



June 16, 2022

Megan Kuczka
Project Manager
New York State Department of Environmental Conservation
700 Delaware Avenue
Buffalo, NY 14209

Re: Indoor Air Sampling Work Plan
Site Name: Buffalo Color Corporation Site Area C
Site No.: C915231
Site Address: 229 Elk Street
Buffalo, New York 14210

Dear Ms. Kuczka:

On behalf of South Buffalo Development Corporation, LLC (SBD), Inventum Engineering, P.C. (Inventum) is pleased to submit this Indoor Air Sampling Work Plan (work plan) for the former Buffalo Color Corporation (BCC) Area C Brownfield Cleanup Program (BCP) Site (Site No. C915231). The 6.03-acre Area C Site is located at 229 Elk Street in the City of Buffalo, County of Erie, New York and is one of five areas that comprised the former BCC. BCC produced dyes and organic chemicals until its bankruptcy in 2005.

Remedial investigations had previously determined that Site soil contained concentrations of certain metals and organic substances that exceeded the New York State Department of Environmental Conservation (NYSDEC) Commercial Soil Cleanup Objectives (SCOs). Shallow groundwater on the northern half of Area C was found to contain concentrations of volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) that exceeded the NY State Class GA Standards. Remedial activities conducted at the Site are documented in the December 2010 Area C Final Engineering Report (FER) and December 2010 Area C Site Management Plan (SMP)¹.

Additional remedial activities were conducted in accordance with a May 2018 Remedial Action Work Plan (RAWP) to upgrade the existing remedial actions to meet the requirements for Restricted-Residential development. Included was the design, construction, and operation of a sub-slab depressurization (SSD) system, which has been in operation since building occupancy was approved in December 2020. The SSD system was voluntarily installed as a proactive measure to mitigate any potential vapor intrusion issues at the Site.

Post-construction communication testing of the SSD was completed in October 2021 (Attachment A) and the system is operating as designed.

¹ The FER and SMP are currently being revised to document additional remedial activities and institutional controls/engineering controls put in place since 2010 to allow for Restricted-Residential use. The FER/SMP revisions will include an Operations and Maintenance Plan for the SSD system.

Confirmatory indoor air sampling will be conducted to further document the efficacy of the SSD system.

Sub-Slab Depressurization System Description

The SSD system is operating in a mixed-use building consisting of a basement and two above grade interior floors:

Story	Use	Commercial Space (Sq.Ft)
Basement	Utilities, Storage	N/A
1 st Floor	Banquet Facility	27,140
2 nd Floor	Office Space and One Dwelling Unit (Unoccupied)	10,088

Table 1: City of Buffalo Certificate of Occupancy (202405) Description

The SSD system (Figure 1; Attachment B) consists of 3-inch perforated high-density polyethylene (HDPE) piping installed beneath the slab. The piping is connected via 4-inch polyvinyl chloride (PVC) risers to six in-line mounted fans. The fans operate to create a negative sub-slab pressure relative to ambient air within the building. Pre-installed sample ports within the basement slab are used to measure the pressure differential between the occupied space and the zone below the slab.

Long-term monitoring procedures associated with operation of the SSD system will be included in the forthcoming revision to the Area C SMP.

Indoor Air Sampling Work Plan

Indoor air samples will be collected in general accordance with the following guidance document:

- Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, New York State Department of Health (NYSDOH), Center for Environmental Health Bureau of Environmental Exposure Investigation. October 2006

Indoor air samples will be collected at two (2) indoor locations and one (1) outdoor location as shown on Figure 1. The proposed indoor sample locations are in the basement of the building and adjacent to two of the vented sump wells that are connected to the sub-slab HDPE piping. The location of the proposed sample on the southern end of the building is directly below the 2nd floor unoccupied dwelling unit.

One (1) 8-hour sample will be collected at each location in a laboratory certified clean Summa® canister and submitted to Alpha Analytical Laboratories of Buffalo, New York for Volatile Organic Compound (VOC) analysis using EPA Method TO-15/TO-15-SIM. Matrix A and C compounds as listed within the NYSDOH guidance document² will utilize a minimum reporting limit of 0.20 micrograms per cubic meter (µg/m³). Matrix B compounds will utilize a reporting limit of 1.0

² The most recent Soil Vapor/Indoor Air matrices available at the time of sample collection will be utilized.



µg/m³. The inlet of the sample collection canisters will be elevated approximately 3-feet above the basement surface during collection.

Reporting

Inventum will prepare an Indoor Air Sampling Letter Report within 30-days of receipt of the final laboratory analytical data packages. The report will include, at minimum:

- Tabular summary of indoor air sample results compared to NYSDOH guidance levels;
- Sample condition documentation including a product inventory, heating/cooling conditions, outside weather conditions, and other field observations that may influence results interpretation;
- Pressure differential readings from sub-slab ports;
- Sample documentation including pre- and post-collection canister vacuum; and
- Final laboratory data packages including EQUiS submittals and a Data Usability Summary Report (DUSR).

Schedule

At the time of this submittal there is a significant amount of utility and construction work being conducted in the basement using piping adhesives. The indoor air samples will be collected during the heating season of November 15, 2022 to March 31, 2023.

As always, please do not hesitate to contact me directly at 571.217.3627 with any questions or comments on the work plan.

Respectfully submitted,

Todd Waldrop



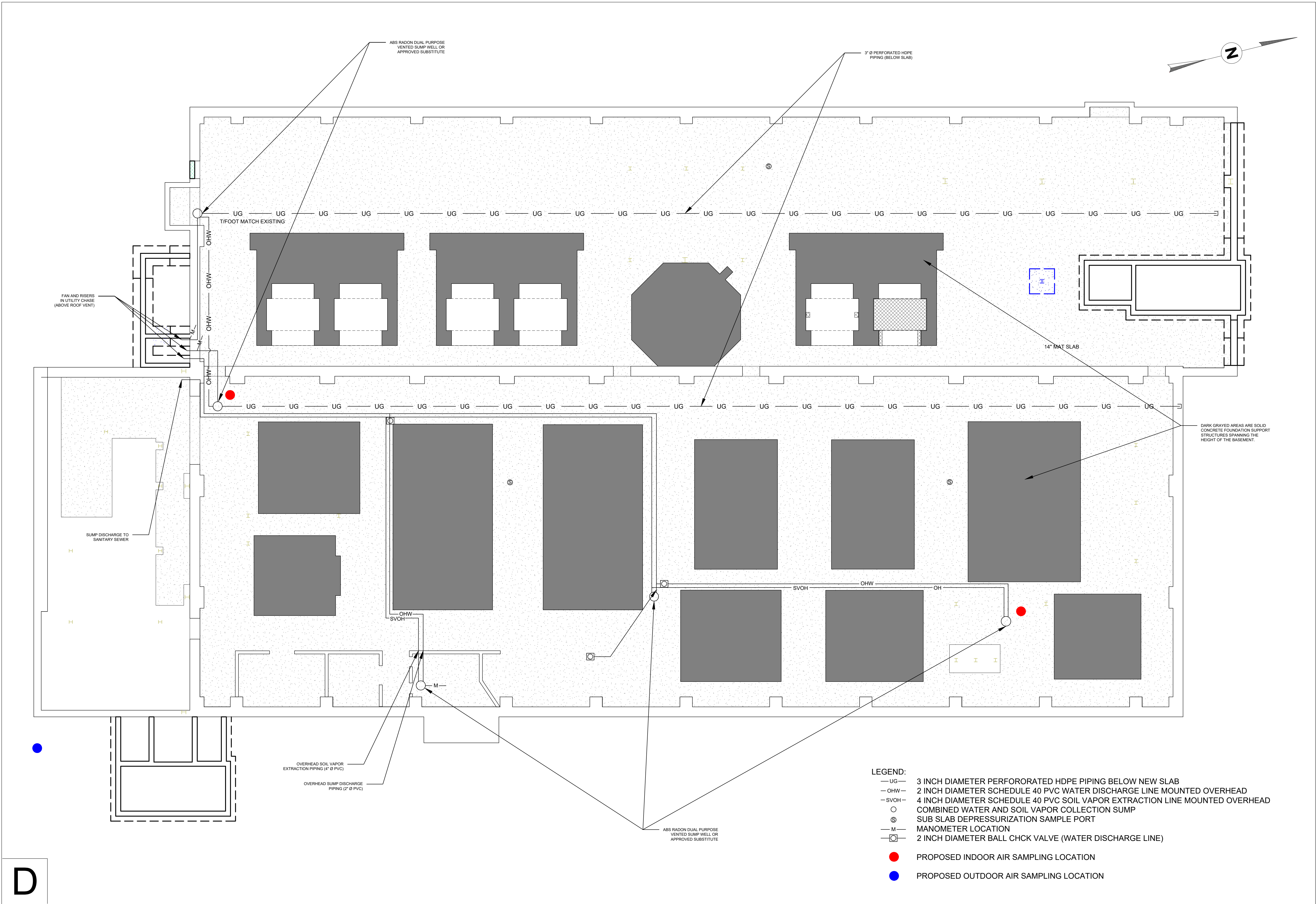
Project Director

Ecc: Andrea Caprio - NYSDEC
Eugene Melnyk - NYSDEC
Teresa Mucha - NYSDEC
Jacquelyn Nealon - NYSDOH
Charlotte Bethoney - NYSDOH
John Yensan – OSC, Inc.
Jon Williams – OSC, Inc.
John Black – Inventum Engineering



Figures





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Indoor Air Sampling Locations
Subslab Depressurization System
140 Lee Street, Buffalo, NY

INVENTUM ENGINEERING
441 CARLISLE DRIVE
SUITE C
HERNDON, VIRGINIA 20170
www.inventumEng.com



FIGURE 1

D

Attachment A



October 13, 2021

Mr. Larry Pirrone
OSC, Inc.
140 Lee Street
Buffalo, New York 14210

Re: Sub-Slab Depressurization (SSD) System – Communication Testing
Former Buffalo Color Area C Site
140 Lee Street, Buffalo, New York

Dear Mr. Pirrone,

Thank you for the opportunity to provide sub-slab depressurization (SSD) system communication testing services at the above referenced Site.

On October 1, 2021, Orion Environmental Solutions, LLC (Orion) personnel utilized a Dwyer handheld digital manometer (Model: 475-00-FM) to conduct communication testing throughout the on-site structure. The Dwyer manometer reads both pressure (positive values) and vacuum (negative values) at a precision of 0.001 inches of water column (wci). Six roof-mounted fans operating for a period of 5 days prior to communication testing activities created a negative sub-slab pressure relative to ambient air within the building. Five pre-installed sample ports were used to measure the pressure differential between the occupied space and the zone below the slab. SSD piping, roof fan, and sample port locations are shown on Figure 1 (attached).

With the SSD system operational and all doors/windows closed, the following pressure differentials were recorded:

- Test Port #1: -0.012 wci
- Test Port #2: -0.014 wci
- Test Port #3: -0.016 wci
- Test Port #4: -0.014 wci
- Test Port #5: -0.012 wci

As shown, each measurement exceeded the pressure differential creation objective of -0.004 wci as well as a typical system design pressure differential of -0.010 wci. As such, Orion has determined that the ASD system is operating as designed. Representative project photographs are presented in Attachment 1.

Feel free to call me with any questions.

Mr. Larry Pirrone
OSC, Inc.

October 13, 2021
Page 2 of 2

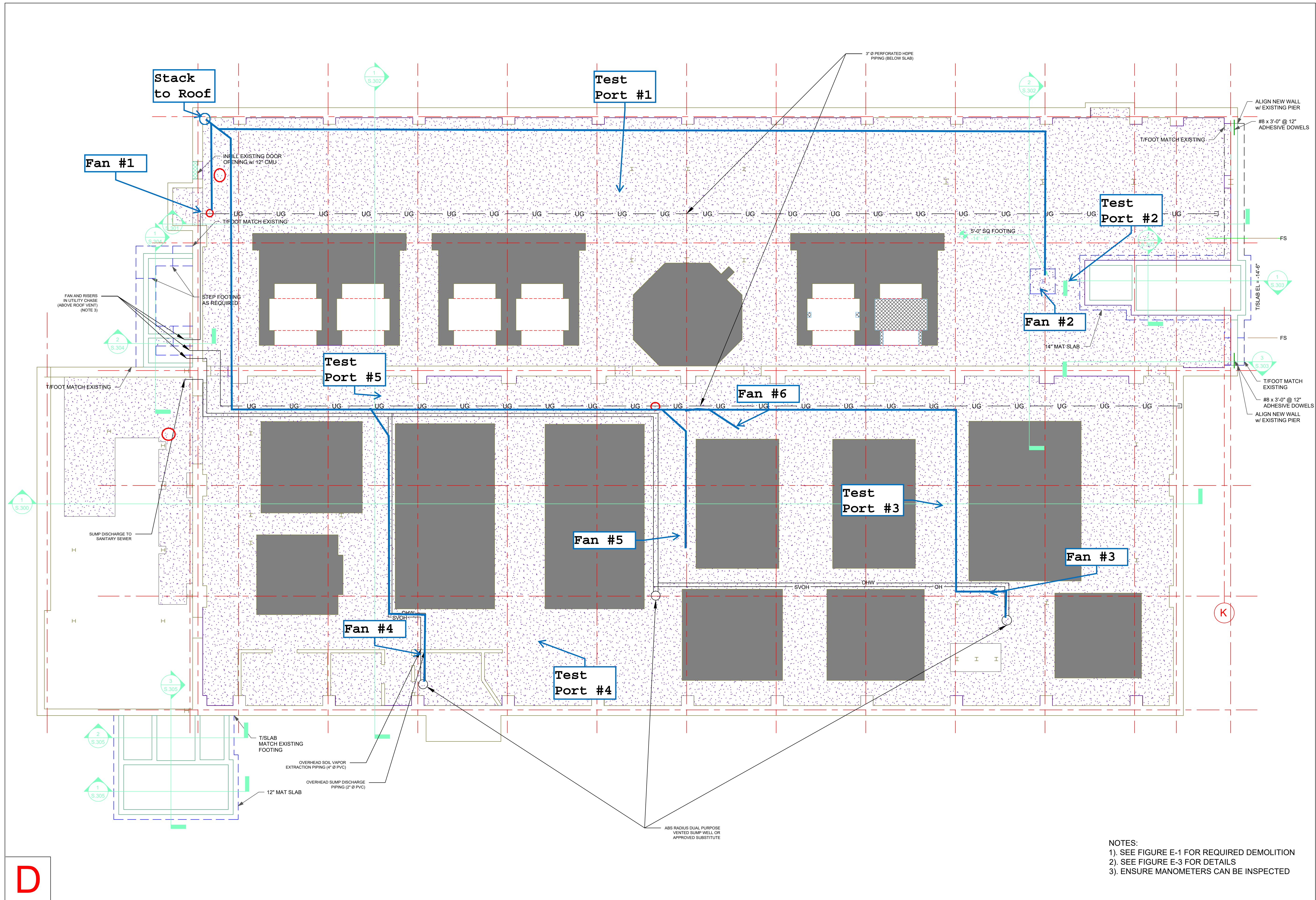
Sincerely,
Orion Environmental Solutions, LLC



Bryan C. Hann, P.G.
Chief Executive Officer

File: 0030-001-002

FIGURES



D

- NOTES:
 1). SEE FIGURE E-1 FOR REQUIRED DEMOLITION
 2). SEE FIGURE E-3 FOR DETAILS
 3). ENSURE MANOMETERS CAN BE INSPECTED

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Subslab Depressurization System
 140 Lee Street, Buffalo, NY

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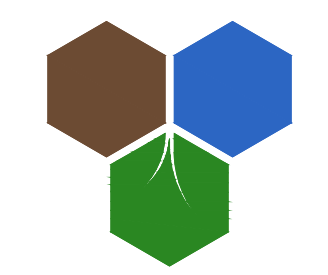


FIGURE E-2

ATTACHMENT 1

PROJECT PHOTOGRAPHS

SITE PHOTOGRAPHS

Photo 1:



Photo 2:



Photo 3:



Photo 4:



Photo 1: Test Port #1 showing measured pressure differential.

Photo 2: Test Port #1.

Photo 3: Test Port #2 showing measured pressure differential.

Photo 4: Test Port #2.

Former Buffalo Color Area C
Buffalo, New York

Photo Date: 2021-10-01



SITE PHOTOGRAPHS

Photo 5:



Photo 6:



Photo 7:



Photo 8:



Photo 5: Test Port #3 showing measured pressure differential.

Photo 6: Test Port #3.

Photo 7: Test Port #4 showing measured pressure differential.

Photo 8: Test Port #4.

Former Buffalo Color Area C
Buffalo, New York

Photo Date: 2021-10-01



SITE PHOTOGRAPHS

Photo 9:



Photo 11:

Photo 10:



Photo 12:

Photo 9: Test Port #5 showing measured pressure differential.

Photo 10: Test Port #5.

Photo 11:

Photo 12:

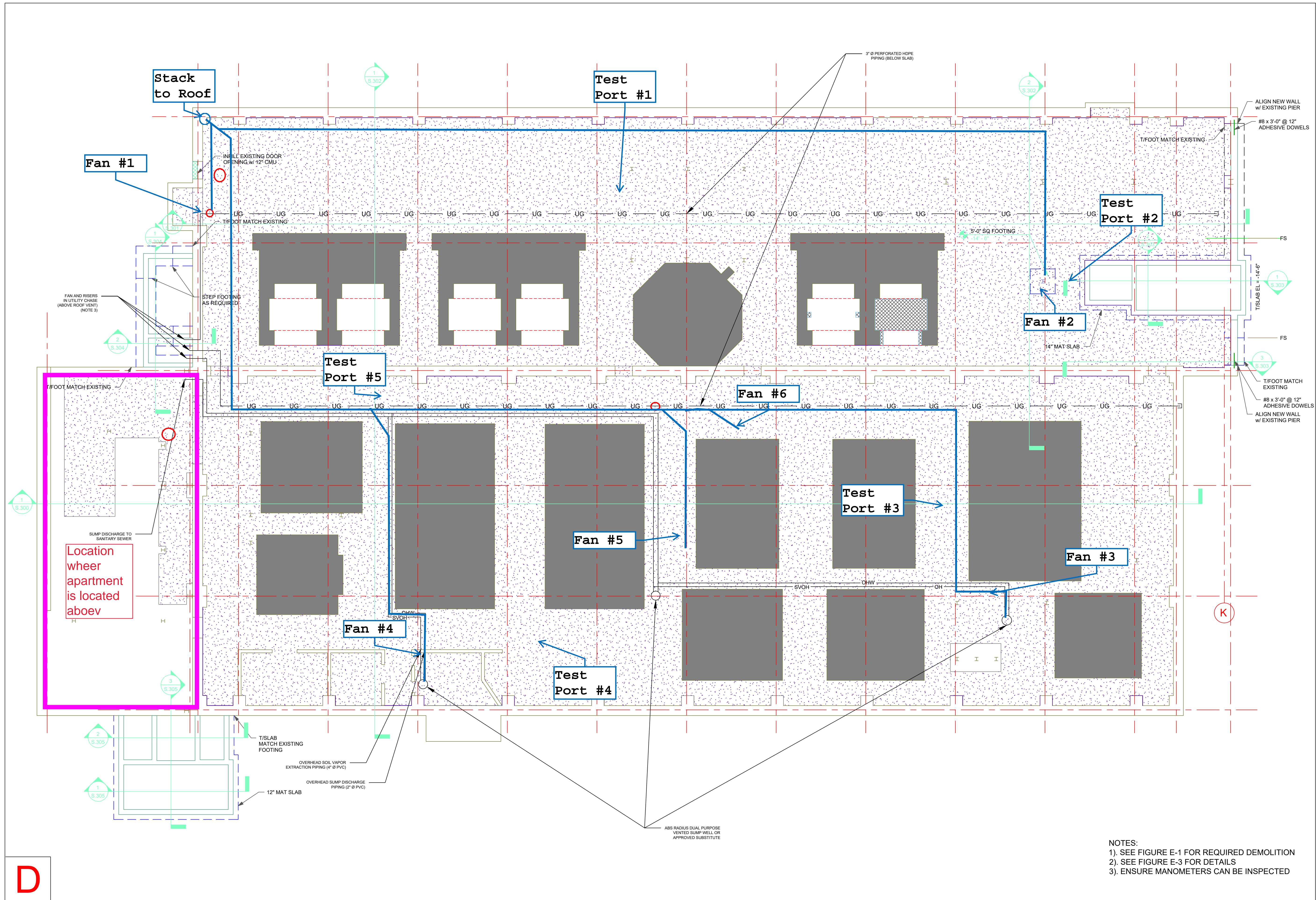
Former Buffalo Color Area C
Buffalo, New York

Photo Date: 2021-10-01



Attachment B





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FIGURE E-2
 DRAWING NUMBER: 02 of 03

- NOTES:
 1). SEE FIGURE E-1 FOR REQUIRED DEMOLITION
 2). SEE FIGURE E-3 FOR DETAILS
 3). ENSURE MANOMETERS CAN BE INSPECTED

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