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SOIL VAPOR INTRUSION MITIGATION WORK PLAN

for the

FORMER NATIONAL PLATING SITE
1501 Brewerton Road
Town of Salina, Onondaga County, New York
DEC Site No. V00264
Project No. 2010150

June 2017

BACKGROUND

The New York State Department of Environmental Conservation (DEC) has been investigating and remediating the Former National Plating Site, located at 1501 Brewerton Road in the Town of Salina, Onondaga County, New York, through the Voluntary Cleanup Program (VCP). A soil vapor intrusion (SVI) investigation was completed at the site and results provided in a May 1, 2017 submission to the DEC. Refer to *Figure 1 – Site Plan* for the sample locations. The June 12, 2017 DEC response letter indicated the installation of a vapor intrusion mitigation system at the onsite building would be required and requested a work plan.

Implementation of an SVI mitigation system is proposed to address sub-slab soil vapors identified during the 2017 soil vapor intrusion investigation. The SVI mitigation system will consist of a sub-slab depressurization (SSD) system using existing perforated polyvinyl chloride (PVC) pipe installed after the 2011 remediation of a former sump structure. The excavation was lined with filter fabric following the removal of impacted soils. Two sets of perforated PVC pipe were installed, one horizontal loop below the groundwater table used to inject chemical oxidants to enhance groundwater remediation and a second loop approximately 6 inches below the floor slab, prior to backfilling with washed #2 rounded sandstone.

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SCOPE OF WORK

The proposed SSD system is shown in relation to the prior remedial excavation on *Figure 2 – Sub-Slab Depressurization System*. The following tasks are proposed:

- The existing 4-inch riser from the shallow perforated PVC loop will be extended upward along the adjacent steel column to the ceiling. A horizontal run to the north will be installed, penetrating the northern wall to vent to the exterior atmosphere above the existing roof elevation.

- An exhaust fan capable of producing approximately 2.5 inches of water vacuum at a flow rate of approximately 70 cubic feet per minute (cfm) (such as Infiltech GP-501 or equivalent, as approved by the Engineer) will be installed on the 4-inch PVC riser outside of the building via flexible couplings to draw air from the sub-slab soil atmosphere. The exhaust fan will be hard-wired in conformance with the National Electric Code and applicable local codes.

- A fan speed control (such as Fantech Speed Control or equivalent, as approved by the Engineer) will be incorporated within the electrical circuit to the exhaust fan and will be accessible by facility personnel.

- A "U" tube type manometer or vacuum gauge (such as a Vacu-Ray Vacumeter or Dwyer Magnehelic Vacuum Gauge or equivalent, as approved by the Engineer) capable of measuring 4 inches of water column vacuum will be installed at eye level and in plain view to measure the vacuum in the SSD system vent pipe before the fan.

- Floor slab construction joints will be sealed using closed cell foam backer rod and/or non-shrink caulk.

- A rain deflector cap will be installed on top of the exhaust stack to minimize the potential for rainwater to enter the system.

- All components will be clearly marked and labeled.

The system will be activated following installation and allowed to run for seven days. A performance test of the system will then be conducted by measuring the vacuum pressure at sub-slab sample locations SS-1 and SS-2 (refer to Figure 1), located hydraulically downgradient from the remediated area.

Confirmation testing will be conducted during the following heating season. Confirmation samples will be collected as follows:

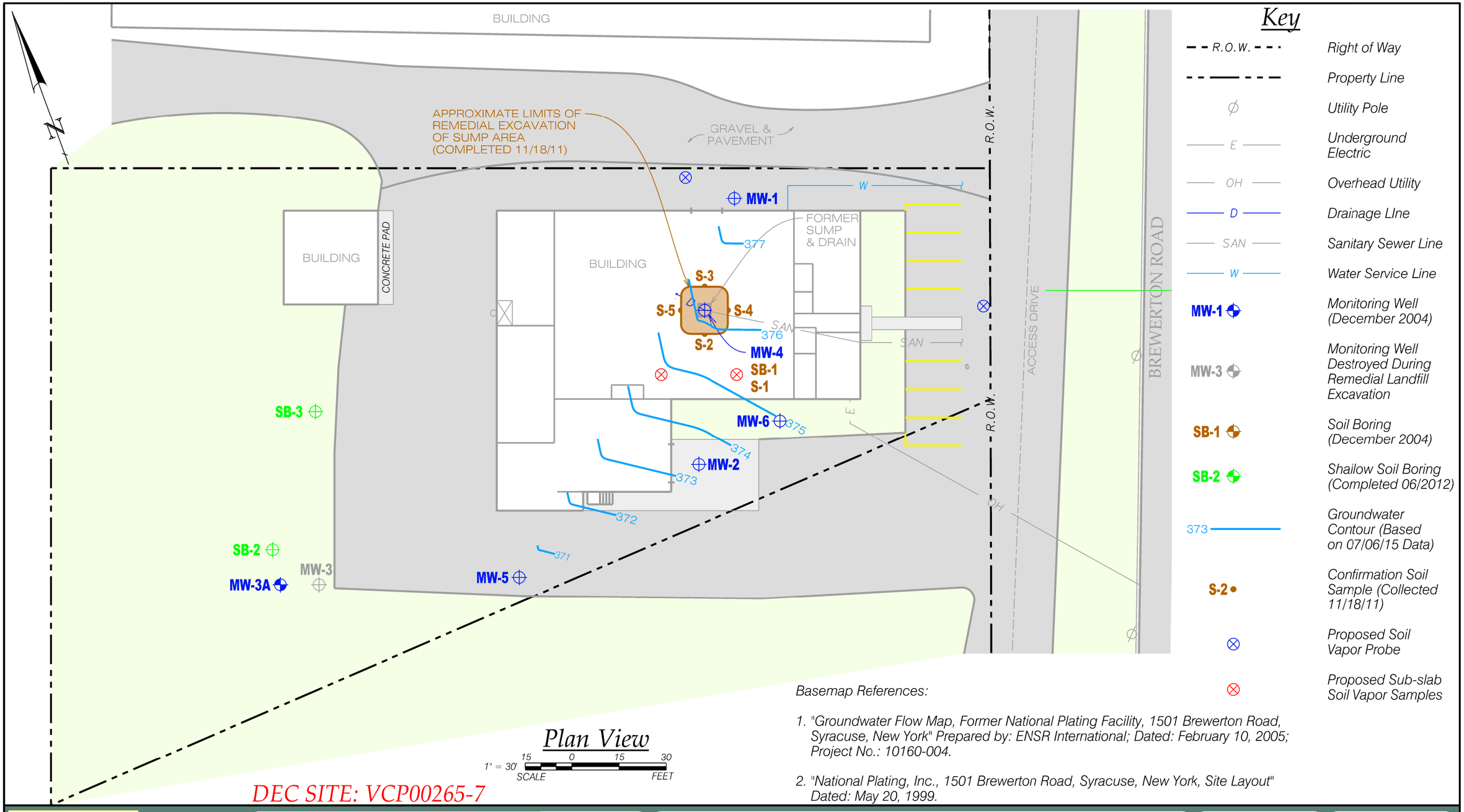
- Two sub-slab vapor samples (one each at sample locations SS-1 and SS-2).

- One indoor air sample from within the building.

- One outdoor air sample from between the onsite building and the adjacent building to the north.

REPORT

A report will be prepared summarizing the remedial activities and system evaluation sampling following completion of the work and submitted to the DEC for review.



Plan View

1" = 30' SCALE 15 0 15 30 FEET

DEC SITE: VCP00265-7

Basemap References:

1. *"Groundwater Flow Map, Former National Plating Facility, 1501 Brewerton Road, Syracuse, New York" Prepared by: ENSR International; Dated: February 10, 2005; Project No.: 10160-004.*
2. *"National Plating, Inc., 1501 Brewerton Road, Syracuse, New York, Site Layout" Dated: May 20, 1999.*

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REVISIONS: DATE: BY:

PROJECT: FORMER NATIONAL PLATING

DWG. TITLE: SITE PLAN

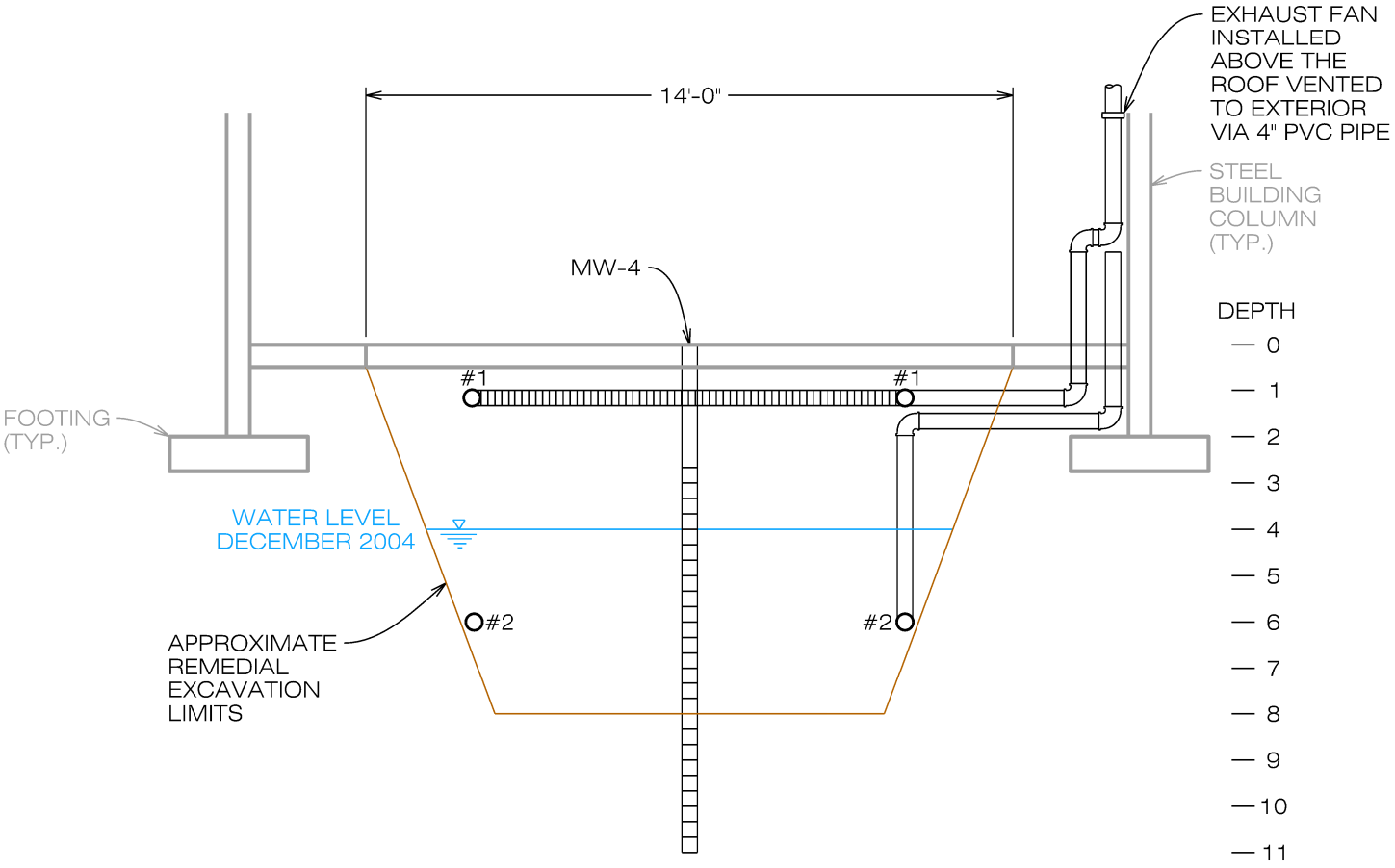
CLIENT: DJH REALTY CORP.

LOCATION: TOWN OF SALINA, ONONDAGA COUNTY, NEW YORK

Note: No alteration permitted hereon except as provided under Section 7209 Subdivision 2 of the New York State Education Law.

PROJECT No.:	2010150
FILE NAME.:	GWC_11-11-16
SCALE:	AS NOTED
DATE:	OCT. 2016
ENG'D BY:	DKM
DRAWN BY:	MGT
CHECKED BY:	DRV

SHEET NO.: FIGURE 1



BACKFILL - FILTER FABRIC & WASHED #2 ROUNDED SAND STONE (NOT LIMESTONE)

REMEDIAL PIPING:

#1 SHALLOW 4" PERFORATED PVC LOOP FOR SOIL EXTRACTION.
#2 SUBMERGED 4" PERFORATED PVC LOOP FOR INJECTION.

DEC SITE: VCP00265-7

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PROJECT: FORMER NATIONAL PLATING

DWG. TITLE: SUB-SLAB DEPRESSURIZATION SYSTEM

CLIENT: D.H.J. REALTY CORP.

LOCATION: TOWN OF SALINA, ONONDAGA COUNTY, NEW YORK

PROJECT No.:	2010150
FILE NAME.:	FIGURE 2
SCALE:	1/4" = 1'-0"
DATE:	NOV. 2010
ENG'D BY:	DKM
DRAWN BY:	JJL
CHECKED BY:	DRV