ASBESTOS & LEAD PAINT SURVEY REPORT

HARLEM LINE
HARTSDALE STATION
HARTSDALE, NY 10530

PROJECT: CAPITAL – HARLEM LINE – HARTSDALE STATION: PEDESTRIAN OVERPASS, PLATFORMS & STAIRCASES REPAIRS

PREPARED FOR:

METRO-NORTH RAILROAD
DEPARTMENT OF SAFETY & SECURITY
420 LEXINGTON AVENUE – 9TH FLOOR
NEW YORK, N.Y. 10017

CONTRACT # 10005008
OSS TASK NUMBER: HAL-18-039-AL

PREPARED BY:

ENVIRONMENTAL PLANNING & MANAGEMENT, INC.
1983 Marcus Ave., Suite 109
Lake Success, NY 11042

EPM's Project No. 18041-2

October 5th, 2018
18041-02 HARTSDALE STATION ASBESTOS LEAD SURVEY REPORT.doc **/ MA**

TABLE OF CONTENTS

Section **Page**

TABLES

APPENDICES

EXECUTIVE SUMMARY

As directed, from August 15th through August 28th, 2018, Environmental Planning & Management (EPM) certified New York State Department of Labor (NYSDOL) Asbestos Inspectors Michael Aprahamian (certificate number 97-02855), Darren Frank (certificate number 02-21260) and Andrzei Zabrocki (certificate number 93-20787) performed an asbestos and lead containing coating survey at Metro North Railroad (MNRR) Hartsdale Station, located in Hartsdale, New York. Mr. Frank and Mr. Zabrocki are also a USEPA Lead Inspectors (certificate number LBP-I-9510-1 Exp.: 11/16/2019 and certificate number LBP-I-11979-1 EXP.: 6/3/2021).

The purpose of the initial survey was to identify the location and quantity of asbestos containing materials (ACM greater than 1%) and the presence of lead containing paint, that might be impacted by the scope of work as described in drawings titled '*Design Build Service for Scarsdale and Hartsdale Station Improvements*', prepared by STV and dated July 13th, 2018 (30% Design Plan Submission). However, following this, EPM was directed to survey all accessible areas.

The known scope of work includes:

- Remove shelters and associated items;
- Remove communications hut;
- Remove, signs, benches, recycling bins, and schedule panels
- Remove platform lighting;
- Replace platforms, piers and associated items;
- Remove platform canopies and associated items;
- Replace or repair specific staircases and ramps associated with the platforms;
- Replace existing inbound side glass panel at the inbound side of the pedestrian overpass.

EPM collected bulk samples from eighteen (18) homogenous groups. A summary of identified asbestos containing materials is provided in Table I below:

Table I – Summary of Asbestos Containing Materials – Hartsdale Station							
SAMPLE #	ASBESTOS MATERIAL FOUND	LOCATION	CONDITION	QUANTITY	UNITS	PHOTO #	COMMENTS
HD-5A,5B,5C	Black mastic / flashing	Outbound platform north most section canopy roof: Perimeter and center trough	Fair	111	SF	1	
HD-16A,16B, 16C	Dark gray mastic tar/ sealant	Sidewalk near ramp E13	Poor	17.5	SF	2	

With the exception of the aforementioned presumed ACMs, no other asbestos containing materials were identified. The following materials tested, were determined to be non-asbestos containing (areas referenced are from design drawings dated 7-13-2018):

- Black adhesive/mastic tar layer and roll roofing present on the inbound platform canopy roof (Areas:8W,15W and 25W);
- Black mastic/tar repair patch present on the inbound platform canopy roof(Areas: 14W-15W, 15W-16W);
- Black asphaltic roll roofing present on the outbound platform north section canopy roof (Areas: 31E-32E);
- Brown board roofing insulation present beneath the roll roofing on the outbound north section canopy roof (Areas: 30E-31E and 31E-32E);
- Black roof sealer present on the northern center section of the outbound EPDM canopy roof (Areas 28E-29E and 30E-31E). This EPDM system is homogenous with the pedestrian overpass and associated staircase canopy roofs;
- Black roof patch on EPDM roofing present on the outbound canopy roof (Areas: 21E-22E);
- Black joint filler material present at transverse platform joints on the outbound and inbound platforms;
- Dark gray caulk present at ends of rubber expansion joint typical found on the platform expansion joints and staircase landing E12;
- Light gray caulk present at staircase joint of stairs E1, E4, and E14;
- Dark blue/gray caulk present at expansion joints between stairs E2, Ramp E1 and inbound platform and Stairs E16 and outbound platform;
- Gray caulk typical present at the base of light poles on both platforms and expansion joint between stairs E13 and the outbound platform;

- Off-white caulk present at the stairs E4 and landing of the inbound platform;
- Black caulk typical present at the base of drains/columns supports of both canopy platforms;
- Brown joint filler material present at stairs E2, E8, of the inbound platform and stairs E13 of the outbound platform, and;
- Soft gray caulk present at stairs E12 steps of the outbound platform.

According to the Occupational Safety and Health Administration (OSHA), any detectable amount of lead in the paint sample constitutes the coating as lead containing. OSHA does not recognize the USEPA definition of lead-based paint (LBP). The following surfaces, as well as those that are homogeneous, are lead-containing:

- Gray paint present on the metal canopy fascia of the inbound platform.
- Brown paint on the metal light fixture mounted to the inbound canopy;
- Yellow paint present on the tactile warning strip on both concrete platforms;
- Green paint present on the salt box located on the outbound platform;
- Green paint present on the canopy supports of the outbound platform;
- Black paint present on the ramp railing located at the center of the outbound platform, and;
- Light green paint present on the parking sign located in the parking lot adjacent to the outbound platform.

1.0 INTRODUCTION

At the request of Metro North Railroad (MNR) Office of System Safety, EPM performed a limited investigation for the presence of asbestos containing materials (ACM) and limited lead containing coating inspection of the New Harlem line's Hartsdale station, located in Hartsdale, New York. The asbestos investigation was conducted in general conformance with guidelines established by the Environmental Protection Agency (EPA) in the Guidance for Controlling Asbestos Containing Materials in Buildings, Office of Pesticides and Toxic Substances, DOC #560/5-85-024, and 40 CFR Part 763, Asbestos Hazard Emergency Response Act (AHERA). The limited pre-renovation lead containing coating inspection was performed to provide the project with information necessary for the development of work practices and controls in compliance with OSHA's Lead Standard for the Construction Industry, Title 29 Code of Federal Regulations 1926.62 (29 CFR 1926.62).

The scope of work for the survey consisted of the following tasks:

1. Perform a visual inspection of station areas and components to identify the potential location of asbestos containing materials (ACMs) that might be affected by the proposed scope of work as described by the previously mentioned drawings and all accessible areas and to determine the delineation of homogeneous areas to be impacted.
2. Collect bulk samples of suspect ACM.
3. Submit the suspect ACM bulk samples to a certified laboratory for Polarized Light Microscopy (PLM) and/or Transmission Electron Microscopy (TEM), where applicable, analysis.
4. Investigate painted surfaces utilizing The Niton XLp 300A analyzer.
5. Prepare a report summarizing data collection techniques, analysis procedures, and location of asbestos containing materials (greater than 1% as determined by PLM or TEM) and lead containing coatings.

2.0 ASBESTOS SURVEY

The field inspection was conducted from August 15th through August 28th, 2018, Environmental Planning & Management (EPM) certified New York State Department of Labor (NYSDOL) Asbestos Inspectors Michael Aprahamian (certificate number 97-02855), Darren Frank (certificate number 02-21260) and Andrzei Zabrocki (certificate number 93-20787)

Field information was organized as per the AHERA concept of homogenous area (HA). The delineation of homogeneous areas at the site was based on criteria including material type and location. Materials suspected of containing asbestos were identified for the area inspected. When suspect ACM's were found, representative bulk samples from the homogeneous material group (material which is uniform by color, texture, construction application date, and general appearance) were collected. Three bulk samples were collected per homogeneous material group from miscellaneous materials.

Fifty-four (54) bulk samples were collected from eighteen (18) homogeneous areas from the following suspect materials:

- Black adhesive/mastic tar layer and roll roofing present on the inbound platform canopy roof (Areas:8W,15W and 25W);
- Black mastic/tar repair patch present on the inbound platform canopy roof (Areas: 14W-15W, 15W-16W);
- Black asphaltic roll roofing present on the outbound platform north section canopy roof (Areas: 31E-32E);
- Brown board roofing insulation present beneath the roll roofing on the outbound north section canopy roof (Areas: 30E-31E and 31E-32E);
- Black mastic tar present as perimeter flashing of the northern most section of the outbound canopy roof (Area: 31E-32E)
- Black roof sealer present on the northern center section of the outbound EPDM canopy roof (Areas 28E-29E and 30E-31E). This EPDM system is homogenous with the pedestrian overpass and associated staircase canopy roofs;
- Black roof patch on EPDM roofing present on the outbound canopy roof (Areas: 21E-22E);
- Black joint filler material present at transverse platform joints on the outbound and inbound platforms;
- Dark gray caulk present at ends of rubber expansion joint typical found on the platform expansion joints and staircase landing E12;
- Light gray caulk present at staircase joint of stairs E1, E4, and E14;
- Dark blue/gray caulk present at expansion joints between stairs E2, Ramp E1 and

inbound platform and Stairs E16 and outbound platform;

- Gray caulk typical present at the base of light poles on both platforms and expansion joint between stairs E13 and the outbound platform;
- Off-white caulk present at the stairs E4 and landing of the inbound platform;
- Black caulk typical present at the base of drains/columns supports of both canopy platforms;
- Brown joint filler material present at stairs E2, E8, of the inbound platform and stairs E13 of the outbound platform,
- Dark gray mastic/tar sealant present in sidewalk adjacent to the outbound platform /parking lot near pier 22E, and;
- Soft gray caulk present at stairs E12 steps of the outbound platform.

Non-suspect materials observed at the site include:

- Concrete platforms and ramps;
- Concrete pier that support the platforms;
- Joint between concrete piers and platforms is rubber bearing;
- Metal structural steel (I-beams, angles, stringers);
- Lamp post upper base joint is sealed with silicone sealant;
- Rubber and/or silicone overpass glazing sealant and sash sealant, and; Non-suspect vinyl insulation present on platforms lighting and signs.

Table II contains a detailed summary of the inspection results. Laboratory analytical data is included as Appendix E.

The bulk samples were analyzed by Alpha Labs LLC, 14-26 28th Avenue, LIC, NY. Alpha Labs LLC is accredited by the New York State Environmental Laboratory Accreditation Program (ELAP # 11833) and the National Voluntary Laboratory Accreditation Program (NVLAP # 200691-0) of the National Institute of Standards and Technology (NIST). Laboratory accreditation documentation is included as Appendix D.

2.1 Analytical Procedures

Asbestos containing materials are summarized in Table I on Page 2. Bulk samples of suspect asbestos containing materials (ACM) were analyzed using Polarized Light Microscopy (PLM) with dispersion staining, as described in 40 CFR Part 763 and National Emissions Standards for Hazardous Air Pollutants (NESHAPS) regulations. Non-friable organically bound (NOB) materials were analyzed as per Environmental Laboratories Accreditation Program (ELAP) item 198.1, “Polarized Light Microscopy Method for Identifying and Quantifying Asbestos in Bulk Samples”. NOB materials which tested negative by PLM were analyzed using Transmission Electron Microscopy (TEM) method. TEM analysis is the only method that can be used to determine if non-friable organically bound materials (NOBs) can be considered non-asbestos containing.

2.2 Asbestos Survey Findings

Based on laboratory analysis conducted by layers, it was determined that the following materials are not asbestos containing:

- Black adhesive/mastic tar layer and roll roofing present on the inbound platform canopy roof (Areas:8W,15W and 25W);
- Black mastic/tar repair patch present on the inbound platform canopy roof (Areas: 14W-15W, 15W-16W);
- Black asphaltic roll roofing present on the outbound platform north section canopy roof (Areas: 31E-32E);
- Brown board roofing insulation present beneath the roll roofing on the outbound north section canopy roof (Areas: 30E-31E and 31E-32E);
- Black roof sealer present on the northern center section of the outbound EPDM canopy roof (Areas 28E-29E and 30E-31E). This EPDM system is homogenous with the pedestrian overpass and associated staircase canopy roofs;
- Black roof patch on EPDM roofing present on the outbound canopy roof (Areas: 21E-22E);
- Black joint filler material present at transverse platform joints on the outbound and inbound platforms;
- Dark gray caulk present at ends of rubber expansion joint typical found on the platform expansion joints and staircase landing E12;
- Light gray caulk present at staircase joint of stairs E1, E4, and E14;
- Dark blue/gray caulk present at expansion joints between stairs E2, Ramp E1 and inbound platform and Stairs E16 and outbound platform;
- Gray caulk typical present at the base of light poles on both platforms and expansion joint between stairs E13 and the outbound platform;
- Off-white caulk present at the stairs E4 and landing of the inbound platform;
- Black caulk typical present at the base of drains/columns supports of both canopy platforms;
- Brown joint filler material present at stairs E2, E8, of the inbound platform and stairs E13 of the outbound platform, and;
- Soft gray caulk present at stairs E12 steps of the outbound platform.

3.0 LEAD PAINT SURVEY

The lead survey field inspections were conducted from August 15th through August 28th by Environmental Planning & Management (EPM) certified USEPA Lead Inspectors Darren Frank (certificate number LBP-I-9510-1 Exp.: 11/16/2019,) Andrzei Zabrocki, (certificate number LBP-I-11979-1 EXP.: 6/3/2021) at Metro North Railroad (MNRR) Hartsdale Station, located in Hartsdale, New York.

3.1 Testing Procedures using the Niton XLp 300A XRF Analyzer:

In lieu of an applicable lead sampling protocols for a non-residential property the limited lead containing coating (LCC) inspection was conducted in general conformance with the United States Environmental Protection Agency (US EPA) 40 CFR Part 745 “Lead; Identification of Dangerous Levels of Lead; Final Rule”, dated January 5, 2001, and the US Department of Housing and Urban Development’s (HUD) “Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing” (HUD Guidelines), dated June 1995, revised 2012. HUD has established a threshold of 0.5% by weight and/or 1.0 mg/cm^2 at and above which a paint is lead-based.

The Niton XLp 300A Series Lead-Based Paint Analyzer is a complete lead-based paint (LBP) analysis system, which quickly, accurately, and non-destructively measures the concentration of LBP on tested surfaces. The XLp 300A relies on the measurement of the K-shell and L-shell X-rays to determine the amount of lead present in a painted surface. The measurement of both K-shell and L-shell X-rays allows for the penetration of many layers of paint thereby providing an increased level of accuracy for the measurement of lead without being significantly affected by the thickness or number of layers of paint on the surface of the sample.

The Niton XLp 300A simultaneously detects K-shell and L-shell X-rays, analyzes them with an automatic positive/ negative decision, and correction for substrate bias, and age of source. All negative readings in all paint test modes are verified by negative K-Shell X-ray readings. Patent-pending TrueDepth™ Technology identifies and locates deeply buried lead and provides exact depth of leaded paint in inches.

The Niton XLp 300A analyzer has two modes of operation, the "Standard Mode" and the "K & L Mode". In the "Standard Mode”, the instrument will measure only until a 95% confidence reading of “Positive” or “Negative” has been attained. Measurement time can vary on this mode. In the "K & L Mode" the analyzer displays the complete test information continuously, from the beginning of each reading, including the K-Shell reading with two-sigma confidence intervals, the L-shell reading with two-sigma confidence intervals and the combined reading with two-sigma confidence intervals. The depth index value, which correlates directly with the depth of measurement in inches, is available with both modes of operation. There are no inconclusive ranges or results measured with the XLp 300A. EPM utilized the Niton XLp 300A, serial number 7797, in the "K and L" mode for the testing performed.

Verification of proper XRF reading capabilities is performed before and after each inspection. A calibration check consists of three consecutive readings of a NIST 1.04 mg/cm2 Paint Film Standard (SRM No. 2573) as required by the instrument's Performance Characteristic Sheet (PCS). The individual readings, and an average of three readings, were recorded and compared to the standards. In all cases the instrument was functioning within the standard deviation as defined by the manufacturer and the PCS. All validation readings were recorded on the field inspection logs. If for any reason the XRF does not pass the quality control procedures, it is EPM's policy to replace that instrument with an XRF that passes the above criteria for calibration. The Results of Calibration Verification is included in Table III.

The parameters used to interpret XRF results are outlined in the HUD Guidelines and the PCS in Appendix F. According to the PCS, each XRF result is classified as positive or negative as follows:

Positive: A positive classification indicates that lead is present on the testing combination at or above the HUD/EPA standard of 1.0 mg/cm^2.

Negative: A negative classification indicates that lead is not present on the testing combination at or above the HUD/EPA standard.

The sampling method for this job consisted of a modified HUD inspection. XRF testing was conducted on all accessible materials, with the potential to be impacted by the proposed scope of work at the site.

Table III lists all tested components and their respective locations, substrates, color and XRF result.

Components that were identified as containing lead in concentrations at or above the HUD/EPA threshold limit of 1.0 mg/cm^2 are considered lead-based and are highlighted in yellow. Components that were identified as containing lead in concentrations below the HUD/EPA threshold limit of 1.0 mg/cm^2, but still contain a detectable level are considered lead containing and are listed in blue. Those components that were identified as containing no detectable lead level are listed in black.

XRF readings listed as "Calibration" are a result of pre and post inspection testing shots of a known NIST standard.

XRF readings listed as "Shutter Calibration" are a result of the XRF device performing an internal calibration check.

3.2 Lead Paint Survey Findings

The results of this inspection indicate that 24.1% of the building materials tested contain paint with a detectable level of lead. Of the fifty-eight (58) readings, fourteen (14) had detectable levels of lead. According to the Occupational Safety and Health

Administration (OSHA), any detectable amount of lead in the paint sample constitutes the coating as lead containing. OSHA does not recognize the USEPA definition of lead-based paint (LBP).

- Gray paint present on the metal canopy fascia of the inbound platform;
- Brown paint on the metal light fixture mounted to the inbound canopy;
- Yellow paint present on the tactile warning strip on both concrete platforms;
- Green paint present on the salt box located on the outbound platform;
- Green paint present on the canopy supports of the outbound platform;
- Black paint present on the ramp railing located at the center of the outbound platform, and;
- Light green paint present on the parking sign located in the parking lot adjacent to the outbound platform.

4.0 EXCLUSIONS AND INACCESSIBLE AREAS

EPM inspected and sampled materials which were observable and accessible to the survey team. It is possible that additional suspect ACM or lead paints may be present within other concealed spaces which were not accessible without the use of destructive means.

EPM did not have access to the following areas:

- Station Building which is currently occupied and is an active “Starbucks” coffee house, and is reportedly not owned by MNR;
- Unknown buried utilities beneath the station platforms and throughout the station limits.

All asbestos containing materials and lead-painted surfaces with the potential to be impacted by the scope of work should be abated in accordance with all applicable federal, state and local regulations, including Metro-North Railroad Specifications for The Treatment of Lead-Based Painted Surfaces, 29 CFR 1926.62 Occupational Safety and Health Administration Lead in Construction, USEPA regulations, OSHA regulations, and NIOSH recommendations.

TABLE II - ASBESTOS SAMPLE LABORATORY ANALYTICAL RESULTS

Table II- Asbestos Sample Laboratory Analysis Results
MNR Harlem Line - Hartsdale Station, NY

Sample #	Sample	Sample	Asbestos Content	
	Location	Description	PLM	TEM
HD-01A.1	Inbound platform, south end (8W) of canopy roof	Black adhesive / mastic tar layer (bottom)	NAD Inconclusive	NAD
HD-01A.2	Inbound platform, south end (8W)of canopy roof	Black membrane / roll roofing material	NAD Inconclusive	NAD
HD-01B.1	Inbound platform, center area (15W)of canopy roof	Black adhesive / mastic tar layer (bottom)	NAD Inconclusive	NAD
HD-01B.2	inbound platform, center area (15W)of canopy roof	Black membrane / roll roofing material	NAD Inconclusive	NAD
HD-01C.1	Inbound platform, north end (25W)of canopy roof	Black adhesive / mastic tar layer (bottom)	NAD Inconclusive	Analysis not requested by client
HD-01C.2	Inbound platform, north end (25W)of canopy roof	Black membrane / roll roofing material	NAD Inconclusive	Analysis not requested by client
HD-02A	Inbound platform, center area (15W-16W) of canopy roof patch	Black mastic/tar repair patch	NAD Inconclusive	NAD
HD-02B	Inbound platform, center area (15W-16W) of canopy roof patch	Black mastic/tar repair patch	NAD Inconclusive	NAD
HD-02C	Inbound platform, center area (14W-15W) of canopy roof patch	Black mastic/tar repair patch	NAD Inconclusive	Analysis not requested by client
HD-03A	Outbound platform, northern section (31E-32E) of canopy	Black asphaltic roll roofing material	NAD Inconclusive	NAD
HD-03B	Outbound platform, northern section (31E-32E) of canopy	Black asphaltic roll roofing material	NAD Inconclusive	NAD
HD-03C	Outbound platform, northern section (31E-32E) of canopy	Black asphaltic roll roofing material	NAD Inconclusive	Analysis not requested by client
HD-04A	Outbound platform, northern section (31E-32E) of canopy	Brown board roof insulation	NAD	
HD-04B	Outbound platform, northern section (31E-32E) of canopy	Brown board roof insulation	NAD	
HD-04C	Outbound platform, northern section (30E-31E) of canopy	Brown board roof insulation	NAD	
HD-05A	**Outbound platform, northern section (31E-32E) of canopy-West**	**Black perimeter flashing mastic/tar**	**7.7% CH**	
HD-05B	**Outbound platform, northern section (31E-32E) of canopy-south**	**Black perimeter flashing mastic/tar**	**NA/PS**	
HD-05C	**Outbound platform, northern section (31E-32E) of canopy - East**	**Black perimeter flashing mastic/tar**	**NA/PS**	

Table II- Asbestos Sample Laboratory Analysis Results
MNR Harlem Line - Hartsdale Station, NY

Sample #	Sample	Sample	Asbestos Content	
	Location	Description	PLM	TEM
HD-06A	Outbound platform, northern section (30E-31E) of canopy	Black roof sealer on EPDM roofing	NAD Inconclusive	NAD
HD-06B	Outbound platform, northern section (30E-31E) of canopy	Black roof sealer on EPDM roofing	NAD Inconclusive	NAD
HD-06C	Outbound platform, northern section (28E-29E) of canopy	Black roof sealer on EPDM roofing	NAD Inconclusive	Analysis not requested by client
HD-07A	Outbound platform, northern section (21E-22E) of canopy	Black roof patch on EPDM roofing	NAD Inconclusive	NAD
HD-07B	Outbound platform, northern section (21E-22E) of canopy	Black roof patch on EPDM roofing	NAD Inconclusive	NAD
HD-07C	Outbound platform, northern section (21E-22E) of canopy	Black roof patch on EPDM roofing	NAD Inconclusive	Analysis not requested by client
HD-08A	Outbound platform, transverse joint at 27E	Black joint filler	NAD Inconclusive	NAD
HD-08B	Inbound platform, transverse joint at 10W	Black joint filler	NAD Inconclusive	NAD
HD-08C	Inbound platform, transverse joint at 30W	Black joint filler	NAD Inconclusive	Analysis not requested by client
HD-09A	Outbound platform, (32E) rubber expansion joint filler end	Dark gray caulk	NAD Inconclusive	NAD
HD-09B	Outbound platform, stair landing E12 rubber expansion joint	Dark gray caulk	NAD Inconclusive	NAD
HD-09C	Outbound platform, (2E) rubber expansion joint filler end	Dark gray caulk	NAD Inconclusive	Analysis not requested by client
HD-10A	Inbound platform, joint at stair E1	Light gray caulk	NAD Inconclusive	NAD
HD-10B	Inbound platform, joint at stair E4	Light gray caulk	NAD Inconclusive	NAD
HD-10C	Outbound platform, joint at stair E14	Light gray caulk	NAD Inconclusive	Analysis not requested by client
HD-11A	Inbound platform, expansion joint btwn stair E2 and platform	Dark blue caulk	NAD Inconclusive	NAD
HD-11B	Inbound platform, expansion joint btwn Ramp E1 and platform	Dark blue caulk	NAD Inconclusive	NAD
HD-11C	Outbound platform, expansion joint btwn stair E16 and platform	Dark blue caulk	NAD Inconclusive	Analysis not requested by client
HD-12A	Inbound platform, base of light pole at 1W	Gray caulk	NAD Inconclusive	NAD
HD-12B	Inbound platform, base of light pole at 28W	Gray caulk	NAD Inconclusive	NAD

Table II- Asbestos Sample Laboratory Analysis Results
MNR Harlem Line - Hartsdale Station, NY

Sample #	Sample Location	Sample Description	Asbestos Content	
			PLM	TEM
HD-12C	Outbound platform, expansion joint btwn stair E13 and platform	Gray caulk	NAD Inconclusive	Analysis not requested by client
HD-13A	Inbound platform, stair and landing E4	Off-white caulk	NAD Inconclusive	NAD
HD-13B	Inbound platform, stair and landing E4	Off-white caulk	NAD Inconclusive	NAD
HD-13C	Inbound platform, stair and landing E4	Off-white caulk	NAD Inconclusive	Analysis not requested by client
HD-14A	Inbound platform, around drainage pipe at platform column 17W	Black caulk	NAD Inconclusive	NAD
HD-14B	Inbound platform, around drainage pipe at platform column 25W	Black caulk	NAD Inconclusive	NAD
HD-14C	Outbound platform, around drainage pipe at platform column 24E	Black caulk	NAD Inconclusive	Analysis not requested by client
HD-15A	Inbound platform, at stair E2 steps	Brown joint filler	NAD	
HD-15B	Inbound platform, at stair E8 steps	Brown joint filler	NAD	
HD-15C	Outbound platform, at stair E13 steps	Brown joint filler	NAD	
HD-16A	**Parking lot sidewalk, adjacent to outbound platform near pier 22E (near Ramp E13)**	**Dark gray mastic/tar sealant**	**5.7% CH**	
HD-16B	**Parking lot sidewalk, adjacent to outbound platform near pier 22E (near Ramp E13)**	**Dark gray mastic/tar sealant**	**NA/PS**	
HD-16C	**Parking lot sidewalk, adjacent to outbound platform near pier 22E (near Ramp E13)**	**Dark gray mastic/tar sealant**	**NA/PS**	
HD-17A	Outbound platform, stair E12 steps	Soft gray caulk	NAD Inconclusive	NAD
HD-17B	Outbound platform, stair E12 steps	Soft gray caulk	NAD Inconclusive	NAD
HD-17C	Outbound platform, stair E12 steps	Soft gray caulk	NAD Inconclusive	Analysis not requested by client

NAD -No Asbestos Detected
NA/PS - Not Analyzed/Positive Stop
CH - Chrysotile Asbestos
Trace CH - < 1%

TABLE III – XRF INSPECTION RESULTS

Table III - Results from XRF Testing for Lead
MNR Harlem Line - Hartsdale Station, Hartsdale, NY

Reading No	Room/ Area	Component	Color	Substrate	PbC mg/cm^2
504	CALIBRATION				1.1
505	CALIBRATION				1.1
506	CALIBRATION				1.1
507	Inbound Platform	Canopy fascia	Gray	Metal	0.01
508	SHUTTER_CALIBRATION				7.22
509	Inbound Platform sign	"watch the Gap"	Yellow	Concrete	0
510	Inbound Platform	Canopy Roof edge	Off-white	Wood	0
511	Inbound Platform	Canopy Roof underside	Off-white	Wood	0
512	Inbound Platform	Canopy Roof - joist	Off-white	Wood	0
513	SHUTTER_CALIBRATION				6.92
514	Inbound Platform	Canopy Roof fascia	Gray	Metal	0
515	Outbound Platform	North Canopy fascia	Brown	Metal	0
516	Outbound Platform	North Canopy fascia	Brown	Metal	0
517	Inbound Platform	Platform Light	Brown	Metal	0.03
518	SHUTTER_CALIBRATION				6.94
519	Inbund Platform	Tactile Strip	Yellow	Plastic	0
520	Inbund Platform	Sign	Yellow	concrete	0
521	Inbund Platform	Sign	Yellow	concrete	0
522	SHUTTER_CALIBRATION				7.11
523	SHUTTER_CALIBRATION				7.04
524	CALIBRATION				1
525	CALIBRATION				1.1
526	CALIBRATION				1.1
266	SHUTTER_CALIBRATION				5.83
267	CALIBRATION				1
268	CALIBRATION				1
269	CALIBRATION				1.1
270	Inbound Platform-south	Stairs - railing	Black	Metal	0
271	Inbound Platform-south	Light Pole	Green	Metal	0
272	Inbound Platform-south	Platform Paint	Yellow	Concrete	0
273	Inbound Platform-south	Camera Pole	Black	Metal	0
274	Inbound Platform-south	Shelter frame	Black	Metal	0
275	Inbound Platform-south	Recycle Recepticle	Green	Metal	0
276	Inbound Platform-south	Station Sign	White	Metal	0
277	Inbound Platform-south	Ramp to Platform-railing	Black	Metal	0
278	Inbound Platform-center	Canopy Support	Green	Metal	0
279	Inbound Platform-center	Stair Railing	Black	Metal	0
280	Inbound Platform-center	Canopy Support	Green	Metal	0
281	Inbound Platform-center	Railing	Black	Metal	0

Table III - Results from XRF Testing for Lead
MNR Harlem Line - Hartsdale Station, Hartsdale, NY

Reading No	Room/ Area	Component	Color	Substrate	PbC mg/cm^2
282	Inbound Platform-center	Platform Paint	Yellow	Concrete	1.5
283	Inbound Platform-center	Bench	Black	Metal	0
284	Inbound Platform-center	Canopy Support	Green	Metal	0
285	Inbound Paltform-North	Salt Box	Green	Wood	0
286	Inbound Paltform-North	Shelter Frame	Black	Metal	0
287	NULL				0
288	Inbound Paltform-North	Platform Paint	Yellow	Concrete	1.3
289	Inbound Paltform-North	Bench	Black	Metal	0
290	Inbound Paltform-North	North Shelter Frame	Black	Metal	0
291	Inbound Paltform-North	Platform Paint	Yellow	Concrete	1.4
292	Inbound Paltform-North	North Camera Pole	Black	Metal	0
293	Inbound Paltform-North	Railing	Black	Metal	0
294	Inbound Paltform-North	Security Box	Green	Metal	0
295	Overpass - West	Wall/Window	Green	Metal	0
296	Overpass-East	Wall/Window	Green	Metal	0
297	Outbound Platform-South end	Stair Railing	Black	Metal	0
298	Outbound Platform-South end	Platform Paint	Yellow	Concrete	1.6
299	Outbound Platform-South end	Bench	Black	Metal	0
300	Outbound Platform-South end	Station Sign	White	Metal	0
301	Outbound Platform-South end	Railing	Black	Metal	0
302	Outbound Platform-South end	Camera Pole	Black	Metal	0
303	Outbound Platform-South end	Light Pole	Green	Metal	0
304	Outbound Platform-center	Recycle Recepticle	Green	Metal	0
305	Outbound Platform-center	Salt Box	Green	Wood	0.01
306	Outbound Platform-center	Platform Paint	Yellow	Concrete	1.3

Table III - Results from XRF Testing for Lead
MNR Harlem Line - Hartsdale Station, Hartsdale, NY

Reading No	Room/ Area	Component	Color	Substrate	PbC mg/cm^2
307	Outbound Platform-center	Canopy support	Green	Metal	0.3
308	Outbound Platform-center	Canopy support	Green	Metal	0.5
309	Outbound Platform-center	Shelter Frame	Black	Metal	0
310	Outbound Platform-center	Ramp Railing	Black	Metal	0.01
311	Outbound Platform-Parking Lot	Parking Sign	Light Green	Metal	0.15
312	Outbound Platform-North end	Bench	Black	Metal	0
313	Outbound Platform-North end	Canopy support	Green	Metal	0.4
314	Outbound Platform-North end	Light Pole	Green	Metal	0
315	Outbound Platform-North end	Platform Paint	Yellow	Concrete	1.3
316	Outbound Platform-North end	Railing	Black	Metal	0
317	CALIBRATION				1
318	CALIBRATION				1
319	CALIBRATION				1

APPENDIX A
Representative Survey Photographs
Of Asbestos-Containing Materials and Lead Paints

Photographs of Asbestos-Containing Materials

EPM, INC.

Environmental Planning & Management, Inc.
www.epmco.com

Photographs of Asbestos-Containing Materials

LOCATION: MNR HARTSDALE STATION

HARTSDALE, NY

DATE: August 2018

Photo No. 1

Location: Outbound platform north most section canopy roof: Perimeter and center trough.
Description: ACM Black mastic / flashing.
Samples: HD-5A,5B, 5C

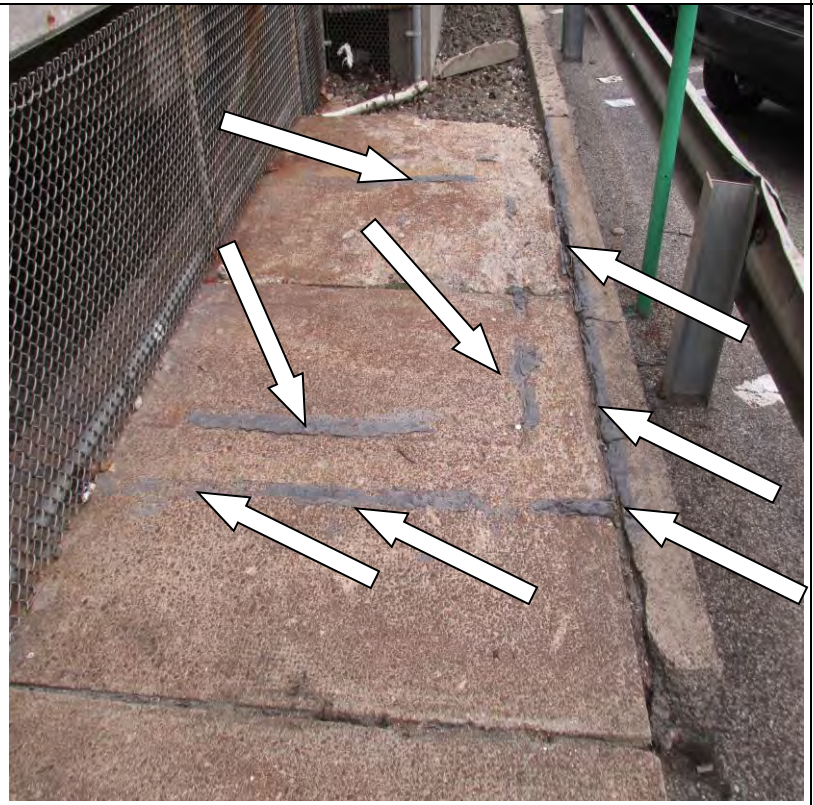


Photo No. 2

Location: Sidewalk adjacent to outbound platform at column line 22E.
Description: ACM Dark gray mastic tar/sealant
Samples: HD-16A, 16B, 16C

Photographs of Lead-Containing Paints

EPM, INC.

Environmental Planning & Management, Inc.
www.epmco.com

Lead Paint Survey Photographs

LOCATION: MNR HARTSDALE STATION

HARLEM LINE, HARTSDALE, NY

DATE: AUGUST 2018

	Photo No. 1		**Photo No. 2**
Location: Inbound Platform - Canopy **Description:** Lead containing gray paint on metal canopy fascia (Reading No.507)		**Location:** Inbound Platform – canopy **Description:** Lead containing brown paint on metal light fixture mounted on the south end of the canopy (Reading No. 517).	

Environmental Planning & Management, Inc.
www.epmco.com

Lead Paint Survey Photographs

LOCATION: MNR HARTSDALE STATION

HARLEM LINE, HARTSDALE, NY

DATE: AUGUST 2018

Photo No. 3

Location: Inbound Platform – Tactile Warning Strip
Description: Typical - Lead containing yellow paint on concrete warning strip. (Reading Nos. 282, 288, and 291).

Photo No. 4

Location: Outbound Platform-Tactile Warning Strip
Description: Typical - Lead containing yellow paint on concrete warning strip. (Reading Nos. 298, 306, and 315).

Environmental Planning & Management, Inc.
www.epmco.com

Lead Paint Survey Photographs

LOCATION: MNR HARTSDALE STATION

HARLEM LINE, HARTSDALE, NY

DATE: AUGUST 2018

Photo No. 5

Location: Outbound Platform- center
Description: Lead containing green paint on wood salt box (Reading No.305)

Photo No. 6

Location: Outbound Platform - center
Description: Typical - Lead containing green paint on metal columns that support the canopy. (Reading Nos. 307, 308, and 313)

Environmental Planning & Management, Inc.
www.epmco.com

Lead Paint Survey Photographs

LOCATION: MNR HARTSDALE STATION

HARLEM LINE, HARTSDALE, NY

DATE: AUGUST 2018

Photo No. 7

Location: Outbound Platform - center
Description: Lead containing black paint on metal railing of ramp (Reading No. 310).

Photo No. 8

Location: Parking Lot adjacent to out bound platform
Description: Lead containing light green paint on metal parking sign post (Reading No. 311).

APPENDIX B
Company and Personnel Licenses

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

Environmental Planning & Management, Inc.
Suite 109
1983 Marcus Avenue

Lake Success, NY 11042

FILE NUMBER: 99-1017
LICENSE NUMBER: 28623
LICENSE CLASS: RESTRICTED
DATE OF ISSUE: 11/02/2017
EXPIRATION DATE: 11/30/2018

Duly Authorized Representative – Aphrodite Socrates:

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, Director
For the Commissioner of Labor

SH 432 (8/12)

United States Environmental Protection Agency

This is to certify that

Environmental Planning & Management, Inc.

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226

In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires May 14, 2021

LBP-2003-1

Certification #

October 25, 2017

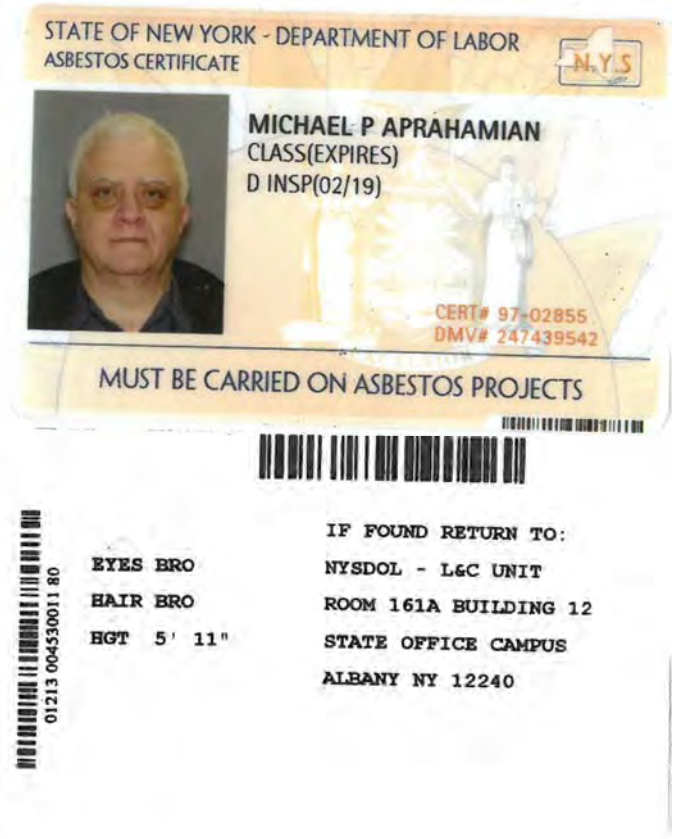
Issued On

Michelle Price, Chief

Lead, Heavy Metals, and Inorganics Branch

Environmental Planning & Management, Inc.
www.epmco.com

MICHAEL APRAHAMIAN



A – Asbestos Handling

B – Restricted Handler – Allied Trades

C – Air Sampling Technician

D – Inspector

E- Management Planner

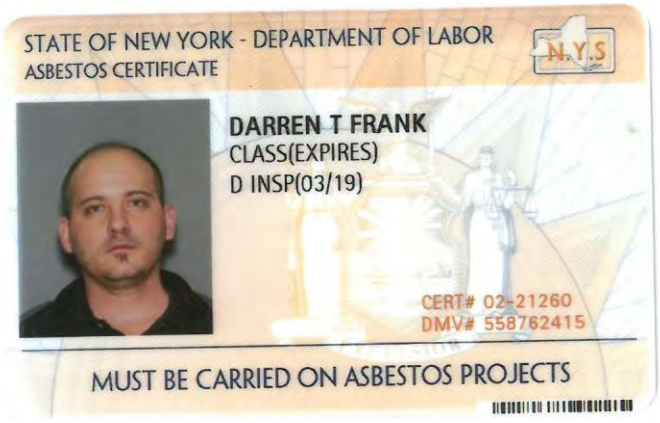
F – Operations and Maintenance

G – Supervisor

H – Project Monitor

I – Project Designer

Environmental Planning & Management, Inc.
www.epmco.com



A – Asbestos Handling

B – Restricted Handler – Allied Trades

C – Air Sampling Technician

D – Inspector

E- Management Planner

F – Operations and Maintenance

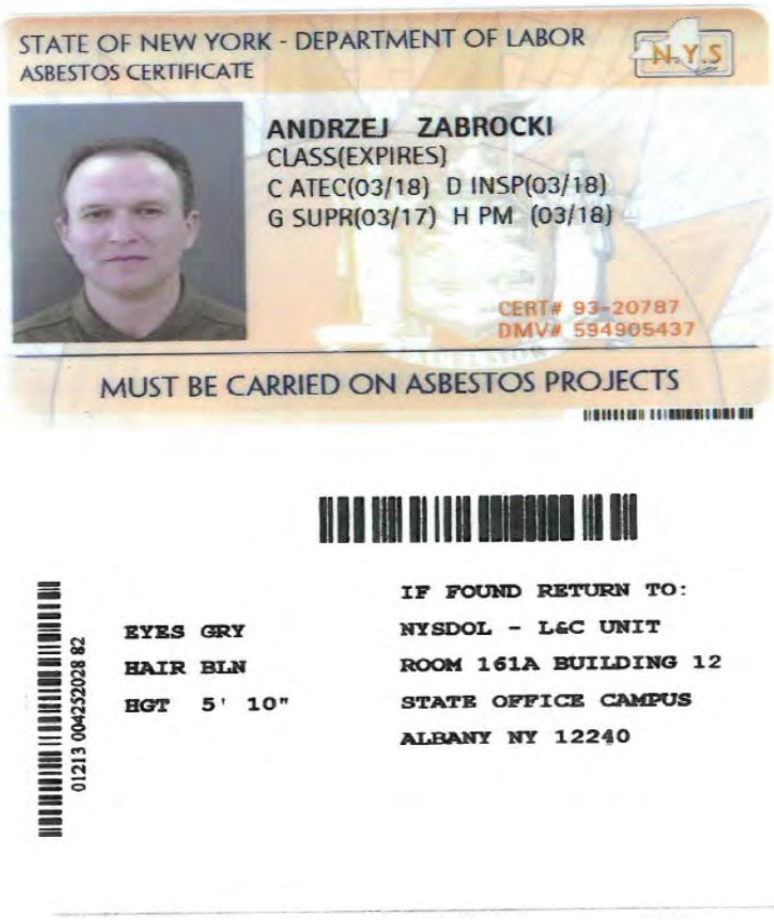
G – Supervisor

H – Project Monitor

I – Project Designer

Environmental Planning & Management, Inc.
www.epmco.com

ANDRZEJ ZABROCKI



A – Asbestos Handling

B – Restricted Handler – Allied Trades

C – Air Sampling Technician

D – Inspector

E- Management Planner

F – Operations and Maintenance

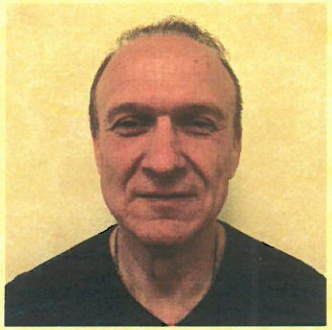
G – Supervisor

H – Project Monitor

I – Project Designer

United States Environmental Protection Agency

This is to certify that



Andrzej Zabrocki

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Inspector

In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires June 03, 2021

LBP-I-11979-1

Certification #

May 03, 2018

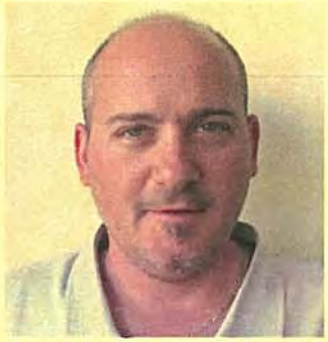
Issued On

John Gorman, Chief

Pesticides & Toxic Substances Branch

United States Environmental Protection Agency

This is to certify that



Darren T. Frank

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Inspector

In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires November 16, 2019

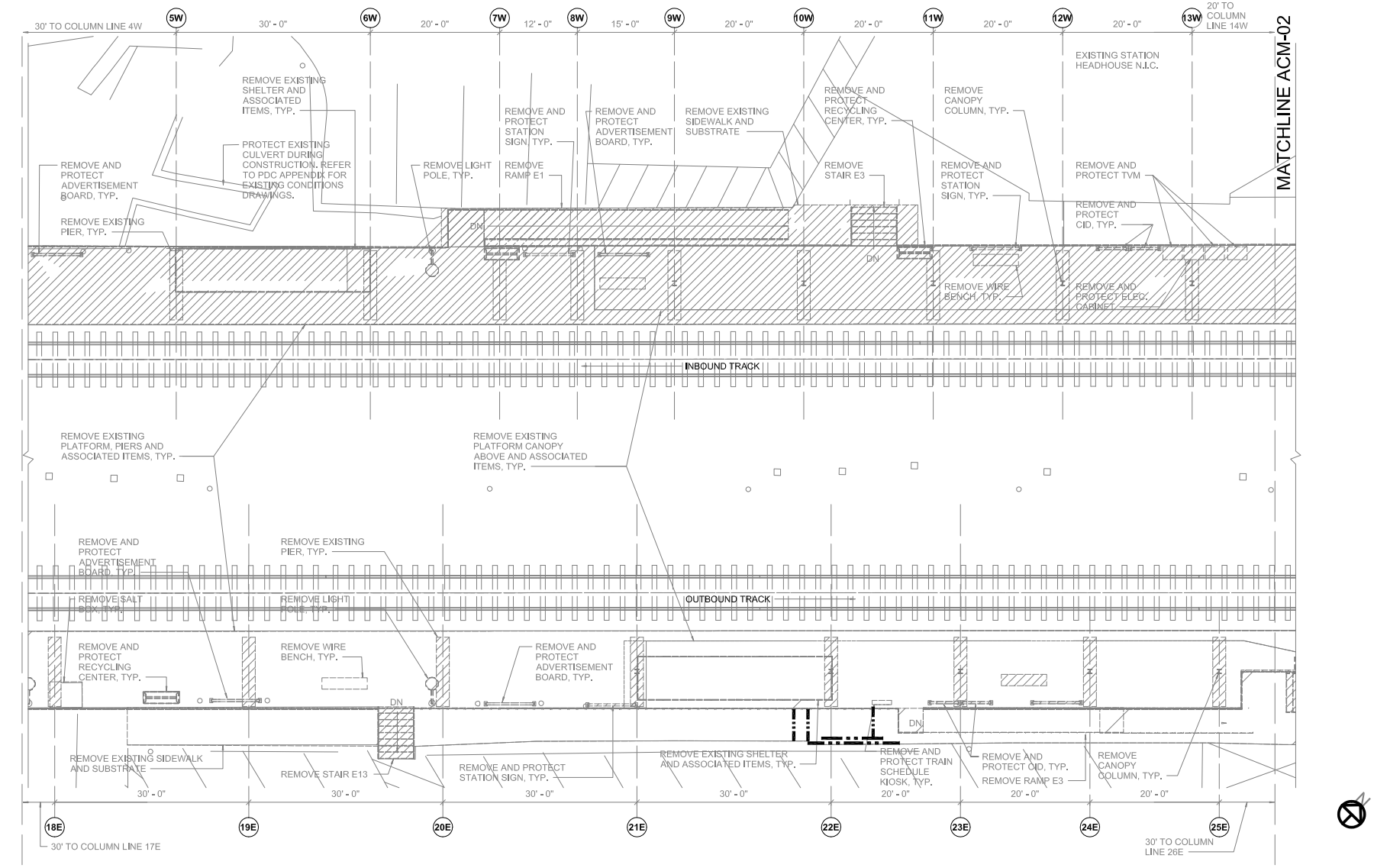
LBP-I-9510-1
Certification #

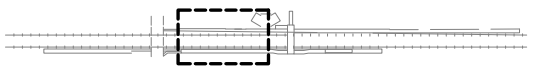
October 17, 2016
Issued On

John Gorman, Chief
Pesticides & Toxic Substances Branch

APPENDIX C
Asbestos Bulk Sample and Lead-Paint Shot Location Schematic

Asbestos Bulk Sample Location Schematic



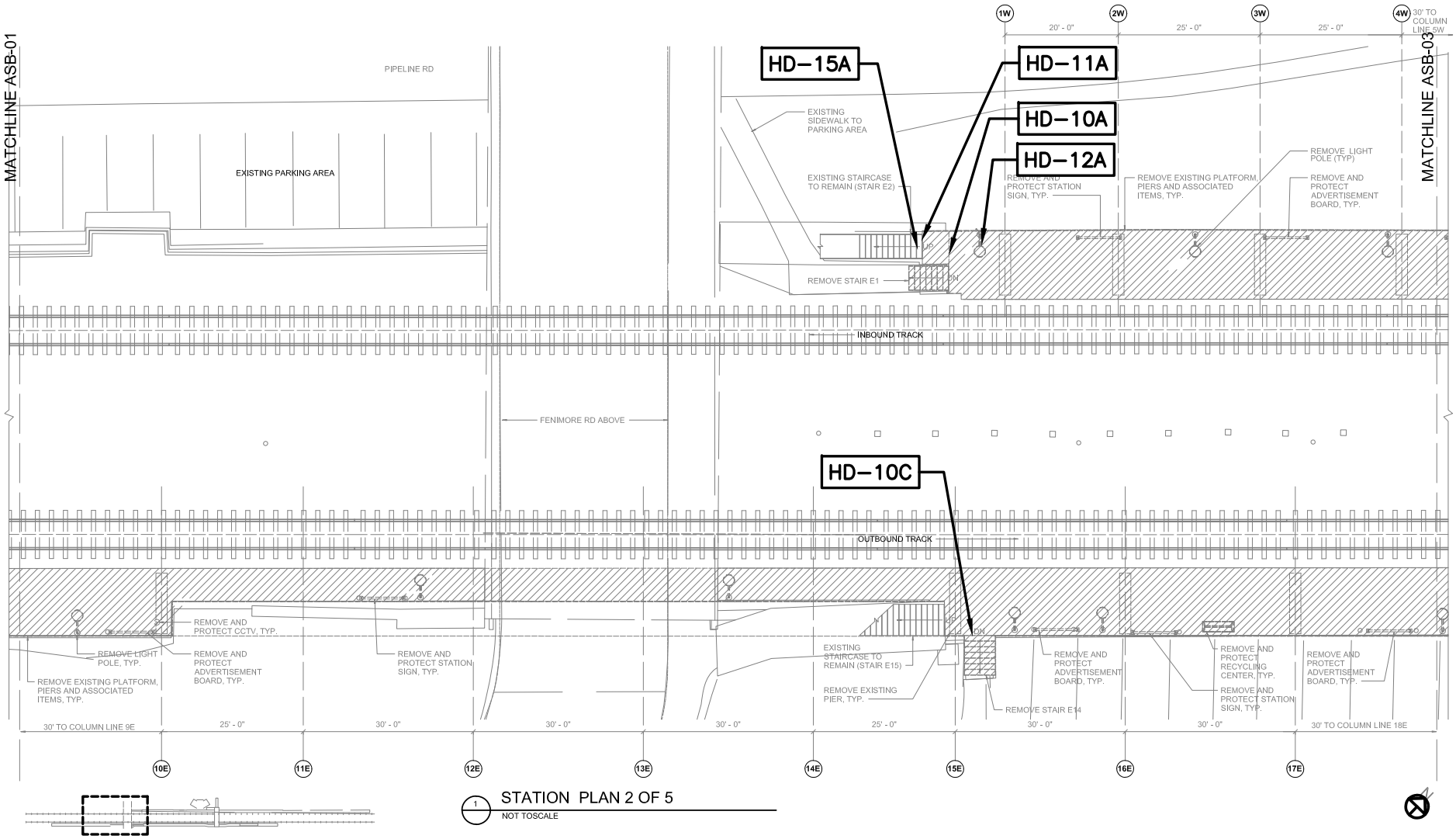


1 STATION PLAN 1 OF 2
NOT TO SCALE

LEGEND

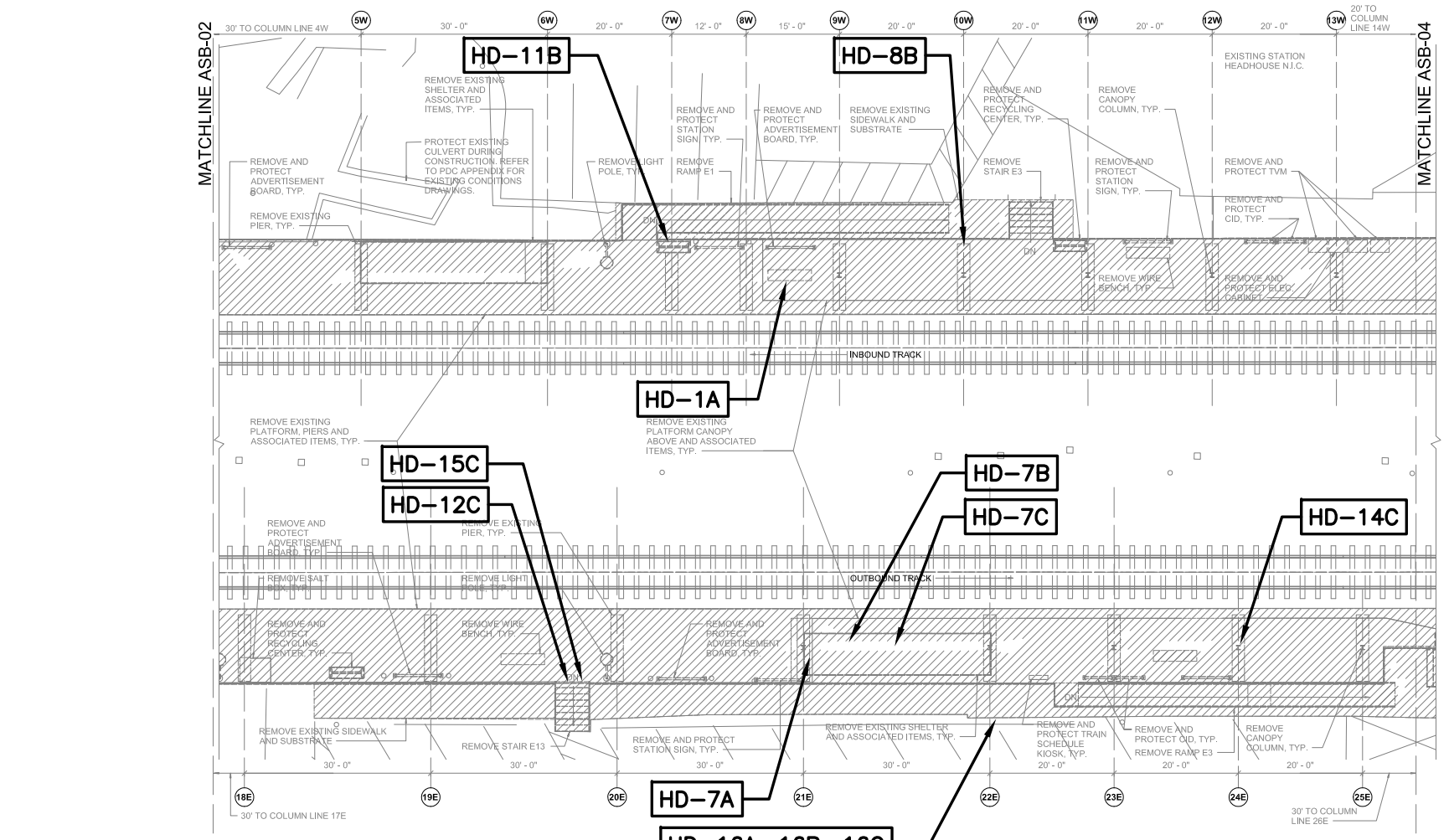
LOCATION OF ACM DARK GRAY MASTIC TAR/SEALANT

EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: SEPT. 2018	CLIENT: MTA Metro-North Railroad Office of System Safety 420 Lexington Ave. Suite 930 New York, NY 10170
	CHECKED BY: MA	FILENAME: 18041-02	TITLE: STATION PLAN ASBESTOS MATERIAL LOCATION SCHEMATIC
	APPR'VD BY: AS	SCALE: NOT TO SCALE	PROJECT LOCATION: HARTSDALE STATION DESIGN BUILD SERVICES FOR SCARSDALE AND HARTSDALE STA. IMPROVEMENTS
	PATH: X:\Metro North RR\18041 Term\Task 2-OSS # HAL-18-039-AL Hartsdale Sta		FIGURE ACM-01 SHEET 01 OF 02



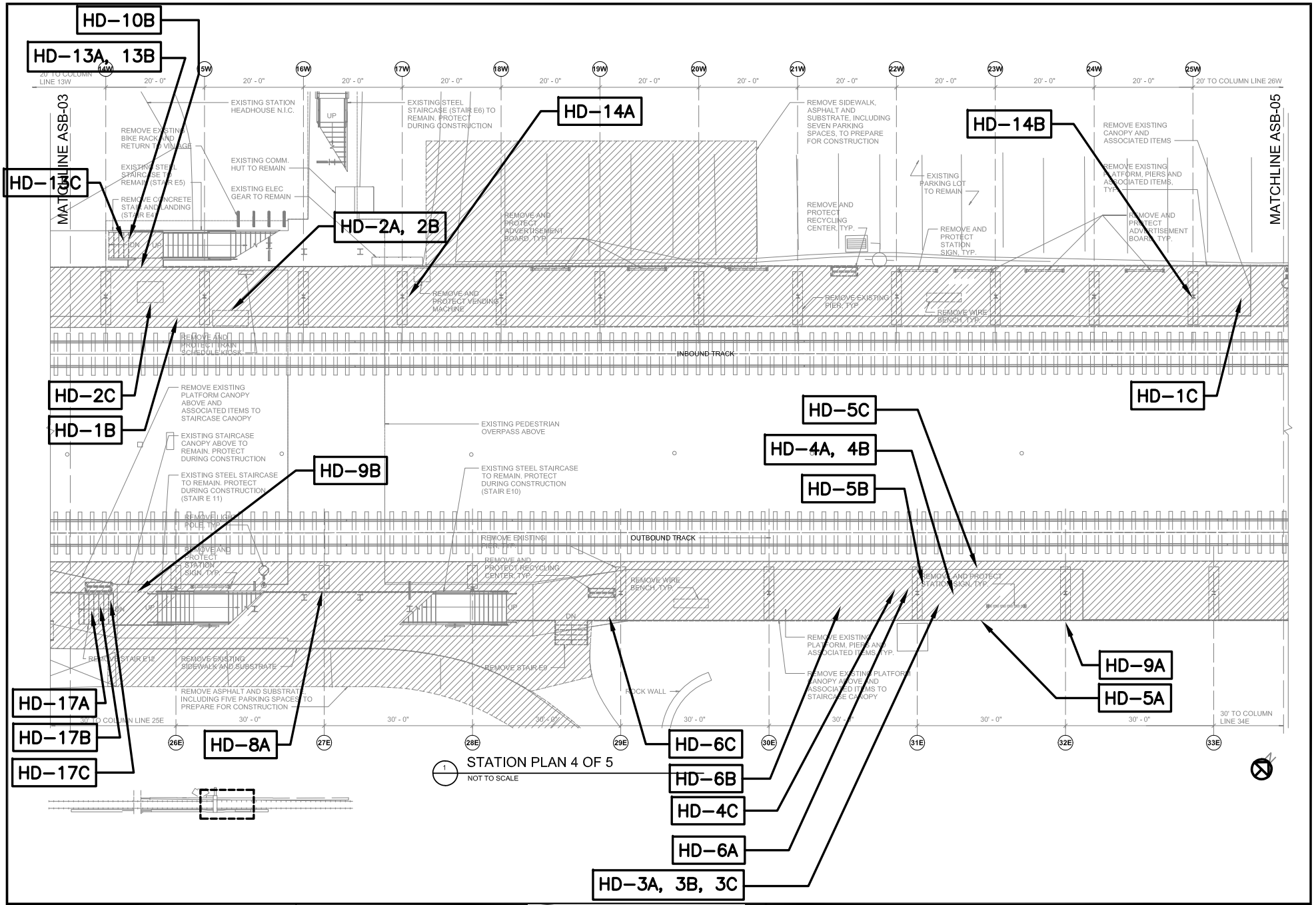
1 STATION PLAN 2 OF 5
NOT TOSCALE

EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: SEPT. 2018	CLIENT: MTA Metro-North Railroad Office of System Safety 420 Lexington Ave. Suite 930 New York, NY 10170	TITLE: STATION PLAN ASBESTOS SAMPLE LOCATION SCHEMATIC	FIGURE **ASB-02**
	CHECKED BY: MA	FILENAME: 18041-02			
	APPR'VD BY: AS	SCALE: NOT TO SCALE		PROJECT LOCATION: HARTSDALE STATION DESIGN BUILD SERVICES FOR SCARSDALE AND HARTSDALE STA. IMPROVEMENTS	SHEET 02 OF 05
	PATH: X:\Metro North RR\18041 Term\Task 2-OSS # HAL-18-039-AL Hartsdale Sta				



1 STATION PLAN 3 OF 5
NOT TO SCALE

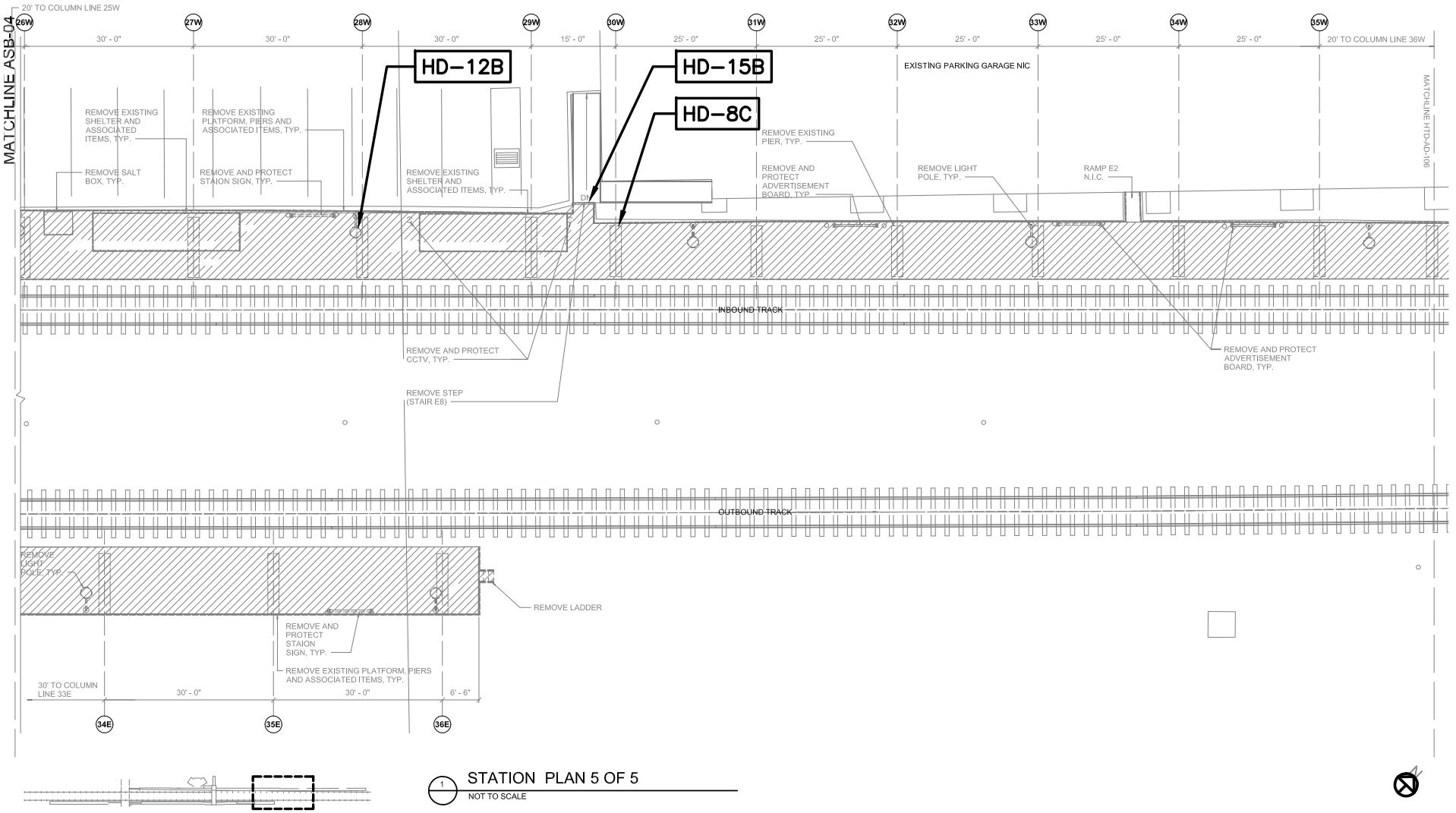
EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: SEPT. 2018	CLIENT: MTA Metro-North Railroad Office of System Safety 420 Lexington Ave. Suite 930 New York, NY 10170	TITLE: STATION PLAN ASBESTOS SAMPLE LOCATION SCHEMATIC	FIGURE **ASB-03**
	CHECKED BY: MA	FILENAME: 18041-02			
	APPR'VD BY: AS	SCALE: NOT TO SCALE		PROJECT LOCATION: HARTSDALE STATION DESIGN BUILD SERVICES FOR SCARSDALE AND HARTSDALE STA. IMPROVEMENTS	SHEET 03 OF 05
	PATH: X:\Metro North RR\18041 Term\Task 2-OSS # HAL-18-039-AL Hartsdale Sta				



1 STATION PLAN 4 OF 5
NOT TO SCALE

EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: SEPT. 2018	CLIENT: MTA Metro-North Railroad Office of System Safety 420 Lexington Ave. Suite 930 New York, NY 10170	TITLE: STATION PLAN ASBESTOS SAMPLE LOCATION SCHEMATIC	FIGURE **ASB-04**
	CHECKED BY: MA	FILENAME: 18041-02			
	APPR'VD BY: AS	SCALE: NOT TO SCALE		PROJECT LOCATION: HARTSDALE STATION DESIGN BUILD SERVICES FOR SCARSDALE AND HARTSDALE STA. IMPROVEMENTS	SHEET 04 OF 05
	PATH: X:\Metro North RR\18041 Term\Task 2-OSS # HAL-18-039-AL Hartsdale Sta				

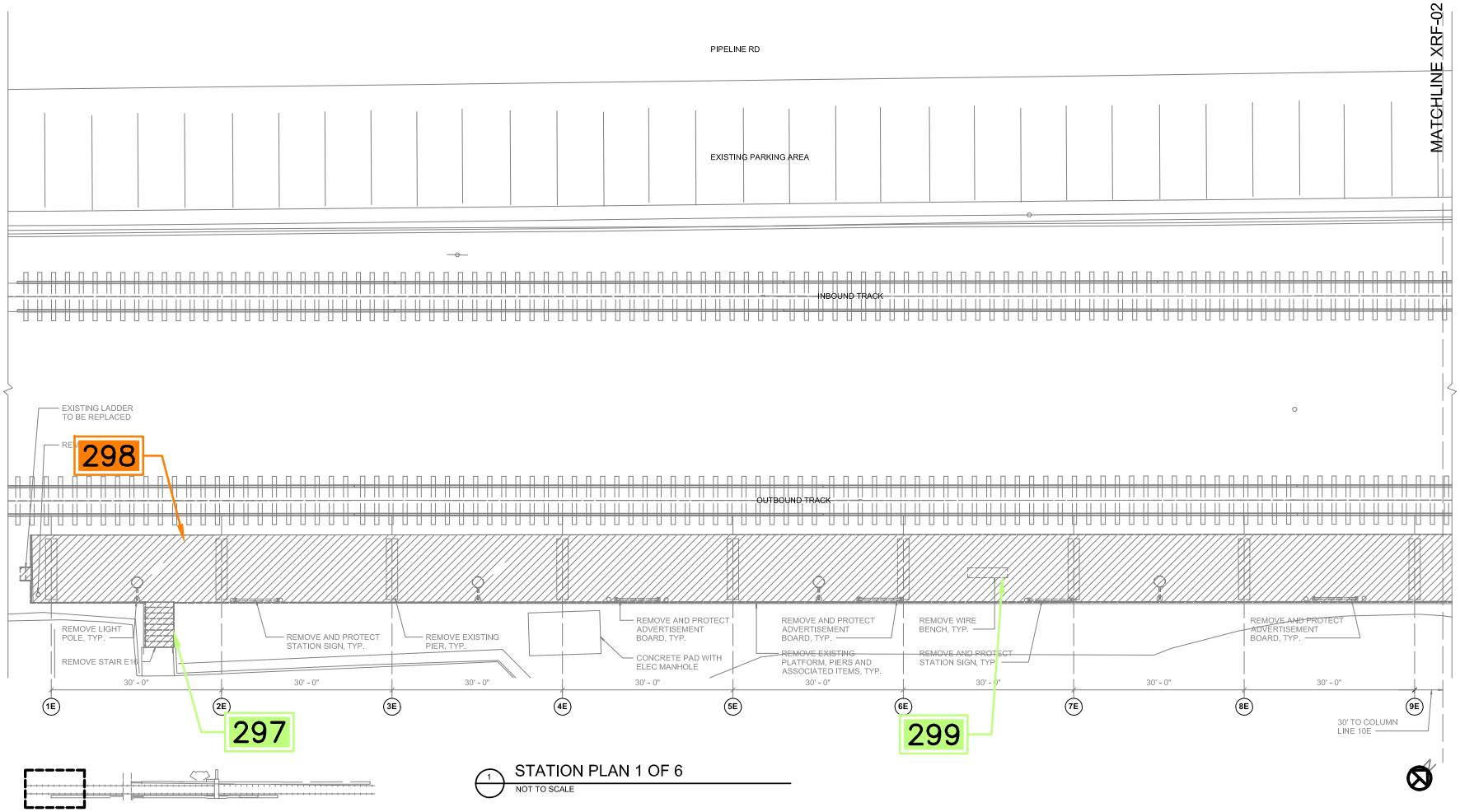
X:\Metro North RR\18041 - Term Contract 100005008\Task 2-OSS # HAL-18-039-AL Hartsdale Station ACM and LEad Survey\18041-02_Hartsdale EPM Drawings\18041-02_ASB DWGS.d



1 STATION PLAN 5 OF 5
NOT TO SCALE

EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: SEPT. 2018	CLIENT: MTA Metro-North Railroad Office of System Safety 420 Lexington Ave. Suite 930 New York, NY 10170
	CHECKED BY: MA	FILENAME: 18041-02	TITLE: STATION PLAN ASBESTOS SAMPLE LOCATION SCHEMATIC
	APPR'VD BY: AS	SCALE: NOT TO SCALE	PROJECT LOCATION: HARTSDALE STATION DESIGN BUILD SERVICES FOR SCARSDALE AND HARTSDALE STA. IMPROVEMENTS
	PATH: X:\Metro North RR\18041 Term\Task 2-OSS # HAL-18-039-AL Hartsdale Sta		FIGURE ASB-05 SHEET 05 OF 05

Lead-Paint Shot Location Schematic



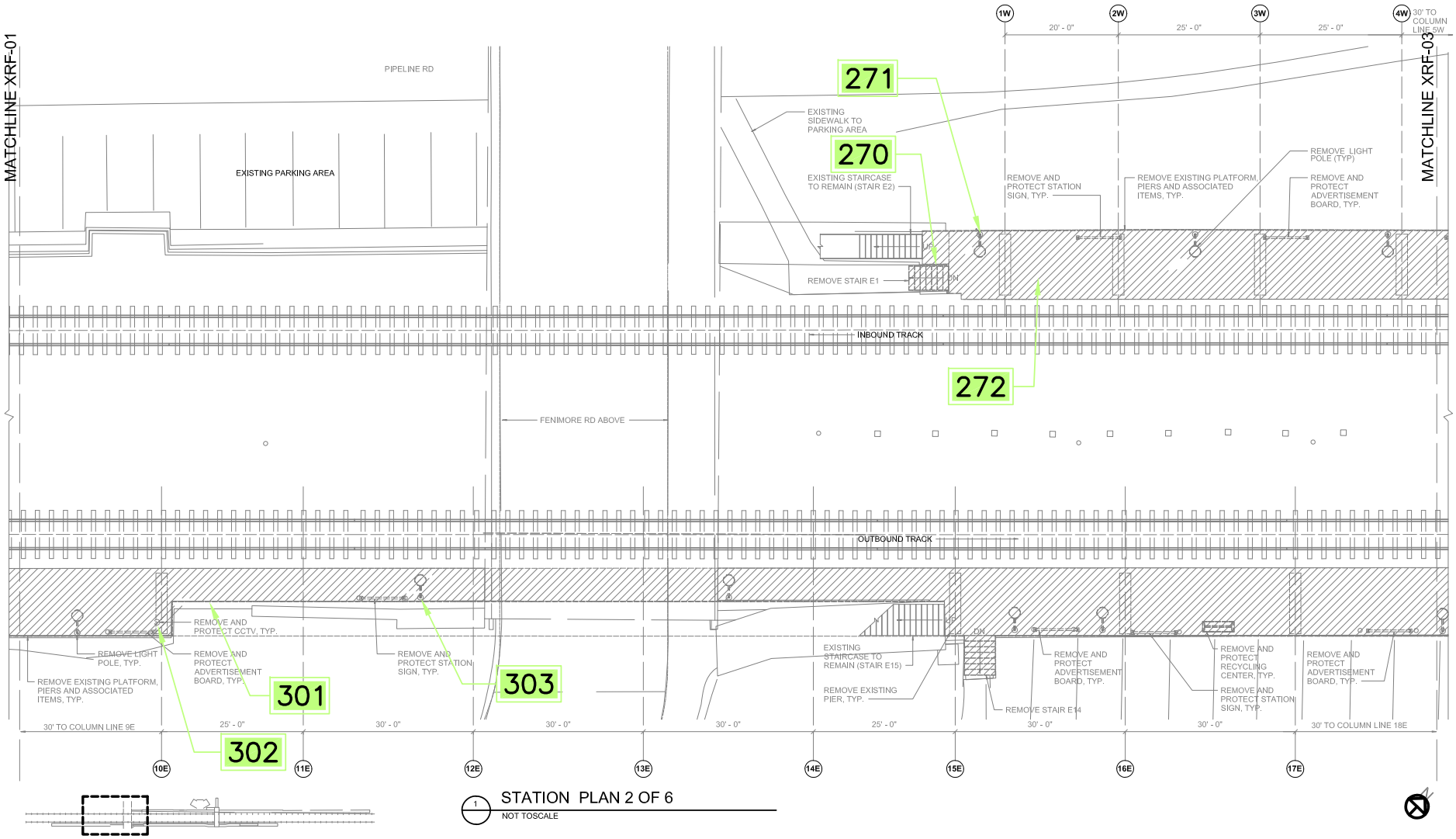
1 STATION PLAN 1 OF 6
NOT TO SCALE

LEGEND:

XRF READING NO. LEAD RESULT = 0.00 (NON-DETECTABLE LEAD)

XRF READING NO. LEAD RESULT ≥ 0.01 mg/cm² (LEAD CONTAINING)

EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: SEPT. 2018	CLIENT: MTA Metro-North Railroad Office of System Safety 420 Lexington Ave. Suite 930 New York, NY 10170
	CHECKED BY: MA	FILENAME: 18041-02	TITLE: STATION PLAN XRF SHOTS LOCATION SCHEMATIC
	APPR'VD BY: AS	SCALE: NOT TO SCALE	PROJECT LOCATION: HARTSDALE STATION DESIGN BUILD SERVICES FOR SCARSDALE AND HARTSDALE STA. IMPROVEMENTS
	PATH: X:\Metro North RR\18041 Term\Task 2-OSS # HAL-18-039-AL Hartsdale Sta		FIGURE **XRF-01** SHEET 01 OF 07



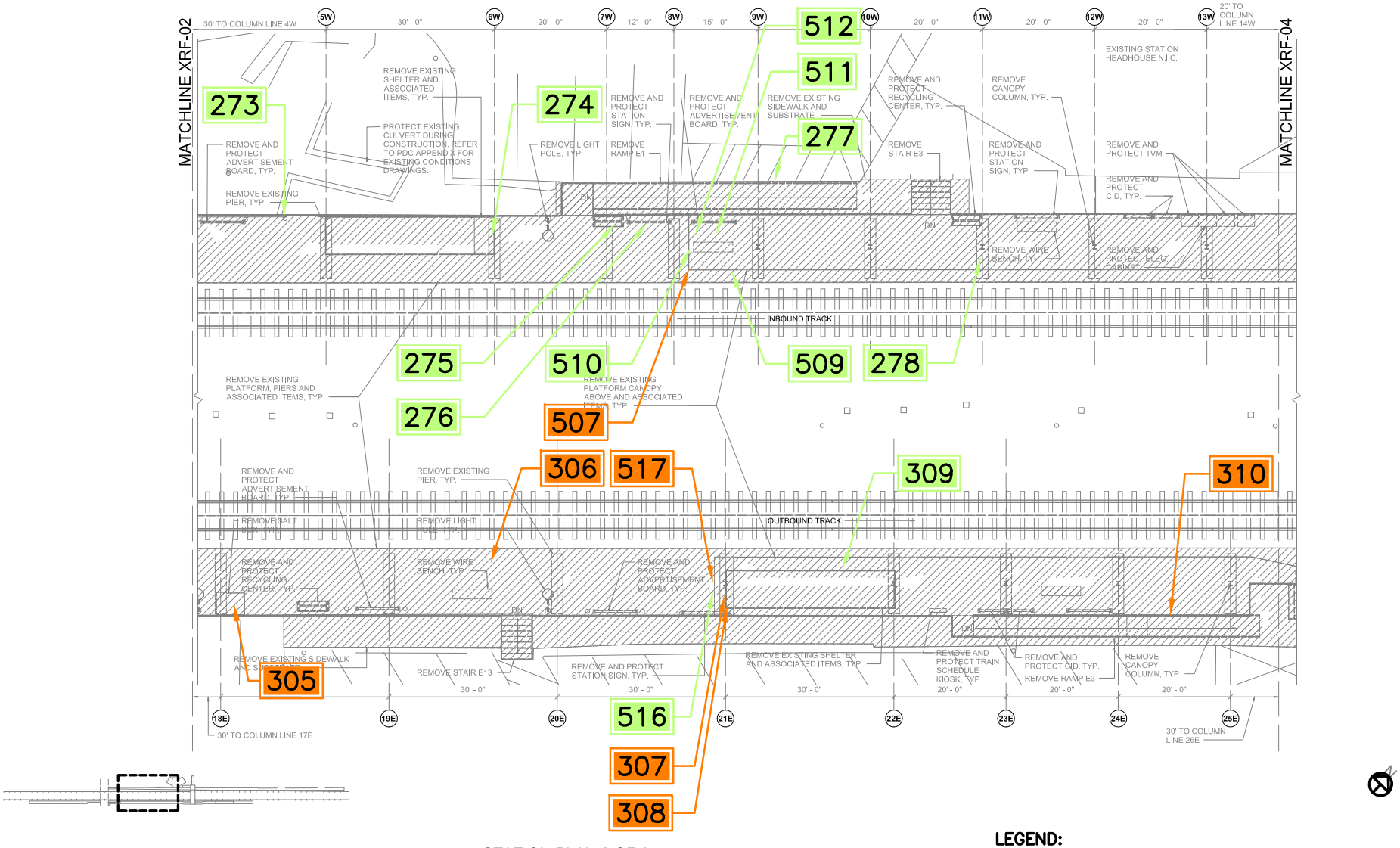
1 STATION PLAN 2 OF 6
NOT TOSCALE

LEGEND:

XRF READING NO. LEAD RESULT = 0.00 (NON-DETECTABLE LEAD)

XRF READING NO. LEAD RESULT ≥ 0.01 mg/cm² (LEAD CONTAINING)

EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: SEPT. 2018	CLIENT: MTA Metro-North Railroad Office of System Safety 420 Lexington Ave. Suite 930 New York, NY 10170
	CHECKED BY: MA	FILENAME: 18041-02	TITLE: STATION PLAN XRF SHOTS LOCATION SCHEMATIC
	APPR'VD BY: AS	SCALE: NOT TO SCALE	PROJECT LOCATION: HARTSDALE STATION DESIGN BUILD SERVICES FOR SCARSDALE AND HARTSDALE STA. IMPROVEMENTS
	PATH: X:\Metro North RR\18041 Term\Task 2-OSS # HAL-18-039-AL Hartsdale Sta		FIGURE **XRF-02** SHEET 02 OF 07



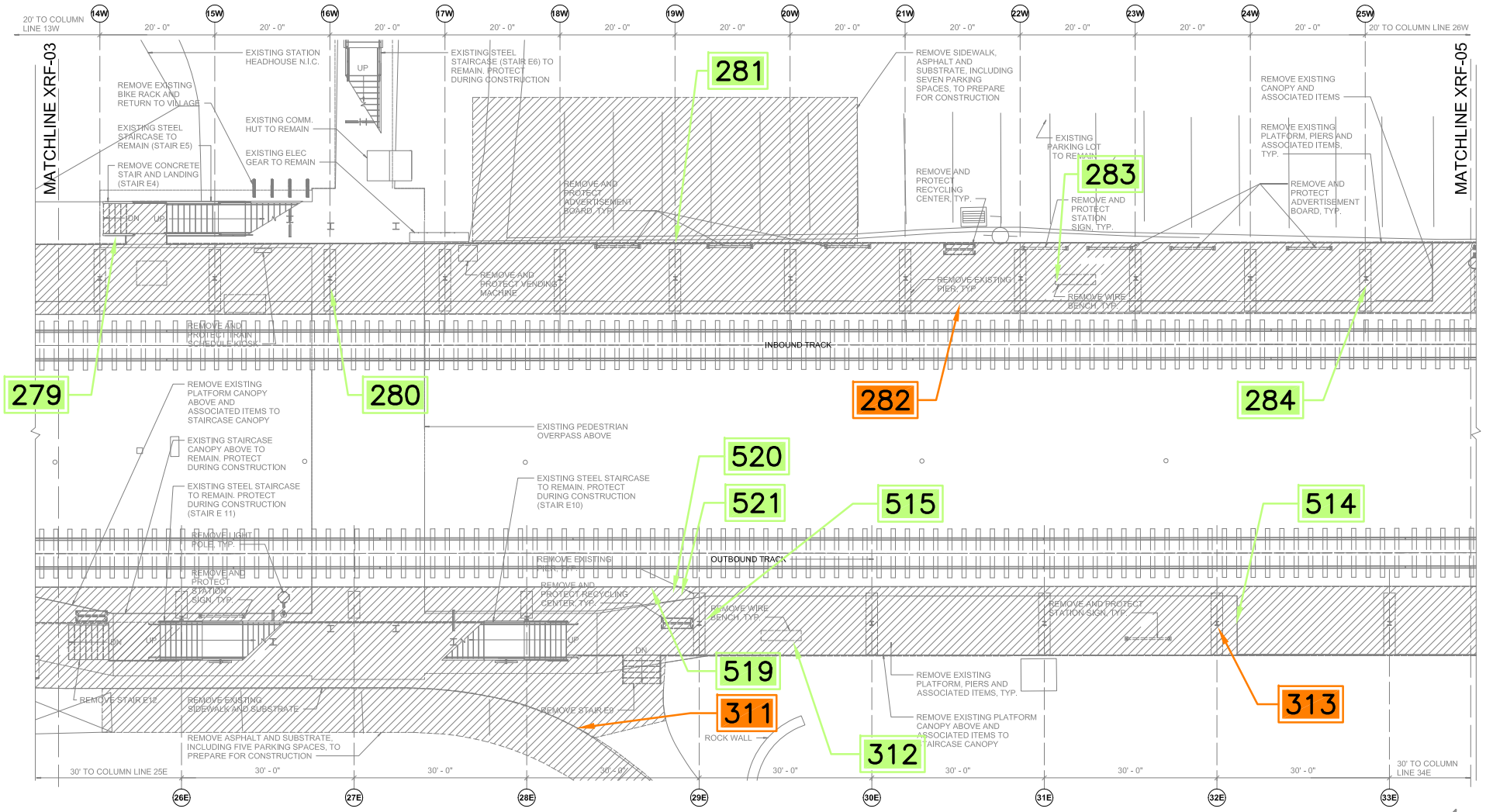
1 STATION PLAN 3 OF 6
NOT TO SCALE

LEGEND:

XRF READING NO. LEAD RESULT = 0.00 (NON-DETECTABLE LEAD)

XRF READING NO. LEAD RESULT ≥ 0.01 mg/cm² (LEAD CONTAINING)

EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: SEPT. 2018	CLIENT: MTA Metro-North Railroad Office of System Safety 420 Lexington Ave. Suite 930 New York, NY 10170
	CHECKED BY: MA	FILENAME: 18041-02	TITLE: STATION PLAN XRF SHOTS LOCATION SCHEMATIC
	APPR'VD BY: AS	SCALE: NOT TO SCALE	PROJECT LOCATION: HARTSDALE STATION DESIGN BUILD SERVICES FOR SCARSDALE AND HARTSDALE STA. IMPROVEMENTS
	PATH: X:\Metro North RR\18041 Term\Task 2-OSS # HAL-18-039-AL Hartsdale Sta		FIGURE XRF-03 SHEET 03 OF 07



1 STATION PLAN 4 OF 6
NOT TO SCALE

LEGEND:

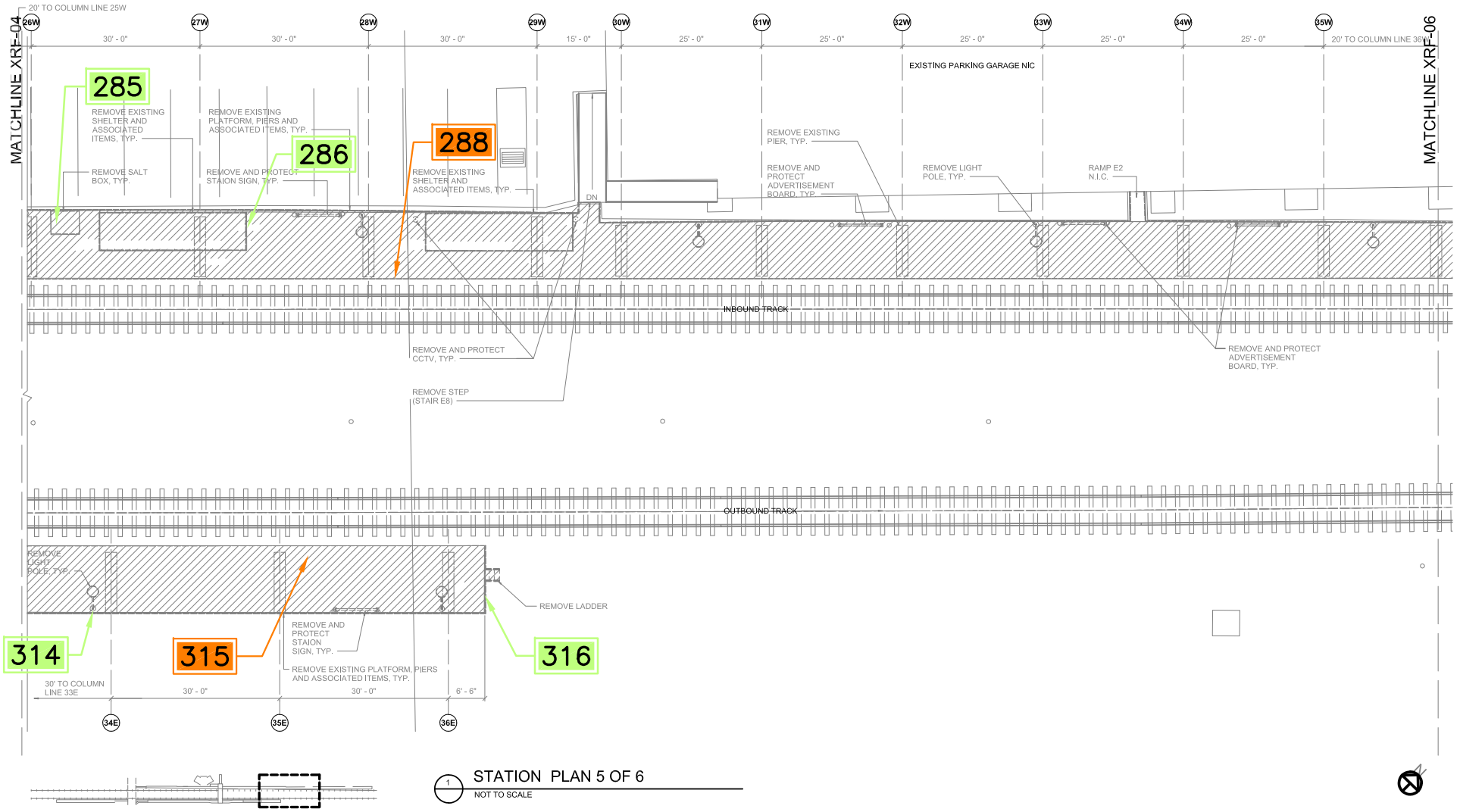
XRF READING NO. LEAD RESULT = 0.00 (NON-DETECTABLE LEAD)

XRF READING NO. LEAD RESULT ≥ 0.01 mg/cm² (LEAD CONTAINING)

EPM Environmental Planning & Management, Inc.
www.epmco.com

DRAWN BY: MH/AR	DATE: SEPT. 2018	CLIENT: MTA Metro-North Railroad	TITLE: STATION PLAN XRF SHOTS LOCATION SCHEMATIC
CHECKED BY: MA	FILENAME: 18041-02	Office of System Safety 420 Lexington Ave. Suite 930 New York, NY 10170	PROJECT LOCATION: HARTSDALE STATION DESIGN BUILD SERVICES FOR SCARSDALE AND HARTSDALE STA. IMPROVEMENTS
APPR'VD BY: AS	SCALE: NOT TO SCALE		FIGURE XRF-04 SHEET 04 OF 07

PATH: X:\Metro North RR\18041 Term\Task 2-OSS # HAL-18-039-AL Hartsdale Sta



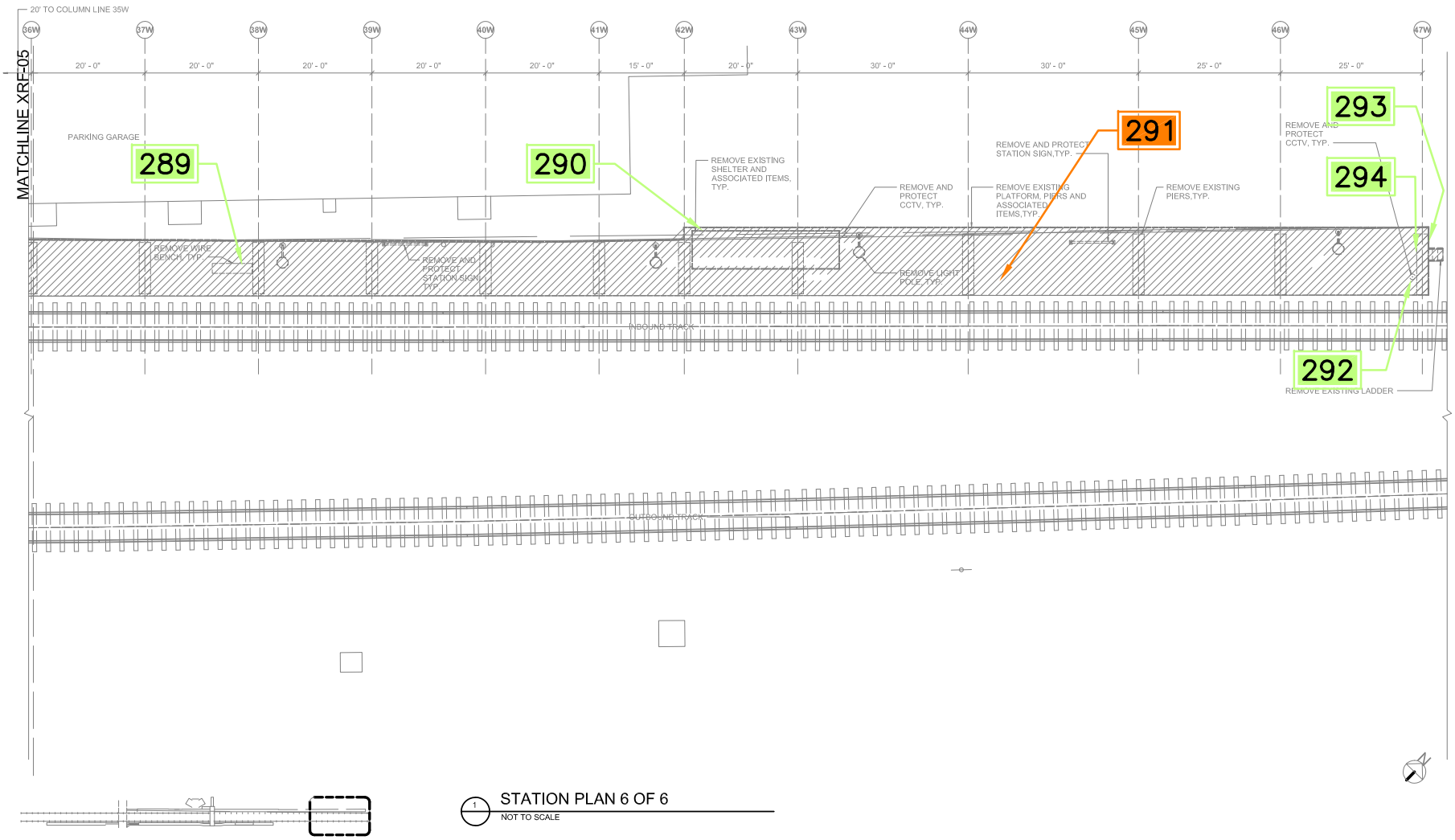
1 STATION PLAN 5 OF 6
NOT TO SCALE

LEGEND:

XRF READING NO. LEAD RESULT = 0.00 (NON-DETECTABLE LEAD)

XRF READING NO. LEAD RESULT ≥ 0.01 mg/cm² (LEAD CONTAINING)

EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: SEPT. 2018	CLIENT: MTA Metro-North Railroad, Office of System Safety, 420 Lexington Ave. Suite 930, New York, NY 10170
	CHECKED BY: MA	FILENAME: 18041-02	TITLE: STATION PLAN XRF SHOTS LOCATION SCHEMATIC
	APPR'VD BY: AS	SCALE: NOT TO SCALE	PROJECT LOCATION: HARTSDALE STATION DESIGN BUILD SERVICES FOR SCARSDALE AND HARTSDALE STA. IMPROVEMENTS
	PATH: X:\Metro North RR\18041 Term\Task 2-OSS # HAL-18-039-AL Hartsdale Sta		FIGURE XRF-05 SHEET 05 OF 07



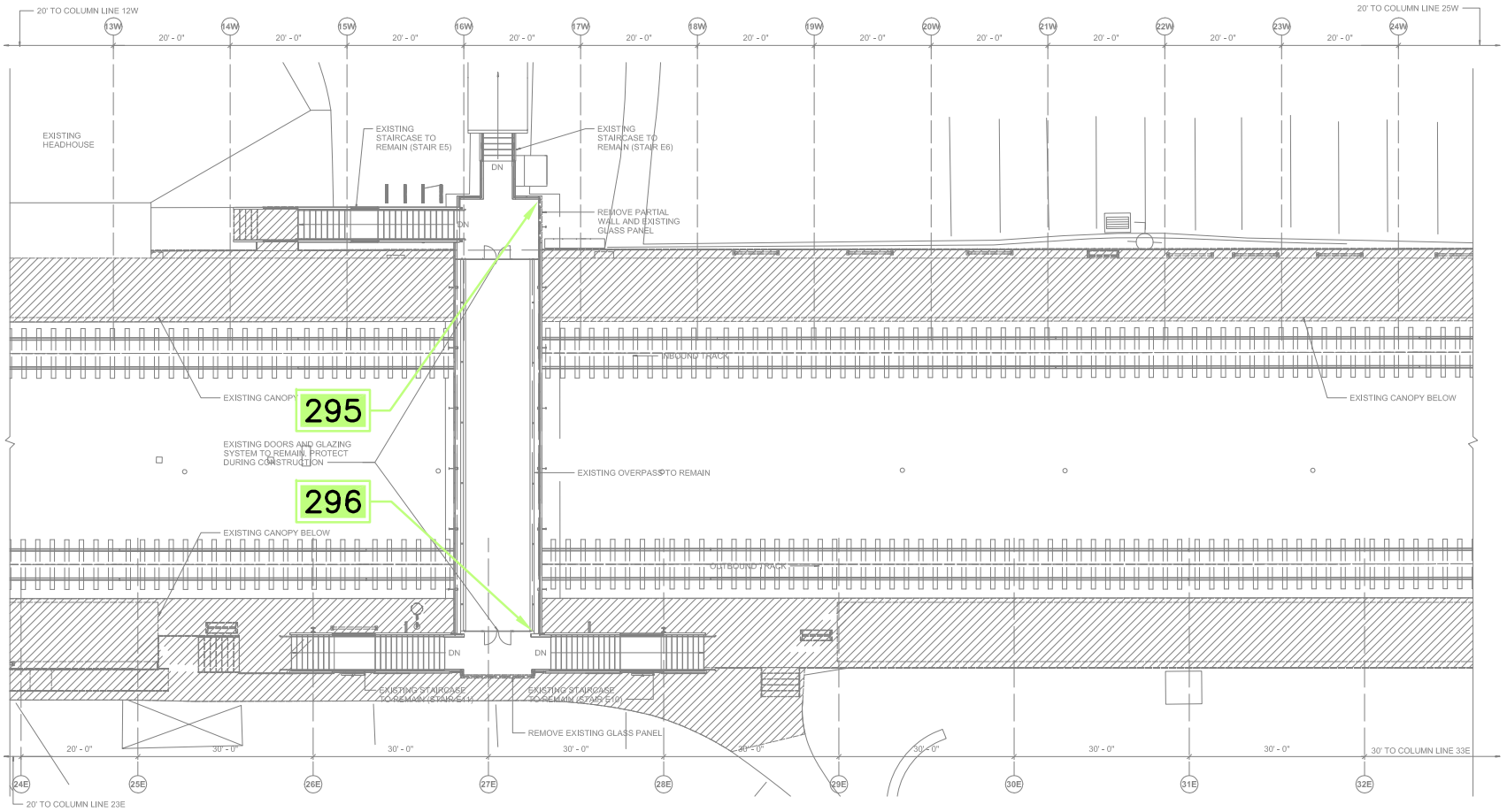
1 STATION PLAN 6 OF 6
NOT TO SCALE

LEGEND:

XRF READING NO. LEAD RESULT = 0.00 (NON-DETECTABLE LEAD)

XRF READING NO. LEAD RESULT ≥ 0.01 mg/cm² (LEAD CONTAINING)

EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: SEPT. 2018	CLIENT: MTA Metro-North Railroad Office of System Safety 420 Lexington Ave. Suite 930 New York, NY 10170
	CHECKED BY: MA	FILENAME: 18041-02	TITLE: STATION PLAN XRF SHOTS LOCATION SCHEMATIC
	APPR'VD BY: AS	SCALE: NOT TO SCALE	PROJECT LOCATION: HARTSDALE STATION DESIGN BUILD SERVICES FOR SCARSDALE AND HARTSDALE STA. IMPROVEMENTS
	PATH: X:\Metro North RR\18041 Term\Task 2-OSS # HAL-18-039-AL Hartsdale Sta		FIGURE XRF-06 SHEET 06 OF 07



STATION DEMOLITION PLAN (OVERPASS LEVEL)

LEGEND:

XRF READING NO. LEAD RESULT = 0.00 (NON-DETECTABLE LEAD)

XRF READING NO. LEAD RESULT ≥ 0.01 mg/cm² (LEAD CONTAINING)

EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: SEPT. 2018	CLIENT: MTA Metro-North Railroad Office of System Safety 420 Lexington Ave. Suite 930 New York, NY 10170	TITLE: STATION OVERPASS XRF SHOTS LOCATION SCHEMATIC	FIGURE **XRF-07**
	CHECKED BY: MA	FILENAME: 18041-02			
	APPR'VD BY: AS	SCALE: NOT TO SCALE		PROJECT LOCATION: HARTSDALE STATION DESIGN BUILD SERVICES FOR SCARSDALE AND HARTSDALE STA. IMPROVEMENTS	SHEET 07 OF 07
	PATH: X:\Metro North RR\18041 Term\Task 2-OSS # HAL-18-039-AL Hartsdale Sta				

APPENDIX D
Laboratory Accreditation

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2019
Issued April 01, 2018

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

MR. DIMITRIOS MOLOHIDES
ALPHA LABS LLC
14-26 28TH AVENUE
LONG ISLAND CITY, NY 11102

NY Lab Id No: 11833

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
Asbestos-Vermiculite-Containing Material	Item 198.8 of Manual
Lead in Dust Wipes	EPA 7000B
Lead in Paint	ASTM D3335-85A

Sample Preparation Methods

	ASTM D3335-85A
	ASTM E-1644-04

Serial No.: 58001

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.

APPENDIX E
Asbestos Bulk Sample Laboratory Analytical Data

alpha Labs
14-26 28th Avenue Long Island City, NY 11102
Tel.: (718) 482-7525 Fax: (718) 482-7524 www.alphalabsllc.com

BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Metro North RR – Hartsdale Station, Greenburgh, Westchester, NY
PROJECT: 18041-02

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
HD-1A.1 18-08-158-01	Black adhesive / mastic tar layer (bottom)	Inbound platform, south end (8W) of canopy roof	Black Homogeneous NOB	81.2	6.2	12.6	0%	100%	NAD inconclusive	NAD
HD-1A.2 18-08-158-02	Black membrane / roll roofing material	Inbound platform, south end (8W) of canopy roof	Black Homogeneous NOB	58.9	14.2	26.9	0%	100%	NAD inconclusive	NAD
HD-1B.1 18-08-158-03	Black adhesive / mastic tar layer (bottom)	Inbound platform, center area (15W) of canopy roof	Black Homogeneous NOB	88.6	6.7	4.7	0%	100%	NAD inconclusive	NAD
HD-1B.2 18-08-158-04	Black membrane / roll roofing material	Inbound platform, center area (15W) of canopy roof	Black Homogeneous NOB	76.3	12.3	11.4	0%	100%	NAD inconclusive	NAD
HD-1C.1 18-08-158-05	Black adhesive / mastic tar layer (bottom)	Inbound platform, north end (25W) of canopy roof	Black Homogeneous NOB	87.7	7.6	4.7	0%	100%	NAD inconclusive	Analysis not requested by client
HD-1C.2 18-08-158-06	Black membrane / roll roofing material	Inbound platform, north end (25W) of canopy roof	Black Homogeneous NOB	47.7	18.9	33.4	0%	100%	NAD inconclusive	Analysis not requested by client
HD-2A 18-08-158-07	Black mastic/tar repair patch	Inbound platform, center (15W-16W) of canopy roof patch	Black Homogeneous NOB	81.9	7.6	10.5	0%	100%	NAD inconclusive	NAD
HD-2B 18-08-158-08	Black mastic/tar repair patch	Inbound platform, center (15W-16W) of canopy roof patch	Black Homogeneous NOB	69.5	0.0	30.5	0%	100%	NAD inconclusive	NAD
HD-2C 18-08-158-09	Black mastic/tar repair patch	Inbound platform, center (14W-15W) of canopy roof patch	Black Homogeneous NOB	66.8	15.7	17.6	0%	100%	NAD inconclusive	Analysis not requested by client
HD-3A 18-08-158-10	Black asphaltic roll roofing material	Outbound platform, northern section (31E-32E) of canopy	Black Homogeneous NOB	55.5	14.0	30.6	0%	100%	NAD inconclusive	NAD
HD-3B 18-08-158-11	Black asphaltic roll roofing material	Outbound platform, northern section (31E-32E) of canopy	Black Homogeneous NOB	53.6	29.9	16.5	0%	100%	NAD inconclusive	NAD
HD-3C 18-08-158-12	Black asphaltic roll roofing material	Outbound platform, northern section (31E-32E) of canopy	Black Homogeneous NOB	57.9	28.1	14.1	0%	100%	NAD inconclusive	Analysis not requested by client

alpha Labs
14-26 28th Avenue Long Island City, NY 11102
Tel.: (718) 482-7525 Fax: (718) 482-7524 www.alphalabsllc.com

BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Metro North RR – Hartsdale Station, Greenburgh, Westchester, NY
PROJECT: 18041-02

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
HD-4A 18-08-158-13	Brown board roof insulation	Outbound platform, northern section (31E-32E) of canopy	Brown Homogeneous Friable	Not Applicable			60% CELL	40%	NAD	
HD-4B 18-08-158-14	Brown board roof insulation	Outbound platform, northern section (31E-32E) of canopy	Brown Homogeneous Friable	Not Applicable			50% CELL	50%	NAD	
HD-4C 18-08-158-15	Brown board roof insulation	Outbound platform, northern section (30E-31E) of canopy	Brown Homogeneous Friable	Not Applicable			60% CELL	40%	NAD	
HD-5A 18-08-158-16	Black perimeter flashing mastic/tar	Outbound platform, northern section (31E-32E) of canopy-west	Black Homogeneous NOB	67.6	5.4	26.9	0%	92.3%	7.7% CH	
HD-5B 18-08-158-17	Black perimeter flashing mastic/tar	Outbound platform, northern section (31E-32E) of canopy-south	Black Homogeneous NOB	75.1	4.6	20.3			NA/PS	
HD-5C 18-08-158-18	Black perimeter flashing mastic/tar	Outbound platform, northern section (30E-32E) of canopy -east	Black Homogeneous NOB	61.8	2.8	35.4			NA/PS	
HD-6A 18-08-158-19	Black roof sealer on EPDM roofing	Outbound platform, northern section (30E-31E) of canopy	Black Homogeneous NOB	58.4	2.0	39.6	0%	100%	NAD Inconclusive	NAD
HD-6B 18-08-158-20	Black roof sealer on EPDM roofing	Outbound platform, northern section (30E-31E) of canopy	Black Homogeneous NOB	58.0	5.7	36.3	0%	100%	NAD Inconclusive	NAD
HD-6C 18-08-158-21	Black roof sealer on EPDM roofing	Outbound platform, northern section (28E-29E) of canopy	Black Homogeneous NOB	54.6	1.5	43.9	0%	100%	NAD Inconclusive	Analysis not requested by client
HD-7A 18-08-158-22	Black roof patch on EPDM roofing	Outbound platform, northern section (21E-22E) of canopy	Black Homogeneous Friable	62.3	0.2	37.5	0%	100%	NAD Inconclusive	NAD
HD-7B 18-08-158-23	Black roof patch on EPDM roofing	Outbound platform, northern section (21E-22E) of canopy	Black Homogeneous Friable	61.5	17.2	21.4	0%	100%	NAD Inconclusive	NAD
HD-7C 18-08-158-24	Black roof patch on EPDM roofing	Outbound platform, northern section (21E-22E) of canopy	Black Homogeneous Friable	62.2	4.4	33.4	0%	100%	NAD Inconclusive	Analysis not requested by client

alpha Labs
14-26 28th Avenue Long Island City, NY 11102
Tel.: (718) 482-7525 Fax: (718) 482-7524 www.alphalabsllc.com

BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Metro North RR – Hartsdale Station, Greenburgh, Westchester, NY
PROJECT: 18041-02

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
HD-8A 18-08-158-25	Black joint filler	Outbound platform, transverse joint at 27E	Black Homogeneous NOB	90.8	5.3	3.9	0%	100%	NAD inconclusive	NAD
HD-8B 18-08-158-26	Black joint filler	Inbound platform, transverse joint at 10W	Black Homogeneous NOB	94.3	4.0	1.8	0%	100%	NAD inconclusive	NAD
HD-8C 18-08-158-27	Black joint filler	Inbound platform, transverse joint at 30W	Black Homogeneous NOB	94.3	3.1	2.7	0%	100%	NAD inconclusive	Analysis not requested by client
HD-9A 18-08-158-28	Dark grey caulk	Outbound platform, 32E rubber expansion joint filler end	Dk. Grey Homogeneous NOB	51.7	46.9	1.5	0%	100%	NAD inconclusive	NAD
HD-9B 18-08-158-29	Dark grey caulk	Outbound platform, stair landing E12 rubber expansion joint	Dk. Grey Homogeneous NOB	49.4	49.5	1.1	0%	100%	NAD inconclusive	NAD
HD-9C 18-08-158-30	Dark grey caulk	Outbound platform, (2E) rubber expansion joint filler end	Dk. Grey Homogeneous NOB	50.2	48.5	1.3	0%	100%	NAD inconclusive	Analysis not requested by client
HD-10A 18-08-158-31	Light grey caulk	Inbound platform, joint at stair E1	Lt. Grey Homogeneous NOB	45.2	53.4	1.4	0%	100%	NAD inconclusive	NAD
HD-10B 18-08-158-32	Light grey caulk	Inbound platform, joint at stair E4	Lt. Grey Homogeneous NOB	45.0	53.9	1.1	0%	100%	NAD inconclusive	NAD
HD-10C 18-08-158-33	Light grey caulk	Outbound platform, joint at stair E14	Lt. Grey Homogeneous NOB	45.0	53.8	1.3	0%	100%	NAD inconclusive	Analysis not requested by client
HD-11A 18-08-158-34	Dark blue caulk	Inbound platform, expansion joint btwn stair E2 and platform	Dk. Grey Homogeneous NOB	40.0	58.7	1.2	0%	100%	NAD inconclusive	NAD
HD-11B 18-08-158-35	Dark blue caulk	Inbound platform, expansion joint btwn ramp E1 and platform	Dk. Grey Homogeneous NOB	40.1	58.4	1.4	0%	100%	NAD inconclusive	NAD
HD-11C 18-08-158-36	Dark blue caulk	Outbound platform, expansion joint btwn stair E16 and platform	Dk. Grey Homogeneous NOB	39.8	59.1	1.1	0%	100%	NAD inconclusive	Analysis not requested by client

alpha Labs
14-26 28th Avenue Long Island City, NY 11102
Tel.: (718) 482-7525 Fax: (718) 482-7524 www.alphalabsllc.com

BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Metro North RR – Hartsdale Station, Greenburgh, Westchester, NY
PROJECT: 18041-02

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
HD-12A 18-08-158-37	Grey caulk	Inbound platform, base of light pole at 1W	Lt. Grey Homogeneous NOB	76.4	22.4	1.2	0%	100%	NAD inconclusive	NAD
HD-12B 18-08-158-38	Grey caulk	Inbound platform, base of light pole at 28W	Lt. Grey Homogeneous NOB	69.0	29.6	1.4	0%	100%	NAD inconclusive	NAD
HD-12C 18-08-158-39	Grey caulk	Outbound platform, expansion joint btwn stair E13 and platform	Lt. Grey Homogeneous NOB	68.1	30.5	1.4	0%	100%	NAD inconclusive	Analysis not requested by client
HD-13A 18-08-158-40	Off-white caulk	Inbound platform, stair and landing E4	Off-White Homogeneous NOB	33.1	60.4	6.5	0%	100%	NAD inconclusive	NAD
HD-13B 18-08-158-41	Off-white caulk	Inbound platform, stair and landing E4	Off-White Homogeneous NOB	34.7	50.4	14.9	0%	100%	NAD inconclusive	NAD
HD-13C 18-08-158-42	Off-white caulk	Inbound platform, stair and landing E4	Off-White Homogeneous NOB	35.4	61.5	3.2	0%	100%	NAD inconclusive	Analysis not requested by client
HD-14A 18-08-158-43	Black caulk	Inbound platform, around drainage pipe platform column 17W	Black Homogeneous NOB	55.9	42.2	1.9	0%	100%	NAD inconclusive	NAD
HD-14B 18-08-158-44	Black caulk	Inbound platform, around drainage pipe platform column 25W	Black Homogeneous NOB	54.9	43.9	1.2	0%	100%	NAD inconclusive	NAD
HD-14C 18-08-158-45	Black caulk	Outbound platform around drainage pipe platform column 24E	Black Homogeneous NOB	56.4	42.6	1.1	0%	100%	NAD inconclusive	Analysis not requested by client
HD-15A 18-08-158-46	Brown joint filler	Inbound platform, at stair E2 steps	Brown Homogeneous Friable	Not Applicable			100% CELL	0%	NAD	
HD-15B 18-08-158-47	Brown joint filler	Inbound platform, at stair E8 steps	Brown Homogeneous Friable	Not Applicable			100% CELL	0%	NAD	
HD-15C 18-08-158-48	Brown joint filler	Outbound platform, at stair E13 steps	Brown Homogeneous Friable	Not Applicable			100% CELL	0%	NAD	

alpha Labs
14-26 28th Avenue Long Island City, NY 11102
Tel.: (718) 482-7525 Fax: (718) 482-7524 www.alphalabsllc.com

BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Metro North RR – Hartsdale Station, Greenburgh, Westchester, NY
PROJECT: 18041-02

Client Sample ID# Lab Sample ID#	Sample Description	Sample Location	Appearance	GRAVIMETRIC PREPARATION			PLM			TEM
				% Ashed Organic Component	% Acid Soluble Inorganic Component	% Acid Insoluble Inorganic Component	% Estimated Non-Asbestos Fibrous Material	% Non-Fibrous Matrix Material	ASBESTOS % & Type	ASBESTOS % & Type
HD-16A 18-08-158-49	Dark grey mastic/tar sealant	Parking lot sidewalk, adjacent to outbound platform near pier 22E	Dk. Grey Homogeneous NOB	66.6	6.2	27.3	0%	94.3%	5.7% CH	
HD-16B 18-08-158-50	Dark grey mastic/tar sealant	Parking lot sidewalk, adjacent to outbound platform near pier 22E	Dk. Grey Homogeneous NOB	68.5	7.8	23.7			NA/PS	
HD-16C 18-08-158-51	Dark grey mastic/tar sealant	Parking lot sidewalk, adjacent to outbound platform near pier 22E	Dk. Grey Homogeneous NOB	71.4	6.3	22.3			NA/PS	
HD-17A 18-08-158-52	Soft grey caulk	Outbound platform, stair E12 steps	Lt. Grey Homogeneous NOB	69.3	28.7	2.0	0%	100%	NAD inconclusive	NAD
HD-17B 18-08-158-53	Soft grey caulk	Outbound platform, stair E12 steps	Lt. Grey Homogeneous NOB	69.7	28.3	2.0	0%	100%	NAD inconclusive	NAD
HD-17C 18-08-158-54	Soft grey caulk	Outbound platform, stair E12 steps	Lt. Grey Homogeneous NOB	71.1	27.3	1.6	0%	100%	NAD inconclusive	Analysis not requested by client

alpha Labs
14-26 28th Avenue Long Island City, NY 11102
Tel.: (718) 482-7525 Fax: (718) 482-7524 www.alphalabsllc.com

BULK SAMPLE ANALYSIS REPORT

CLIENT: Environmental Planning & Management Inc., 1983 Marcus Avenue, Suite 109, Lake Success NY 11042
BUILDING ADDRESS: Metro North RR – Hartsdale Station, Greenburgh, Westchester, NY
PROJECT: 18041-02

Date Received: 8/21/18
Date of PLM Analysis: 8/23/18
Date of TEM Analysis: 8/23/18
Date of Report: 8/23/18

PLM Analyst: L. Tchorzewski
TEM Analyst: A. Ansari

Analyst: _____
L. Tchorzewski

QC Review / Date: _____
D. Molohides, Lab Director

NAD= No Asbestos Detected; NA/PS = Not Analyzed / Positive Stop; Trace = < 1%, CH = Chrysotile, AMO = Amosite, CRO = Crocidolite, ANTH = Anthophyllite, TRE = Tremolite, ACT = Actinolite, FBGL = Fiberglass, CELL = Cellulose, SYNTH = Synthetic fibers, VERM = Vermiculite, WOLL = Wollastonite. Polarized Light Microscopy (PLM) analysis of samples is performed by Method EPA 600/M4-82-020 and ELAP PLM Analysis Protocol 198.1 (friable samples) and protocol 198.6 (NOB samples). Transmission Electron Microscopy (TEM) analysis of samples is performed by Method ELAP TEM Analysis Protocol 198.4. This report includes the identification and quantitation of vermiculite as required by current NYS-DOH ELAP protocols & interim guidance letters. Analytical equipments: Stereobinocular microscopes: Professional Bin (PM #1), Accuscope (Ser# 1200608), Carlsan (Ser# 011418); Polarized Light Microscopes: Olympus BH-2 (Ser #: 214335), Olympus BH-2 (Ser #: 236532). PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing. Samples will be stored for sixty (60) days and then returned to the client upon request. The results relate only to the items calibrated or tested. This report may not be reproduced, except in full, without the written approval of Alpha Labs LLC. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the US Government. This report contains data (bulk asbestos TEM results) that are not covered by the NVLAP accreditation. The liability of Alpha Labs LLC with respect to the services charged shall in no event exceed the amount of the invoice. **(November 1, 2016)**

NYS-DOH ELAP # 11833 **NVLAP Lab Code: 200691-0**

Bulk Sample Form

18-08-158

EPM
Environmental Planning & Management, Inc.
www.epmco.com
1983 Marcus Avenue, Suite 109 | Lake Success | New York 11040
P. 516.328.1194 | F. 516.328.1381
2125 Center Avenue, Suite 404 | Fort Lee | New Jersey 07024
P. 201.363.1983 | F. 201.363.0800

RESULTS NEEDED: 48 Hour TAT

SEND ALL RESULTS BY EMAIL TO : Mike Aprahamian (maprahamian@epmco.com); Darren Frank (dfrank@epmco.com)

FOLLOW-UP ALL FAXES WITH HARDCOPY BY MAIL TO EPM

SHIPPED BY: Fed-Ex overnight

PROJECT INFORMATION			
CLIENT :	Metro North RR		
EPM # :	18041-02	DATE :	8/20/2018
Project:	Station Improvements - (MNR OSS Task #NAL-18-039)		
Project Location:	HartsdaleStation: Greenburgh, Westchester NY		

LABORATORY NOTE : Analyze by layer via PLM with positive stop.

If negative by PLM and NOB, analyze by TEM only first two (2) samples.

SAMPLE NUMBER	DATE SAMPLED	SAMPLE LOCATION	MATERIAL DESCRIPTION
HD-01A.1		Inbound platform, south end (8W) of canopy roof	Black adhesive / mastic tar layer (bottom)
HD-01A.2		Inbound platform, south end (8W)of canopy roof	Black membrane / roll roofing material
HD-01B.1		Inbound platform, center area (15W)of canopy roof	Black adhesive / mastic tar layer (bottom)
HD-01B.2		nbound platform, center area (15W)of canopy roof	Black membrane / roll roofing material
HD-01C.1		Inbound platform, north end (25W)of canopy roof	Black adhesive / mastic tar layer (bottom)
HD-01C.2		Inbound platform, north end (25W)of canopy roof	Black membrane / roll roofing material
HD-02A		Inbound platform, center area (15W-16W) of canopy roof patch	Black mastic/tar repair patch
HD-02B		Inbound platform, center area (15W-16W) of canopy roof patch	Black mastic/tar repair patch
HD-02C		Inbound platform, center area (14W-15W) of canopy roof patch	Black mastic/tar repair patch
HD-03A		Outbound platform, northern section (31E-32E) of canopy	Black asphaltic roll roofing material
HD-03B	8/15/2018	Outbound platform, northern section (31E-32E) of canopy	Black asphaltic roll roofing material
HD-03C		Outbound platform, northern section (31E-32E) of canopy	Black asphaltic roll roofing material
HD-04A		Outbound platform, northern section (31E-32E) of canopy	Brown board roof insulation
HD-04B		Outbound platform, northern section (31E-32E) of canopy	Brown board roof insulation
HD-04C		Outbound platform, northern section (30E-31E) of canopy	Brown board roof insulation
HD-05A		Outbound platform, northern section (31E-32E) of canopy-West	Black perimeter flashing mastic/tar
HD-05B		Outbound platform, northern section (31E-32E) of canopy-south	Black perimeter flashing mastic/tar
HD-05C	MA	Outbound platform, northern section (30E-32E) of canopy - East	Black perimeter flashing mastic/tar
HD-06A	MA	Outbound platform, northern section (30E-31E) of canopy	Black roof sealer on EPDM roofing
HD-06B		Outbound platform, northern section (30E-31E) of canopy	Black roof sealer on EPDM roofing
HD-06C		Outbound platform, northern section (28E-29E) of canopy	Black roof sealer on EPDM roofing

Sampler's Relinquishment Signature / Date / Time:

8/20/2018 18:40 FED-EX

Lab Receipt Signature / Date / Time:

AP 8/21/18

BULK SAMPLE FORM

18-08-158 PAGE_2_ OF_3_

EPM
Environmental Planning & Management, Inc.
www.epmco.com

1983 Marcus Avenue, Suite 109 | Lake Success | New York 11040
P. 516.328.1194 | F. 516.328.1381

2125 Center Avenue, Suite 404 | Fort Lee | New Jersey 07024
P. 201.363.1983 | F. 201.363.0800

RESULTS NEEDED: 48 Hour TAT

SEND ALL RESULTS BY EMAIL TO : Mike Aprahamian (maprahamian@epmco.com); Darren Frank (dfrank@epmco.com)

FOLLOW-UP ALL FAXES WITH HARDCOPY BY MAIL TO EPM

SHIPPED BY: Fed-Ex overnight

LABORATORY NOTE : Analyze by layer via PLM with positive stop.

If negative by PLM and NOB, analyze by TEM only first two (2) samples.

PROJECT INFORMATION

CLIENT :	Metro North RR		
EPM # :	18041-02	DATE :	8/20/2018
Project:	Station Improvements - (MNR OSS Task #NAL-18-039)		
Project Location:	HartsdaleStation: Greenburgh, Westchester NY		

SAMPLE NUMBER	DATE SAMPLED	SAMPLE LOCATION	MATERIAL DESCRIPTION
HD-07A	8/15/2018	Outbound platform, northern section (21E-22E) of canopy	Black roof patch on EPDM roofing
HD-07B		Outbound platform, northern section (21E-22E) of canopy	Black roof patch on EPDM roofing
HD-07C		Outbound platform, northern section (21E-22E) of canopy	Black roof patch on EPDM roofing
HD-08A	8/17/2018	Outbound platform, transverse joint at 27E	Black joint filler
HD-08B		Inbound platform, transverse joint at 10W	Black joint filler
HD-08C		Inbound platform, transverse joint at 30W	Black joint filler
HD-09A		Outbound platform, (32E) rubber expansion joint filler end	Dark gray caulk
HD-09B		Outbound platform, stair landing E12 rubber expansion joint	Dark gray caulk
HD-09C		Outbound platform, (2E) rubber expansion joint filler end	Dark gray caulk
HD-10A		Inbound platform, joint at stair E1	Light gray caulk
HD-10B		Inbound platform, joint at stair E4	Light gray caulk
HD-10C		Outbound platform, joint at stair E14	Light gray caulk
HD-11A		Inbound platform, expansion joint btwn stair E2 and platform	Dark blue caulk
HD-11B		Inbound platform, expansion joint btwn Ramp E1 and platform	Dark blue caulk
HD-11C		Outbound platform, expansion joint btwn stair E16 and platform	Dark blue caulk
HD-12A		Inbound platform, base of light pole at 1W	Gray caulk
HD-12B		Inbound platform, base of light pole at 28W	Gray caulk
HD-12C		Outbound platform, expansion joint btwn stair E13 and platform	Gray caulk
HD-13A		Inbound platform, stair and landing E4	Off-white caulk
HD-13B		Inbound platform, stair and landing E4	Off-white caulk
HD-13C		Inbound platform, stair and landing E4	Off-white caulk
HD-14A		Inbound platform, around drainage pipe at platform column 17W	Black caulk
HD-14B		Inbound platform, around drainage pipe at platform column 25W	Black caulk
HD-14C		Outbound platform,around drainage pipe at platform column 24E	Black caulk

Sampler's Relinquishment Signature / Date / Time:

8/20/2018 18:40 FED-EX

Lab Receipt Signature / Date / Time:

AP 8/21/18

BULK SAMPLE FORM

18-08-158 PAGE_3_ OF_3_

EPM
Environmental Planning & Management, Inc.
www.epmco.com

1983 Marcus Avenue, Suite 109 | Lake Success | New York 11040
P. 516.328.1194 | F. 516.328.1381

2125 Center Avenue, Suite 404 | Fort Lee | New Jersey 07024
P. 201.363.1983 | F. 201.363.0800

RESULTS NEEDED: 48 Hour TAT

SEND ALL RESULTS BY EMAIL TO : Mike Aprahamian (maprahamian@epmco.com); Darren Frank (dfrank@epmco.com)

FOLLOW-UP ALL FAXES WITH HARDCOPY BY MAIL TO EPM

SHIPPED BY: Fed-Ex overnight

PROJECT INFORMATION			
CLIENT :	Metro North RR		
EPM # :	18041-02	DATE :	8/20/2018
Project:	Station Improvements - (MNR OSS Task #NAL-18-039)		
Project Location:	HartsdaleStation: Greenburgh, Westchester NY		

LABORATORY NOTE : Analyze by layer via PLM with positive stop.

If negative by PLM and NOB, analyze by TEM only first two (2) samples.

SAMPLE NUMBER	DATE SAMPLED	SAMPLE LOCATION	MATERIAL DESCRIPTION
HD-15A	8/17/2018	Inbound platform, at stair E2 steps	Brown joint filler
HD-15B		Inbound platform, at stair E8 steps	Brown joint filler
HD-15C		Outbound platform, at stair E13 steps	Brown joint filler
HD-16A		Parking lot sidewalk, adjacent to outbound platform near pier 22E	Dark gray mastic/tar sealant
HD-16B		Parking lot sidewalk, adjacent to outbound platform near pier 22E	Dark gray mastic/tar sealant
HD-16C		Parking lot sidewalk, adjacent to outbound platform near pier 22E	Dark gray mastic/tar sealant
HD-17A		Outbound platform, stair E12 steps	Soft gray caulk
HD-17B		Outbound platform, stair E12 steps	Soft gray caulk
HD-17C		Outbound platform, stair E12 steps	Soft gray caulk

Sampler's Relinquishment Signature / Date / Time:

8/20/2018 18:40 FED-EX

Lab Receipt Signature / Date / Time:

AP 8/21/18

APPENDIX F
XRF Performance Characteristic Sheet

Performance Characteristic Sheet

EFFECTIVE DATE: **September 24, 2004** **EDITION NO.: 1**

MANUFACTURER AND MODEL:

Make: *Niton LLC*
Tested Model: *XLp 300*
Source: ^{109}Cd
Note: This PCS is also applicable to the equivalent model variations indicated below, for the Lead-in-Paint K+L variable reading time mode, in the XLi and XLp series:

XLi 300A, XLi 301A, XLi 302A and XLi 303A.
XLp 300A, XLp 301A, XLp 302A and XLp 303A.
XLi 700A, XLi 701A, XLi 702A and XLi 703A.
XLp 700A, XLp 701A, XLp 702A, and XLp 703A.

Note: The XLi and XLp versions refer to the shape of the handle part of the instrument. The differences in the model numbers reflect other modes available, in addition to Lead-in-Paint modes. The manufacturer states that specifications for these instruments are identical for the source, detector, and detector electronics relative to the Lead-in-Paint mode.

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Lead-in-Paint K+L variable reading time mode.

XRF CALIBRATION CHECK LIMITS:

0.8 to 1.2 mg/cm^2 (inclusive)

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm^2 in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm^2 film).

If readings are outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instruments into control before XRF testing proceeds.

SUBSTRATE CORRECTION:

For XRF results using Lead-in-Paint K+L variable reading time mode, substrate correction is <u>not</u> needed for:

Brick, Concrete, Drywall, Metal, Plaster, and Wood

INCONCLUSIVE RANGE OR THRESHOLD:

K+L MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm^2)
Results not corrected for substrate bias on any substrate	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	1.0
	Plaster	1.0
	Wood	1.0

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted in August 2004 on 133 testing combinations. The instruments that were used to perform the testing had new sources; one instrument's was installed in November 2003 with 40 mCi initial strength, and the other's was installed June 2004 with 40 mCi initial strength.

OPERATING PARAMETERS:

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

SUBSTRATE CORRECTION VALUE COMPUTATION:

Substrate correction is not needed for brick, concrete, drywall, metal, plaster or wood when using Lead-in-Paint K+L variable reading time mode, the normal operating mode for these instruments. If substrate correction is desired, refer to Chapter 7 of the HUD Guidelines for guidance on correcting XRF results for substrate bias.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing. Use the K+L variable time mode readings.

Conduct XRF retesting at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family housing a result is defined as the average of three readings. In multifamily housing, a result is a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF results.

Compute the average of all ten re-test XRF results.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

TESTING TIMES:

For the Lead-in-Paint K+L variable reading time mode, the instrument continues to read until it is moved away from the testing surface, terminated by the user, or the instrument software indicates the reading is complete. The following table provides testing time information for this testing mode. The times have been adjusted for source decay, normalized to the initial source strengths as noted above. Source strength and type of substrate will affect actual testing times. At the time of testing, the instruments had source strengths of 26.6 and 36.6 mCi.

Testing Times Using K+L Reading Mode (Seconds)						
	All Data			Median for laboratory-measured lead levels (mg/cm^2)		
Substrate	25^{th} Percentile	Median	75^{th} Percentile	Pb < 0.25	0.25 ≤ Pb<1.0	1.0 ≤ Pb
Wood Drywall	4	11	19	11	15	11
Metal	4	12	18	9	12	14
Brick Concrete Plaster	8	16	22	15	18	16

CLASSIFICATION RESULTS:

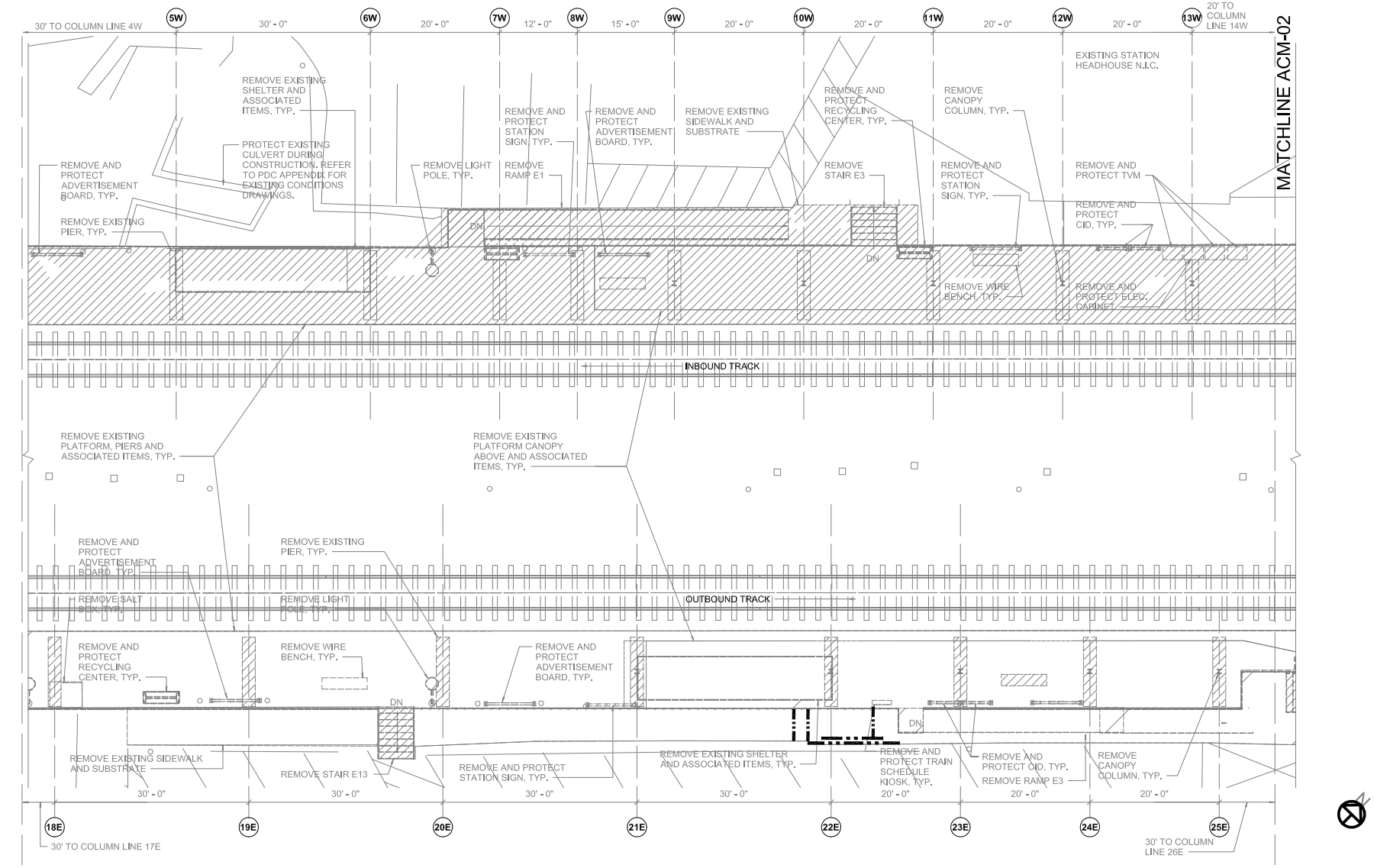
XRF results are classified as positive if they are greater than or equal to the threshold, and negative if they are less than the threshold.

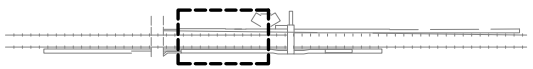
DOCUMENTATION:

A document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD.

This XRF Performance Characteristic Sheet was developed by the Midwest Research Institute (MRI) and QuanTech, Inc., under a contract between MRI and the XRF manufacturer. HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*.

APPENDIX G
Asbestos Containing Materials Location Schematics



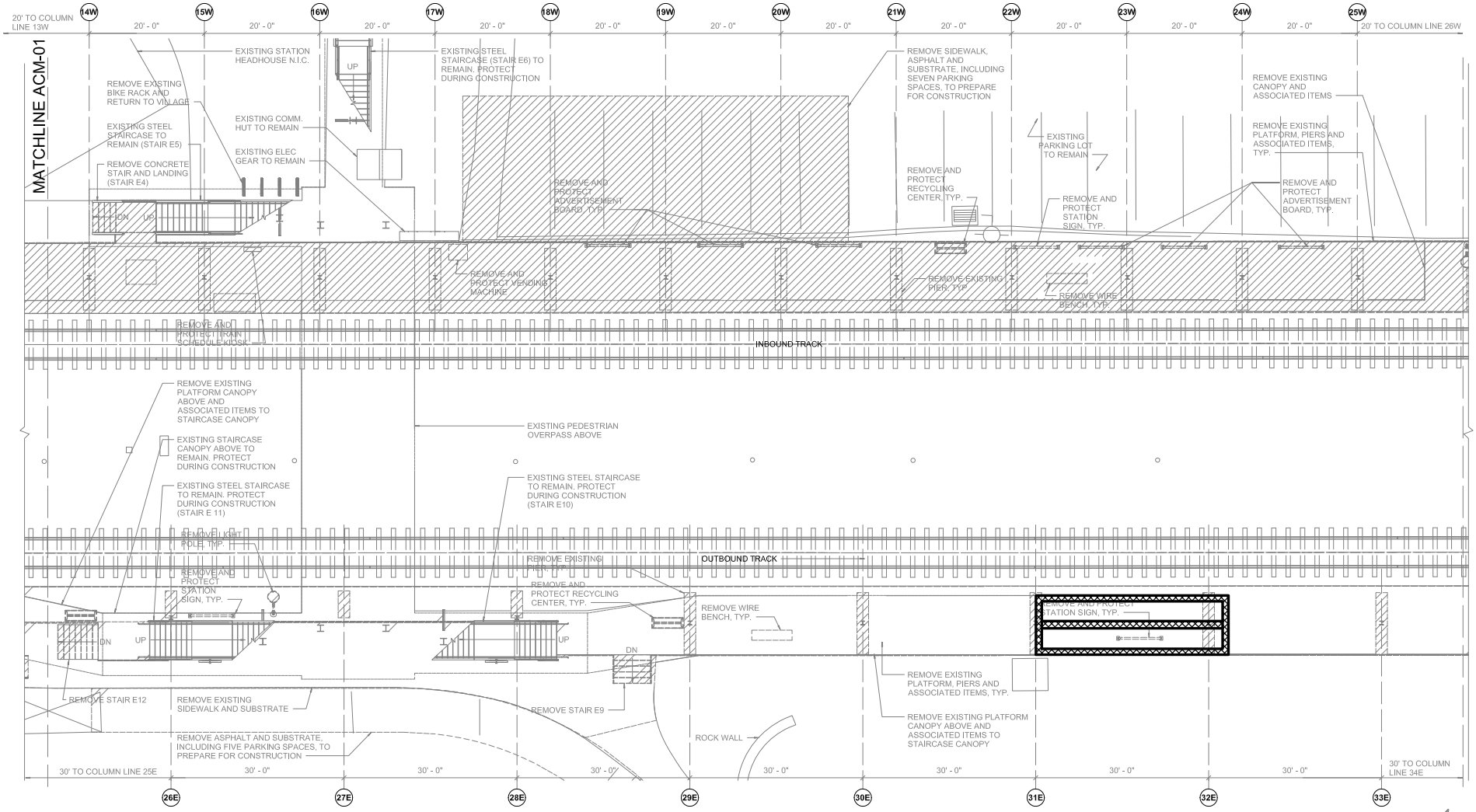


1 STATION PLAN 1 OF 2
NOT TO SCALE

LEGEND

LOCATION OF ACM DARK GRAY MASTIC TAR/SEALANT

EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: SEPT. 2018	CLIENT: MTA Metro-North Railroad Office of System Safety 420 Lexington Ave. Suite 930 New York, NY 10170
	CHECKED BY: MA	FILENAME: 18041-02	TITLE: STATION PLAN ASBESTOS MATERIAL LOCATION SCHEMATIC
	APPR'VD BY: AS	SCALE: NOT TO SCALE	PROJECT LOCATION: HARTSDALE STATION DESIGN BUILD SERVICES FOR SCARSDALE AND HARTSDALE STA. IMPROVEMENTS
	PATH: X:\Metro North RR\18041 Term\Task 2-OSS # HAL-18-039-AL Hartsdale Sta		FIGURE ACM-01 SHEET 01 OF 02



1 STATION PLAN 2 OF 2
NOT TO SCALE

LEGEND

LOCATION OF ACM BLACK MASTIC/FLASHING

EPM Environmental Planning & Management, Inc. www.epmco.com	DRAWN BY: MH/AR	DATE: SEPT. 2018	CLIENT: MTA Metro-North Railroad Office of System Safety 420 Lexington Ave. Suite 930 New York, NY 10170
	CHECKED BY: MA	FILENAME: 18041-02	TITLE: STATION PLAN ASBESTOS MATERIAL LOCATION SCHEMATIC
	APPR'VD BY: AS	SCALE: NOT TO SCALE	PROJECT LOCATION: HARTSDALE STATION DESIGN BUILD SERVICES FOR SCARSDALE AND HARTSDALE STA. IMPROVEMENTS
	PATH: X:\Metro North RR\18041 Term\Task 2-OSS # HAL-18-039-AL Hartsdale Sta		FIGURE **ACM-02** SHEET 02 OF 02