



Addendum #4

Date: 2/4/2021
To: YPS Facilities Management; All Bidders
From: LiRo Engineers, Inc.
Subject: YPS 10881 – Saunders HS - HVAC Upgrades Project Addendum #4

The following changes are made to the issued bid drawings:

- The following drawings have been updated to clarify Abatement Scope and therefore replace originally issued drawings:
 - o H-100A
 - o H-100B
 - o H-101
 - o H-102
 - o H-103
 - o H-104
 - o M-101

Additionally, the following information is being provided as response to received questions:

1. What is the manufacturer for the existing roof and is it under warranty?
Roof over Main Office area (details 7 and 8/A-626) is Firestone EPDM, under warranty. Other roof areas are not under warranty, manufacturer is not known.
2. Is there an existing asbestos testing report for the roof?
Please see attached document.
3. What are the size/dimensions of the incinerator flue to be removed as per H-100A Special Job Conditions Note #9?
The existing records show approximately 16" x 16" flue that extends 50 feet up. Contractor will need to confirm exact dimensions in-field as they have not been verified.

Sincerely,

LiRo Engineers, Inc.

PROJECT NOTES:

SCOPE OF WORK

- A. This asbestos abatement Project will consist of the removal and disposal of asbestos containing flooring and mastic, replacement of abated tiles with non ACM tiles of similar color, pattern, and size, as well the disconnect and abandoning of asbestos cement ducts associated with the mechanical HVAC system.
- B. The work shall include but not be limited to the abatement work tabulated in the H-100 series drawings.
- C. The Contractor shall be aware of all conditions of the Project and is responsible for verifying quantities and locations of all Work to be performed. Failure to do so shall not relieve the Contractor of its obligation to furnish all labor and materials necessary to perform the Work.
- D. All Work shall be performed in strict accordance with the Project Documents and all governing codes, rules, and regulations. Where conflicts occur between the Project Documents and applicable codes, rules, and regulations, the more stringent shall apply.
- E. Working hours shall be as required and approved by the Owner. Asbestos abatement activities including, but not limited to, work area preparation, gross removal activities, cleaning activities, waste removal, etc. may need to be performed during 'off-hours' (including nights and weekends). In addition, multiple mobilizations may be required to perform the work identified in this project. The Contractor shall coordinate and schedule all Work with the facility and Owner's representative.

SPECIAL JOB CONDITIONS

1. The abatement contractor shall confirm the location and quantity of all asbestos removal and, prior to the start of any abatement activities, notify Yonkers Public Schools (YPS) of any inconsistencies with the Bid Documents, as well as any site conditions that were not captured by the Bid Documents that will impact the execution of the work.
2. The schedule for all work at the school must be coordinated with and approved in advance of mobilization by YPS.
3. Mechanical system components that the Contractor may need to access to perform the work of this contract, including oversized ducts, duct enclosures, and plenum units, are considered confined spaces for purposes of planning and executing abatement work in this area. The Contractor shall submit a Confined Space Entry plan that must be approved by YPS and acknowledged by the local City of Yonkers fire rescue department.
4. The HVAC Contractor shall perform disconnect of electrical and mechanical components of ventilation system units that are being taken out of service. Care shall be taken to avoid disturbance in asbestos cement ducts; the general contractor's asbestos abatement contractor shall make the final disconnection at the asbestos duct, cut the asbestos duct to slab/grade as necessary and cap air tight using galvanized steel or effective equivalent.
5. The abatement contractor shall perform asbestos abatement in a manner consistent with the project specifications as well as all applicable federal, state, and local regulations or as modified by Site Specific Variances.
6. The Contractor shall be aware of the presence of lead-based paint on all surfaces except those YPS has designated as non-lead-based paint, and apply the appropriate health and safety measures.
7. All work must be coordinated with YPS facility representatives prior to scheduling and mobilization of manpower and resources to the project site.
8. The Contractor shall replace all floor tile removed as part of this abatement using non-asbestos resilient vinyl tiles of similar color, pattern and size. Flooring shall be removed down to the substrate.
9. Abandoned Incinerator Flue is assumed to contain asbestos. Removal shall be performed from the Incinerator Room; flue / flue liner may be secured at roof level and/or intermittently along vertical extension - Contractor is responsible for complete removal of the flue / flue liner as ACM.
10. For Work Areas 4,5,6 & 7 (H-102), the asbestos cement ducts leading to the unit ventilators shall also be capped & sealed air tight at the subgrade intakes.

ASBESTOS ABATEMENT BASE SCOPE OF WORK TABLE:

Work Area	Location	Description of Asbestos Material	Approximate Quantity Of ACM	ICR 56 Procedure
1	3rd Floor Library (Corner)	9"x9" Beige Floor Tile and Mastic	200.0 SF	56-11.7
2	1st Floor Mechanical Room	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
3	1st Floor Fan Room	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
4	1st Floor Room 101	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
5	1st Floor Room 102	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
6	1st Floor Room 103/105	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
7	1st Floor Room 106	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
8	1st Floor Faculty Dining	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
9	1st Floor Room 110	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
10	1st Mechanical Room - Incinerator Duct	Asbestos Cement Ducts	<1.0 SF	56-11.3 or SSV
11	1st Floor Old Incinerator Room	Flue / Flue Liner	50.0 LF	56-7.11 (f)
12	2nd Floor Teacher Room	9"x9" Floor Tile and Mastic	550.0 SF	56-11.7
13	2nd Floor Storage Room	9"x9" Floor Tile and Mastic	65.0 SF	56-11.7
Total			815.0 SF / 50.0 LF	

ASBESTOS ABATEMENT ALTERNATE SCOPE OF WORK TABLE:

Work Area	Location	Description of Asbestos Material	Approximate Quantity Of ACM	ICR 56 Procedure
A1	3 rd Floor Library	9"x9" Beige Floor Tile and Mastic	2,450.0 SF	56-11.7
Total			5,310.0 SF	

PROJECT TITLE

**SAUNDERS TRADES
AND TECHNICAL
HIGH SCHOOL HVAC
UPGRADES**

PROJECT ADDRESS

**183 PALMER RD
YONKERS, NY 10701**

OWNER

**YONKERS PUBLIC
SCHOOLS**

ARCHITECT

**FULLER AND
D'ANGELO P.C.**

45 KNOLLWOOD ROAD
ELMSFORD, NY 10523
(716) 914-5922, 4444

MEP ENGINEER AND ENVIRONMENTAL ENGINEER

LiRo Engineers, Inc.
A LiRo Group Company
Syosset, N.Y. 516-214-8151(T)

KEY PLAN: NOT TO SCALE

SHEET SIZE 30X42

MARK DATE DESCRIPTION

REVISION

04.17.20 90% CD

02.04.21 ADDENDUM 4

MARK DATE DESCRIPTION

ISSUE

SED # 69-23-09-01-0-206-017

YPS JOB: 10881

DESIGN BY: R. SALERNO- 10-00697

DRAWN BY: S. RAMCHARAN

CHKD BY: C. ZANONI - 92-16430

COPYRIGHT:

LIRO ENGINEERS, INC.

ENGINEER'S SEAL

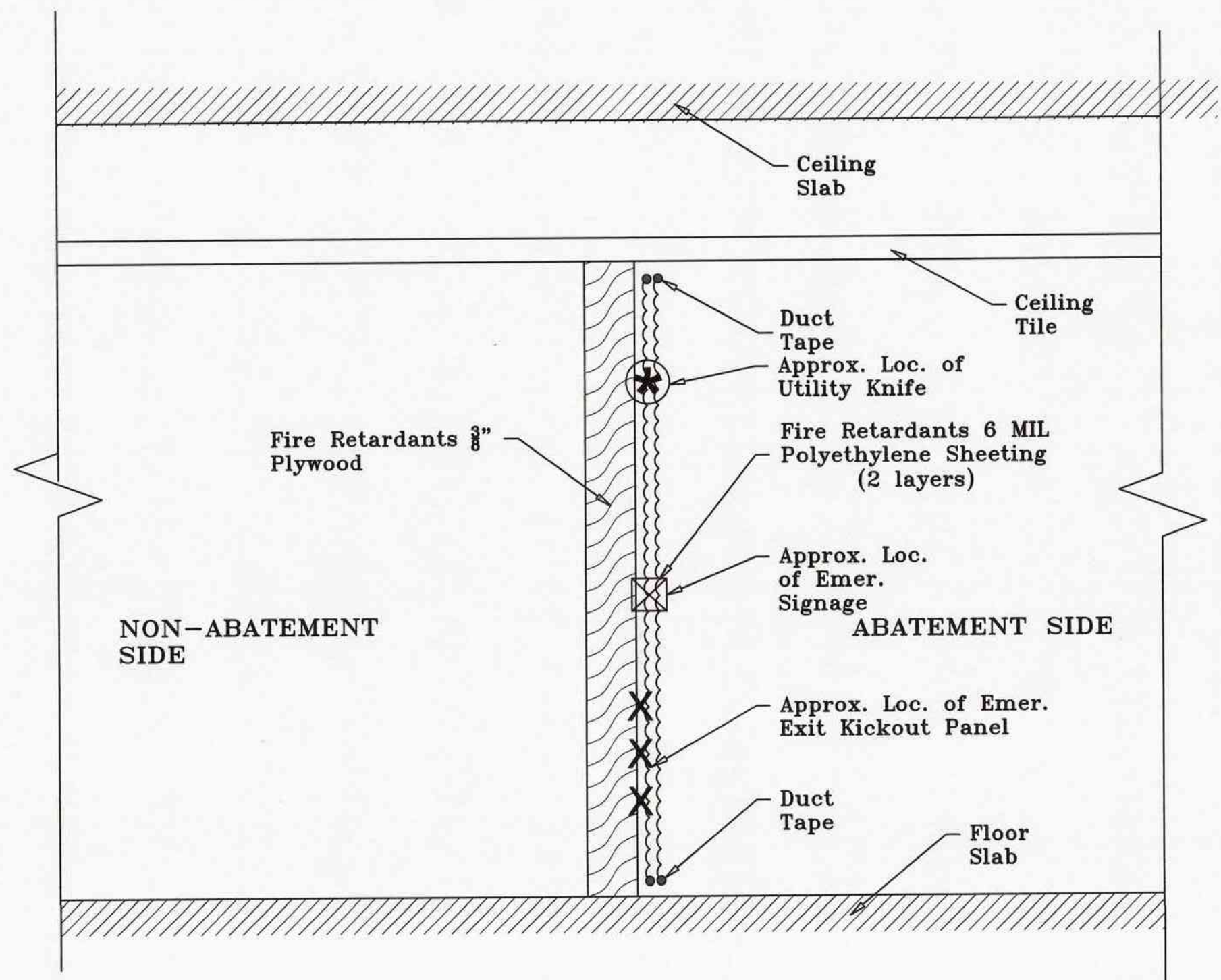


IT IS A VIOLATION OF NYS LAW FOR ANY PERSON TO ALTER THIS DOCUMENT IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. IF A DOCUMENT BEARING THE SEAL OF AN ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE DOCUMENT THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

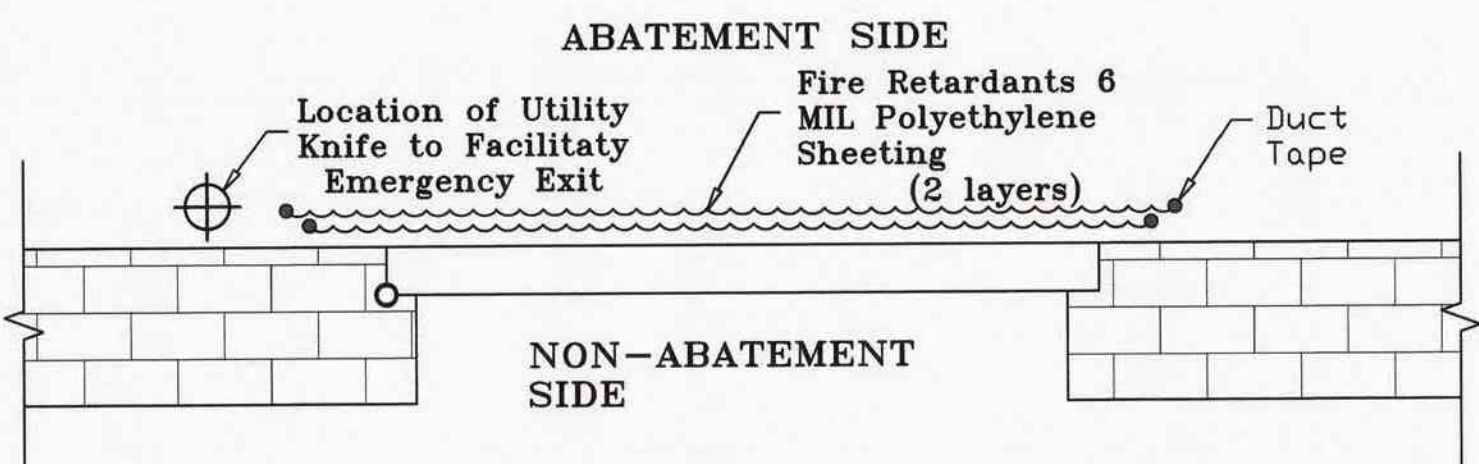
SHEET TITLE

**SCOPE OF WORK
AND DETAILS**

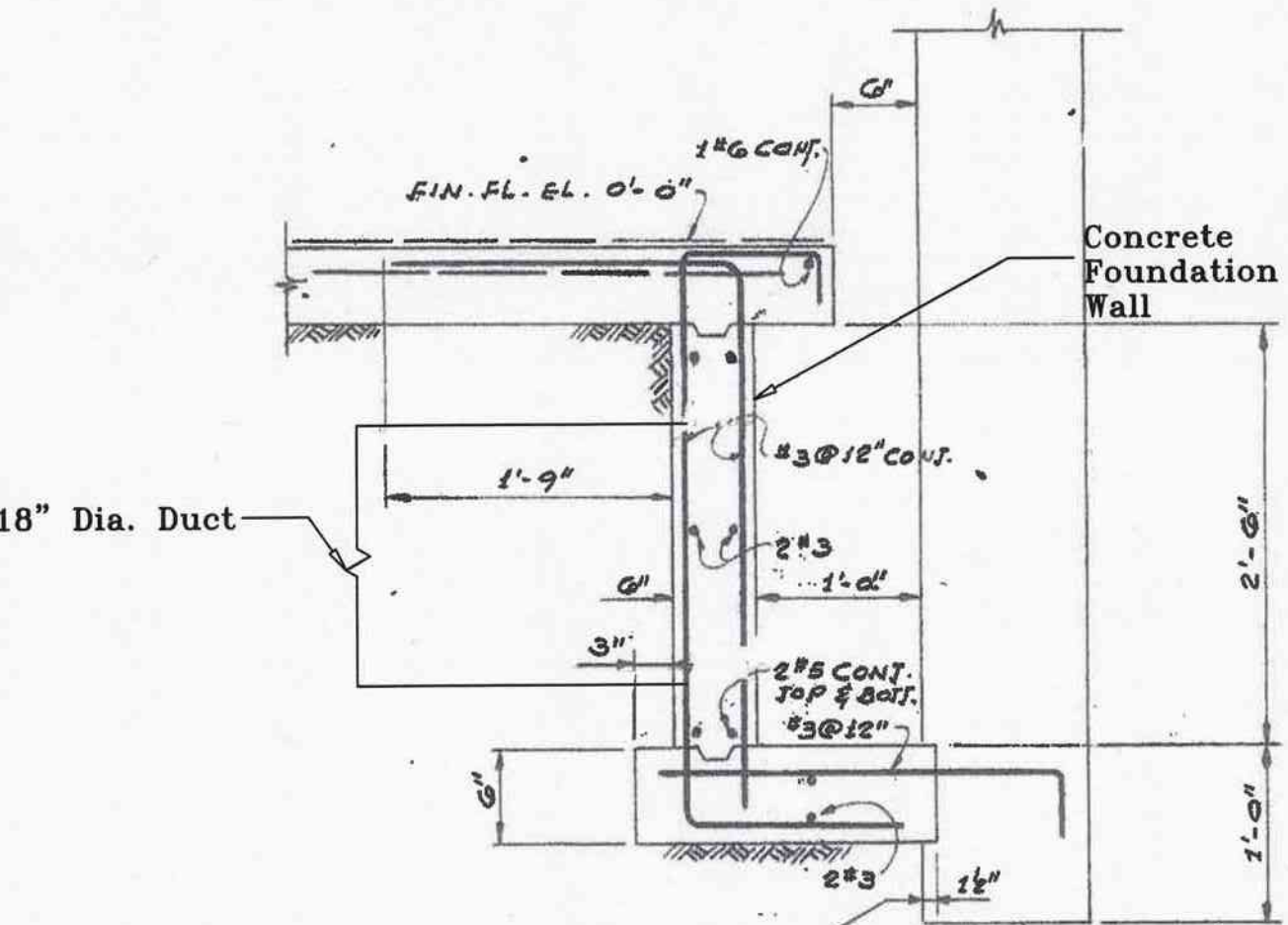
H-100A



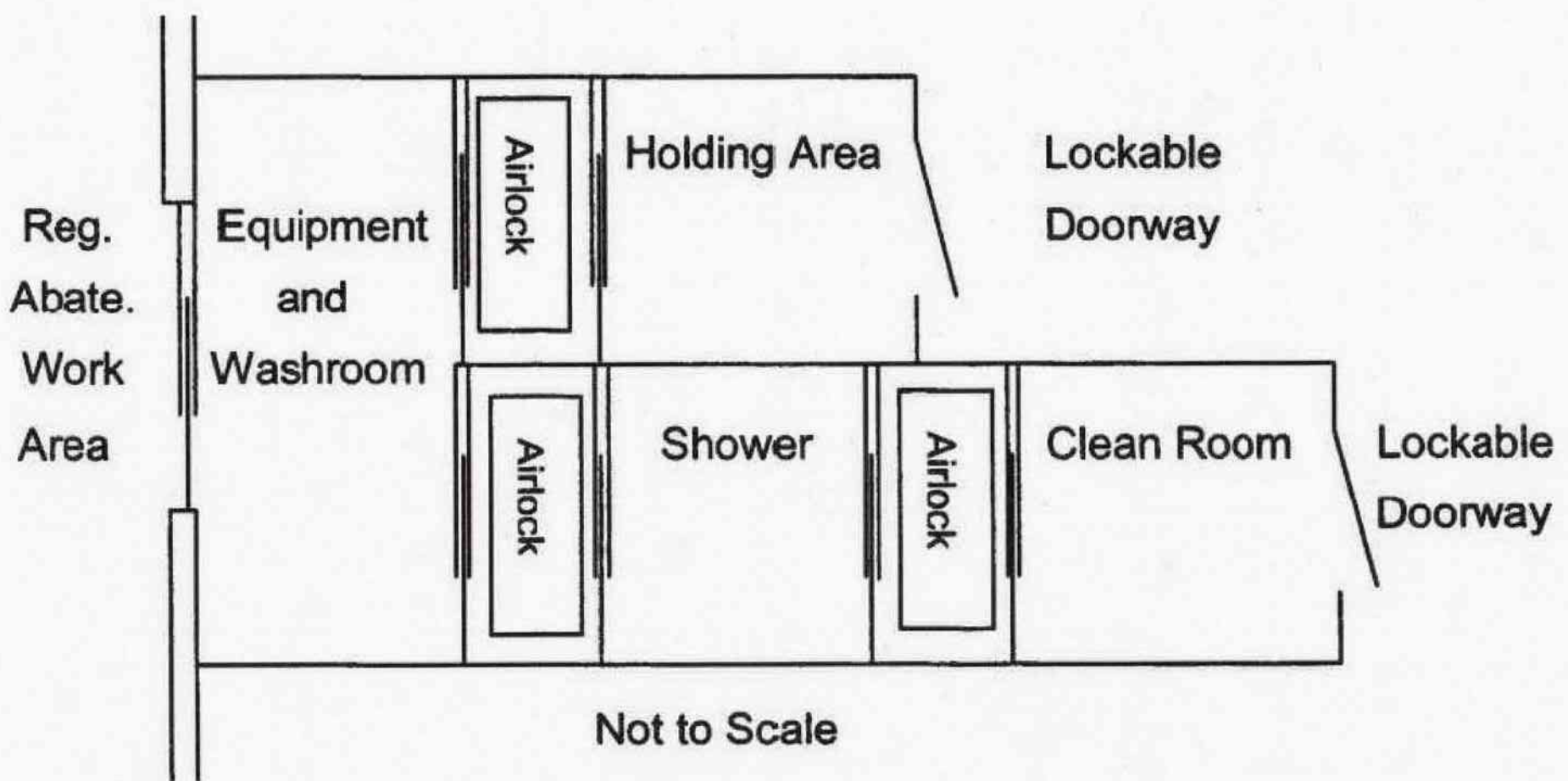
1
H-100A
TYPICAL HARD WALL BARRIER
AT OPENINGS MORE THAN 32SF
Not To Scale



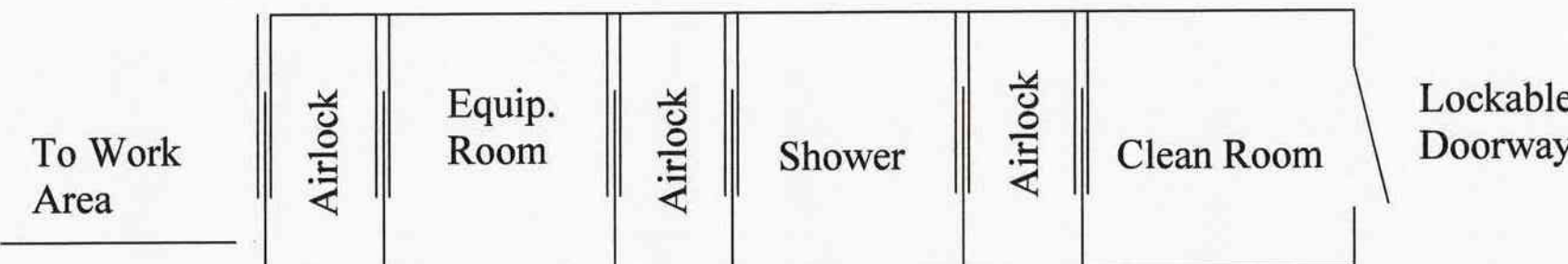
2
H-100A
TYPICAL SOFT WALL BARRIER
AT OPENINGS LESS THAN 32SF
(OPERABLE DOORWAYS)
Not To Scale



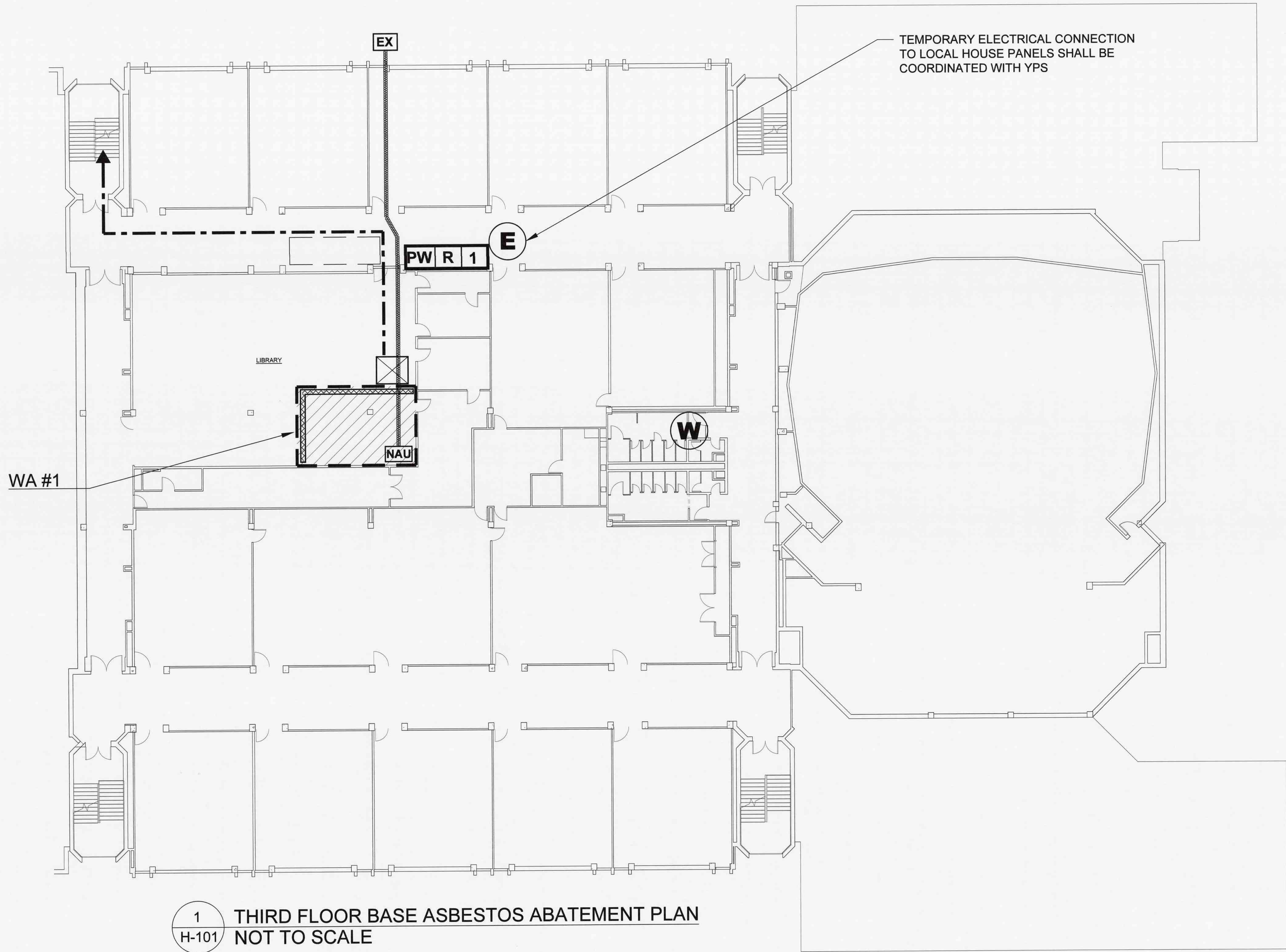
5
H-100A
TYPICAL ASBESTOS CEMENT DUCT CONNECTION TO
UNIT VENTILATORS
Not To Scale



3
H-100A
LARGE PROJECT WORKER/WASTE DECONTAMINATION UNIT
Not To Scale



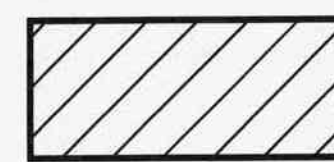
4
H100A
SMALL / MINOR PROJECT WORKER
DECONTAMINATION UNIT
Not To Scale



Work Area	Location	Description of Asbestos Material	Approximate Quantity Of ACM	ICR 56 Procedure
1	3rd Floor Library (Corner)	9"x9" Beige Floor Tile and Mastic	200.0 SF	56-11.7
Total			200.0 SF	

LEGEND

--- - WORK AREA LIMITS

 - FLOOR TILES - 9"X9" BEIGE

 - REMOTE SMALL PROJECT DECONTAMINATION UNIT


 - TEMPORARY WATER

 - TEMPORARY ELECTRIC

 - WASTE ROUTE

 - NEGATIVE AIR UNIT

 - AIRLOCK

 - ISOLATION BARRIER

PROJECT TITLE

**SAUNDERS TRADES
AND TECHNICAL
HIGH SCHOOL HVAC
UPGRADES**

PROJECT ADDRESS

**183 PALMER RD
YONKERS, NY 10701**

OWNER

**YONKERS PUBLIC
SCHOOLS**

ARCHITECT

**FULLER AND
D'ANGELO P.C.**

45 KNOLLWOOD ROAD
ELMSFORD, NY 10523
(T) 914.592.4444

MEP ENGINEER AND ENVIRONMENTAL ENGINEER

 **LiRo Engineers, Inc.**
A LiRo Group Company
Syosset, N.Y. 516-214-5157(T)

KEY PLAN: NOT TO SCALE

SHEET SIZE 30X42

MARK DATE DESCRIPTION

REVISION

04.17.20 90% CD

02.04.21 ADDENDUM 4

MARK DATE DESCRIPTION

ISSUE

SED # 06-23-00-01-0-206-017

YPS JOB: 10881

DESIGN BY: R. SALERNO - 10-00897

DRAWN BY: S. RAMCHARAN

CHKD BY: C. ZANONI - 92-16430

COPYRIGHT:

LIRO ENGINEERS, INC.

ENGINEER'S SEAL



IT IS A VIOLATION OF NYS LAW FOR ANY PERSON TO ALTER THIS DOCUMENT IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. IF A DOCUMENT BEARING THE SEAL OF AN ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE DOCUMENT THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET TITLE

**THIRD FLOOR
BASE
ASBESTOS ABATEMENT
PLAN**

H-101

PROJECT TITLE

**SAUNDERS TRADES
AND TECHNICAL
HIGH SCHOOL HVAC
UPGRADES**

PROJECT ADDRESS

**183 PALMER RD
YONKERS, NY 10701**

OWNER

**YONKERS PUBLIC
SCHOOLS**

ARCHITECT

**FULLER AND
D'ANGELO P.C.**
45 KNOLLWOOD ROAD
ELMSFORD, NY 10523
(716) 592-4444

MEP ENGINEER AND ENVIRONMENTAL ENGINEER

 **LiRo Engineers, Inc.**
A LiRo Group Company
Syosset, N.Y. 516-214-8151(T)

KEY PLAN: NOT TO SCALE

SHEET SIZE 30X42

MARK	DATE	DESCRIPTION
REVISION		
	04.17.20	90% CD
	02.04.21	ADDENDUM 4

MARK	DATE	DESCRIPTION
ISSUE		
SED #	66-23-00-01-0-208-017	
YPS JOB	10881	
DESIGN BY	R. SALERNO - 10-00697	
DRAWN BY	S. RAMCHARAN	
CHKD BY	C. ZANONI - 92-16430	
COPYRIGHT		
	LIRO ENGINEERS, INC.	
ENGINEER'S SEAL		



IT IS A VIOLATION OF NYS LAW FOR ANY PERSON TO ALTER THIS DOCUMENT IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. IF A DOCUMENT BEARING THE SEAL OF AN ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE DOCUMENT THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

**SECOND FLOOR
BASE
ASBESTOS ABATEMENT
PLAN**

H-103

WORKER & WASTE DECONTAMINATION
UNITS IN SERIES - USE AS REMOTE UNIT
FOR WORK AREA 13 UPON COMPLETION
OF WORK AREA 12.

WA #12

WA #13

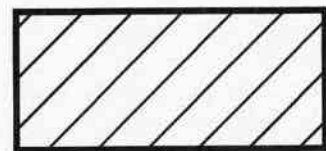
TEMPORARY
ELECTRICAL
CONNECTION
TO LOCAL HOUSE
POWER SHALL BE
COORDINATED
WITH YPS

**1
H-103** SECOND FLOOR BASE ASBESTOS ABATEMENT PLAN
NOT TO SCALE

Work Area	Location	Description of Asbestos Material	Approximate Quantity Of ACM	ICR 56 Procedure
12	2nd Floor Teacher Room	9"x9" Floor Tile and Mastic	550.0 SF	56-11.7
13	2nd Floor Storage Room	9"x9" Floor Tile and Mastic	65.0 SF	56-11.7
Total			615.0 SF	

LEGEND

--- - WORK AREA LIMITS

 - FLOOR TILES - 9"x9" BEIGE

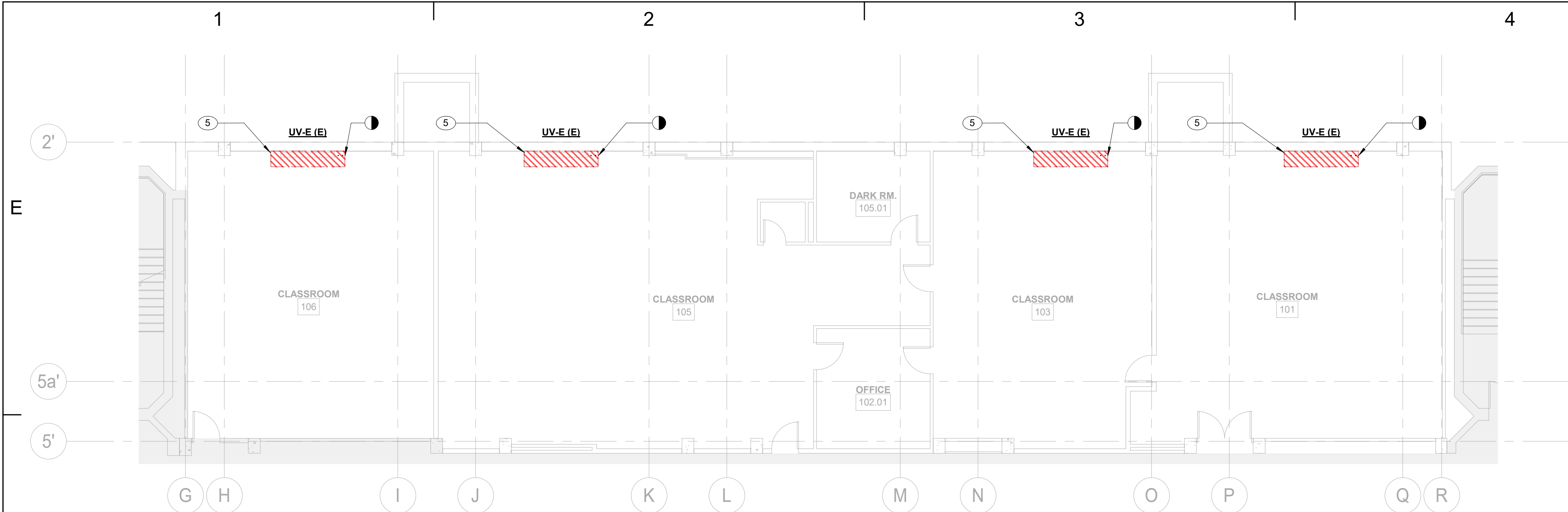
PW A # - ATTACHED LARGE PROJECT DECONTAMINATION UNIT

W - TEMPORARY WATER

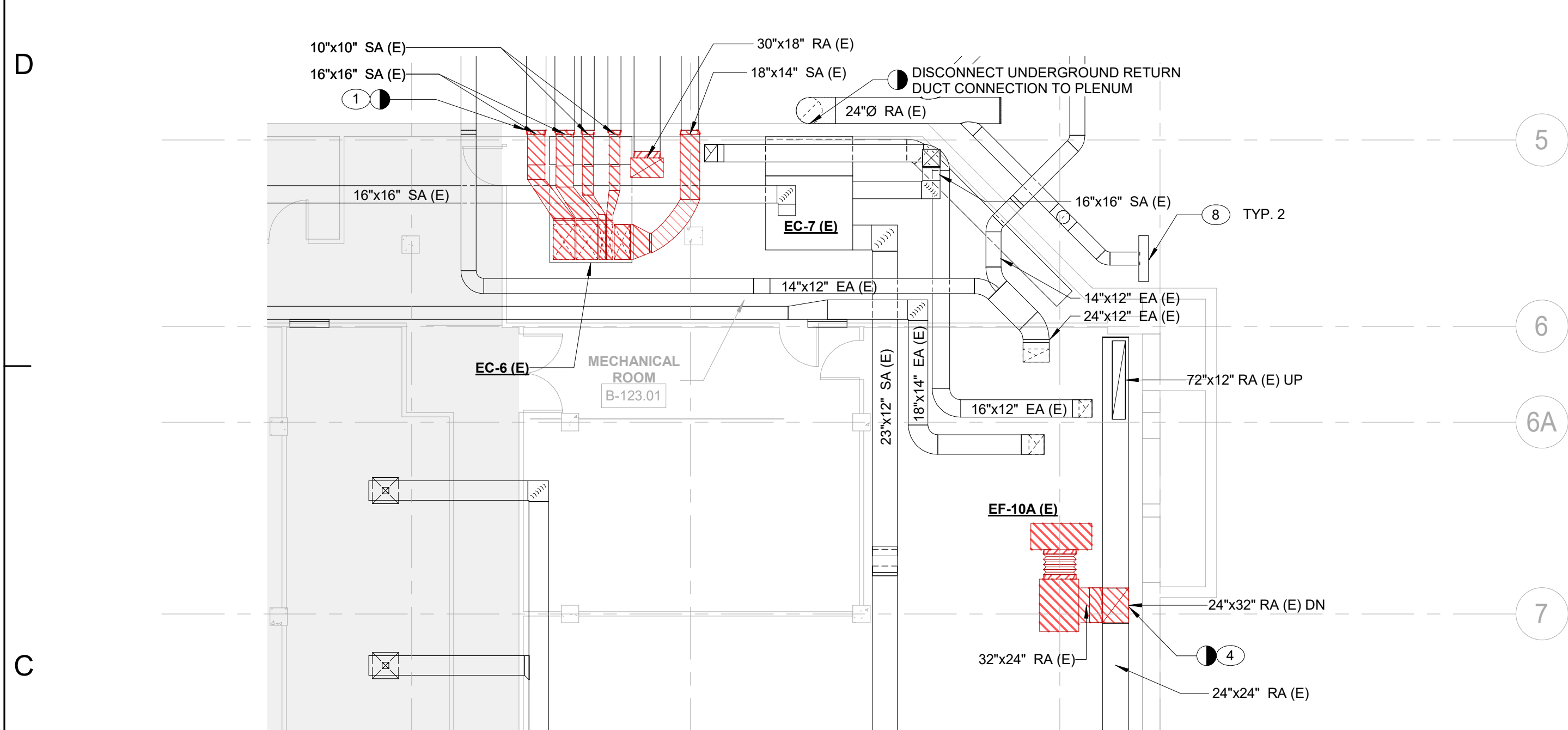
E - TEMPORARY ELECTRIC

 - WASTE ROUTE

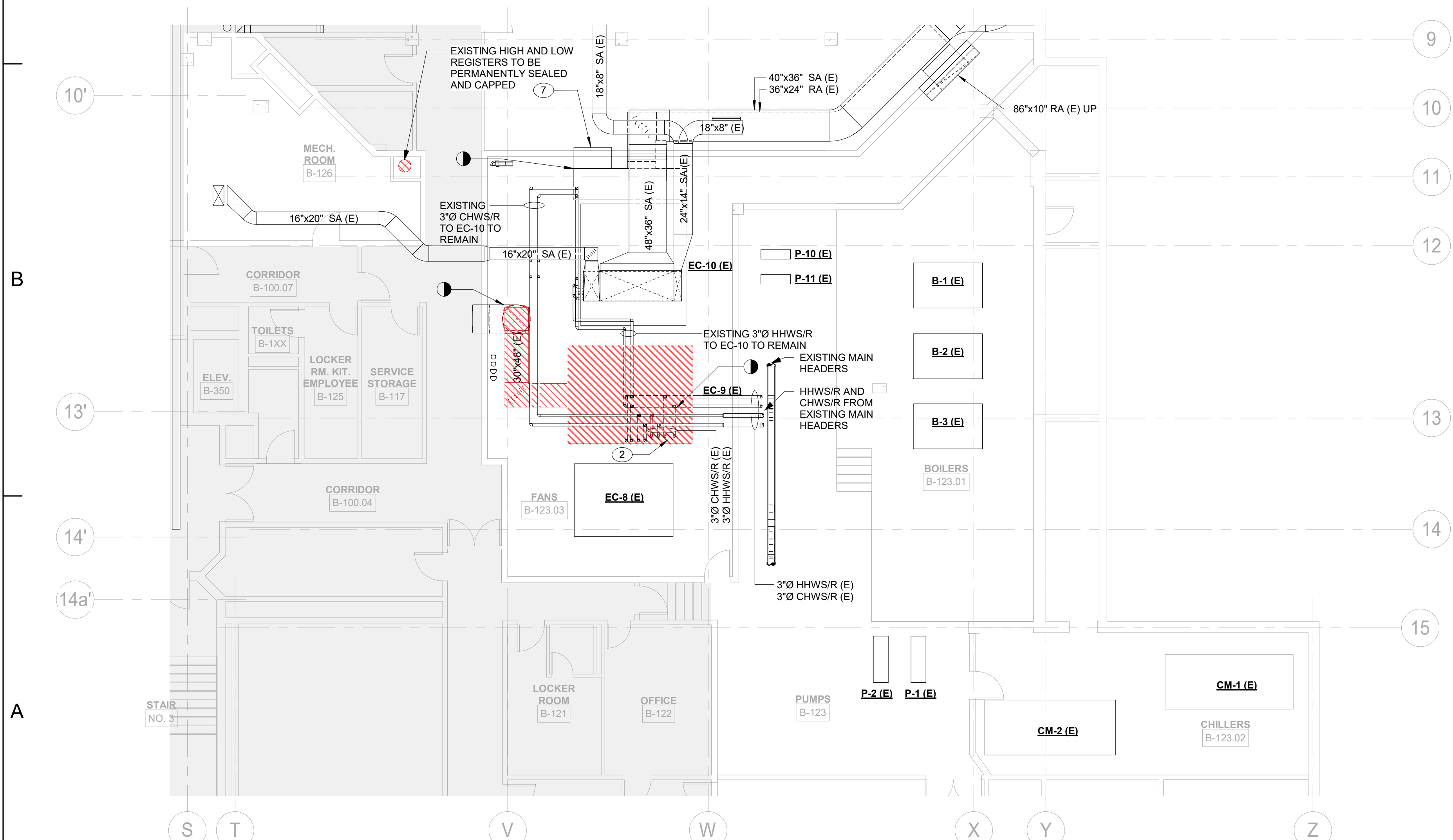
NAU  **EX** - NEGATIVE AIR UNIT



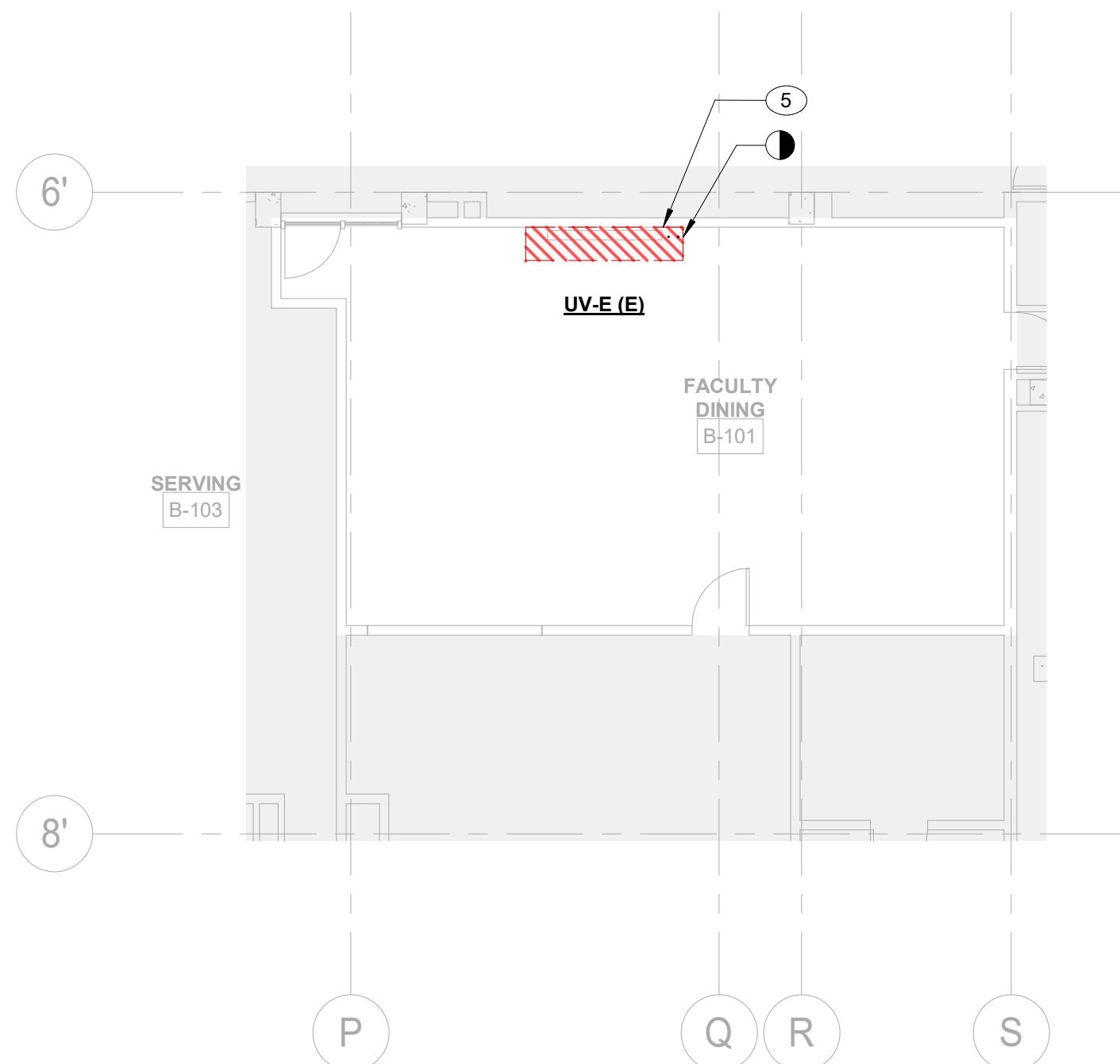
MECHANICAL 1ST FLOOR HVAC CLASSROOM DEMOLITION PLAN



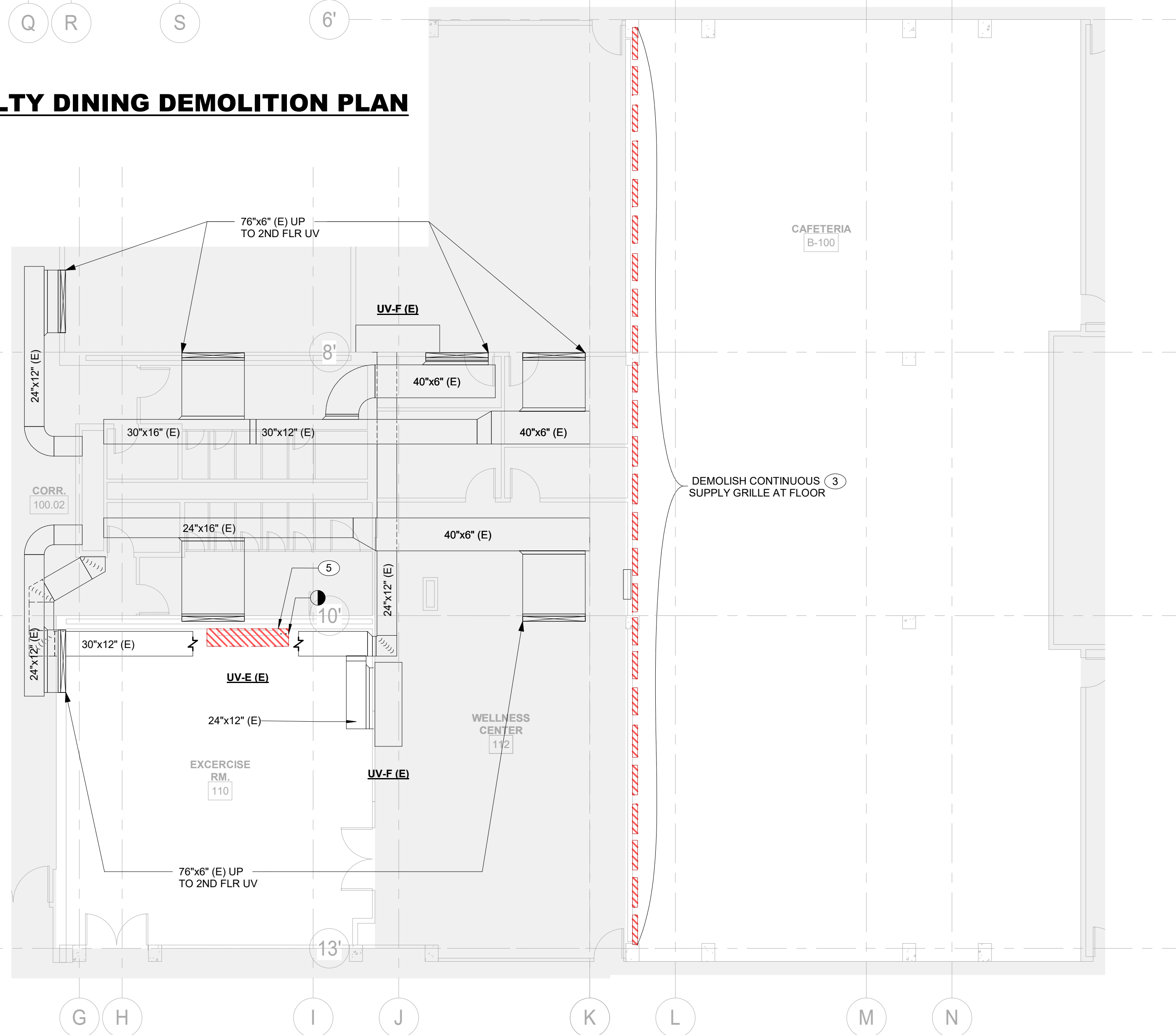
MECHANICAL 1ST FLOOR HVAC MER DEMOLITION PLAN



MECHANICAL 1ST FLOOR HVAC BOILER RM DEMOLITION PLAN



MECHANICAL 1ST FLOOR HVAC FACULTY DINING DEMOLITION PLAN



MECHANICAL 1ST FLOOR HVAC EXERCISE ROOM & CAFETERIA DEMOLITION PLAN

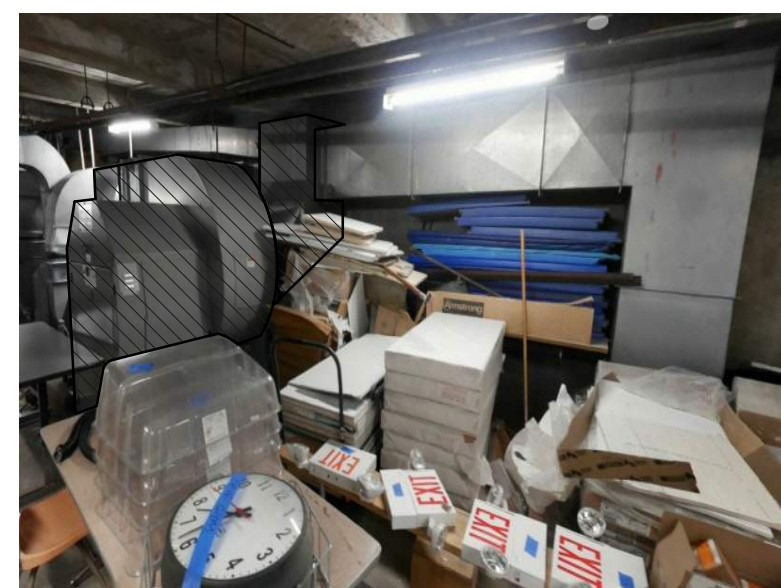


FIGURE 1:
MECHANICAL ROOM EXHAUST FAN
EF-10A



FIGURE 2:
CAFETERIA SUPPLY GRILLE



FIGURE 3:
MER ROOM DUCT CONNECTION TO
UNDERGROUND TRANSITE DUCTS

MECHANICAL NOTES:

- DEMOLISH SUPPLY AND RETURN DUCTWORK FROM UNIT EC-6 UP TO 6 INCHES FROM WHERE TRANSITION TO TRANSITE DUCT OCCURS. REMAINDER TO BE REMOVED AND SEALED BY ABATEMENT CONTRACTOR. (SEE FIGURE 3 & 4)
- EC-9 TO BE DEMOLISHED. SUPPLY DUCTWORK TO BE DEMOLISHED UP TO 6 INCHES ABOVE FLOOR SLAB. THE REMAINDER OF SUPPLY DUCT TO BE REMOVED AND FLOOR SLAB PENETRATION SEALED BY ABATEMENT CONTRACTOR. MECHANICAL CONTRACTOR TO SEAL UP EC-9 CONNECTION TO OUTDOOR AIR PLENUM. DEMOLISH HEATING HOT WATER AND CHILLED WATER PIPES BACK TO HEADER.
- CONTINUOUS SUPPLY GRILLES AND PLENUM (SEE FIGURE 2) ALONG CAFETERIA WALL TO BE REMOVED. SUPPLY AIR INTAKE OPENINGS TO BE FILLED AND COVERED BY ABATEMENT CONTRACTOR.
- DISCONNECT 24x32 EXHAUST FAN CONNECTION FROM 24x24 RETURN MAIN AND PATCH DUCT TO MAINTAIN INTEGRITY OF RETURN DUCT MAIN. EF-10A AND ASSOCIATED 24x32 DUCT TO BE DEMOLISHED. (SEE FIGURE 1)
- UNIT VENTILATORS TO BE REMOVED. ABATEMENT CONTRACTOR TO REMOVE UNIT UNDER ABATEMENT CONDITIONS. OUTSIDE AIR INTAKE TRENCH TO BE FILLED AND COVERED BY ABATEMENT CONTRACTOR. MECHANICAL CONTRACTOR TO DISCONNECT EXISTING PIPES AND CONTROLS WIRING.
- CHILLED WATER PUMPS TO BE REPLACED. CUT BACK EXISTING PIPING TO ENABLE NEW PUMPS INSTALLATION. MAINTAIN EXISTING INSTRUMENTATION AS MUCH AS FEASIBLE. SEE PHOTO ON M-301.
- MECHANICAL CONTRACTOR TO TEMPORARILY REMOVE THE EC-10 DISCHARGE PLENUM TO ALLOW ACCESS FOR ABATEMENT WORK. EXISTING 48x24 RETURN DUCT TO EC-10 TO BE DISCONNECTED AND SEALED BY ABATEMENT CONTRACTOR. FLOOR TO BE RESTORED BY GC.
- EXISTING GRILLES (ONE SIDEWALL GRILLE AT SECURITY CLOSET WALL AND ONE FLOOR-MOUNTED GRILLE IN LOBBY) TO BE DEMOLISHED BY MC. EXISTING TRANSITE DUCTS TO BE CUT BACK TO SLAB AND SEALED BY ABATEMENT CONTRACTOR. FLOOR TO BE RESTORED BY GC.

GENERAL NOTES:

- SEE ENVIRONMENTAL DRAWINGS FOR GC AND REMEDIATION CONTRACTOR SCOPE TO CAP AND SEAL ABANDONED DUCTS.
- UNDERGROUND DUCTS CONNECTED TO EC-6, 7, 9, AND 10 TO BE ABANDONED IN PLACE.

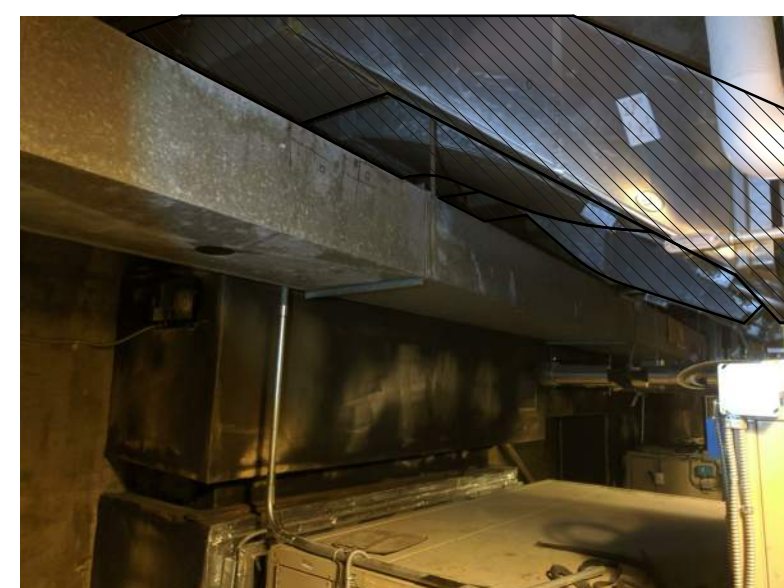


FIGURE 4:
MER ROOM DUCT TRANSITION FROM
EC-6

PROJECT TITLE

**SAUNDERS TRADES
AND TECHNICAL
HIGH SCHOOL HVAC
UPGRADES**

PROJECT ADDRESS

**183 PALMER RD
YONKERS, NY 10701**

OWNER

**YONKERS PUBLIC
SCHOOLS**

ARCHITECT

**FULLER AND
D'ANGELO P.C.**

45 KNOLLWOOD ROAD
ELMSFORD, NY 10523
(716) 914-5824/4444

MEP ENGINEER AND ENVIRONMENTAL ENGINEER

LiRo Engineers, Inc.
A LiRo Group Company
Syosset, N.Y. 516-214-8157(T)

KEY PLAN: NOT TO SCALE

SHEET SIZE 30X42

MARK	DATE	DESCRIPTION
REVISION		
1	02.03.21	ADDENDUM 4
0	09.28.20	ISSUED FOR BID
	04.17.20	100% CONSTRUCTION DOCUMENTS
	03.27.20	90% CONSTRUCTION DOCUMENTS

MARK	DATE	DESCRIPTION
ISSUE		
SED #:	66-23-00-01-0-206-017	
YPS JOB:	10881	
DESIGN BY:	SHB	
DRAWN BY:	SHB	
CHKD BY:	SFA	
COPYRIGHT:		
LIRO ENGINEERS, INC.		
ENGINEER'S SEAL		



IT IS A VIOLATION OF NYS LAW FOR ANY PERSON TO ALTER THIS DOCUMENT IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. IF A DOCUMENT BEARING THE SEAL ON AN ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE DOCUMENT THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

**MECHANICAL 1ST FLOOR
HVAC DEMOLITION PLAN**

M-101



October 4, 2019

Mr. John Carr, P.E.
Director of Facilities
Yonkers Public Schools
1 Larkin Center
Yonkers, New York 10704

RE: Saunders Trades & Technical High School
Roof Testing for Asbestos

Dear Mr. Carr:

On September 30, 2019, LiRo Engineers Inc. (LiRo) performed a limited asbestos inspection at Saunders Trades & Technical High School. The inspection was limited to the lower roof areas that are expected to be impacted by HVAC system upgrades currently under consideration. The asbestos inspection was performed by certified New York State Department of Labor Asbestos Inspector Mr. Ismael Torres (NYS DOL Inspector # 11-08133, Exp. 6/20).

Guidelines used for inspections of asbestos were established by NYS DOL ICR-56-5.1 and USEPA 40 CFR Part 763, AHERA. Field information was organized as per the AHERA concept of homogenous area (HA), that is, suspect Asbestos-Containing Materials (ACM) with similar age, appearance, and texture was grouped together, sampled and assessed for condition. The following suspect materials were sampled for analysis:

- Lower Roof – Multi-Layered Built-Up Roofing
- Lower Roof – Flashing
- Lower Roof – Pitch Pocket Tar
- Asphalt Shingles

Analysis of the bulk samples performed by Amersci Laboratories indicate that none of these materials contain asbestos. If you have any questions or require additional information, please do not hesitate to contact our office at (516) 595-2900.

Sincerely,
LiRo Engineers, Inc.

Christopher Zanon
Vice President

Attachment(s): Laboratory Sample Results, Licenses, Certifications

**AmeriSci New York**

117 EAST 30TH ST.
NEW YORK, NY 10016
TEL: (212) 679-8600 • FAX: (212) 679-3114

PLM Bulk Asbestos Report

The Liro Group
Attn: Robert Kreuzer
690 Delaware Ave.

Buffalo, NY 14209

Date Received 10/01/19 **AmeriSci Job #** 219101122
Date Examined 10/02/19 **P.O. #**
ELAP # 11480 **Page** 1 **of** 5
RE: IT93019CZ; Sanders T&T High School; 183 Palmer Rd.,
Yonkers, NY 10701 - HVAC Upgrade

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
01 01	219101122-01 Location: South Bulk Head - Lower Roof - (Bottom) 5th Foam	No	NAD ¹ (by NYS ELAP 198.1) by Jared C. Clarke on 10/02/19
Analyst Description: Yellow, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
02 01	219101122-02 Location: North Bulk Head - Lower Roof - (Bottom) 5th Foam	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/02/19
Analyst Description: Yellow, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
03 01	219101122-03 Location: Center Duct (Adj.) - Lower Roof - (Bottom) 5th Foam	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/02/19
Analyst Description: Yellow, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
04 02	219101122-04 Location: South Bulk Head - Lower Roof - 4th Layer Screed "Submitted Material Appears To Be Insulation."	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/02/19
Analyst Description: Grey/Brown, Homogeneous, Fibrous, Bulk Material Asbestos Types: Other Material: Cellulose 60 %, Non-fibrous 40 %			
05 02	219101122-05 Location: North Bulk Head - Lower Roof - 4th Layer Screed "Submitted Material Appears To Be Insulation."	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/02/19
Analyst Description: Grey/Brown, Homogeneous, Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			

Client Name: The Liro Group

PLM Bulk Asbestos ReportIT93019CZ; Sanders T&T High School; 183 Palmer Rd.,
Yonkers, NY 10701 - HVAC Upgrade

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
06 02	219101122-06 Location: Center Duct (Adj.) - Lower Roof - 4th Layer Screed 'Submitted Material Appears To Be Insulation.'	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/02/19
Analyst Description: Grey/Brown, Homogeneous, Fibrous, Bulk Material Asbestos Types: Other Material: Cellulose 60 %, Non-fibrous 40 %			
07 03	219101122-07 Location: South Bulk Head - Lower Roof - 3rd Layer Tar	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/02/19
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 21.5 %			
08 03	219101122-08 Location: North Bulk Head - Lower Roof - 3rd Layer Tar	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/02/19
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 10.9 %			
09 03	219101122-09 Location: Center Duct (Adj.) - Lower Roof - 3rd Layer Tar	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/02/19
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 19.7 %			
10 04	219101122-10 Location: South Bulk Head - Lower Roof - 2nd Layer Tar Paper	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/02/19
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 12.2 %			
11 04	219101122-11 Location: North Bulk Head - Lower Roof - 2nd Layer Tar Paper	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/02/19
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 11.7 %			

PLM Bulk Asbestos Report

IT93019CZ; Sanders T&T High School; 183 Palmer Rd.,
Yonkers, NY 10701 - HVAC Upgrade

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
12 04	219101122-12 Location: Center Duct (Adj.) - Lower Roof - 2nd Layer Tar Paper	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/02/19
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 15.9 %			
13 05	219101122-13 Location: South Bulk Head - Lower Roof - (Top) 1st Layer Roof Multi-Layer Membrane	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/02/19
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Fibrous glass 2 %, Non-fibrous 8.5 %			
14 05	219101122-14 Location: North Bulk Head - Lower Roof - (Top) 1st Layer Roof Multi-Layer Membrane	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/02/19
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Fibrous glass 2 %, Non-fibrous 6.7 %			
15 05	219101122-15 Location: Center Duct (Adj.) - Lower Roof - (Top) 1st Layer Roof Multi-Layer Membrane	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/02/19
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Fibrous glass 2 %, Non-fibrous 9.1 %			
16 06	219101122-16 Location: South Bulk Head - Lower Roof - Tar Flashing	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/02/19
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 8.5 %			
17 06	219101122-17 Location: South East Bulk Head - Lower Roof - Tar Flashing	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/02/19
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 7.4 %			

PLM Bulk Asbestos Report

IT93019CZ; Sanders T&T High School; 183 Palmer Rd.,
Yonkers, NY 10701 - HVAC Upgrade

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
18 06	219101122-18 Location: North Bulk Head - Lower Roof - Tar Flashing	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/02/19
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 2 %			
19 07	219101122-19 Location: North Bulk Head - Lower Roof - Asphalt Shingle Flashing	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/02/19
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 27.6 %			
20 07	219101122-20 Location: North East Bulk Head - Lower Roof - Asphalt Shingle Flashing	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/02/19
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 26.1 %			
21 07	219101122-21 Location: South Bulk Head - Lower Roof - Asphalt Shingle Flashing	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/02/19
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 23.7 %			
22 08	219101122-22 Location: Center Roof (Duct) - Lower Roof - Pitch Pocket Tar	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/02/19
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 12.7 %			
23 08	219101122-23 Location: North Roof (Drain) - Lower Roof - Pitch Pocket Tar	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/02/19
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 14.8 %			

PLM Bulk Asbestos Report

IT93019CZ; Sanders T&T High School; 183 Palmer Rd.,
Yonkers, NY 10701 - HVAC Upgrade

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
24 08	219101122-24 Location: South East (Adj. To Unit) - Lower Roof - Pitch Pocket Tar	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/02/19
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material			
Asbestos Types:			
Other Material: Non-fibrous 44.2 %			

Reporting Notes:

(1) This job was - Analyzed using Motic BA310 Pol Scope S/N 1190000326

Analyzed by: Jared C. Clarke

*NAD/NSD =no asbestos detected; NA =not analyzed; NA/PS=not analyzed/positive stop, (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; PLM Bulk Asbestos Analysis by Appd E to Subpt E, 40 CFR 763 (NVLAP 200546-0), ELAP PLM Method 198.1 for NY friable samples, which includes the identification and quantitation of vermiculite or 198.6 for NOB samples or EPA 400 pt ct by Appd E to Subpt E, 40 CFR 763 (NY ELAP Lab 11480); Note:PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non asbestos-containing in NY State (also see EPA Advisory for floor tile, FR 59,146,38970,8/1/94) National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the lab.This PLM report relates ONLY to the items tested. AIHA-LAP, LLC Lab ID 102843, RI Cert AAL-094, CT Cert PH-0186, Mass Cert AA000054.

Reviewed By: _____ END OF REPORT _____

Client Name: The Liro Group

Table I
Summary of Bulk Asbestos Analysis Results

IT93019CZ; Sanders T&T High School; 183 Palmer Rd., Yonkers, NY 10701 - HVAC Upgrade

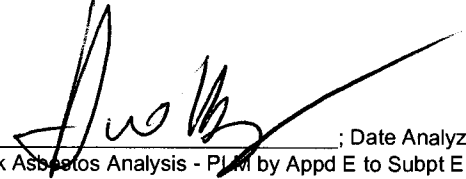
AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
01	01	01	----	----	----	----	NAD	NA
Location: South Bulk Head - Lower Roof - (Bottom) 5th Foam								
02	02	01	----	----	----	----	NAD	NA
Location: North Bulk Head - Lower Roof - (Bottom) 5th Foam								
03	03	01	----	----	----	----	NAD	NA
Location: Center Duct (Adj.) - Lower Roof - (Bottom) 5th Foam								
04	04	02	----	----	----	----	NAD	NA
Location: South Bulk Head - Lower Roof - 4th Layer Screed "Submitted Material Appears To Be Insulation."								
05	05	02	----	----	----	----	NAD	NA
Location: North Bulk Head - Lower Roof - 4th Layer Screed 'Submitted Material Appears To Be Insulation.'								
06	06	02	----	----	----	----	NAD	NA
Location: Center Duct (Adj.) - Lower Roof - 4th Layer Screed 'Submitted Material Appears To Be Insulation.'								
07	07	03	0.209	60.8	17.7	21.5	NAD	NAD
Location: South Bulk Head - Lower Roof - 3rd Layer Tar								
08	08	03	0.137	77.4	11.7	10.9	NAD	NAD
Location: North Bulk Head - Lower Roof - 3rd Layer Tar								
09	09	03	0.218	47.7	32.6	19.7	NAD	NAD
Location: Center Duct (Adj.) - Lower Roof - 3rd Layer Tar								
10	10	04	0.360	82.8	5.0	12.2	NAD	NAD
Location: South Bulk Head - Lower Roof - 2nd Layer Tar Paper								
11	11	04	0.290	82.8	5.5	11.7	NAD	NAD
Location: North Bulk Head - Lower Roof - 2nd Layer Tar Paper								
12	12	04	0.276	76.1	8.0	15.9	NAD	NAD
Location: Center Duct (Adj.) - Lower Roof - 2nd Layer Tar Paper								
13	13	05	0.373	87.9	1.6	10.5	NAD	NAD
Location: South Bulk Head - Lower Roof - (Top) 1st Layer Roof Multi-Layer Membrane								
14	14	05	0.346	88.7	2.6	8.7	NAD	NAD
Location: North Bulk Head - Lower Roof - (Top) 1st Layer Roof Multi-Layer Membrane								
15	15	05	0.287	86.8	2.1	11.1	NAD	NAD
Location: Center Duct (Adj.) - Lower Roof - (Top) 1st Layer Roof Multi-Layer Membrane								
16	16	06	0.342	88.9	2.6	8.5	NAD	NAD
Location: South Bulk Head - Lower Roof - Tar Flashing								

Client Name: The Liro Group

Table I
Summary of Bulk Asbestos Analysis Results

IT93019CZ; Sanders T&T High School; 183 Palmer Rd., Yonkers, NY 10701 - HVAC Upgrade

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
17	17	06	0.350	89.1	3.4	7.4	NAD	NAD
Location: South East Bulk Head - Lower Roof - Tar Flashing								
18	18	06	0.445	97.8	0.2	2.0	NAD	NAD
Location: North Bulk Head - Lower Roof - Tar Flashing								
19	19	07	0.438	61.2	11.2	27.6	NAD	NAD
Location: North Bulk Head - Lower Roof - Asphalt Shingle Flashing								
20	20	07	0.417	51.3	22.5	26.1	NAD	NAD
Location: North East Bulk Head - Lower Roof - Asphalt Shingle Flashing								
21	21	07	0.465	56.1	20.2	23.7	NAD	NAD
Location: South Bulk Head - Lower Roof - Asphalt Shingle Flashing								
22	22	08	0.245	75.1	12.2	12.7	NAD	NAD
Location: Center Roof (Duct) - Lower Roof - Pitch Pocket Tar								
23	23	08	0.318	73.6	11.6	14.8	NAD	NAD
Location: North Roof (Drain) - Lower Roof - Pitch Pocket Tar								
24	24	08	0.380	48.9	6.8	44.2	NAD	NAD
Location: South East (Adj. To Unit) - Lower Roof - Pitch Pocket Tar								

Analyzed by: Aleksandr Barenholts ; Date Analyzed 10/3/2019

**Quantitative Analysis (Semi/Full); Bulk Asbestos Analysis - PLM by Appd E to Subpt E, 40 CFR 763 or ELAP 198.1 for New York friable samples or ELAP 198.6 for New York NOB samples; TEM (Semi/Full) by EPA 600/R-93/116 (or ELAP 198.4; for New York samples; NAD = no asbestos detected during a quantitative analysis; NA = not analyzed; Trace = <1%; (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; Quantitation for beginning weights of <0.1 grams should be considered as qualitative only; Qualitative Analysis: Asbestos analysis results of "Present" or "NVA = No Visible Asbestos" represents results for Qualitative PLM or TEM Analysis only (no accreditation coverage available from any regulatory agency for qualitative analyses); NVLAP (PLM) 200546-0, NYSDOH ELAP Lab 11480, AIHA-LAP, LLC (PLM) Lab ID 102843.

Warning Note: PLM limitation, only TEM will resolve fibers <0.25 micrometers in diameter. TEM bulk analysis is representative of the fine grained matrix material and may not be representative of non-uniformly dispersed debris for which PLM evaluation is recommended (i.e. soils and other heterogenous materials).

Reviewed By: 



LiRo Engineers, Inc.

A LiRo Group Company

3 Aerial Way Syosset, New York 11791

Telephone 516.938.5476

Facsimile 516.937.5421

BULK SAMPLING CHAIN-OF-CUSTODY

Site Name/Location: <u>STANDERS T & T HIGH SCHOOL - 183 PLUMER Rd YONKERS, NY 10701</u>
SPO#
Project: <u>HVAC UPGRADE</u>
LiRo Job #: <u>IT93019CZ</u>
Investigator/Inspector: <u>Ismael Torres</u>
Date: <u>9/30/19</u>

HA #	Sample #	SAMPLE LOCATION	MATERIAL DESCRIPTION	NOTES
01	01	SOUTH BULK HEAD	LOWER ROOF (BOTTOM) 5" H FOAM	
	02	NORTH		
	03	CENTER DUCT (ADJ)		
02	04	SOUTH BULK HEAD	4 TH LAYER SCREED	
	05	NORTH		
	06	CENTER DUCT (ADJ)		
03	07	SOUTH BULK HEAD	3 RD LAYER TAR	
	08	NORTH		
	09	CENTER DUCT (ADJ)		
04	10	SOUTH BULK HEAD	2 ND LAYER TAR PAPER	
	11	NORTH		
	12	CENTER DUCT (ADJ)		
05	13	SOUTH BULK HEAD	(TOP) 1 ST LAYER ROOF MULTI LAYER MEMBRANE	
	14	NORTH		
	15	CENTER DUCT (ADJ)		
06	16	SOUTH BULK HEAD	TAR FLASHING	
	17	SOUTH EAST		
	18	NORTH		
07	19	NORTH	ASPHALT SHINGLE FLASHING	
	20	NORTH EAST		
	21	SOUTH		

COMMENTS: Stop at first positive for each HID group

All results to be reported within 48 Hours (TEM and PLM)**** E-mail results to torres@liro.com; / ZANONIC@LIRO.COM

Relinquished By (Print/Date/Time) <u>Ismael Torres 9/30/19 1524</u>	Relinquished By (Print/Date/Time)	Received By (Print/Date/Time) <u>J. Byrne 10/1/19 145</u>	PLM Analysis (signature/time) <u>[Signature] 10/2/19 16:45</u>
Relinquished By (Signature) <u>[Signature]</u>	Relinquished By (Signature)	Received By (Signature) <u>[Signature]</u>	TEM Analysis (signature/time) <u>[Signature] 10/3/19 15:30</u>



3 Aerial Way Syosset, New York 11791

Telephone 516.938.5476

Facsimile 516.937.5421




BULK SAMPLING CHAIN-OF-CUSTODY

#219101122

[illegible]

COMMENTS: Stop at first positive for each HID group

All results to be reported within 48 Hours (TEM and PLM)**** E-mail results to torresi@liro.com; / ZANDONI@DLRP.COM

Relinquished By (Print/Date/Time) Ismael Torres 9/30/19 1524	Relinquished By (Print/Date/Time)	Received By (Print/Date/Time) J. Byrne 10/1/19 1525	PLM Analysis (signature/time)  10/2/19 11:48
Relinquished By (Signature) 	Relinquished By (Signature)	Received By (Signature) J. Byrne	TEM Analysis (signature/time) AB2W to the 

Construction Managers • Engineers • Architects

10/3/18 15:50

STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE



ISMAEL TORRES

CLASS(EXPIRES)

C ATEC(06/20) D INSP(06/20)

H PM (06/20)

CERT# 15-08122

MUST BE CARRIED ON ASBESTOS PROJECTS

PRINTED BY THE DEPARTMENT OF LABOR



REPRODUCTION OF THIS CERTIFICATE IS PROHIBITED
01213 005122026 70

EYES GRN
HAIR BRN
HGT 5' 07"

IF FOUND RETURN TO:
NYSDOL - LSC UNIT
ROOM 161A BUILDING 12
STATE OFFICE CAMPUS
ALBANY NY 12240

**NYC DEP ASBESTOS CONTROL PROGRAM
ASBESTOS CERTIFICATE**



**TORRES,
ISMAEL
INVESTIGATOR
144516**

EXPIRES: 06/09/2021

MUST BE CARRIED ON ALL ASBESTOS PROJECTS

NYC DEP ASBESTOS CONTROL PROGRAM

**This certificate must be shown to a
NYCDEP representative upon request.
Report loss immediately to NYCDEP
Asbestos Control Program, 6th floor
69-17 Junction Blvd., Flushing, NY 11373**

01213 06-09-2021 10



**NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER**



Expires 12:01 AM April 01, 2020
Issued April 01, 2019

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

**MR. PAUL J. MUCHA
AMERICA SCIENCE TEAM NEW YORK, INC
117 EAST 30TH ST
NEW YORK, NY 10016**

NY Lab Id No: 11480

*is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:*

Miscellaneous

Asbestos In Friable Material	Item 198.1 of Manual EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos In Non-Friable Material-TEM	Item 198.4 of Manual

Serial No.: 59674

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

**NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER**



Expires 12:01 AM April 01, 2020
Issued April 01, 2019

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

**MR. PAUL J. MUCHA
AMERICA SCIENCE TEAM NEW YORK, INC
117 EAST 30TH ST
NEW YORK, NY 10016**

NY Lab Id No: 11480

*is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES AIR AND EMISSIONS
All approved subcategories and/or analytes are listed below:*

Miscellaneous

Asbestos

40 CFR 763 APX A No. III

YAMATE, AGARWAL GIBB

NIOSH 7402

Fibers

NIOSH 7400 A RULES

Serial No.: 59675

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

New York State – Department of Labor

Division of Safety and Health
License and Certificate Unit
State Campus, Building 12
Albany, NY 12240

ASBESTOS HANDLING LICENSE

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, NY 14209

FILE NUMBER: 99-1147
LICENSE NUMBER: 28866
LICENSE CLASS: RESTRICTED
DATE OF ISSUE: 11/29/2018
EXPIRATION DATE: 12/31/2019

Duly Authorized Representative – Robert Kreuzer:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.

Eileen M. Franko

Eileen M. Franko, Director
For the Commissioner of Labor