Asbestos Abatement Plan

CCRI Knight Campus
400 East Avenue
Warwick, RI 02886

6th Floor, South Window-Wall Glass Panes Replacement Project

Prepared for:-

Aharonian & Associates, Inc. - Architects
310 George Washington Hwy., Suite 100
Smithfield, RI 02917

RI Analytical Laboratories, Inc.
Project #180195

Prepared: October 19, 2018

R.I. ANALYTICAL
Specialists in Environmental Services

R.I. ANALYTICAL
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TRANSMITTAL to RIDOH

To: Ms. Bonnie Cassani-Brandt
Healthy Communities Program
RI Department of Health
Center for Healthy Homes & Environment
Three Capitol Hill, 206 Cannon Building, Providence, RI 02908
P: 401.222.7763; F: 401.222.2456
E: **Bonnie.cassanibrandt@health.ri.gov**

cc: Mr. David Horton, RA
Aharonian & Associates, Inc. - Architects
310 George Washington Hwy., Suite 100
Smithfield, RI 02917
P: 401.232.5010; F: 401.232.5080
E: **DHorton@arch-eng.com**

cc: Mr. Mark A. Libutti
College Projects Manager
CCRI Knight Campus
400 East Ave, Room 0304
Warwick, RI 02886
P: 401.825.2380
E: **malibutti@ccri.edu**

FROM: Mr. Kenneth Davis
DATE: October 24, 2018

REF: Asbestos Abatement Plan - 6th Floor, South Window Replacement Project
Site: CCRI Knight Campus, 400 East Avenue Warwick, RI 02886
RI Analytical Laboratories, Inc. Project # 180195

Ms. Cassani-Brandt,

In summary, abatement at the above-referenced Site will include removal and disposal of the following ACM related to removal of approx. 72 panes of glass in a metal window-wall system that is ~291 feet wide by ~6½ feet tall. The intent is to replace the glass panes and leave the perimeter metal frame in place. It is anticipated that plastic will be installed over the exterior of the window-wall and interior, negative pressure enclosures be installed so that the glass panes can be removed from the inside. The glass panes and metal mullions and frames will be cleaned of ACM glazing materials prior to disposal of the glass panes and mullions as non-asbestos materials, unless the mullions are to be re-used.

- **All window glazing materials between window metal frames/mullions and glass (interior and exterior) on the 6th floor, south window-wall system.**

The following waiver is being applied for in association with this work:

- Interior wall plastic – waiver for no containment wall plastic on the wall where window glazing materials are to be removed [**§B.8.2(d)**].

Attached to this Transmittal, please find the following.

(1) Asbestos Abatement Plan for your review and approval.

The RIDOH plan filing fee is waived for CCRI.

RHODE ISLAND DEPARTMENT OF HEALTH

NOTARIZED CERTIFICATION OF ASBESTOS ABATEMENT PLAN

Facility: **CCRI Knight Campus**

Address: **400 East Avenue**

City/Town: **Warwick** Zip: **02886** Amendment Phase No: _____

Abatement Plan Written By: **Kenneth Davis** Certification No: **AAC-0510**

Summary of specific waivers/variances being requested: **Refer to Attachment #5**

Type of Asbestos Abatement ☒ Removal ☐ Enclosure ☐ Encapsulation
☐ Demolition ☐ Glovebag ☐ Asphalt Roofing
☐ Other (specify) _____

Is this plan being submitted in response to a Notice of Violation and/or a Notice of Requirement to Submit an Asbestos Abatement Plan? ☐ Yes ☒ No

If yes, Indicate Notice/Building Evaluation No(s): _____

Contractor: **To Be Determined** License No: **To Be Determined**

Estimated Starting Date: **April 1, 2019**

Pre-Abatement Sampling Information

Bulk Samples Collected By: **Danny Mullen** Certification No: **AAC-0963**

Bulk Samples Analyzed By: **RI Analytical Laboratories, Inc.** Certification No: **AAL-142**

Air Samples Analyzed By: **RI Analytical Laboratories, Inc.** Certification No: **AAL-142**

Clearance Air Sampling Information

Air Samples to be Collected By: **RI Analytical Staff**

Air Samples to be Analyzed By: **RI Analytical Laboratories, Inc.** Certification No: **AAL-142**

CERTIFICATION

I certify that: this asbestos abatement plan is prepared and submitted under the provisions of Section 23-24.5-6 of the RI Asbestos Control Act and Parts A and C of the RI Rules and Regulations for Asbestos Control; all abatement/management activities performed in conjunction with this plan must be in compliance with the specifications prescribed in this plan (when approved) and the most current revision of all applicable federal and state regulations; and the asbestos abatement/management activities described in this plan must be performed by a RI licensed asbestos abatement contractor.

Certified by: _____ Title: _____
(Signature of Building Owner or Agent)

_____ Date: 10/26/18
(Typed/Printed Name of Certifier)

Subscribed and sworn before me this 26th day of October, 2018

_____ My Commission Expires:
(Notary Public)

ANABEL F. CUNHA - #33532
Notary Public-State of Rhode Island
My Commission Expires
September 25, 2021

AFFIX NOTARY SEAL HERE

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Health

Office of Occupational & Radiological Health

APPLICATION FOR APPROVAL OF AN ASBESTOS ABATEMENT PLAN

1. Building Owner's Name:

   Community College of Rhode Island

2. Application Prepared By:

   Kenneth Davis

   RI Certification No: **AAC-0510**

   Phone No: **401-737-8500 ext. 120**
   (Area Code, No., Ext.)

   Email: **kdavis@rianalytical.com**

3. Building Owner's Mailing Address and Telephone Number:

   Company: **CCRI, Knight Campus**

   Street: **400 East Ave**

   City/Town: **Warwick, RI**

   Zip: **02886**

   Telephone No.: **401.825.2380**
   (Area Code, No., Ext.)

4. Person to be contacted regarding this application:

   Name: **Mr. Mark A. Libutti**
   College Projects Manager

   Email: **malibutti@ccri.edu**

   Phone No: **401.825.2380**
   (Area Code, No., Ext.)

5. Location where abatement work will be performed:

   Name (if applicable): **CCRI Knight Campus**

   Street: **400 East Ave**
   City/Town: **Warwick, RI** Zip: **02886**

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6. Is this application being submitted in response to a "Notice of Requirement to Submit an Asbestos Abatement plan"? ☐ Yes ☒ No

If Yes, what is the due date for submittal of Abatement plan? _____
(Mo.) (Day) (Yr.)

Evaluation Number on the Notice: _____

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7. Contractor who will be performing abatement work (if selected):

   Name: **To be determined** R.I. License No.: **To be determined**

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8. Estimated Starting Date of Abatement Work: **April 1, 2019**
(Month) (Day) (Year)

9. Estimated Completion Date of Abatement Work: **April 1, 2020**
(Month) (Day) (Year)

10. Type of Asbestos Abatement: **(Check all that apply)**

☒ Removal
☐ Enclosure
☐ Encapsulation
☐ Demolition
☐ Operations and Maintenance Only
☐ Asphaltic Roofing
☐ Other (Specify): _____

11. Type of Building:
☐ School
☐ Privately Owned Building
☒ Publicly Owned Building
☐ Residence
☐ Other (Specify) _____

12. Building Access:
☒ Public Access (≥ 25% of Building Area)
☐ Limited Public Access (< 25% of Building Area)
☐ No Public Access

13. Bulk Sample Collection and Analysis:

A). Person collecting bulk samples:

Name: **Danny Mullen** RI Certification No.: **AAC-0963**

B). Sampling Methodology:

☐ EPA AHERA Sampling requirements [40 CFR 763.86].

☒ EPA's Asbestos-Containing Material in School Buildings: A Guidance Document (EPA-405/2-78-014) or Guidance for Controlling Asbestos Containing Materials – 1985 Edition (EPA-560-5-85-024)

☐ Other (Specify) _____

C). Laboratory performing the analysis of the bulk samples

Name: **RI Analytical Laboratories, Inc.** RI Certification No.: **AAL-142**

D). Analytical Methodology:

☒ EPA Interim Method for the Determination of Asbestos in Bulk Insulation Samples [PLM method only].

☐ Other (Specify) _____

14. Pre-Abatement Air Sample Collection and Analysis:

A). Person collecting pre-abatement air samples:

Name: **Danny Mullen** Affiliation: **RI Analytical Laboratories, Inc.**

B). Laboratory performing analysis of pre-abatement air samples.

Name: **RI Analytical Laboratories, Inc.** RI Certification No.: **AAL-142**

C). Methodology used in the collection and analysis of pre-abatement samples:

☒ NIOSH Method 7400 [Most Current Revision]

☐ OSHA 29 CFR 1926.1101 – Appendix A & B

☐ Other (Specify)

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15. A. Indicate how the regulated asbestos-containing material (RACM) will be removed from the abatement site. If a hauler or broker will be used to transport the RACM to a disposal site, they must also be identified.

All RACM and other asbestos-containing materials (ACM)/asbestos-containing waste materials (ACWM) that will be impacted by any proposed renovations at the site will be abated by a RIDOH-licensed Asbestos Contractor prior to renovation/ demolition activities. RACM will be abated utilizing appropriate containment, and all (adequately wet) waste will be placed in double 6-mil polyethylene disposal bags, drums that are double-lined with 6-mil polyethylene disposal bags, and/or dumpsters lined with two layers of 10-mil polyethylene sheeting. All waste shall be appropriately disposed of at a permitted waste disposal facility to be named at a later date. Each work area where RACM has been removed shall be visually inspected to ensure no visual suspect dust or debris remains.

B. Provide the name and location of the authorized asbestos waste facility to which the removed material will be transferred for disposal (if known).

To be determined

16. Person designated as compliance monitor for abatement work. **[NOT REQUIRED]**

Name: **RI Analytical Laboratories, Inc. Staff**

Affiliation: **RI Analytical Laboratories, Inc.**

17. In-Process & Clearance Air Sampling: **Refer to Attachment #1**

    A. Describe on an attachment the type, number and location of air samples that will be collected outside the work area during the abatement project.

    B. Describe on an attachment the plan of action to be followed if the Indoor Non-Occupational Air Exposure Standard for Asbestos (0.01 fibers per cubic centimeter) is exceeded outside the work area during the abatement project.

    C. Describe on an attachment the type, number, and location of air samples that will be collected as part of the final clearance testing.

    D. Describe on an attachment the plan of action to be followed if the Indoor Non-Occupational Air Exposure Standard for Asbestos (0.01 fiber per cubic centimeter) is exceed during final clearance testing.

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18. A separate and fully-completed Form ASB-16A must be submitted for each area to be abated. List below the entry in Item 1 from each attached ASB-16A.

    Area 1 - 6th Floor, South Window-Wall System

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19. I certify that this plan was prepared by me and I am responsible for its content.

    Signature: _____ Date: **October 24, 2018**
    (Month) (Day) (Year)

    Affiliation: **RI Analytical Laboratories, Inc.**

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20. ASBESTOS ABATEMENT PLAN APPLICATION FEE:

☐ Operation & Maintenance Only	$ 75
☐ Up to One (1) NESHAP Unit	$ 75
☐ Between One (1) & Ten (10) NESHAP Units	$ 300
☐ Between Ten (10) & Fifty (50) NESHAP Units	$ 600
☐ Over Fifty (50) NESHAP Units	$ 900
☒ Fee Waived For State Agency	

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Health

Office of Occupational & Radiological Health

APPLICATION FOR APPROVAL OF AN ASBESTOS ABATEMENT PLAN

SUPPLEMENTAL INFORMATION: AREA DESCRIPTION AND PROPOSED REMEDY

BUILDING LOCATION: **CCRI Knight Campus, 400 East Avenue Warwick, RI 02886**

INSTRUCTIONS: All items on this form must be addressed. All references to attachments must be clearly identified. All attachments must be marked with the specific item numbers on this form to which they pertain.

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(1) Area Location/Identification (Room Name/No., Evaluation Number, etc.):

Area 1 - 6th Floor, South Window-Wall System

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(2) Attach a description of each type (e.g. pipe, ceiling, etc.) of regulated asbestos containing material (RACM) in this area, including condition, location, quantity and asbestos content. Attach a copy of the laboratory report(s) for all samples. (NOTE: All laboratory reports must include the name of the building(s) and the location(s) of the sample(s).)

Refer to Attachment #2 for the Table of all RACM that will be impacted by proposed activities.
Refer to Attachment #3 for the asbestos laboratory analytical report and chain-of-custody forms.

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(3) Attach a current scale drawing of this area, showing direction of North and East, which has been clearly annotated to show the type, location and quantity of all RACM in this area. This drawing must include a legend which acts as a guide to the scale, symbols and nomenclature used in the drawing. If a master plan or multiple drawings are provided, indicate the specific location(s) and drawing number(s) which depict this area. The location of the decontamination chamber must also be so indicated on the appropriate drawing(s).

Refer to Attachment #6 for Drawing

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(4) PROPOSED REMEDIES:

A). Attach a description of the interim Operations and Maintenance Plan that will be implemented in accordance with C.1.2 (b).

Refer to Attachment #4

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(4) PROPOSED REMEDIES (cont.)

B). Will any portion of this area be abated by use of B.8 work procedures?

☒ Yes ☐ No

If Yes, indicate below which RACM in this area will be abated by use of the following B.8 work procedures:

B.8.2 & B.8.3 [Removal]	**All window glazing materials between window metal frames/mullions and glass (interior and exterior) on the 6th floor, south window-wall system**
B.8.2 & B.8.4 [Encapsulation]	
B.8.2 & B.8.5 [Enclosure]	
B.8.6 [Demolition]	
B.8.7 [Glovebag]	
B.8.8 [Asphalt Roofing]	

C). Are you requesting any waivers to the above selected B.8 procedure for any of the abatement activities in this area?

☒ Yes ☐ No

If yes, attach a detailed description of the waivers requested you are proposing to utilize. All items must be keyed to the specific section(s) of the regulations for which waivers are requested.

D). Are you proposing alternative procedures under B.11 for any of the abatement activities in this area?

☐ Yes ☒ No

If yes, attach a detailed description of the alternate procedures requested you are proposing to utilize. Alternate procedures must include a justification for not following specific section(s) of the regulations and be as protective of public health.

E). Will any RACM remain in this area after abatement?

☐ Yes ☐ No ☒ Beyond scope of inspection

If Yes, attach a description of the RACM that will remain and the details of the on-going Operations and Maintenance Plan that will be implemented in accordance with C.1.2 (b).

AGENCY USE ONLY

ATTACHMENT #1
ASB-16 - 17A-D

The RIDOH-licensed Asbestos Contractor will comply with applicable sections of RIDOH Rules and Regulations for Asbestos Control [R23-24.5-ASB].

Item No. 17A
During Abatement Air Sampling

Area air samples shall be collected using 25-mm conductive cassettes with a 50-mm cowl extension containing a 0.8 µm pore or a 0.45 µm pore size Mixed Cellulose Ester (MCE) filter. Sample collection and analysis will be by Phase Contrast Microscopy (PCM) in accordance with the NIOSH 7400 method. The number and location of samples taken per day will be determined by the on-site Industrial Hygienist (IH)/Project Monitor. *At least one PCM air sample will be collected by the on-site IH/Project Monitor outside each work area during each day abatement work occurs.*

Item No. 17B
Indoor Non-Occupational Air Exposure Standards during Abatement

Air samples collected outside of work areas during asbestos removal that exceed exposure standard of 0.01 fibers per cubic centimeter (f/cc) will result in work stoppage. An investigation to determine the reason for elevated airborne fiber levels will be conducted. Inspect containment and critical barriers in the area outside containment where counts exceeded the standard. Perform smoke testing if needed to determine locations of containment breach. Repair any tears or improperly sealed flaps or seams.

If visible emissions or debris is observed or contamination suspected outside negative pressure enclosures the Asbestos Contractor will then be responsible for extending the negative pressure enclosure to include the contaminated area in accordance with regulatory and on-site IH/Project Monitor requirements. The contaminated area will then be cleaned by the Asbestos Contractor at the Asbestos Contractor's own expense and final air clearance samples will be collected by the IH/Project Monitor. These additional air samples will be collected and analyzed by PCM or TEM (Transmission Electron Microscopy, NIOSH method 7402) at the Asbestos Contractor's expense.

Item No. 17C
Final Clearance Air Samples

Upon completion of asbestos removal work, a final visual inspection will be conducted in each work area to document that all required abatement is complete and the area meets the "No Visible Dust or Debris" criterion. Then final air clearance samples will be collected and analyzed with results meeting the clearance standard of 0.01 f/cc. Final clearance air sample collection and analysis will be in accordance with RIDOH Regulation R23-24.5-ASB C1.3 and include at least one sample for each 100 linear feet (LF) or 1,000 square feet (SF) of asbestos or portion thereof (up to 500 LF or 5,000 SF), plus one sample for each additional 500 LF or 5,000 SF or portion thereof, or one sample per room, whichever is greater. A minimum of two samples (plus blanks as required by the method) per clearance will be collected and analyzed. The collection and analysis of these samples will be in accordance with NIOSH 7400 Method and include utilizing aggressive air sampling techniques to obtain a minimum volume of 1,200 liters.

Item No. 17D
Indoor Non-Occupational Air Exposure Standards during Clearance

If the Indoor Non-Occupational Exposure Standard for asbestos is exceeded for the final clearance air sample results, the work area will be re-cleaned using wet-wiping and cleaning with HEPA-filter equipped vacuums per RIDOH Regulation B.8.2 (h). Final air clearance samples will be re-collected to determine if the total airborne fiber concentrations are below the OSHA re-occupancy standard. This process of re-cleaning and resampling will be repeated until the clearance air samples meet the regulatory requirements. All re-cleaning, resampling and analysis costs will be paid for by the Asbestos Contractor. The Asbestos Contractor may elect to have failed PCM clearance air sample re-analyzed by TEM NIOSH method 7402 (6-hour laboratory turnaround time) at the Asbestos Contractor's own expense if clearance air samples by PCM fail due to suspected non-asbestos fibers.

R. I. Analytical
Specialists in Environmental Services

ATTACHMENT #2

ASB-16A - 2

Scope of Work: -

CCRI Knight Campus, 400 East Avenue, Warwick, RI 02886
6th Floor, South Window-Wall Glass Panes Replacement Project

In summary, abatement at the above-referenced Site will include removal and disposal of the following ACM related to removal of approx. 72 panes of glass in a metal window-wall system that is ~291 feet wide by ~6½ feet tall. The intent is to replace the glass panes and leave the perimeter metal frame in place. It is anticipated that plastic will be installed over the exterior of the window-wall and interior, negative pressure enclosures be installed so that the glass panes can be removed from the inside. The glass panes and metal mullions and frames will be cleaned of ACM glazing materials prior to disposal of the glass panes and mullions as non-asbestos materials, unless the mullions are to be re-used.

Table 1 below itemizes the materials suspected of containing asbestos that were identified and sampled for asbestos content. Homogeneous materials found to be Asbestos-Containing Materials (ACM) are highlighted in **yellow**.

Table 1 - Work Order # 1807-15197
Suspect ACM - Laboratory Analytical Data Summary

Lab #	Sample #	Material	Sample Location	Asbestos Content
001	1A	Clear exterior window caulk on metal and glass	South side 6th floor window system	Not Detected
002	1B	Clear exterior window caulk on metal and glass	South side 6th floor window system	Not Detected
003	2A	Gray exterior window caulk on metal and concrete	South side 6th floor window system	Not Detected
004	2B	Gray exterior window caulk on metal and concrete	South side 6th floor window system	Not Detected
005	**3A**	**Gray exterior window glazing on metal and glass**	**South side 6th floor window system**	**1-5% Chrysotile**
006	**3B**	**Gray exterior window glazing on metal and glass**	**South side 6th floor window system**	**1-5% Chrysotile**
007	4A	Black exterior window glazing on metal and glass	South side 6th floor window system	Not Detected
008	4B	Black exterior window glazing on metal and glass	South side 6th floor window system	Not Detected
009	5A	Black sealer on metal	South side 6th floor window system	Not Detected
010	5B	Black sealer on metal	South side 6th floor window system	Not Detected
011	6A	Gray interior window glazing on metal and glass	South side 6th floor window system	Not Detected
012	6B	Gray interior window glazing on metal and glass	South side 6th floor window system	Not Detected

Remove all ACM materials identified in Table 2 below – refer to Notes below.

Table 2 - ACM Inventory Summary						
HM #	**Material Type**	**Location(s)**	**Asbestos Content**	**Condition**	**Estimated Quantity**	**Notes**
3	All window glazing materials between perimeter metal frame, metal mullions and glass panes	South side 6th floor window-wall system	1-5% Chrysotile	I, NF	130 SF	*1
N/A	Allowance for assumed ACM window-wall system perimeter frame caulking if the frames have to be removed.	South side 6th floor window-wall system	1-5% Chrysotile	I, NF	100 SF	*2
NESHAP unit/RIDOH Abatement Plan Fee Calculation - 1 NESHAP unit = 260 LF/160 SF/35 CF/or combination thereof			(130 + 100) SF/160 SF = 1.44 NESHAP units			

HM = Homogenous Material; SF = Square Feet; LF = Linear Feet; CF = Cubic Feet; D = Damaged; I = Intact; F = Friable; NF = Non-Friable

Notes:

*1 – Assume approx. 72 glass panes, each ~4' wide x 6½' tall (i.e. 21 LF of glass edge), and each with ½" perimeter bead of glazing materials on both sides of the glass, gives approx. total quantity of ACM glazing materials of 21 x ½"/12 x 2 x 72 = 130 SF.

*2 – Window wall perimeter caulking tested negative for asbestos (HM#2), however there may be hidden caulking that is ACM beneath the window-wall frame perimeter visible caulking. Therefore, a quantity allowance for assumed ACM window-wall system perimeter frame caulking is included for bidding purposes in case the window panes cannot be removed without impacting the perimeter frame. Additional inspection and testing should be undertaken if the frames are to be removed to verify whether hidden materials do or do not contain asbestos, prior to commencement of frame removal work. Assume 291' x 6.5' x 1" bead on both sides of perimeter frame, i.e. 291x6½x$^{1}/_{12}$*2 = 99.2 SF, say 100 SF.

General Notes:

1. Refer to any Contract Documents if applicable, including drawings and Specification Sections. The most stringent interpretation of the Asbestos Abatement Plan (AAP), Contract Documents, or applicable regulations shall apply.
2. ***Quantities are approximate - it is the contractor's responsibility to verify quantities as well as site conditions.***
3. ACM not shown as friable that may become friable during the work must be considered as friable.
4. The Asbestos Contractor shall attend one (1) pre-construction meeting with the Owner's Representative and Project Monitor company representative at least 2 weeks prior to commencement of abatement work. At that meeting, the Asbestos Contractor shall provide copies of the EPA and RIDOH 10-working day notifications for the project.
5. The Owner/Owner's Representative will hire a third-party Industrial Hygiene/Project Monitoring company to complete abatement project monitoring including review of abatement contractor procedures, post-abatement visual inspections, and closeout documents.
6. The Asbestos Contractor shall immediately comply and abide by all directives and stop work orders from Owner, Owner's representative or on-site Industrial Hygienist (IH)/Project Monitor without prejudice and at no cost to Owner, Owner's representative, or on-site IH/Project Monitor.
7. Remove and dispose of ACM and materials containing <1% asbestos identified in the abatement plan in accordance with all applicable federal, state, and local rules and regulations including EPA, OSHA, RIDEM, and RIDOH rules and regulations.
8. All workers are to use protective clothing and respiratory protection as well as comply with all OSHA regulations. It is the Contractor's responsibility to correctly select personnel protective equipment and respiratory protection and implement medical surveillance for all hazardous materials likely to be encountered.
9. The Asbestos Contractor is responsible for all regulatory (including OSHA) compliance for all hazardous materials, including regulations related to disturbing paint that may contain lead. The Owner, its sub-consultants and their agents and sub-contractors are not responsible for the Asbestos Contractor's means and methods and regulatory compliance.
10. The Contractor shall conduct daily OSHA STEL and PEL personnel air monitoring of asbestos abatement workers to demonstrate compliance with the provisions of OSHA 29 CFR, Part 1926.1101. The on-site IH/Project Monitor will conduct periodic Phase Contrast Microscopy (PCM) air testing (NIOSH 7400 method) at representative interior areas adjacent to and outside of interior containment work areas during the abatement work.
11. Install barriers in a manner to avoid damage to finishes and surfaces. Pre-clean (prior to barrier installation) and post clean (after barrier removal) work areas. The Asbestos Contractor will ensure that no building components or equipment are damaged by the Asbestos Contractor's work methods.

12. Unless otherwise directed by the Owner's Representative or IH/Project Monitor, critical barriers shall comprise a wood stud frame wall with outside ¼" smooth plywood or hardboard sheeting installed from the floor up to the fixed ceiling or deck and covered on the interior side (abatement work side) with 2 layers of 6-mil plastic, with gaps sealed with foam, spray adhesive, and plastic.
13. Water, power, and drains will be provided by Owner. GFCI cords and panels, hoses, and water shut off valves are to be provided by the Asbestos Contractor.
14. Decontamination facility (Decon) - 3-stage decon with hot and cold water showers, 5 µm final waste water filter with pump activated by float switch, and disposable towels shall be used for all asbestos abatement work. The Decon shall be maintained clean, neat, and free of stored items, except for supplies of disposable towels and waste receptacles, at all times. For exterior work, a two-chamber decon facility may be used.
15. The Contractor will use an opaque encapsulant and/or add dye to the encapsulant, if requested by the Owner's representative, at no extra cost. The encapsulant product data sheet shall be provided to the Owner for approval of compatibility with the new and existing finishes, materials and building components. A bridging encapsulant shall be used if requested by the Owner at no additional cost.
16. The Contractor shall designate 1 (one) Asbestos Abatement Supervisor for the project that shall be licensed by, and in good standing with, the RIDOH. The Asbestos Abatement Supervisor shall have a minimum of 5 (five) years of experience as an Asbestos Abatement Supervisor without violations, citations, or legal judgments. The Asbestos Abatement Supervisor shall attend pre-construction meeting(s) as required by Owner. The designated Asbestos Abatement Supervisor shall be on site at all times during the work. The Asbestos Contractor shall maintain a RIDOH-licensed Asbestos Abatement Worker outside regulated areas at all times during work. The Owner and IH/Project Monitor reserve the right to immediately dismiss any Asbestos Contractor employee from the site for any reason whatsoever.
17. The Asbestos Contractor will ensure that no water escapes work areas and leaks into adjacent non-work areas. All water shall be turned off and disconnected at the sources at the end of each work shift and verified as not leaking. The Asbestos Contractor is responsible for water damage as a result of their equipment and failure to monitor or shut off the water.
18. The Asbestos Contractor shall post signs on all exterior doors to the building identifying the locations and nature of the work in accordance with RIDOH regulations (Subparagraph B.8.2 (g)).
19. The Asbestos Contractor shall coordinate work with Owner's Representative, General Contractor, and other trades to ensure work areas are not disturbed and the integrity of the building is maintained and protected from weather and unauthorized entry.

20. High-Efficiency Particulate Air (HEPA) Unit Exhausts - 6- or 8-mil poly factory-made 12" diameter tubing with no joins or tees, secured through plywood with 12" diameter holes at Owner-provided location directly to the exterior and away from air intakes or ingestion pathways. Verify HEPA units are in good working order with 3 filters (course, fine, and HEPA) securely in place with gaskets and no gaps between metal exhaust tube mounting collar and unit housing. HEPA unit exhausts that pass through interior building areas outside of regulated areas prior to exiting to the exterior shall consist of double, 6-mil poly tubing. The Asbestos Contractor shall remove any bars or screens on windows where HEPA units exhaust and replace them after completion of the work in the same manner they were originally fastened.
21. Work area setups, decon locations, and HEPA unit quantities and locations are schematic only and site conditions, availability of water, power, and drains, as well as scheduling and other requirements may require modifications to be made. Modifications shall be reviewed in advance with the IH.
22. Costs associated with amendments to the RIDOH-approved Asbestos Abatement Plan and notification revisions to RIDOH and EPA and any associated delays are the responsibility of the Asbestos Contractor.
23. Phasing/scheduling of the work shall meet Owner requirements.
24. Maintain negative 0.020" water pressure differential inside work containment areas relative to outside.
25. Keep one spare HEPA-filtered work area ventilation unit inside each negative pressure enclosure as a spare in case a unit fails or additional negative pressure is needed, in addition to sufficient units to maintain 4 air changes per hour at -0.020" water column containment differential pressure with good airflow throughout interior work areas.
26. The Asbestos Contractor shall clean and protect fire-suppression system heads and piping. The asbestos Contractor is responsible for damage to the fire-suppression system and any associated damage to building materials and contents caused by said damage.
27. Protection of systems. Protect all wiring (electrical, communication, fire, alarm, etc.), plumbing, fire sprinkler and other systems as indicated by the Contract Documents and Owner or Owner’s Representative. Lock out and tag out as required for safety, regulatory compliance, and Owner's requirements. The Asbestos Contractor shall protect all exit signs, thermostats, fire system boxes, fire pull boxes, electrical junction boxes and associated conduit, and other electrical components that are in the work areas prior to commencement of abatement work. The Contractor is responsible for damage to these items.
28. Clean and protect all other buildings systems, components, piping, and work area contents. Clean and protect light fixtures - decontaminate as necessary.
29. The Asbestos Contractor will clean by HEPA vacuuming and damp wiping with amended water and move any free-standing and stored items in the way of abatement activities into adjacent non-work areas prior to commencement of setup.
30. The Asbestos Contractor shall provide a copy of all permits and notifications to the Owner and IH at the time of submission to applicable agencies, including EPA and RIDOH. No work or preparation for work shall be undertaken prior to receipt of these permits and notifications.

R. I. Analytical
Specialists in Environmental Services

ATTACHMENT #3

Asbestos Laboratory Analytical Report and Chain-of-Custody Form

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

R.I. Analytical Laboratories
Attn: Danny Mullen
E.A.M. Division
15 Lark Industrial Parkway
Smithfield, RI 02828

Date Received: 7/18/2018
Date Reported: 7/25/2018
Work Order #: 1807-15197

Site Location:PROJECT #180195, AHARONIAN & ASSOCIATES, INC.

Enclosed please find your sample(s) analysis results for asbestos content. The six asbestos types include amosite, chrysotile, crocidolite, anthophyllite, tremolite, and actinolite.

Analysis by Polarized Light Microscopy (PLM) was performed as suggested by EPA 600/R-93/116, July 1993 edition and EPA 600/M4-82-020, December 1982.

R.I. Analytical Laboratories, Inc. maintains bulk asbestos fiber NVLAP accreditation under lab code 101440-0. This report does not serve as a product certification, approval, and/or endorsement by NVLAP,

The sample(s) submitted for analysis were accepted by R.I. Analytical unless otherwise noted in the report. If a sample is found to be inhomogeneous, individual components will be analyzed separately. If individual components cannot be separated, the sample will be homogenized and a single result will be provided. These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

Samples submitted for analysis will be retained for three months for future reference.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Asbestos Signatory

Dawne E. Smart
Data Reporting Manager

R.I. Analytical Laboratories, Inc

LABORATORY REPORT

R.I. Analytical Laboratories
Date Received: 7/18/2018
Work Order #: 1807-15197
Site Location:PROJECT #180195, AHARONIAN & ASSOCIATES, INC.

METHOD: EPA 600/R-93/116

SAMPLE NO.	SAMPLE DESCRIPTION	PARAMETER	SAMPLE RESULTS / UNITS		DATE ANALYZED	ANALYST
001	1A CLEAR EXTERIOR WINDOW CAULK ON METAL AND GLASS	PLM Fiber Analysis				
		Asbestos	Not Detected		7/25/2018	CRC
		Non-fibrous	100	%	7/25/2018	CRC
		Sample Color	Clear		7/25/2018	CRC
002	1B CLEAR EXTERIOR WINDOW CAULK ON METAL AND GLASS	PLM Fiber Analysis				
		Asbestos	Not Detected		7/25/2018	CRC
		Non-fibrous	100	%	7/25/2018	CRC
		Sample Color	Clear		7/25/2018	CRC
003	2A GRAY EXTERIOR WINDOW CAULK ON METAL AND CONCRETE	PLM Fiber Analysis				
		Asbestos	Not Detected		7/25/2018	CRC
		Non-fibrous	10	%	7/25/2018	CRC
		Sample Color	Gray		7/25/2018	CRC
004	2B GRAY EXTERIOR WINDOW CAULK ON METAL AND CONCRETE	PLM Fiber Analysis				
		Asbestos	Not Detected		7/25/2018	CRC
		Non-fibrous	100	%	7/25/2018	CRC
		Sample Color	Gray		7/25/2018	CRC
005	3A GRAY EXTERIOR WINDOW GLAZING ON METAL AND GLASS	PLM Fiber Analysis				
		Asbestos	Detected		7/25/2018	CRC
		Chrysotile	1-5	%	7/25/2018	CRC
		Non-fibrous	95-99	%	7/25/2018	CRC
		Sample Color	Gray		7/25/2018	CRC
006	3B GRAY EXTERIOR WINDOW GLAZING ON METAL AND GLASS	PLM Fiber Analysis				
		Asbestos	Detected		7/25/2018	CRC
		Chrysotile	1-5	%	7/25/2018	CRC
		Non-fibrous	95-99	%	7/25/2018	CRC
		Sample Color	Gray		7/25/2018	CRC

R.I. Analytical Laboratories, Inc

LABORATORY REPORT

R.I. Analytical Laboratories
Date Received: 7/18/2018
Work Order #: 1807-15197
Site Location:PROJECT #180195, AHARONIAN & ASSOCIATES, INC.

METHOD: EPA 600/R-93/116

SAMPLE NO.	SAMPLE DESCRIPTION	PARAMETER	SAMPLE RESULTS / UNITS		DATE ANALYZED	ANALYST
007	4A BLACK EXTERIOR WINDOW GLAZING ON METAL AND GLASS	PLM Fiber Analysis				
		Asbestos	Not Detected		7/25/2018	CRC
		Non-fibrous	100	%	7/25/2018	CRC
		Sample Color	Black		7/25/2018	CRC
008	4B BLACK EXTERIOR WINDOW GLAZING ON METAL AND GLASS	PLM Fiber Analysis				
		Asbestos	Not Detected		7/25/2018	CRC
		Non-fibrous	100	%	7/25/2018	CRC
		Sample Color	Black		7/25/2018	CRC
009	5A BLACK SEALER ON METAL	PLM Fiber Analysis				
		Asbestos	Not Detected		7/25/2018	CRC
		Non-fibrous	100	%	7/25/2018	CRC
		Sample Color	Black		7/25/2018	CRC
010	5B BLACK SEALER ON METAL	PLM Fiber Analysis				
		Asbestos	Not Detected		7/25/2018	CRC
		Non-fibrous	100	%	7/25/2018	CRC
		Sample Color	Black		7/25/2018	CRC
011	6A GRAY INTERIOR WINDOW GLAZING ON METAL AND GLASS	PLM Fiber Analysis				
		Asbestos	Not Detected		7/25/2018	CRC
		Non-fibrous	100	%	7/25/2018	CRC
		Sample Color	Gray		7/25/2018	CRC
012	6B GRAY INTERIOR WINDOW GLAZING ON METAL AND GLASS	PLM Fiber Analysis				
		Asbestos	Not Detected		7/25/2018	CRC
		Non-fibrous	100	%	7/25/2018	CRC
		Sample Color	Gray		7/25/2018	CRC

R.I. ANALYTICAL
41 Illinois Avenue - Warwick, RI 02888
P: (401) 737-8500 F: (401) 732-8034

SAMPLE DATA SHEET & CHAIN OF CUSTODY

Project: Aharonian & Associates, Inc.
Client Purchase Order #:
Address: CCRI Knight Campus, Warwick, RI
RI Analytical EAM Project #: 180195
Sampled By (Name): Danny Mullen
RI Analytical Work Order#: 1807-15197
Sampled By (Certification #): AAC-0963
Inspection Date: 7/18/18
Page 1 of 1

Line	Sample #	Description	Location	Notes
1	1a	Clear exterior window caulk on metal and glass	South side 6th floor window system	
2	1b	Clear exterior window caulk on metal and glass	South side 6th floor window system	
3	2a	Gray exterior window caulk on metal and concrete	South side 6th floor window system	
4	2b	Gray exterior window caulk on metal and concrete	South side 6th floor window system	
5	3a	Gray exterior window glazing on metal and glass	South side 6th floor window system	
6	3b	Gray exterior window glazing on metal and glass	South side 6th floor window system	
7	4a	Black exterior window glazing on metal and glass	South side 6th floor window system	
8	4b	Black exterior window glazing on metal and glass	South side 6th floor window system	
9	5a	Black sealer on metal	South side 6th floor window system	
10	5b	Black sealer on metal	South side 6th floor window system	
11	6a	Gray interior window glazing on metal and glass	South side 6th floor window system	
12	6b	Gray interior window glazing on metal and glass	South side 6th floor window system	
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				

COMMENTS: Email report to: Name: Danny Mullen ; Email to: dmullen @rianalytical.com & datareporting@rianalytical.com
A. (1) Analysis = ☒ PLM, Asbestos (EPA 600/R-93/116); ☒ PLM NOB as needed; ☐ ___ point count if friable and <10% ASB; ☐ TEM NOB
(2) TAT = 5-7 Day ; (3) No. samples submitted = 12 ; (4) ☐ Y or ☒ N - Positive stop by Homogeneous # shown.

RELINQUISHED BY: (SIGNATURE) Danny R. Mullen	DATE/TIME 7/18/18 11:36	RECEIVED BY: (SIGNATURE) Christa Bond	DATE/TIME 07/18/18 1140
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	DATE/TIME

ATTACHMENT #4

ASB-16A - 4A

Interim Operations & Maintenance Plan

Contractors and personnel associated with the building are aware of the presence and location of ACM within the above stated areas through review of this Asbestos Abatement Plan. They have been instructed not to disturb the material due to the potential health hazards if fibers become airborne. The Contractor shall be responsible for monitoring existing ACM and notifying RI Analytical through the Owner if a disturbance occurs. If previously unidentified, suspect building materials are discovered, a RIDOH-licensed Asbestos Inspector shall be summoned to evaluate the situation and take appropriate actions.

1. Notification

All personnel, including any contractors, entering the building and/or premises to perform work, shall be notified of the presence and location of ACM and cautioned regarding disturbance of the material(s). If an emergency fiber release occurs, the following procedures shall be initiated.

2. Fiber Release Episodes

A. Minor Release Episode

If a minor fiber release episode occurs (release of less than 10 linear feet or 25 square feet of material), trained maintenance staff or an asbestos abatement contractor may perform the cleaning. Access to the area shall be restricted during clean up. All debris shall be thoroughly wetted using amended water and placed in labeled, double six-mil polyethylene bags. The area shall then be cleaned using HEPA filtered vacuums and/or wet cleaning methods. Damaged material must be cleaned and repaired with non-asbestos-containing material. The area shall then be evaluated to decide if further action is necessary.

B. Major Release Episode

If a major fiber release episode occurs (falling or dislodging of more than 10 linear feet or 25 square feet of ACBM), the cleaning must be carried out and directed by persons accredited to conduct and design response actions. After such an episode, the area shall be immediately restricted and entry to the area prevented. Warning signs shall be posted to caution people other than those qualified to deal with the problem. Air handling units in the area shall be shut down to prevent the spread of fibers beyond the problem area. A response action shall be designed and carried out by qualified personnel.

3. Training

Any employee who, because of their work, may disturb ACM, shall be trained and certified as a Competent Person as described by the R.I. Rules and Regulations for Asbestos Control. The program coordinator shall ensure that the procedures described above to protect the personnel shall be followed for any operations and maintenance activities disturbing or involving ACM.

Long Term Operations and Maintenance Program

A. The asbestos abatement plan including the Interim Operations and Maintenance Program and records of the abatement activities including air sample results and ACM waste disposal manifests, shall be incorporated into the Long Term Operations and Maintenance Program, and the Operations and Maintenance activities will continue as needed.

B. Prior to undertaking further renovation or demolition activities, areas and materials not previously inspected and sampled, will be inspected and sampled by a RIDOH-certified asbestos abatement consultant to ascertain whether those materials contain asbestos, which must then be treated as RACM (Regulated ACM). Materials identified as ACM in all previous and current inspections that will be impacted by further renovation or demolition activities, must be removed prior to commencement of these activities in accordance with RIDOH, EPA, OSHA and other applicable regulations.

C. ACM known to be in the work area(s) that were beyond the scope of work of this renovation project are as follows.

- None known.

D. The Owner's designated person will undertake surveillance inspections of any remaining, visible ACM every 6 months. Minor and major fiber release episodes, as well as all response actions will be documented by the designated person. Suspect materials found to have been damaged or become friable will be repaired in accordance with RIDOH, OSHA, and EPA regulations.

E. The Owner's designated person will indicate in writing to any employees, trades, contractors, or visitors to the building that may impact ACM (whether by maintenance, janitorial, or other activities) the presence, type, and location of the ACM with instructions not to disturb the ACM in any way whatsoever.

ATTACHMENT #5

Scope of Work / Description of Waivers

Scope of Work:

The scope of work is the removal of the ACM and AACM (Assumed ACM) identified in Table 2 above.

All work will be conducted using applicable B.8 work procedures noted in ASB-16A or as described below.

All applicable OSHA, federal, state, and local asbestos, demolition, and safety regulations shall be followed.

It is the contractor's responsibility to verify quantities of all identified asbestos-containing materials and locations and site conditions.

It is the responsibility of the Asbestos Contractor to collect personnel air samples in compliance with OSHA 29 CFR, Part 1926.1101 (f).

Waivers:

Interior Window-Wall Materials - Wall Poly Sheeting

- Interior wall plastic – waiver for no containment wall plastic on the wall where window glazing materials are to be removed [§B.8.2(d)].

Alternative Work Practices:

None.

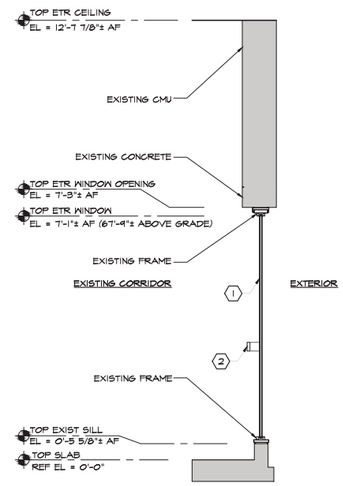
R. I. Analytical
Specialists in Environmental Services

ATTACHMENT #6

ASB-16A-3

Drawings

Not to scale. Typical ACM setups - setups are not shown at all locations. Actual setup configuration will be determined by the Contractor based on site conditions, access restrictions and Owner's requirements, including phasing and schedule. If applicable, refer to the Contract Documents including drawings for renovation/demolition areas as well as details and dimensions. There is potential for hidden ACM.



2 A1.1 EXISTING WINDOW SECTION
SCALE: 1/2" = 1'-0"

GENERAL NOTES

1) THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND INSPECTIONS NECESSARY TO INSURE ISSUANCE OF AN OCCUPANCY CERTIFICATE UPON COMPLETION OF THE WORK.

2) THE CONTRACTOR SHALL MAINTAIN ALL INSURANCE REQ'D BY THE OWNER AND/OR GOVERNMENTAL AUTHORITIES AND SHALL PROVIDE PROOF OF SUCH INSURANCE AS REQUIRED.

3) ALL WORK SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, CITY OF WARWICK, RHODE ISLAND REQUIREMENTS AND AS PUT FORTH IN THESE CONSTRUCTION DOCUMENTS. WHERE CONFLICTS OCCUR, THE MOST STRINGENT REQUIREMENTS SHALL BE MET.

4) THE CONTRACTOR SHALL BE RESPONSIBLE FOR BRACING ALL WORK DURING CONSTRUCTION.

5) THE DRAWINGS MAY NOT BE TO SCALE. SEE PLANS AND DETAILS FOR DIMENSIONS.

6) ALL EXTERIOR DIMENSIONS SHOWN ARE TO THE FACE OF FRAMING. ALL INTERIOR DIMENSIONS SHOWN ARE TO THE FACE OF WALL.

7) THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS BEFORE COMMENCING CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING.

8) THE CONTRACTOR SHALL ANCHOR WALL MOUNTED EQUIPMENT AND ACCESSORIES TO EXISTING WALLS AS REQ'D FOR PROPER SUPPORT.

9) LEVEL OF GYP BD FINISH PER MATERIAL:
UNDER WALL COVERING: 4
UNDER PAINT: 5

10) NOTHING IN THE SPECIFICATIONS OR DRAWINGS SHALL BE CONSTRUED TO ALLOW WORK NOT IN ACCORDANCE WITH THE CODE REQUIREMENTS. WHEN REQUIREMENTS SHOWN OR SPECIFIED ARE LESS THAN THOSE DICTATED IN THE CODE, THE CONTRACTOR SHALL FURNISH AND/OR INSTALL THE LARGER SIZE OR HIGHER STANDARD WITHOUT EXTRA COST TO THE OWNER.

11) "PROVIDE" SHALL MEAN TO "SUPPLY & INSTALL".

12) ALL MATERIALS USED IN THE CONSTRUCTION OF THIS PROJECT SHALL BE CLASSIFIED AS NONCOMBUSTIBLE PER THE STATE BUILDING CODE WHETHER SO INDICATED ON THE DWGS OR NOT.

13) COMPLY W/ ALL CCRI RULES & REGULATIONS REGARDING SCHEDULE & CONSTRUCTION PRACTICES. COORDINATE W/ SCHOOL OFFICIALS TO REVIEW SCOPE OF WORK & TIMELINE PRIOR TO START OF PROJECT.

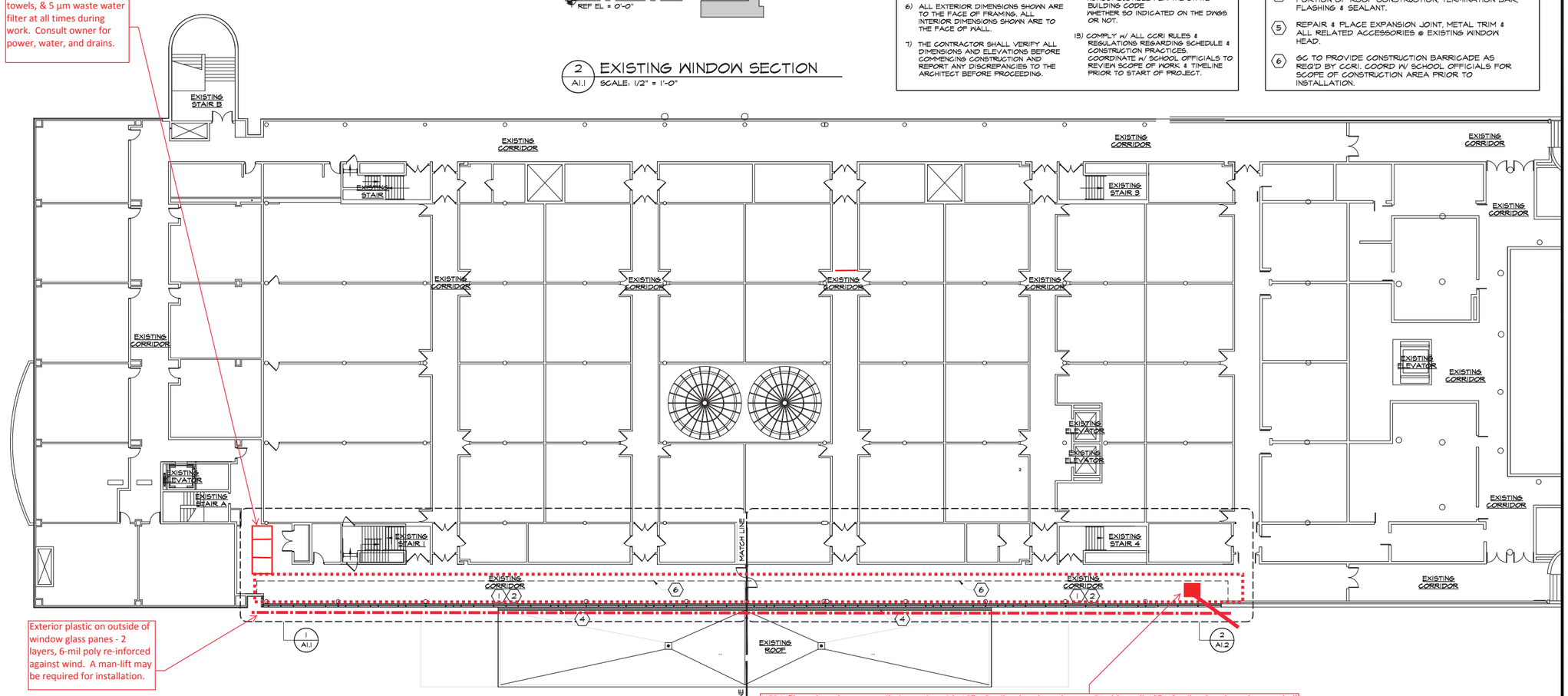
FIRE RATED CONSTRUCTION NOTES:

1. SEAL ALL PENETRATIONS THROUGH FIRE RATED CONSTRUCTION W/ FIRE CAULKING. TYPICAL FOR FIRE RATED PARTITIONS & FLOOR/ CEILING CONSTRUCTION.

KEYED PLAN NOTES

1. PLACE NEW 1" INSULATED, LOW E, TINTED GLASS WINDOW & SEALANT INTO ETR FRAME. VERIFY ALL WINDOW SIZES PRIOR TO ORDERING.
2. PLACE ALL EXISTING RAILINGS, BRACKETS & ALL RELATED ACCESSORIES IN EXISTING LOCATION POST WINDOW INFILL.
3. PLACE EXISTING EXTENSION PIECE & ALL RELATED ACCESSORIES IN EXISTING LOCATION. REPLACE INSULATION TO MATCH EXISTING REQUIREMENTS.
4. COORD W/ CCRI ROOF CONTRACTOR TO REPLACE PORTION OF ROOF CONSTRUCTION, TERMINATION BAR, FLASHING & SEALANT.
5. REPAIR & PLACE EXPANSION JOINT, METAL TRIM & ALL RELATED ACCESSORIES @ EXISTING WINDOW HEAD.
6. GC TO PROVIDE CONSTRUCTION BARRICADE AS REQ'D BY CCRI. COORD W/ SCHOOL OFFICIALS FOR SCOPE OF CONSTRUCTION AREA PRIOR TO INSTALLATION.

Typical 3-stage Decontamination facility - includes hot & cold water, towels, & 5 µm waste water filter at all times during work. Consult owner for power, water, and drains.



Exterior plastic on outside of window glass panes - 2 layers, 6-mil poly re-inforced against wind. A man-lift may be required for installation.

HEPA-filtered work area ventilation units with 12"ø 6-mil poly tube exhausts. Double wall 12"ø 6-mil poly tube exhausts shall be used where the exhausts travel through building interiors outside containment. Install and maintain one spare 2,000 CFM HEPA unit. Maintain at least -0.020 inches water column negative pressure inside containment and good airflow throughout.

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

N PLAN

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AHARONIAN
& ASSOCIATES INC.
ARCHITECTS

310 George Washington Highway
Suite 100
Smithfield, Rhode Island
0 2 9 1 7

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DISCLAIMER

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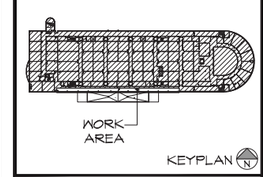
THESE DRAWINGS ARE BASED ON AN AS-BUILT PROVIDED TO THIS OFFICE BY THE OWNER AND IS NOT GUARANTEED TO BE ACCURATE. GC SHALL VERIFY ALL EXISTING DIMENSIONS & CONSTRUCTION PRIOR TO START OF WORK & PRESENT ANY POTENTIAL ISSUES TO THE ARCHITECT.



REVISIONS

NUMBER	REMARKS	DATE

PRELIMINARY
NOT FOR CONSTRUCTION

FOR REVIEW

PROJECT TITLE

COMMUNITY COLLEGE OF RHODE ISLAND
Knight Campus

6TH FLOOR WINDOW REPLACEMENT

400 EAST AVENUE
WARWICK, RI 02886
Kent County

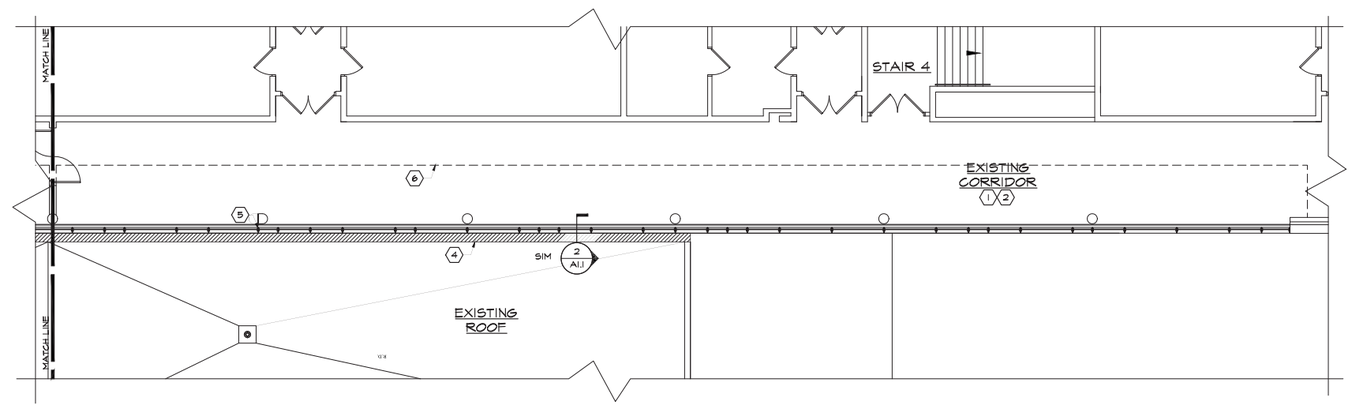
DRAWING TITLE

FLOOR PLAN & SECTION

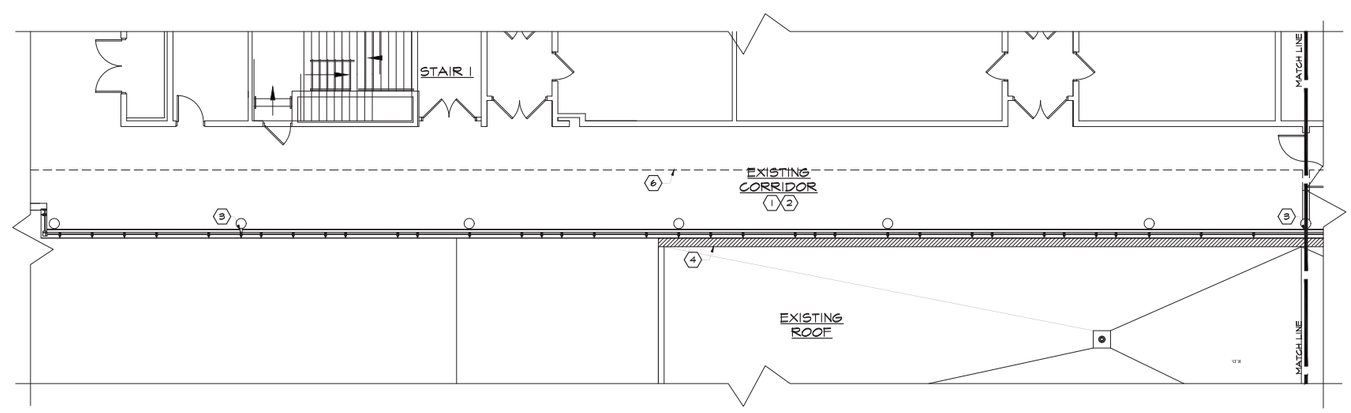
DATE	PROJ NO
AUG 31, 2018	18059
DRAWN BY: ERM	CHECKED BY: DH

DRAWING NUMBER

A1.1



2 A1.1 PARTIAL SIXTH FLOOR PLAN
SCALE: 1/8" = 1'-0"
N PLAN



1 A1.1 PARTIAL SIXTH FLOOR PLAN
SCALE: 1/8" = 1'-0"
N PLAN

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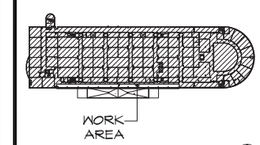
THESE DRAWINGS ARE BASED ON AN AS-BUILT PROVIDED TO THIS OFFICE BY THE OWNER AND IS NOT GUARANTEED TO BE ACCURATE.
GC SHALL VERIFY ALL EXISTING DIMENSIONS & CONSTRUCTION PRIOR TO START OF WORK & PRESENT ANY POTENTIAL ISSUES TO THE ARCHITECT.



KEYPLAN N

REVISIONS

NUMBER	REMARKS	DATE

PRELIMINARY
NOT FOR CONSTRUCTION

FOR REVIEW

PROJECT TITLE

COMMUNITY COLLEGE
OF RHODE ISLAND
Knight Campus

6TH FLOOR WINDOW REPLACEMENT

400 EAST AVENUE
WARWICK, RI 02886
Kent County

DRAWING TITLE

ENLARGED FLOOR PLANS & DTLS

DATE	PROJ NO
AUG 31, 2018	18059
DRAWN BY	CHECKED BY
ERM	DH

DRAWING NUMBER

A1.2

R. I. Analytical
Specialists in Environmental Services

ATTACHMENT #7

Pre-Abatement Air Sample
Laboratory Analytical Report and Chain-of-Custody Form

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

R.I. Analytical Laboratories
Attn: Danny Mullen
E.A.M. Division
15 Lark Industrial Parkway
Smithfield, RI 02828

Date Received: 10/12/18
Date Reported: 10/15/18
Work Order #: 1810-22033

Site Location:
PROJECT #180195; CCRI KNIGHT

Dear: Danny Mullen

Attached please find the results of sample(s) analyzed for fiber concentration in fibers/cc or Fiber Density (Blank Results) .

METHODOLOGY: Asbestos and Other Fibers by Phase Contrast Microscopy, NIOSH Method 7400 Manual of Analytical Methods, U.S. Department of Health and Human Services - 4th edition, revised August 15, 1994.

QUANTITATION LIMIT: The sensitivity of this method is based on 5.5 fibers per graticule field, where graticule field area is 0.00785 square millimeters.

ACCREDITATION : RI AAL-142, MA AA000028, CT PH-0511

If you have any questions regarding this report, or if we may be of further assistance, please contact our Customer Service Department.

Approved by:

Dawne E. Smart
Data Reporting Manager

R.I. Analytical Laboratories, Inc

LABORATORY REPORT

R.I. Analytical Laboratories

Sample collected by RIAL personnel on 10/11/2018
Work Order #: 1810-22033
Site Location: PROJECT #180195; CCRI KNIGHT

SAMPLE #	IDENTIFICATION:	REPORTED VOLUME (L)	FIBER DENSITY FIBER/SQUARE MM	LIMIT OF DETECTION	CONC. F/CC	ANALYST
001	03-10/12/18-DRM - FIELD BLANK #1		<7.0			DRM
002	04-10/12/18-DRM - FIELD BLANK #2		<7.0			DRM
003	01-10/12/18-DRM - HALLWAY EAST	1226.74	<7.0	0.002	0.002	DRM
004	02-10/12/18-DRM - HALLWAY WEST	1226.74	<7.0	0.002	<0.002	DRM

EAM Project #180195
CCRI Knight Campus
6th Floor Hall Adjacent to Window System
400 East Avenue
Warwick, RI 02886

Laboratory blank samples fall within acceptable limits of method.

R.I. ANALYTICAL
41 Illinois Avenue - Warwick, RI 02888
P: (401) 737-8500 F: (401) 732-8034

PCM Air Monitoring Worksheet Chain of Custody for Airborne Fiber Analysis

Project Name: CCRI Knight Campus
Project Manager: Ken Davis
Sampler Name: Danny Mullen
Project Number: 180195
180195 **Rotometer #/Cal. Date:** RI 12/5.31.2018
Sample Date: 10/11/2018
Building Name/#:
Cassette Lot #:
20180321 **Analyst Name:** Danny Mullen
Site Address: 400 East Ave., Warwick, RI 02886
Cassette Manufacturer: EMS, Inc.
Analysis Date: 10/12/2018
Work Area: 6th Floor Hall Adjacent to Window System
Microscope #: 7K44047 **Phase Rings Aligned:** ☒ Y / ☐ N
Analyst Signature: Danny R. Mullen

Sample ID # (##-Date-Initials)	Sample Location	Activity Code	Sample Time On	Sample Time Off	Sample Duration (Minutes)	Flow Rate Pre	Flow Rate Post	Flow Rate Avg.	Total Volume (Liters)	Limit of Detection (Fibers/cc)	Fiber Count (Fibers)	Fiber Count (Fields)	Fiber Density (Fibers/mm^2)	Fiber Conc. (Fibers/cc)
03-10/12/18-DRM	Field Blank #1										0	100	<7	
04-10/12/18-DRM	Field Blank #2										0	100	<7	
01-10/12/18-DRM	Hallway East	1	15:00	16:23	83	14.78	14.78	14.78	1226.74	0.0022	4	100	<7	<0.0022
02-10/12/18-DRM	Hallway West	1	15:02	16:25	83	14.78	14.78	14.78	1226.74	0.0022	3	100	<7	<0.0022
	Duplicate													

Reference Method: NIOSH 7400 Issue 2, 8/15/94

Sample Type: PCM Cassette - 25-mm, 3-Piece, 0.8µm Mixed-Cellulose Ester filter

Limits of Detection & Quantitation = 0.055 Fibers/field = 7 Fibers/mm^2 & 2.7/(Total Volume) Fibers/cc.

Fiber Density (Fibers/mm^2) = $\frac{\text{(SAMPLE Fibers/Field)} - \text{(Average BLANK Fibers/Field)}}{\text{(0.00785 mm}^2\text{/Field)}}$

CONCENTRATION (Fibers/cc) = $\frac{\text{(SAMPLE Fibers/Field)} - \text{(BLANK Fibers/Field)} \times 385\ \text{mm}^2\text{/Filter}}{\text{(0.00785 mm/Field)} \times \text{Liters} \times 1{,}000\ \text{cc/Liter}}$

IC	Inside Containment
OCB	Outside Critical Barrier
Decon	Decontamination Facility

*Activity Code

Code	Type
1	Pre-Abatement
2	Set-Up
3	During Abatement
4	Clearance
5	Environmental
6	Personal
7	Other: General Area

Reference Slide	
Slide #	Fiber Density (Fibers/mm^2)

24 HR TAT	**Email Report To:** dmullen @rianalytical.com & datareporting@rianalytical.com	**RI Analytical Work Order #:**	1810 - 22033
Relinquished By: (Signature) D. R. Mull 12:50	10/12/18	**Received By: (Signature)** Christa Brown	10/12/18 1300
Relinquished By: (Signature)		**Received By: (Signature)**	
Relinquished By: (Signature)		**Received By: (Signature)**	

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