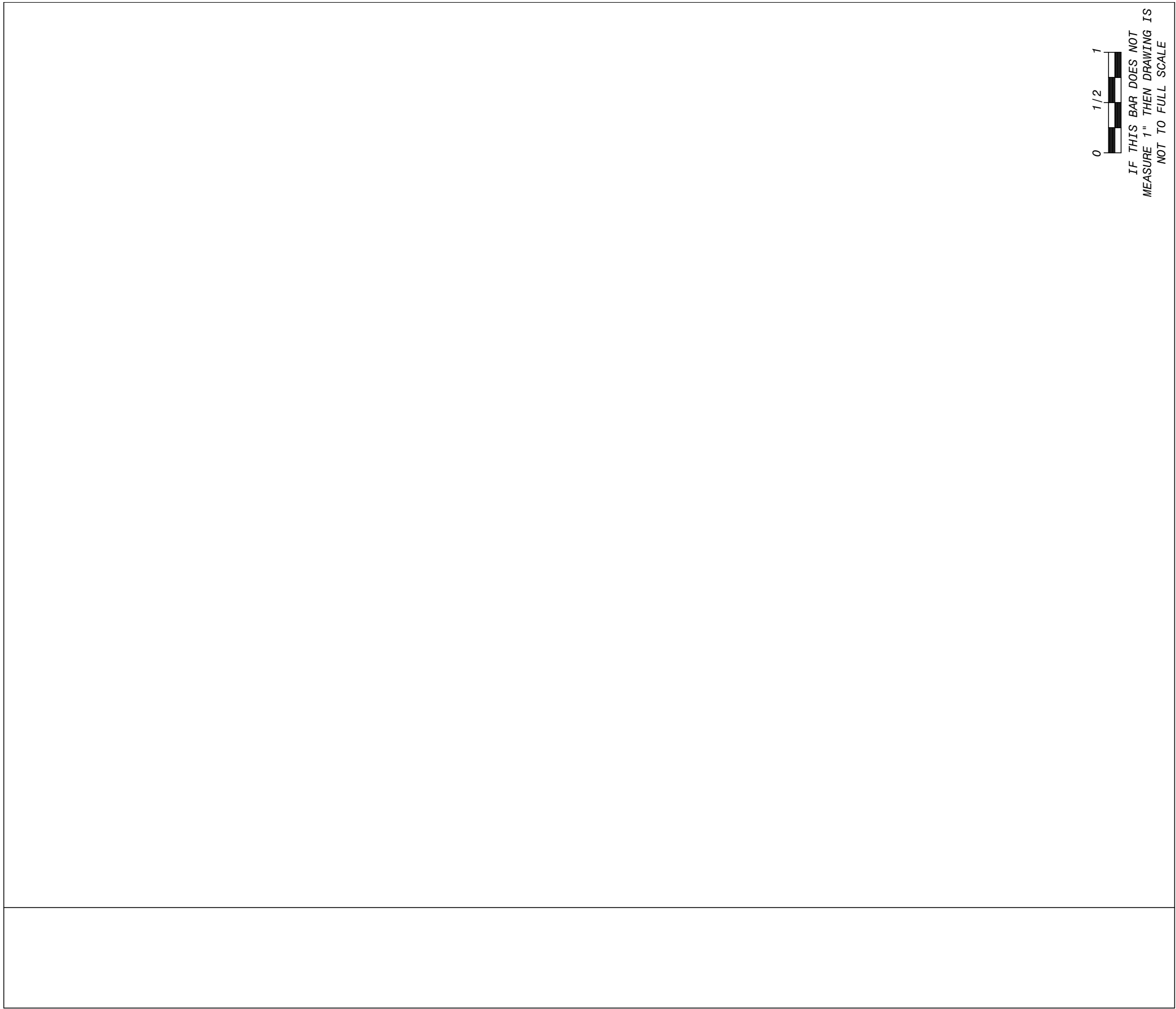
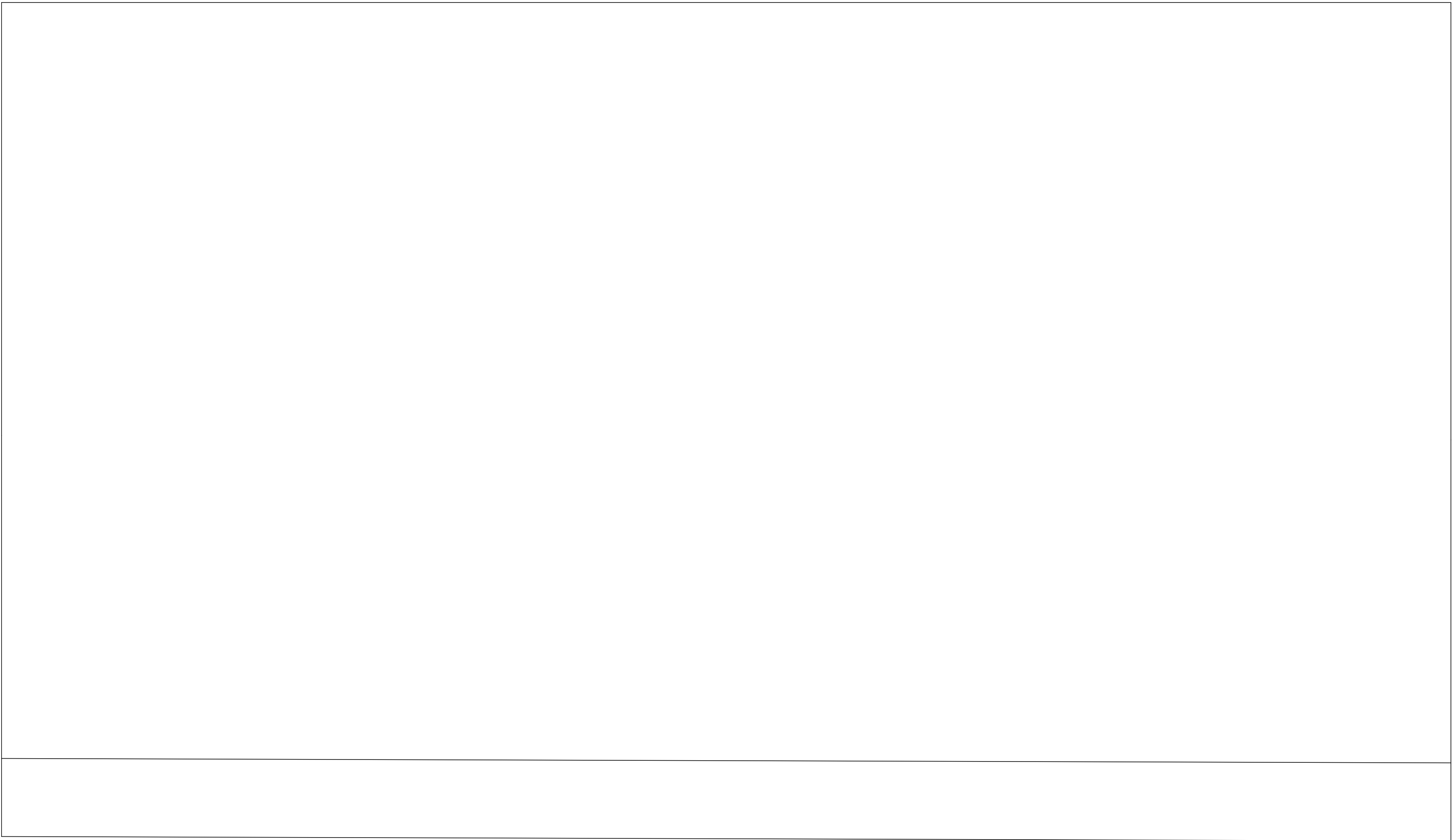
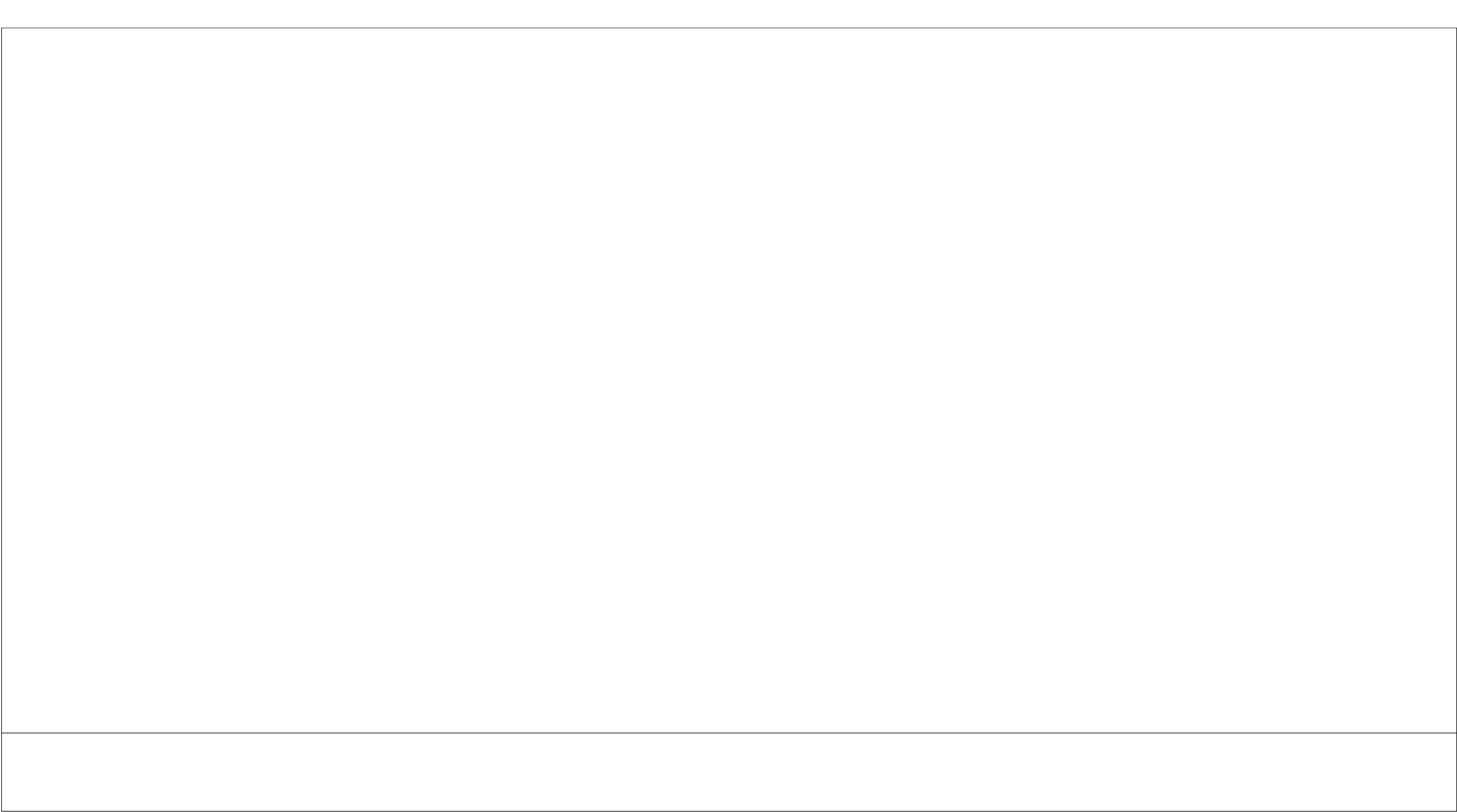
Mechanical & Electrical Engineer:	GREENMAN PEDERSEN, INC 400 BELLA BOULEVARD MONTEBELLO, NY 10601
Structural Engineer:	GREENMAN PEDERSEN, INC 400 BELLA BOULEVARD MONTEBELLO, NY 10601

UNIVENT REPLACEMENT AT STONY POINT, THEILLS AND WEST HAVERSTRAW ELEMENTARY SCHOOL	SPES SED# 50-02-01-08-0-014-012 TES SED# 50-02-01-06-0-025-018 WHES SED# 50-02-01-08-0-024-015
7 GIBNEY DRIVE STONY POINT, NY 10980	COUNTY OF ROCKLAND

MSA
MICHAEL SHILALE ARCHITECTS, L.L.P. 140 Park Avenue New York, NY 10022 Tel 945-705-6200 msa@msa.com

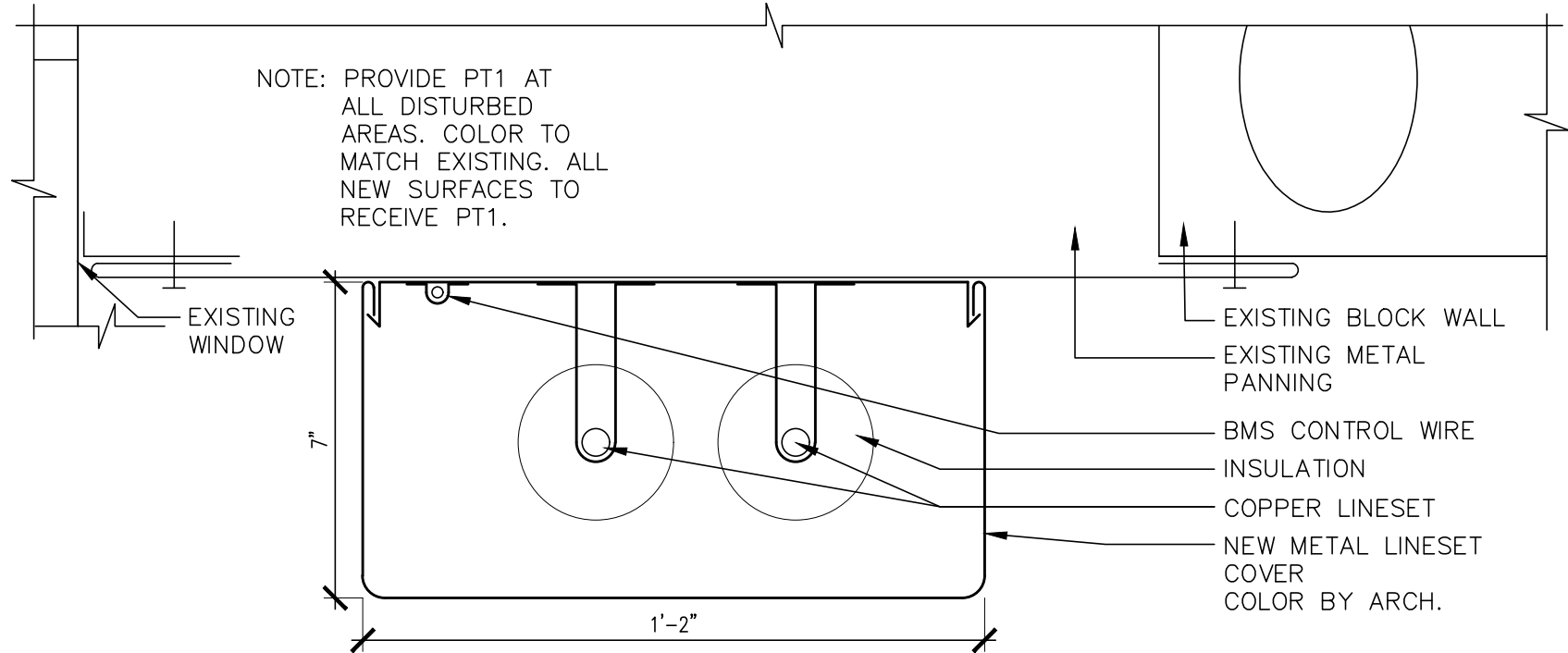
TYPICAL UV ELEVATIONS	A-603
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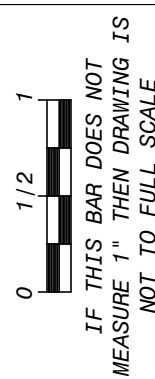


CODE	MATERIAL	MANUFACTURER	PRODUCT	CATALOG NO.	FINISH	COLOR	REMARKS
PT1	LATEX FINISH	BENJAMIN MOORE	REGAL AQUA PEARL	310	EGGSHELL	BY ARCH	(1) COAT PT4, (2) COATS PT1
PT4	LATEX PRIMER	BENJAMIN MOORE	LATEX PRIMER	273	FLAT	BY ARCH	
PT5	LATEX FINISH	BENJAMIN MOORE	DTM ACRYLIC	M29	SEMI-GLOSS	BY ARCH	(3) COAT PT6
BF	BLOCK FILLER	BENJAMIN MOORE	BLOCK FILLER	958-11			
ACT1	2'X2' CEILING TILE	USG	MARS CLIMAPLUS	86185HRC		WHITE	W/ NEW GRID SYSTEM. PROVIDE "A USG DX" GRID PROFILE

FINISH MATERIAL SCHEDULE



1 LINE SET ENCLOSURE
SCALE: 3" = 1'-0"



MECHANICAL & ELECTRICAL ENGINEER:
GREENMAN PEDERSEN, INC
400 BELLA BOULEVARD
MONTEBELLO, NY 10601

STRUCTURAL ENGINEER:
GREENMAN PEDERSEN, INC
400 BELLA BOULEVARD
MONTEBELLO, NY 10601

Drawn by: JR

Checked by: MS/JC

Project No.: 43040

Scale: AS NOTED

Date: 03-18-24

REG. EXP. DATE: 12-31-25

No. | Date | Revisions

UNIVENT REPLACEMENT AT
STONY POINT, THIELS
AND WEST HAVERSTRAW
ELEMENTARY SCHOOL
SPES SED# 50-02-01-08-0-014-012
TES SED# 50-02-01-06-0-025-018
WHES SED# 50-02-01-08-0-024-015
7 CURNER DRIVE, STONY POINT, NY 10980
COUNTY OF ROCKLAND



INTERIOR
DETAILS

Drawing No.
A-610

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1. SPECIAL PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR SO THAT EQUIPMENT ON THE APPLICATION AND ITS INSTALLATION WILL NOT AFFECT THE FOLLOWING:

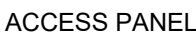
- EGRESS TO AND FROM THE BUILDING FIRE SAFETY OR CREATE A FIRE HAZARD
- STRUCTURAL SAFETY OF THE BUILDING.
- ACCUMULATION OF DUST AND DEBRIS. THE CONTRACTOR SHALL LEAVE THE SITE BROOM CLEAN EACH DAY.

2. ASBESTOS MUST FIRST BE INVESTIGATED AND VERIFIED IN FIELD BEFORE ANY DEMOLITION OR CONSTRUCTION WORK TO BE PERFORMED. ASBESTOS FREE MUST BE CERTIFIED FOR ALL HVAC EQUIPMENT, DUCTWORK, AND ALL PIPING INSULATION.
3. CONSTRUCTION WORK SHALL BE CONFINED TO WORK AREAS NOTED ON THE DRAWINGS AND SHALL INVOLVE TEMPORARY INTERRUPTION OF HEATING, WATER AND ELECTRIC SERVICES TO THE BUILDING SYSTEMS ONLY AS SCHEDULED WITH NEW YORK CITY.
4. FIRE SAFETY: ALL BUILDING MATERIALS STORED IN CONSTRUCTION AREA, AND/OR IN ANY AREA OF THE BUILDING ARE TO BE SECURED IN A LOCKED AREA. ACCESS TO SUCH AREAS TO BE CONTROLLED BY THE FACILITY AND/OR GENERAL CONTRACTOR.
5. CONTRACTOR SHALL PROVIDE BARRICADES AROUND WORK AREAS AS REQUIRED TO PREVENT UNAUTHORIZED PERSONS FROM ENTERING THEREIN.
6. THE CONTRACTOR SHALL SUBMIT SAFETY PLAN FOR CONSTRUCTION MANAGER'S APPROVAL.
7. CONFINED SPACES: ALL WORK WITHIN CONFINED SPACES SHALL BE CONDUCTED IN ACCORDANCE WITH OSHA REGULATIONS. THE BUILDING 'E' TUNNEL LEVEL AND THE 'DEEP SIX' TUNNEL HAVE ONLY ONE ENTRANCE/EXIT AND SHALL BE CONSIDERED CONFINED SPACES.

1. DEMOLITION/RELOCATIONS: CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AND RELOCATION'S OF SERVICES, EQUIPMENT AND MATERIAL RELATING TO HIS/HER RESPECTIVE TRADE. INCLUDE IN BID THE COST TO PROVIDE DEMOLITION OF ALL ELECTRICAL EQUIPMENT AND SYSTEMS ASSOCIATED WITH THE RENOVATION WORK. ALL DEMOLITION WORK SHALL COORDINATE WITH OWNER.

- WHERE EXISTING WALLS, FLOORS OR CEILINGS ARE REMOVED OR PENETRATED, AND WHERE EXISTING END WALLS OF THE BUILDING ARE POINTS OF CONNECTION OF ADDITIONS, ALL SERVICES, PIPING, CONDUIT, CONTROL AND/OR SWITCH DEVICES, LIGHTS, OR OTHER HVAC, PLUMBING, FIRE PROTECTION OR ELECTRICAL EQUIPMENT SHALL BE REMOVED (AND/OR RELOCATED WHERE THEY MUST REMAIN IN SERVICE, OR SERVICE AREAS BEYOND THE IMMEDIATE WORK). CONTRACTOR SHALL FIELD VERIFY CONDITIONS AT THE SITE.
3. PRIOR TO DEMOLITION CONTRACTOR SHALL REVIEW WITH OWNER ALL MATERIALS TO BE REMOVED. SHOULD THE OWNER OPT TO KEEP ANY MATERIALS THE CONTRACTOR SHALL REMOVE AND DELIVER THE PARTS TO THE OWNER ON THE SITE WHERE SO DIRECTED. OTHERWISE ALL DEMOLISHED OR REMOVED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE AND BE DISPOSED OF IN A LEGAL MANNER.
4. DEMOLITION SHALL INCLUDE REMOVAL OF ALL PARTS AND PIECES IN THEIR ENTIRETY BACK TO POINTS INDICATED OR IF NOT INDICATED BACK TO THEIR POINT OF SOURCE. REMOVE CONDUCTORS FROM REMAINING CONDUITS WHERE IT IS INDICATED. WHERE CONDUCTORS REMAINED IN CONDUITS-DISCONNECT, ISOLATE AND CAPPED THEM TO ENSURE SAFETY AND PROTECTION. WHERE CONDITIONS PROHIBIT TOTAL REMOVAL OF THE WORK, THE REMAINING PORTION SHALL BE CUT FLUSH WITH THE SURROUNDING SURFACE AND BE CAPPED, PLUGGED OR SEALED AND THE SURROUNDING SURFACE SHALL BE REFINISHED IN AN APPROVED MANNER.
5. MAINTAIN EXISTING UTILITIES INDICATED OR REQUIRED TO REMAIN, KEEP IN SERVICE, AND PROTECT AGAINST DAMAGE DURING DEMOLITION OPERATIONS. DO NOT INTERRUPT EXISTING UTILITIES SERVING OCCUPIED OR USED FACILITIES, EXCEPT WHEN SCHEDULED WITH THE OWNER.
6. DO NOT REMOVE EXISTING STRUCTURAL WORK. DO NOT REMOVE OPERATIONAL ELEMENTS AND SAFETY-RELATED COMPONENTS IN A MANNER RESULTING IN A REDUCTION OF CAPACITIES TO PERFORM IN THE MANNER INTENDED OR RESULTING IN DECREASED OPERATIONAL LIFE, INCREASED MAINTENANCE, OR DECREASED SAFETY.
7. REMOVALS, DISCONNECTIONS, AND RELOCATIONS SHALL BE PERFORMED BY WORKMEN SKILLED IN THE TRADE INVOLVED AND SHALL BE EMPLOYED BY A CONTRACTOR LICENSED IN THE TRADE INVOLVED. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ACCEPTED TRADE PRACTICES.
8. PROVIDE ADEQUATE TEMPORARY SUPPORT FOR WORK TO KEEP, TO PREVENT FAILURE. DO NOT ENDANGER OTHER WORK.
9. PROTECTION: PROVIDE ADEQUATE PROTECTION WHERE REQUIRED FOR THE PRESENT BUILDING AND ITS CONTENTS. TEMPORARY DUSTPROOF BARRIERS AND BARRICADES SHALL BE ERECTED WHERE REQUIRED FOR PROTECTION OF PERSONNEL, PROTECTION FROM DUST AND DIRT, FOR SECURITY, FIRE AND WEATHER PROTECTIVE REASONS. CONTRACTOR SHALL TAKE EVERY PRECAUTION AGAINST FIRE BY EMPLOYING FIRE DEPARTMENT TYPE HOSES AND PORTABLE FIRE EXTINGUISHERS AS REQUIRED BY OSHA AND/OR THE OWNER'S INSURANCE UNDERWRITER.
10. USE TEMPORARY ENCLOSURES, OR OTHER SUITABLE METHODS TO LIMIT DUST AND DIRT RISING AND SCATTERING TO LOWEST PRACTICAL LEVEL. COMPLY WITH GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.

11. ALL EXISTING EQUIPMENT REQUIRED TO BE REUSED SHALL BE CLEANED, RECONDITIONED, CALIBRATED AND ADJUSTED. IN ALL INSTANCES WHERE CONTRACTOR FINDS THAT EXISTING EQUIPMENT IS DEFECTIVE TO THE POINT WHERE IT CANNOT BE PROPERLY RESTORED, AND WILL NOT OPERATE PROPERLY, HE SHALL REPORT THE SPECIFIC INSTRUMENTS OR EQUIPMENT TO THE OWNER/ENGINEER FOR DIRECTIONS.
12. TEMPORARY SHUTDOWNS OF SERVICE OF EXISTING ELECTRICAL, HEATING, AIR CONDITIONING, AND VENTILATION SYSTEMS SHALL BE PERFORMED WITH A MINIMUM OF DISRUPTION OF SERVICE, HELD TO AN ABSOLUTE MINIMUM DURATION OF TIME, AND ONLY AFTER HAVING NOTIFIED THE BUILDING OPERATIONS MANAGEMENT AT LEAST TWO WEEKS IN ADVANCE AND HAVING RECEIVED THEIR PERMISSION IN WRITING. AT LEAST TWO WEEKS PRIOR TO THE SCHEDULED SHUTDOWN, COMMUNICATIONS SHALL BE RELAYED THROUGH THE PROJECT OFFICER.
13. ELECTRICAL CONTRACTOR SHALL RING OUT AND IDENTIFY ALL CIRCUITS REMAINING IN CONTRACT AREA, AFTER DEMOLITION. REMOVE ALL CIRCUITS BACK TO POINT OF SOURCE. MARK PANEL CIRCUITS NO LONGER IN USE "SPARE".



VOLUME DAMPER



RETURN OR EXHAUST GRILLE



— — — — —



1. THE FULL DEMOLITION SCOPE IS NOT SPECIFICALLY SHOWN ON THE DRAWINGS. PROVIDE DEMOLITION WORK CONSIDERED NECESSARY FOR THE COMPLETION OF THE WORK. SURVEY THE PREMISES TO ACCURATELY DETERMINE THE FULL SCOPE OF THE REMOVAL AND DISPOSAL WORK. NO ADDITIONAL PAYMENTS WILL BE MADE DUE TO CONTRACTOR'S FAILURE TO ADEQUATELY SURVEY THE PREMISES.

2. CONTRACTOR TO REMOVE AND PROPERLY DISPOSE OF EQUIPMENT FROM SITE INDICATED FOR DEMOLITION, UNLESS OTHERWISE DIRECTED BY THE AUTHORITY.
3. THE MECHANICAL CONTRACTOR SHALL PROVIDE POWER SUPPLIES, ELECTRICAL WIRING AND CONDUIT FOR POWER AND CONTROL TO PNEUMATIC OR MOTORIZED DAMPER AND VALVE OPERATORS, THERMOSTATS, AUTOMATIC CONTROL INSTRUMENTATION. COORDINATE WITH THE ELECTRICAL CONTRACTOR TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM.
4. FOR POWERED EQUIPMENT INTENDED FOR DEMOLITION, THE CONTRACTOR SHALL COORDINATE SHUT-OFF POWER SUPPLIES AND DISCONNECT SWITCHES ASSOCIATED WITH THE EQUIPMENT TO BE DISCONNECTED. RECONNECT ELECTRICAL POWER TO NEW EQUIPMENT AFTER INSTALLATION. PROVIDE ELECTRICAL MATERIAL AND LABOR AS REQUIRED FOR A COMPLETE AND FUNCTIONAL INSTALLATION.
5. TEMPORARY SHUTDOWNS OF SERVICE OF EXISTING ELECTRICAL, STEAM, HEATING, AIR CONDITIONING AND VENTILATION SYSTEMS SHALL BE PERFORMED WITH A MINIMUM OF DISRUPTION OF SERVICE, HELD TO AN ABSOLUTE MINIMUM DURATION OF TIME, AND ONLY AFTER HAVING NOTIFIED THE BUILDING OPERATIONS MANAGEMENT AT LEAST TWO WEEKS IN ADVANCE AND HAVING RECEIVED THEIR PERMISSION IN WRITING, AT LEAST TWO WEEKS PRIOR TO THE SCHEDULED SHUTDOWN. COMMUNICATIONS SHALL BE RELAYED THROUGH THE OWNER'S REPRESENTATIVE.
6. LOAD CALCULATIONS HAVE BEEN PERFORMED IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING STANDARDS, SPECIFICALLY ASHRAE HANDBOOK - FUNDAMENTALS.
7. CONTRACTOR SHALL PERFORM ALL TESTS AND STARTUP PROCEDURES FOR EACH VENTILATION SYSTEM IN ACCORDANCE WITH THE MANUFACTURER AND SPECIFICATIONS.
8. ALL THERMOSTATIC CONTROLS SHALL BE TESTED FOR FUNCTIONALITY AND PROPER OPERATION AS REQUIRED BY NYS ECC.
9. ELECTRIC MOTORS SHALL COMPLY WITH THE REQUIREMENTS OF THE ENERGY POLICY ACT OF 1992 AS SHOWN IN ASHRAE 90.1-2013 TABLE #10.8.
10. IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO PROVIDE CONTROL WIRING. THE MECHANICAL CONTRACTOR SHALL ALSO PROVIDE ALL POWER SUPPLIES, ELECTRICAL WIRING AND CONDUIT FOR POWER AND CONTROL TO ALL VALVE OPERATORS, THERMOSTATS AND AUTOMATIC CONTROL INSTRUMENTATION. ELECTRICAL CONTRACTOR TO INSTALL AND ROUTE POWER WIRING FOR EACH MECHANICAL SYSTEM.
11. MOUNTING HEIGHTS FOR ASSOCIATED MECHANICAL THERMOSTAT CONTROLS, ETC. SHALL MEET THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDING AND FACILITIES. MOUNTING HEIGHTS FOR ALL THERMOSTATS, ETC SHALL BE 48" AFF.

A. SITE (BASED ON NEAREST AVAILABLE DATA: ASHRAE 2013 HANDBOOK CLIMATIC DESIGN INFORMATION, WESTCHESTER CO, NY):

1. 41.07°N, 73.71°W
2. ELEVATION: 397 FT
3. CLIMATE ZONE 5A.

- B. OUTSIDE DESIGN CONDITIONS (BASED ON NEAREST AVAILABLE DATA: ASHRAE 2013 CLIMATIC DESIGN INFORMATION, WESTCHESTER CO, NY):
 - 1. HEATING DB (99.6%): 9.0°F DB
 - 2. COOLING DB/MCWB (1%): 86.5°F DB, 72.1°F WB
- C. INSIDE DESIGN CONDITIONS (PER NYSED MANUAL OF PLANNING STANDARDS §602.6 B. AND 2015 ASHRAE HANDBOOK CH 7 TABLE 6):
 - 1. HEATING INDOOR SETPOINT: 72°F
 - 2. COOLING INDOOR SETPOINT: 78°F, 60% RH
- D. ACOUSTICS (PER NYSED MANUAL OF PLANNING STANDARDS, TABLE S304-1):
 - 1. DESIGN REQUIREMENTS FOR HVAC SYSTEM NOISE FOR CLASSROOMS 7-12: RC 25-30.
- E. FILTRATION: MERV 13 (PER NYSED MANUAL OF PLANNING STANDARDS).
- F. DEMAND CONTROLLED VENTILATION NOT REQUIRED PER ECQNY'S C403.2.6.1 EXCEPTION #3.

1. REFER TO SEQUENCE OF OPERATION SPECIFICATION.

1. PROVIDE LABOR, MATERIALS, TOOLS, MACHINERY, EQUIPMENT, AND SERVICES NECESSARY TO COMPLETE THE HVAC WORK UNDER THIS CONTRACT. ALL SYSTEMS AND EQUIPMENT SHALL BE COMPLETE IN EVERY ASPECT AND ALL ITEMS OF MATERIAL, EQUIPMENT AND LABOR SHALL BE PROVIDED FOR A FULLY OPERATIONAL SYSTEM AND READY FOR USE. COORDINATE THE WORK WITH THE WORK OF THE OTHER SUBCONTRACTORS IN ORDER TO RESOLVE ALL CONFLICTS WITHOUT IMPEDING THE JOB PROGRESS.

3. EXAMINE THE ARCHITECTURAL, STRUCTURAL, AND ELECTRICAL DRAWINGS AND OTHER DIVISIONS, AND SECTIONS OF THE SPECIFICATIONS IN ORDER TO DETERMINE THE EXTENT OF THE WORK REQUIRED TO BE COMPLETED UNDER THIS DIVISION. FAILURE TO EXAMINE ALL THE CONTRACT DOCUMENTS FOR THIS PROJECT WILL NOT RELIEVE THIS CONTRACTOR OF HIS RESPONSIBILITIES TO PERFORM THE WORK REQUIRED FOR A COMPLETE FULLY OPERATIONAL AND SATISFACTORY INSTALLATION.
3. START-UP SERVICES SHALL BE INCLUDED.
4. ALL SYSTEMS, EQUIPMENT AND SERVICES SPECIFIED HEREIN SHALL BE PROVIDED COMPLETE AND READY FOR USE. ALL EQUIPMENT, DUCTWORK, PIPING, DAMPERS, OUTLETS ARE NEW, FURNISHED AND INSTALLED BY THIS CONTRACTOR, UNLESS OTHERWISE NOTED.
5. DUCTWORK AND PIPING ARE SHOWN DIAGRAMMATICALLY AND DO NOT SHOW ALL OFFSETS, DROPS AND RISERS OF RUNS. THE CONTRACTOR SHALL ALLOW IN HIS PRICE FOR ROUTING OF DUCTWORK AND PIPING TO AVOID OBSTRUCTIONS. EXACT LOCATIONS ARE SUBJECT TO APPROVAL OF ENGINEER. COORDINATION WITH THE EXISTING SERVICES, INCLUDING THOSE OF OTHER SUBCONTRACTORS IS REQUIRED. PROVIDE COORDINATION DRAWINGS SHOWING ALL TRADES WORK AND EXISTING CONDITION.
6. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES INVOLVING EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.
7. VERIFY FINAL LOCATIONS FOR ROUGH WORK WITH FIELD MEASUREMENTS AND WITH THE REQUIREMENTS OF THE ACTUAL EQUIPMENT BEING CONNECTED.
8. PROVIDE A COMPLETE SYSTEM OF VIBRATION ISOLATION FOR EACH ITEM OF HVAC EQUIPMENT AND APPARATUS AS SPECIFIED HEREIN, AS SHOWN ON THE DRAWINGS AND AS NEEDED FOR A COMPLETE AND PROPER INSTALLATION.
9. THE FINAL ACCEPTANCE WILL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT TO BALANCE THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATES OF INSPECTION AND APPROVAL.
10. CONTRACTOR IS RESPONSIBLE TO ATTEND COORDINATION MEETING WITH ALL TRADES TO DETERMINE LOCATIONS OF DEVICES AND DISCOVER IF ANY CONFLICTS MAY EXIST.
11. ALL PIPING EXPOSED OR INSULATED, DUCTWORK, CONDUIT AND CONTROL WIRING SHALL BE CONCEALED IN CEILINGS, WALLS AND FLOORS OR CONCEALED IN NEW SOFFITS OR FRAMED ENCLOSURES.
12. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE 2020 NYS BUILDING CODE, 2020 NYS MECHANICAL CODE, AND 2020 NYS ENERGY CONSERVATION CONSTRUCTION CODE, AND ALL GOVERNING LOCAL CODES, LAWS, AND REGULATIONS.
13. PROVIDE A COMPLETE OPERABLE SYSTEM IN A WORKMANLIKE MANNER. OUTLINE DESCRIPTION AND EQUIPMENT; DO NOT LIMIT CONTRACTOR'S LIABILITY FOR THE INSTALLATION OF A COMPLETE OPERABLE SYSTEM.
14. VISIT THE SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS THAT MAY AFFECT THE WORK. NO ADDITIONAL COMPENSATION WILL BE DUE FOR FAILURE TO DO SO.
15. CONTRACTOR TO BE RESPONSIBLE FOR REVIEWING THE FULL SET OF BID DOCUMENTS TO BE AWARE OF THE TOTAL SCOPE PRIOR TO SUBMITTING BID. ALL WORK SHOWN ON THE DRAWINGS NOT SPECIFICALLY CALLED OUT AS EXISTING SHALL BE CONSIDERED WORK TO BE PERFORMED UNDER THIS CONTRACT.
16. BIDDERS, BEFORE SUBMITTING A PROPOSAL, SHALL VISIT AND CAREFULLY EXAMINE THE SITE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND WITH THE DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THIS WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE. LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED. NO ALLOWANCE WILL SUBSEQUENTLY BE MADE TO THE CONTRACTOR BY REASON OF ANY ERROR DUE TO THE CONTRACTOR'S NEGLECT TO COMPLY WITH THIS REQUIREMENT. REPORT ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS TO THE ENGINEER.
17. BEFORE COMMENCING WORK, THE CONTRACTOR SHALL FILE ALL REQUIRED CERTIFICATES OF INSURANCE WITH THE BUILDING DEPARTMENT. OBTAIN ALL REQUIRED PERMITS AND PAY ALL FEES REQUIRED.
18. THE CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING REQUIRED TO COMPLETE THE WORK OR TO MAKE ITS PARTS FIT TOGETHER PROPERLY WITHOUT COMPROMISING THE QUALITY OF THE WORK. RESTORE WALLS AND CEILINGS TO MATCH EXISTING.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING ALL WORK DURING CONSTRUCTION AGAINST DAMAGE, BREAKAGE, COLLAPSE, DISTORTIONS, AND OFF ALIGNMENTS ACCORDING TO CODES AND STANDARDS OF GOOD PRACTICE.
20. THE TERM "FINISH FLOOR" SHALL MEAN THE NORMAL FINISHED SURFACE OF THE FLOOR LEVEL. ALL ELEVATIONS GIVEN FOR EXISTING BUILDINGS ARE TO FINISHED FLOOR. THE CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS FOR EXISTING STRUCTURES PRIOR TO THE COMMENCEMENT OF WORK.
21. THE CONTRACTOR SHALL PATCH AND REPAIR ALL FLOORS, WALLS, CEILINGS, ETC. DAMAGED OR EXPOSED DUE TO WORK OR REMOVALS AND FINISH TO MATCH ADJOINING SURFACES.
22. WHERE MANUFACTURERS NAMES AND PRODUCT NUMBERS ARE INDICATED ON THE DRAWINGS IT SHALL BE CONSTRUED TO MEAN THE ESTABLISHING OF QUALITY AND PERFORMANCE STANDARDS OF SUCH ITEMS. ALL OTHER PRODUCTS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE THEY SHALL BE DEEMED EQUAL.
23. DRAWINGS ARE NOT TO BE SCALED. USE DIMENSIONS ONLY. ALL DIMENSIONS AND CONDITIONS SHOWN AND ASSUMED ON THE DRAWINGS MUST BE VERIFIED AT THE SITE BY THE CONTRACTOR BEFORE ORDERING ANY MATERIAL OR DOING ANY WORK. ANY DISCREPANCIES IN THE DRAWINGS AND SPECIFICATIONS SHALL BE REPORTED TO THE ENGINEER. NO CHANGE IN DRAWINGS OR SPECIFICATIONS IS PERMISSIBLE WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.
24. ALL WORK ON THESE DRAWINGS SHALL BE CONSIDERED NEW WORK WHETHER STATED OR NOT EXCEPT WHERE SPECIFICALLY NOTED AS "EXISTING TO REMAIN".
25. DETAILS NOT SHOWN OR SPECIFIED, BUT NECESSARY FOR PROPER AND ACCEPTABLE CONSTRUCTION, INSTALLATION OR OPERATION OF ANY PART OF THE WORK AS DETERMINED BY THE ENGINEER, SHALL BE INCLUDED IN THE WORK THE SAME AS IF HEREIN SPECIFIED OR INDICATED.
26. ALL WORK SHALL BE INSTALLED SO THAT ALL PARTS REQUIRED ARE READILY ACCESSIBLE FOR INSPECTION, OPERATION, MAINTENANCE AND REPAIR.
27. CONTRACTOR SHALL KEEP WORK SITE FREE FROM DEBRIS AND ACCUMULATED REFUSE, AND SHALL HAVE SOLE RESPONSIBILITY FOR PROTECTING ALL DANGEROUS AREAS FROM ENTRY BY UNAUTHORIZED PARTIES. WORK AREA WILL BE LEFT BROOM CLEAN AT THE END OF COMPLETION OF WORK AND UNTIL THE SPACE IS READY TO BE OCCUPIED.
28. PROVIDE BARRICADES AROUND WORK AREAS AS REQUIRED TO PREVENT UNAUTHORIZED PERSONS FROM ENTERING THEREIN.
29. THE WORD "PROVIDE" USED ON DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THIS PROJECT MEANS "FURNISH AND INSTALL". WHEN ONLY ONE PART OF ACTION IS REQUIRED, EITHER "FURNISH" OR "INSTALL" WILL BE USED ACCORDINGLY (TYP., U.O.W.N.).
30. ALL DISCONNECT SWITCHES, STARTERS, AND VARIABLE FREQUENCY DRIVES SHALL BE FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR.
31. PROVIDE OPERATING AND MAINTENANCE MANUALS FOR ALL EQUIPMENT SPECIFIED IN THE SCHEDULES ON THIS DRAWING TO THE BUILDING OWNER WITHIN 90 DAYS AFTER SYSTEM ACCEPTANCE.

ABBREVIATION:	DESCRIPTION:
A	AMPERE
AC	AIR CONDITIONING
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AMP	AMPERE
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING,

A	AMERICAN SOCIETY OF MECHANICAL ENGINEERING
AUX	AUXILIARY
BC	BRANCH CONTROLLER
BHP	BRAKE HORSEPOWER
BMS	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BD	BUILDING MANAGEMENT SYSTEM
BTU	BRITISH THERMAL UNIT
CFM	CUBIC FEET PER MINUTE
CB	COLD WATER
DB	DRY BULB
DDC	DIGITAL CONTROL
DEG, °	DEGREES
DP	DEW POINT
DWG	DRAWING
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EFF	EFFICIENCY
ESP	EXTERNAL STATIC PRESSURE
F	FAHRENHEIT
FA	FIRE ALARM
FC	FLEXIBLE CONNECTION
FD	FIRE DAMPER
FDD	FLOOR DRAIN IN
FLO	FULL LOAD AMPS
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FSD	COMBINATION FIRE/SMOKE DAMPER
FT	FEET
G	NATURAL GAS
GAL	GALLON
GALV	GALVANIZED
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HOA	HAND/OFF/AUTO
HWS	HEAT PUMP
HP	HOUR
HP	HORSEPOWER
HVAC	HEATING, VENTILATION, AND AIR CONDITIONING
HW	HOT WATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HZ	HERTZ
IEER	INTEGRATED ENERGY EFFICIENCY RATIO
IN	INCHES
KW	KILOWATTS
LxWxH	LENGTH BY WIDTH BY HEIGHT
LAT	LEAVING AIR TEMPERATURE
LB	POUND
LF	LINEAR FEET
LRA	LOCKED ROTOR AMPS
LWLT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	1,000 BTU/H
MCA	MINIMUM CIRCUIT AMPACITY
MHP	MINOR HORSEPOWER
MIN	MINIMUM, MINUTE
MM	MILLIMETER
MOP	MAXIMUM OVER-CURRENT PROTECTION
OAT	OUTSIDE AIR TEMPERATURE
OC	ON CENTER
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PH	PHASE
PRESS	PRESSURE
PSIA	POUNDS PER SQUARE INCH, ABSOLUTE
PSIG	POUNDS PER SQUARE INCH, GAUGE
QTY	QUANTITY
RAT	RETURN AIR
REQD	REQUIRED
REV	REVISION
RM	ROOM
RTU	ROOFTOP UNIT
S	SECONDS
SD	SMOKE DAMPER
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SENS	SENSIBLE
SF	SQUARE FEET
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
TEMP	TEMPERATURE
THK	THICK
TOD	TOP OF DUCT
TON	12,000 BTU/H COOLING CAPACITY
TYP	TYPICAL
UH	UNIT HEATER
V	VENT, VOLTS, OR VOLUME
VV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
VIRF	VELOCITY IN FIELD
VRF	VARIABLE REFRIGERANT FLOW
W	WATTS, WIDTH
WB	WET BULB
WC	WATER COLUMN

[illegible]

Drawn by	VF/AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

Mechanical & Electrical Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 202 SUFFERN, NY 10901 PHON. NO. : NYT-3300088.00
Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 202 SUFFERN, NY 10901

UNIVENT REPLACEMENT AT
STONY POINT, THIELLS,
WEST HAVESTRAW
ELEMENTARY SCHOOL

SED# 50-02-01-06-0-014-012
SED# 50-02-01-06-0-025-018
SED# 50-02-01-06-0-024-015

7 CUREN DR.
STONY POINT, NY 10980

STONY POINT
ROCLAND COUNTY

HSAA

MICHAEL SHILAE ARCHITECTS, L.L.P.

140 Park Avenue New City, NY 10956 Tel: 845-705-9200
www.hsaa.com

Drawing Title
**GENERAL NOTES AND
 ABBREVIATIONS**

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SUMMARY OF WORK STONY POINT:

THE WORK OF THIS PROJECT INCLUDES HVAC UPGRADES AT STONY POINT ELEMENTARY SCHOOL. PROVIDE MATERIALS AND SERVICES AS FOLLOWS. THE FOLLOWING IS NOT INTENDED TO BE A COMPLETE DESCRIPTION OF THE WORK; PERFORM THE WORK AS HEREINAFTER DESCRIBED IN THESE CONTRACT DOCUMENTS.

- A. REPLACE UNIT VENTILATORS THROUGHOUT THE BUILDING WHERE INDICATED. CONNECT ALL NEW UNIT VENTILATORS TO THE NEW VRF SYSTEM WITH NEWLY INSTALLED REFRIGERANT PIPING. UNIT VENTILATORS TO DX COOLING AND HEATING AND ALSO HYDRONIC HOT WATER HEATING COIL TO BE TIED IN AND CONTROLLED VIA SEPARATE THERMOSTAT . TYP. 50 TO BE TIED INTO EXISTING BMS SYSTEM.
- B. PROVIDE NINE (9) NEW CEILING CASSETTE HVAC UNITS WITH DX COOLING AND HEATING. CONNECTED TO NEW OR EXISTING FRESH AIR DUCTWORK WITH NEW THERMOSTATS. TO BE TIED INTO EXISTING BMS SYSTEM.
- B. PROVIDE EIGHT (8) NEW WALL HUNG HVAC UNITS WITH DX COOLING AND HEATING WITH NEW THERMOSTATS. TO BE TIED INTO EXISTING BMS SYSTEM.
- C. PROVIDE SEVEN (7) NEW DUCTLESS VRF OUTDOOR CONDENSING UNITS.
- D. PROVIDE AND INSTALL THREE (3) ROOFTOP HVAC UNITS. ONE (1) FOR THE LIBRARY, TIE INTO EXISTING DUCT WORK AND EXTEND NEW DUCTWORK INTO THREE ROOM. TWO (2) FOR THE GYM AND SUPPLY AND RETURN DUCTWORK ALL THREE NEW THERMOSTATS AND CONNECT TO BMS.
- E. LIBRARY SUPPLY DUCTWORK TO HAVE NEW HOT WATER COILS TO BE TIED INTO EXISTING HOT WATER SYSTEM. CONNECT TO NEW THERMOSTAT AND BMS.

SUMMARY OF WORK - THIELLS:

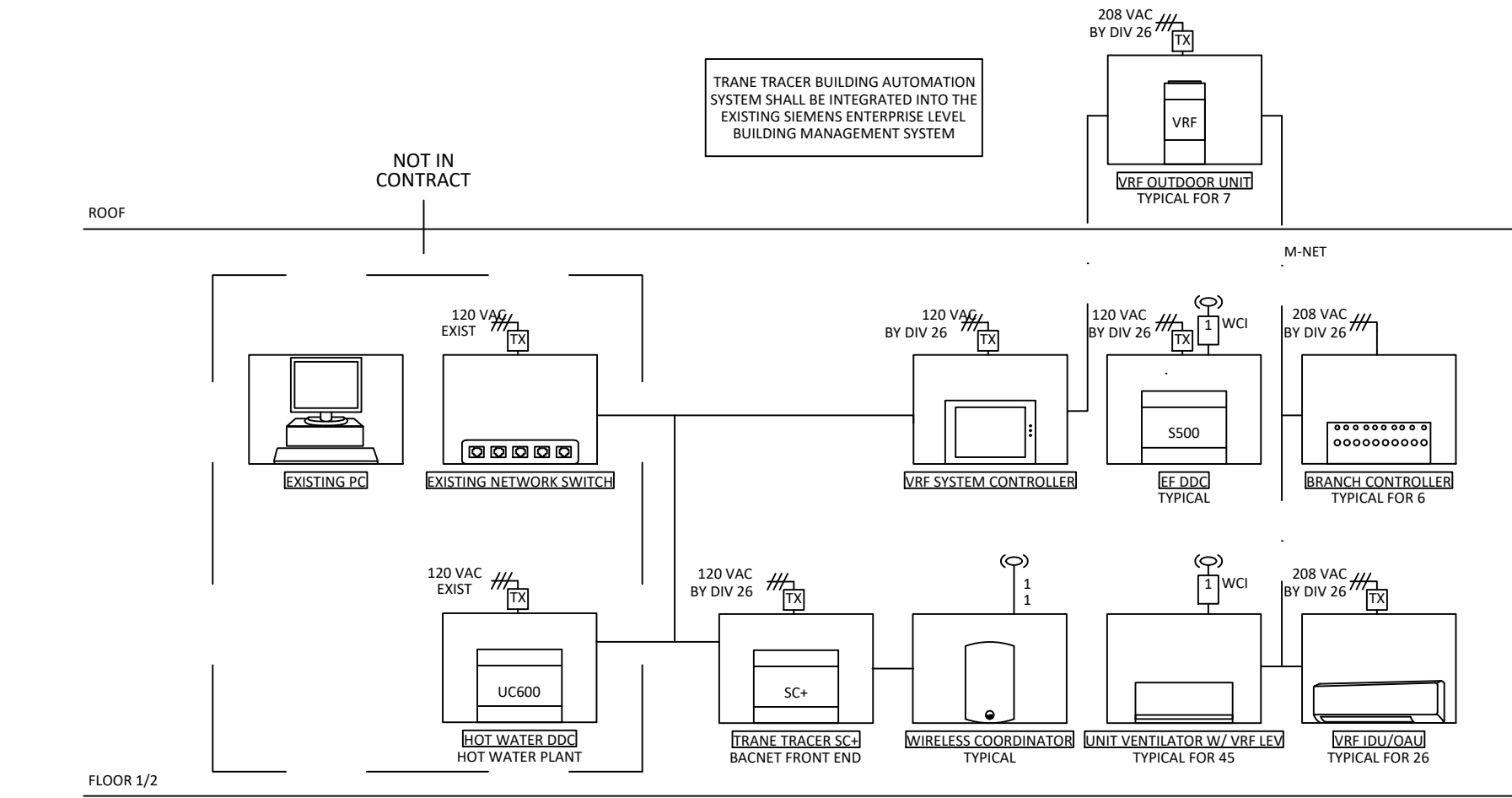
THE WORK OF THIS PROJECT INCLUDES HVAC UPGRADES AT THIELLS ELEMENTARY SCHOOL. PROVIDE MATERIALS AND SERVICES AS FOLLOWS. THE FOLLOWING IS NOT INTENDED TO BE A COMPLETE DESCRIPTION OF THE WORK; PERFORM THE WORK AS HEREINAFTER DESCRIBED IN THESE CONTRACT DOCUMENTS.

- A. REPLACE UNIT VENTILATORS THROUGHOUT THE BUILDING WHERE INDICATED. CONNECT ALL NEW UNIT VENTILATORS TO THE NEW VRF SYSTEM WITH NEWLY INSTALLED REFRIGERANT PIPING. UNIT VENTILATORS TO DX COOLING AND HEATING AND ALSO HYDRONIC HOT WATER HEATING COIL TO BE TIED IN AND CONTROLLED VIA SEPARATE THERMOSTAT . TYP. 51 TO BE TIED INTO EXISTING BMS SYSTEM.
- B. PROVIDE NINE (9) NEW CEILING CASSETTE HVAC UNITS WITH DX COOLING AND HEATING. CONNECTED TO NEW OR EXISTING FRESH AIR DUCTWORK WITH NEW THERMOSTATS. TO BE TIED INTO EXISTING BMS SYSTEM.
- B. PROVIDE EIGHT (8) NEW WALL HUNG HVAC UNITS WITH DX COOLING AND HEATING WITH NEW THERMOSTATS. TO BE TIED INTO EXISTING BMS SYSTEM.
- C. PROVIDE SEVEN (7) NEW DUCTLESS VRF OUTDOOR CONDENSING UNITS.

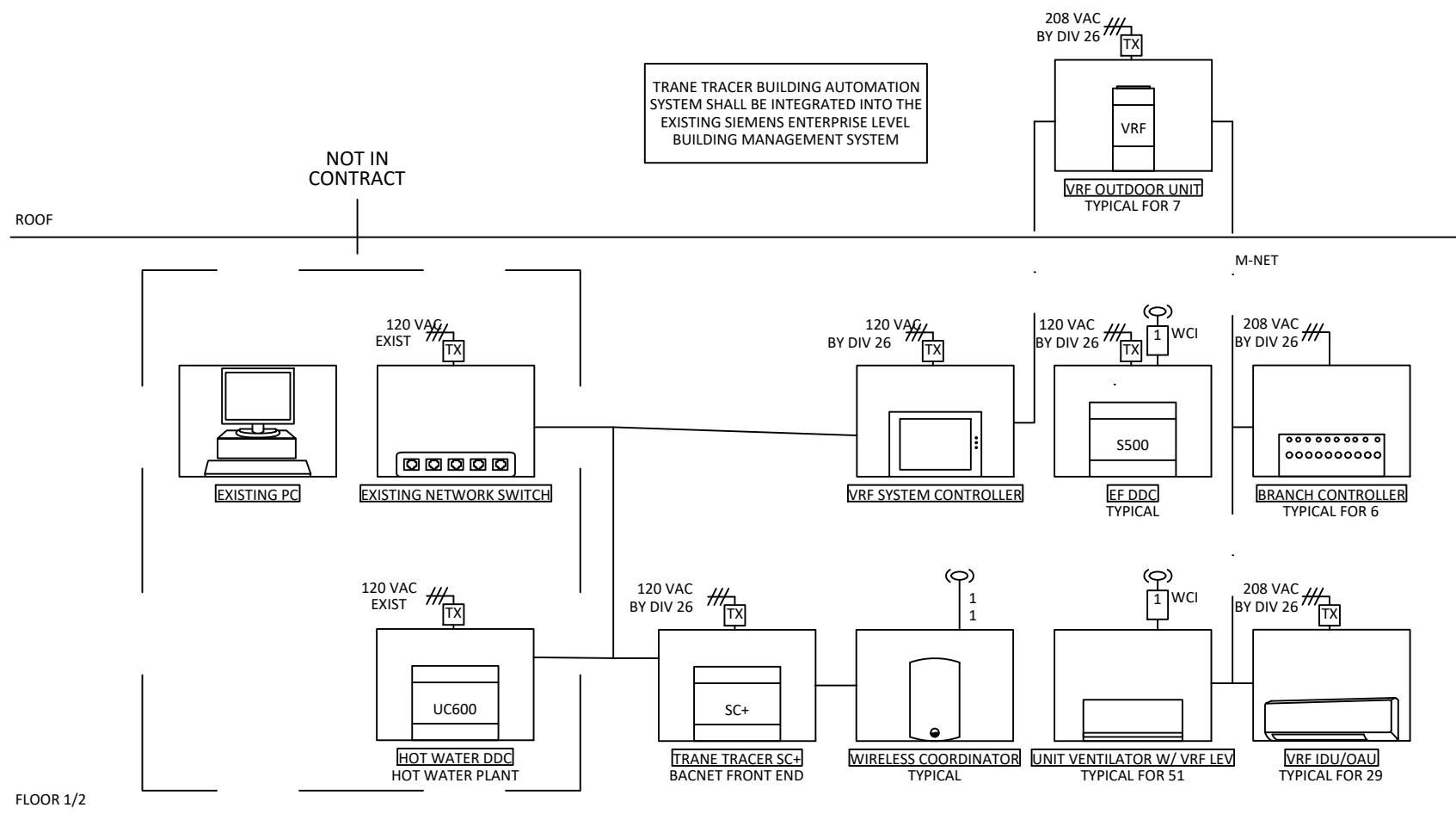
SUMMARY OF WORK WEST HAVERSTRAW:

THE WORK OF THIS PROJECT INCLUDES HVAC UPGRADES AT WEST HAVERSTRAW ELEMENTARY SCHOOL. PROVIDE MATERIALS AND SERVICES AS FOLLOWS. THE FOLLOWING IS NOT INTENDED TO BE A COMPLETE DESCRIPTION OF THE WORK; PERFORM THE WORK AS HEREINAFTER DESCRIBED IN THESE CONTRACT DOCUMENTS.

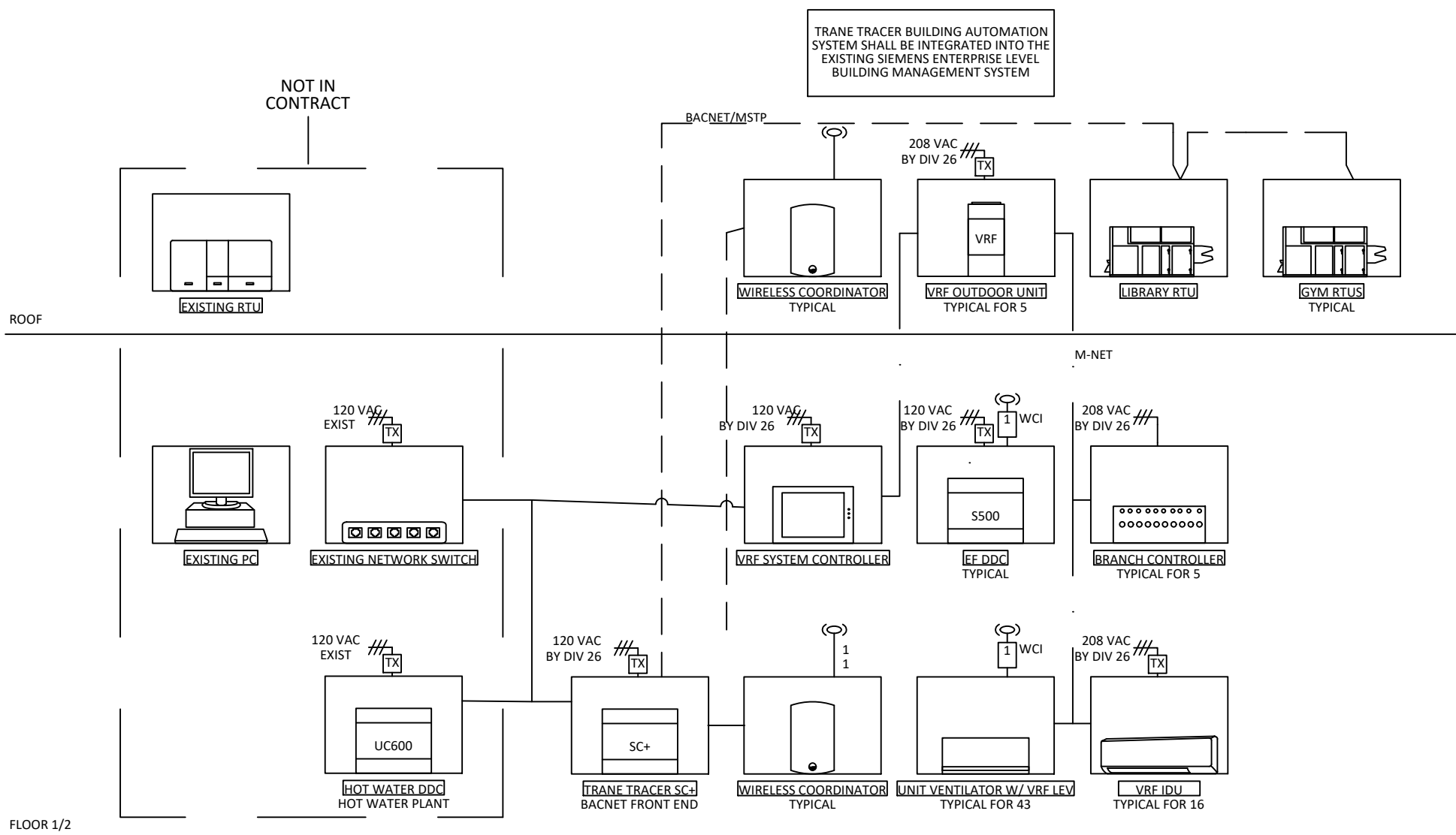
- A. REPLACE UNIT VENTILATORS THROUGHOUT THE BUILDING WHERE INDICATED. CONNECT ALL NEW UNIT VENTILATORS TO THE NEW VRF SYSTEM WITH NEWLY INSTALLED REFRIGERANT PIPING. UNIT VENTILATORS TO DX COOLING AND HEATING AND ALSO HYDRONIC HOT WATER HEATING COIL TO BE TIED IN AND CONTROLLED VIA SEPARATE THERMOSTAT . TYP. 50 TO BE TIED INTO EXISTING BMS SYSTEM.
- B. PROVIDE NINE (9) NEW CEILING CASSETTE HVAC UNITS WITH DX COOLING AND HEATING. CONNECTED TO NEW OR EXISTING FRESH AIR DUCTWORK WITH NEW THERMOSTATS. TO BE TIED INTO EXISTING BMS SYSTEM.
- B. PROVIDE EIGHT (8) NEW WALL HUNG HVAC UNITS WITH DX COOLING AND HEATING WITH NEW THERMOSTATS. TO BE TIED INTO EXISTING BMS SYSTEM.
- C. PROVIDE SEVEN (7) NEW DUCTLESS VRF OUTDOOR CONDENSING UNITS.



1 HVAC UPGRADE BMS-CONTROLS (THIELLS)
SCALE: N.T.S.



2 HVAC UPGRADE BMS-CONTROLS (WEST HAVERSTRAW)
SCALE: N.T.S.



3 HVAC UPGRADE BMS-CONTROLS (STONY POINT)
SCALE: N.T.S.

0 1/2 1
IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

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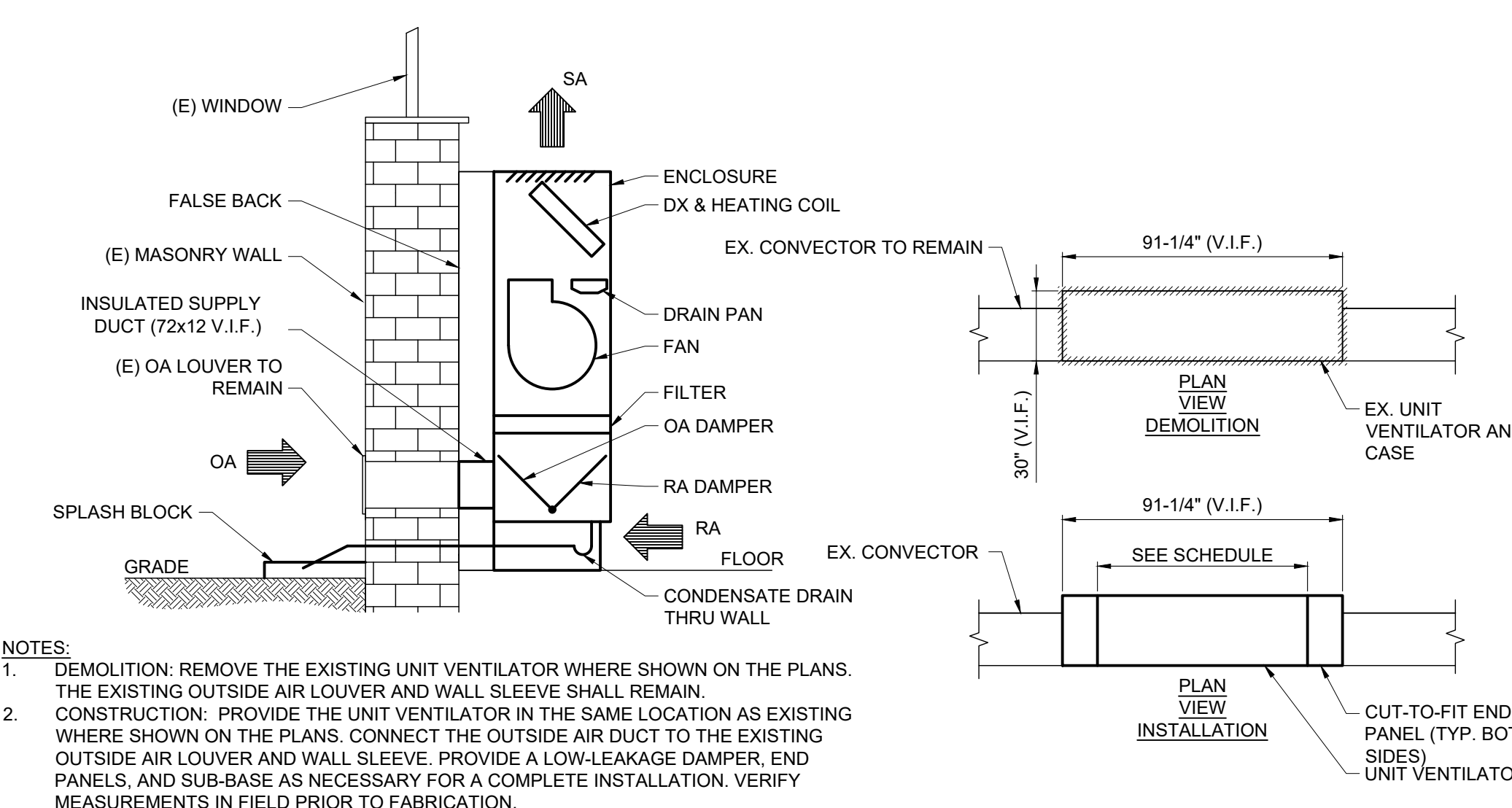
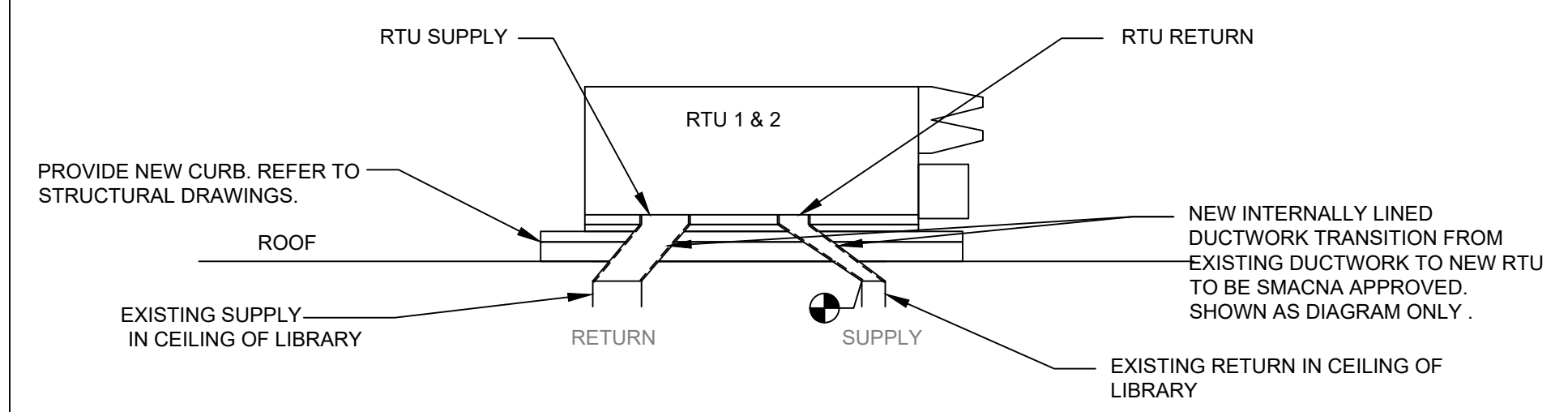
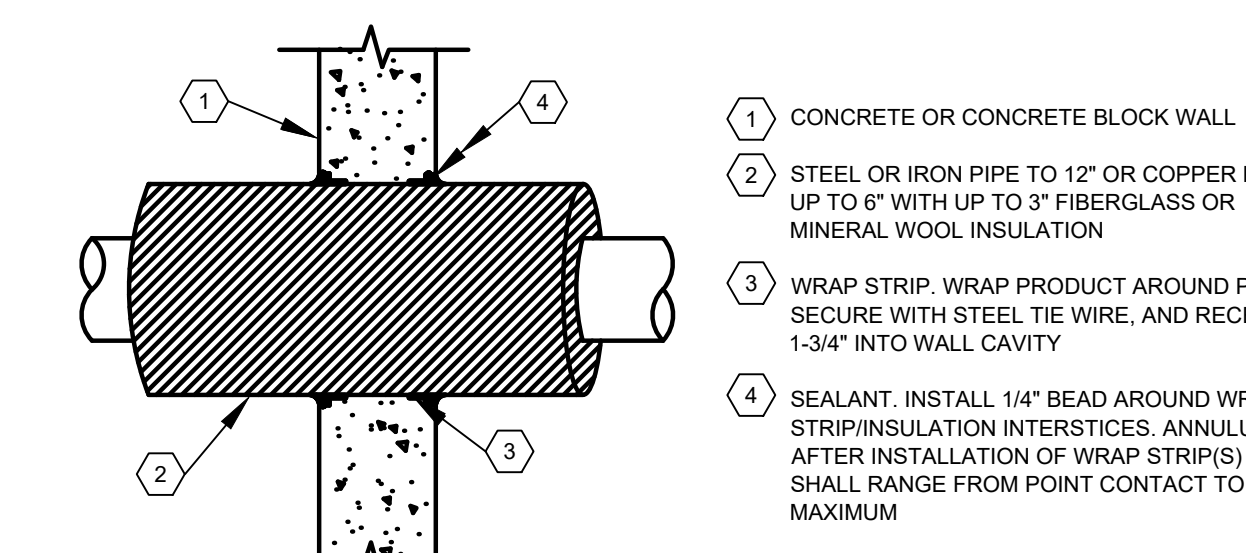
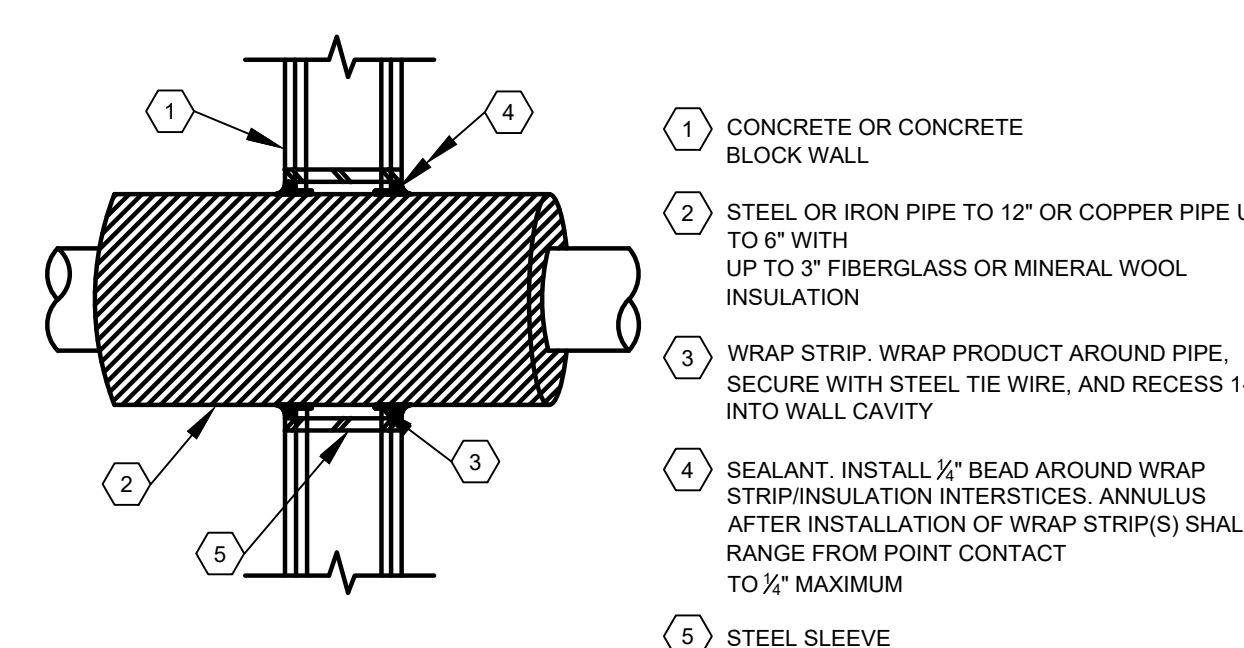
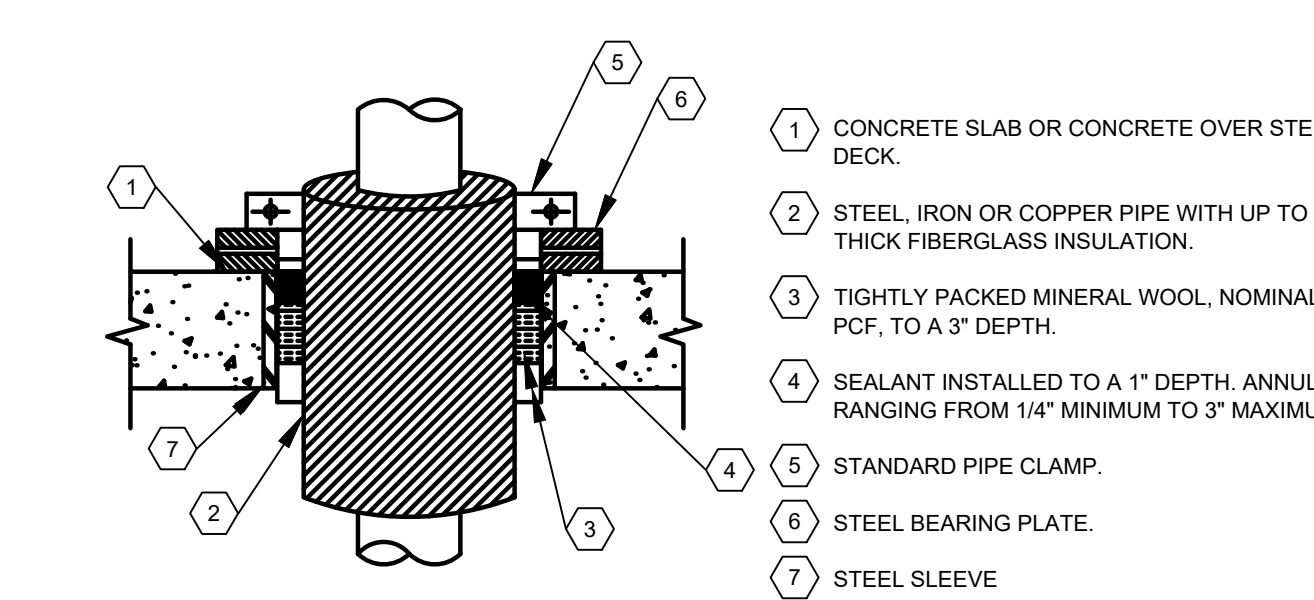
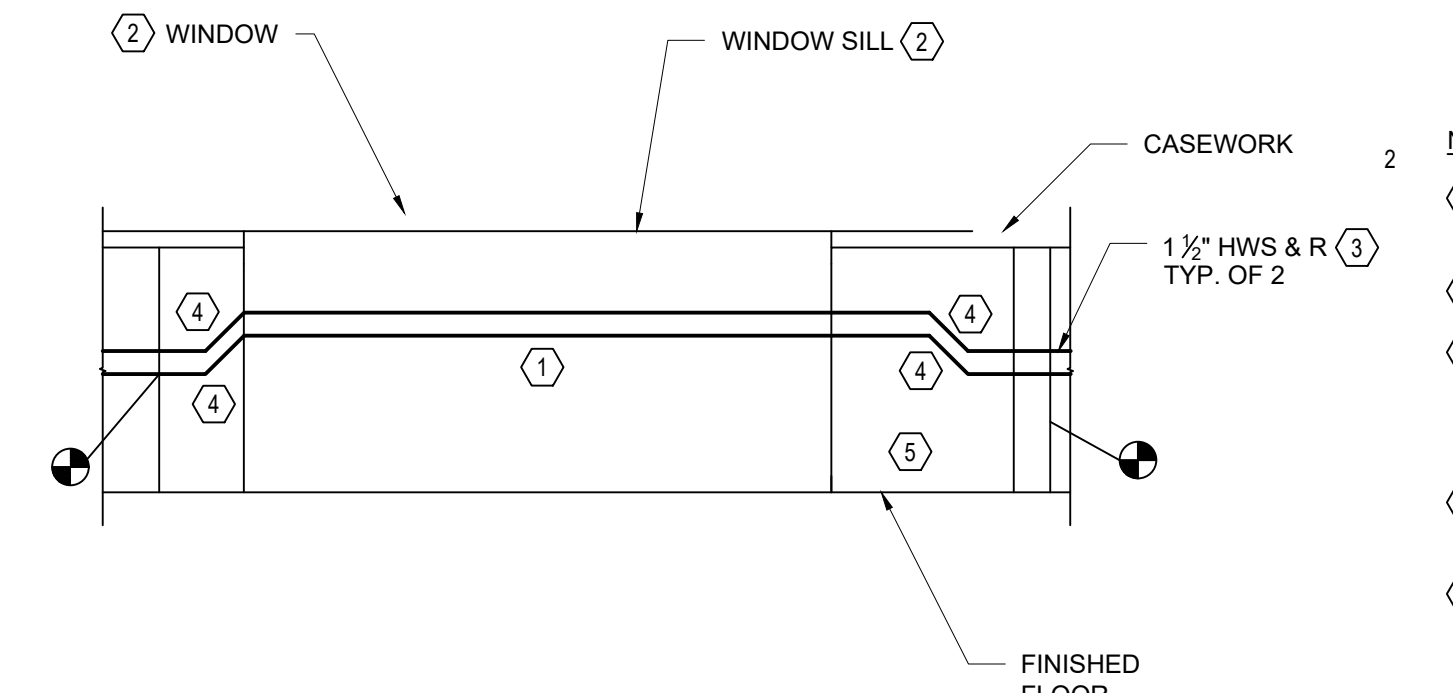
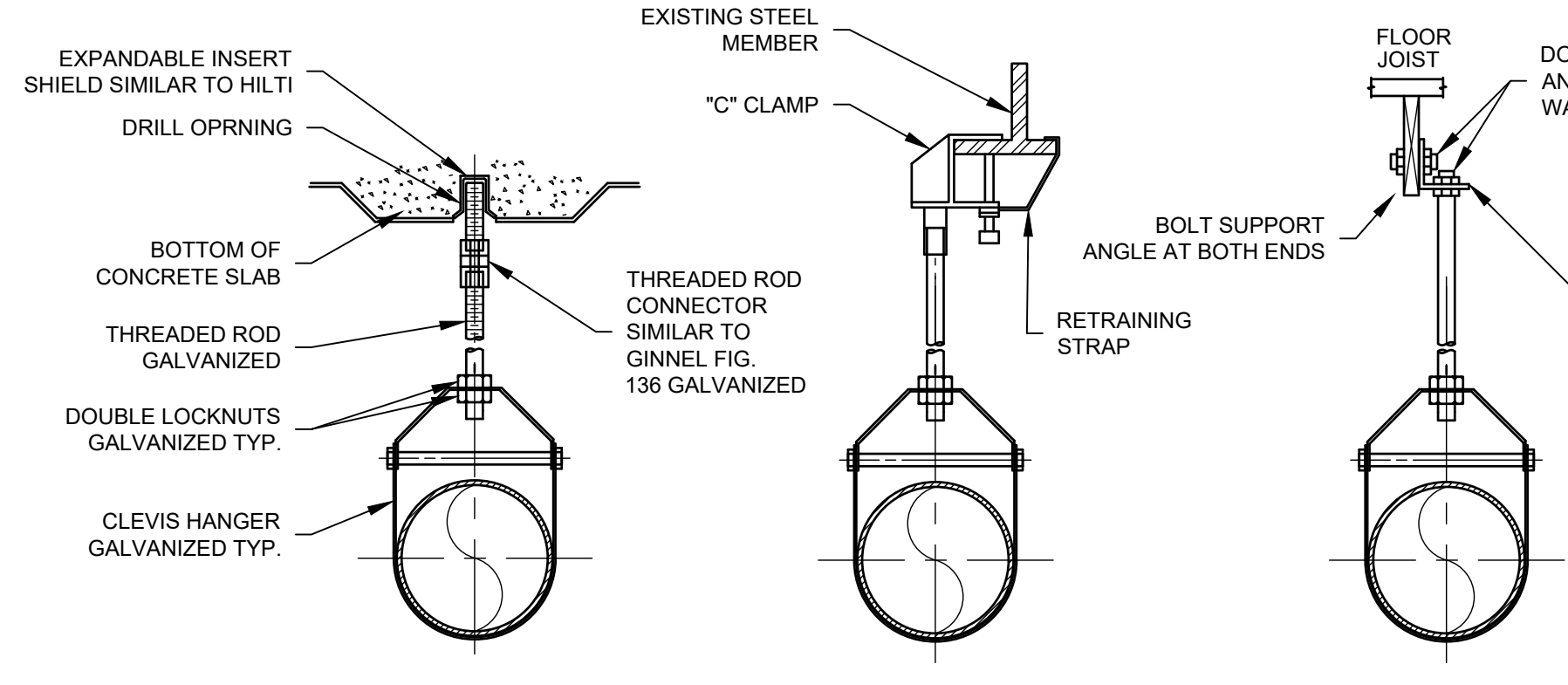
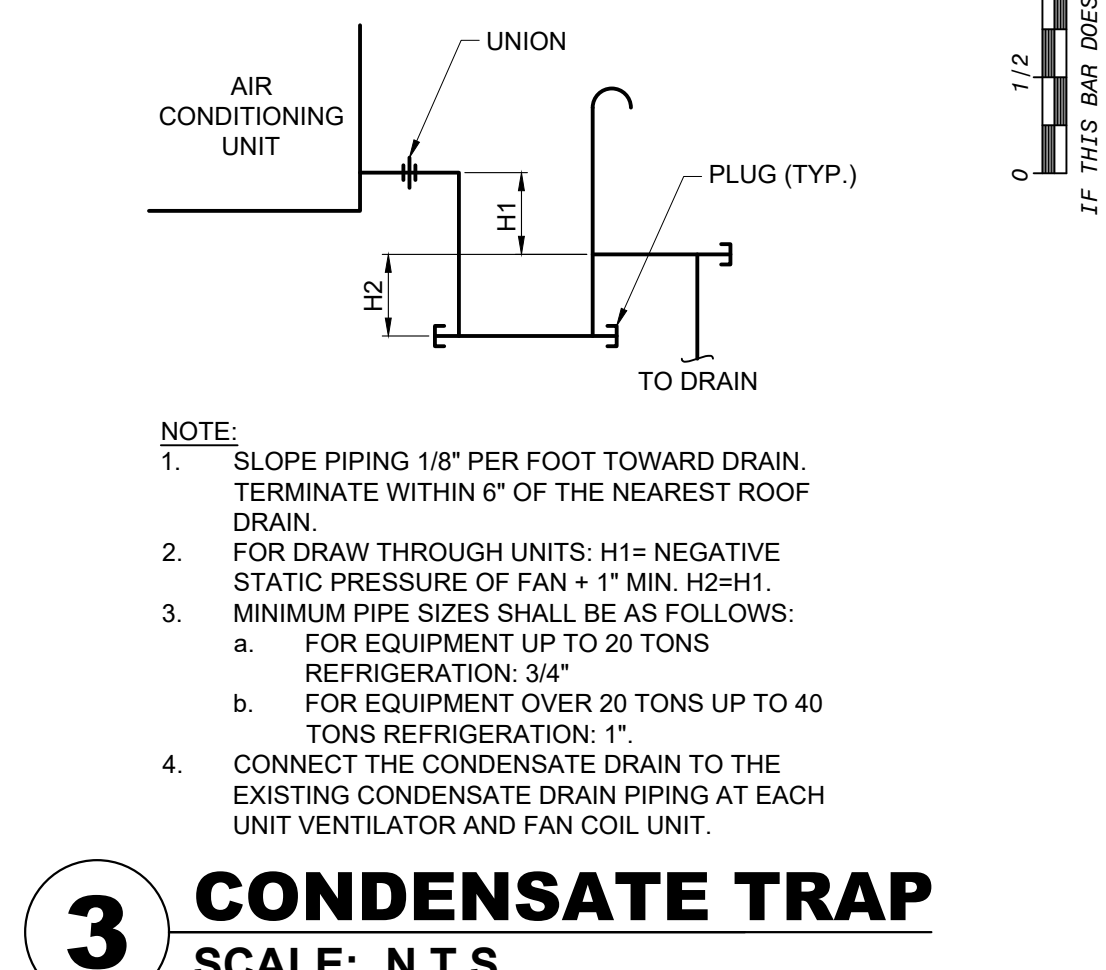
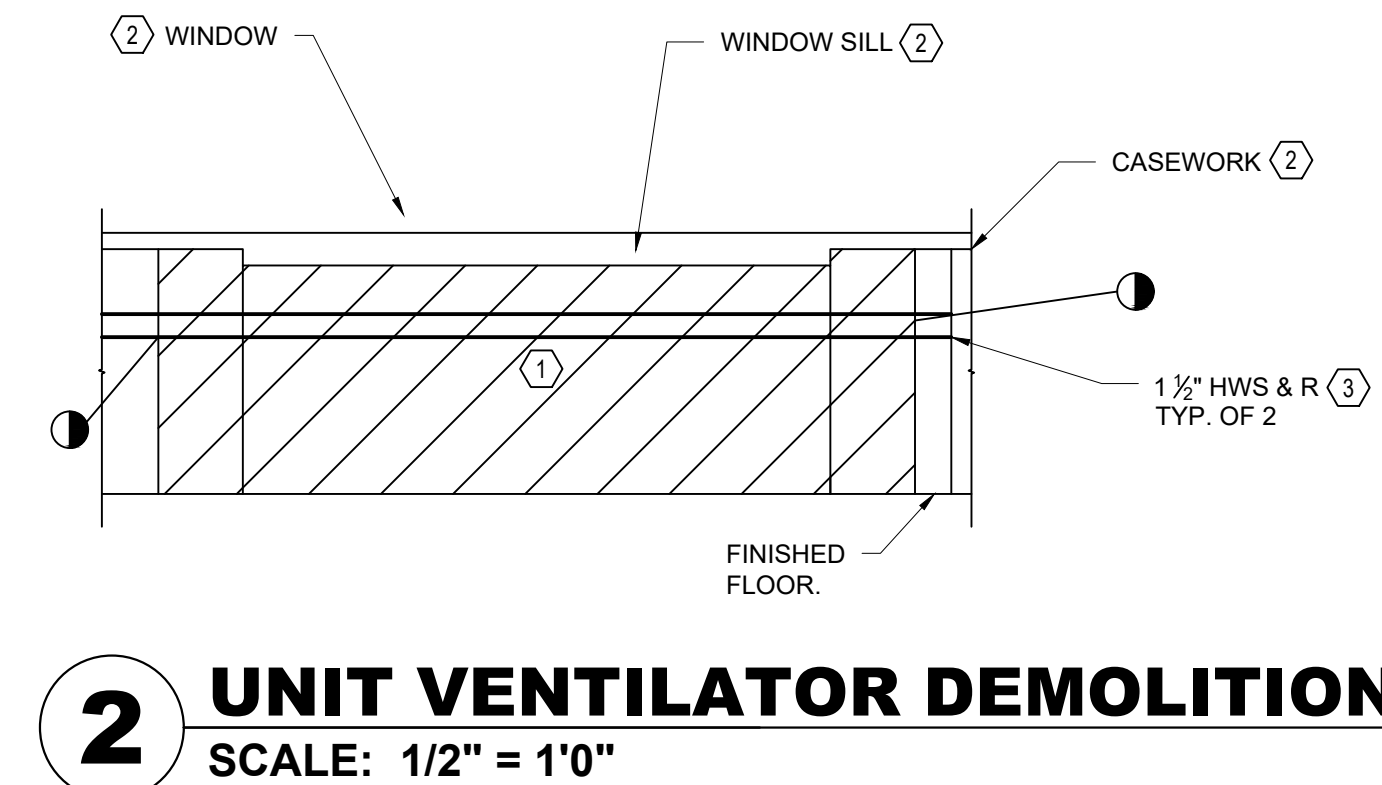
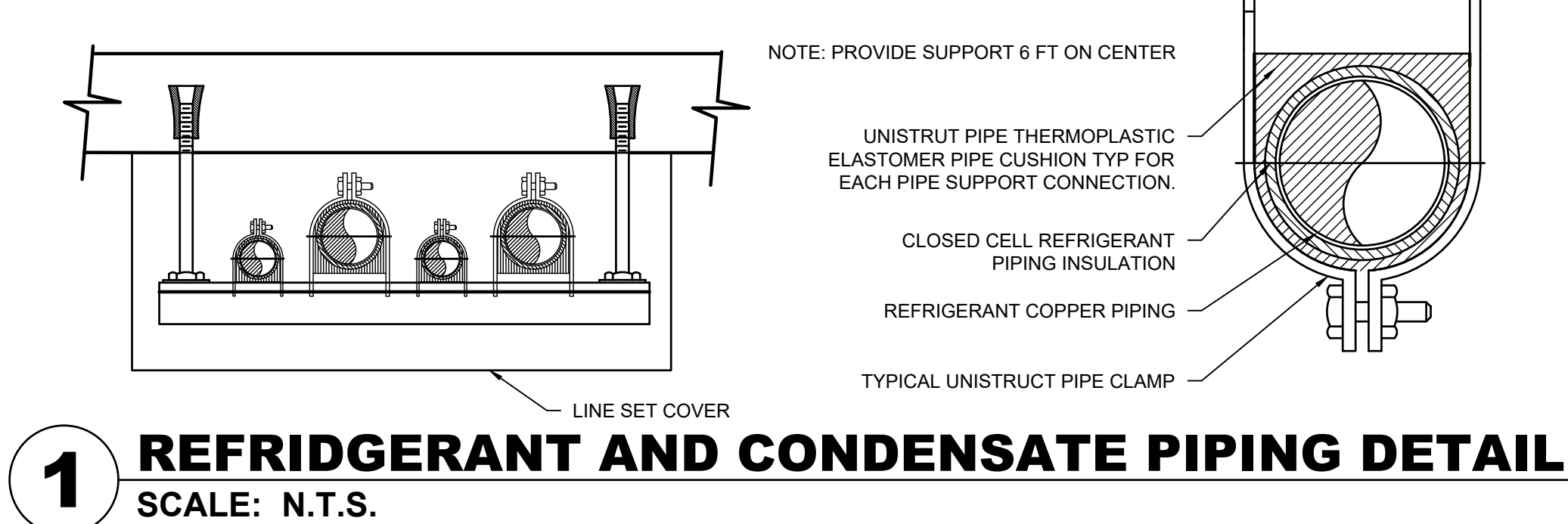
Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 STONY POINT, NY 10980 PROJ. NO. : MNY-2000080.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 STONY POINT, NY 10980
Mechanical Structural Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELLS, WEST HAVERSTRAW ELEMENTARY SCHOOL	SED# 50-02-01-06-0-014-012 SED# 50-02-01-06-0-025-018 SED# 50-02-01-06-0-024-015
GREENMAN PEDERSEN, INC STONY POINT, NY 10980	STONY POINT REPLACEMENT ACTIVITY

MSA MICHAEL SHILAE ARCHITECTS, LLP 140 Park Avenue New York, NY 10056 Tel 845-708-9200 www.shilae.com
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No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

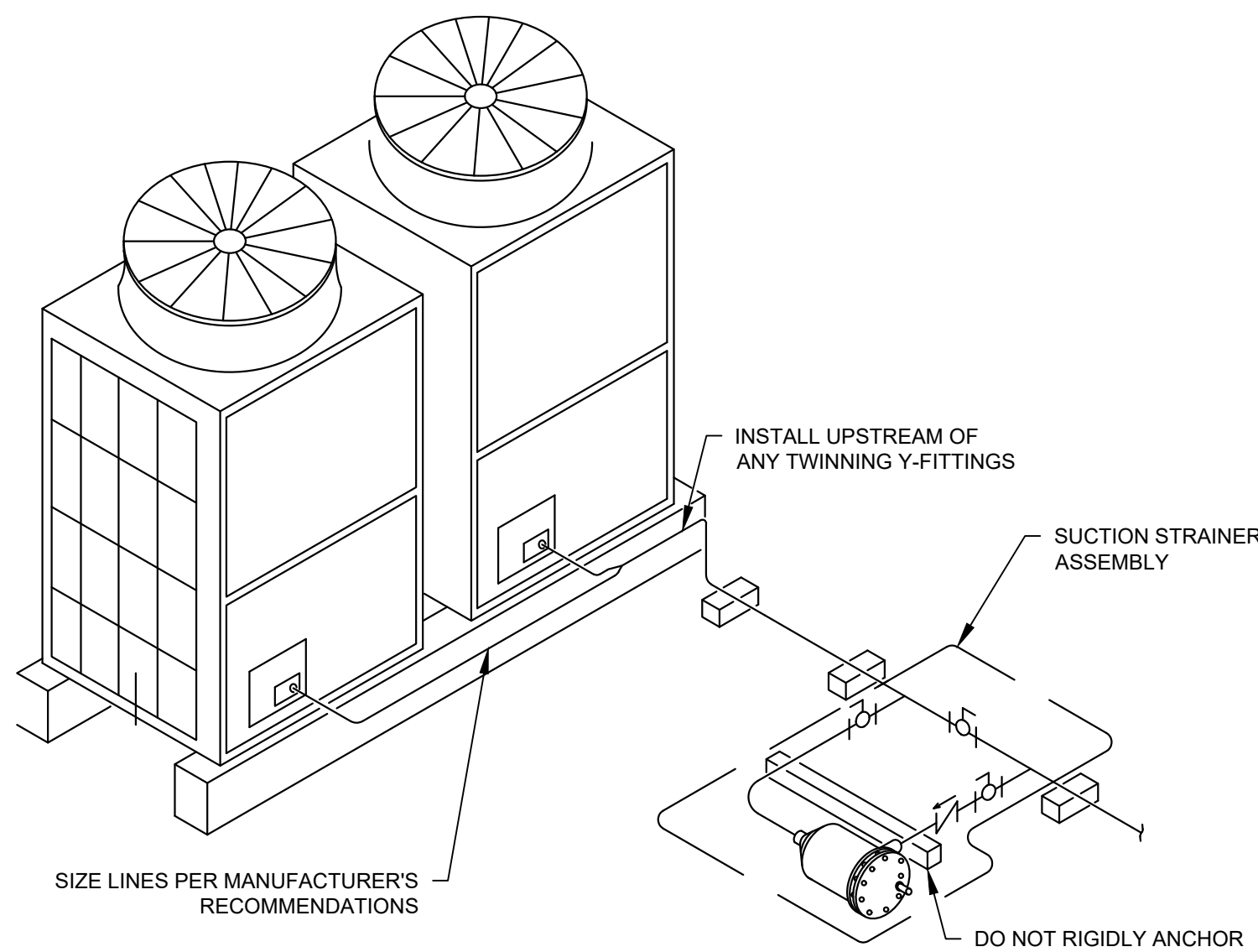
GREENMAN PEDERSEN, INC 2 EXECUTIVE BUILDING SUFFERN, NY 10981 PROJ. NO. : MNY-500127.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BUILDING SUFFERN, NY 10981
Mechanical Electrical Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAV ELEMENTARY SCHOOL SED# 50-02-01-06-0-014-XXX SED# 50-02-01-06-0-024-XXX SED# 50-02-01-06-0-024-XXX NY STATE ESD# 50-02-01-06-0-024-XXX MICHAEL SHILALE ARCHITECTS, LLP

MSA MICHAEL SHILALE ARCHITECTS, LLP 140 Park Avenue New York, NY 10056 Tel 845-708-9200 www.shilale.com

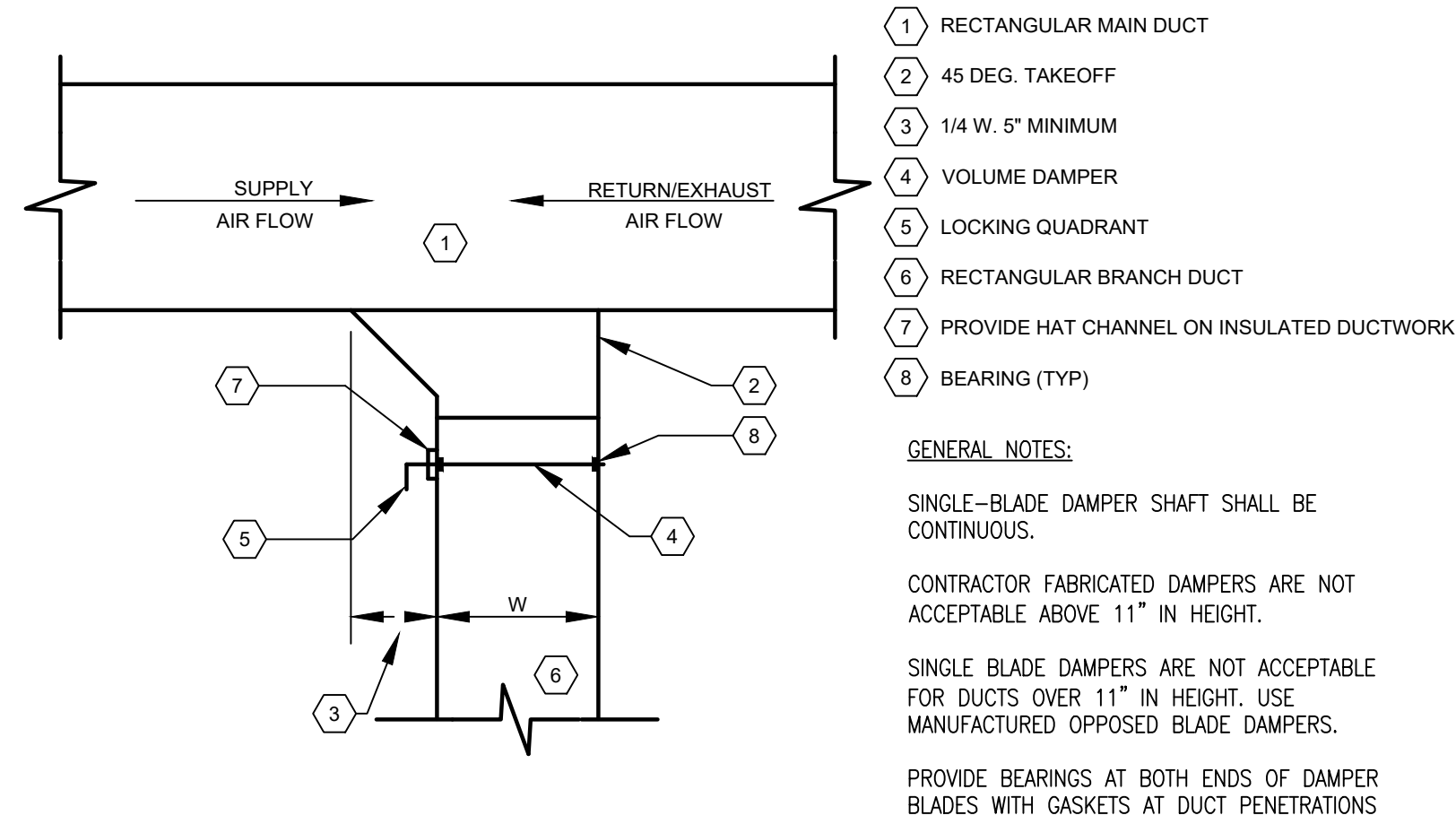
Drawing Title MECHANICAL DETAILS - 1	Drawing No. M-501
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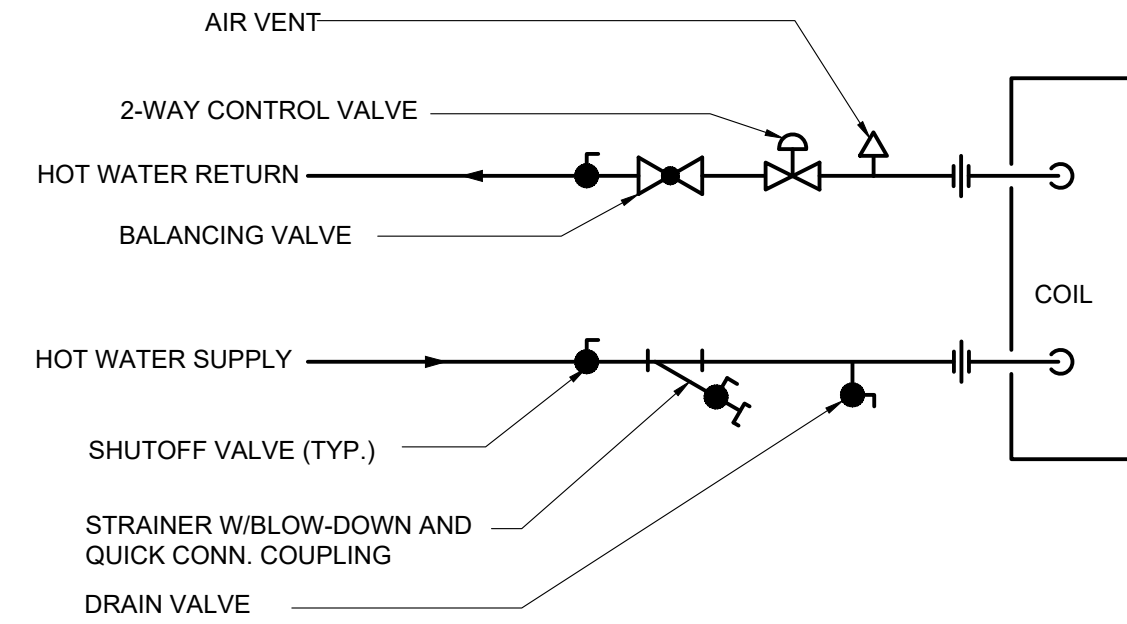
1 PIPING AT ACCU

SCALE: N.T.S.



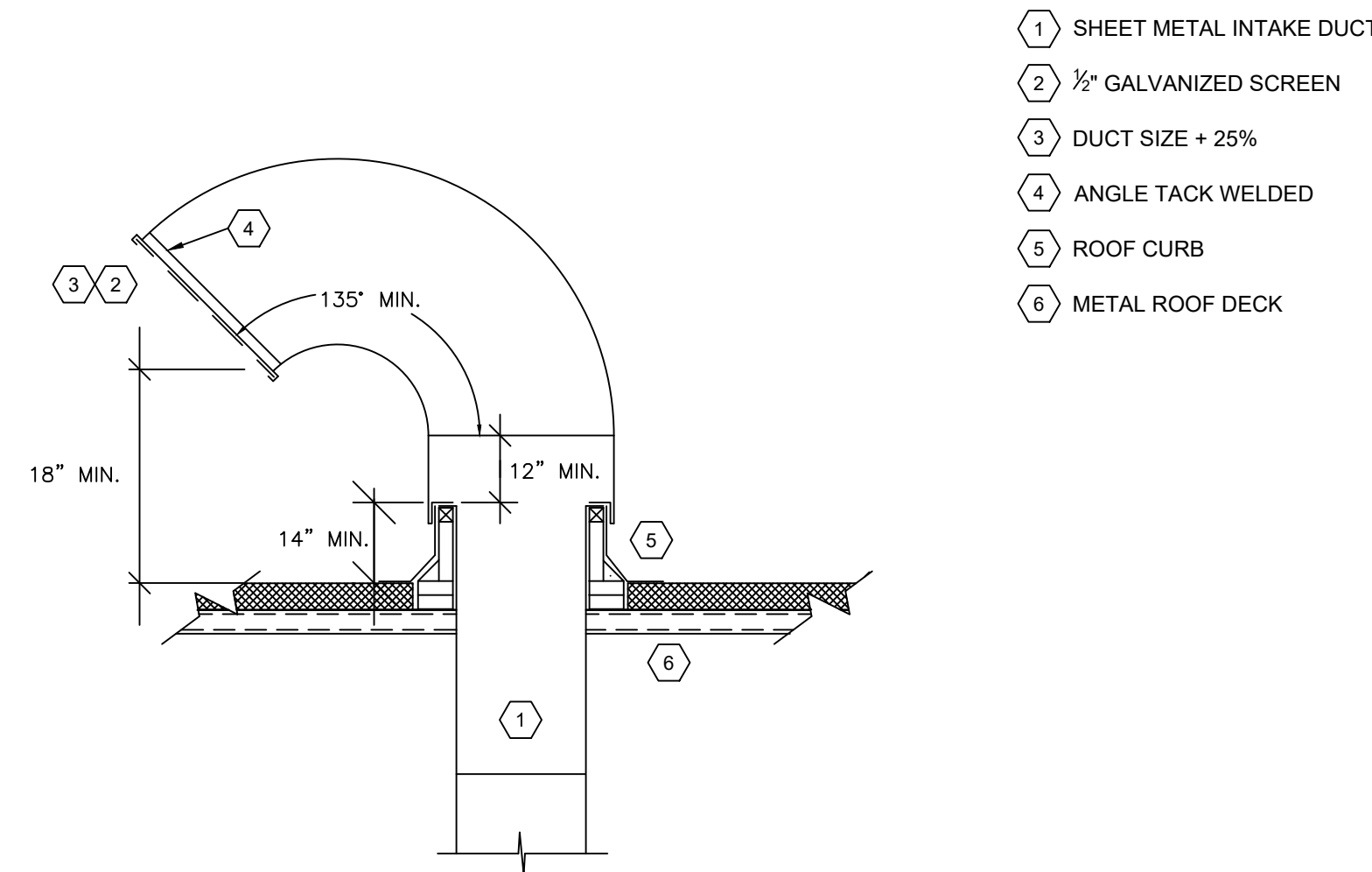
2 RECTANGULAR DUCT TAP W/ DAMPER

SCALE: N.T.S.



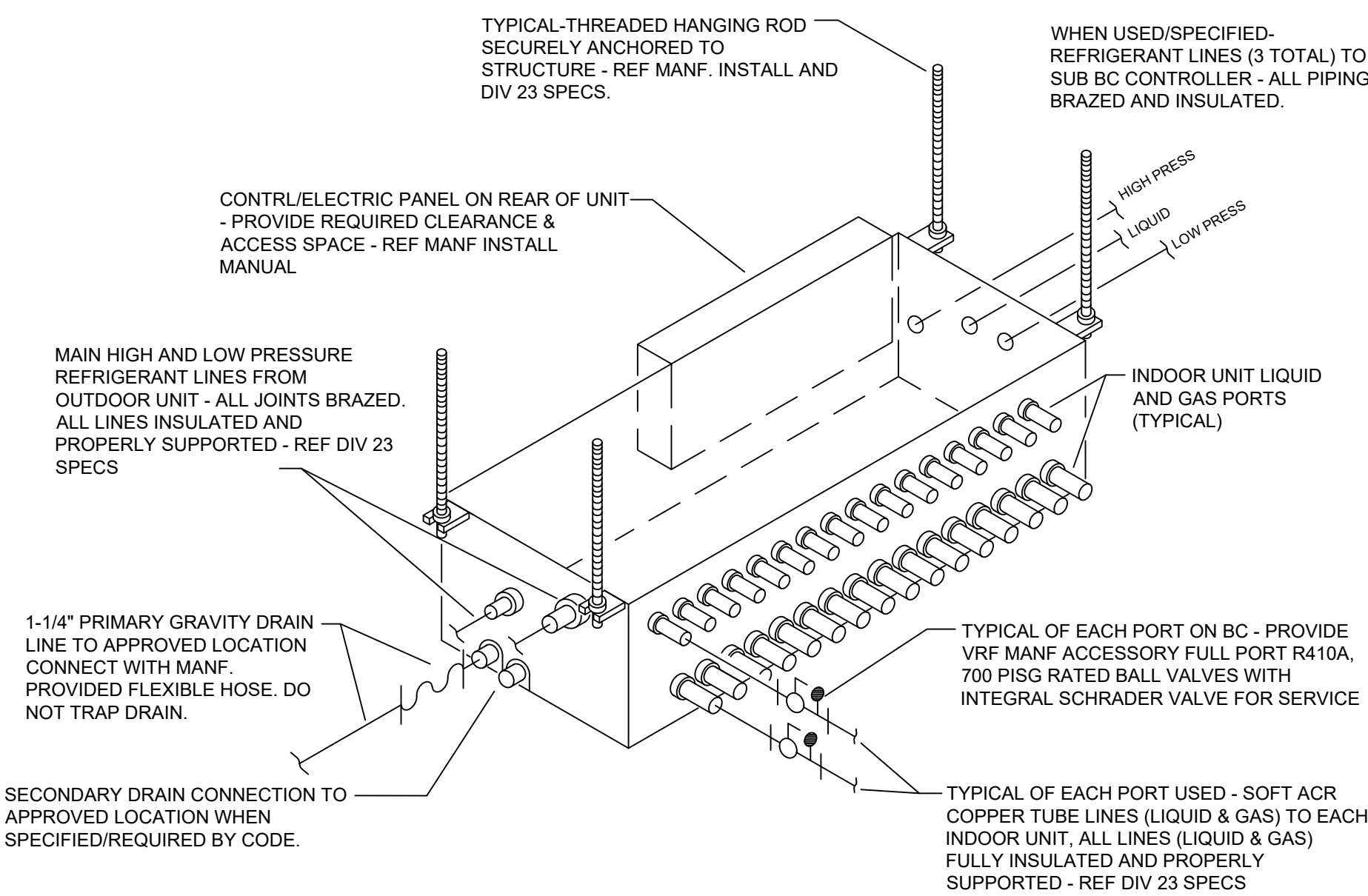
3 HOT WATER PIPING AT VENTILATOR

SCALE: N.T.S.



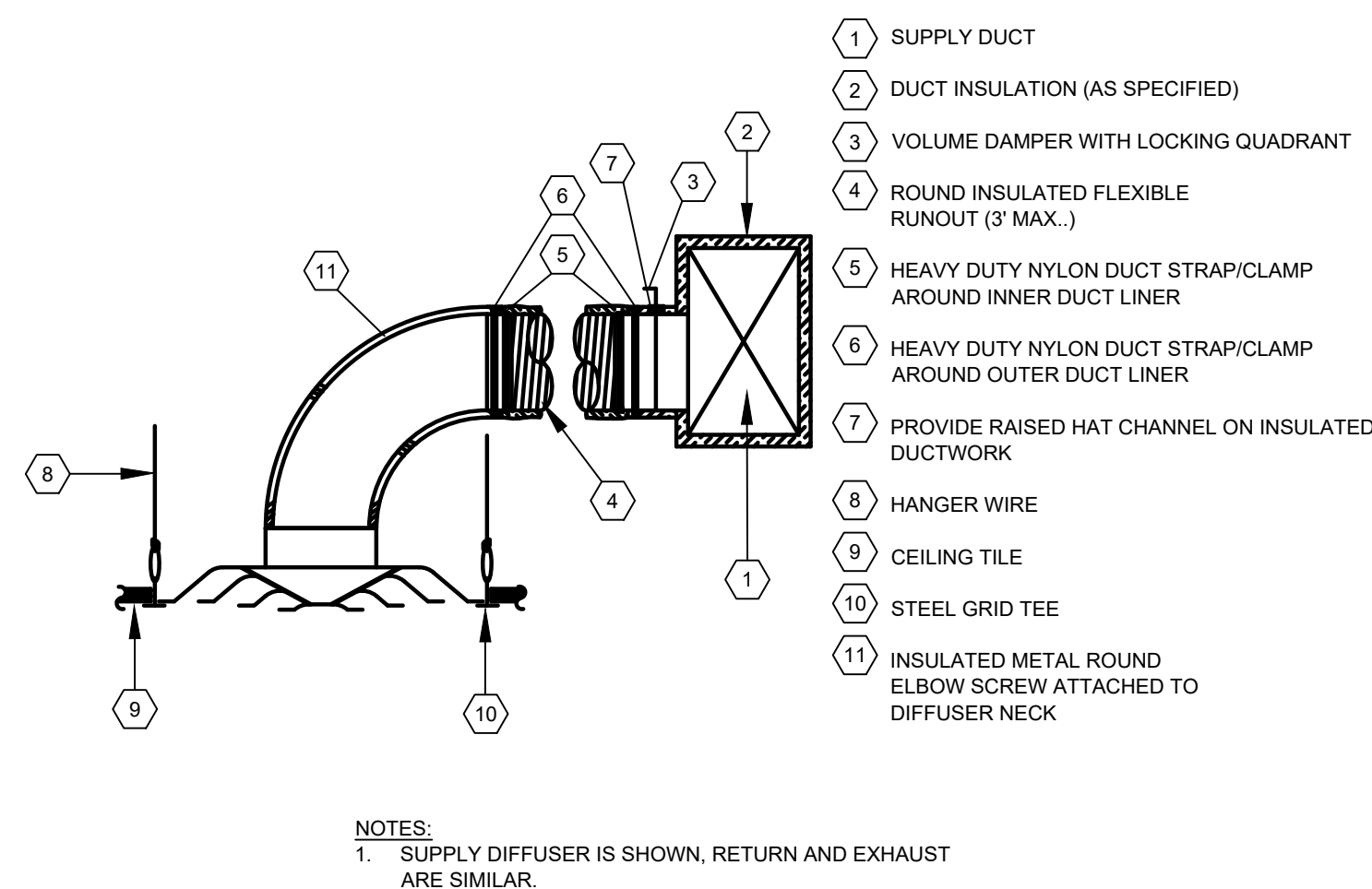
4 INTAKE GOOSE DETAIL

SCALE: N.T.S.



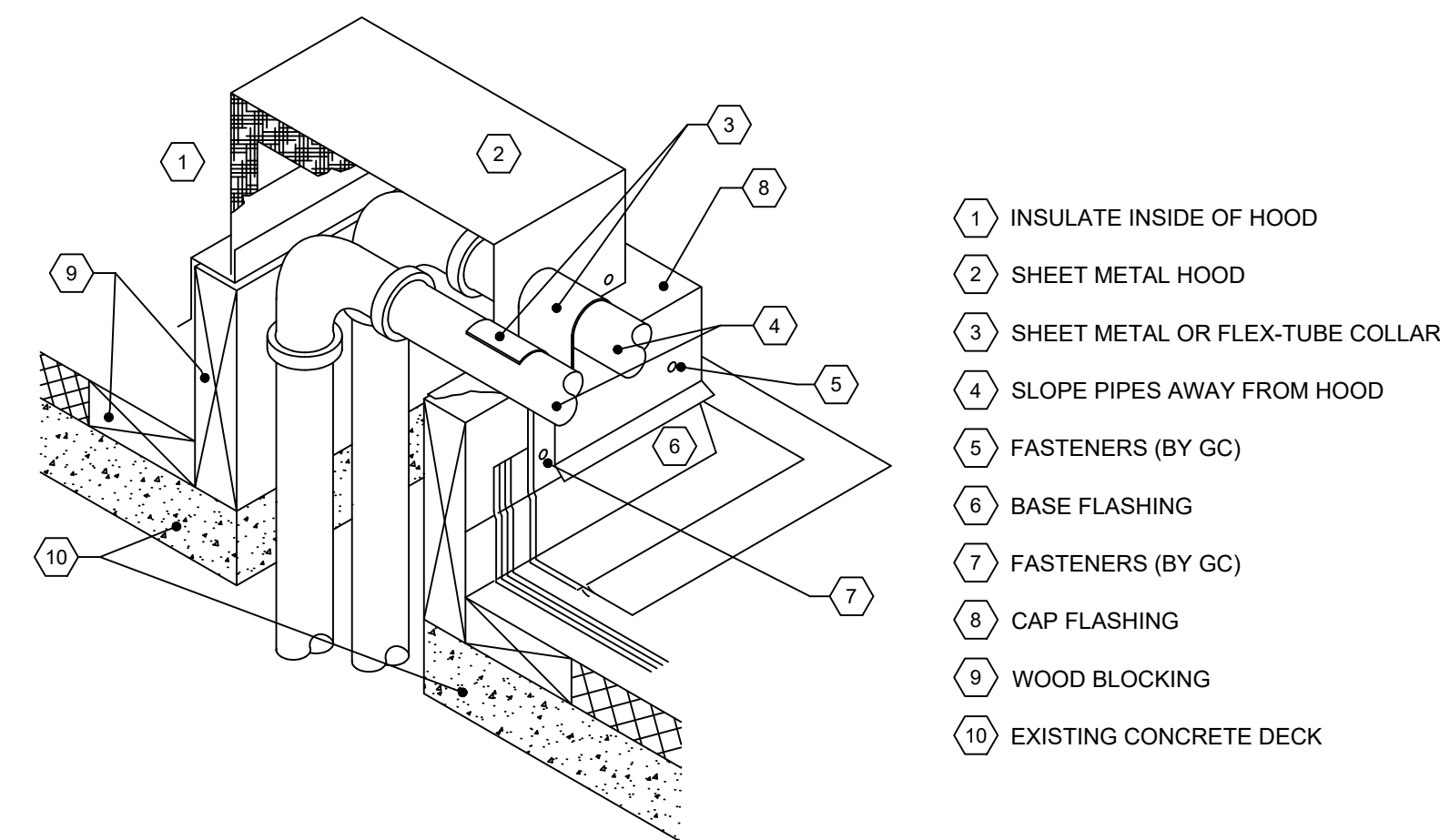
5 BC CONTROLLER DETAIL

SCALE: N.T.S.



6 DIFFUSER/ GRILL CONNECTION DETAIL

SCALE: N.T.S.

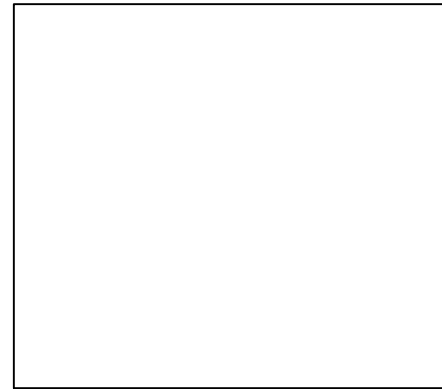


7 ROOFTOP PIPE PENETRATION

SCALE: N.T.S.



Revisions	
No.	Date
1	03-04-25 BIDDING DOCUMENTS



Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

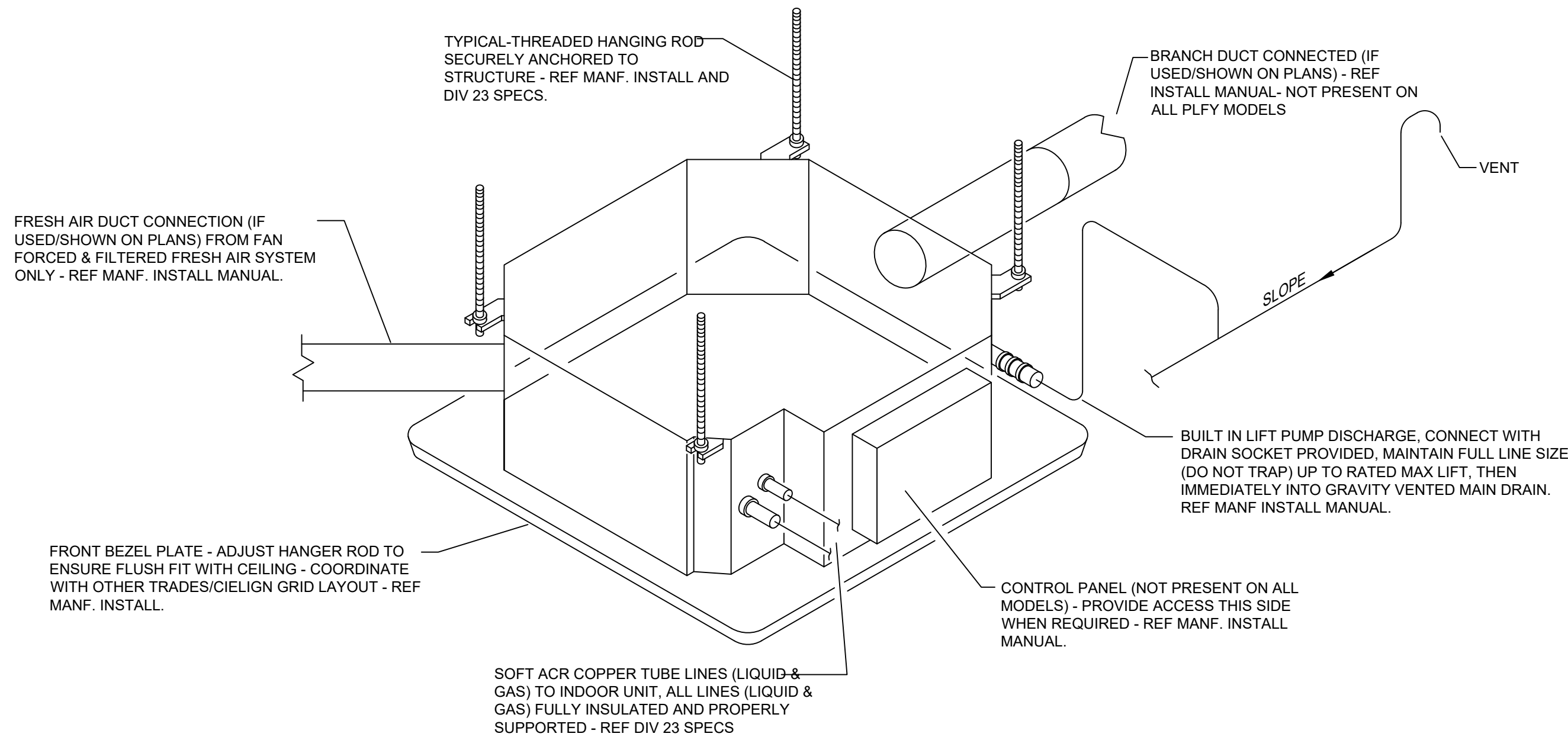
GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD ROCKY HILL, CT 06067 PROJ. NO. : MNY-5000127.00	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD ROCKY HILL, CT 06067
Mechanical Structural Engineer:	Structural Engineer:

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAV ELEMENTARY SCHOOL SSD# 50-02-01-06-0-014-XXX SSD# 50-02-01-06-0-025-XXX SSD# 50-02-01-06-0-024-XXX NY REG. NO. 00993 HARTFORD, CT 06105
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MSA MICHAEL SHILALE ARCHITECTS, LLP 140 Park Avenue New City, NY 10956 Tel 845-708-9200 www.shilale.com

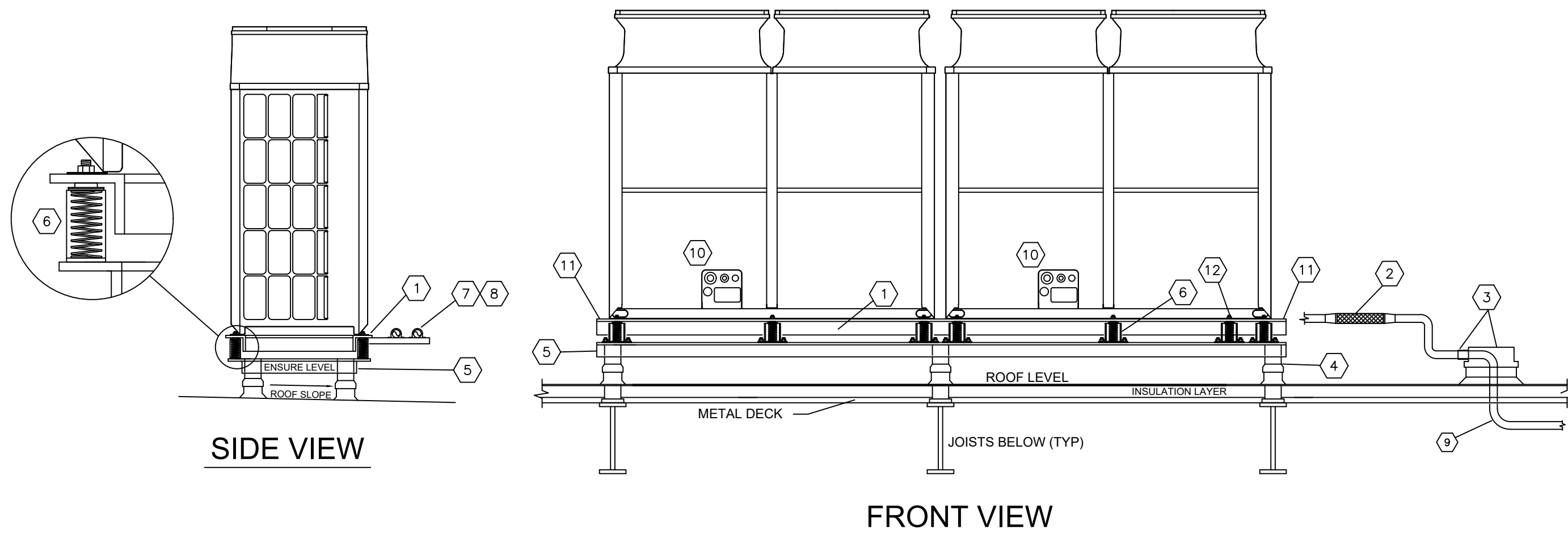
MECHANICAL DETAILS - 2	Drawing No. M-502
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1 CEILING CASSETTE INSTALLATION DETAIL

SCALE: N.T.S.

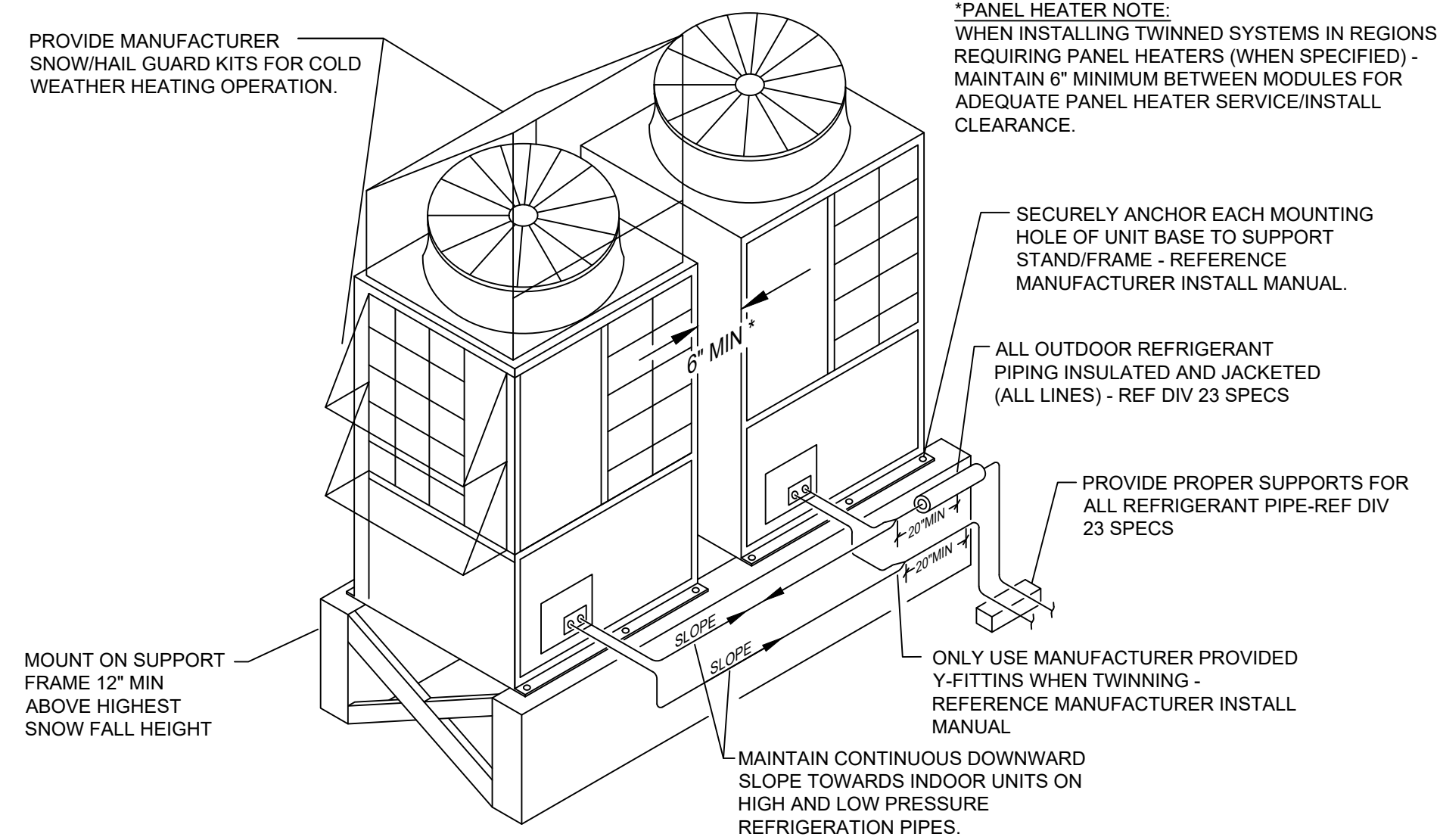


CODED NOTES:

1. PROVIDE STRUCTURAL INTERSTITIAL ANGLE IRON MOUNTING MEMBER OR SIMILAR ATTACHED DIRECTLY TO BOTTOM OF UNIT MOUNTING FLANGE AND PROVIDE CROSS BRACING FOR RIGIDITY. ENSURE IT CARRIES FULL MOUNTING FOOT WIDTH ON UNIT. FINAL SPECIFICATION OF MEMBER BY STRUCTURAL ENGINEER OF RECORD.
2. PROVIDE BRAIDED COPPER FLEXIBLE CONNECTOR, R410A RATED, 650PSI MAX WORKING PRESSURE, PACKLESS INDUSTRIES OR EQUAL ON ALL MAIN PIPING DOWNSTREAM OF TWINNING KITS/CONVERGING FITTINGS PRIOR TO PENETRATION THROUGH ROOF.
3. PIPE ROOF CURB, FLASHED AND SEALED WATER TIGHT, PROVIDE FLEXIBLE WATER TIGHT COLLAR TO ALLOW FOR MOVEMENT WHERE PIPE ENTERS CURB. DO NOT ENTER PIPE CURB FROM VERTICAL DIRECTION.
4. TYPICAL BASE SUPPORT POSTS, SECURELY ANCHORED TO BUILDING STRUCTURE BELOW, QUANTITY, SIZE, AND CARRYING CAPACITY DETERMINED BY STRUCTURAL ENGINEER OF RECORD.
5. STRUCTURAL ANGLE IRON BASE MOUNTING FRAME WITH CROSS MEMBERS FOR RIGIDITY - FINAL SIZING BY STRUCTURAL ENGINEER OF RECORD.
6. VIBRATION SPRING SLR TYPE ISOLATORS (MASON INDUSTRIES OR EQUIV.) WITH RUBBER BASE PADS, SECURELY FASTENED TO STRUCTURAL BASE AND TO VRF UNIT INTERSTITIAL SUPPORT STEEL. SPRING ISOLATOR TO PROVIDE MINIMUM 1" DEFLECTION OR 10 TIMES THE STATIC DEFLECTION OF THE ROOF DECK FROM EQUIPMENT WEIGHT - DETERMINED BY STRUCTURAL ENGINEER OF RECORD. AT A MINIMUM, PROVIDE SPRING ISOLATORS AT EACH EQUIPMENT BASE MOUNTING HOLE LOCATION.
7. IF REQUIRED, ONLY SUPPORT LATERAL PIPE EMANATING FROM VRF UNIT CONNECTIONS BY CROSS MEMBER SUPPORT THAT IS ATTACHED DIRECTLY TO VRF UNIT MOUNTING ANGLE IRON FRAME ABOVE SPRING ISOLATORS. DO NOT ATTACH ANY PIPING TO LOWER FIXED SUPPORT BASE.
8. USE NEOPRENE ISOLATION COLLARS ON PIPE CLAMS WHEN FASTENING PIPING TO SUPPORTS.
9. USE LONG RADIUS SWEEPING COPPER ACR TUBE PIPE BENDS WHERE PIPE ENTERS BUILDING AT FIRST ELBOW INTO CEILING SPACE TO MINIMIZE REFRIGERANT FLOW NOISE AND VIBRATION.
10. ALL ELECTRICAL CONNECTIONS TO UNITS TO BE VIA FLEXIBLE CONDUIT, PROVIDE SUFFICIENT SLACK TO ALLOW FOR UNIT MOVEMENT ON SPRING ISOLATORS.
11. ENSURE CROSS MEMBERS OF INTERSTITIAL FRAME AND BOTTOM SUPPORT FRAME ARE NOT DIRECTLY BELOW ENDS OF MODULES IN ALL LOCATIONS AND DO NOT BLOCK DRAINAGE WEEP HOLES IN BOTTOM OF UNIT CASING, FAILURE TO DO THIS MAY RESULT IN ICE DAMMING/BUILDUP BENEATH UNIT AND SUBSEQUENT BUILDUP OF ICE IN BOTTOM OF UNIT CASING BELOW COIL AND POTENTIAL DAMAGE TO BOTTOM OF COIL.
12. WHEN SELECTING SPRING ISOLATORS ALWAYS CONSIDER WEIGHT DISTRIBUTION BY REFERENCING EQUIPMENT WEIGHT AND CENTER OF GRAVITY. NEAR RIGHT ENDS OF UNITS (VIEWED FROM FRONT PANEL) SPRING WEIGHT CAPACITY MAY BE LARGER. IF HIGHER SPRING WEIGHT CAPACITY IS REQUIRED VS OTHER SPRING LOCATIONS, CONSIDER AN ADDITIONAL SPRING OF EQUAL "K" VALUE (lbs/in) NEAR RIGHT END OF LAST MODULE. IN GENERAL IT IS RECOMMENDED TO SELECT ALL MOUNTING SPRINGS OF EQUIVALENT "K" VALUE (lbs/in).

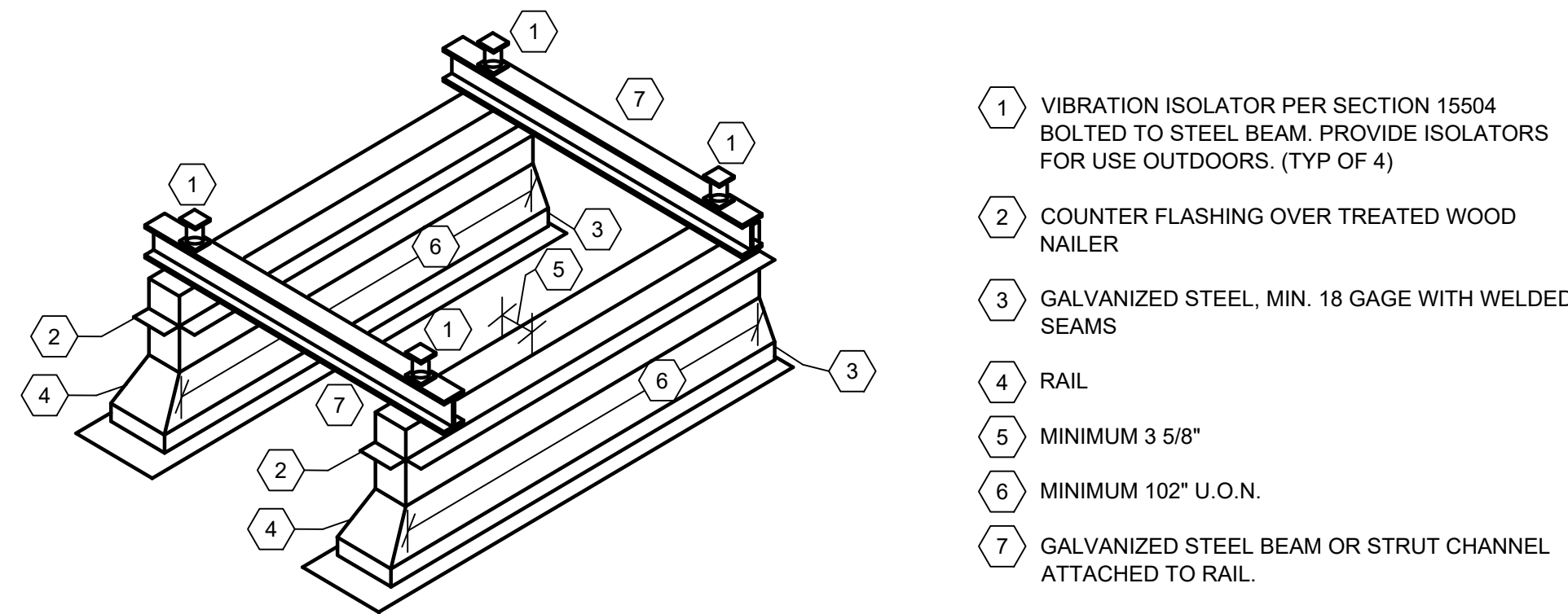
3 ACCU OUTDOOR UNIT MOUNTING DETAIL

SCALE: N.T.S.



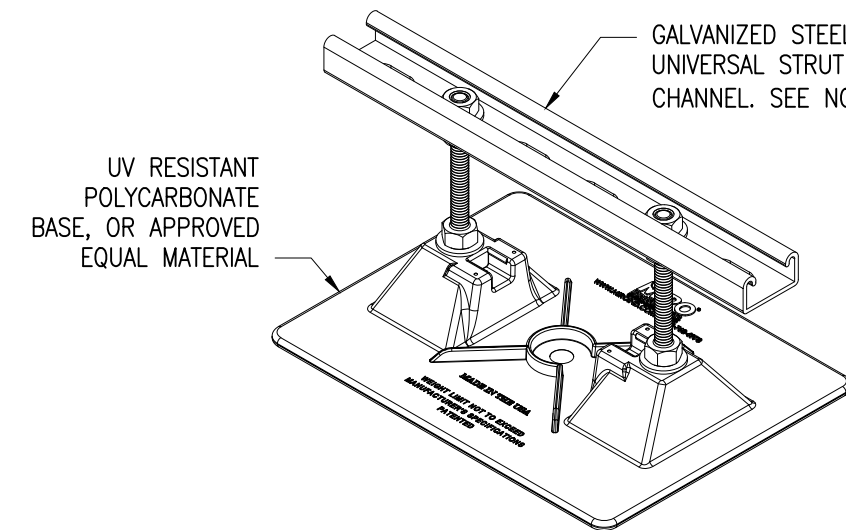
2 ACCU OUTDOOR UNIT TWINNING DETAIL

SCALE: N.T.S.



4 ACCU ROOFTOP SUPPORT RAIL DETAIL

SCALE: N.T.S.

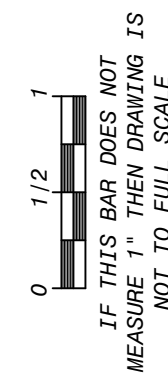


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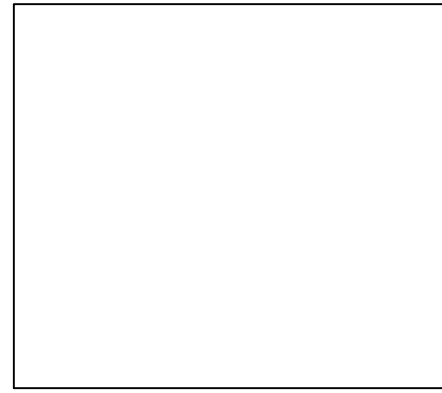
1. MINIMUM SUPPORT SPACING SHALL BE AS FOLLOWS:
 - a. COPPER TUBE (1 1/4" AND SMALLER): 6'-0" O.C.
 - b. COPPER TUBE (1 1/2" AND LARGER): 10'-0" O.C.
 - c. PVC: 4'-0" O.C.
 - d. FOR SIZES AND MATERIALS NOT LISTED ABOVE, COMPLY WITH 2015 MCNYS 305.4.
2. VERIFY IN FIELD REQUIRED STRUT CHANNEL HEIGHT. SECURE PIPING TO CHANNEL USING CLAMP CONSTRUCTED OF COMPATIBLE MATERIAL.
3. BASIS OF DESIGN: MIRO IND. MODEL 2.5-CS.

5 SUPPORT FOR ROOFTOP CONDENSATE PIPING

SCALE: N.T.S.



Revisions	
No.	Date
1	03-04-25
BIDDING DOCUMENTS	



Drawn by	VF /AW
Checked by	EF
Project No.	43040
Scale	AS NOTED
Date	03-04-25

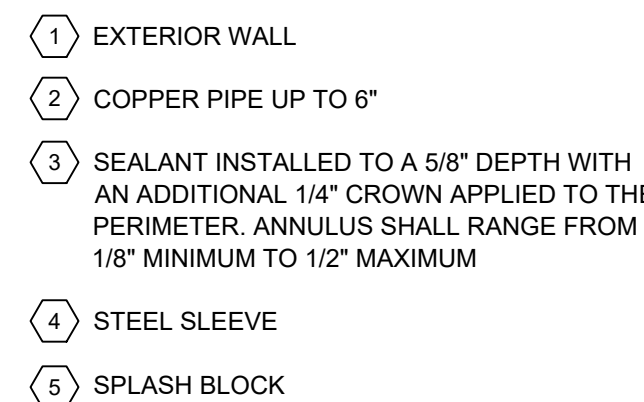
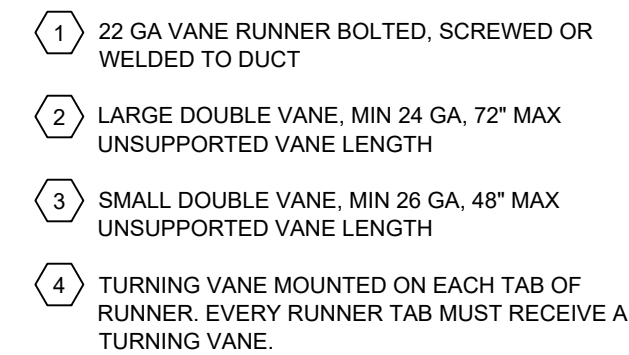
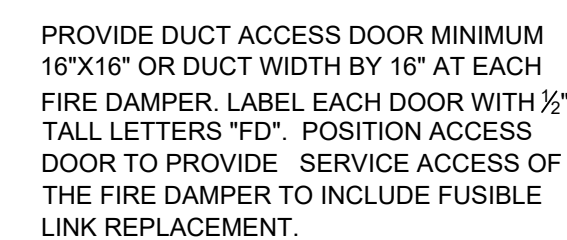
Mechanical Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 SUFFERN, NY 10901 PROJ. NO. : MNY-5000127.00
	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 SUFFERN, NY 10901

UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAV ELEMENTARY SCHOOL SDD# 50-02-01-06-0-014-XXX SDD# 50-02-01-06-0-025-XXX SDD# 50-02-01-06-0-024-XXX NY, NJ, AND CT ARE REGISTERED ARCHITECTS, NY 10993
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MSA MICHAEL SHILAE ARCHITECTS, LLP 140 Park Avenue New York, NY 10058 Tel 845-708-9200 www.shilae.com
--

Drawing Title MECHANICAL DETAILS - 3	Drawing No. M-503
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NOTES:

1. PROVIDE A UL LISTED ACOUSTIC FLEXIBLE AIR DUCT FACTORY COMPOSED OF A RESILIENT CALENDERED FILM LINER DUCT PERMANENTLY BONDED TO A COATED SPRING STEEL WIRE HELIX AND SUPPORTING A FIBERGLASS INSULATING BLANKET WITH LOW PERMEABILITY OUTER VAPOR BARRIER OF FIBERGLASS REINFORCED FILM LAMINATE. DUCT SHALL BE 24" UNLESS OTHERWISE NOTED ON THE PLANS. BIAS OF DESIGN: THERMA-FLEX I-M-K.
2. MAXIMUM OFFSET FOR FLEXIBLE DUCT SHALL BE 1/8 OF ITS INSTALLED LENGTH. USE ROUND, LONG RADIUS GALVANIZED STEEL ELBOWS IF A GREATER OFFSET IS REQUIRED. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
3. FLEXIBLE DUCT SHALL BE LIMITED TO 5 FEET IN LENGTH.
4. DUCT SHALL BE INTERNALLY LINED WITH 1" THICK ACOUSTIC FIBERGLASS DUCT LINER (JOHNS MANVILLE LINACUSTIC RC-HP OR EQUAL).
5. CLEAR INSIDE DIMENSIONS OF SUPPLY PLENUM SHALL BE 24"x24" MINIMUM.
6. PROVIDE 4" DOUBLE WALL ACOUSTIC TURNING VANES WHERE SHOWN (DUCTMATE 4AVGA24 OR EQUAL).

Drawing No. **M-504**

FOR AN EXPLANATION OF ABBREVIATIONS AND SYMBOLS USED ON THESE DRAWINGS, SEE THE ABBREVIATION LIST AND SYMBOLS LIST ON THIS SHEET.

2. ALL ELECTRICAL WORK SHALL BE DONE IN COMPLIANCE WITH NYS BUILDING CODE, NATIONAL ELECTRIC CODE 2017 AND ALL OTHER APPLICABLE CODE & LOCAL LAWS AS REQUIRED.
3. THE CONTRACTOR SHALL CHECK THE LOCATION, NUMBER AND SIZE OF ALL CHASES PROVIDED ON THE CONSTRUCTION PLANS AND ARRANGE FOR ANY CHASES REQUIRED FOR CABINET OR BOXES.
4. THE CONTRACTOR SHALL COORDINATE WITH THE HVAC, PLUMBING, ARCHITECTURAL AND STRUCTURAL TRADES FOR EXACT LOCATIONS OF MOTORS AND EQUIPMENT, IN ORDER TO AVOID INTERFERENCE.
5. THE CONTRACTOR SHALL CHECK WITH THE HVAC TRADE CONCERNING THE LOCATION OF STEEL PLATE FIRE STOPS IN CORRIDORS AND HUNG CEILINGS AND SHALL FURNISH THE HVAC TRADE WITH SIZES AND LOCATIONS OF OPENINGS NECESSARY TO ACCOMMODATE THE ELECTRICAL CONDUITS PIERCING THE FIRE STOPS.
6. IN UNFINISHED PORTIONS OF THE BUILDING, SUCH AS BOILER ROOM, FAN ROOMS, PIPE SPACES, ETC., LOCATIONS OF CONDUIT AND OUTLETS ARE APPROXIMATE AND SHALL CLEAR PIPING AND ALL OTHER CONSTRUCTION. CONDUIT IN THESE PORTIONS OF THE BUILDING SHALL BE RUN EXPOSED.
7. IN THE BOILER ROOM, SYSTEM CONDUITS, SUCH AS FOR LIGHTING AND POWER FEEDERS, LOW VOLTAGE, FIRE SIGNAL, ETC., SHALL NOT BE RUN OVER BOILERS.
8. NO CONDUIT SHALL BE RUN IN ANY FLOOR IN CONTACT WITH THE EARTH UNLESS OTHERWISE DIRECTED ON THE PLAN. IN SUCH AREAS, CONDUIT FOR MOTORS AND STARTERS SHALL BE RUN OVERHEAD, SUPPORTED AS REQUIRED.
9. PULL AND JUNCTION BOXES SHALL BE SURFACE TYPE IN UNFINISHED AREAS AND FLUSH TYPE IN FINISHED AREAS (AT NEW WALLS/PARTITIONS), UNLESS OTHERWISE NOTED. THE JUNCTION AND PULL BOXES SHALL BE LOCATED TO SUIT CONDUIT ENTRANCE, BUT SHALL, IN ALL CASES, BE LOCATED TO AVOID INTERFERENCE WITH EQUIPMENT FROM OTHER TRADES AND SHALL BE LOCATED SO THAT COVERS ARE READILY ACCESSIBLE.
10. WHERE RECESSED FIXTURES ARE INDICATED ON THESE PLANS AND WET PLASTER CEILING CONSTRUCTION IS USED, PLASTER FRAMES SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR WITH OTHER TYPES OF HUNG CEILING CONSTRUCTION. LIGHTING FIXTURES SHALL BE APPROPRIATE TO MEET THE REQUIREMENTS OF THAT CEILING CONSTRUCTION.
11. UNLESS OTHERWISE NOTED ON FLOOR PLANS OR IN FLOOR PLAN NOTES, SWITCHES SHALL BE INSTALLED AT 4'-0" ABOVE FINISHED FLOOR. WHERE SWITCH HEIGHTS ARE GIVEN ON THESE DRAWINGS FOR AREAS IN WHICH THERE ARE TILE WAINSCOTS, SUCH AS TOILETS, LOCKER ROOMS, ETC. THE CONTRACTOR SHALL ADJUST SWITCH HEIGHTS, IF NECESSARY TO AVOID INTERFERENCE WITH THE WAINSCOT.
12. CONTRACTOR SHALL PROVIDE SEPARATE RACEWAYS FOR CONDUCTORS ON NORMAL AND EMERGENCY CIRCUITS.
13. PROVIDE FIRE STOP SEALS TO ALL PENETRATIONS OF ALL EXISTING FLOORS, SLABS, AND WALLS/PARTITIONS; AND ALL NEW FIRE RATED WALLS & PARTITIONS.
14. PROVIDE DEFLECTION FITTINGS AT ALL REQUIRED CROSSINGS OF EXPANSION POINTS.
15. ALL CIRCUITS CONTAINING GFI OUTLETS, CKTS FOR COMPUTERS AND/OR PERIPHERALS AND RELATED EQUIPMENT AND CIRCUITS RECOMMENDED BY THE MANUFACTURERS SHALL HAVE A SEPARATE DEDICATED NEUTRAL.
16. PROVIDE COLOR CODING FOR BRANCH CIRCUITS & FEEDERS AS FOLLOWS FOR 120/208V. CONDUCTORS:

BLACK PHASE "A"
RED PHASE "B"
BLUE PHASE "C"
WHITE NEUTRAL
GREEN GROUNDING
17. PLACEMENT OF ALL ELECTRICAL DEVICES MUST BE COORDINATED WITH FURNITURE LAY-OUTS. THE ELECTRICAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR SUBMITTING SHOP DWGS FOR LOCATION OF ALL ELECTRICAL DEVICES. THE SHOP DWGS MUST INDICATE THE MOUNTING HEIGHTS & CENTER LINE DISTANCE FROM THE NEAREST COLUMN.
18. ALL COMPONENTS SHOWN ON RISER DIAGRAMS, BUT NOT ON THE PLAN OR VICE VERSA, SHALL BE INCLUDED AS IF SHOWN ON BOTH.
19. CONTRACTOR SHALL NOT INSTALL MORE THAN 3 CURRENT CARRYING CONDUCTORS IN A RACEWAY UNLESS OTHERWISE SPECIFICALLY INDICATED ON THE DRAWINGS.
20. THE ELECTRICAL CONTRACTOR SHALL REVIEW ALL TRADES CONTRACT DOCUMENTS TO DETERMINE SPECIFIC MOUNTING LOCATIONS FOR ELECTRICAL EQUIPMENT.
21. ALL MOUNTING HEIGHTS SHALL BE MEASURED FROM FINISHED FLOOR TO CENTERLINE OF DEVICES EXCEPT FOR EXIT SIGNS.
22. RIGID NONMETALLIC CONDUIT (RNM) SHALL NOT BE INSTALLED WITHIN THE BUILDING FOOTPRINT, UNLESS OTHERWISE INDICATED.
23. NO CONDUIT IN THE BUILDING SHALL BE IN CONTACT WITH THE EARTH UNLESS OTHERWISE NOTED.
24. CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING EACH CKT IN ALL MANHOLES, HAND HOLES, WIRE WAYS & ALL OTHER ENCLOSURES & AT ALL TERMINATION.
25. ALL SERVICE ENTRANCE CONDUITS ARE TO BE PITCHED AS REQUIRED AND SEALED AT THE POINT OF ENTRY TO THE BUILDING IN ORDER TO AVOID WATER PENETRATION TO THE BUILDING THROUGH THESE CONDUITS.
26. FINAL LOCATION OF ALL ELECTRICAL EQUIPMENTS, DEVICES SHALL BE COORDINATED AT FIELD WITH ALL OTHER TRADES AND WITH EXISTING BUILDING ELEMENTS, PIPES, EQUIPMENTS, DEVICES ETC. IN ORDER TO HAVE CODE COMPLIANT INSTALLATION.
28. ROUTING OF ELECTRICAL CONDUITS IF SHOWN IN THE DRAWINGS ARE TENTATIVE. THE CONTRACTOR IS RESPONSIBLE TO FINALIZE THE ROUTING OF ALL ELECTRICAL CONDUITS AT FIELD IN COORDINATION WITH ALL OTHER TRADES AND EXISTING BUILDING ELEMENTS, STRUCTURES, PIPES, EQUIPMENTS, & DEVICES ETC. FOR CODE COMPLIANT INSTALLATION.
29. THE ELECTRICAL CONTRACTOR IS REQUIRED TO COORDINATE WITH THE MECHANICAL CONTRACTOR DURING THE MECHANICAL EQUIPMENT SUBMITTAL REVIEW PROCESS IN ORDER TO VERIFY THE REQUIREMENT OF INSTALLING NEUTRAL WIRE IN THE CONDUIT TO FEED ALL HVAC EQUIPMENT SUCH AS ROOF TOP UNIT PRIOR TO INSTALLATION OF THE WIRES IN CONDUIT.
30. THE FINAL LOCATION OF ALL ELECTRICAL RECEPTACLE OUTLETS THROUGHOUT THE BUILDING SHALL BE COORDINATED WITH FURNITURE AND ALL OTHER TRADES SO THAT ALL RECEPTACLES WILL BE ACCESSIBLE FOR USE. THE FINAL LOCATION OF THE RECEPTACLES SHOWN AT THE WINDOW SIDE WALL SHALL BE COORDINATED WITH HEATING EQUIPMENT AND BOOK SHELF; THE CONTRACTOR MAY NEED TO ADJUST THE HEIGHT OF THE RECEPTACLE, IF NECESSARY TO AVOID THE INTERFACE WITH THE HEATING EQUIPMENT OR ANY OTHER FURNITURE/BUILDING ELEMENTS.
31. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH OTHER TRADES AT FIELD SO THAT NO FOREIGN SYSTEM SUCH AS PIPING, DUCT, LEAK PROTECTION APPARATUS, OR OTHER EQUIPMENT FOREIGN TO THE ELECTRICAL INSTALLATION SHALL BE RUN OVER THE ELECTRICAL EQUIPMENT INSTALLATION.
32. THE CONTRACTOR IS REQUIRED TO PERFORM CONTINUITY AND INSULATION RESISTANCE TEST BY MEGER FOR ALL FEEDERS AND BRANCH CIRCUITS BEING INSTALLED AND BEING MODIFIED UNDER THIS PROJECT.

1. CONTRACTOR SHALL MAINTAIN UNINTERRUPTED POWER SUPPLY TO THE SCHOOL BUILDING DURING THE CONSTRUCTION. POWER IS TO BE MAINTAINED AT ALL TIMES, UNLESS OTHERWISE INSTRUCTED, ALONG WITH THE ADEQUATE POWER SUPPLY FOR THE CONCURRENT CONSTRUCTION AND MAINTENANCE PROJECTS.
2. THE MAINTENANCE OF POWER SUPPLY INCLUDES BOTH THE OVERALL POWER SERVICE TO THE BUILDING AS WELL AS LOCAL POWER SUPPLY TO THE SCHOOL AREAS TEMPORARILY AFFECTED BY THE WORK OF THIS CONTRACT. THE CONTRACTOR SHALL COORDINATE ALL HIS WORK WITH THE SCHOOL PRINCIPAL AND CUSTODIAN ALONG WITH THE AUTHORITY PROJECT OFFICER.
3. PROVIDING UNINTERRUPTED POWER SERVICE TO THE ENTIRE BUILDING AND POWER SUPPLY TO SCHOOL AREAS TEMPORARILY AFFECTED BY THE WORK OF THIS CONTRACT SHALL BE ACCOMPLISHED BY VARIOUS MEANS SUCH AS TEMPORARY BYPASS FEEDERS, TEMPORARY SWITCHES SUPPLYING PERMANENT FEEDERS, ETC.
4. THE CONTRACTOR SHALL ARRANGE TO WORK CONTINUOUSLY, INCLUDING OVERTIME, IF REQUIRED, TO ASSURE THAT SERVICES WILL BE SHUTDOWNS ONLY DURING THE TIME ACTUALLY REQUIRED TO MAKE THE NECESSARY DISCONNECTIONS/RECONNECTIONS TO EXISTING WORK.
5. THE CONTRACTOR SHALL GIVE THIRTY DAYS WRITTEN NOTICE IN ADVANCE TO THE SCA OF ANY REQUIRED SHUTDOWN, INCLUDING THE ESTIMATED PERIOD.

1. THE DEMOLITION WORK SHALL BE CARRIED ON IN EVERY RESPECT IN A THOROUGH AND WORKMANLIKE MANNER.
2. ALL DEMOLITION, REMOVAL, AND DISPOSAL WORK SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF THE BUILDING CODE AND WITH ALL STATE AND FEDERAL REGULATIONS.
3. REMOVE ALL DEBRIS NOT EXPLICITLY DESIGNATED TO BE SALVAGED (TO REMAIN) FROM THE PREMISES AND LEGALLY DISPOSE OFF AWAY FROM PREMISES.
4. ITEMS INDICATED TO BE SALVAGED SHALL BE REMOVED EITHER BEFORE DEMOLITION OR DURING THE PROCESS OF THE WORK, STORED AND PROTECTED ON THE SITE IN A LOCATION DESIGNATED BY THE AUTHORITY'S REPRESENTATIVE. THESE ITEMS WILL BE IDENTIFIED AND RETAINED BY THE AUTHORITY.
5. CAREFULLY REMOVE AND PROTECT ALL ITEMS TO BE SAVED AND REUSED AS INDICATED ON DRAWINGS. REPLACE ANY ITEMS THAT ARE DAMAGED BY REMOVAL AT YOUR OWN COST. NOTIFY THE AUTHORITY IN WRITING OF ANY ITEM THAT IS DAMAGED PRIOR TO REMOVAL SO THAT THEY MAY ASCERTAIN THE ITEM'S CONDITION.
6. PROTECT MATERIALS, SURFACES AND STRUCTURE, WHICH ARE TO REMAIN, FROM DAMAGE; IF DAMAGE OCCURS, REPAIR OR REPLACEMENT SHALL BE MADE BY THE CONTRACTOR, TO THE SATISFACTION OF THE AUTHORITY, AND AT THE EXPENSE OF THE CONTRACTOR.
7. DISCONNECT, REMOVE AND RELOCATE ANY ELECTRICAL EQUIPMENT NOT SHOWN ON THESE DRAWINGS AS PART OF THIS CONTRACT, BUT INTERFERES WITH THE WORK UNDER THIS CONTRACT. THIS WORK SHALL NOT BE CONSIDERED EXTRA AND SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
8. VISIT AND EXAMINE CAREFULLY THE AREAS AFFECTED BY THIS WORK TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND WITH THE DIFFICULTIES THAT ATTEND THE EXECUTION OF THIS WORK
9. RELOCATE AND/OR ALTER THE EXISTING BUILDING COMPONENTS AS DIRECTED BY AUTHORITY'S REPRESENTATIVE. ALL RELOCATION OR ALTERATIONS TO BUILDING SHALL BE RESTORED TO THEIR ORIGINAL WORKING CONDITIONS AFTER SUCH RELOCATION OR ALTERATION WORK.
10. AT THE COMPLETION OF DEMOLITION WORK, ALL RUBBISH, DEBRIS AND WASTE MATERIALS SHALL BE REMOVED BY THE CONTRACTOR AND THE PREMISES SHALL BE LEFT IN CLEAN CONDITION.
11. THE CONTRACTOR SHALL DISCONNECT THE CIRCUIT WIRING NOT IN USE AND SHALL REMOVE ALL NECESSARY WIRING MATERIALS, INCLUDING EXPOSED CONDUITS AND JUNCTION BOXES WHICH IMPEDE THE NEW WORK.
12. MAINTAIN CONTINUITY FOR ALL EQUIPMENT TO REMAIN. PROVIDE ALL REQUIRED ACCESSORIES, WIRING AND CONDUIT AS REQUIRED.
13. SUBSTANTIAL JOB COMPLETION INCORPORATES DEMOLITION OF EXISTING SYSTEMS IN CONTRACT.
14. THE EXISTING FIRE ALARM SYSTEM SHALL REMAIN OPERATIONAL AT ALL TIMES DURING CONSTRUCTION.
15. THE CONTRACTOR IS REQUIRED TO COORDINATE WITH GC AND ALL OTHER TRADES TO REWIRE THE EXISTING ELECTRICAL COMPONENTS, CONDUITS, DEVICES, PULL BOX, JUNCTION BOX ETC. THAT ARE ASSOCIATED WITH THE WALL THAT ARE BEING DEMOLISHED OR RESURFACED. REROUTE THE CONDUITS AND RELOCATE THOSE ELECTRICAL COMPONENTS AS REQUIRED AND FOR THE COMPLETION OF GC WORK. EXTEND CONDUIT WIRING AS REQUIRED TO REROUTING. MAINTAIN CIRCUIT CONTINUITY OF THE DEVICES THAT ARE BEING AFFECTED

	CONDUIT AND WIRE RUN CONCEALED IN FLOOR, CEILING OR WALL IN NEW CONSTRUCTION & SURFACE IN EXISTING CONSTRUCTION. HASH MARKS DENOTE NUMBER OF WIRES IF MORE THAN TWO ARE REQUIRED. ARROWS DENOTE HOMERUNS OF PARTICULAR CIRCUITS. MINIMUM 2#12 THHN/THWN IN 3/4" CONDUIT. ALL BRANCH CIRCUITS FOR 120V IF GREATER THAN 100 FEET SHALL BE ONE SIZE LARGER MINIMUM, AND FOR 277V IF MORE THAN 200 FEET ONE SIZE LARGER MINIMUM (BOTH TO MEET VOLTAGE DROP REQUIREMENTS) * DENOTES GROUND CONDUCTOR TO MATCH CIRCUIT WIRES
PNL-1	"PNL" INDICATES PANEL DESIGNATION, "1" INDICATES CIRCUIT NUMBER. CIRCUIT WIRE SHALL BE MINIMUM 2#12 THHN/THWN IN 3/4" CONDUIT. U.O.I. COMPUTER CIRCUIT SHALL ALSO BE PROVIDED WITH A SEPARATE NEUTRAL
	LIGHTING AND POWER PANEL BOARD, FLUSH MOUNTED IN WALL WITH COVER.
	LIGHTING AND POWER PANEL BOARD, SURFACE MOUNTED ON WALL.
	SAME AS ABOVE BUT WITH GUTTER TAP.
	WIRING TROUGH/SPLICE BOX, SIZE AS REQUIRED.
	MOTOR. HORSEPOWER INSCRIBED, PHASES INDICATED BY CIRCUITING.
	CIRCUIT BREAKER.
	FUSED SWITCH, RATING AND FUSING INDICATED.
	UNFUSED SWITCH.
	AUTOMATIC TRANSFER SWITCH.
	GROUND
	JUNCTION BOX, SIZE IS REQUIRED.
WP	DUPLEX THREE WIRE GROUNDED RECEPTACLE, 20A, 125V. (NEMA 5-20R) MOUNTED 18" A.F.F. U.O.I. SUBSCRIPT "WP" INDICATES WEATHER PROOF. SUBSCRIPT "K" INDICATES SAFETY TYPE.
	DUPLEX THREE WIRE GROUNDED RECEPTACLE, 20A, 125V. (NEMA 5-20R) WITH "GFI" GROUND FAULT INTERRUPTER STANCION MOUNTED 18" A.F.F. U.O.I.
	VARIABLE FREQUENCY DRIVE WITH INTEGRAL DISCONNECT
	DISCONNECT SWITCH, RATING AND FUSING NOTED. HORSEPOWER RATING AS REQUIRED BY MOTOR LOAD. "WP" INDICATES WEATHERPROOF NEMA 4X ENCLOSURE. OTHERWISE NEMA-1. SUBSCRIPT "L" INDICATES LOCKABLE TYPE.
	NEW UNIT VENTILATOR
	RECESSED MOUNTED 2'x2' BASKET LED LENS LIGHTING FIXTURE. INSCRIPTION DENOTES FIXTURE TYPE. SUBSCRIPTION DENOTES SWITCH CONTROL. TRIANGLE SHADE INDICATES EMERGENCY LIGHTING.
	CEILING MOUNTED LOW VOLTAGE OCCUPANCY SENSOR. AUTOMATIC "ON/OFF." "W" INDICATES WALL MOUNTED OCCUPANCY SENSOR.
	MOTOR STARTER SNAP ACTION TOGGLE SWITCH WITH THERMO OVERLOAD. "WP" INDICATES WEATHER PROOF

	EXISTING JUNCTION BOX
	EXISTING DISCONNECT SWITCH/MOTOR STARTER
	EXISTING PANEL
	EXISTING UNIT VENTILATOR

ABBREVIATION:	DESCRIPTION:	
A	AMPERE	
AC	ALTERNATION CURRENT	IG ISOLATED GROUND
AF	FUSE RATING IN AMPS	IWB INTERACTIVE WHITE BOARD
AFCI	ARC FAULT CIRCUIT INTERRUPTER	JB JUNCTION BOX
AFG	ABOVE FINISHED FLOOR	KEF KITCHEN EXHAUST FAN
AFG	ABOVE FINISHED GRADE	KEF KITCHEN EXHAUST FAN
AHRI	AIR-CONDITIONING, HEATING, AND REFRIGERATION	KVA KILOVOLT AMPERE
	INSTITUTE	KW KILOWATT
AHU	AIR HANDLING UNIT	KWH KILOWATT HOUR
AI	ANALOG INPUT	LP LIGHTING PANEL
AMP	AMPERE	LS LOUDSPEAKER
AO	ANALOG OUTPUT	LTG LIGHTING
AS	SWITCH RATING IN AMPS	MCC MOTOR CONTROL CENTER
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR CONDITIONING ENGINEERS	MECH MECHANICAL
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	ER MECHANICAL EQUIPMENT ROOM
ATS	AUTOMATIC TRANSFER SWITCH	MP MICROPHONE
AUX	AUXILIARY	MLO MAIN LUGS ONLY
BHP	AVERAGE	MTD MOUNTED
AVG	BRAKE HORSEPOWER	N NEUTRAL
BMS	BUILDING MANAGEMENT SYSTEM	N.C. NORMALLY CLOSED
C	CONDUIT	N.O. NORMALLY OPEN
CB	CIRCUIT BREAKER	P POLE(S)
CF	CUBIC FEET	PB PULLBOX
CLG	CEILING	PNL PANEL
CKT(S)	CIRCUIT(S)	PPP PORT PATCH PANEL
COL	COLUMN	POS POINT OF SALE
CONC	CONCRETE	PP POWER PANEL
DBA	DECIBELS (A WEIGHTED)	PWR POWER
DDC	DIRECT DIGITAL CONTROL	RC REMOTE CONTROL
DEG. °	DIGREES	REL RELOCATED
Ø	DIAMETER/ROUND	RG RIGID GALVANIZED CONDUIT
DRAIN	DRAIN	RTU ROOF TOP UNIT
DWG	DRAWING	SECT SECTION
E	EXISTING TO REMAIN	SP SPARE
ER	EXISTING TO BE REMOVED	SPF SMOKE PURGE FAN
ERR	EXISTING TO BE RELOCATED	SPR SPARE
EC	EMPTY CONDUIT	STD STANDARD
ECC	ELECTRIC CABINET CONNECTOR	SUR SURFACE
ECH	ELECTRIC CABINET HEATER	SW SWITCH
EF	EXHAUST FAN	SWDB SWITCHBOARD
EMR	ELEVATOR MACHINE ROO	TEL TELEPHONE
EUH	ELECTRIC UNIT HEATER	TEF TELEVISION
EXH	EXHAUST	TV TYPICAL
FA	FIRE ALARM	UOI UNLESS OTHERWISE INDICATED
FL	FLOOR	V VOLT
G	GUARD	VAV VARIABLE AIR VOLUME
GND	GROUND	W WATT
GFI	GROUND FAULT INTERRUPTER	WP WEATHER PROOF

STONY POINT ELEMENTARY SCHOOL:

THE WORK OF THIS PROJECT INCLUDES PROVIDING ELECTRICAL POWER TO THE HVAC UPGRADES AT STONY POINT ELEMENTARY SCHOOL. PROVIDE MATERIALS AND SERVICES AS FOLLOWS. THE FOLLOWING IS NOT INTENDED TO BE A COMPLETE DESCRIPTION OF THE WORK; PERFORM THE WORK AS HEREINAFTER DESCRIBED IN THESE CONTRACT DOCUMENTS.

- A. DISCONNECT POWER TO EXISTING UNIT VENTILATORS AND RETAIN THE EXISTING CABLES AND CONDUIT.
- B. RECONNECT EXISTING ELECTRIC POWER TO THE NEW UNIT VENTILATORS THROUGHOUT THE BUILDING WHERE INDICATED.
- C. PROVIDE POWER TO ALL NEW HVAC VRF EQUIPMENT BY MAKING MODIFICATIONS TO THE EXISTING SWITCHGEAR IN THE ELECTRICAL ROOM.

THIELLS ELEMENTARY SCHOOL:

THE WORK OF THIS PROJECT INCLUDES PROVIDING ELECTRICAL POWER TO THE HVAC UPGRADES AT THIELLS ELEMENTARY SCHOOL. PROVIDE MATERIALS AND SERVICES AS FOLLOWS. THE FOLLOWING IS NOT INTENDED TO BE A COMPLETE DESCRIPTION OF THE WORK; PERFORM THE WORK AS HEREINAFTER DESCRIBED IN THESE CONTRACT DOCUMENTS.

- A. DISCONNECT POWER TO EXISTING UNIT VENTILATORS AND RETAIN THE EXISTING CABLES AND CONDUIT.
- B. RECONNECT EXISTING ELECTRIC POWER TO THE NEW UNIT VENTILATORS THROUGHOUT THE BUILDING WHERE INDICATED.
- C. PROVIDE POWER TO ALL NEW HVAC VRF EQUIPMENT BY MAKING MODIFICATIONS TO THE EXISTING SWITCHGEAR IN THE ELECTRICAL ROOM.

WEST HAVERSTRAW ELEMENTARY SCHOOL:

THE WORK OF THIS PROJECT INCLUDES PROVIDING ELECTRICAL POWER TO THE HVAC UPGRADES AT STONY POINT ELEMENTARY SCHOOL. PROVIDE MATERIALS AND SERVICES AS FOLLOWS. THE FOLLOWING IS NOT INTENDED TO BE A COMPLETE DESCRIPTION OF THE WORK; PERFORM THE WORK AS HEREINAFTER DESCRIBED IN THESE CONTRACT DOCUMENTS.

- A. DISCONNECT POWER TO EXISTING UNIT VENTILATORS AND RETAIN THE EXISTING CABLES AND CONDUIT.
- B. RECONNECT EXISTING ELECTRIC POWER TO THE NEW UNIT VENTILATORS THROUGHOUT THE BUILDING WHERE INDICATED.
- C. PROVIDE POWER TO ALL NEW HVAC VRF EQUIPMENT BY MAKING MODIFICATIONS TO THE EXISTING SWITCHGEAR IN THE ELECTRICAL ROOM.

[illegible]

Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

Mechanical & Electrical Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 202 NY, 10901 PROJ. NO. : MNY-2300088-00
Structural Engineer:	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 202 SUFFERN, NY 10901

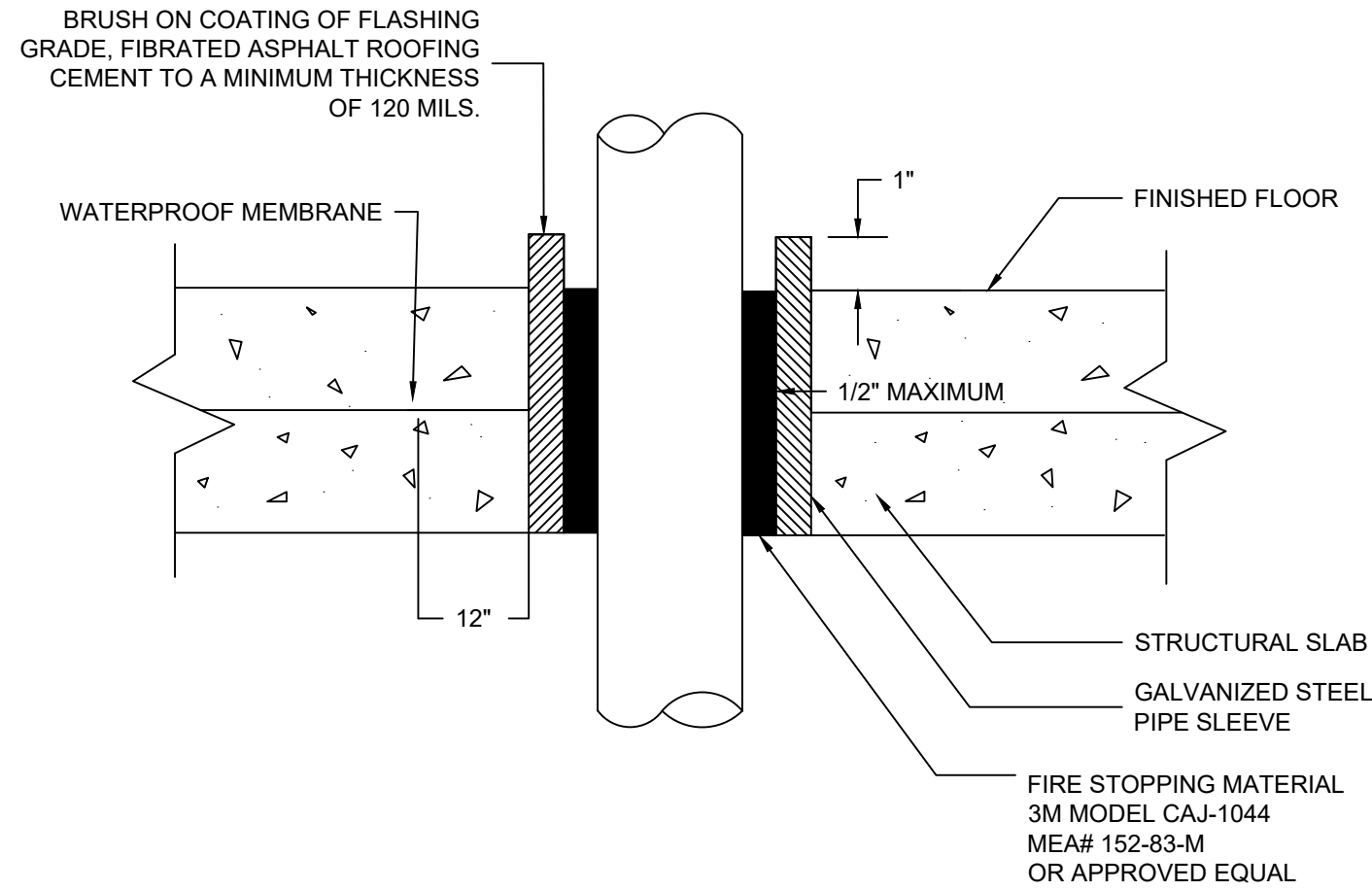
UNIVENT REPLACEMENT AT
STONY POINT, THIELLS,
WEST HAVESTRAW
ELEMENTARY SCHOOL



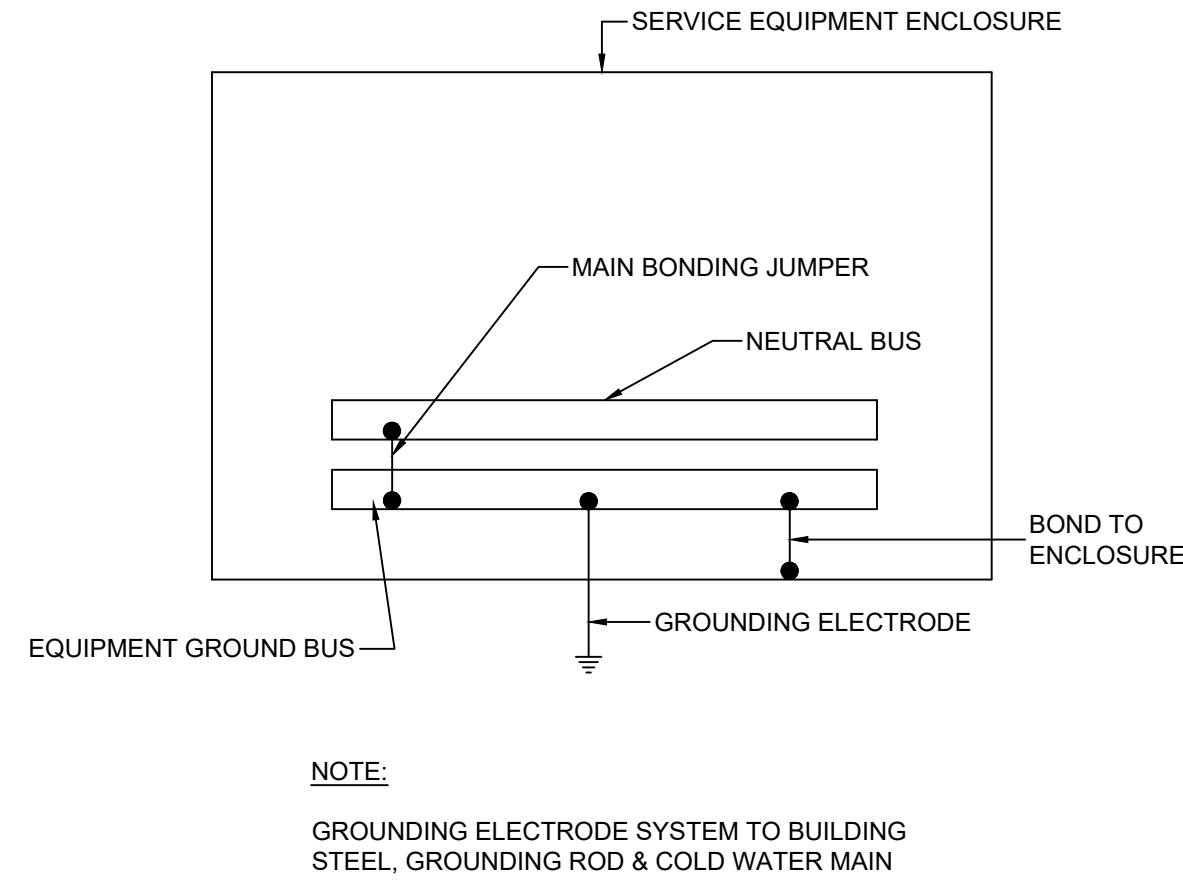
MICHAEL SHILALE ARCHITECTS, L.L.P.
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Drawing Title
**GENERAL NOTES AND
ABBREVIATIONS**

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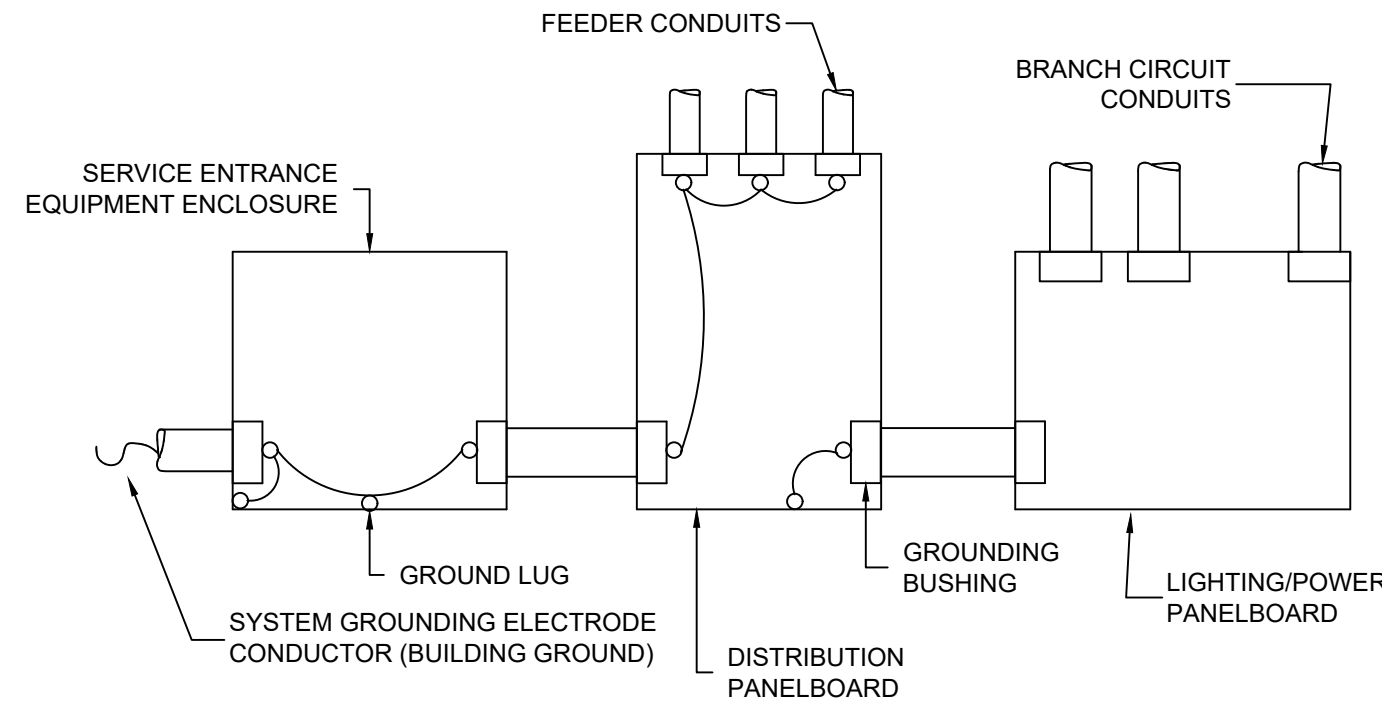


1 CONDUIT PENETRATION THRU WATERPROOF SLAB
SCALE: NTS

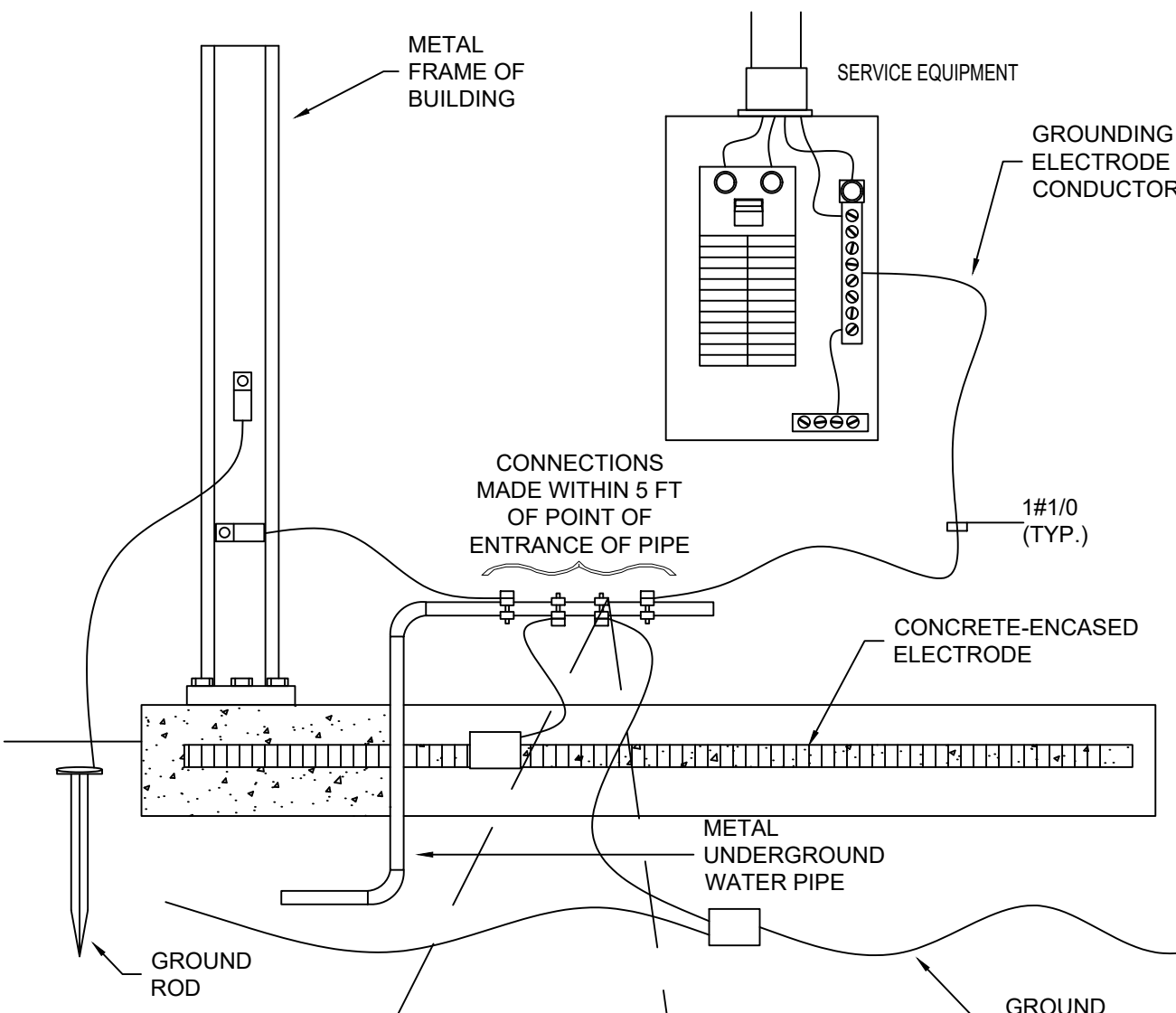


2 GROUNDING SYSTEM WITH GROUND BUS & NEUTRAL BUS
SCALE: NTS

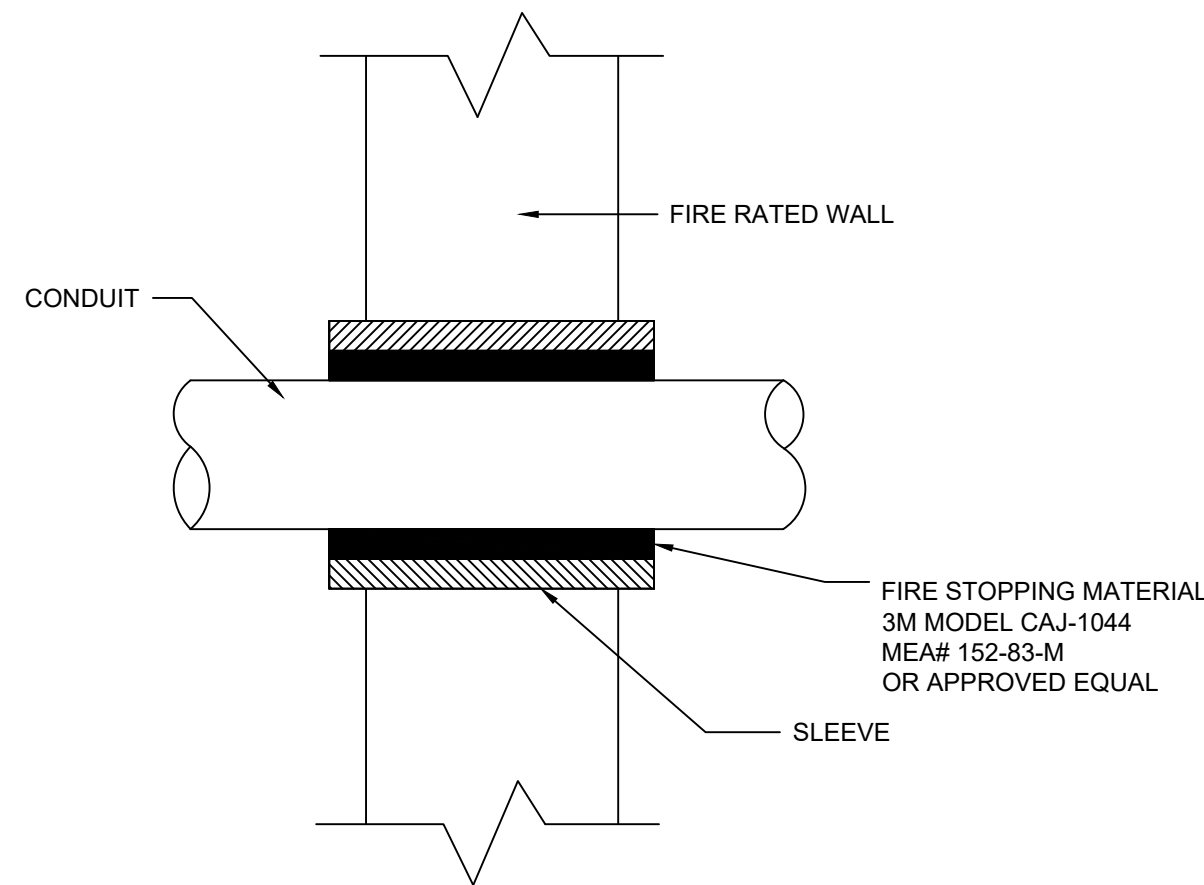
NOTE:
GROUNDING ELECTRODE SYSTEM TO BUILDING STEEL, GROUNDING ROD & COLD WATER MAIN



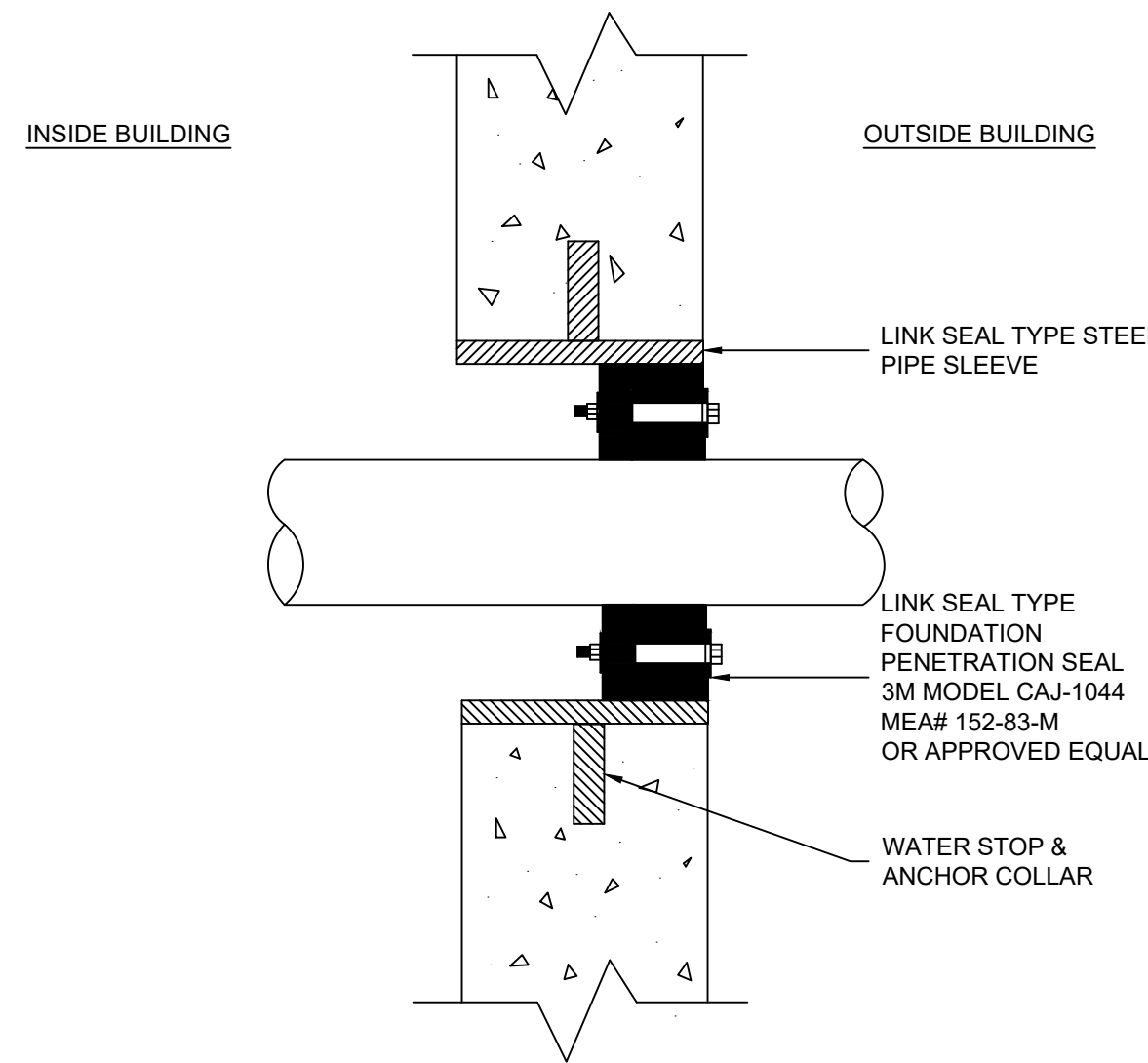
3 GROUNDING RACEWAY EQUIPMENT GROUNDING SYSTEM
SCALE: NTS



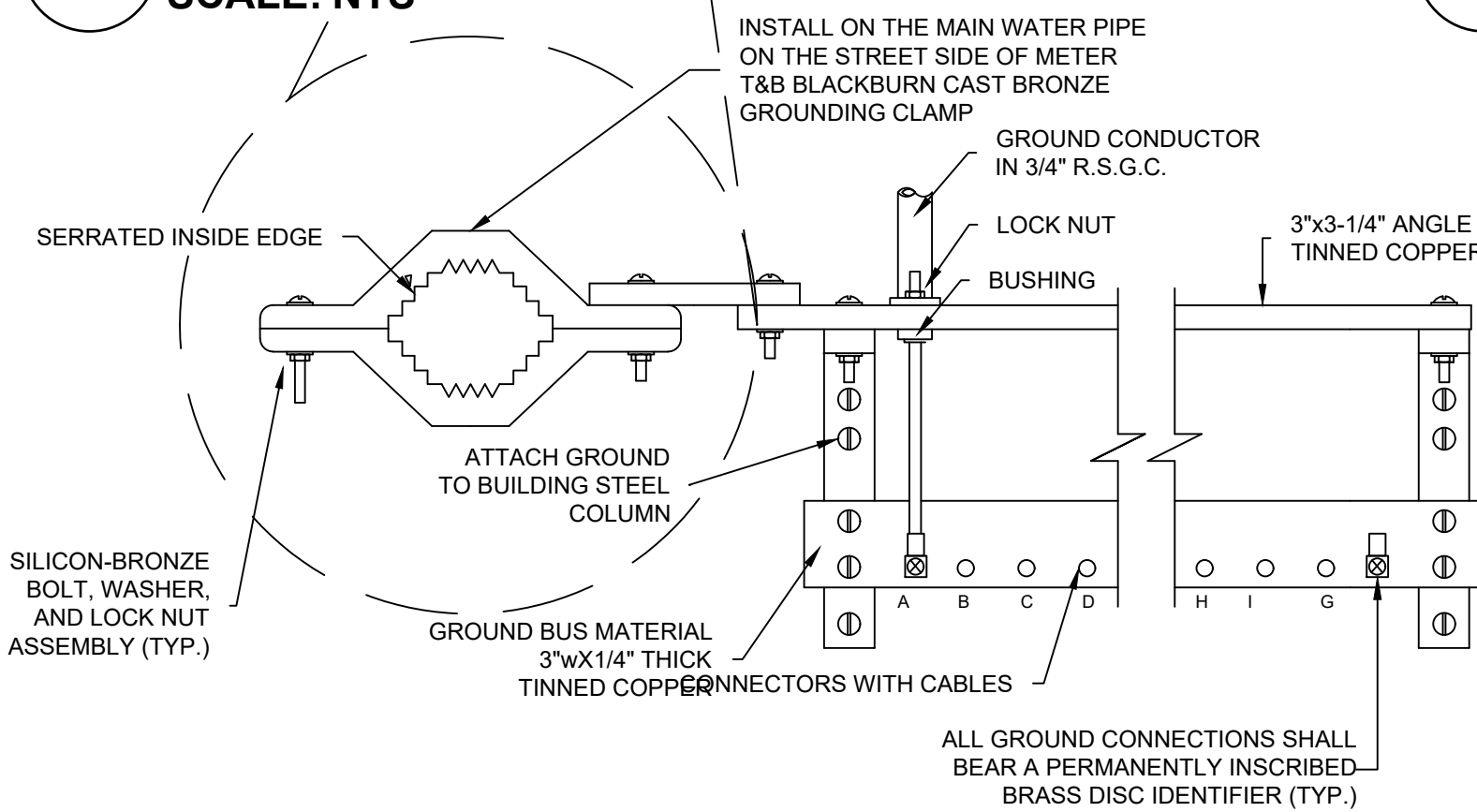
4 GROUNDING ELECTRODE SYSTEM
SCALE: NTS



5 CONDUIT PENETRATION THRU THRU FIRE RATED WALL
SCALE: NTS



6 CONDUIT PENETRATION THRU THRU FOUNDATION WALL
SCALE: NTS



7 GROUNDING CONNECTIONS & GROUND BUS
SCALE: NTS

MAIN GROUND BUS ROOM	
LETTER DESIGNATION	IDENTIFICATION
A	TO STRUCTURAL STEEL
B	FIRE ALARM CONTROL PANEL
C	NEW SERVICE EQUIPMENT
D	NEW GROUND ROD
E	NEW GROUND ROD
F	EXISTING SOLAR SYSTEM
G	EXISTING TELECOM ROOM
H	EXISTING REBAR
I	EXISTING/NEW INCOMING CONDUITS
J	OTHER EXISTING GROUNDING
K	OTHER EXISTING GROUNDING
L	OTHER EXISTING GROUNDING
M	OTHER EXISTING GROUNDING
N	OTHER EXISTING GROUNDING
O	SPARE
P	SPARE
Q	SPARE

0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BUILDING SUITE 200 ROCKY HILL, CT 06151 TEL: 860-514-1100 FAX: 860-514-1101 WWW.GPMI.COM	GREENMAN PEDERSEN, INC 2 EXECUTIVE BUILDING SUITE 200 ROCKY HILL, CT 06151 TEL: 860-514-1100 FAX: 860-514-1101 WWW.GPMI.COM
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UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAVEN ELEMENTARY SCHOOL SED# 50-02-01-06-0-014-XXX SED# 50-02-01-06-0-024-XXX SED# 50-02-01-06-0-024-XXX TEL: 860-514-1100 FAX: 860-514-1101 WWW.GPMI.COM

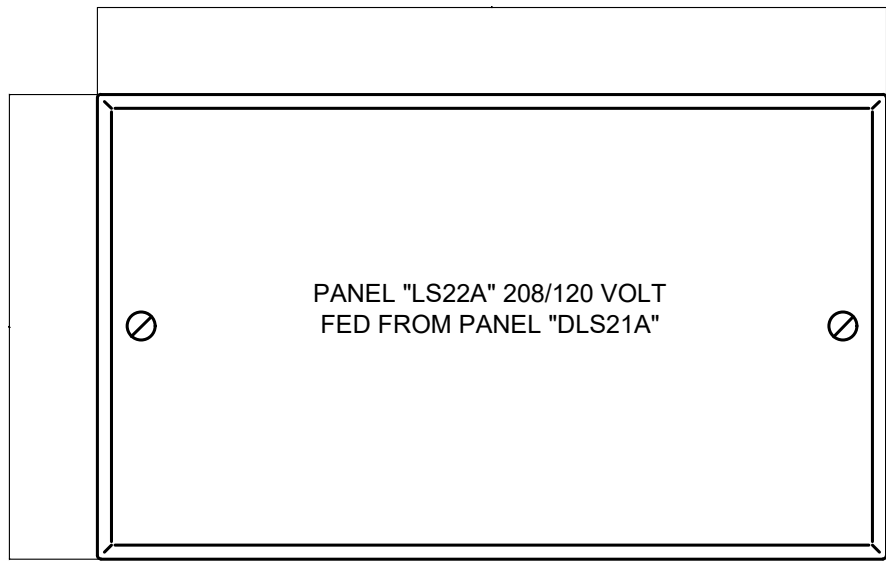
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ELECTRICAL DETAILS - 1	E-601
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BRANCH CIRCUIT VOLTAGE DROP			
CONDUCTOR AWG	#12	#10	#8
MAXIMUM CONDUCTOR LENGTH (IN FT.) AT 120V	95	160	245
MAXIMUM CONDUCTOR LENGTH (IN FT.) AT 208V,1PH	170	280	425
GROUND CONDUCTOR AWG	#12	#12	#12

NOTES:

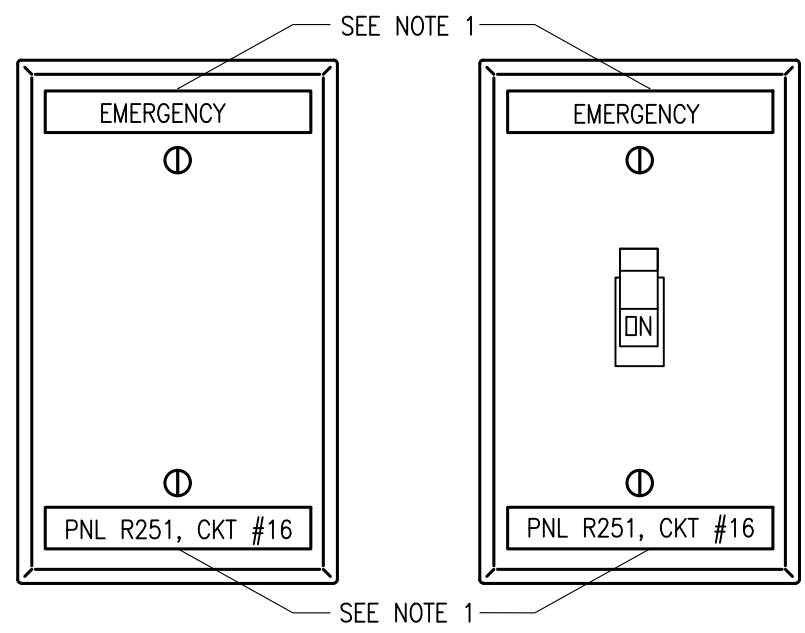
- INCREASE BRANCH CIRCUIT CONDUCTOR AS REQUIRED.
- BASED ON 20 AMP CIRCUIT LOADED TO 10 AMP USING SINGLE PHASE, 2 WIRE CIRCUITS.
- SCHEDULE REPRESENTS MINIMUM CONDUCTOR SIZE BASED ON LENGTH OF BRANCH CIRCUIT CONDUCTOR FROM PANEL TO PHYSICAL CENTER OF LOAD TO OVERCOME VOLTAGE DROP. 3% VOLTAGE DROP ASSUMED.
- TRANSITION FROM LARGER CONDUCTOR SIZE TO #12 FOR FINAL TERMINATION TO OUTLET DEVICE. PROVIDE JUNCTION BOX WITHIN 10' OF OUTLET. EXTEND #12 CONDUCTOR TO OUTLET.



- NOTES:
- NAMEPLATES SHALL HAVE WHITE LETTERS ON BLACK BACKGROUND.
 - NAMEPLATES SHALL BE FASTENED BY MACHINE SCREWS. ADHESIVES WILL NOT BE ALLOWED.
 - NAME PLATES SHALL BE PROVIDED FOR ALL ELECTRICAL EQUIPMENT INCLUDING, BUT NOT LIMITED TO, PANELBOARDS, SWITCHBOARDS, MOTOR CONTROL CENTERS, STARTERS, JUNCTION BOXES, PULL BOXES, DISCONNECT SWITCHES, TRANSFORMERS, CABINETS, ETC.

1 BRANCH CIRCUIT VOLTAGE DROP

SCALE: NTS



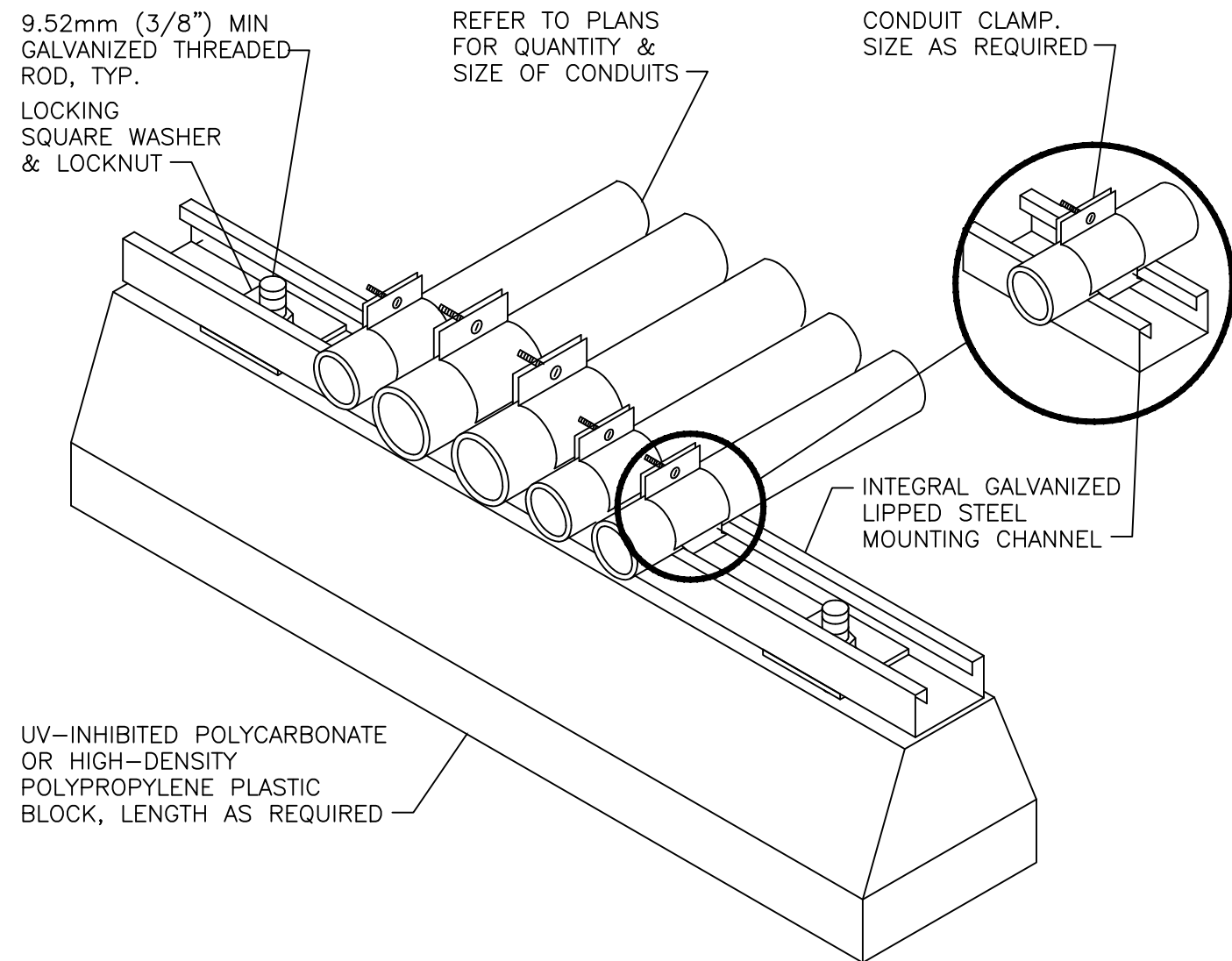
- NOTES:
- AT A MINIMUM, ELECTRICAL CONTRACTOR SHALL PROVIDE TYPED LABELS WITH PTOUCH MACHINE TO INDICATE PANEL NAME AND CIRCUIT NUMBER. PROVIDE 'EMERGENCY' TYPED LABEL FOR CIRCUITS CONNECTED TO EMERGENCY PANELS. COORDINATE EXACT NAMING WITH FACILITY'S PERSONNEL. IF FACILITY STANDARD IS ENGRAVED COVERPLATES, THE ELECTRICAL CONTRACTOR SHALL PROVIDE ENGRAVED COVERPLATES TO MATCH FACILITY REQUIREMENTS.

3 TYPICAL COVERPLATE AND SWITCH

SCALE: NTS

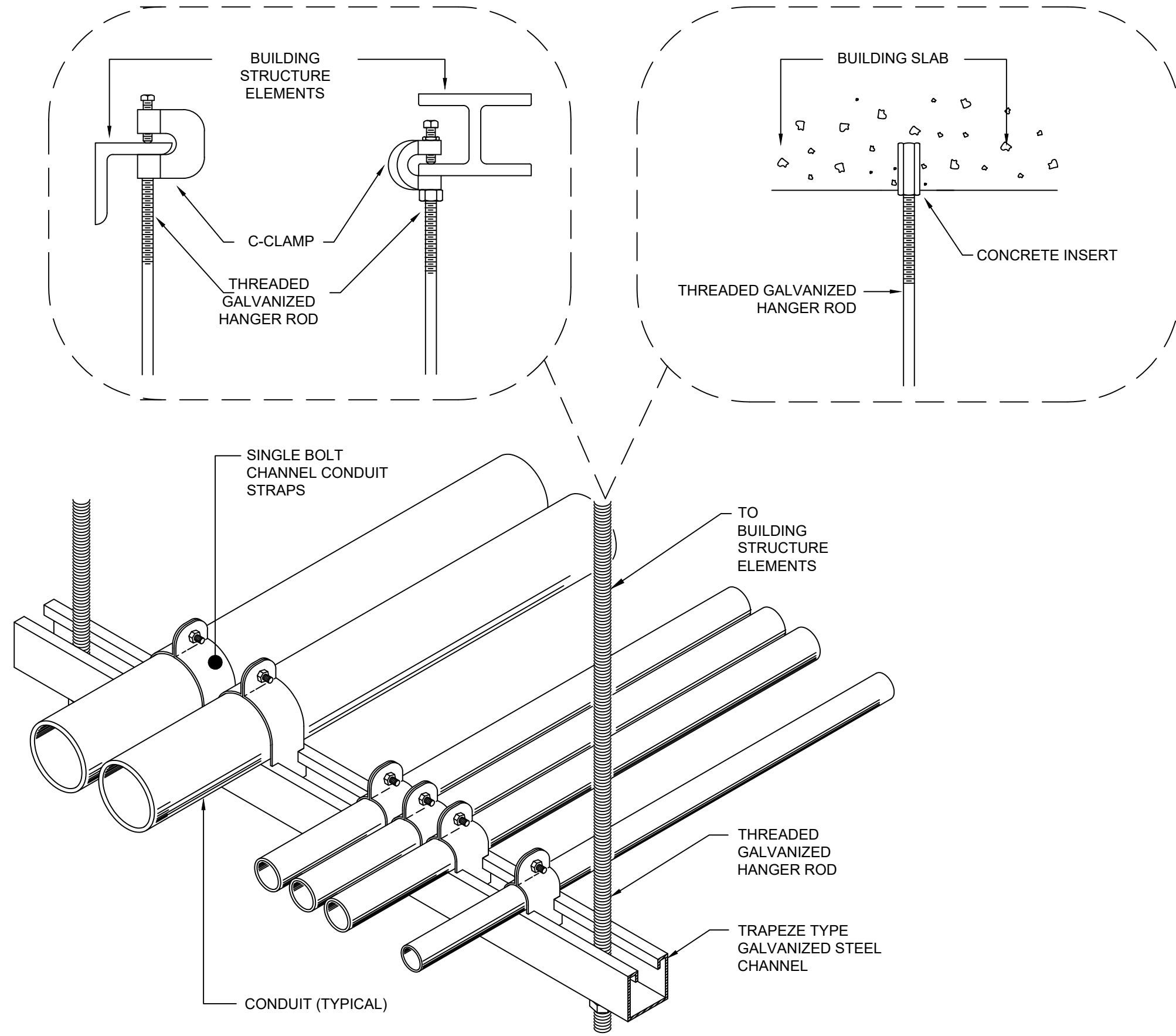
2 TYPICAL ENGRAVED NAME PLATE

SCALE: NTS



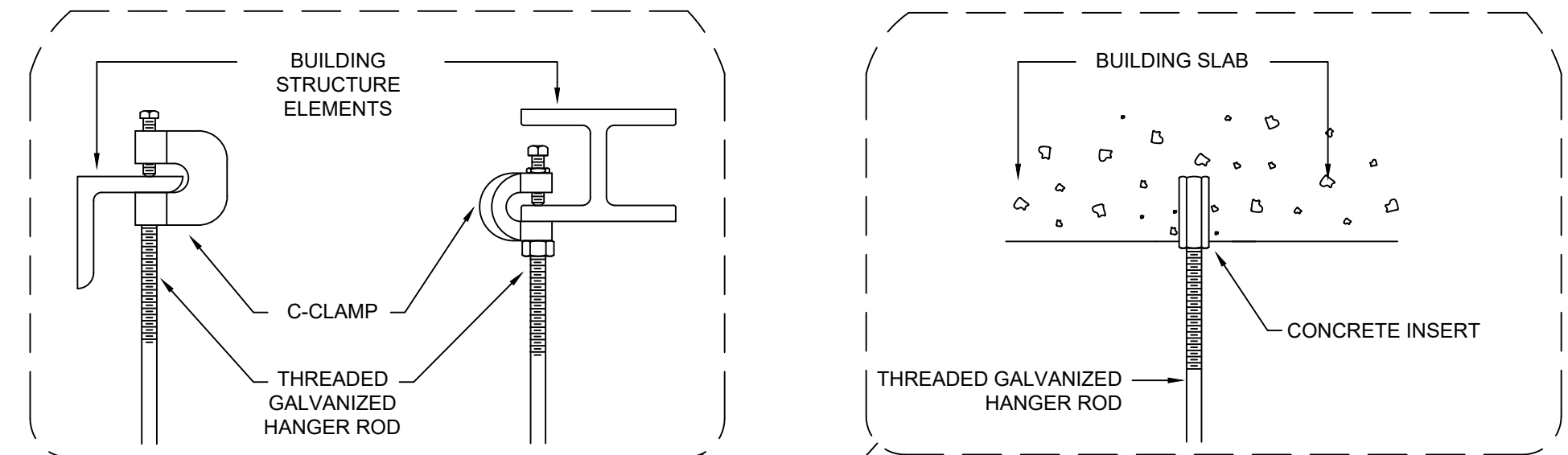
4 ROOF CONDUIT SUPPORT DETAIL

SCALE: N.T.S.



5 SUSPENDED SYSTEM MULTIPLE CONDUITS

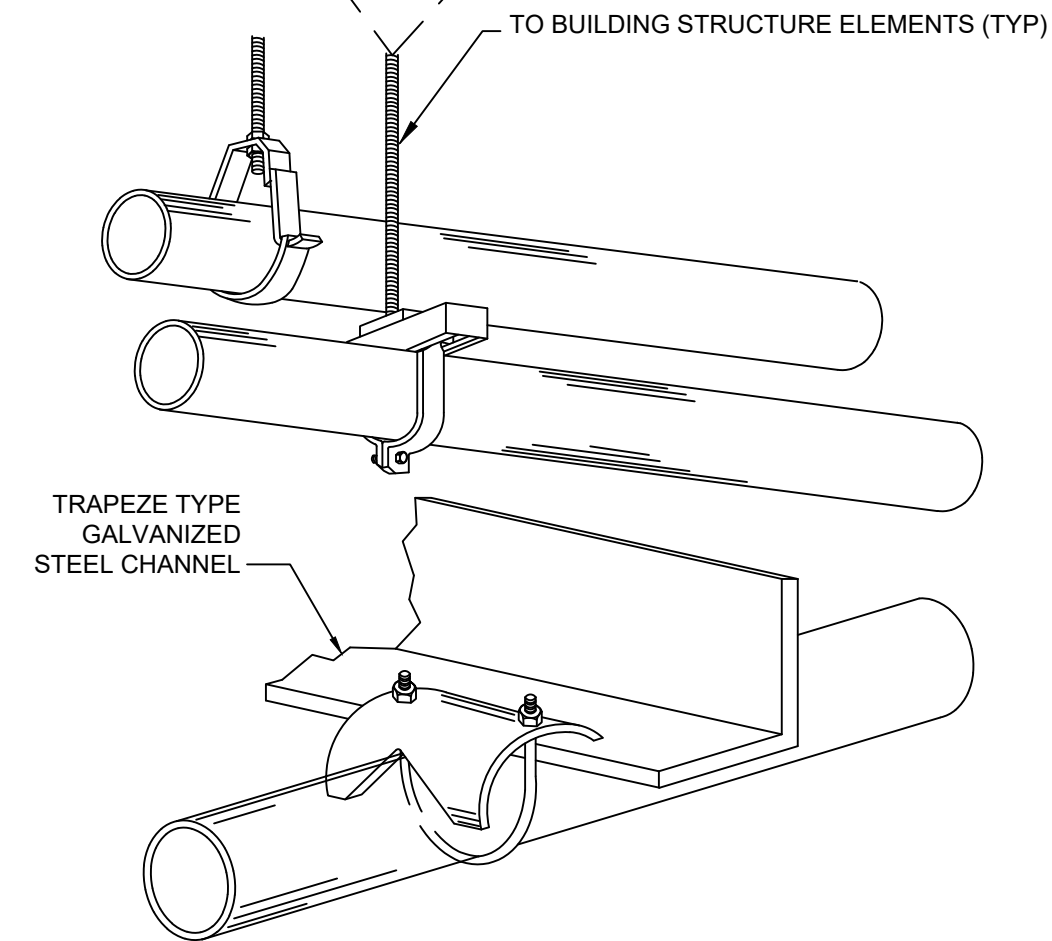
SCALE: NTS



- NOTES :
- CONTRACTOR MAY USE A CONDUIT SUSPENSION SYSTEM EQUIVALENT TO THAT WHICH IS DETAILED, HAVING THE FEATURES SHOWN AND APPROVED IN ADVANCE BY THE ENGINEER.
 - ALL ELECTRIC CONDUITS SHALL BE SECURELY FASTENED IN PLACE. CONDUIT SUSPENSION SYSTEM SHALL BE INDEPENDENT OF ANY OTHER SUSPENSION SYSTEM. HANGERS AND PIPING INSTALLED BY OTHER TRADES SHALL NOT BE USED FOR SUPPORTING ELECTRIC CONDUITS.
 - EACH MULTIPLE HANGER SHALL BE DESIGNED TO SUPPORT A LOAD EQUAL TO OR GREATER THAN THE SUM OF THE WEIGHTS OF THE CONDUITS, WIRES AND HANGER ITSELF, PLUS 200 POUNDS.

6 SUSPENDED SYSTEM SINGLE CONDUIT

SCALE: NTS



0 1/2 1
IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

No.	Date	Revisions
1	03-04-25	BIDDING DOCUMENTS

Drawn by	DK/KD
Checked by	SH
Project No.	43040
Scale	AS NOTED
Date	03-04-25

GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-261-1234 FAX: 860-261-1235 WWW.GPM-INC.COM	GREENMAN PEDERSEN, INC 2 EXECUTIVE BOULEVARD SUITE 200 ROCKY HILL, CT 06067 TEL: 860-261-1234 FAX: 860-261-1235 WWW.GPM-INC.COM
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UNIVENT REPLACEMENT AT STONY POINT, THIELS, WEST HAV ELEMENTARY SCHOOL SSD# 50-02-01-06-0-014-XXX SSD# 50-02-01-06-0-025-XXX SSD# 50-02-01-06-0-024-XXX NY 10000 NEW YORK, NY 10000

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ELECTRICAL DETAILS - 2	E-602
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