

**ENVIRONMENTAL SITE INVESTIGATION  
WORK PLAN**

**SOUTH GROVE ELEMENTARY SCHOOL  
AND  
SOUTH GROVE ANNEX  
60 COLONY LANE  
SYOSSET, NEW YORK 11971**

**PREPARED FOR:  
SYOSSET CENTRAL SCHOOL DISTRICT  
99 PELL LANE  
SYOSSET, NEW YORK 11791**

**JCB PROJECT #: 18-40222  
MAY 2018**

**J.C. BRODERICK & ASSOCIATES, INC.  
Environmental Consulting & Testing**

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- Figure No. 1 – Site Location Map
- Figure No. 2 – Proposed Sub-slab and Crawlspace Sampling Locations
- Figure No. 3 – Proposed 1st Floor and Ambient Sampling Locations
- Figure No. 4 – Proposed Soil Boring & Groundwater Sampling Locations

## **Introduction**

J.C. Broderick & Associates, Inc. (JCB) was retained by the Syosset Central School District to prepare an Environmental Investigation Work Plan (IWP). The following sections summarize the proposed scope of work to evaluate the potential for exposure by soil, groundwater, and soil vapor intrusion into the districts property and buildings from known landfill contaminants by the adjoining Syosset Landfill located at 150 Miller Place Road. This IWP was developed following the protocols to comply with the requirements of the New York State Department of Health (NYSDOH) "Guidance for Evaluating Soil Vapor Intrusion in the State of New York", Final Version, October 2006 and all amendments; and, The New York State Department of Environmental Conservation, Division of Environmental Remediation, (NYSDEC) "DER-10 Technical Guidance for Site Investigation and Remediation", May 2010.

The proposed scope of work will include the following tasks:

1. Volatile Vapor Intrusion (VVI) Investigation
2. Subsurface Soil Investigation
3. Groundwater Investigation

## **Section No. 1.0: Volatile Vapor Intrusion (VVI) Investigation**

### **Section No. 1.1: Pre-Work Field Preparations**

The following summarizes the pre-work field preparations:

- Prior to mobilization, a pre-sampling inspection will be performed to evaluate the physical layout and conditions of the school building being investigated, to specifically determine the location of each sample, identify conditions that may affect or interfere with the proposed sampling and to prepare the building for sampling.

### **Section No. 1.2: Sub-Slab Vapor Collection**

The following summarizes the manner in which sub-slab vapor samples will be collected:

- For the collection of the subsurface vapor samples, a probe will be fabricated from ½-inch diameter, threaded brass pipe with a barbed tubing connection. Using a hammer drill, a 1-inch hole will be drilled into the concrete floor at least two inches below the base of the slab (three to four inches thick). The pipe will be lowered into the hole, but not flush to the bottom, and set into place utilizing hydrated bentonite powder, which contains no volatile organic compounds (VOCs). A five (5) gallon plastic container will be placed on top of the concrete floor and above the vapor point. The container will be sealed to the concrete floor with modeling clay. Teflon-lined, ¼-inch I.D. disposable polyethylene tubing will then be utilized to connect the barbed connection of the vapor point to a laboratory clean-certified, 6-liter SUMMA<sup>®</sup> canister, provided by York Analytical Laboratories, Inc. (York) through a flow controller pre-set for an eight (8) hour long sample duration. The tubing includes a tee connection and valve to a purging vacuum pump calibrated for a flow rate of less than 0.2 liters per minute. The tubing, probe, and subsurface soil will be purged of at least one (1) liter of vapor prior to the start of sample collection. Upon completion of the sampling, the probe will be removed from the concrete slab and the hole patched with concrete.

- Helium (He) will be introduced into the atmosphere under the pail, as a tracer gas, to assure the integrity of the subsurface vapor point seals with the atmosphere. The tracer gas will be monitored in the purge air both before and after sampling and outside of any seals, utilizing a Myron Helium Detector, or similar equipment. In addition, Helium (He) will be analyzed for in the sample and if detected at a concentration of more than ten (10) percent by volume, the sample will be considered invalid and retaken.

Please refer to Figure No. 2, Proposed Sub-slab and Crawlspace Sampling Locations, located in the attachments of this IWP for additional information.

- One (1) sub-slab vapor sample will be collected from beneath the crawlspace along the east side of the elementary school building.
- One (1) sub-slab vapor sample will be collected from beneath the crawlspace along the west side of the elementary school building.
- One (1) sub-slab vapor sample will be collected from beneath the crawlspace along the west side of the elementary school gym.
- One (1) sub-slab vapor sample will be collected from beneath the crawlspace along the south side of the Annex.

### **Section No. 1.3: Indoor Air Sample Collection**

The following summarizes the manner in which indoor air samples will be collected:

- Sample flow rates will conform to the specifications in the sample collection method (less than 0.2 liters per minute).
- All personnel will avoid lingering in the immediate area of the sampling device while samples are being collected.
- Samples will be collected, utilizing conventional sampling methods, in laboratory clean-certified, 6-liter SUMMA<sup>®</sup> canisters, provided by York.
- Indoor air samples will be collected, at a height approximately three (3) feet above the floor to represent a height at which occupants are normally seated, from the following locations.

#### **Section 1.3.1: Crawlspace Air Sample Locations**

Please refer to Figure No. 2, Proposed Sub-slab and Crawlspace Sampling Locations, located in the attachments of this IWP for additional information.

- One (1) crawlspace air sample will be collected within close proximity of the sub-slab sample location within the east side of the elementary school building.
- One (1) crawlspace air sample will be collected within close proximity of the sub-slab sample location within the west side of the elementary school building.
- One (1) crawlspace air sample will be collected within close proximity of the sub-slab sample location within the elementary school gym.
- One (1) crawlspace air sample will be collected within close proximity of the sub-slab sample location within the Annex.

### **Section 1.3.2: First Floor Air Sample Locations**

Please refer to Figure No. 3, Proposed 1<sup>st</sup> Floor and Ambient Sampling Locations, located in the attachments of this IWP for additional information.

- One (1) 1<sup>st</sup> floor air sample will be collected from classroom directly above the crawlspace sample location within the east side of the elementary school building.
  - One (1) 1<sup>st</sup> floor air sample will be collected from classroom directly above the crawlspace sample location within the west side of the elementary school building.
  - One (1) 1<sup>st</sup> floor air sample will be collected from the room directly above the crawlspace sample location within the elementary school gym.
  - One (1) 1<sup>st</sup> floor air sample will be collected from the room directly above the crawlspace sample location within the Annex.
- To document conditions during indoor air sampling and ultimately to aid in the interpretation of the sampling results, the following actions will be taken:
    - The storage of volatile chemicals will be identified.
    - A product inventory survey will be completed, documenting possible sources of volatile chemicals present in the building during the indoor air sampling which could potentially influence the sample results. This inventory will be completed utilizing the NYSDOH product inventory sheet provided in the NYSDOH “Guidance for Evaluating Soil Vapor Intrusion in the State of New York”, Final Version, October 2006.
    - The use of heating or air conditioning systems during sampling will be noted.
    - Floor plan sketches will be drawn which include: the floor layout with sampling locations, chemical storage areas, garages, doorways, stairways, locations of basement sumps or subsurface drains and utility perforations through building foundations, HVAC system supply and return registers, compass orientation (north), and footings that create separate foundation sections. Photographs will be taken to accompany the floor plan sketches.
    - Any pertinent observations, including readings from field instrumentation, will be recorded.

### **Section No. 1.4: Outdoor (Ambient) Air Sample Collection**

Please refer to Figure No. 3, Proposed 1<sup>st</sup> Floor and Ambient Sampling Locations, located in the attachments of this IWP for additional information. The following summarizes the manner in which the outdoor (ambient) air sample will be collected:

- An outdoor (ambient) air sample will be collected simultaneously with sub-slab, crawlspace and indoor air samples to evaluate the potential influence, if any, of outdoor air on indoor air quality. To obtain a representative sample which meets the data quality objectives, the outdoor air sample will be collected in a manner consistent with that for indoor air samples.
- The ambient air sample will be collected, at a height above the ground to represent breathing zones (3 to 5 feet), from the following locations:

- One (1) ambient air sample will be collected from outside the south side of the elementary school.
- One (1) ambient air sample will be collected from outside the south side of the Annex.
- To document conditions during outdoor air sampling and ultimately to aid in the interpretation of the sampling results, the following actions will be taken:
  - Outdoor plot sketches will be drawn which include the building site, area streets, outdoor air sampling location, the location of potential interferences, compass orientation (north), and paved areas.
  - Weather conditions (barometric pressure/precipitation/outdoor temperature) will be recorded.
  - Any pertinent observations, including readings from field instrumentation, will be recorded.

### **Section No. 1.5: Laboratory Analysis**

The following summarizes laboratory analysis procedures:

- The collected Summa<sup>®</sup> Canister samples will be assigned individual identification numbers; Chain of Custody documents will be prepared and the samples will then be delivered to an independent New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory for analysis.
- The collected air samples will be analyzed for VOCs utilizing Environmental Protection Agency (EPA) Method TO-15. Sub-slab samples will additionally be analyzed for Helium (He).
- York Analytical Laboratories, Inc. will provide all laboratory analytical services. Copies of York's NYSDOH ELAP certifications are available upon request.

### **Section No. 1.6: Quality Assurance and Quality Control (QA/QC) Procedures**

The following summarizes Quality Assurance and Quality Control (QA/QC) Procedures:

- In order to prevent cross-contamination between sampling locations, all re-usable sampling equipment which comes into contact with sample materials will be decontaminated prior to each use. Equipment used for sample collection will be wiped clean, washed in a solution of Alconox, and thoroughly rinsed with potable water. New and dedicated polyethylene tubing will be used for collection of each soil vapor sample. All sampling personnel shall wear disposable latex, nylon, or nitrile gloves during sampling events. At a minimum, gloves will be changed before each laboratory sample is collected.
- The field sampling team will maintain a sample log sheet summarizing the following:
  - Sample identification;
  - Canister ID Number;
  - Regulator ID Number;

- Date and time of sample collection;
  - Sampling height;
  - Sampling methods and devices;
  - The volume of air sampled;
  - The vacuum of canisters before and after sample collection;
  - Chain of custody protocols and records used to track samples from sampling point to analysis.
- Subsequent to sample collection, the Summa<sup>®</sup> canister will be labeled with the sampling location, time, and samplers initials.

**Section No. 1.7: Volatile Vapor Intrusion (VVI) Report Preparation**

- Upon completion of the subsurface investigation activities, a VVI Report will be prepared documenting the site findings. At a minimum, the report will include: an executive summary; a narrative of the field activities; validated laboratory analysis data and conclusions; a comparison of subsurface soil vapor, indoor and outdoor air sampling analytical results to TO-15; updated figures and recommendations, if warranted.

## **Section No. 2.0: Subsurface Soil and Groundwater Investigation**

The following summarizes the pre-work field preparations:

- In accordance with New York State Law 16 NYCRR Part 753, a utility mark out will be obtained from the One Call Notification System.
- Perform a limited subsurface inspection utilizing ground penetrating radar (GPR) and/or subsurface structure/utility locating equipment in an attempt to locate subsurface anomalies within the areas of the proposed borings. The subsurface inspection will be limited to: active electric, potable water, natural gas, telecommunications and site lighting lines; sanitary/storm drain systems and underground storage tanks (USTs).

## **Section No. 2.1: Soil Sample Collection**

Please refer to Figure No. 4, Proposed Soil Boring & Groundwater Sampling Locations Map, located in the attachments of this IWP for additional information. The following summarizes the soil sample collection activities:

- With the use of a track-mounted Geoprobe® Model 7822DT or similar equipment advance up to four (4) environmental soil borings along the property boundary between the landfill and the Elementary School and Annex buildings. As the borings are advanced, continuous soil sampling will be performed in five (5) foot intervals, utilizing a Geoprobe® Macro-Core soil sampling system, beginning at the surface grade until the groundwater interface is encountered. The depth to groundwater is estimated to be between 104 feet and 118 feet below surface grade (bsg). To confirm the presence or absence of a contaminant smear zone, soil samples will be collected terminating approximately five (5) feet below the observed groundwater interface. If contamination is discovered, the sampling will continue until the vertical extent of the contamination is reached. The depth and location of each boring will be documented on boring logs and a boring location map.
- Field screening for the presence of total volatile organic compounds (TVOCs) will be performed during all soil sampling utilizing a MiniRAE 3000 portable Photo-Ionization Detector (PID) or equivalent. All PID readings will be documented on boring logs.
- At each boring location, a soil sample will be collected from the surface sample (0 – 5 ft bsg) and at the observed groundwater interface. Additional samples may be collected based on apparent contamination (PID readings, visual and/or olfactory sensing) above or below the groundwater interface. If no evidence of contamination is detected within the borehole, then only the surface sample and groundwater interface sample will be submitted for laboratory analysis.

## **Section No. 2.2: Groundwater Sample Collection**

Please refer to Figure No. 4, Proposed Soil Boring & Groundwater Sampling Locations, located in the attachments of this IWP for additional information. The following summarizes the groundwater sample collection activities:

- Subsequent to the completion of each soil boring, a groundwater sample will be collected utilizing a track-mounted Geoprobe® Model 7822DT equipped with a Geoprobe® SP-16



groundwater sampler. The sampler will be driven to three (3) feet below the observed groundwater interface and deployed in preparation for groundwater sampling.

- All groundwater quality sampling will be performed in accordance with the Environmental Protection Agency's (EPA's) Low-flow (minimal draw down) procedures. In accordance with this procedure, each deployed groundwater sampler will be purged utilizing dedicated polyethylene tubing and a stainless-steel check valve to transfer groundwater up the well and through the flow chamber of a YSI 556 Multi-Probe handheld groundwater chemistry meter. Groundwater chemistry will be monitored and recorded every 5 minutes until the groundwater chemistry stabilizes. Monitoring will consist of pH, Specific Conductivity, Redox Potential and Dissolved Oxygen. The sampler will be considered to be stabilized and ready for sampling when the readings remain in the following ranges:  $\pm 0.1$  for pH;  $\pm 3\%$  for Specific Conductance (Conductivity);  $\pm 10$  mv for Redox Potential; and  $\pm 10\%$  for Dissolved Oxygen. YSI stabilization data for each well will be recorded. Between each sampling location, the dedicated polyethylene tubing will be discarded and new tubing utilized. Purge water generated during sample collection will be containerized in 55-gallon steel DOT rated drums.
- Upon completion of the groundwater sampling and removal of the probe rods, the boring will be backfilled with clean sand to grade. The location of each boring will be marked, photographed and measured from at least two (2) fixed points.

### **Section No. 2.3: Laboratory Analysis**

The following summarizes laboratory analysis procedures:

- Soil and groundwater samples selected for laboratory analysis will be placed into laboratory supplied containers, assigned individual identification numbers, and then placed into an appropriately conditioned cooler. Chain of custody documents will be prepared and the samples will then be delivered to an independent New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory for analysis.
- Soil and groundwater samples submitted for laboratory analysis will be analyzed for volatile organic compounds (VOCs) utilizing Environmental Protection Agency (EPA) Method 8260 and semi-volatile organic compounds (SVOCs) utilizing Environmental Protection Agency (EPA) Method 8270.
- York Analytical Laboratories, Inc. will provide all laboratory analytical services. Copies of York's NYSDOH certifications are available upon request.

### **Section No. 2.4: Quality Assurance and Quality Control (QA/QC) Procedures**

The following summarizes quality assurance and quality control (QA/QC) procedures:

- In order to prevent cross-contamination between sampling locations, all re-usable sampling equipment which comes into contact with sample materials will be decontaminated prior to each use. Equipment used for sample collection will be wiped clean, washed in a solution of Alconox, and thoroughly rinsed with potable water. All down-hole equipment which does not come into contact with sample material shall be pressure rinsed with potable water prior to the start of each boring. New and dedicated polyethylene liners will be used for the collection of each soil sample

and new and dedicated polyethylene tubing will be used for collection of each groundwater sample. All sampling personnel shall wear disposable latex, nylon, or nitrile gloves during sampling events. At a minimum, gloves will be changed between boring locations and before each laboratory sample is collected. All collected samples shall be placed into an appropriately conditioned cooler for storage and transported to the laboratory. Samples shall be maintained between 0°C and 8°C.

- All soils not selected for laboratory analysis, all rinsewater and all water generated during sample purging will be containerized in properly labeled Department of Transportation (DOT) 55-gallon drums. The drums (soil and water) will be placed in a secure location until disposal arrangements are made and will remain on-site for a maximum of 60 days.

### **Section No. 2.5: Subsurface Soil and Groundwater Investigation Report Preparation**

- Upon completion of the subsurface soil and groundwater investigation activities and receipt of laboratory analysis results, a Subsurface Soil and Groundwater Investigation Report will be prepared documenting the site findings. At a minimum, the report will include: an executive summary; a narrative of the field activities; laboratory analysis data and conclusions; a comparison of soil and groundwater analytical results to the Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a) as reported in NYSDEC Division of Environmental Remediation 6 NYCRR Part 375 Environmental Remediation Programs dated December 14, 2006 and NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations dated June 1998, respectively; an updated site drawing depicting the boring locations; boring logs; and recommendations, if warranted.

If you have any questions, please do not hesitate to contact our office.

Sincerely,

**J.C. Broderick & Associates, Inc.**



Jeffrey V. Nannini  
Environmental Scientist



Steven Muller, P.G. (LA)  
Director – Subsurface Division

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# Figures



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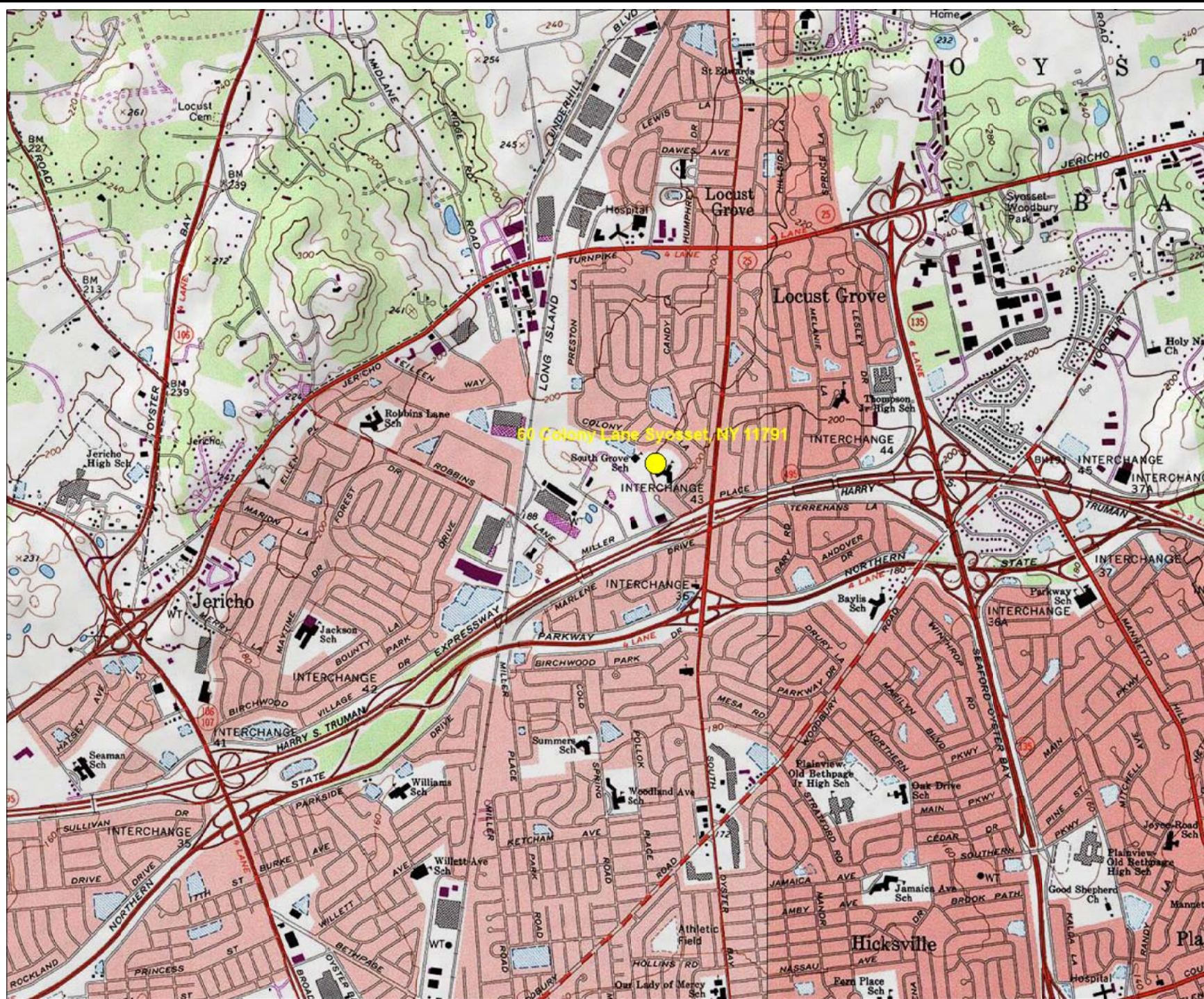
Notes:  
  
 South Grove  
 Elementary School  
 60 Colony Lane  
 Syosset, NY 11791

Drawing Title  
  
 Figure No. 1  
 Site Location Map

Scale As Noted Project No. 18-40222 Date 05-31-18

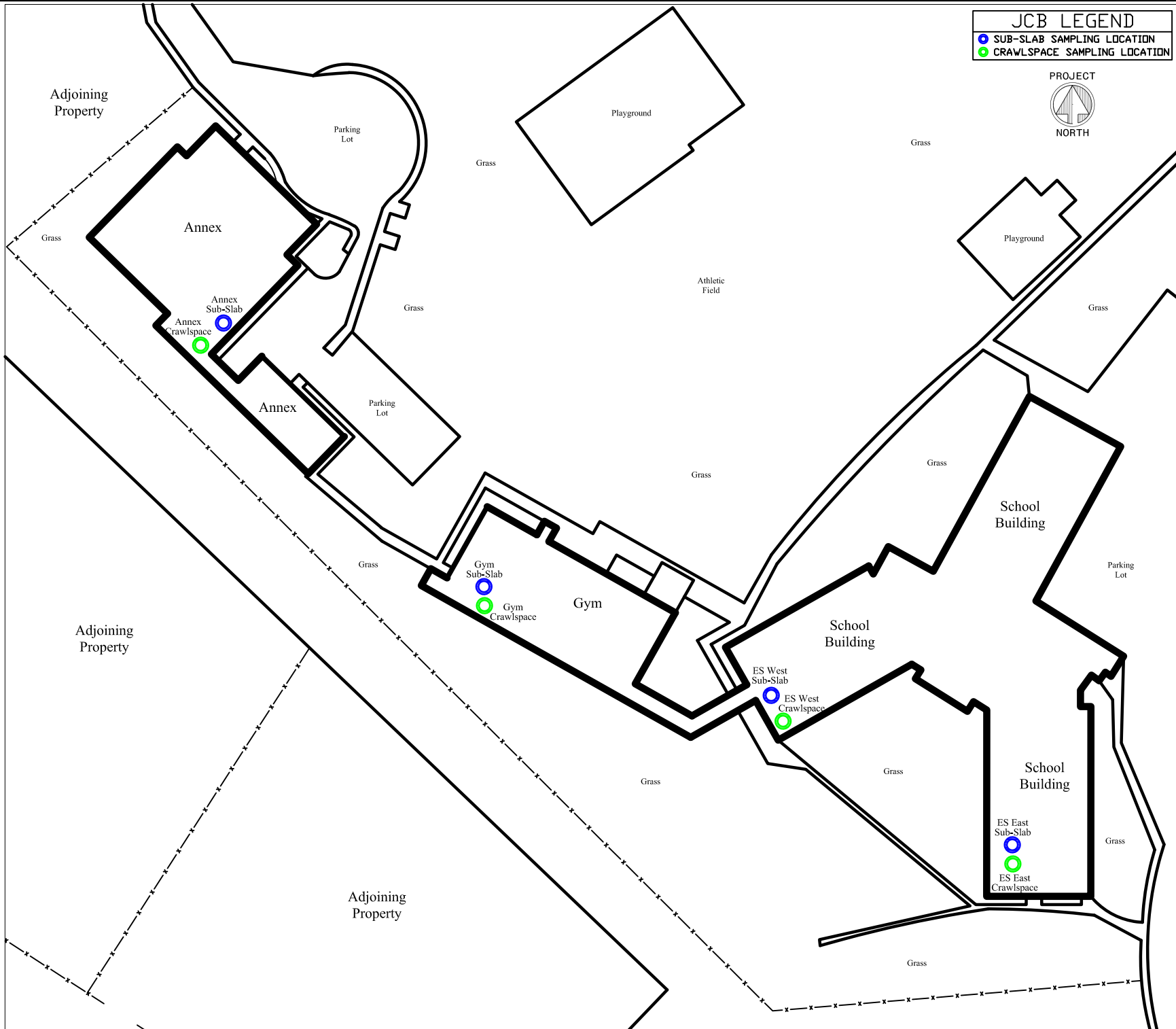
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Drawing No.



**JCB LEGEND**  
 ● SUBJECT SITE

Map created with TOPO!® ©2002 National Geographic (www.nationalgeographic.com/topo)



**JCB LEGEND**  
 ● SUB-SLAB SAMPLING LOCATION  
 ● CRAWLSPACE SAMPLING LOCATION



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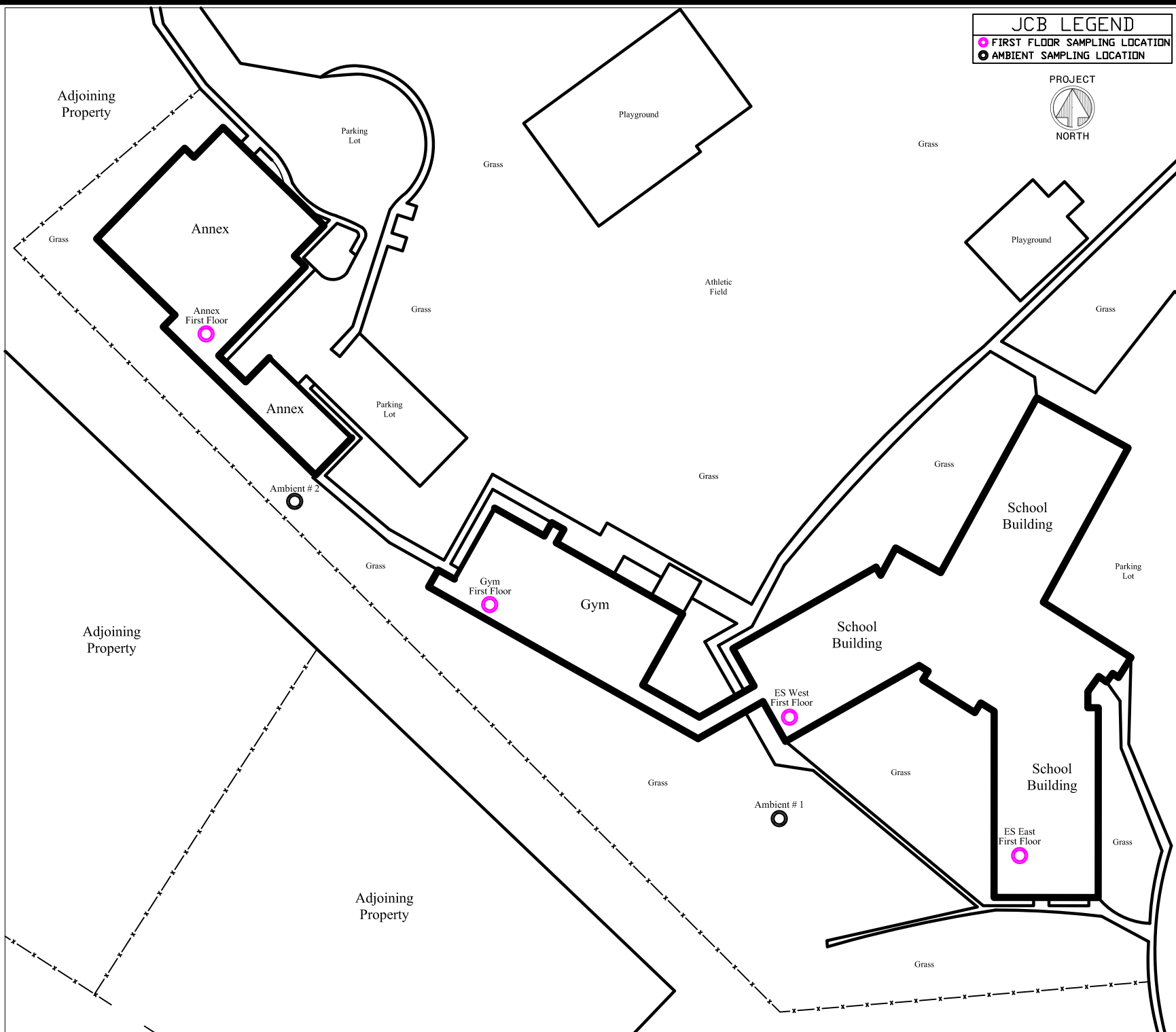
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 South Grove  
 Elementary School  
 60 Colony Lane  
 Syosset, NY 11791

Drawing Title  
 Figure No. 2  
 Proposed  
 Sub-Slab  
 and  
 Crawlspace  
 Sampling  
 Locations

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Drawing No.  
 2



**JCB LEGEND**  
 ● FIRST FLOOR SAMPLING LOCATION  
 ● AMBIENT SAMPLING LOCATION



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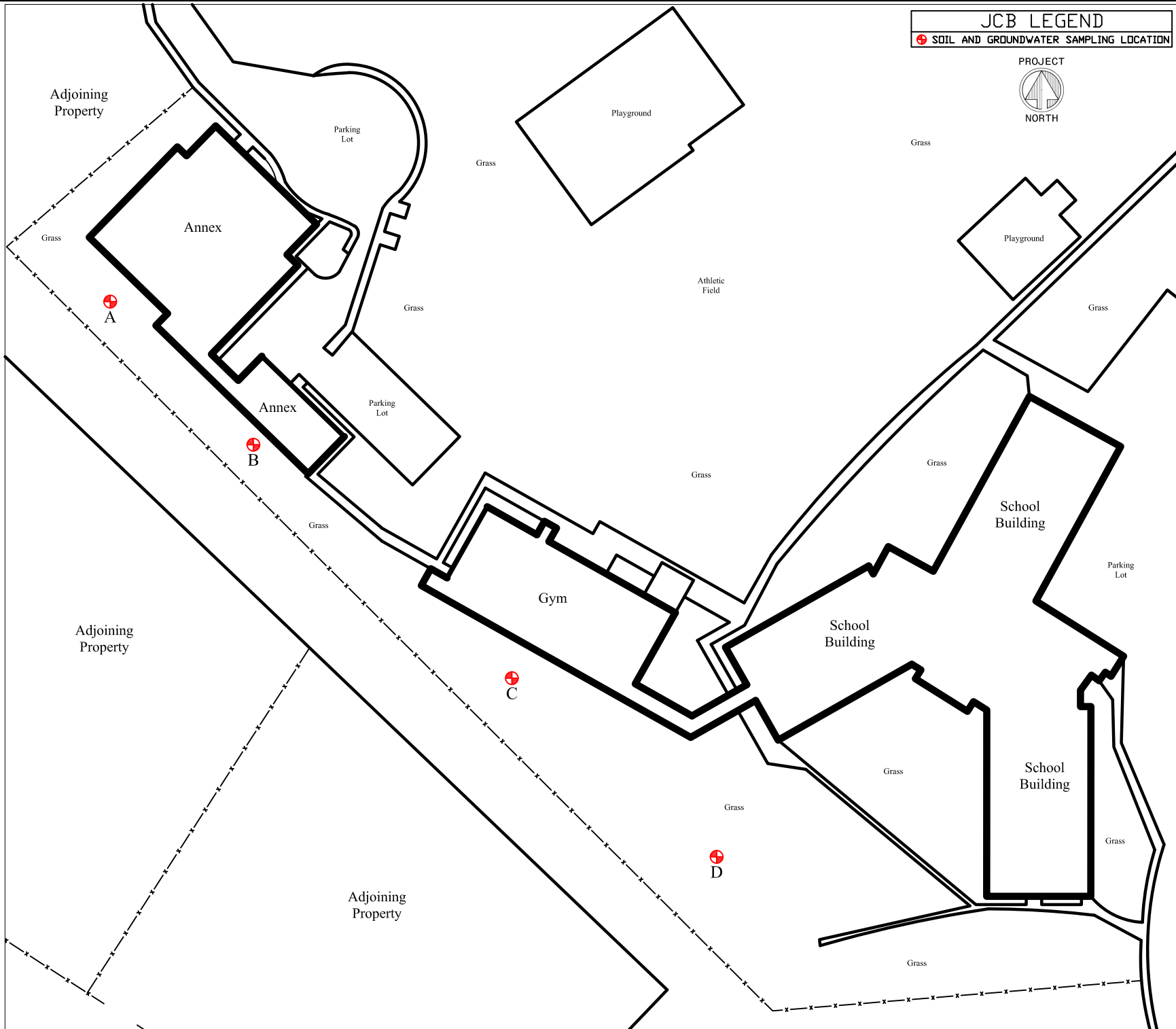
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 South Grove  
 Elementary School  
 60 Colony Lane  
 Syosset, NY 11791

**Drawing Title**  
  
 Figure No. 3  
  
 Proposed  
 1st Floor  
 and  
 Ambient  
 Sampling  
 Locations

<b>Scale</b> N.T.S.	<b>Project No.</b> 18-40222	<b>Date</b> 05-31-18
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**Drawing No.**  
  
 3



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**Notes:**

South Grove  
 Elementary School  
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 Syosset, NY 11791

**Drawing Title**

Figure No. 4

Proposed  
 Soil Boring  
 and  
 Groundwater  
 Sampling  
 Locations

<b>Scale</b> N.T.S.	<b>Project No.</b> 18-40222	<b>Date</b> 06-01-18
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**Drawing No.**

4

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# **Indoor Air Quality Questionnaire and Building Inventory**



**NEW YORK STATE DEPARTMENT OF HEALTH  
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY  
CENTER FOR ENVIRONMENTAL HEALTH**

This form must be completed for each residence involved in indoor air testing.

Preparer's Name \_\_\_\_\_ Date/Time Prepared \_\_\_\_\_

Preparer's Affiliation \_\_\_\_\_ Phone No. \_\_\_\_\_

Purpose of Investigation \_\_\_\_\_

**1. OCCUPANT:**

**Interviewed:** Y / N

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_

Address: \_\_\_\_\_

County: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Office Phone: \_\_\_\_\_

Number of Occupants/persons at this location \_\_\_\_\_ Age of Occupants \_\_\_\_\_

**2. OWNER OR LANDLORD:** (Check if same as occupant \_\_\_ )

**Interviewed:** Y / N

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_

Address: \_\_\_\_\_

County: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Office Phone: \_\_\_\_\_

**3. BUILDING CHARACTERISTICS**

**Type of Building:** (Circle appropriate response)

Residential  
Industrial

School  
Church

Commercial/Multi-use  
Other: \_\_\_\_\_

**If the property is residential, type?** (Circle appropriate response)

- |              |                 |                   |
|--------------|-----------------|-------------------|
| Ranch        | 2-Family        | 3-Family          |
| Raised Ranch | Split Level     | Colonial          |
| Cape Cod     | Contemporary    | Mobile Home       |
| Duplex       | Apartment House | Townhouses/Condos |
| Modular      | Log Home        | Other: _____      |

**If multiple units, how many?** \_\_\_\_\_

**If the property is commercial, type?**

Business Type(s) \_\_\_\_\_

Does it include residences (i.e., multi-use)? Y / N      If yes, how many? \_\_\_\_\_

**Other characteristics:**

Number of floors \_\_\_\_\_      Building age \_\_\_\_\_

Is the building insulated? Y / N      How air tight? Tight / Average / Not Tight

**4. AIRFLOW**

**Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:**

Airflow between floors

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Airflow near source

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Outdoor air infiltration

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Infiltration into air ducts

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**5. BASEMENT AND CONSTRUCTION CHARACTERISTICS** (Circle all that apply)

- a. Above grade construction: wood frame concrete stone brick
- b. Basement type: full crawlspace slab other \_\_\_\_\_
- c. Basement floor: concrete dirt stone other \_\_\_\_\_
- d. Basement floor: uncovered covered covered with \_\_\_\_\_
- e. Concrete floor: unsealed sealed sealed with \_\_\_\_\_
- f. Foundation walls: poured block stone other \_\_\_\_\_
- g. Foundation walls: unsealed sealed sealed with \_\_\_\_\_
- h. The basement is: wet damp dry moldy
- i. The basement is: finished unfinished partially finished
- j. Sump present? Y / N
- k. Water in sump? Y / N / not applicable

**Basement/Lowest level depth below grade:** \_\_\_\_\_(feet)

**Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)**

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**6. HEATING, VENTING and AIR CONDITIONING** (Circle all that apply)

**Type of heating system(s) used in this building: (circle all that apply – note primary)**

- Hot air circulation
- Space Heaters
- Electric baseboard
- Heat pump
- Steam radiation
- Wood stove
- Hot water baseboard
- Radiant floor
- Outdoor wood boiler
- Other \_\_\_\_\_

**The primary type of fuel used is:**

- Natural Gas
- Electric
- Wood
- Fuel Oil
- Propane
- Coal
- Kerosene
- Solar

**Domestic hot water tank fueled by:** \_\_\_\_\_

**Boiler/furnace located in:** Basement Outdoors Main Floor Other \_\_\_\_\_

**Air conditioning:** Central Air Window units Open Windows None

Are there air distribution ducts present? Y / N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

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**7. OCCUPANCY**

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never

**Level** General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)

Basement	_____
1 <sup>st</sup> Floor	_____
2 <sup>nd</sup> Floor	_____
3 <sup>rd</sup> Floor	_____
4 <sup>th</sup> Floor	_____

**8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY**

- a. Is there an attached garage? Y / N
- b. Does the garage have a separate heating unit? Y / N / NA
- c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / N / NA  
Please specify \_\_\_\_\_
- d. Has the building ever had a fire? Y / N When? \_\_\_\_\_
- e. Is a kerosene or unvented gas space heater present? Y / N Where? \_\_\_\_\_
- f. Is there a workshop or hobby/craft area? Y / N Where & Type? \_\_\_\_\_
- g. Is there smoking in the building? Y / N How frequently? \_\_\_\_\_
- h. Have cleaning products been used recently? Y / N When & Type? \_\_\_\_\_
- i. Have cosmetic products been used recently? Y / N When & Type? \_\_\_\_\_

- j. Has painting/staining been done in the last 6 months? Y / N Where & When? \_\_\_\_\_
- k. Is there new carpet, drapes or other textiles? Y / N Where & When? \_\_\_\_\_
- l. Have air fresheners been used recently? Y / N When & Type? \_\_\_\_\_
- m. Is there a kitchen exhaust fan? Y / N If yes, where vented? \_\_\_\_\_
- n. Is there a bathroom exhaust fan? Y / N If yes, where vented? \_\_\_\_\_
- o. Is there a clothes dryer? Y / N If yes, is it vented outside? Y / N
- p. Has there been a pesticide application? Y / N When & Type? \_\_\_\_\_

**Are there odors in the building?** Y / N  
 If yes, please describe: \_\_\_\_\_

**Do any of the building occupants use solvents at work?** Y / N  
 (e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist)

If yes, what types of solvents are used? \_\_\_\_\_

If yes, are their clothes washed at work? Y / N

**Do any of the building occupants regularly use or work at a dry-cleaning service?** (Circle appropriate response)

- Yes, use dry-cleaning regularly (weekly) No
- Yes, use dry-cleaning infrequently (monthly or less) Unknown
- Yes, work at a dry-cleaning service

**Is there a radon mitigation system for the building/structure?** Y / N Date of Installation: \_\_\_\_\_  
**Is the system active or passive?** Active/Passive

**9. WATER AND SEWAGE**

**Water Supply:** Public Water Drilled Well Driven Well Dug Well Other: \_\_\_\_\_  
**Sewage Disposal:** Public Sewer Septic Tank Leach Field Dry Well Other: \_\_\_\_\_

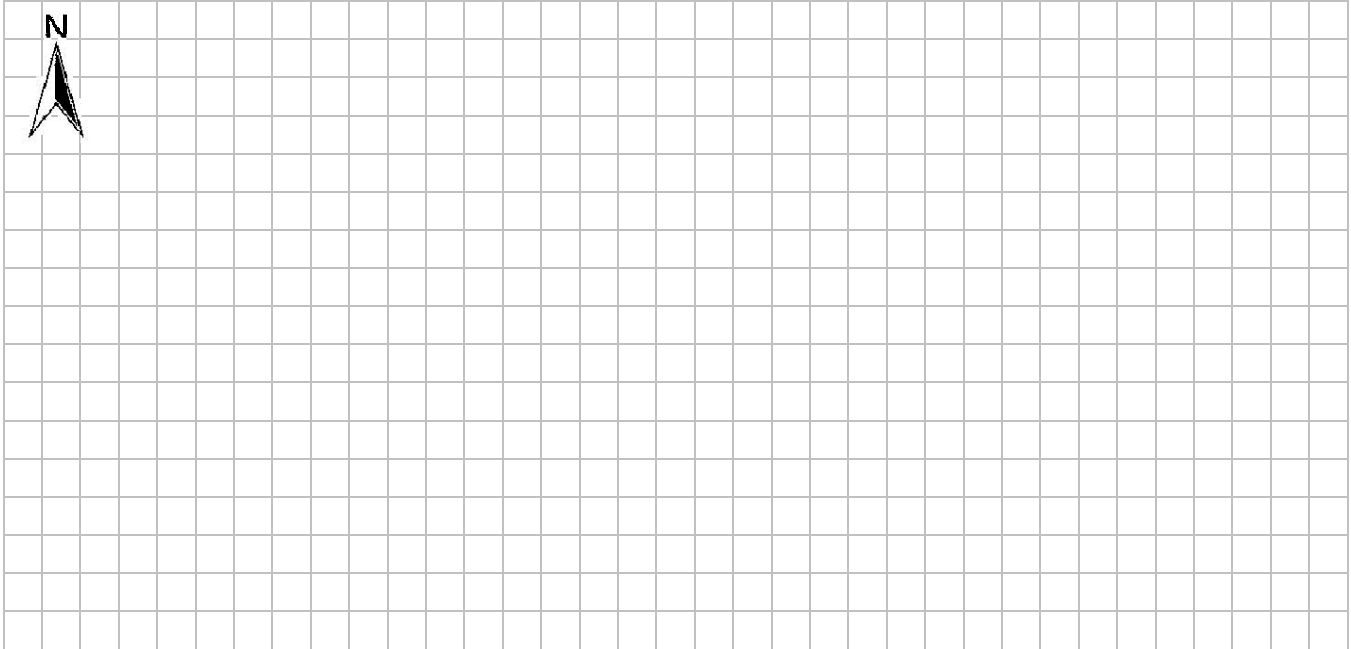
**10. RELOCATION INFORMATION (for oil spill residential emergency)**

- a. Provide reasons why relocation is recommended: \_\_\_\_\_
- b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel
- c. Responsibility for costs associated with reimbursement explained? Y / N
- d. Relocation package provided and explained to residents? Y / N

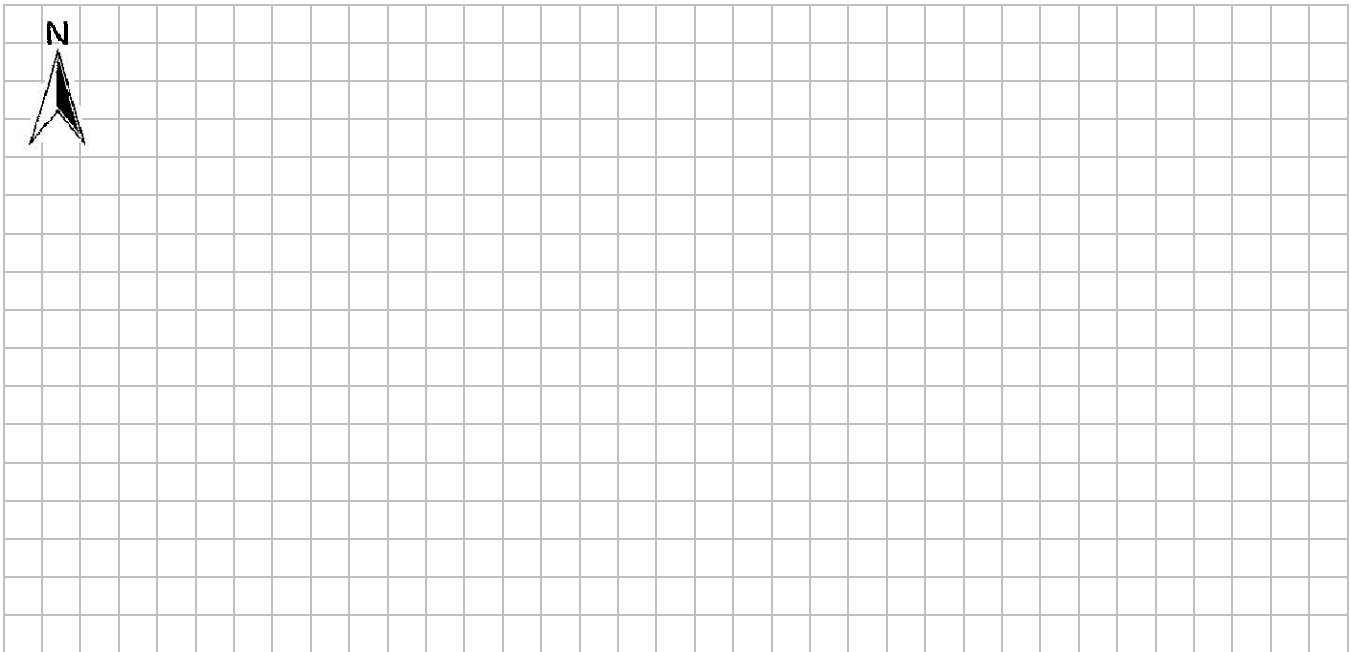
**11. FLOOR PLANS**

**Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.**

**Basement:**



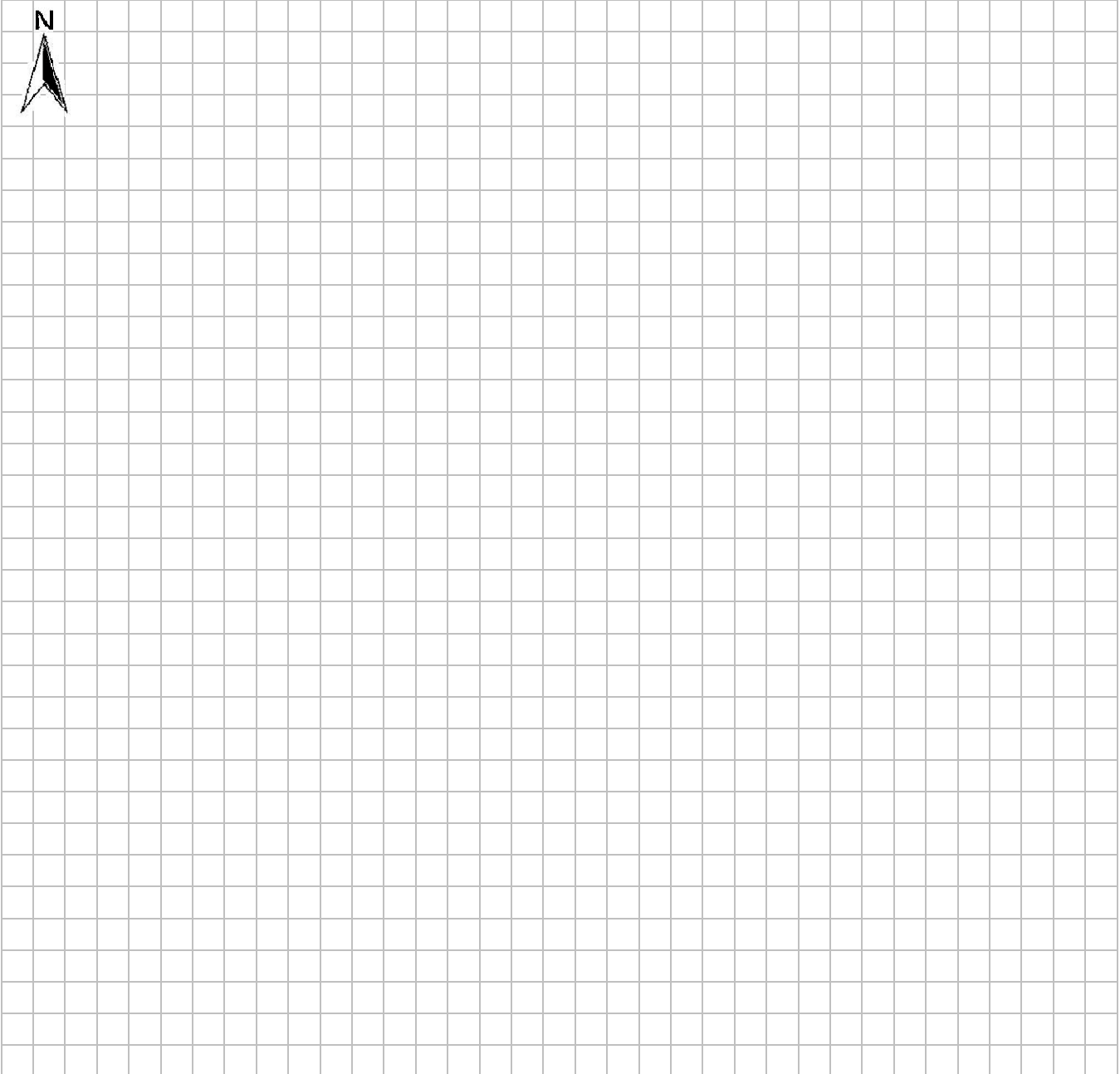
**First Floor:**



**12. OUTDOOR PLOT**

**Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.**

**Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.**



**13. PRODUCT INVENTORY FORM**

**Make & Model of field instrument used:** \_\_\_\_\_

**List specific products found in the residence that have the potential to affect indoor air quality.**

<b>Location</b>	<b>Product Description</b>	<b>Size (units)</b>	<b>Condition *</b>	<b>Chemical Ingredients</b>	<b>Field Instrument Reading (units)</b>	<b>Photo ** <u>Y / N</u></b>

\* Describe the condition of the product containers as **Unopened (UO)**, **Used (U)**, or **Deteriorated (D)**  
\*\* Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.