Construction Completion Report

Soil Vapor Intrusion Mitigation System Installation
Buildings 5, 6, and 6A

Location:

Former Emerson Power Transmission Facility
620 South Aurora Street
Ithaca, New York 14850
NYSDEC Site No. 755010

Prepared on Behalf of:

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Philadelphia, Pennsylvania 19134

LaBella Project No. 2241173

Revision No.	Date Submitted	Summary of Revision	NYSDEC Approval Date
--	12/24/2025	Original Report / Submission	Modifications Requested in Letter Dated 1/8/26
01	1/16/2026	Address comments and modifications requested in NYSDEC letter dated 1/8/26	

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CERTIFICATION

"I, Daniel P. Noll, certify that I am currently a NYS registered professional engineer and that this Construction Completion Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10)."

NYS Prof. Engineer # 081996	January 16, 2026 Date	Signature

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FIGURE

DRAWINGS – SOIL VAPOR INTRUSION MITIGATION SYSTEM

APPENDIX

COMMON / FREQUENT ACRONYMS AND ABBREVIATIONS

CCR – Construction Completion Report
DEC – Department of Environmental Conservation
EP-## - Extraction Point (ID)
ft – feet
FTEMP-## - Temporary Floor Monitoring Point (ID)
in – inch
IRM – Interim Remedial Measure
MH-## - Manhole (ID)
MP-## - Monitoring Point (ID)
NYSDEC – New York State Department of Environmental Conservation
NYSDOH – New York State Department of Health
O&M – Operation & Maintenance
PFE – Pressure Field Extension
PID – Photoionization Detector
ppb – Parts Per Billion
PRR – Periodic Review Report
SF – Square Feet
SMP – Site Management Plan
SSDS – Sub-Slab Depressurization System
SVI – Soil Vapor Intrusion
USEPA – United States Environmental Protection Agency
VOC – Volatile Organic Compound
“wc – inches of Water Column
WEP-## - Wall Extraction Point (ID)
WMP-## - Wall Monitoring Point (ID)
WTEMP-## - Temporary Wall Monitoring Point (ID)

1.0 INTRODUCTION

LaBella Associates, D.P.C. ("LaBella") was retained by Shift Capital to install soil vapor intrusion (SVI) mitigation systems for Buildings 5, 6, and the northern portion of 6A, at the Former Emerson Power Transmission Facility, located at 620 South Aurora Street, in the City of Ithaca, Tompkins County, New York, hereinafter referred to as the "Site" (refer to Figure 1).

Note: A Work Plan for the installation of the Sub-Slab Depressurization System installation was not provided prior to the work due to the expedited timeframe; however, the scope of the SVI mitigation systems' installation was in accordance with the information shared with the NYSDEC on October 24, 2025.

2.0 BACKGROUND

2.1 Site History & Background

Historical investigation and remediation activities have occurred at the Site. An Interim Site Management Plan (SMP), prepared by WSP USA Inc. ("WSP") and dated October 2022, outlines the institutional and engineering controls, inspections, monitoring, maintenance, and reporting requirements for the Site. The Interim SMP identifies the potential for soil vapor intrusion to impact site-related redevelopment activities, which must be addressed prior to use/occupancy. For a complete description of Site history and background, refer to the Interim SMP prepared by WSP (dated October 2022).

As of 2024, Shift Capital has acquired the Site and is in the process of redeveloping the Site.

2.2 Project Background

Shift Capital is redeveloping the Lower Level (Basement) of Buildings 5, 6, and 6A for commercial use by a tenant.

Vapor intrusion assessment activities conducted in 2013, 2023, and 2025 in Buildings 5, 6, and 6A have indicated a requirement for further monitoring (at minimum) and/or mitigation. WSP submitted a Vapor Intrusion Assessment Work Plan for Buildings 5, 6, and 6A, dated August 6, 2025 (hereinafter referred to as the "Work Plan"), outlining the plan to obtain representative vapor intrusion data from Buildings 5, 6, and 6A following redevelopment and prior to occupancy.

The Work Plan was implemented on September 5, 2025, with results indicating a need for 'Mitigation' according to the NYSDOH Decision Matrices, as well as the concentration of trichloroethene (TCE) in Indoor Air exceeding the NYSDOH Indoor Air Guideline Value of 2 ug/m^3.

Based on the results returned by the September 5, 2025 sampling event, WSP implemented a Pathway Assessment sampling event (including vapor sampling of the tunnel, manholes, wall, and other floor openings/drains) on September 19, 2025. The results of the Pathway Assessment indicated that the tunnel connecting Building 5 to Building 35 and the adjacent wall area are contributing to the vapor intrusion and indoor air quality concern identified in Buildings 5, 6, and the northern portion of 6A.

Based on the findings of the pre-occupancy vapor intrusion assessment performed September 5, 2025, and the Pathway Assessment results from the September 19, 2025 sampling event, it was determined that Mitigation followed by another round of vapor intrusion assessment/testing would be completed prior to the occupancy of Buildings 5, 6, and 6A.

This CCR summarizes the installation of SVI mitigation systems within Building 5, 6, and the northern portion of 6A, at the Site. Vapor intrusion assessment/testing results are reported by WSP under separate cover.

2.3 Buildings 5, 6, and 6A Description & Features

Buildings 5, 6, and 6A consist of contiguous space within the primary Site building. Numerous other interconnected buildings comprise the primary Site building. The location of Building 5, 6, and 6A are depicted on the attached Figure 1 and Drawing SVIM-01.

The space being redeveloped for use by a commercial tenant includes the Lower Level (Basement) of Buildings 5, 6, and 6A only. Each of Building 5, 6, and 6A also have a Main Level, which is currently unoccupied/vacant. Building 5 also contains unoccupied/vacant second, third, and fourth floors.

The Lower Level of Building 5, 6, and 6A has been isolated from adjoining interconnected Buildings with newly constructed air-tight demising walls. A barrier has been erected to seal the tunnel connecting Building 5 to Building 35.

2.4 Prior Remedial Measures

This CCR documents the first IRM dedicated to SVI mitigation of interior spaces of the Site buildings.

Previous IRMs, remedial actions, institutional and engineering controls, and monitoring requirements for the Site are described in the Interim SMP (October 2022).

3.0 OBJECTIVE

The primary objective of this IRM was to mitigate chlorinated VOC impacts identified in indoor air samples collected in the Lower Level (Basement) of Buildings 5 and 6 in (most recently) September 2025. This objective was accomplished via the installation of an active ventilation system for the Lower Level of Buildings 5, 6, and 6A, and the installation of three SVI mitigation systems within portions of Buildings 5 and 6:

- SVI Mitigation System 1 – Sub-Slab (Floor) Mitigation System
- SVI Mitigation System 2 – Below-Grade Wall Mitigation System
- SVI Mitigation System 3 – Tunnel Mitigation System

The Site is mostly unoccupied, with Buildings 5, 6, and 6A entirely unoccupied (prior to and during system installation) except for occasional activity from the Building Owner's maintenance staff and/or construction crews performing various redevelopment activities. As such, the completion of intrusive work such as installation of the SVI Mitigation Systems represented a minimal disturbance to the Site. However, occupancy of the Lower Level of Buildings 5, 6, and 6A was imminent as of October 2025. Swift action was therefore necessary to prevent delay to the impending occupancy of the space. Hence the lack of a formal Work Plan for this IRM, with the scope of the SVI mitigation systems' installation shared with the NYSDEC on October 24, 2025.

The overall objective for the Site is its continued redevelopment for future mixed use (primarily commercial and residential) and safe occupancy. The need for additional SVI mitigation systems elsewhere on-site is to be determined by the results of future Building-specific SVI evaluation, as outlined in the Interim SMP: *"An SVI evaluation work plan shall be submitted to the NYSDEC prior to a change of use that involves modifications to existing buildings and/or construction of new buildings."*

4.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

The following sub-sections summarize the remedial actions performed at the Site in relation to the mitigation of SVI in Building 5, 6, and 6A.

4.1 Pre-Design Assessment (for SSDS)

LaBella's subcontractor, Mitigation Tech of Brockport, New York ("Mitigation Tech"), visited the Site on April 2-3, 2025, to perform preliminary sub-slab air communication testing and a general building condition assessment of Buildings 5, 6, and 6A. Sub-slab air communication testing was utilized to design the most efficient system configuration.

The air communication testing included drilling test holes in representative sub-slab areas to create and measure vacuum influence. A known vacuum was applied to potential extraction/suction points to observe differential pressure measurements at various test points to estimate the expected radius of influence for typical extraction/suction points.

Volumetric airflow analysis was used to determine the number of extraction points supportable by particular blower types. Test holes were installed at representative areas of the slab to determine that sub-slab material was consistent. All test holes were repaired with urethane caulk applied over a closed cell backer rod. Based on the pre-design assessment, Mitigation Tech suggested appropriate locations for fan, extraction points/cavities, and other mitigation system components.

The final design is a result of weighing key elements (blower/fan type, extraction point location, pipe diameter, etc.) against the cost and feasibility of different construction strategies and materials. Blower/fan maintenance, noise, and operating cost are considered in system design.

4.2 SVI Mitigation System Installation - General

Mitigation Tech and LaBella performed all aspects of SVI mitigation system installation/construction, except electrical connection and some sealing procedures (which were completed by the Building Owner's maintenance personnel and separate electrical contractor).

Two 4"-diameter PVC and one 6"-diameter PVC conveyance (header) pipe systems connect extraction points to roof mounted blower/fans. For minimum impact to existing building condition/layout, riser pipes were installed adjacent to steel structural members and horizontal pipe was installed as close to ceiling and established raceways as practicable. Work was coordinated with the Building Owner to minimize disturbance.

Further information specific to the construction characteristics of the SVI Mitigation Systems are included in Section 5.2 and on the attached Drawings SVIM-00 through SVIM-03.

4.3 Ventilation System

To comply with building code requirements, a ventilation system was designed by an architect and HVAC contractor for the entirety of the Lower Level of Building 5, 6, and 6A. The ventilation system includes the following components:

1) Supply Air Intake
2) Ventilation Fan
3) Power Switch

The location and size of the supply air intake and ventilation/exhaust fan were selected to achieve ventilation of the entirety of the Lower Level of Building 5, 6, and 6A (20,357 SF at 0.06 CFM per SF, total of 1,220 CFM).

The ventilation system is actuated by a wall mounted toggle switch on the wall behind the area designated by the tenant as the cash wrap/check-out counter to limit access and accidental shut-down. The ventilation system is designed to operate at all times (24/7/365). The ventilation system was started on November 5, 2025.

4.4 Sealing Measures

Polyurethane sealants were applied to accessible floor cracks and slab penetrations to enhance the barrier between sub-slab and ambient air and improve the efficiency of the sub-slab depressurization system (SSDS). Materials used for sealing included Sika Sikaflex 1c-SI self-leveling joint sealant, and Sika 1a Sealant.

The tunnel connecting Building 5 to Building 35 was sealed by framing and drywall with perimeter sealant/caulk applied at the edges. A sealed access hatch is installed in the newly constructed demising wall.

5.0 SUMMARY OF SVI MITIGATION SYSTEM CONSTRUCTION

Field activities associated with the installation/construction of the SVI mitigation systems occurred from October 27 through November 6, 2025, with subsequent completion and final documentary inspections occurring November 21 and December 3, 2025.

All work was in accordance with the NYSDOH document, "*Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006*" and the document *"Soil Gas Mitigation Standards for existing Multifamily, School, Commercial and Mixed-use Buildings" (ANSI/AARST SGM-MFLB-2023).*

5.1 Construction Oversight

LaBella was periodically on-site during system installation activities performed by Mitigation Tech. LaBella's tasks included in-field design/engineering support, documenting the activities being performed, observation of material(s) encountered during extraction point installation, ensuring materials were properly handled, taking representative photographs of the system for use in the preparation of the As-Built, and collecting pressure differential (vacuum) data. Air monitoring during construction was not required due to the space being unoccupied, the limited disturbance involved, and ventilation of the space during mitigation system installation activities.

LaBella's observations made during construction oversight are included throughout this report. Representative photographs documenting the construction and installation activities are included on Drawing SVIM-00.

5.2 System Characteristics

Each SVI mitigation system consists of a roof mounted blower or fan connected by manifold piping to vapor extraction points. The systems were constructed using principles and equipment typically used for radon mitigation in buildings as detailed in the USEPA document 402-K-03-007 (May 2006), and the final NYSDOH *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (October 2006). The systems were installed as permanent, integral additions to the Buildings.

The following subsections describe the characteristics of each System installed in the Lower Level (Basement) of Buildings 5, 6, and 6A (Project Area).

5.2.1 System 1 – Sub-Slab (Floor) Mitigation System

SVI Mitigation System 1 refers to the sub-slab (floor) mitigation system (also known as a sub-slab depressurization system – SSDS) installed in the Project Area.

System 1 consists of thirteen (13) extraction points and risers (identified as EP-01 through EP-13). The extraction points consist of suction cavities excavated through core holes and subsequently sealed in place with urethane caulk. The suction cavities were created by the removal of approximately one (1) cubic foot of sub-slab material. Removed material was containerized on-site (refer to Section 6.0).

Conveyance pipe (riser) consists of 3"-diameter SCH 40 PVC pipe, connected to overhead / horizontal 4"-diameter SCH 40 PVC trunk lines installed near the ceiling. All risers and conveyance piping are secured by metal brackets.

Conveyance piping continues to a roof mounted blower system (OBAR SYSTEMS Obar 89 Radial Blower, spec sheet included in Appendix 1) with exhaust directed down wind. Vent pipes were installed at a pitch that ensures that any rainwater or condensation within the piping drains downward into the ground beneath the slab. Piping is independently supported (i.e., not supported from existing building mechanical systems). Piping is labeled at each level as "Sub-Slab Depressurization System". The overhead / horizontal pipe grid is suspended directly to structure and positioned no lower than existing mechanical improvements.

The Obar 89 Radial Blower (exhaust fan) was field selected for specific performance properties based on the requirements of pressure field extension testing. The system has an exterior disconnect switch.

At the time of System 1 start-up, in-pipe vacuum (measured at EP-10) was approximately 0.46" wc.

5.2.2 System 2 – Below-Grade Wall Mitigation System

SVI Mitigation System 2 refers to the below-grade wall mitigation system installed along the interior (eastern) wall of the Project Area.

System 2 consists of three (3) extraction points and risers (identified as WEP-01, WEP-02, and MH-36). The two (2) wall extraction points ("WEP") consist of suction cavities installed via core holes and subsequently sealed in place with urethane caulk. The suction cavities were created by the removal of approximately one (1) cubic foot of material from behind the wall. Removed material was containerized on-site (refer to Section 6.0). The third extraction point connected to System 2 (MH-36) is designed to collect vapors from beneath the cover of Manhole 36 on the interior (eastern) wall of Building 6.

Noticeable air flow was observed behind the wall at WEP-02. The air was screened with a PPB Rae PID which detected no vapors (0 ppb).

Conveyance pipe for System 2 consists of 2.5"-diameter SCH 40 PVC pipe (riser) connected to MH-36 and 4"-diameter SCH 40 PVC connective piping, then connected to overhead / horizontal 4"-diameter SCH 40 PVC piping installed near the ceiling. All risers and conveyance piping are secured by metal brackets. The 2.5"-diameter piping connected to MH-36 includes a valve for controlling air flow from MH-36. A flow restrictor is installed in the last 90° elbow adjacent to WEP-02 to balance the system, due to the increased volume of air present behind the wall of Building 6A (where WEP-02 is located).

Conveyance piping continues to a roof mounted exhaust fan (FANTECH Rn4-EC fan, spec sheet included in Appendix 1) with exhaust directed down wind. Vent pipes were installed at a pitch that ensures that any rainwater or condensation within the piping drains downward into the ground beneath the slab. Piping is independently supported (i.e., not supported from existing building mechanical systems). Piping is labeled at each level as "Sub-Slab Depressurization System".

The Fantech Rn4-EC (exhaust fan) was field selected for specific performance properties based on the findings of air communication testing performed on the below-grade interior wall at the start of system installation.

At the time of System 2 start-up, in-pipe vacuum (measured at WEP-02) was approximately 0.91" wc.

5.2.3 System 3 – Tunnel Mitigation System

SVI Mitigation System 3 refers to the ventilation system installed where the tunnel connecting Building 5 to Building 35 is located on the interior (eastern) wall of the Project Area.

System 3 consists of one (1) collection point and riser. The collection point consists of 6"-diameter SCH 40 PVC pipe penetrating the recently installed air-tight demising wall (drywall and access hatch with perimeter sealant/caulk) surrounding the tunnel opening into Building 5. The collection point connected to System 3 is designed to collect and ventilate vapors from the tunnel connecting Building 5 to Building 35.

Conveyance pipe for System 3 consists of 6"-diameter SCH 40 PVC pipe connected to overhead / horizontal 6"-diameter SCH 40 PVC piping installed near the ceiling. All conveyance piping is secured by metal brackets.

Conveyance piping continues to a roof mounted exhaust fan (RADONAWAY RP-380 fan, spec sheet included in Appendix 1) with exhaust directed down wind. Vent pipes were installed at a pitch that ensures that any rainwater or condensation within the piping drains downward into the ground beneath the slab. Piping is independently supported (i.e., not supported from existing building mechanical systems). Piping is labeled at each level as "Sub-Slab Depressurization System".

The Radonaway RP-380 (exhaust fan) was selected for its size and performance properties, including consideration of the size and volume of air in the tunnel, and ability to produce a negative pressure environment inside the tunnel relative to Building 5.

At the time of System 3 start-up, in-pipe vacuum was approximately 0.40" wc.

5.2.4 General System Characteristics - Electrical

The fans and blower are controlled from a dedicated circuit (Circuit Breaker No. 9) located in the electrical panel (breaker box) on the main level of Building 5, column G49.

5.2.5 General System Characteristics - Exhaust

No doors, windows, or air intakes are present within ten (10) feet of the exhaust point of each system. The fans are mounted with rubber Fernco couplings for ease of future replacement.

5.2.6 General System Characteristics - Instrumentation and Control

There is no centralized control for the SVI mitigation systems 1 - 3. Blower/fans can be turned off either from the adjacent positioned disconnect or at the marked breaker. Each system is equipped with a vacuum indicator mounted in the storage room in Building 6A. The vacuum indicators (gauges) consist of dial type Magnahelic Model 2001 (refer to spec sheet included in Appendix 1). The gauges can be inspected by observing the position of the needle. The gauges are designed primarily to give a simple visual check that vacuum is present in-pipe for each system, specifically by observation that the needle is at or near the position of the mark. The indicator is marked at the level observed by Mitigation Tech on November 26, 2025.

Audible alarms are also present and connected to the gauges. The alarms will sound upon loss of vacuum. These alarms are powered from a circuit separate from the circuit of the rooftop blower/fans.

5.3 System Monitoring

Sub-slab and below-grade wall vacuum monitoring points were installed during system construction. Vacuum monitoring points FMP-01, FMP-02, FMP-03, FMP-04, and WMP-01 consist of direct drill Vapor Pin® model points installed per manufacturer's instructions. The vapor pins installed through

the floor slab feature a removable stainless steel protective lid. Vacuum monitoring point WMP-02 consists of a hole drilled through the foundation wall sealed with a closed-cell backer rod.

The vacuum monitoring points were established to aid in original system design and confirmatory testing to prove effectiveness. Their future use shall be for recertification of system effectiveness and, if necessary, future sub-slab sampling.

For additional information pertaining to system monitoring refer to the separate document (Operations & Maintenance Plan, prepared by LaBella and dated December 2025) which is to be appended to the existing Interim SMP.

5.4 Groundwater Monitoring Well

Groundwater monitoring well WSP-MW-03B is located in the Project Area. The monitoring well was not altered or affected by SVI mitigation system installation activities. At the time of mitigation system installation activities, the well was sealed; however, the screws that secure the cover were missing.

5.5 Encountering of Trapped Stormwater

While performing System 2 (Below-Grade Wall) installation activities, apparent stormwater trapped behind the wall was encountered at one discrete location on the northernmost end of the approximate extent of the system's area of influence. The location where stormwater was encountered is identified on Drawing SVIM-01.

Roof leaks in the vicinity of the Project Area result in water infiltration on upper floors. An access hatch / manhole on the Main Level is located immediately adjacent to the area where water was encountered. Stormwater from occasional rain events has been observed entering the access hatch / manhole, representing the likely source of trapped water encountered during system installation activities. The building Owner has taken temporary measures to limit the volume of stormwater entering the hatch / manhole in question, with the condition anticipated to improve further in the future as site redevelopment continues.

The limited volume of water observed showed no field evidence of impairment (no odor or sheen observed). The water was dried with cloths and otherwise left to evaporate. An attempt to drain more water from behind the wall by drilling a second (larger) hole below the original resulted in no additional water seeping from the wall.

5.6 Restoration

Temporary monitoring points (holes) drilled through the foundation slab and below-grade wall were patched with ready-mix concrete by Mitigation Tech.

The Owner repaired roof penetrations where conveyance piping emerges and connects to the roof-mounted blower/fans.

6.0 MATERIALS MANAGEMENT

6.1 Soil / Fill

Sub-slab and below-grade soil/fill material generated during system installation activities (specifically, material removed as part of the extraction point installation process) was containerized in a 55-gallon steel drum, labeled, and transferred to the designated on-site storage location. WSP assumed responsibility for proper characterization and disposal of soil/fill material generated during system installation activities.

Note: *Soil/fill encountered during system installation activities exhibited no field evidence of impairment (no odors, discoloration, staining, etc.).*

7.0 PERFORMANCE TESTING

System effectiveness (performance testing) consisted of the following:

1) Pressure Field Extension (PFE) testing (i.e., measurement of vacuum sub-slab and behind the below-grade wall); and,
2) Indoor Air Testing.

7.1 PFE Testing

Multiple rounds of PFE testing were conducted during and after system installation to verify reproducibility and consistency of system performance.

7.1.1 System 1 – Sub-Slab (Floor) Mitigation System

PFE testing of System 1 (sub-slab vacuum measurement) occurred on the following dates, with results reported for each date. PFE testing locations for System 1 are depicted on Drawing SVIM-04.

November 6, 2025

The following table summarizes PFE testing results upon completion of system installation and start-up. PFE testing locations are depicted on Drawing SVIM-04.

Test Point ID	Location	Type	Result ("wc)	Note
FMP-01	Building 5 – East	Vapor Pin	-0.017	
FMP-02	Building 6 – Center	Vapor Pin	-0.071	
FMP-03	Building 6A – East (North)	Vapor Pin	-0.027	
FMP-04	Building 6A – Storage	Vapor Pin	-0.022	
FMP-05	Building 6A – Restroom	Vapor Pin	-0.003	Variable results
FMP-06	Building 6 – Dressing Rm	Vapor Pin	-0.004	Variable results
FMP-07	Building 6A – East (South)	Vapor Pin	0.000	Outside of area to be mitigated by design
FTemp-01	Building 5 – Northeast	Temporary Hole	-0.011	
FTemp-02	Building 5 – Northwest	Temporary Hole	-0.003	Variable results
FTemp-03	Building 5 – Northwest	Temporary Hole	0.000	Variable results
FTemp-06	Building 5 – West	Temporary Hole	-0.012	Variable results
FTemp-08	Building 6A – West (North)	Temporary Hole	-0.054	

Variable results observed on the northwestern perimeter of the Project Area and outside edge of the building likely a result of proximity to outside and high winds at time of testing. 'Variable results' defined as rapid and significant changes in measured vacuum (for example, result changing from +0.007 to -0.005).

November 21, 2025

The following table summarizes PFE testing results approximately two (2) weeks after the completion of system installation and start-up. PFE testing locations for System 1 are depicted on Drawing SVIM-04.

Test Point ID	Location	Type	Result ("wc)	Note
FMP-01	Building 5 – East	Vapor Pin	-0.016	
FMP-02	Building 6 – Center	Vapor Pin	-0.098	
FMP-03	Building 6A – East (North)	Vapor Pin	-0.020	
FMP-04	Building 6A – Storage	Vapor Pin	-0.022	
FMP-05	Building 6A – Restroom	Vapor Pin	+0.010	
FMP-06	Building 6 – Dressing Rm	Vapor Pin	+0.002	
FMP-07	Building 6A – East (South)	Vapor Pin	0.000	Outside of area to be mitigated by design
FTemp-01	Building 5 – Northeast	Temporary Hole	-0.004	
FTemp-02	Building 5 – Northwest	Temporary Hole	+0.008	
FTemp-03	Building 5 – Northwest	Temporary Hole	0.000	
FTemp-04	Building 5 – Northwest	Temporary Hole	+0.002	
FTemp-05	Building 5 – West	Temporary Hole	-0.003	
FTemp-06	Building 5 – West	Temporary Hole	-0.002	
FTemp-07	Building 6 – West	Temporary Hole	-0.016	
FTemp-08	Building 6A – West (North)	Temporary Hole	-0.055	

Upon conclusion of PFE testing on November 21, 2025, temporary holes (FTemp-01 through FTemp-08) were patched with concrete.

December 3, 2025

The following table summarizes PFE testing results approximately one (1) month after the completion of system installation and start-up. PFE testing locations for System 1 are depicted on Drawing SVIM-04.

Test Point ID	Location	Type	Result ("wc)	Note
FMP-01	Building 5 – East	Vapor Pin	-0.009	Future Monitoring Point
FMP-02	Building 6 – Center	Vapor Pin	-0.093	Future Monitoring Point

Test Point ID	Location	Type	Result ("wc)	Note
FMP-03	Building 6A – East (North)	Vapor Pin	-0.025	Future Monitoring Point
FMP-04	Building 6A – Storage	Vapor Pin	-0.020	Future Monitoring Point
FMP-05	Building 6A – Restroom	Vapor Pin	+0.002	
FMP-06	Building 6 – Dressing Rm	Vapor Pin	+0.006	

Based on the variable PFE testing results observed in the northwestern portion of Building 5, the Dressing Room, and the Restroom (including sometimes positive pressure), those areas have been excluded from the limits of the mitigation extent shown on the Drawings. Note that extraction points are located in the Dressing Room, Utility Room, and Restroom.

7.1.2 System 2 – Below-Grade Wall Mitigation System

PFE testing of System 2 (measurement of vacuum behind the below-grade wall) occurred on the following dates, with results reported for each date.

November 6, 2025

The following table summarizes PFE testing results upon completion of system installation and start-up. PFE testing locations for System 2 are depicted on Drawing SVIM-05.

Test Point ID	Location	Type	Result ("wc)	Note
WMP-01	Building 5 – N of Tunnel	Temporary Hole	-0.023	
WMP-02	Building 6 – South	Permanent Hole	-0.020	
WTemp-01	Building 5 – N of Tunnel	Temporary Hole	-0.009	Near area of water
WTemp-02	Building 5 – S of Tunnel	Temporary Hole	-0.020	
WTemp-03	Building 6 – MH-36	Temporary Hole	-0.030	Valve open
WTemp-04	Building 6A	Temporary Hole	-0.004	

Upon conclusion of PFE testing on November 6, 2025, temporary hole WTemp-04 was patched with concrete.

November 21, 2025

The following table summarizes PFE testing results approximately two (2) weeks after the completion of system installation and start-up. PFE testing locations for System 2 are depicted on Drawing SVIM-05.

Test Point ID	Location	Type	Result ("wc)	Note
WMP-01	Building 5 – N of Tunnel	Temporary Hole	-0.030	
WMP-02	Building 6 – South	Permanent Hole	-0.013	
WTemp-01	Building 5 – N of Tunnel	Temporary Hole	-0.005	
WTemp-02	Building 5 – S of Tunnel	Temporary Hole	-0.030	

Test Point ID	Location	Type	Result ("wc)	Note
WTemp-03	Building 6 – MH-36	Temporary Hole	-0.041	Valve open

Upon conclusion of PFE testing on November 21, 2025, temporary hole WTemp-02 was patched with concrete.

December 3, 2025

The following table summarizes PFE testing results approximately one (1) month after the completion of system installation and start-up. PFE testing locations for System 2 are depicted on Drawing SVIM-05.

Test Point ID	Location	Type	Result ("wc)	Note
WMP-01	Building 5 – N of Tunnel	Vapor Pin	-0.035	Future Monitoring Point
WMP-02	Building 6 – South	Permanent Hole	-0.012	Future Monitoring Point
WTemp-01	Building 5 – N of Tunnel	Temporary Hole	-0.009	
WTemp-03	Building 6 – MH-36	Temporary Hole	-0.038	Valve open

Based on the consistent results observed the entirety of the eastern (interior) wall of Building 5, 6, and the northern portion of 6A are included in the mitigation extent on the Drawings.

7.2 Indoor Air Testing

Post-construction (pre-occupancy) air testing was performed by WSP on November 12, 2025, and December 10, 2025. All indoor air sampling results indicate the Project Area meets NYSDOH SVI-related criteria for occupancy.

Refer to the separate report prepared by WSP, also dated January 16, 2026, and entitled *Buildings 5, 6, and 6A Vapor Intrusion Sampling Results – September, November, December 2025 (Revised)*, for additional information related to the pre-occupancy indoor air testing performed.

8.0 OPERATION

What follows is an abbreviated summary of key construction characteristics and requirements for the operation of the ventilation and SVI mitigation systems. For complete Operations & Maintenance instructions, refer to the separate document (Operations & Maintenance Plan, prepared by LaBella and dated December 2025) which is to be appended to the existing Interim SMP.

8.1 Ventilation System

To comply with building code requirements, a ventilation system was designed by an architect and HVAC contractor for the entirety of the Lower Level (Basement) of Building 5, 6, and 6A. The ventilation system is designed to operate at all times (24/7/365). The ventilation system was started on November 5, 2025.

If ventilation system shutdown is required, or the ventilation system requires maintenance, the building owner and design engineer is to be promptly notified.

8.2 SVI Mitigation Systems – General Operation

The SVI mitigation systems were started on November 6, 2025. Note the following:

- The blower and fans are to be kept in continuous operation (24/7/365).
- Fans restart automatically in the event of power loss.
- In the event of unusual fan noise, audible alarm activation, failure to start, physical damage, repeated circuit breaker trip, or any other issue, the design engineer (LaBella) is to be notified as promptly as possible.
- The Building Owner or their designated person (i.e., maintenance staff) is to regularly inspect (at least monthly) vacuum indicators (gauges) to verify that in-pipe vacuum, indicated by a mark on the wall at the gauge, has not changed significantly from the position of the mark. Gauge is inspected by observing the needle inside the gauge. Monthly inspections are to be documented in accordance with the Operations & Maintenance (O&M) Manual.
- An annual inspection of the systems must be performed by a NYS licensed Professional Engineer (PE), or someone acting under the direction of a PE, to ensure that the systems are operating properly. The annual inspection is to include a visual assessment of the accessible portions of the system (rooftop blower/fans, visible system piping, and system gauges). The exhaust blower/fans and points should be inspected to verify that they are not obstructed and that no air intakes have been located nearby. Annual inspections are to be documented in accordance with the O&M Manual.
- Normal system operation requires unchanged structural conditions. Any changes in structure, HVAC systems, slab conditions, etc., are to be evaluated for impact on the SVI mitigation system operation.

9.0 CONCLUSION

The project consisted of the successful installation of an active ventilation system for the Lower Level of Buildings 5, 6, and 6A, and the installation of three SVI mitigation systems within portions of Buildings 5, 6, and 6A:

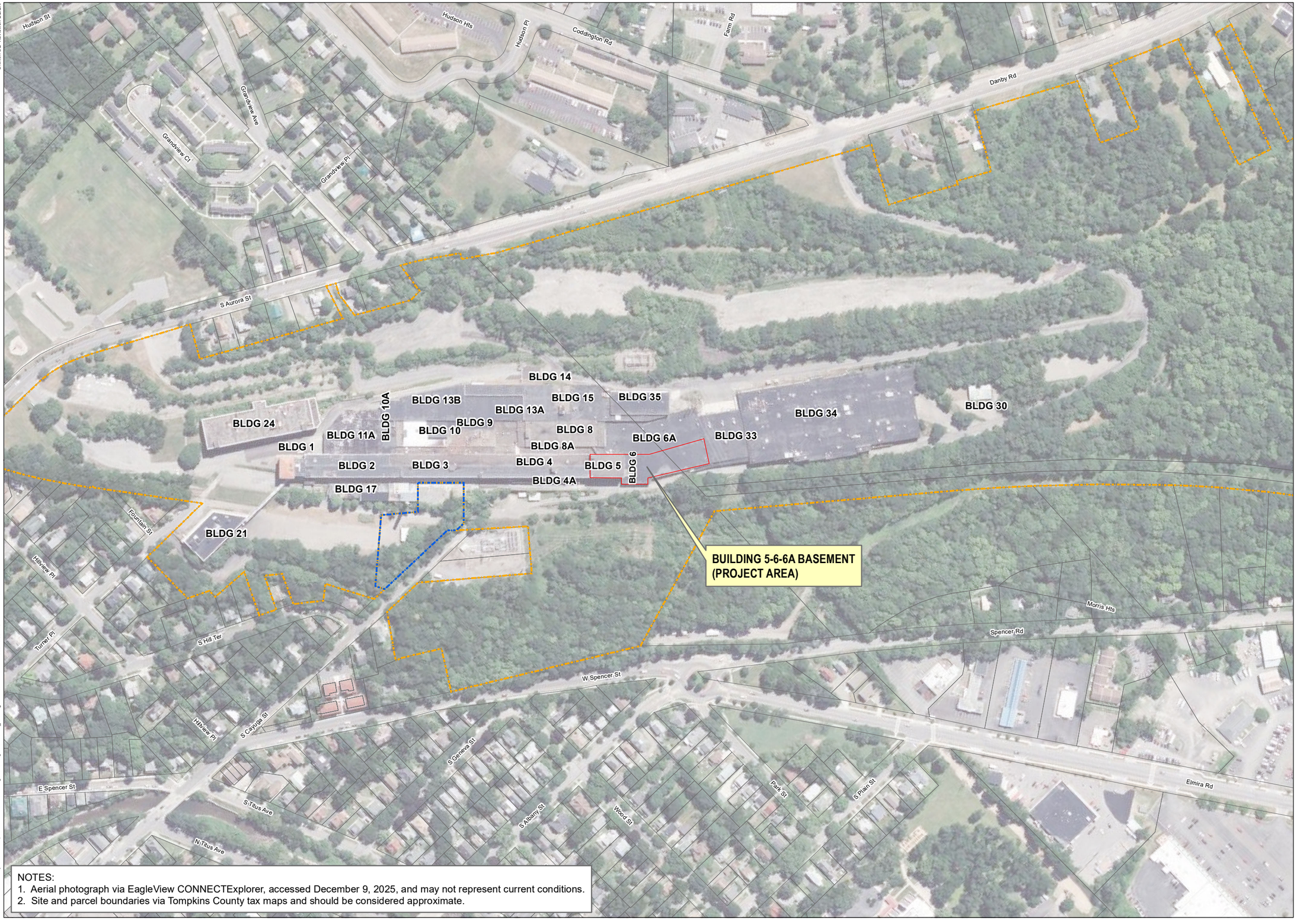
- SVI Mitigation System 1 – Sub-Slab (Floor) Mitigation System
- SVI Mitigation System 2 – Below-Grade Wall Mitigation System
- SVI Mitigation System 3 – Tunnel Mitigation System

The performance of the systems was evaluated by PFE and indoor air testing, with all results satisfactory for occupancy of the Project Area.

One (1) 55-gallon drum of soil/fill generated by system construction/installation was transferred to the designated on-site storage location. WSP assumed responsibility for proper characterization and disposal of soil/fill material generated during system installation activities.

The need for additional SVI mitigation systems elsewhere on-site is to be determined by the results of future Building-specific SVI evaluation, as outlined in the Interim SMP: *"An SVI evaluation work plan shall be submitted to the NYSDEC prior to a change of use that involves modifications to existing buildings and/or construction of new buildings."*

FIGURE



NOTES:
1. Aerial photograph via EagleView CONNECTExplorer, accessed December 9, 2025, and may not represent current conditions.
2. Site and parcel boundaries via Tompkins County tax maps and should be considered approximate.

Drafter: DB Reviewer: DB/DN

Path: B:\GLOBAL\Projects\Shift Capital\2241173.01 - SVI Mitigations Bldgs 5 and 6\06_Drawings\Environmental\FIG 2025 12 09 FIG1 SitePlan.mxd

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SOUTHWORKS
620 SOUTH AURORA STREET
ITHACA, NEW YORK 14850

FORMER EMERSON POWER TRANSMISSION FACILITY
NYSDEC SITE NO. 755010

SVI MITIGATION
BUILDINGS 5, 6, AND 6A

0 125 250 Feet

1 inch = 250 feet
Intended to print in 11" x 17" size.
DATE: December 2025

Legend

- Building 5-6-6A Basement
- Site Boundary
- OU-1 Boundary
- Parcel Boundaries

Site Plan

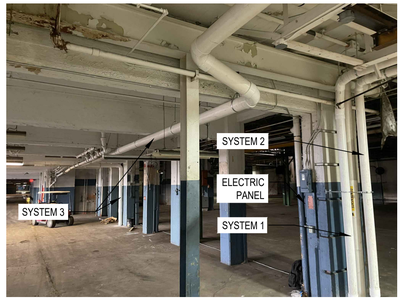
2241173

FIGURE 1

DRAWINGS

ROOF-MOUNTED EXHAUST BLOWER (SYSTEM 1) & FANS (SYSTEMS 2 & 3)

NOTES FOR BLOWER & FANS:
1. **SYSTEM 1 (FLOOR)** - OBAR 89 RADIAL BLOWER
2. **SYSTEM 2 (WALL)** - FANTECH RN4-EC FAN
3. **SYSTEM 3 (TUNNEL)** - RADONAWAY RP-380 FAN



ELECTRIC PANEL & CONVEYANCE / RISER PIPING ON MAIN LEVEL

NOTES FOR ELECTRIC PANEL & CONVEYANCE PIPING:
1. ELECTRICAL PANEL (BREAKER BOX) FOR ROOF-MOUNTED BLOWER AND FANS LOCATED ON MAIN LEVEL COLUMN G49.
2. SYSTEMS 1, 2, AND 3 FANS CONTROLLED BY BREAKER NUMBER 9.
3. CONVEYANCE PIPING CONSISTS OF 4"-, AND 6"-DIA SCHEDULE 40 PVC PIPE, RESPECTIVELY.
4. CONVEYANCE PIPING INSTALLED HORIZONTALLY NEAR CEILING, AS CLOSE TO CEILING AS PRACTICABLE; WITH METAL BRACKETING DIRECT TO STRUCTURE, SLOPED AS NECESSARY TO PROMOTE DRAINAGE OF ANY MOISTURE THAT MIGHT INFILTRATE SYSTEMS.

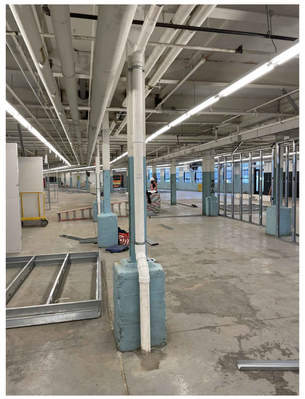
SYSTEM 2 - FLOW RESTRICTOR

NOTES FOR FLOW RESTRICTOR:
1. FLOW RESTRICTOR INSTALLED IN LAST 90° ELBOW OF CONNECTIVE PIPING AT WEP-02 TO BALANCE SYSTEM 2.

DRAWING NO.	TITLE
SVIM-00	NOTES & PHOTOS
SVIM-01	BASEMENT (LOWER LEVEL) LAYOUT
SVIM-02	MAIN LEVEL LAYOUT
SVIM-03	SECOND FLOOR / ROOF LAYOUT
SVIM-04	SUB-SLAB PFE TESTING
SVIM-05	BELOW-GRADE WALL PFE TESTING

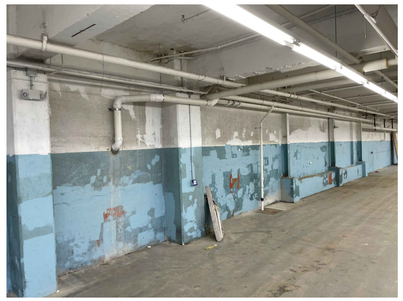
LEGEND

- SYSTEM 1 - SUB-SLAB (FLOOR) MITIGATION EXTENT
- SYSTEM 1 - SUB-SLAB (FLOOR) EXTRACTION / SUCTION POINT
- SYSTEM 1 - OVERHEAD / HORIZONTAL CONVEYANCE PIPING
- SYSTEM 2 - WALL MITIGATION EXTENT
- SYSTEM 2 - WALL EXTRACTION / SUCTION POINT
- SYSTEM 2 - MANHOLE (FLOOR) EXTRACTION / SUCTION POINT
- SYSTEM 2 - HORIZONTAL CONVEYANCE PIPING
- SYSTEM 3 - TUNNEL MITIGATION EXTENT
- SYSTEM 3 - HORIZONTAL CONVEYANCE PIPING
- MONITORING POINT
- MONITORING POINT (OUTSIDE OF MITIGATION EXTENT / AOI)



SYSTEM 1 - SUB-SLAB (FLOOR) EXTRACTION POINT (TYP.)

NOTES FOR SYSTEM 1 EXTRACTION POINTS:
1. SYSTEM 1 (FLOOR) EXTRACTION POINTS CONSIST OF APPROXIMATELY 1 CU. FT. EXCAVATED MATERIAL IN SUB-SLAB WITH CONNECTION VIA 3"-DIA SCHEDULE 40 PVC PIPE FORMING AN AIR-TIGHT SEAL.



SYSTEM 2 - WALL EXTRACTION POINT (TYPICAL)

NOTES FOR SYSTEM 2 WALL EXTRACTION POINTS:
1. SYSTEM 2 (WALL) EXTRACTION POINTS CONSIST OF APPROXIMATELY 1 CU. FT. EXCAVATED MATERIAL BEHIND WALL WITH CONNECTION VIA 4"-DIA SCHEDULE 40 PVC PIPE FORMING AN AIR-TIGHT SEAL.

SYSTEM 3 - TUNNEL VENTILATION

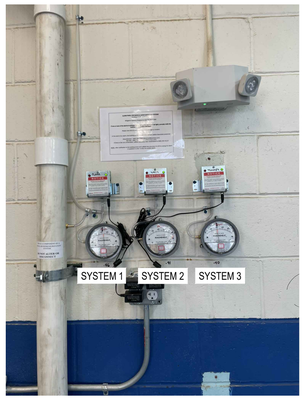
NOTES FOR TUNNEL VENTILATION:
1. TUNNEL ENTRANCE COVERED AND SEALED.
2. AIR IN TUNNEL ACTIVELY VENTILATED TO EXTERIOR VIA 6"-DIA SCHEDULE 40 PVC PIPE CONNECTED TO ROOF-MOUNTED EXHAUST FAN.

MH-36

NOTES FOR MH-36:
1. PRIOR TO SEALING, MH-36 WAS CONNECTED TO ADJACENT WALL DRAINS/WEEPS.
2. MANHOLE COVER MH-36 SEALED TO FLOOR (SEMI-PERMANENT - ACCESSIBLE FOR FUTURE USE BUT WOULD REQUIRE RE-SEALING).
3. VAPORS WITHIN VOID SPACE ABOVE DRAINAGE INFRASTRUCTURE ACTIVELY VENTED TO EXTERIOR VIA CONNECTION TO SYSTEM 2 (WALL MITIGATION SYSTEM).
4. VENTILATION PIPE CONNECTING MH-36 TO WALL MITIGATION SYSTEM CONTAINS VALVE USABLE FOR CONTROLLING FLOW RATE FROM MH-36 VOID SPACE.

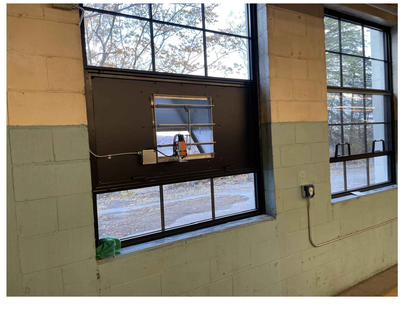
MH-35

NOTES FOR MH-35:
1. PRIOR TO SEALING, DRAINS WERE SNAKED AND FLUSHED TO ENSURE PROPER DRAINAGE AND REDUCE THE POTENTIAL FOR WATER INTRUSION CONCERNS IN THE FUTURE.
2. MANHOLE COVER SEALED TO FLOOR (SEMI-PERMANENT - ACCESSIBLE FOR FUTURE USE BUT WOULD REQUIRE RE-SEALING).



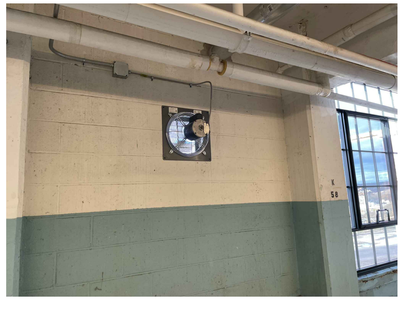
GAUGES AND ALARM PANEL

NOTES FOR GAUGES AND ALARMS PANEL:
1. EACH SYSTEM EQUIPPED WITH A DWYER MAGNAHELIC DIAL-TYPE MECHANICAL VACUUM GAUGE FOR ROUTINE VERIFICATION OF SYSTEM OPERATION.
2. EACH SYSTEM EQUIPPED WITH AN AUDIBLE WARNING SYSTEM (ALARM) TO ALERT THE TENANT AND OWNER'S MAINTENANCE STAFF IF THERE IS A LOSS OF IN-PIPE PRESSURE.



SUPPLY AIR INTAKE

NOTES FOR SUPPLY AIR INTAKE:
1. SUPPLY AIR INTAKE DESIGNED FOR VENTILATION OF ENTIRE BUILDING 5-6-6A LOWER LEVEL (BASEMENT) TENANT SPACE.



VENTILATION FAN

NOTES FOR VENTILATION FAN:
1. VENTILATION EXHAUST FAN DESIGNED FOR VENTILATION OF ENTIRE BUILDING 5-6-6A LOWER LEVEL (BASEMENT) TENANT SPACE (20,357 SQUARE FEET AT 0.06 CFM PER SQUARE FOOT, TOTAL OF 1,220 CFM).

VENTILATION SYSTEM SWITCH

NOTES FOR VENTILATION SYSTEM SWITCH:
1. THE VENTILATION SYSTEM IS ACTUATED BY A WALL-MOUNTED TOGGLE SWITCH BEHIND THE CHECK-OUT COUNTER/REGISTER TO LIMIT ACCESS AND ACCIDENTAL SHUT-DOWN BY THE PUBLIC.
2. VENTILATION SYSTEM SIZED TO PROVIDE COMPLIANCE WHEN IN FULL-TIME OPERATION. AS SUCH, FULL-TIME OPERATION OF THE VENTILATION SYSTEM IS REQUIRED.

MONITORING POINT (VAPOR PIN) (FLOOR)

NOTES FOR MONITORING POINT (FLOOR):
1. PERMANENT MONITORING POINTS INSTALLED AT A FREQUENCY OF MINIMUM OF 1 PER 3,600 SQUARE FEET OF FLOOR SPACE, CONSISTENT WITH NYSDOH GUIDANCE.
2. THE VAPOR PINS INSTALLED THROUGH THE FLOOR SLAB FEATURE A REMOVABLE STAINLESS STEEL PROTECTIVE LID (PICTURED ADJACENT TO VAPOR PIN).

MONITORING POINT (VAPOR PIN) (WALL)

NOTES FOR MONITORING POINT (WALL):
1. PERMANENT MONITORING POINT WMP-01 (PICTURED) PROTRUDES FROM FOUNDATION WALL.
2. PERMANENT MONITORING POINT WMP-02 (NOT PICTURED) CONSISTS OF A HOLE THROUGH THE FOUNDATION WALL SEALED WITH A CLOSED-CELL BACKER ROD.

NO.	REVISION	BY	DATE
1	ADDED PHOTO AND NOTES FOR MONITORING POINT (WALL)	DB	1/15/26
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STATE OF NEW YORK DANIEL P. NOLL LICENSED PROFESSIONAL ENGINEER No. 081894

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PROJECT/CLIENT

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ITHACA, NEW YORK 14850

SHIFT CAPITAL
3400 J STREET, SUITE #611
PHILADELPHIA, PENNSYLVANIA 19134

DRAWING TITLE

SOIL VAPOR INTRUSION MITIGATION
BUILDINGS 5, 6, AND 6A
NOTES & PHOTOS

ISSUED FOR: CCR (AS-BUILT)

DESIGNED BY: DB DPN
DRAWN BY: DB
REVIEWED BY: DPN
DATE: DECEMBER 2025

PROJECT/DRAWING NUMBER

2241173

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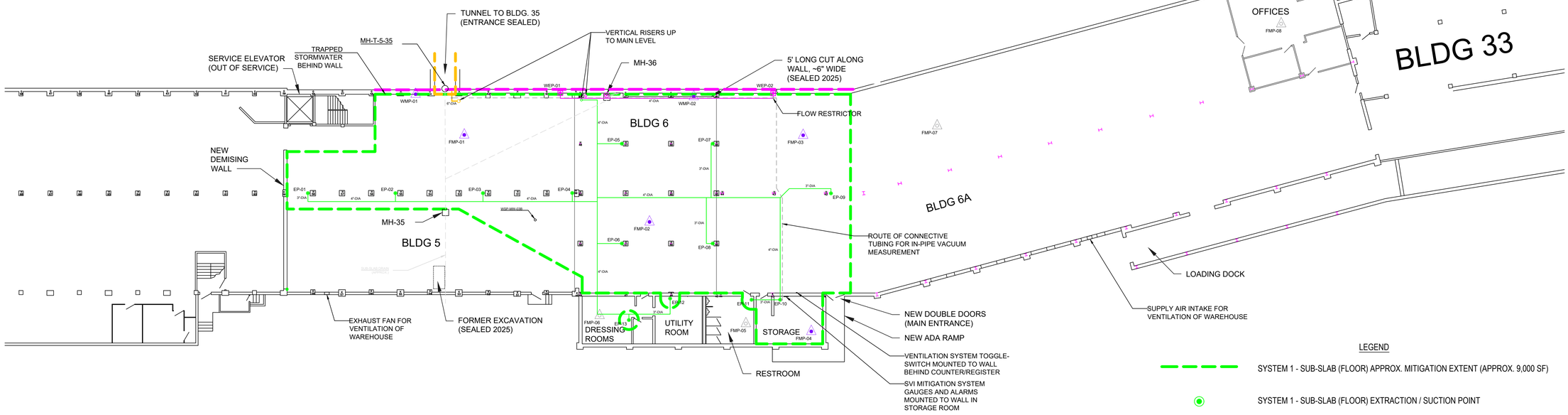

NOTES:

1. THIS DRAWING IS NOT INTENDED TO PROVIDE ARCHITECTURAL, STRUCTURAL, ELECTRICAL, MECHANICAL, OR PLUMBING INFORMATION. REFER TO SEPARATE DRAWINGS FOR APPLICABLE INFORMATION RELATED TO OTHER BUILDING COMPONENTS/SYSTEMS.
2. VENTILATION SYSTEM SIZED TO MEET CODE-REQUIRED MINIMUM FOR THE SQUARE FOOTAGE AND OCCUPANCY OF THE SPACE AS DESIGNED BY THE ARCHITECT. VENTILATION SYSTEM SIZED TO PROVIDE COMPLIANCE WHEN IN FULL-TIME OPERATION. AS SUCH, FULL-TIME OPERATION OF THE VENTILATION SYSTEM MUST BE PROVIDED.
3. THE VENTILATION SYSTEM IS ACTUATED BY A WALL-MOUNTED TOGGLE SWITCH BEHIND THE CHECK-OUT COUNTER/REGISTER TO LIMIT ACCESS AND ACCIDENTAL SHUT-DOWN.
4. SUPPLY AIR INTAKE AND EXHAUST FAN DESIGNED FOR VENTILATION OF ENTIRE BUILDING 5-6-6A LOWER LEVEL (BASEMENT) TENANT SPACE (20,357 SQUARE FEET AT 0.06 CFM PER SQUARE FEET, TOTAL OF 1,220 CFM).
5. **SYSTEM 1 (FLOOR)** - 13 SUB-SLAB EXTRACTION POINTS (EP).
6. **SYSTEM 2 (WALL)** - 2 WALL EXTRACTION POINTS (WEP) AND 1 CONNECTION WITH VALVE TO MH-36 CATCH BASIN.
7. **SYSTEM 3 (TUNNEL)** - GENERAL EVACUATION OF TUNNEL AIR.
8. SYSTEM 1 (SUB-SLAB) EXTRACTION POINTS AS FOLLOWS: CONNECTION VIA 3" SCHEDULE 40 PVC PIPE, TO SUB-FLOOR, WITH AIR-TIGHT SEAL, APPROXIMATELY 1 CU. FT. EXCAVATED MATERIAL IN SUB-SLAB; SOME EXPOSED DIAGONAL OR HORIZONTAL PIPE WHERE TRANSITIONING FROM COLUMN TO FLOOR, TRENCHING AROUND FOOTERS WHERE PRACTICABLE.
9. DIAL TYPE VACUUM GAUGES/INDICATORS, ONE DEVICE PER FAN SYSTEM, LOCATED IN STORAGE ROOM.
10. AUDIBLE INDICATORS (LOSS OF VACUUM ALARM); ONE DEVICE PER SYSTEM, LOCATED IN STORAGE ROOM. ALARM CIRCUIT DISTINCT FROM FAN CIRCUIT.
11. OPENINGS IN CONCRETE FLOOR SLAB WERE FILLED, CLOSED, OR SEALED TO PROVIDE AN AIRTIGHT SEAL.

LEGEND

- SYSTEM 1 - SUB-SLAB (FLOOR) APPROX. MITIGATION EXTENT (APPROX. 9,000 SF)
- SYSTEM 1 - SUB-SLAB (FLOOR) EXTRACTION / SUCTION POINT
- SYSTEM 1 - OVERHEAD / HORIZONTAL CONVEYANCE PIPING
- SYSTEM 2 - WALL MITIGATION APPROX. EXTENT (APPROX. 150 LF)
- SYSTEM 2 - WALL EXTRACTION / SUCTION POINT
- SYSTEM 2 - MANHOLE (FLOOR) EXTRACTION / SUCTION POINT
- SYSTEM 2 - HORIZONTAL CONVEYANCE PIPING
- SYSTEM 3 - TUNNEL MITIGATION APPROX. EXTENT
- SYSTEM 3 - HORIZONTAL CONVEYANCE PIPING
- TUBING FOR IN-PIPE VACUUM MEASUREMENT & MONITORING LOCATION
- PFE MONITORING POINT
- PFE MONITORING POINT (OUTSIDE OF MITIGATION EXTENT / AREA OF INFLUENCE)

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PHILADELPHIA, PENNSYLVANIA 19134

DRAWING TITLE

SOIL VAPOR INTRUSION MITIGATION
BUILDINGS 5, 6, AND 6A
BASEMENT (LOWER LEVEL) LAYOUT

ISSUED FOR:
CCR (AS-BUILT)

DESIGNED BY: DPR 08
DRAWN BY: DB
REVIEWED BY: DPN
DATE: DECEMBER 2025
SCALE: 1/16" = 1'-0"

PROJECT/DRAWING NUMBER

2241173

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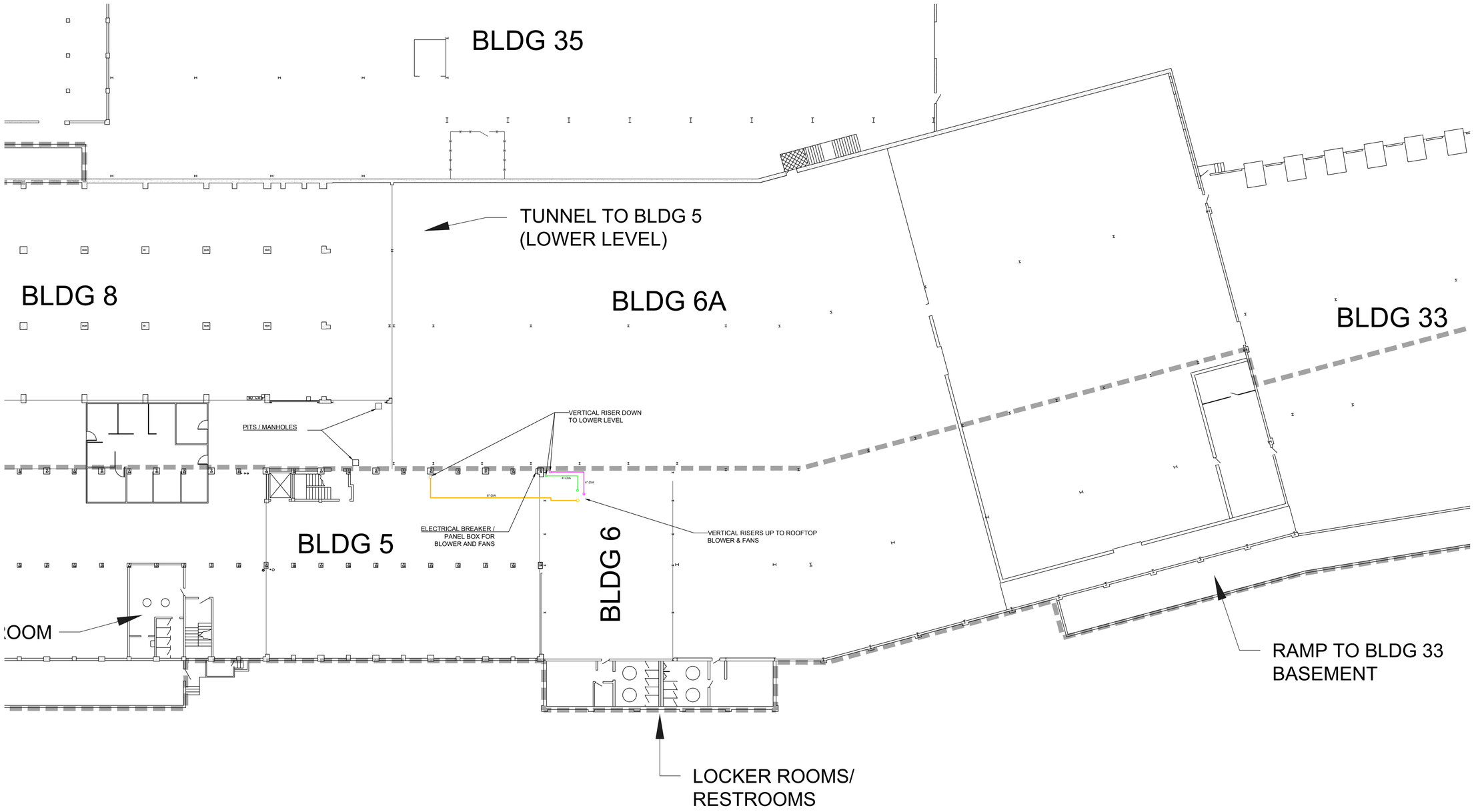

LEGEND

SYSTEM 1 (FLOOR) - OVERHEAD / HORIZONTAL CONVEYANCE PIPING

SYSTEM 2 (WALL) - OVERHEAD / HORIZONTAL CONVEYANCE PIPING

SYSTEM 3 (TUNNEL) - OVERHEAD / HORIZONTAL CONVEYANCE PIPING

NOTE:

1. CONVEYANCE PIPING INSTALLED HORIZONTALLY NEAR CEILING, AS CLOSE TO CEILING AS PRACTICABLE; WITH METAL BRACKETING DIRECT TO STRUCTURE, SLOPED AS NECESSARY TO PROMOTE DRAINAGE OF ANY MOISTURE THAT MIGHT INFILTRATE SYSTEMS.

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DANIEL P. NOLL
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LICENSED PROFESSIONAL ENGINEER

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ITHACA, NEW YORK 14850

SHIFT CAPITAL
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PHILADELPHIA, PENNSYLVANIA 19134

DRAWING TITLE

SOIL VAPOR INTRUSION MITIGATION
BUILDINGS 5, 6, AND 6A
MAIN LEVEL LAYOUT

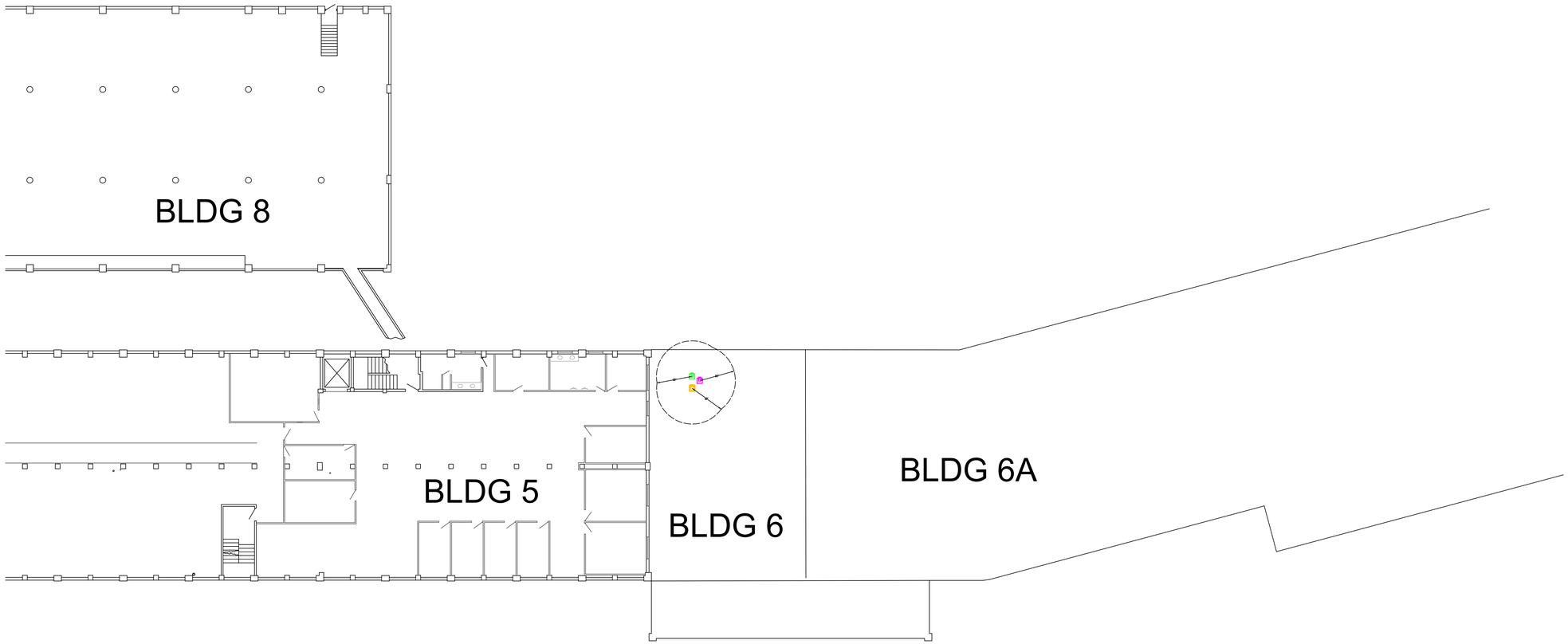
ISSUED FOR:
CCR (AS-BUILT)

DESIGNED BY: DPN DB
DRAWN BY: DB
REVIEWED BY: DPN
DATE: DECEMBER 2025
SCALE: 1/16" = 1'-0"

PROJECT/DRAWING NUMBER

2241173

SVIM-02



LEGEND

- SYSTEM 1 (FLOOR) - OBAR 89 RADIAL BLOWER
- SYSTEM 2 (WALL) - FANTECH RN4-EC FAN
- SYSTEM 3 (TUNNEL) - RADONAWAY RP-380 FAN

NOTES:

1. **SYSTEM 1 (FLOOR)** - OBAR 89 RADIAL BLOWER
2. **SYSTEM 2 (WALL)** - FANTECH RN4-EC FAN
3. **SYSTEM 3 (TUNNEL)** - RADONAWAY RP-380 FAN
4. ALL EXHAUST POINTS MINIMUM 10' FROM ANY AIR INTAKE, WINDOW, OR DOOR.
5. DISCHARGE IS DIRECT TO THE ATMOSPHERE, ABOVE THE ROOF LINE.

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DRAWING TITLE

SOIL VAPOR INTRUSION MITIGATION
BUILDINGS 5, 6, AND 6A
SECOND FLOOR / ROOF LAYOUT

ISSUED FOR:
CCR (AS-BUILT)

DATE:
DECEMBER 2025

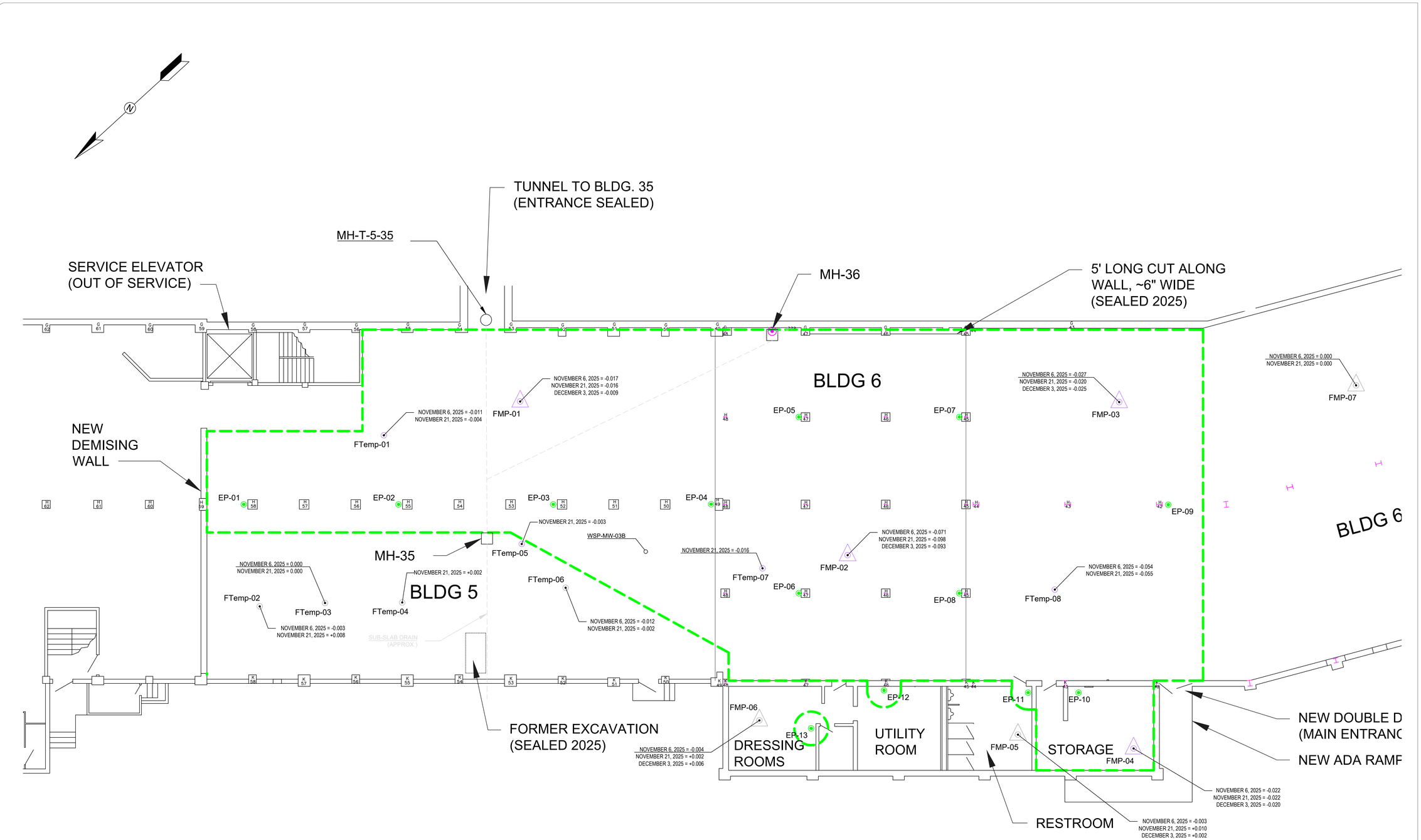
DESIGNED BY: DPN 08
DRAWN BY: DB
REVIEWED BY: DPN

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

PROJECT/DRAWING NUMBER

2241173

SVIM-03



LEGEND

- SYSTEM 1 - SUB-SLAB (FLOOR) APPROX. MITIGATION EXTENT (APPROX. 9,000 SF)
- SYSTEM 1 - SUB-SLAB (FLOOR) EXTRACTION / SUCTION POINT
- SYSTEM 2 - MANHOLE (FLOOR) EXTRACTION / SUCTION POINT
- PFE MONITORING POINT
- PFE MONITORING POINT (OUTSIDE OF MITIGATION EXTENT / AREA OF INFLUENCE)

NOTES:

1. **SYSTEM 1 (FLOOR)** - 13 SUB-SLAB EXTRACTION POINTS (EP).
2. SYSTEM 1 (SUB-SLAB) EXTRACTION POINTS AS FOLLOWS: CONNECTION VIA 3" SCHEDULE 40 PVC PIPE, TO SUB-FLOOR, WITH AIR-TIGHT SEAL, APPROXIMATELY 1 CU. FT. EXCAVATED MATERIAL IN SUB-SLAB; SOME EXPOSED DIAGONAL OR HORIZONTAL PIPE WHERE TRANSITIONING FROM COLUMN TO FLOOR, TRENCHING AROUND FOOTERS WHERE PRACTICABLE.
3. OPENINGS IN CONCRETE FLOOR SLAB WERE FILLED, CLOSED, OR SEALED TO PROVIDE AN AIRTIGHT SEAL.

REVISION

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DANIEL P. NOLL
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3400 J STREET, SUITE #G11
PHILADELPHIA, PENNSYLVANIA 19134

DRAWING TITLE

SOIL VAPOR INTRUSION MITIGATION
BUILDINGS 5, 6, AND 6A
SUB-SLAB PRESSURE FIELD EXTENSION TESTING

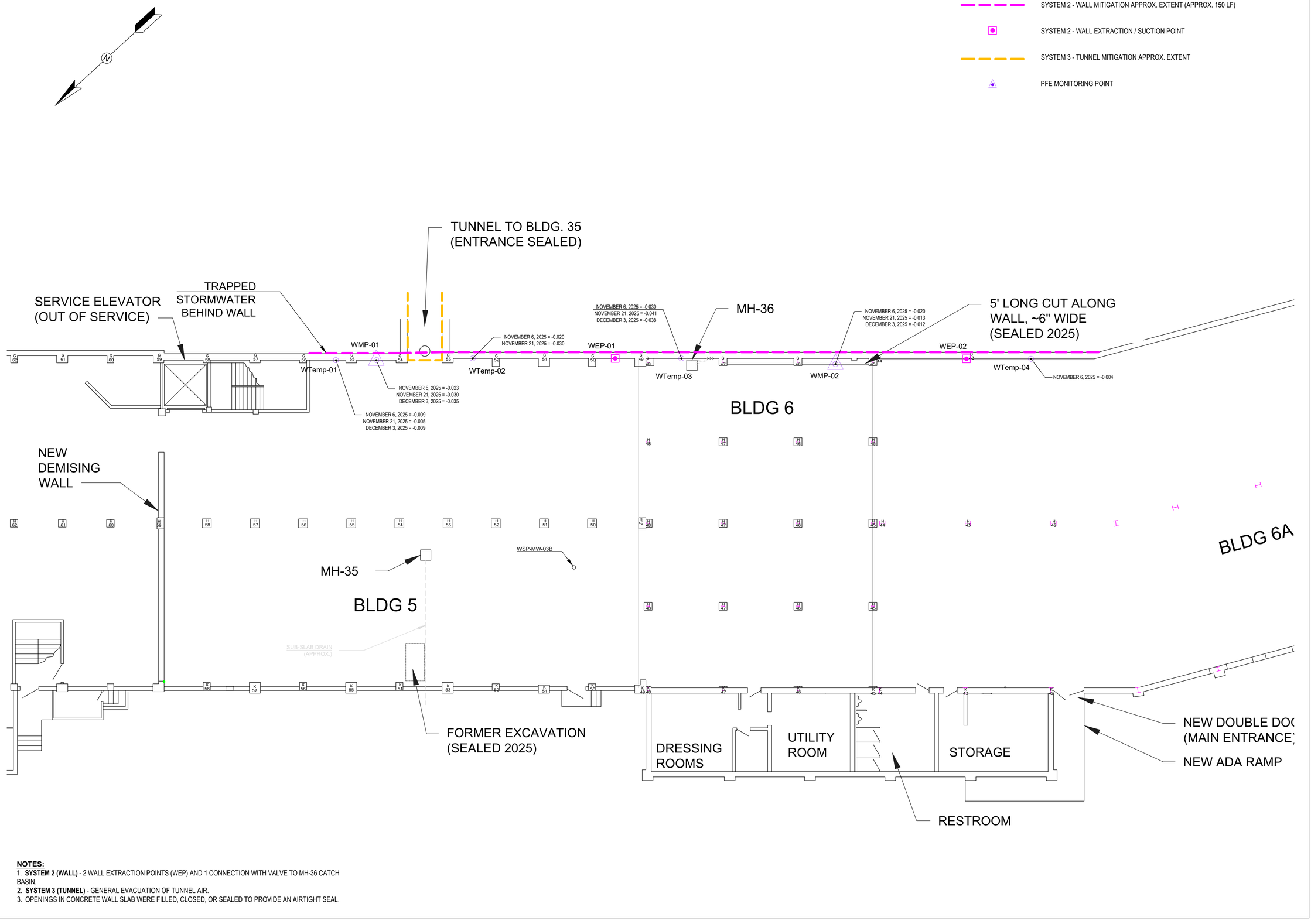
ISSUED FOR:
CCR (AS-BUILT)

DESIGNED BY: DPN DB
DRAWN BY: DB
REVIEWED BY: DPN
DATE: DECEMBER 2025
SCALE: 1/8" = 1'-0"

PROJECT/DRAWING NUMBER

2241173

SVIM-04



NOTES:

1. **SYSTEM 2 (WALL)** - 2 WALL EXTRACTION POINTS (WEP) AND 1 CONNECTION WITH VALVE TO MH-36 CATCH BASIN.
2. **SYSTEM 3 (TUNNEL)** - GENERAL EVACUATION OF TUNNEL AIR.
3. OPENINGS IN CONCRETE WALL SLAB WERE FILLED, CLOSED, OR SEALED TO PROVIDE AN AIRTIGHT SEAL.

NO.	REVISION	BY	DATE
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STATE OF NEW YORK DANIEL P. NOLL LICENSED PROFESSIONAL ENGINEER No. 081896

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PROJECT/CLIENT

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3400 J STREET, SUITE #G11
PHILADELPHIA, PENNSYLVANIA 19134

DRAWING TITLE

SOIL VAPOR INTRUSION MITIGATION
BUILDINGS 5, 6, AND 6A
BELOW-GRADE WALL PRESSURE FIELD EXTENSION TESTING

ISSUED FOR:
CCR (AS-BUILT)

DESIGNED BY: DPN 08
DRAWN BY: DB
REVIEWED BY: DPN
DATE: DECEMBER 2025
SCALE: 1/8" = 1'-0"

PROJECT/DRAWING NUMBER

2241173

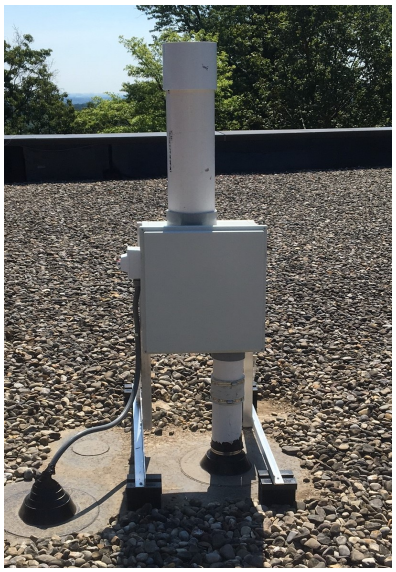
SVIM-05

APPENDIX 1

Spec Sheets for Blower, Fans, and Monitoring Gauges

THE OBAR GBR89
COMPACT RADIAL BLOWER

Based on 25 years of experience and 2 years of research and development, the patent pending GBR series of compact radial blowers provide the perfect combination of performance and design.



GBR89 WITH ROOF MOUNT

PERFORMANCE

- GBR89 HA 14” WC at 100CFM max flow 500 CFM.
- Built in speed control to customize performance.
- Condensate bypass built in.
- 12 month warranty 40,000 hr sealed bearings.

DESIGN

- Our modular design means the blower and manifold assembly can be removed and replaced as a unit. This makes repairs cost effective and easy and allows contractors to upgrade systems simply by swapping assemblies.
- The GBR series is based on a bypass blower designed to handle combustible materials.
- The housing is not required to be air tight so you can add gauges and alarms without compromising the system.
- Built in condensate bypass.
- Built in speed control.
- Quick disconnect electrical harness.
- All UL listed components including UL listed enclosure for outside use.
- Wall fastening lugs included.
- GBR series roof and wall mounts available to quickly configure the blowers for your installation while providing a custom built look.
- Compact design 18”x 16”x 10” weighing only 26 lbs.
- 4” schedule 40 inlet and 6” schedule 40 exhaust.

Enclosure Specifications

Rating:

Ingress Protection (EN 60529): 66/67

Electrical insulation: Totally insulated

Halogen free (DIN/VDE 0472, Part 815): yes

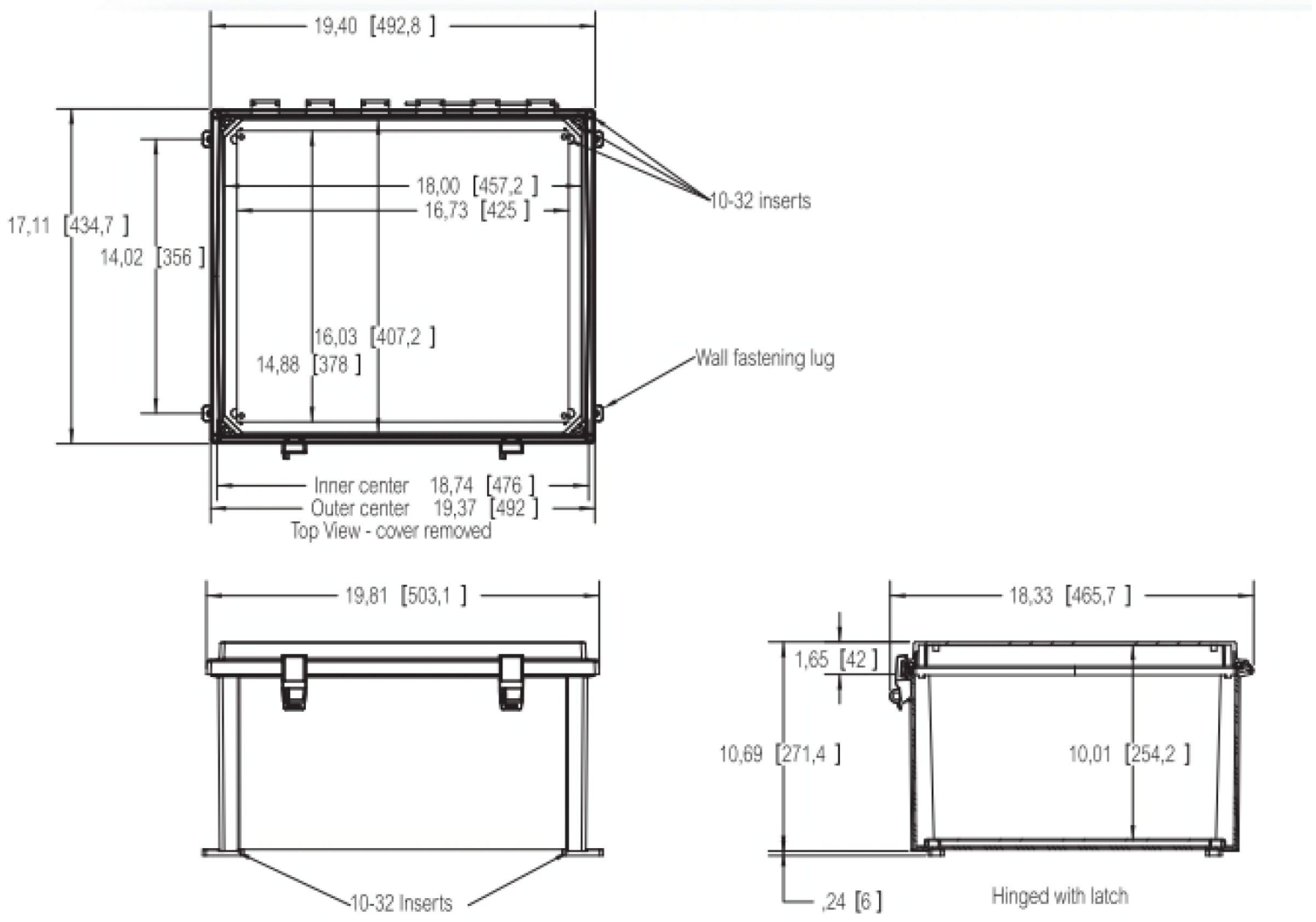
UV resistance: UL 508

Flammability Rating (UL 746 C 5): complies with UL 508

Glow Wire Test (IEC 695-2-1) °C: 960

NEMA Class: UL Type 4, 4X, 6, 6P, 12 and 13

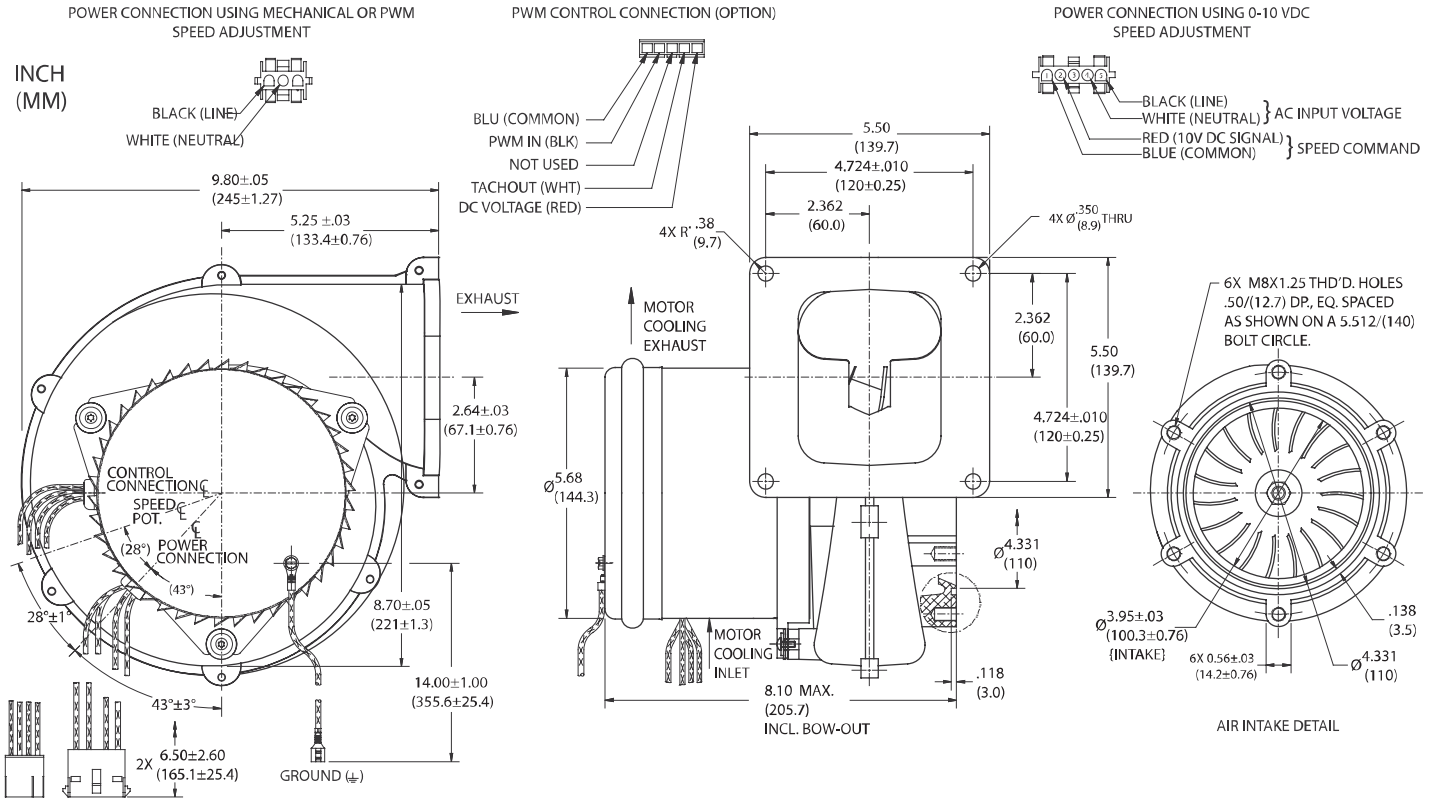
Certificates: Underwriters Laboratories



High Voltage Brushless DC Blowers

Nautilair (TM) 8.9" (226mm) Variable Speed Blower

240 Volt AC Input, Single Phase, High Output



		Part/ Model Number		
Specification	Units	150240	150241	150242
Speed Control	-	Mechanical	0-10 VDC	PWM

Notes:

- **Input Voltage Range:** 216 - 264 Volts AC RMS, 50/60 Hz, single phase.
- **Input Current:** 10 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0°C to 50°C
- **Storage Temperature:** -40°C to 85°C
- **Dielectric Testing:** 1800 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control Methods:** PWM (Pulse Width Modulation). Speed control input signal of 15 - 45 VDC @ 500 Hz - 10 kHz, and tachometer output (2 Pulses / Revolution).
  Optional tachometer output (3 Pulses / Revolution).
  0 to 10 VDC with a speed control input current of 5 mA to 20 mA at 10 VDC Input with multi-turn potentiometer set to minimum resistance (fully clockwise).
  Mechanical: A potentiometer is available for speed control of the blower. The potentiometer can be preset for a specific speed. Access for speed adjustment located in motor housing.
  4-20mA speed control available.
- **Approximate Weight:** 9.3 Lbs. / 4.2 Kg.
- **Option Card available for Customization**
- **Regulatory Agency Certification:** Underwriters Laboratories Inc. UL507 Recognized under File E94403 and CSA C22.2#133 under File LR43448
- **Design Features:** Designed to provide variable airflow for low NOx & CO emission in high efficiency gas fired combustion systems. Built with non-sparking materials. Blower housing assembly constructed of die cast aluminum. Impeller constructed from hardened aluminum. Rubber isolation mounts built into blower construction to dampen vibration within the motor. Two piece blower housing assembly sealed with O-ring gasket for combustion applications. Customer is responsible to check for any leakage once the blower is installed into the final application.
- **Miscellaneous:** Blower inlet, discharge, and all motor cooling inlet and discharge vents must not be obstructed. Motor ventilation air to be free of oils and other foreign particles, (i.e. breathing quality air). Blower is to be mounted so ventilation air cannot be re-circulated.
  POWER CONNECTION (3 CAVITY): Blower connector, AMP Universal MATE-N-LOK, part no. 1-480701-0.
  POWER CONNECTION (5 CAVITY): Blower connector, AMP Universal MATE-N-LOK, part no. 350810-1.
  SPEED CONNECTION (5 CAVITY): Blower connector, Molex Mini-Fit Jr., part no. 39-01-4057.
  Mating harnesses available upon request.

AMETEK TECHNICAL & INDUSTRIAL PRODUCTS
627 Lake Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +44 (0) 845 366 9664 - Asia: +86 21 5763 1258
www.ametektip.com

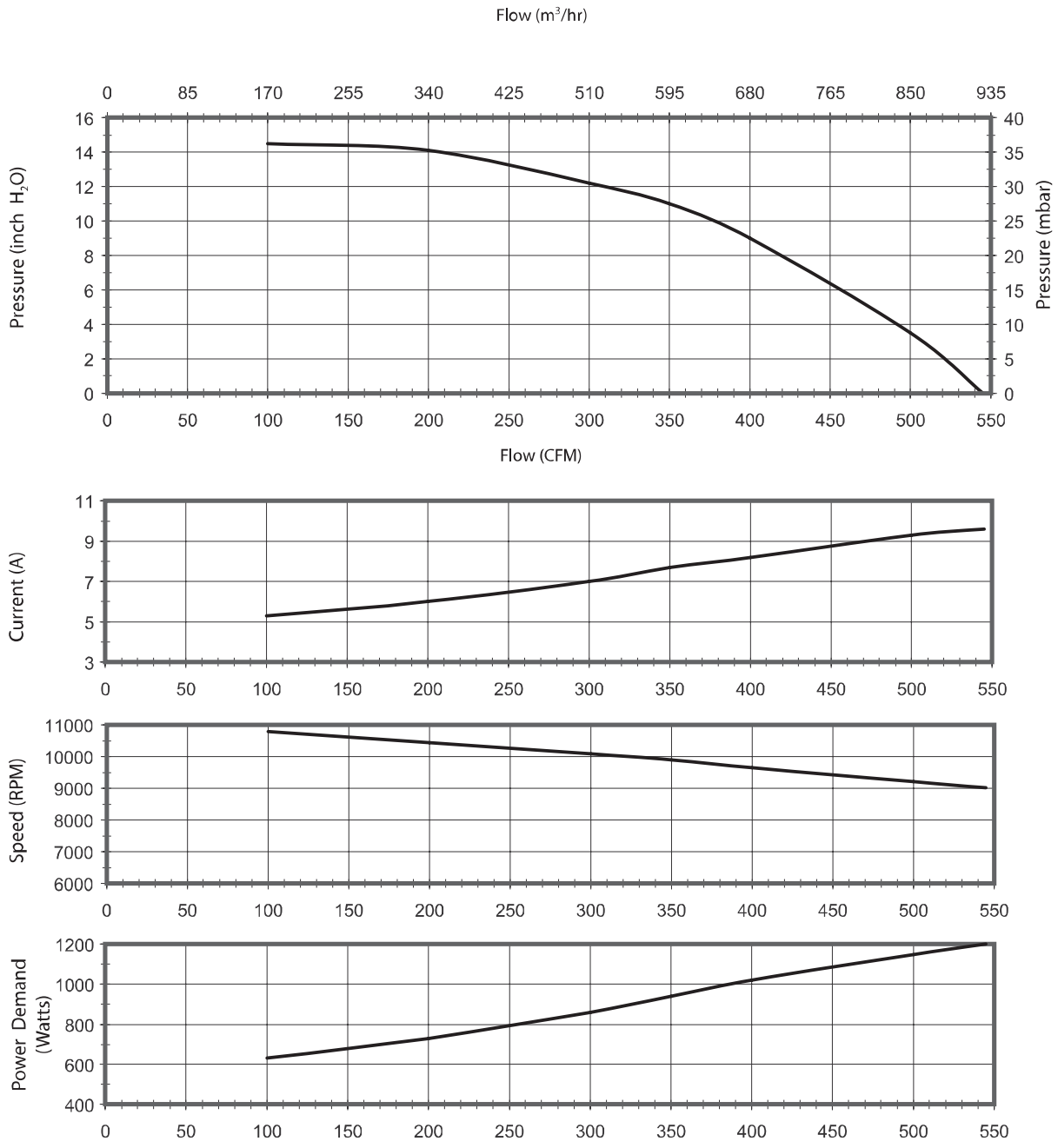
AMETEK
PRECISION MOTION CONTROL

Nautilair (TM) 8.9" (226mm) Variable Speed Blower

Nautilair

240 Volt AC Input, Single Phase, High Output

Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

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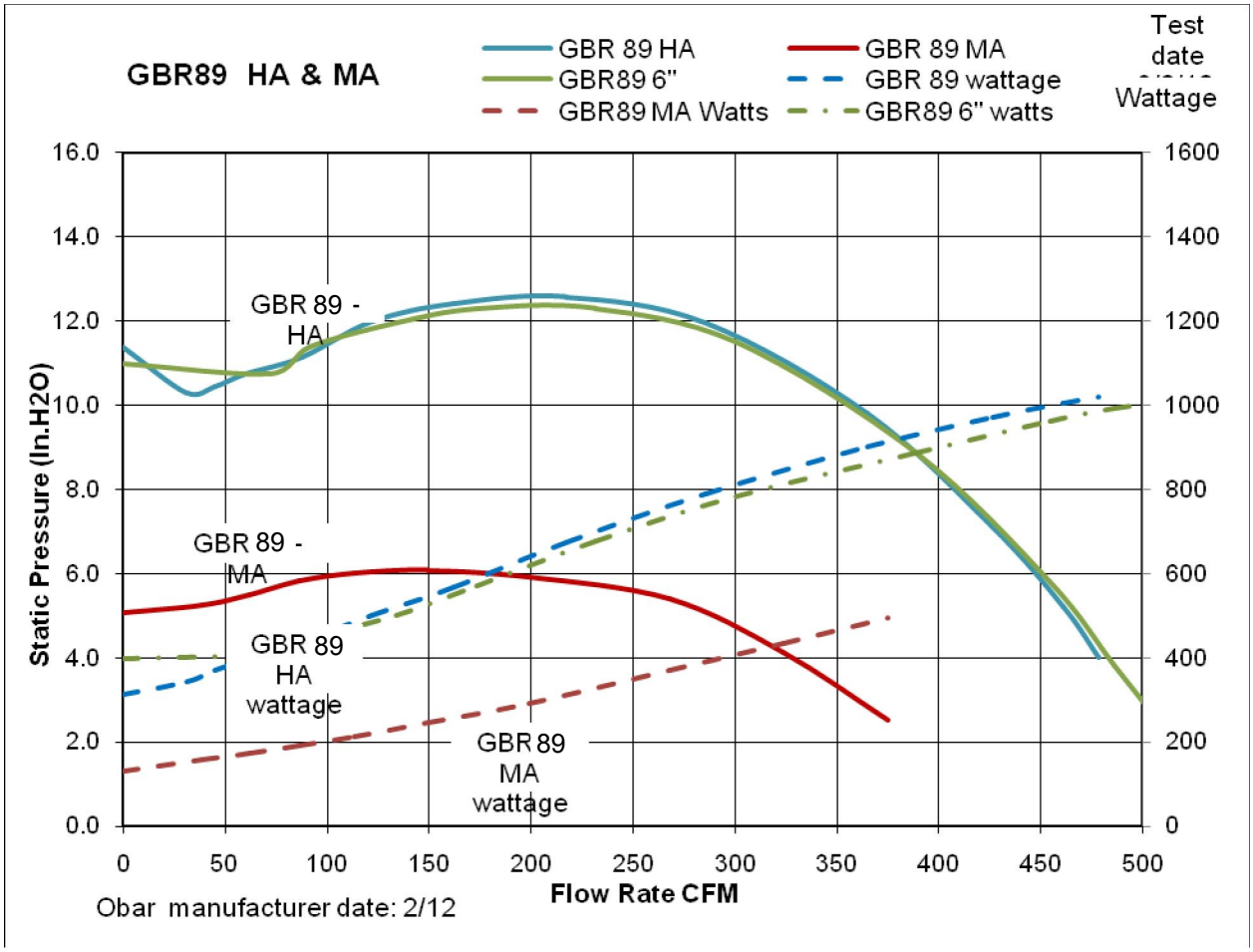
AMETEK
PRECISION MOTION CONTROL

GBR89 HA tested at full voltage with 8 feet of 4" inlet (Blue Lines) and 6" Inlet (Green lines)

Maximum airflow with no exhaust piping and 8' of 6" piping is 529 CFM

GBR89 MA tested with speed control set to half the wattage consumption (Red Line)



Rn 4EC-4 Inline Radon Fan

Item Number: 99923
Variant: 120V 1~ 60Hz

- Use for **High Suction, High Airflow** applications
- Equipped with EC Motor
- Speed Control Included
- LDVI™ Couplings Included
- Airtight Housing Guaranteed
- Large Electrical Box
- Zero Leakage

Active radon mitigation systems employ specialized fans to exhaust radioactive radon gas from underneath building structures via a sealed pipe system. These systems are designed to remove radon gas before it migrates into the building envelope.
As the most powerful model in Fantech's family of Radon Mitigation fans, the **Rn4EC** can create 4.3" of suction while moving 20 cfm, as well as move 490 cfm when operating at only 0.5" of suction. High air flow, high suction.
Rn4EC features an electronically commutated (EC) motor. Inherently efficient and operationally stable at full and reduced speeds, the EC motor arms the radon professional with installation methods not previously practical. Integrated control system allows for "dialling in" the fan speed necessary to achieve either the required sub-slab depressurization or required system air flow rate. For demand-controlled systems, the potentiometer can be removed from the wiring terminal block to accommodate an externally-provided 0-10Vdc speed command.
The **Rn 4-4EC** is constructed with UL certified, UV protected polycarbonate material. The inlet and outlet pieces of the fan's housing are vibration welded for 100% leak-proof housing construction. Totally enclosed motors are designed with extra moisture protection in various radon applications.
Performance certified by **HVI**; safety certified by **UL**.

Technical parameters

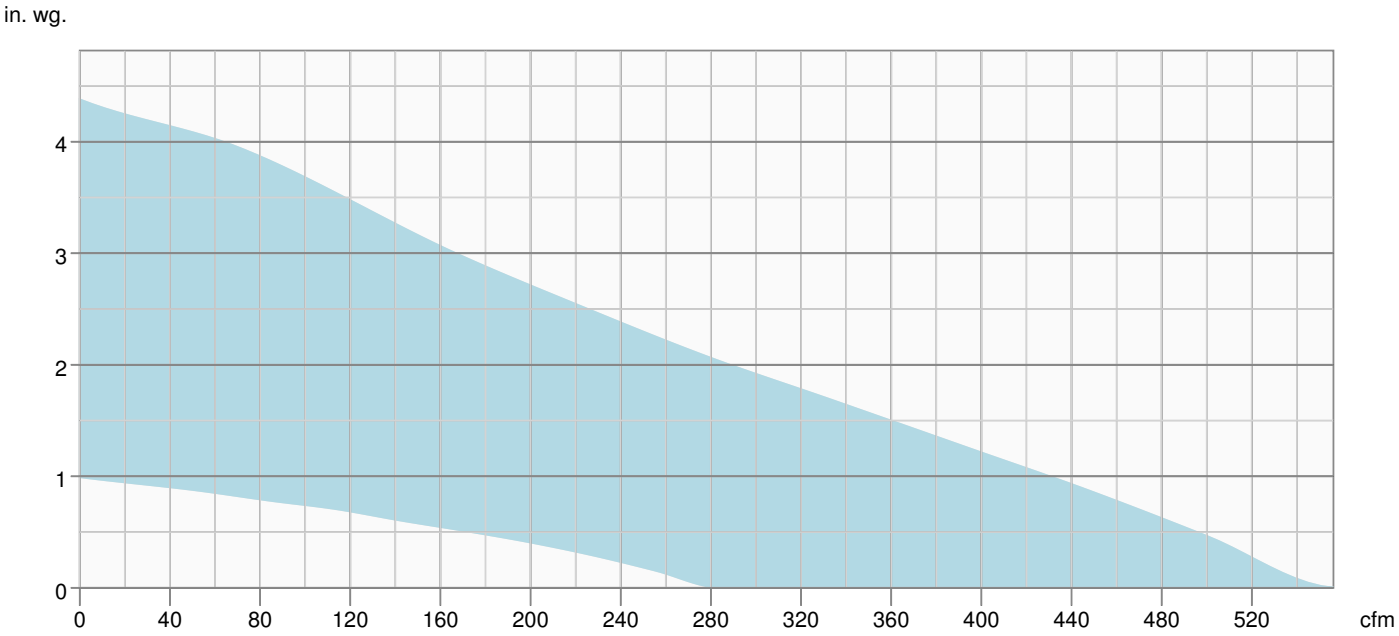
Norminal data		
Voltage (nominal)	120	V
Frequency	60	Hz
Phase(s)	1~	
Input power	169	W
Input current	2.1	A

Impeller speed	4,084	r.p.m.
Air flow	max 555.0	cfm

Protection/Classification		
Enclosure class, motor	IP54	
Insulation class	B	
Certificate	HVI, cULus	

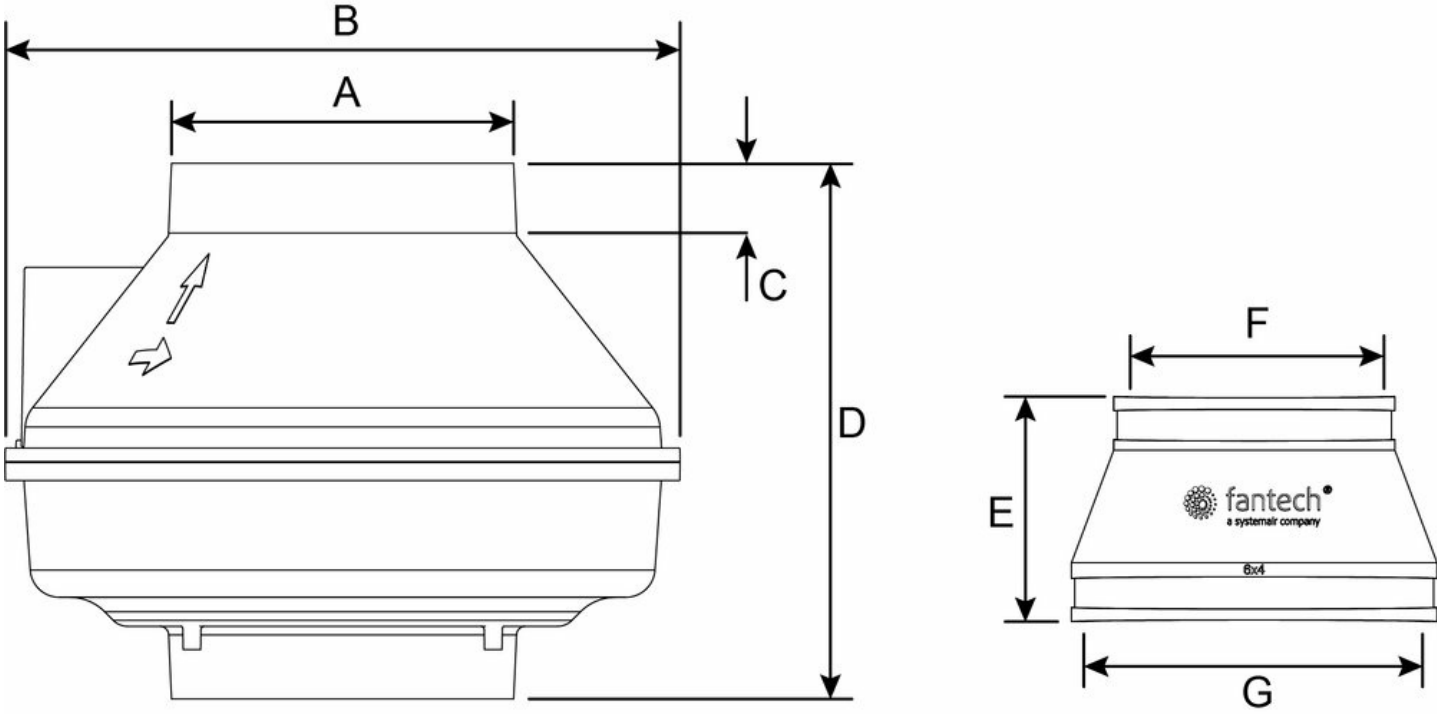
Dimensions and weights		
Weight	7.3	lb

Performance curve



Hydraulic data	
Required air flow	-
Required static pressure	-
Working air flow	-
Working static pressure	-
Air density	0.075 lb/ft³
Power	-
Fan control - RPM	-
Current	-
SFP	-
Control voltage	-
Supply voltage	-

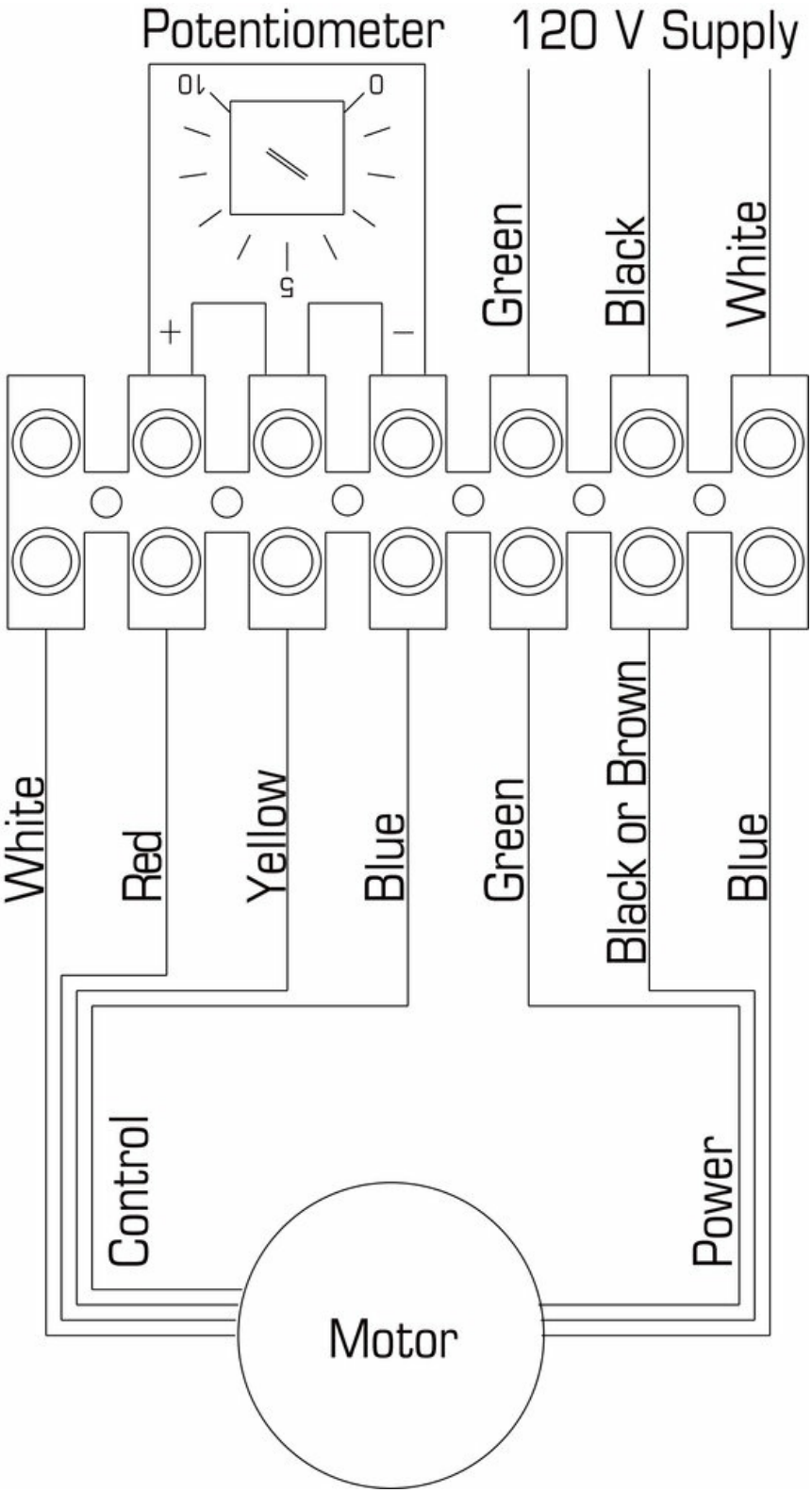
Dimensions



Model	A	B	C	D	E	F	G
Rn2EC	4 15/32 (114)	10 (254)	1 1/4 (32)	9 1/4 (235)	-	-	-
Rn4EC-3	5 7/8 (149)	11 1/2 (292)	1 1/4 (32)	9 1/4 (235)	4 (102)	3 1/2 (89)	6 (152)
Rn4EC-4	5 7/8 (149)	11 1/2 (292)	1 1/4 (32)	9 1/4 (235)	4 (102)	4 1/2 (114)	6 (152)

Dimensions in inches (mm).

Wiring


Potentiometer
120 V Supply
10
0
5
+
−
Green
Black
White
White
Red
Yellow
Blue
Green
Black or Brown
Blue
Control
Power
Motor

Documents

- 142001 Rn2EC-Rn4-EC OIPM EN FR.PDF

RadonAway®

RP PRO SERIES FAN

Radon and Vapor Intrusion Mitigation Fans

All RadonAway® fans are specifically designed for radon and soil gas mitigation. RP Series Fans provide superb performance, run ultra-quiet and are attractive. They are ideal for most Active Soil Depressurization (ASD) systems where loose to moderate gravel or soil density exists.

2100 HVI CERTIFIED

MADE IN USA — Made in USA with U.S. and imported parts.

ETL Listed — Intertek

5 YEAR WARRANTY — All RadonAway® inline radon fans are covered by our 5-year, hassle-free warranty.

ENERGY STAR — RP140 Only

Vapor Tite™ Technology & Eternalast™

Vapor Tite™ sealing technology is an induction welding process where the housing is permanently bonded together, inhibiting radon and soil gas leakage.

Eternalast™ polycarbonate plastic housing protects the fan from color fade over time, keeping the exterior coloration brilliant throughout the system duration.

Features

- Eternalast™ polycarbonate plastic housing
- ETL Listed for indoor or outdoor use
- HVI Certified fan performance
- Rated for commercial and residential use
- Seams sealed to inhibit radon and soil gas leakage *(RP140 & RP145 fans)*
- Energy efficient
- Water-hardened motorized impeller
- Thermally protected motor
- Ultra-quiet operation

RP PRO SERIES

TECHNICAL SPECIFICATIONS

MODEL	P/N	FAN DUCT DIAMETER	WATTS	RECOM. MAX. OP. PRESSURE "WC	TYPICAL CFM vs. STATIC PRESSURE WC					
					0"	.2"	.5"	1.0"	1.5"	2.0"
RP140†◆	28460	4"	17-21	0.7	138	110*	66*	-	-	-
RP145◆	28461	4"	34-66	1.7	169	150*	124*	81*	42	4
RP260	28462	6"	47-65	1.3	251	210*	157	70	-	-
RP265	28463	6"	96-136	2.3	375	340*	282*	204*	140	70
RP380	28464	8"*	90-145	2.0	541	510*	461*	347*	235	107

*NOTE: The RP380 is designed for higher flow, low resistance applications for either 6 inch or 8 inch duct.

*HVI Certified Values. †Energy Star® Rated. ◆Vapor Tite™ fans.

HVI CERTIFIED 2100

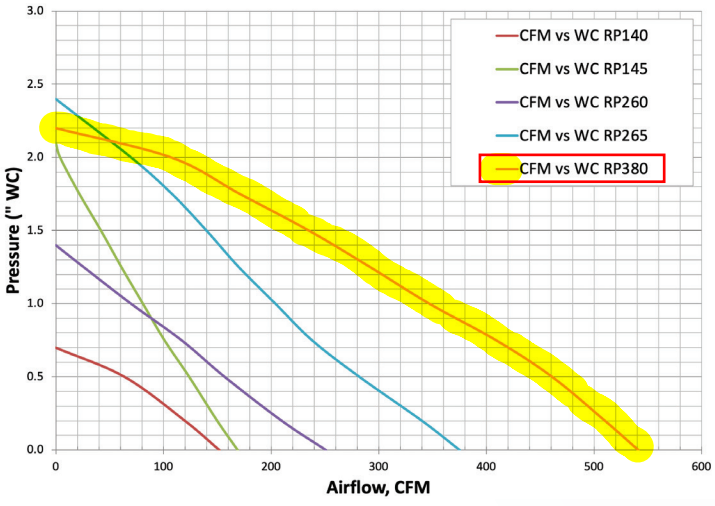
MADE IN USA

ETL Listed Intertek

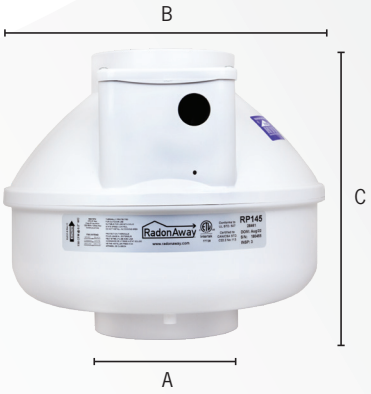
5 YEAR WARRANTY All RadonAway® inline radon fans are covered by our 5-year, hassle-free warranty.

ENERGY STAR RP140 Only

PERFORMANCE CURVE



FAN DIMENSIONS



MODEL	A	B	C
RP140	4.5"	9.7"	8.5"
RP145	4.5"	9.7"	8.5"
RP260	6"	11.75"	8.6"
RP265	6"	11.75"	8.6"
RP380	8"*	13.41"	10.53"

RadonAway®

Rev H 0625
P/N 02047

Dwyer

SERIES 2000

MAGNEHELIC® DIFFERENTIAL PRESSURE GAGES

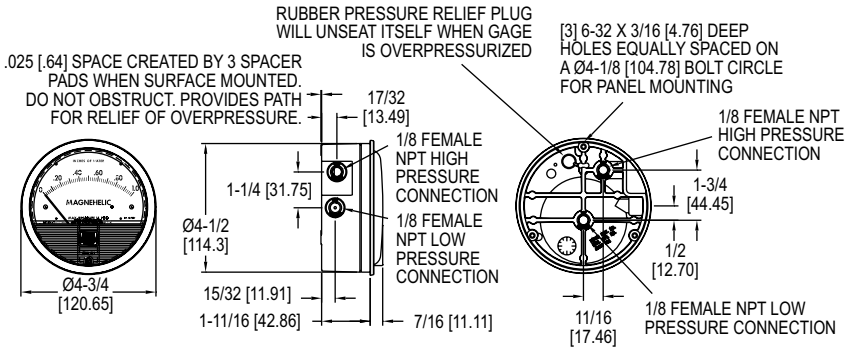
Indicate Positive, Negative or Differential, Accurate within 1%

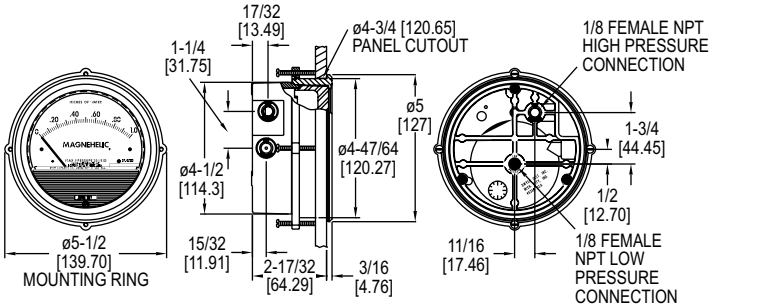
5 YEAR LIMITED WARRANTY

CALIBRATION SERVICES AVAILABLE

Standard Magnehelic® gage

High Accuracy Magnehelic® gage Shown with optional -SS bezel





VIDEO ONLINE

Select the **Series 2000 Magnehelic® Differential Pressure Gages** for a versatile low differential pressure gage with a wide choice of 81 models and 27 options to choose from. Using Dwyer's simple, frictionless Magnehelic® gage movement, it quickly indicates air or non-corrosive gas pressures--either positive, negative (vacuum) or differential. The design resists shock, vibration, over-pressures and is weatherproof to IP67.
Select the –HA High Accuracy Magnehelic® gage option for an accuracy within 1% of full-scale. Also included with the –HA option at no extra cost are a mirrored scale overlay and a 6 point calibration certificate.

BENEFITS/FEATURES

- Easy to read gage through undistorted plastic face permits viewing from far away
- Patented design provides quick response to pressure changes means no delay in assessing critical situations
- Durable and rugged housing and high-quality components combine to provide long-service life and minimized down-time
- High accuracy option is twice as accurate as the standard Magnehelic® gage

APPLICATIONS

- Filter monitoring
- Air velocity with Dwyer® pitot tube
- Blower vacuum monitoring
- Fan pressure indication
- Duct, room or building pressures
- Clean room positive pressure indication

ACCESSORIES

Model	Description
A-432	Portable kit; combine carrying case with any Magnehelic® gage of standard range, except high pressure connection. Includes 9 ft (2.7 m) of 3/16″ ID rubber tubing, standhang bracket and terminal tube with holder
A-605	Air filter gage accessory kit; adapts any standard Magnehelic® gage for use as an air filter gage. Includes aluminum surface mounting bracket with screws, two 5 ft (1.5 m) lengths of 1/4″ aluminum tubing, two static pressure tips and two molded plastic vent valves, integral compression fittings on both tips and valves
A-605B	Air filter gage accessory kit; air filter kit with two plastic open/close valves, two 4″ steel static tips, plastic tubing and mounting flange
A-605C	Air filter gage accessory kit; air filter kit with two plastic open/close valves, two plastic static tips, plastic tubing and mounting flange

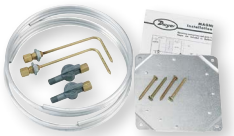
SPECIFICATIONS

Service: Air and non-combustible, compatible gases (natural gas option available).
Note: May be used with hydrogen. Order a Buna-N diaphragm. Pressures must be less than 35 psi.
Wetted Materials: Consult factory.
Housing: Die cast aluminum case and bezel, with acrylic cover. Exterior finish is coated gray to withstand 168 hour salt spray corrosion test.
Accuracy: ±2% (-HA model ±1) of FS (±3% (-HA ±1.5%) on -0, -100PA, -125PA, -10MM and ±4% (-HA ±2%) on -00, -60PA, -6MM ranges), throughout range at 70°F (21.1°C).
Pressure Limits: -20 in Hg to 15 psig (-0.677 to 1.034 bar); MP option: 35 psig (2.41 bar); HP option: 80 psig (5.52 bar).
Enclosure Rating: IP67.
Overpressure: Relief plug opens at approximately 25 psig (1.72 bar), standard gages only.❶
Temperature Limits: 20 to 140°F* (-6.67 to 60°C). -20°F (-28°C) with low temperature option.
Size: 4″ (101.6 mm) diameter dial face.
Mounting Orientation: Diaphragm in vertical position. Consult factory for other position orientations.
Process Connections: 1/8″ female NPT duplicate high and low pressure taps - one pair side and one pair back.
Weight: 1 lb 2 oz (510 g), MP & HP 2 lb 2 oz (963 g).
Standard Accessories: Two 1/8″ NPT plugs for duplicate pressure taps, two 1/8″ pipe thread to rubber tubing adaptor, and three flush mounting adapters with screws. (Mounting and snap ring retainer substituted for three adapters in MP & HP gage accessories.)
Compliance: Meets the technical requirements of EU Directive 2011/65/EU (RoHS II). **Note:** -SP models not RoHS approved.

*Low temperature models available as special options.

Note: For applications with high cycle rate within gage total pressure rating, next higher rating is recommended. See Medium and High pressure options.

A-432



A-605

USA: California Proposition 65
⚠**WARNING:** This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

❶**Over Protection Note: See page 21 (Series 2000)**

Dwyer

SERIES 2000

MAGNEHELIC® DIFFERENTIAL PRESSURE GAGES

Indicate Positive, Negative or Differential, Accurate within 1%

5 YEAR LIMITED WARRANTY

CALIBRATION SERVICES AVAILABLE

Bezel provides flange for flush mounting in panel.

Clear plastic face is highly resistant to breakage. Provides undistorted viewing of pointer and scale.

Precision litho-printed scale is accurate and easy to read.

Calibrated range spring is flat spring steel. Small amplitude of motion assures consistency and long life. It reacts to pressure on diaphragm. Live length adjustable for calibration.

Red tipped pointer of heat treated aluminum tubing is easy to see. It is rigidly mounted on the helix shaft.

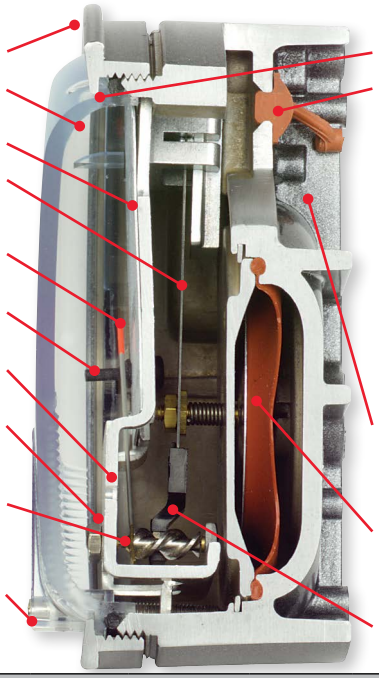
Pointer stops of molded rubber prevent pointer over-travel without damage.

"Wishbone" assembly provides mounting for helix, helix bearings and pointer shaft.

Jeweled bearings are shock-resistant mounted; provide virtually friction-free motion for helix. Motion damped with high viscosity silicone fluid.

Helix is precision made from an alloy of high magnetic permeability. Mounted in jeweled bearings, it turns freely, following the magnetic field to move the pointer across the scale.

Zero adjustment screw is conveniently located in the plastic cover, and is accessible without removing cover. O-ring seal provides pressure tightness.



O-ring seal for cover assures pressure integrity of case.

OVERPRESSURE PROTECTION
Blowout plug is comprised of a rubber plug on the rear which functions as a relief valve by unseating and venting the gage interior when over pressure reaches approximately 25 psig (1.7 bar). To provide a free path for pressure relief, there are four spacer pads which maintain 0.023″ clearance when gage is surface mounted. Do not obstruct the gap created by these pads.
The blowout plug is not used on models above 180″ of water pressure, medium or high pressure models, or on gages which require an elastomer other than silicone for the diaphragm.
The blowout plug should not be used as a system overpressure control. High supply pressures may still cause the gage to fail due to over pressurization, resulting in property damage or serious injury. Good engineering practices should be utilized to prevent your system from exceeding the ratings of any component.

Die cast aluminum case is precision made and iridite-dipped to withstand 168 hour salt spray corrosion test. Exterior finished in baked dark gray hammerloid. One case size is used for all standard pressure options, and for both surface and flush mounting.

Silicone rubber diaphragm with integrally molded O-ring is supported by front and rear plates. It is locked and sealed in position with a sealing plate and retaining ring. Diaphragm motion is restricted to prevent damage due to overpressures.

Samarium Cobalt magnet mounted at one end of range spring rotates helix without mechanical linkages.

MODEL CHART

Model	Range, Inches of Water
2000-00N†••	.05-0-.2
2000-00†••	0-.25
2000-0†•	0-.50
2001	0-1.0
2002	0-2.0
2003	0-3.0
2004	0-4.0
2005	0-5.0
2006	0-6.0
2008	0-8.0
2010	0-10
2012	0-12
2015	0-15
2020	0-20
2025	0-25
2030	0-30
2040	0-40
2050	0-50
2060	0-60
2080	0-80
2100	0-100
2120	0-120
2150	0-150
2160	0-160
2180*	0-180
2250*	0-250
Zero Center Ranges	
2300-00†••	0.125-0-0.125
2300-0†•	.25-0-.25
2301	.5-0-.5
2302	1-0-1
2304	2-0-2
2310	5-0-5
2320	10-0-10
2330	15-0-15

Model	Range, PSI
2201	0-1
2202	0-2
2203	0-3
2204	0-4
2205	0-5
2210*	0-10
2215*	0-15
2220*	0-20
2230**	0-30
Model	**Range, CM of Water**
2000-15CM	0-15
2000-20CM	0-20
2000-25CM	0-25
2000-50CM	0-50
2000-80CM	0-80
2000-100CM	0-100
2000-150CM	0-150
2000-200CM	0-200
2000-250CM	0-250
2000-300CM	0-300
Zero Center Ranges	
2300-4CM	2-0-2
2300-10CM	5-0-5
2300-30CM	15-0-15

Model	Range, MM of Water
2000-6MM†••	0-6
2000-10MM†•	0-10
2000-15MM	0-15
2000-25MM	0-25
2000-30MM	0-30
2000-50MM	0-50
2000-80MM	0-80
2000-100MM	0-100
2000-125MM	0-125
2000-150MM	0-150
2000-200MM	0-200
2000-250MM	0-250
2000-300MM	0-300
Zero Center Ranges	
2300-6MM†••	3-0-3
2300-10MM†•	5-0-5
2300-20MM†•	10-0-10
Model	**Range, Pa**
2000-60NPA†••	10-0-50
2000-30PA†••	0-30
2000-60PA†••	0-60
2000-100PA†•	0-100
2000-125PA†•	0-125
2000-250PA	0-250
2000-300PA	0-300
2000-500PA	0-500
2000-750PA	0-750
2000-1000PA	0-1000
Zero Center Ranges	
Model	**Range, Pa**
2300-60PA†••	30-0-30
2300-100PA†•	50-0-50
2300-120PA	60-0-60
2300-200PA	100-0-100
2300-250PA	125-0-125
2300-300PA	150-0-150
2300-500PA	250-0-250
2300-1000PA	500-0-500

Model	Range, kPa
2000-0.5KPA	0-0.5
2000-1KPA	0-1
2000-1.5KPA	0-1.5
2000-2KPA	0-2
2000-2.5KPA	0-2.5
2000-3KPA	0-3
2000-4KPA	0-4
2000-5KPA	0-5
2000-8KPA	0-8
2000-10KPA	0-10
2000-15KPA	0-15
2000-20KPA	0-20
2000-25KPA	0-25
2000-30KPA	0-30
Zero Center Ranges	
2300-1KPA	.5-0-.5
2300-2KPA	1-0-1
2300-2.5KPA	1.25-0-1.25
2300-3KPA	1.5-0-1.5

Dual Scale Air Velocity Units
For use with pitot tube

Model	Range, in w.c./ Velocity F.P.M.
2000-00AV†••	0-.25/300-2000
2000-0AV†•	0-.50/500-2800
2001AV	0-1.0/500-4000
2002AV	0-2.0/1000-5600
2005AV	0-5.0/2000-8800
2010AV	0-10/2000-12500

Dual Scale English/Metric Models

Model	Range, in w.c.	Range, Pa or kPa
2000-00D†••	0-.25	0-62 Pa
2000-0D†•	0-0.5	0-125 Pa
2001D	0-1.0	0-250 Pa
2002D	0-2.0	0-500 Pa
2003D	0-3.0	0-750 Pa
2004D	0-4.0	0-1.0 kPa
2005D	0-5.0	0-1.25 kPa
2006D	0-6.0	0-1.5 kPa
2008D	0-8.0	0-2.0 kPa
2010D	0-10	0-2.5 kPa
2015D	0-15	0-3.7 kPa
2020D	0-20	0-5 kPa
2025D	0-25	0-6.2 kPa
2050D	0-50	0-12.4 kPa
2060D	0-60	0-15 kPa

†These ranges calibrated for vertical scale position. • Accuracy ±3%. •• Accuracy ±4%. *MP option standard. **HP option standard.

ACCESSORIES

Model	Description
A-135	Rubber gasket for panel mounting
A-310A	3-way vent valves. In applications where pressure is continuous and the Magnehelic® gage is connected by metal or plastic tubing which cannot be easily removed, we suggest using Dwyer A-310A vent valves to connect gage. Pressure can then be removed to check or re-zero the gage
A-321	Safety relief valve
A-401	Plastic carry case
A-448	3-piece magnet kit for mounting Magnehelic® gage directly to magnetic surface

A-310A

VELOCITY AND VOLUMETRIC FLOW UNITS
Scales are available on the Magnehelic® gage that read in velocity units (FPM, m/s) or volumetric flow units (SCFM, m^3/s, m^3/h).
Stocked velocity units with dual range scales in inches w.c. and feet per minute are shown above. For other ranges contact the factory.
When ordering volumetric flow scales please specify the maximum flow rate and its corresponding pressure.
Example: 0.5 in w.c. = 16,000 CFM.

USA: California Proposition 65
⚠**WARNING:** This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

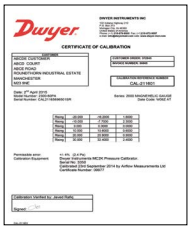
Dwyer

HIGH ACCURACY MAGNEHELIC® DIFFERENTIAL PRESSURE GAGE

CALIBRATION SERVICES AVAILABLE

5 YEAR LIMITED WARRANTY

- Twice as accurate as the standard Magnehelic® gage
- Mirrored scale overlay eliminates parallax error
- IP67 weatherproof housing
- Optional brushed SS bezel



6-point calibration certificate included

OPTIONS - HIGH ACCURACY MAGNEHELIC® GAGE	
To order add suffix:	**Description**
-HA	High accuracy Magnehelic® gage. Accuracy within 1% and weatherproof. Also includes mirrored scale overlay and a six point calibration certificate
-SS	Corrosion resistant brushed 304 stainless steel bezel

Accuracy Specifications: See page 20 (Series 2000)

ADDITIONAL GAGE OPTIONS

OPTIONS - OTHER OPTIONAL BEZELS	
To order add suffix:	**Description**
-CB	Chrome bezel option: A chrome plated aluminum bezel for an aesthetically pleasing finish when mounting on metal surfaces such as control panels.
-SB	Stainless steel bezel option: 304 stainless steel electro polished Ra 16 finished bezel.
-SS	Corrosion resistant brushed 304 stainless steel bezel

LED set point indicator

Adjustable signal flag

Transparent overlay

Mirrored scale overlay

Integrated mounting plate

OPTIONS - LED SET POINT INDICATOR	
To order add suffix:	**Description**
-SP	Bright red LED on right scale shows when set point is reached. Field adjustable from gage face, unit operates on 12-24 VDC. Set point indicator option comes with medium pressure (MP) bezel.
Note: 4-13/16″ hole for flush mounting.	
OPTIONS - ADJUSTABLE SIGNAL FLAG	
To order add suffix:	**Description**
-ASF	Integral with plastic gage cover. Available for most models except those with medium or high pressure construction. Can be ordered with gage or separate.
OPTIONS - TRANSPARENT OVERLAYS	
To order add suffix:	**Description**
-G	Green (to highlight and emphasize critical pressures)
-R	Red (to highlight and emphasize critical pressures)
-Y	Yellow (to highlight and emphasize critical pressures)
OPTIONS - MIRRORED SCALE OVERLAY	
To order add suffix:	**Description**
-M	A mirrored scale overlay is also available to assist in reducing parallax error.
OPTIONS - INTEGRATED MOUNTING PLATE	
To order add suffix:	**Description**
-AHU1	Furnished with attached surface mounting plate
-AHU2	Furnished with attached surface mounting plate and including A-481 installer kit (2 plastic static pressure tips and 7′ of PVC tubing)

OPTIONS - FOR HIGH STATE PRESSURE APPLICATIONS	
To order add suffix:	**Description**
-HP	High pressure option: for pressures to 80 psig
-MP	Medium pressure option: for pressures to 35 psig

OPTIONS	
To order add suffix:	**Description**
-FC	Factory calibration certificate
-LT	Low temperatures to -20°F (-28°C)
-NIST	NIST traceable calibration certificate

USA: California Proposition 65
⚠**WARNING:** This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.