HALEY & ALDRICH OF NEW YORK
200 Town Centre Drive
Suite 2
Rochester, NY 14623
585.359.9000

21 August 2019
File No. 28590-029

New York State Department of Environmental Conservation
625 Broadway, 11th Floor
Albany, NY 12233-7014

Attention: Michael Squire
Project Manager, Remedial Bureau C

Subject: Vapor Intrusion Management Systems (VIMS)
NYSDEC Site No. C360064
Tarrytown Former MGP
Tarrytown, NY

Dear Mr. Squire:

On behalf of Ferry Landings, LLC, this commitment letter responds to your letter dated 22 July 2019 regarding the subject site (the Site, see attached Site Plan). As requested, indoor air sampling and sub-slab soil vapor re-sampling will be conducted at the Site during the upcoming 2019/2020 heating season after receiving access to representative properties within each site building subject to vapor/indoor air sampling.

SCOPE

The indoor air and sub-slab soil vapor sampling and analyses will be performed as outlined in Section 2.3.4 the revised *Site Management Plan - Tarrytown Former MGP Site, Tarrytown, NY*, dated August 2010 and accepted by the NYSDEC on 26 August 2010, and as adapted to the phases and footprints of buildings developed on the site since the SMP was approved.

To be representative of the Site, one set of indoor air and sub-slab soil vapor samples will be collected for each building, as listed below. Note that specific sample locations will need to be determined by what residential units are not occupied when heating season arrives or where a resident is willing to make a unit accessible for the sampling during the heating season. If living units are not present on the ground floor (as is the case with certain buildings) or one is not accessible, then sample locations will be selected based on available and habitable common areas where samples can be obtained, such as lobby areas, bathrooms, utility rooms, indoor storage areas, or garage areas. The buildings and sampling locations are as follows:

- Buildings 1 through 5 – All units in these buildings have a garage, bathroom, and living space on the ground floor slab-on-grade. We will collect one set of indoor air/sub-slab vapor samples in each building. Preference will be given to sampling a residential living space if an accessible unit can be identified in each building. If an accessible indoor living space cannot be determined for

both indoor air and sub-slab sample, then the sub-slab sample will be collected from a garage space and the indoor air sample will be collected from the adjacent living space.

- Club House – has no residential units - one set of indoor air/sub-slab vapor samples will be collected in the basement area.

- Carriage Houses – All units in these buildings have a garage, bathroom, and living space on the ground floor slab-on-grade. Therefore, one set of indoor air/sub-slab vapor samples will be collected in each of the NE, NW, SE, and SW buildings. For these buildings we will collect one set of indoor air/sub-slab vapor samples will in each building. Preference will be given to sampling a residential living space if an accessible unit can be identified in each building. If an accessible indoor living space cannot be determined for both indoor air and sub-slab sample, then the sub-slab sample will be collected from a garage space and the indoor air sample will be collected from the adjacent living space.

- Lookout South – no residential units are present on the ground floor slab-on-grade – we will therefore collect one sample set in the ground floor from an accessible location in the garage, stairwell, utility closet or similar accessible location.

- Lookout North – two residential units are located on the ground floor – one set of indoor air/sub-slab vapor samples will be collected in a residential unit provided one can be made available for sampling. If not, then the sample set will be collected from an accessible location in the garage, stairwell, utility room or similar space.

- Lighthouse – nine residential units on the ground floor – one set of indoor air/sub-slab vapor samples will be collected in an accessible residential unit. If one of the residential units is not accessible, then the sample set will be collected from an accessible location in a lobby, stairwell, utility room or the garage.

Figures showing the unit layouts and/or ground floor plans for these buildings are attached.

METHODS

Field methods will be consistent with guidance from the New York State Department of Health *Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006*.

As requested, indoor air and sub-slab sampling will be conducted concurrently, For indoor air sampling, a laboratory-supplied 6-liter Summa canister with flow regulator will be placed on the floor within the living space of a residential unit on the ground floor (floor in contact with the slab-on-grade) and the regulator will be set to fill at a rate less than 0.1 liters/minute for one hour.

For sub-slab soil vapor sampling, the following procedure will be followed:

- Drill ¾-inch hole through concrete slab into the sub-slab gravel with impact hammer drill. The hole will be drilled in an unobtrusive place such as a closet; tile and wood floors will be avoided.
- Place new flexible tubing into the drilled test holes extending to the sub-slab gravel and seal the annular space around the tubing with hydrated bentonite.
- Connect the tubing to a laboratory-supplied 6-liter Summa canister; setting the regulator to fill at a rate less than 0.1 liters/minute for one hour.
- Seal the test hole with bentonite (to 0.1 foot of bottom of the slab), urethane caulk (to 0.2 foot below top of slab) and finished with a non-shrink grout.

Per the SMP, because impacts at the Site have been associated with coal tar and petroleum residues in the subsurface, the samples will be analyzed for VOCs (minus chlorinated compounds) by USEPA Method TO-15 at a NYSDOH certified laboratory.

Per the SMP, at least once for each round of sampling, a tracer gas (Helium) will be used as a quality assurance/quality control measure to verify the method to seal the soil vapor probe was satisfactory (i.e. ambient air not entrained in the soil vapor sample). An apparatus conforming to Figure 2.4 of the *Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006* will be used. Once it is verified that the helium is not infiltrating past the surface seal for the soil vapor probe, identical protocols for surface sealing will be used for subsequent sample locations.

SCHEDULE

We plan to access residential units which are vacant or can be made accessible by a resident during the heating season in order to be as unobtrusive to the community as possible. Therefore, it is not possible to designate specific units where testing will be performed at this time; again, if a residential unit cannot be found accessible in a subject building, then the sample location set will be determined by the criteria summarized above but the sampling will be performed in the coming heating season. For planning purposes for this sampling program, we will be considering the months of October through March being in the 2019/2020 heating season.

CLOSING

Please contact us if you have any questions.

Sincerely yours,
HALEY & ALDRICH OF NEW YORK

Vincent B. Dick
Principal

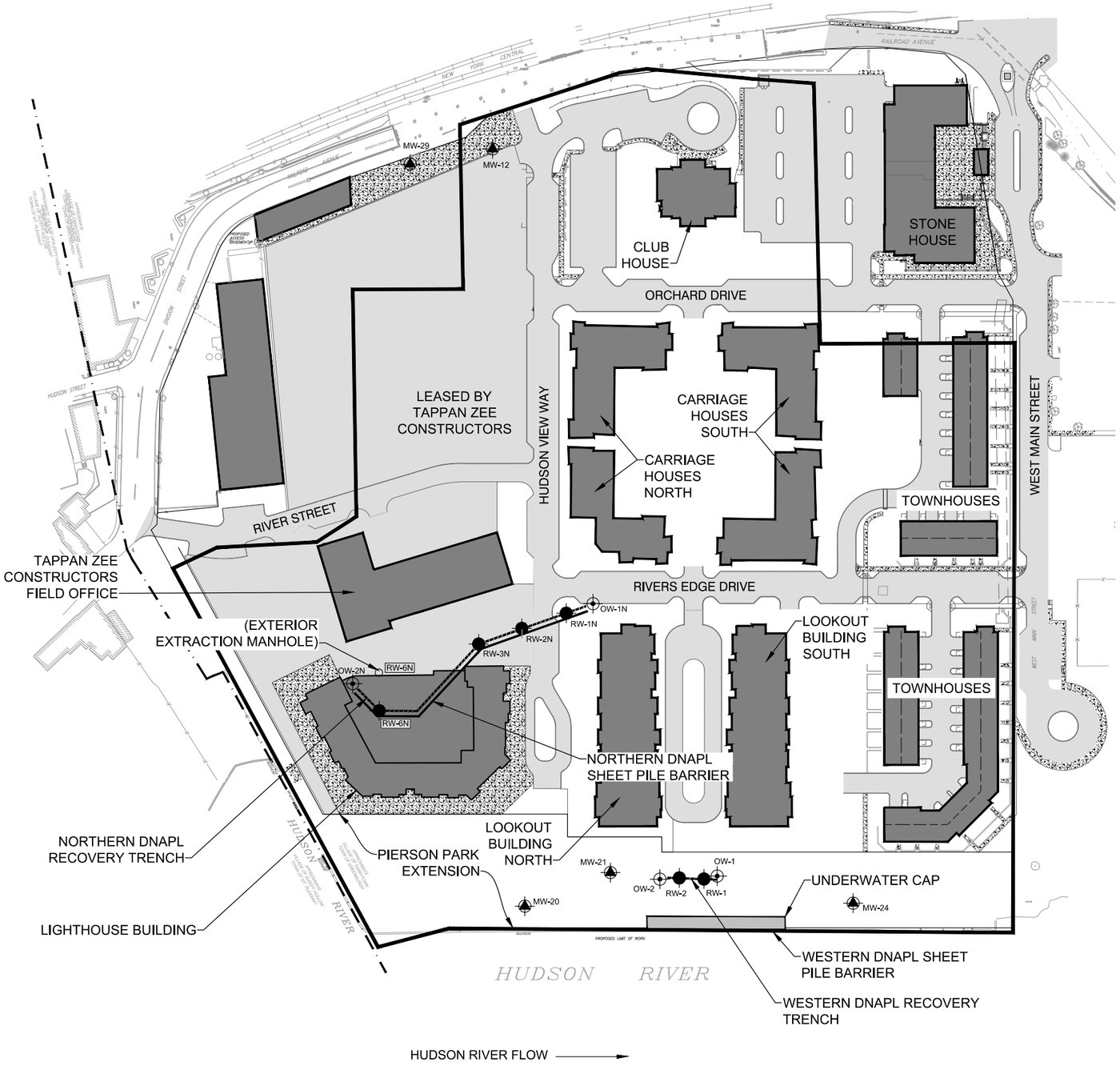
Jonathan D. Babcock, P.E.
Senior Technical Specialist

Attachments:

Site Plan Figure 3, 2018
Buildings 1-5 Unit Layout Figures, 2011
Club House Floor Plan, Figure 1, 2014
Carriage Houses Unit Layout Figures, 2014
Lookout Building South Floor Plan Figure 1, 2014
Lookout Building North Floor Plan Figure 1, 2014
Lighthouse Building Floor Plan Figure 3, 2018

c: Carl Monheit, Ferry Landings, LLC
Steven Berninger, NYSDOH

G:\Projects\28590 Hudson Harbor - National Resources\029 2019 Services\Soil Vapor IAQ Sampling 2019\2019-0821_VIMS 2019 Subslab IAQ Sampling Ltr-F.docx



LEGEND

- GROUNDWATER MONITORING WELL
- DNAPL RECOVERY WELL
- EXTERIOR EXTRACTION MANHOLE
- DNAPL OBSERVATION WELL
- APPROXIMATE AREA ENCOMPASSED BY THE BROWNFIELD CLEAN-UP AGREEMENT #C36OO64
- LANDSCAPED AREAS (THESE AREAS CONTAIN DEMARCATION LAYER BELOW CLEAN FILL AND LANDSCAPING)
- PAVED WALKS, PATIOS, OR COURTYARDS
- EXISTING BUILDINGS
- ROADS AND PARKING AREAS

NOTES

1. BASE MAP IS BASED ON CAD DRAWING ENTTILED "PH1_10399-08_PHASE.DWG," DATED 1 JULY 2009 FROM CHAZEN COMPANIES OF GLENN FALLS, NEW YORK AND "PARKING ALLOCATION DIAGRAM," DATED 7 MARCH 2013 FROM LESSARD GROUP, INC., VIENNA, VIRGINIA.

N

0 80 160 240 320
SCALE IN FEET

HALEY ALDRICH

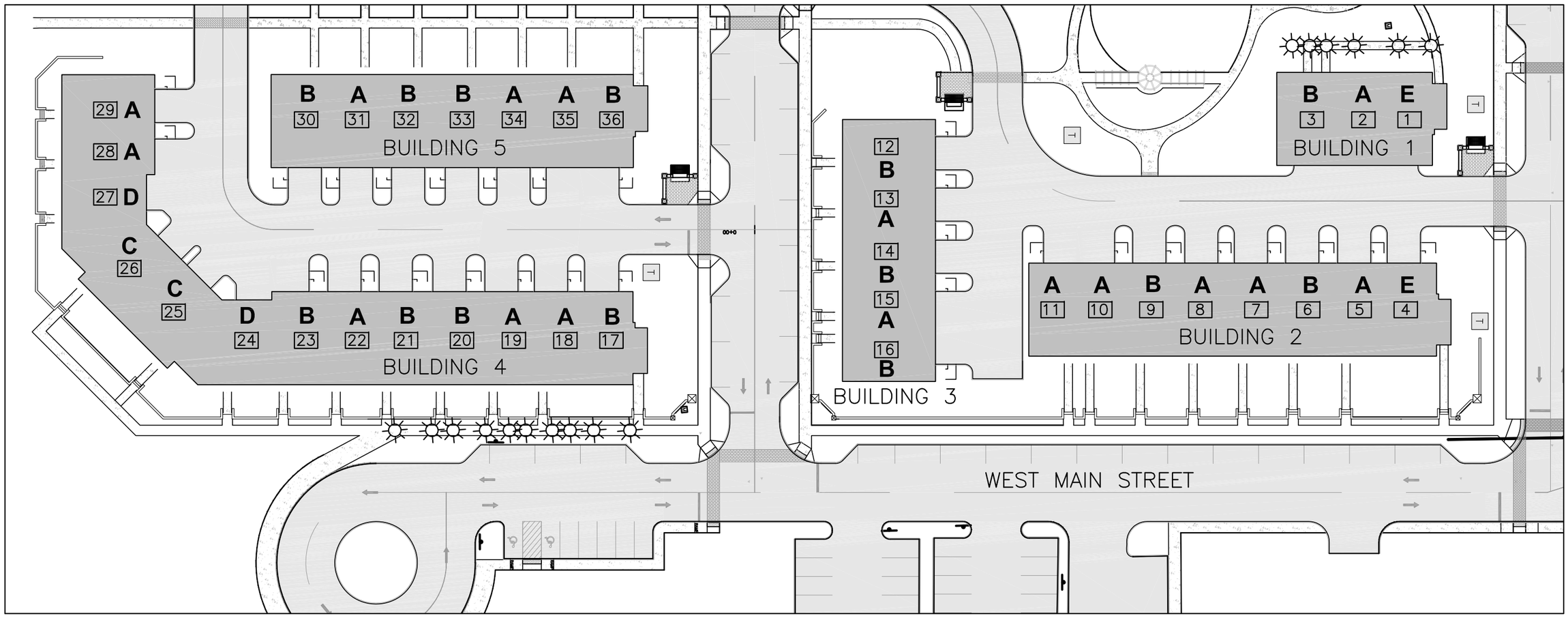
TARRYTOWN FORMER MGP SITE
TARRYTOWN, NEW YORK
FERRY LANDINGS, LLC
NYSDEC SITE NO. C360064

SITE COVER PLAN 2018

SCALE: AS SHOWN
DECEMBER 2018

FIGURE 3

Return to Table of Contents

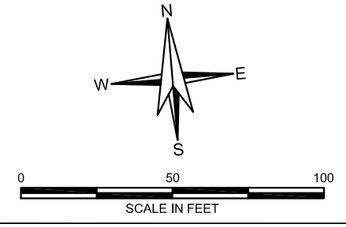


LEGEND:

23	UNIT NUMBER
A	UNIT FLOOR PLAN TYPE

NOTES:

1. THIS PLAN IS ADAPTED FROM CHAZEN COMPANIES DRAWING FILE "XLAYOUT_10399-00.DWG".
2. GEOTHERMAL SYSTEM INSTALLATION LOCATIONS ARE APPROXIMATE.



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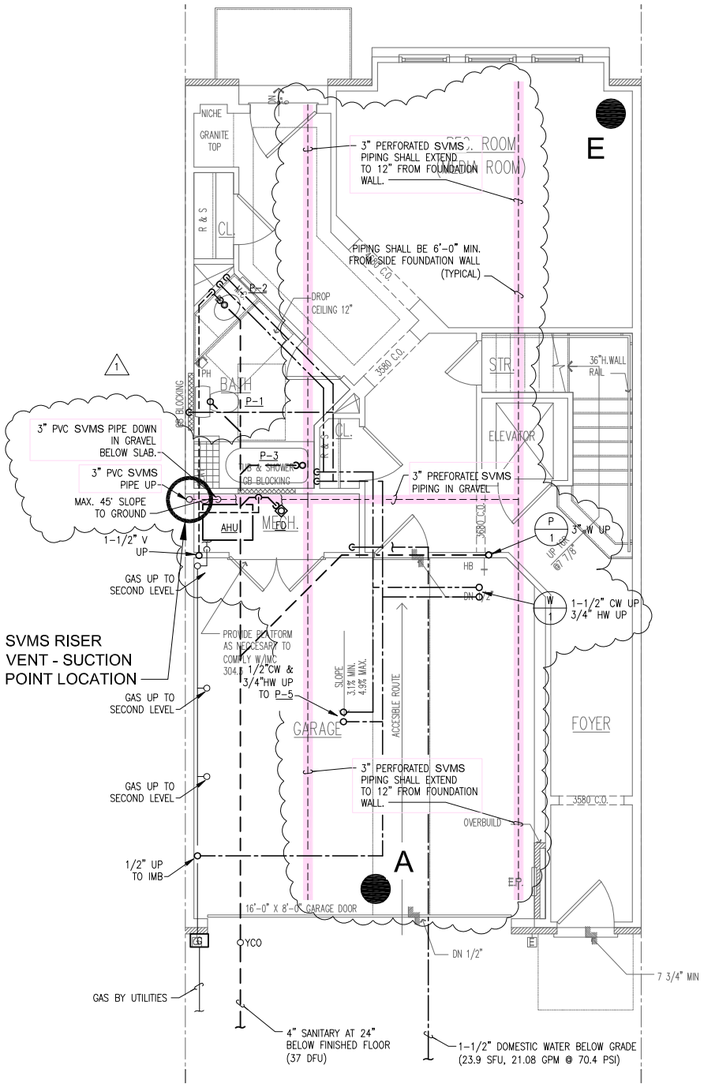
TARRYTOWN FORMER MGP SITE
TARRYTOWN, NY
FERRY LANDINGS, LLC
NYSDEC SITE NO. C360064

SOIL VAPOR MANAGEMENT SYSTEM LOCATIONS (BUILDINGS 1-5)

SCALE: AS SHOWN
JULY 2011

FIGURE 1

G:\PROJECTS\28590\017 SITE DEVELOPMENT SERVICES\CORRESPONDENCE\2011\SSD DEC DOCUMENTATION\FIGURE 4_2011-0720.DWG

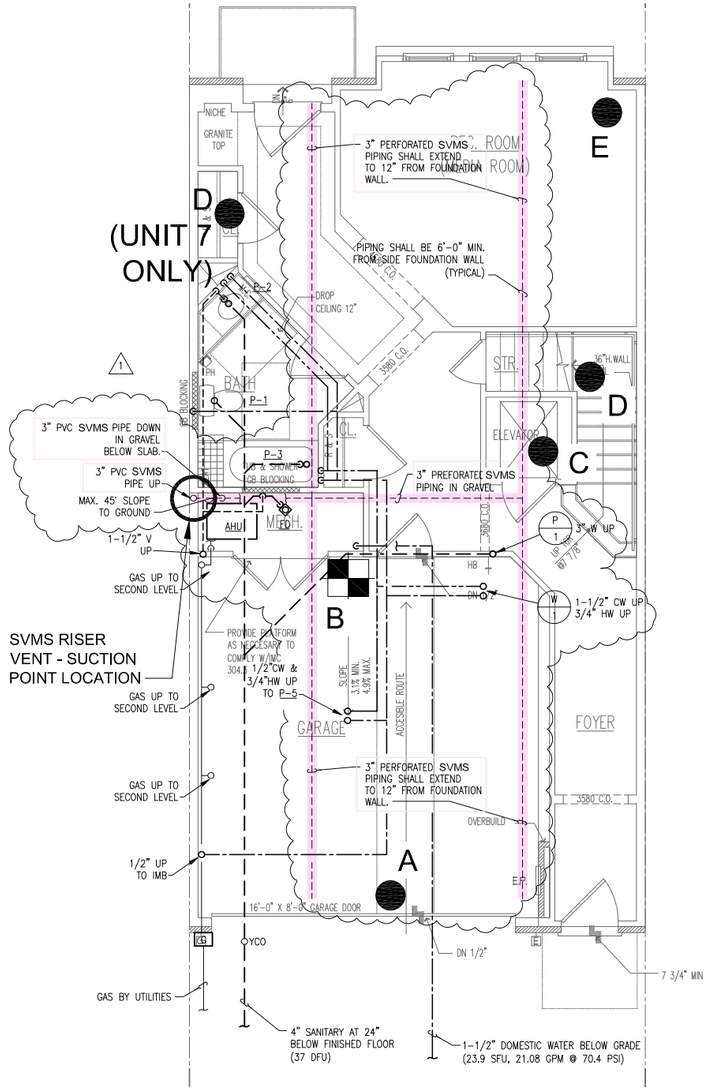


UNIT A - GROUND FLOOR
SCALE: 1/4" = 1'-0"

0 4 8
SCALE IN FEET

POST CONSTRUCTION APPROXIMATE SVMS TEST LOCATIONS

(TYP - UNIT A, EXCEPT CENTER UNIT)

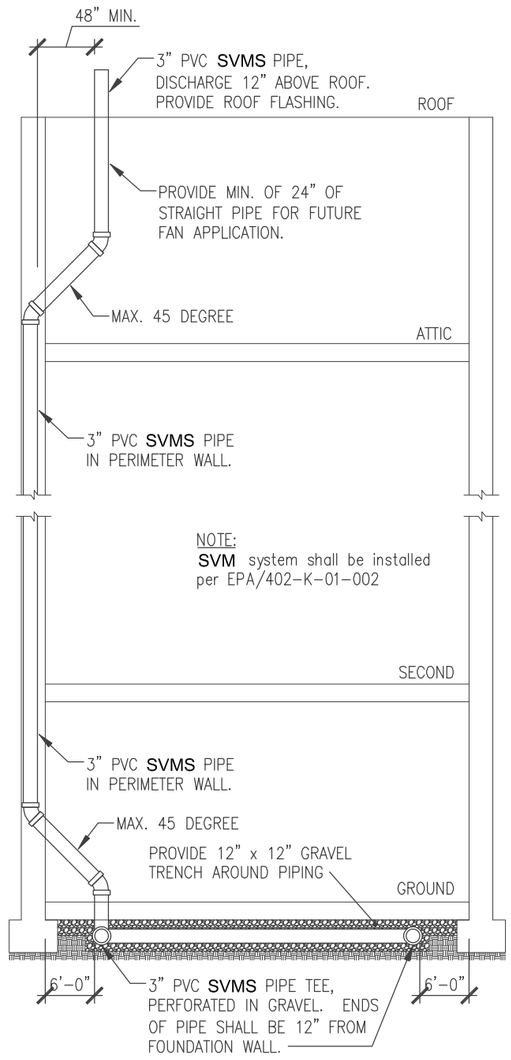


UNIT A - GROUND FLOOR
SCALE: 1/4" = 1'-0"

0 4 8
SCALE IN FEET

POST CONSTRUCTION APPROXIMATE SVMS TEST LOCATIONS

(TYP. - CENTER UNIT A)



SVSM PROFILE (TYP - ALL UNITS)

N.T.S.

LEGEND:

- ● SUB-SLAB VACUUM TEST
- ◩ SOIL VAPOR SAMPLE AND SUB-SLAB PRESSURE TEST
- A TEST LOCATION IDENTIFICATION

NOTES:

1. SVMS = SOIL VAPOR MANAGEMENT SYSTEM
2. GROUND FLOOR PLANS SHOWN WERE TAKEN FROM DWGS. PA-200 THRU PE-200, PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07. SVMS PROFILE TAKEN FROM DWG. P-701 PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07.

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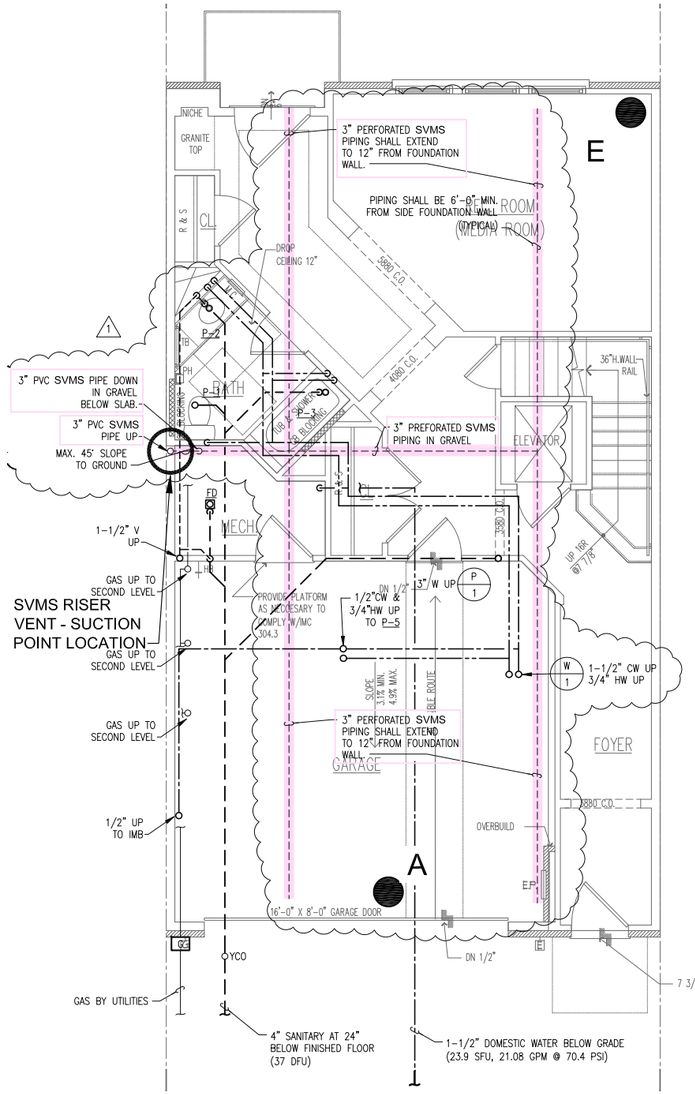
TARRYTOWN PROPERTY DEVELOPMENT
FERRY LANDINGS, LLC
SITE NO. C360064
BROWNFIELD CLEANUP INDEX NO. W3-1007-04-06

SOIL VAPOR MANAGEMENT SYSTEM AND TEST LOCATION PLAN UNIT A - TYP. FLOOR PLAN

SCALE: NOT TO SCALE
JULY 2011

FIGURE 2

G:\PROJECTS\28590\017 SITE DEVELOPMENT SERVICES\CORRESPONDENCE\2011\SSD DEC DOCUMENTATION\FIG 2-4 SVM TESTING FLOOR PLANS.DWG



UNIT B - GROUND FLOOR

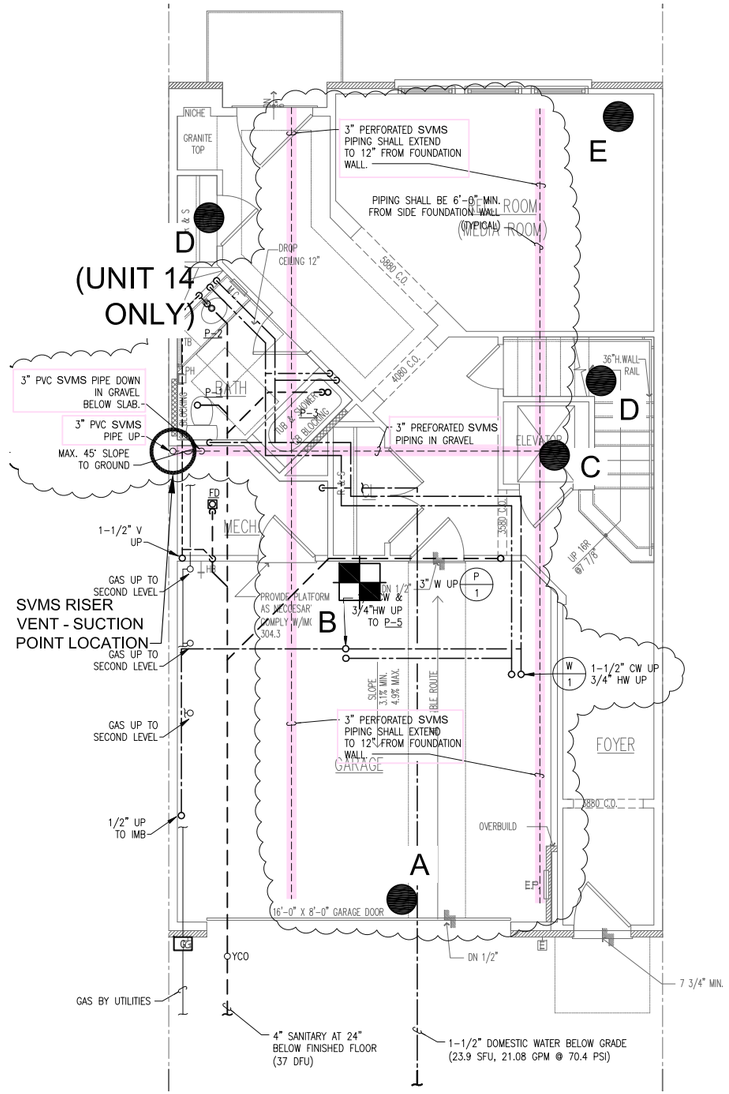
SCALE: 1/4" = 1'-0"

0 4 8

SCALE IN FEET

POST CONSTRUCTION APPROXIMATE SVMS TEST LOCATIONS

(TYP -UNIT B, EXCEPT CENTER UNIT)



UNIT B - GROUND FLOOR

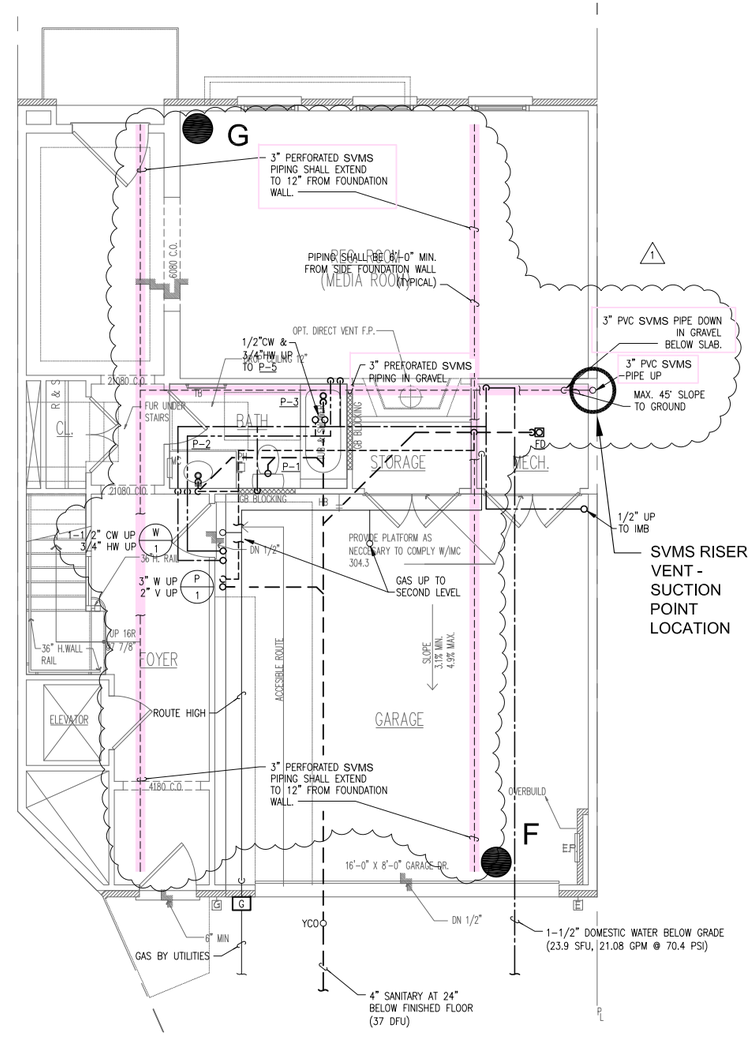
SCALE: 1/4" = 1'-0"

0 4 8

SCALE IN FEET

POST CONSTRUCTION APPROXIMATE SVMS TEST LOCATIONS

(TYP. - CENTER UNIT B)



UNIT C - GROUND FLOOR

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

0 4 8

SCALE IN FEET

POST CONSTRUCTION APPROXIMATE SVMS TEST LOCATIONS

(TYP. - ALL UNIT C)

LEGEND:

- ● SUB-SLAB VACUUM TEST
- ◪ SOIL VAPOR SAMPLE AND SUB-SLAB PRESSURE TEST
- A TEST LOCATION IDENTIFICATION

NOTES:

1. SVMS = SOIL VAPOR MANAGEMENT SYSTEM
2. GROUND FLOOR PLANS SHOWN WERE TAKEN FROM DWGS. PA-200 THRU PE-200, PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07. SVMS PROFILE TAKEN FROM DWG. P-701 PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07.

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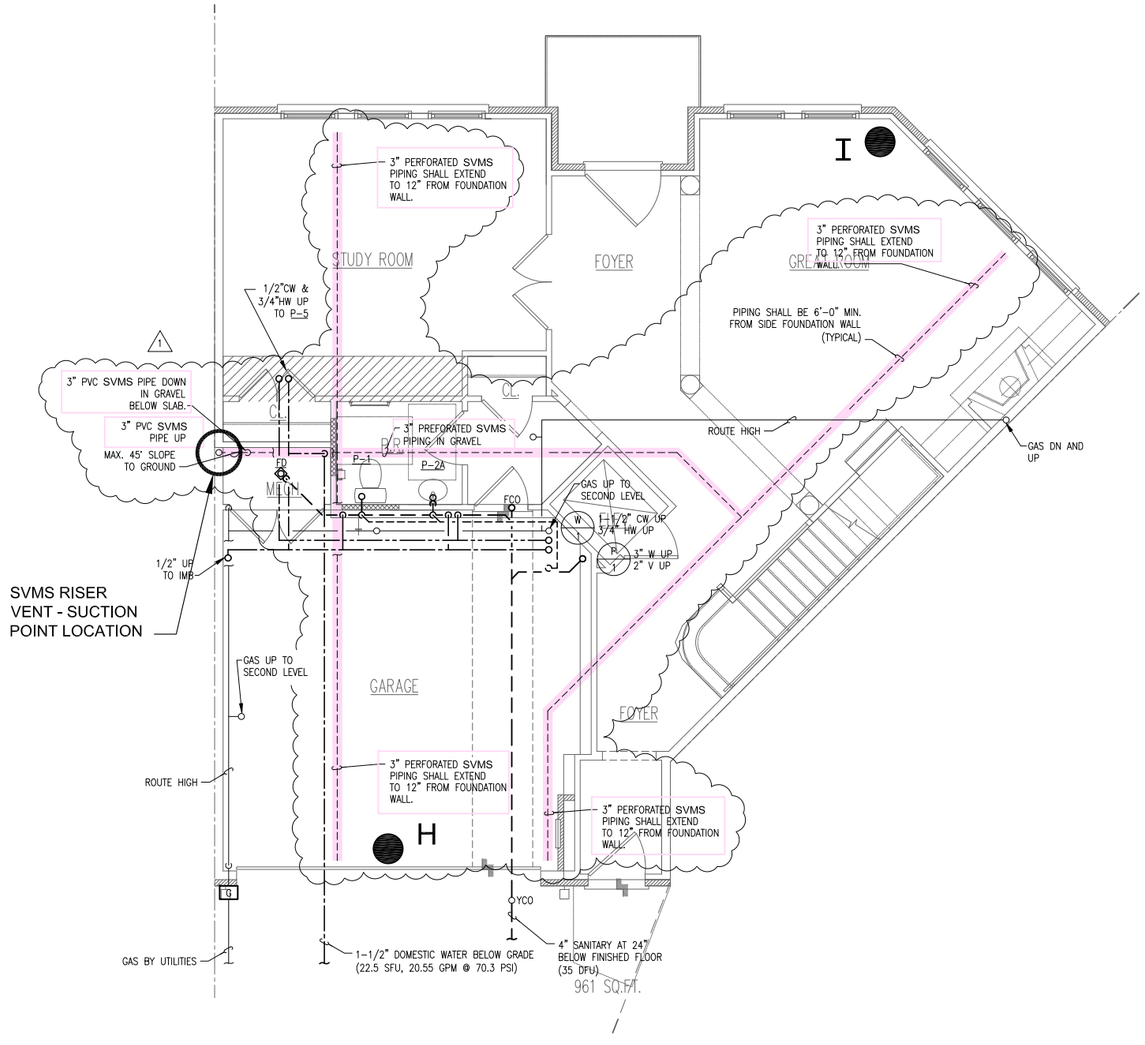
TARRYTOWN PROPERTY DEVELOPMENT
FERRY LANDINGS, LLC
SITE NO. C360064
BROWNFIELD CLEANUP INDEX NO. W3-1007-04-06

SOIL VAPOR MANAGEMENT SYSTEM AND TEST LOCATION PLAN
UNIT B AND C - TYP. FLOOR PLANS

SCALE: NOT TO SCALE
JULY 2011

FIGURE 3

G:\PROJECTS\285900\017 SITE DEVELOPMENT SERVICES\CORRESPONDENCE\2011\SSD DEC DOCUMENTATION\FIG 1-3 SVM TESTING FLOOR PLANS.DWG

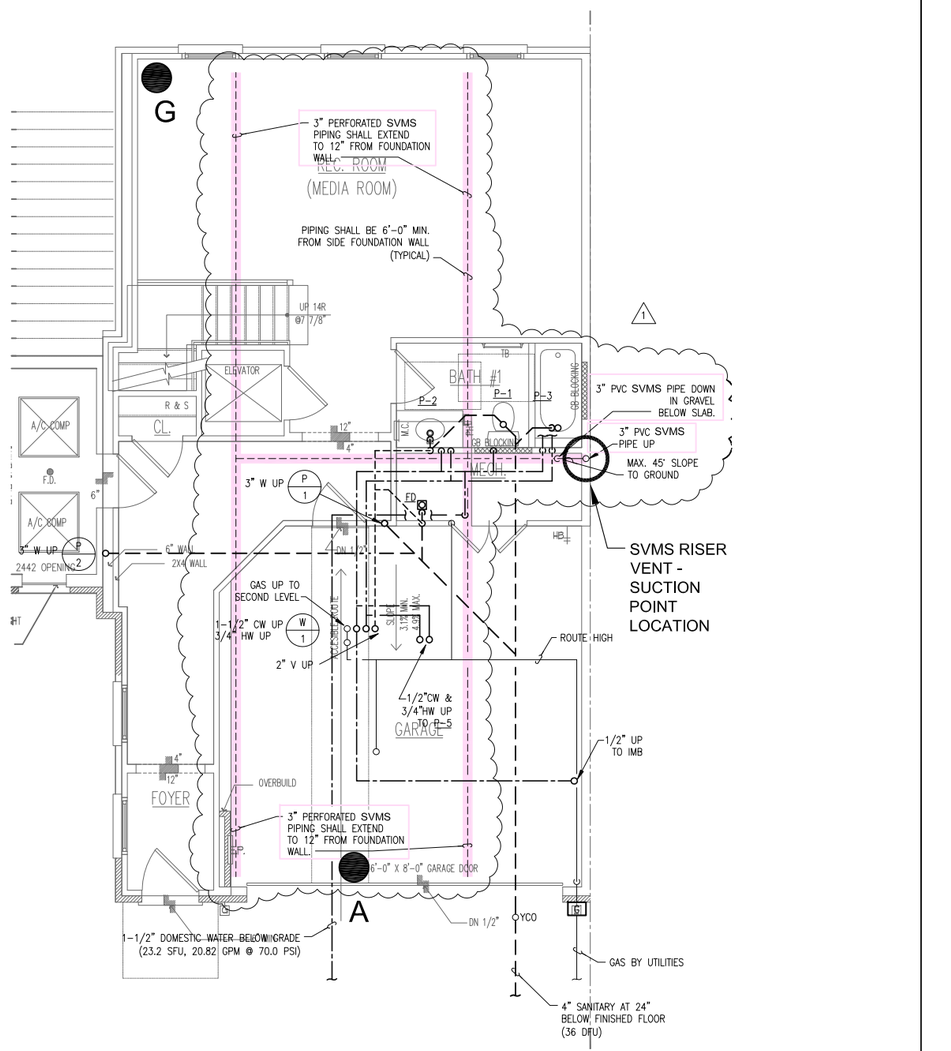


UNIT D - GROUND FLOOR
SCALE: 1/4" = 1'-0"

0 4 8
SCALE IN FEET

POST CONSTRUCTION APPROXIMATE SVMS TEST LOCATIONS

(TYP - ALL UNIT D)



UNIT E - GROUND FLOOR
SCALE: 1/4" = 1'-0"

0 4 8
SCALE IN FEET

POST CONSTRUCTION APPROXIMATE SVMS TEST LOCATIONS

(TYP. - ALL UNIT E)

LEGEND:

- ● SUB-SLAB VACUUM TEST
- ◪ SOIL VAPOR SAMPLE AND SUB-SLAB PRESSURE TEST
- A TEST LOCATION IDENTIFICATION

NOTES:

1. SVMS = SOIL VAPOR MANAGEMENT SYSTEM
2. GROUND FLOOR PLANS SHOWN WERE TAKEN FROM DWGS. PA-200 THRU PE-200, PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07. SVMS PROFILE TAKEN FROM DWG. P-701 PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07.

HALEY & ALDRICH

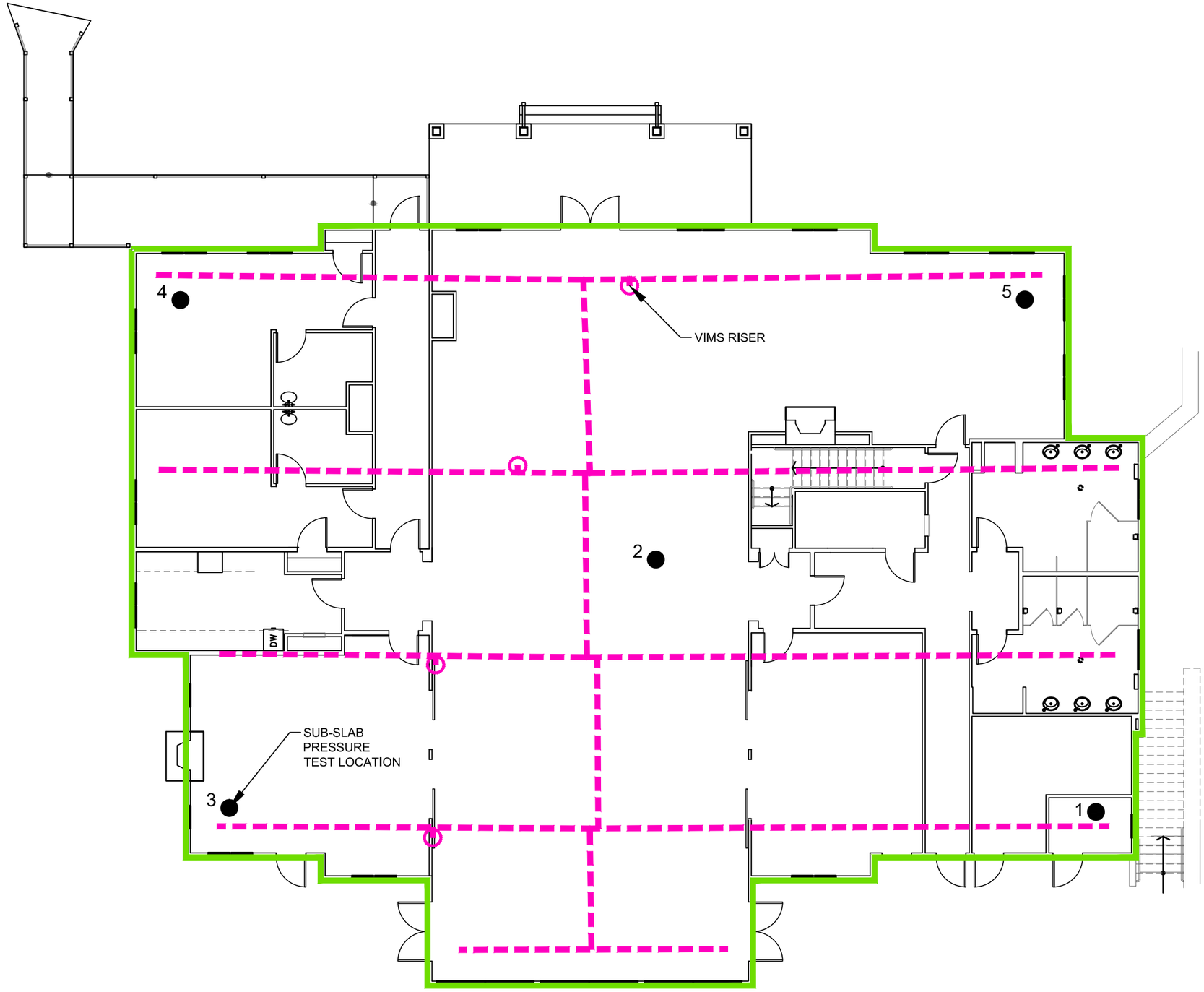
TARRYTOWN PROPERTY DEVELOPMENT
FERRY LANDINGS, LLC
SITE NO. C360064
BROWNFIELD CLEANUP INDEX NO. W3-1007-04-06

SOIL VAPOR MANAGEMENT SYSTEM AND TEST LOCATION PLAN
UNIT D AND UNIT E - TYP. FLOOR PLANS

SCALE: NOT TO SCALE
JULY 2011

FIGURE 4

G:\PROJECTS\28590\017 SITE DEVELOPMENT SERVICES\CORRESPONDENCE\2011\SSD DEC DOCUMENTATIONFIG 1-3 SVM TESTING FLOOR PLANS.DWG

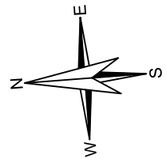


LEGEND:

- 1 ● SUB-SLAB PRESSURE TEST LOCATION
- ○ VIMS RISER
- 4" DIA PERFORATED PIPE
- OUTLINE OF BUILDING FOOTPRINT

NOTES

1. THIS PLAN IS ADAPTED FROM LESSARD DESIGN INC. DRAWING NRC001□B01_AB STAIR MODIFICATION - NEW.DWG.
2. VIMS □ VAPOR INTRUSION MANAGEMENT SYSTEM
3. SUB-SLAB PRESSURE TESTING POINT LOCATIONS BY HALEY □ ALDRICH ARE APPROXIMATE.



0 12 24
APPROXIMATE SCALE

HALEY & ALDRICH

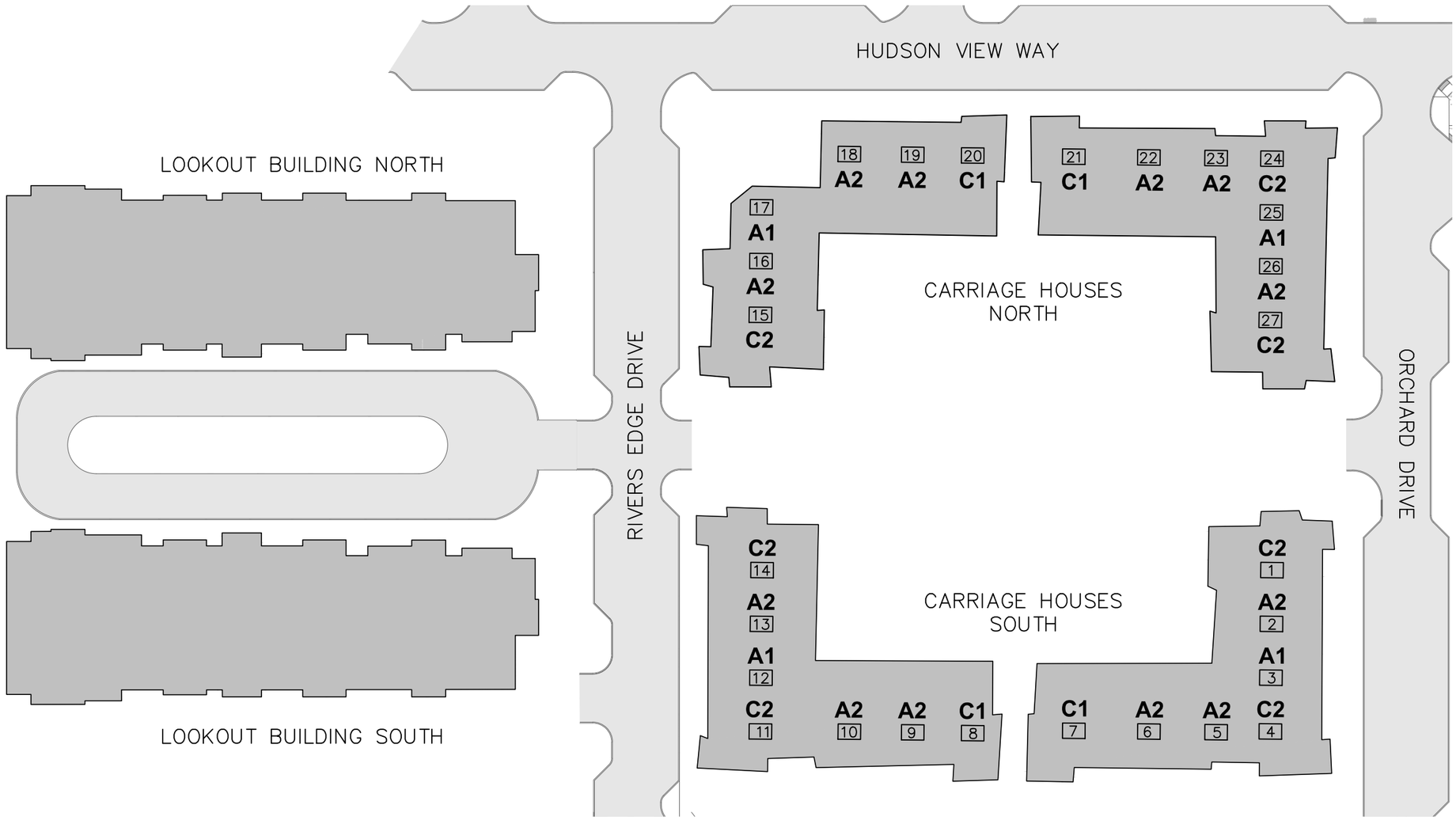
TARRYTOWN FORMER MGP SITE
TARRYTOWN, NEW YORK
FERRY LANDINGS, LLC
NYSDEC SITE No. C360064

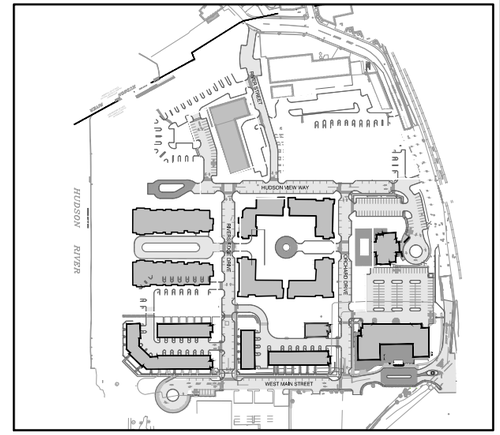
CLUBHOUSE - VAPOR INTRUSION MANAGEMENT SYSTEM AND TEST LOCATION PLAN

SCALE: AS SHOWN
SEPTEMBER 2014

FIGURE 1

G:\28590\GLOBAL\CAD\DRAWINGS\28590-000-0016 CLUBHOUSE VIMS.DWG





KEYMAP
SCALE 1" = 500'

LEGEND

23 UNIT NUMBER

UNIT FLOOR PLAN TYPE

NOTES

1. THIS PLAN IS ADAPTED FROM CHAZEN COMPANIES DRAWING FILE "XLAYOUT_10399-00.DWG".

HALEY & ALDRICH

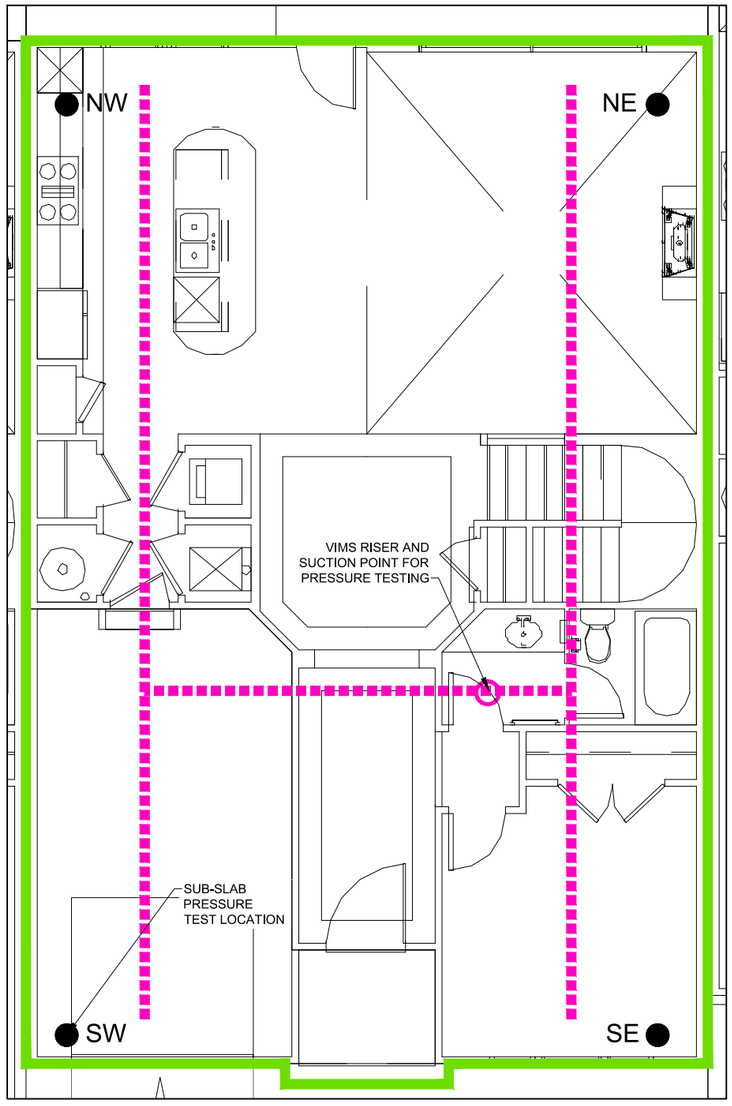
TARRYTOWN FORMER MGP SITE
TARRYTOWN, NEW YORK
FERRY LANDINGS, LLC
NYSDEC SITE No. C360064

UNIT LAYOUT WITH FLOOR PLAN TYPES - CARRIAGE HOUSES

SCALE: AS SHOWN
SEPTEMBER 2014

FIGURE 1

G:\28590\GLOBAL\CAD\DRAWINGS\28590-000-0014 CARRIAGE HOUSE SOIL VAPOR SYSTEM R3.DWG

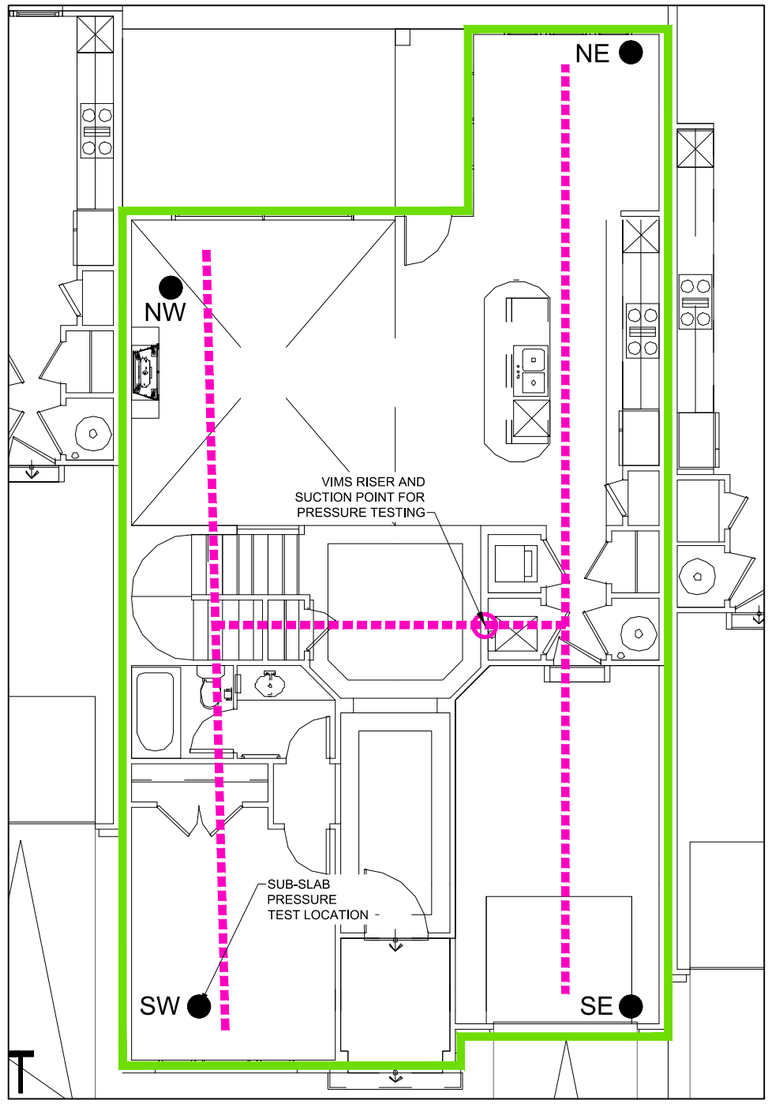


UNIT A1 - GROUND FLOOR

0 4 8

SCALE IN FEET

POST CONSTRUCTION
APPROXIMATE VIMS TEST LOCATIONS



UNIT A2 - GROUND FLOOR

0 5 10

SCALE IN FEET

POST CONSTRUCTION
APPROXIMATE VIMS TEST LOCATIONS

LEGEND:

- SUB-SLAB PRESSURE TEST LOCATION
- VIMS RISER
- NW — TEST LOCATION IDENTIFICATION
- 4" DIA PERFORATED PIPE
- OUTER BUILDING WALL

NOTES:

1. VIMS = VAPOR INTRUSION MANAGEMENT SYSTEM
2. GROUND FLOOR PLANS SHOWN WERE TAKEN FROM DWGS. PA-200 THRU PE-200, PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07. VIMS PROFILE TAKEN FROM DWG. P-701 PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07.

HALEY & ALDRICH

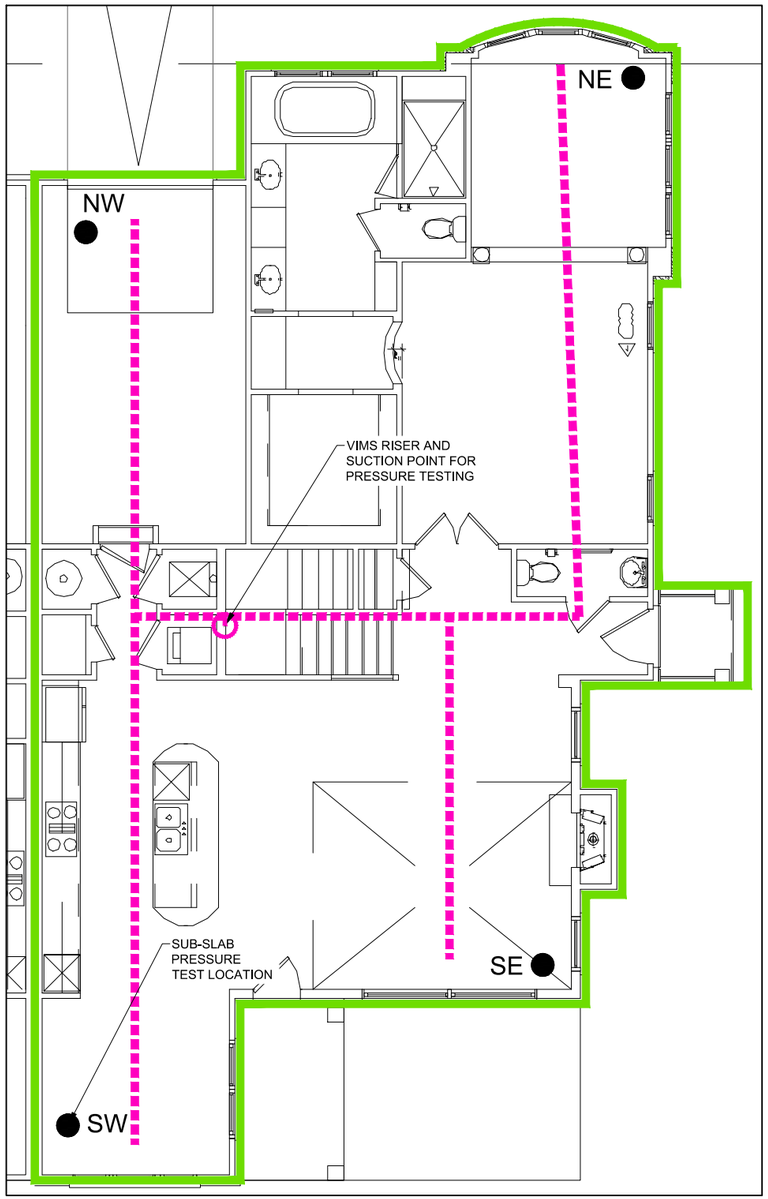
TARRYTOWN FORMER MGP SITE
TARRYTOWN, NEW YORK
FERRY LANDINGS, LLC
NYSDEC SITE No. C360064

CARRIAGE HOUSES NORTH - VAPOR INTRUSION MANAGEMENT SYSTEM AND TEST LOCATION PLAN, UNITS A1 AND A2

SCALE: NOT TO SCALE
SEPTEMBER 2014

FIGURE 2

G:\28590\GLOBAL\CAD\DRAWINGS\28590-000-0012 UNITS A-E SOIL VAPOR SYSTEM.DWG

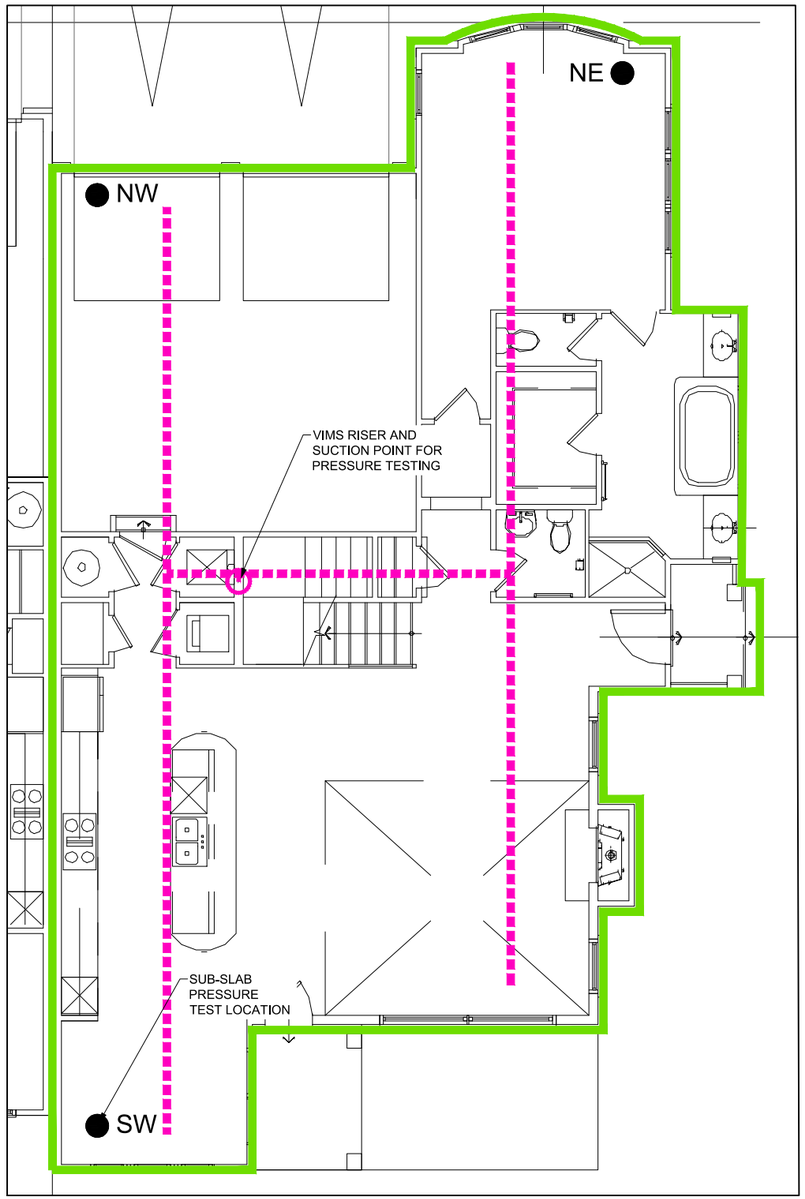


UNIT C1 - GROUND FLOOR

0 5 10

SCALE IN FEET

POST CONSTRUCTION
APPROXIMATE VIMS TEST LOCATIONS



UNIT C2 - GROUND FLOOR

0 5 10

SCALE IN FEET

POST CONSTRUCTION
APPROXIMATE VIMS TEST LOCATIONS

LEGEND:

- SUB-SLAB PRESSURE TEST LOCATION
- VIMS RISER
- NW — TEST LOCATION IDENTIFICATION
- 4" DIA PERFORATED PIPE
- OUTER BUILDING WALL

NOTES:

1. VIMS = VAPOR INTRUSION MANAGEMENT SYSTEM
2. GROUND FLOOR PLANS SHOWN WERE TAKEN FROM DWGS. PA-200 THRU PE-200, PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07. VIMS PROFILE TAKEN FROM DWG. P-701 PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07.

HALEY & ALDRICH

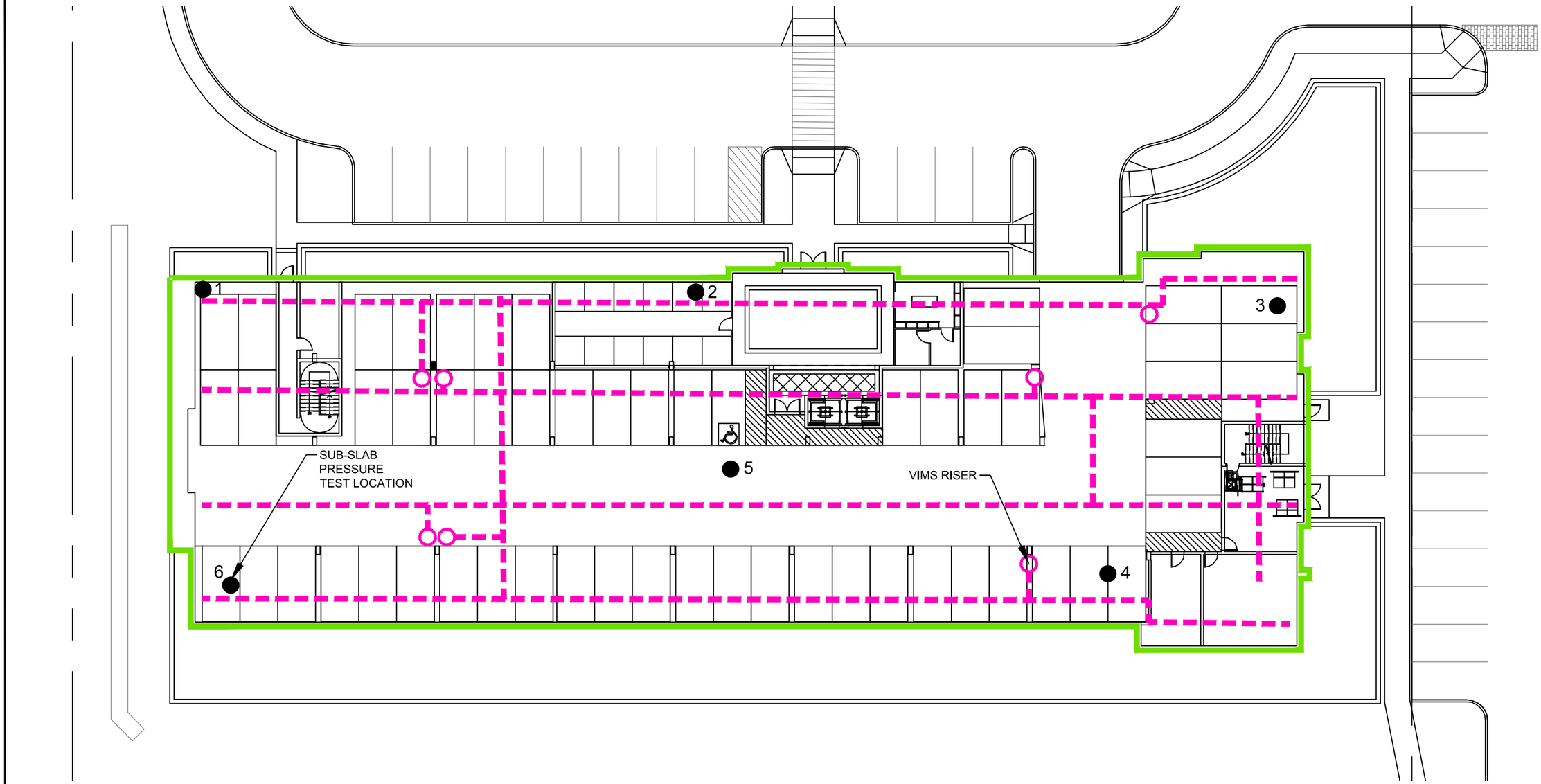
TARRYTOWN FORMER MGP SITE
TARRYTOWN, NEW YORK
FERRY LANDINGS, LLC
NYSDEC SITE No. C360064

CARRIAGE HOUSES NORTH - VAPOR INTRUSION MANAGEMENT SYSTEM AND TEST LOCATION PLAN, UNITS C1 AND C2

SCALE: NOT TO SCALE
SEPTEMBER 2014

FIGURE 3

G:\28590\GLOBAL\CAD\DRAWINGS\28590-000-0012 UNITS A-E SOIL VAPOR SYSTEM.DWG



LEGEND:

1 ● SUB-SLAB PRESSURE TEST LOCATION

○ VIMS RISER

4" DIA PERFORATED PIPE

OUTLINE OF BUILDING FOOTPRINT

NOTES

1. THIS PLAN IS ADAPTED FROM LESSARD URBAN INC. DRAWING P-100U.
2. VIMS = VAPOR INTRUSION MANAGEMENT SYSTEM
3. SUB-SLAB PRESSURE TESTING POINTS LOCATIONS BY HALEY & ALDRICH FIELD MEASUREMENT.

N W E S

HALEY & ALDRICH

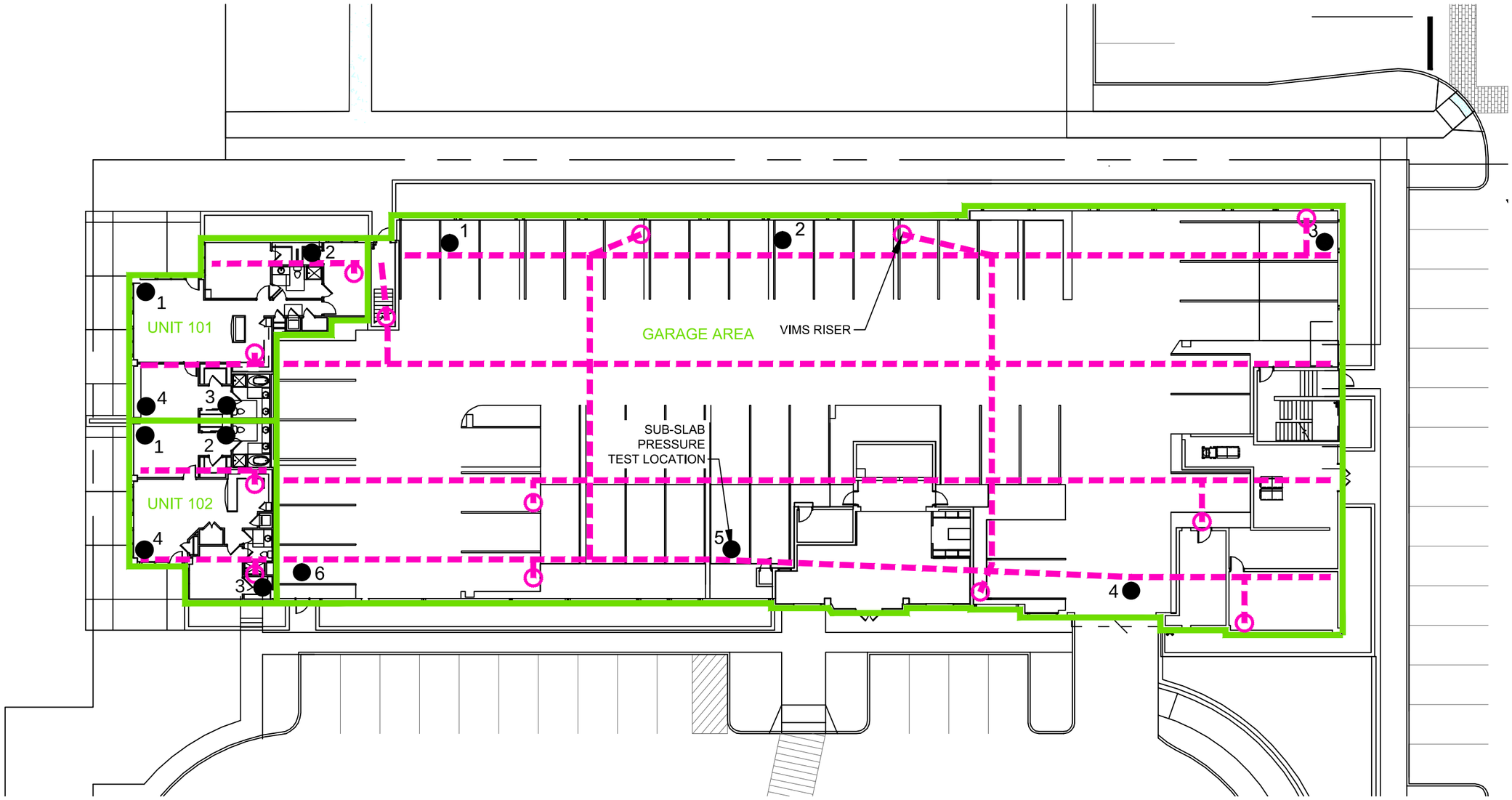
TARRYTOWN FORMER MGP SITE
TARRYTOWN, NEW YORK
FERRY LANDINGS, LLC
NYSDEC SITE No. C360064

LOOKOUT BUILDING SOUTH - VAPOR INTRUSION MANAGEMENT SYSTEM AND TEST LOCATION PLAN

SCALE: NOT TO SCALE
SEPTEMBER 2014

FIGURE 1

G:\28590\GLOBAL\CAD\DRAWINGS\28590-000-0013 LOOKOUT BLDG #1 SOIL VAPOR SYSTEM R2.DWG



LEGEND:

- 1 ● SUB-SLAB PRESSURE TEST LOCATION
- ○ VIMS RISER
- 4" DIA PERFORATED PIPE
- OUTLINE OF BUILDING FOOTPRINT AND UNITS 101 AND 102

NOTES

1. THIS PLAN IS ADAPTED FROM LESSARD URBAN INC. DRAWING P-100U.
2. VIMS = VAPOR INTRUSION MANAGEMENT SYSTEM
3. SUB-SLAB PRESSURE TESTING POINTS LOCATIONS BY HALEY & ALDRICH FIELD MEASUREMENT.

N W E S

HALEY & ALDRICH

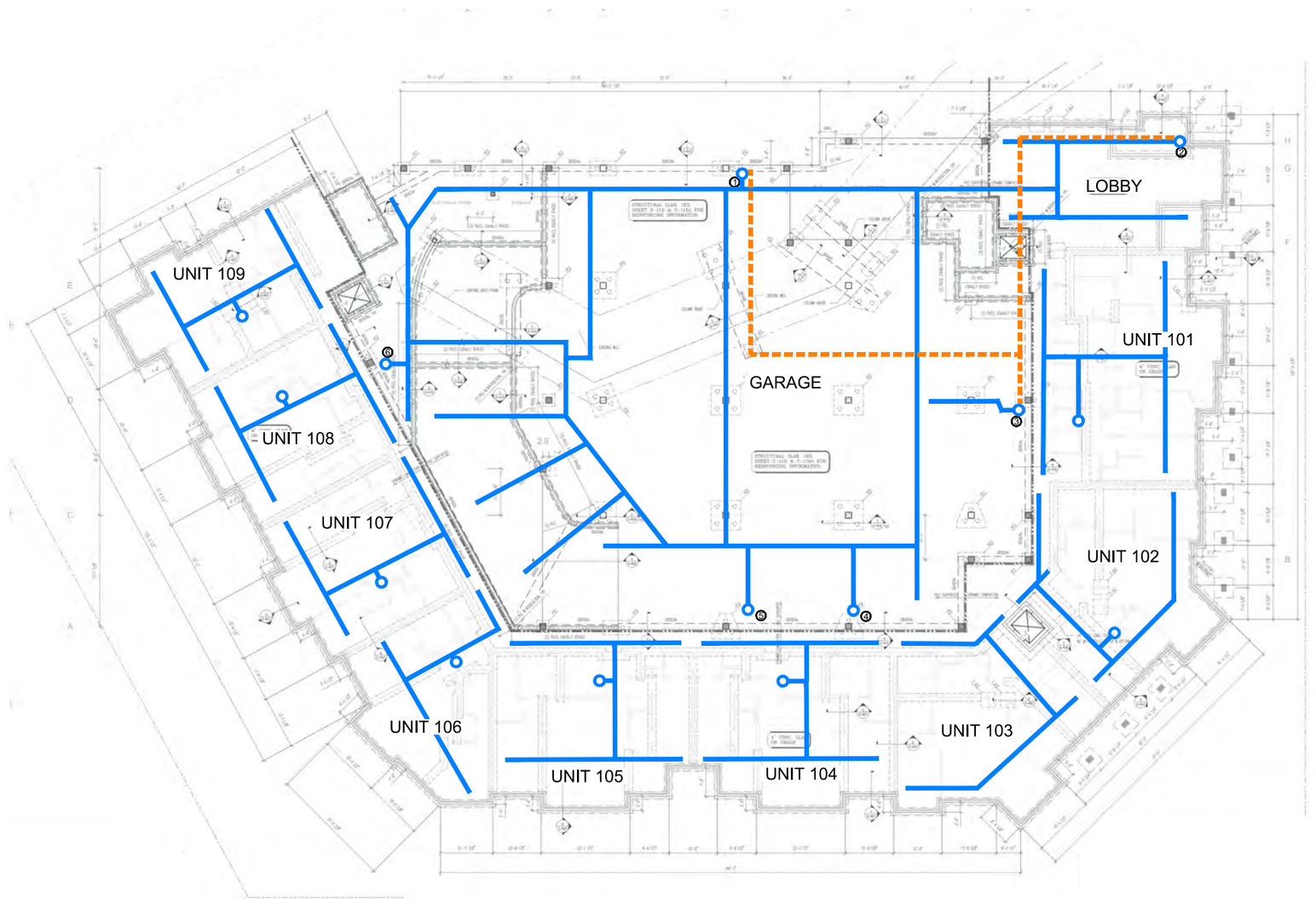
TARRYTOWN FORMER MGP SITE
TARRYTOWN, NEW YORK
FERRY LANDINGS, LLC
NYSDEC SITE No. C360064

LOOKOUT BUILDING NORTH - VAPOR INTRUSION MANAGEMENT SYSTEM AND TEST LOCATION PLAN

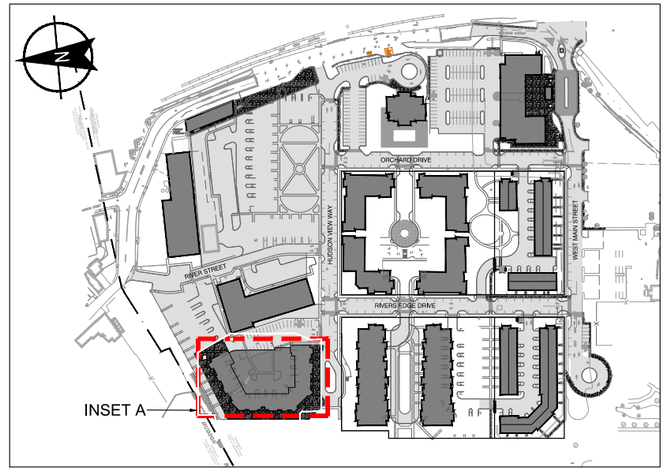
SCALE: NOT TO SCALE
SEPTEMBER 2014

FIGURE 1

G:\28590\GLOBAL\CAD\DRAWINGS\28590-000-0013 LOOKOUT BLDG #1 SOIL VAPOR SYSTEM R2.DWG



NSET



□E□□L□N
SCALE 1" □ 200□

LEGEND

UNIT 101	ROOM DESIGNATION
①	RISER NUMBER
	HORIZONTAL PERFORATED SUB-SLAB PIPE
	APPROXIMATE LOCATION OF OVERHEAD LATERAL FOR RISERS
	HORIZONTAL SOLID RISER LEADER PIPE

NOTE□

1. BASE MAP IS DRAWING S-100 RIVER HOUSE TARRYTOWN, NY FOUNDATION PLAN REVISED 23 SEPTEMBER 2015. BY LESSARD DESIGN, VIENNA, VA.
2. SUB-SLAB PIPES ARE PERFORATED. RISERS AND OVERHEAD PIPES ARE SOLID.

0 15 30 45 60
APPROXIMATE SCALE IN FEET

HALEY ALDRICH

TARRYTOWN FORMER MGP SITE
TARRYTOWN, NEW YORK
FERRY LANDINGS, LLC
NYSDEC SITE NO. C360064

VAPOR INTRUSION MANAGEMENT SYSTEM PIPING CONFIGURATION

SCALE: AS SHOWN
DECEMBER 2018

FIGURE 3