Remedial Action Plan

For

Building Reconstruction

62 North 9th Street, Brooklyn, New York 11211

Block 2309, Lot 13

OER Project Number 12EHAZ301K

E-Designation E-138

CEQR Number 04DCP003K

Greenpoint-Williamsburg Rezoning Action

Prepared for:

HTX Building Expediting

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REMEDIAL ACTION PLAN

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LIST OF ACRONYMS

Acronym	Definition
AST	Aboveground Storage Tank
CAMP	Community Air Monitoring Plan
C&D	Construction & Demolition
CEQR	City Environmental Quality Review
CFR	Code of Federal Regulations
CHASP	Construction Health and Safety Plan
CO	Certificate of Occupancy
CPC	City Planning Commission
DSNY	Department of Sanitation
"E"	E-Designation
EAS	Environmental Assessment Statement
EIS	Environmental Impact Statement
ESA	Environmental Site Assessment
EC/IC	Engineering Control and Institutional Control
ELAP	Environmental Laboratory Accreditation Program
FDNY	New York City Fire Department
GPR	Ground Penetrating Radar
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations Emergency Response
IDW	Investigation Derived Waste
Notice - NNO	Notice of No Objection
Notice - NTP	Notice To Proceed
Notice - NOS	Notice Of Satisfaction
Notice - FNOS	Final Notice of Satisfaction
NYC BSA	New York City Board of Standards and Appeals
NYC DCP	New York City Department of City Planning
NYC DEP	New York City Department of Environmental Protection
NYC DOB	New York City Department of Buildings
NYC DOF	New York City Department of Finance
NYC HPD	New York City Housing Preservation and Development
NYCRR	New York Codes Rules and Regulations
NYC OER	New York City Office of Environmental Remediation
NYS DEC	New York State Department of Environmental Conservation
NYS DEC DER	New York State Department of Environmental Conservation Division of Environmental Remediation
NYS DEC PBS	New York State Department of Environmental Conservation Petroleum Bulk Storage
NYS DOH	New York State Department of Health
NYS DOT	New York State Department of Transportation

OSHA	United States Occupational Health and Safety Administration
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PE	Professional Engineer
PID	Photo Ionization Detector
PM	Particulate Matter
QEP	Qualified Environmental Professional
RA	Register Architect
RAP	Remedial Action Plan
RCA	Recycled Concrete Aggregate
RCR	Remedial Closure Report
RD	Restrictive Declaration
RI	Remedial Investigation
SCOs	Soil Cleanup Objectives
SCG	Standards, Criteria and Guidance
SMP	Site Management Plan
SPDES	State Pollutant Discharge Elimination System
SSDS	Sub-Slab Depressurization System
SVOCs	Semi-Volatile Organic Compounds
USCS	Unified Soil Classification System
USGS	United States Geological Survey
UST	Underground Storage Tank
TAL	Target Analyte List
TCL	Target Compound List
TCO	Temporary Certificate of Occupancy
VB	Vapor Barrier
VOCs	Volatile Organic Compounds

CERTIFICATION

I, Ariel Czemerinski, am a Professional Engineer licensed in the State of New York. I have primary direct responsibility for implementation of the remedial program at the 62 North 9th Street, Brooklyn, New York Site 12EHAZ301K.

I, John Schretzmayer, am a Qualified Environmental Professional as defined in §43-140. I have primary direct responsibility for implementation of the remedial program at the 62 North 9th Street, Brooklyn, New York Site 12EHAZ301K.

I certify that this Remedial Action Plan (RAP) has a plan for handling, transport and disposal of soil, fill, fluids and other materials removed from the property in accordance with applicable City, State and Federal laws and regulations. Importation of all soil, fill and other material from off-Site will be in accordance with all applicable City, State and Federal laws and requirements. This RAP has provisions to control nuisances during the remediation and all invasive work, including dust and odor suppression.

Ariel Czemerinski
Name

076508
NYS PE License Number

Signature

4/16/2014
Date

QEP Name

QEP Signature

Date

CERTIFICATION

I, Ariel Czemerinski, am a Professional Engineer licensed in the State of New York. I have primary direct responsibility for implementation of the remedial program at the 62 North 9th Street, Brooklyn, New York Site 12EHAZ301K.

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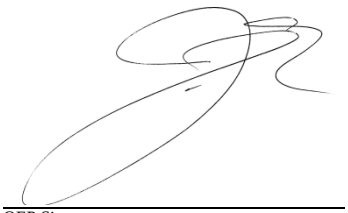
_____
Name

_____
NYS PE License Number

_____
Signature

_____
Date

John Schretzmayer
QEP Name



QEP Signature

4/16/14
Date

EXECUTIVE SUMMARY

HTX Building Expediting has established this plan to remediate a 2,500-square foot site located at 62 North 9th Street in Brooklyn, New York. A Phase II Subsurface Investigation (Phase II) was performed to compile and evaluate data and information necessary to develop this Remedial Action Plan (RAP). The remedial action described in this document achieves the remedial objectives, complies with applicable environmental standards, criteria and guidance and conforms with applicable laws and regulations.

Site Location and Current Usage

The Site is located in the Williamsburg section of Brooklyn, New York and is identified as Block number 2309 and Lot 13 on the New York City Tax Map. **Figure 1** is a Site location map. The Site is 2,500-square feet and is bounded by North 9th Street to the north, industrial-manufacturing properties to the east and west, and a multi-family residential property to the south. Currently, the Site is used for a commercial office, warehousing and light industry (fabrication of HVAC sheet-metal ducting) and contains a one (1) story commercial building with a partial basement.

Summary of Proposed Redevelopment Plan

The proposed use of the Site will convert the existing building on the subject property that is currently a one (1) story commercial building with a partial basement. The proposed project includes the renovation of the existing building and the construction of a three (3)-story addition atop the existing building. The planned renovation is for mixed use with the construction of five (5) residential units within the 3-story addition, and commercial warehousing and storage space on the ground floor and utilities and storage areas in the basement. A Site Plan of the subject property is provided on **Figure 2**. The existing basement will be renovated by removing and replacing interior walls to create various utility and storage rooms. The existing building structure will be retrofitted with additional plumbing and utility systems installed into the subsurface soil at select locations within the basement, however, the existing cellar will remain unchanged. Refer to attached architectural drawings prepared by Thomas C. Tung Engineer,

P.C., New York, New York provided in **Appendix 3**. The current zoning designation is M1-2/R6A Light Manufacturing District within a Special District MX-8 Mixed Use.

Summary of the Remedy

The proposed remedial action achieves all of the remedial action goals established for the project. The proposed remedial action is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants and uses standard methods that are well established in the industry. The proposed remedial action will consist of:

1. Perform a Construction Worker Air Monitoring Program for particulates and volatile organic carbon compounds.
2. Removal of the existing floor drain in the rear of the building and the excavation of apparent VOC-impacted soil found beneath the floor drain will be determined in the field by the QEP, and confirmed with OER PM prior to backfilling.
3. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID.
4. Field screening of the excavation will be conducted visually and using a PID to determine the limits of the remedial excavation. Excavation endpoint soil samples will be collected for laboratory analysis to demonstrate successful removal of VOC impacts.

   Transportation and off-Site disposal of all disturbed soil at permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan.
5. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.
6. Installation and operation of an active sub-slab depressurization system.
7. Installation of a vapor barrier system beneath the building slab wherever sub-slab work such as underpinning or installation of sub-slab depressurization system is performed.

8. Installation of a flooring topcoat sealant, Locktite Novolac Epoxy, on the entire interior slab of both the slab-on-grade and basement areas of the building, as well as all sub-grade walls, and breaches for utility inlets will be resealed with appropriate sealant (Locktite Fixmaster High Performance Quartz or similar).

9. Performance of all activities required for the remedial action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations.

10. Submission of a Remedial Closure Report (RCR) that describes the remedial activities, certifies that the remedial requirements have been achieved, and describes all Engineering and Institutional Controls to be implemented at the Site, and lists any changes from this RAP.

REMEDIAL ACTION PLAN

1.0 SITE BACKGROUND

This Remedial Action Plan (RAP) and site-specific Construction Health and Safety Plan (CHASP) have been developed for the building reconstruction located at 62 North 9th Street in the Williamsburg section of Brooklyn, New York (the Site). This project has been assigned project number 12EHAZ301K by OER. This RAP describes the remediation and/or mitigation activities to be implemented at the Site in coordination with the New York City Office of Environmental Remediation (OER) for the purposes of satisfying the requirements of the Hazardous Materials E-Designation Program and obtaining a Notice To Proceed. An E-Designation for Hazardous Materials (E-138) was placed on the Site by the New York City Department of City Planning (DCP) as part of the May 11, 2005 Greenpoint-Williamsburg Rezoning Action (CEQR number 04DCP003K). The site-specific CHASP (Appendix 2) addresses site-specific hazards, identified contaminants of concern and safety requirements associated with remediation and mitigation activities in accordance with ASTM and OSHA guidelines.

1.1 Site Location and Current Usage

The Site is located in the Williamsburg section of Brooklyn, New York and is identified as Block number 2309 and Lot 13 on the New York City Tax Map. **Figure 1** is a Site location map. The Site is 2,500-square feet and is bounded by North 9th Street to the north, industrial-manufacturing properties to the east and west, and a multi-family residential property to the south. Currently, the Site is used for a commercial office, warehousing and light industry (fabrication of HVAC sheet-metal ducting) and contains a one (1) story commercial building with a partial basement.

1.2 Proposed Redevelopment Plan

The proposed use of the Site will renovate the existing building and construct a three (3)-story addition atop the existing building. A Site Plan of the subject property is provided on **Figure 2**. The existing basement will be renovated by removing and replacing interior walls to

create various utility and storage rooms. The first floor of the building will be used for a garage and building materials storage. The existing building structure will be retrofitted with additional underpinning into the subsurface soil, however, the additional plumbing and utility systems will be installed within the building's interior. The existing cellar will remained unchanged in configuration and use. Refer to attached architectural drawings prepared by Thomas C. Tung Engineer, P.C., New York, New York provided in **Appendix 3**. The current zoning designation is M1-2/R6A Light Manufacturing District within a Special District MX-8 Mixed Use.

1.3 Description of Surrounding Property

Surrounding land use consists primarily of commercial buildings within the M1-2 zoning which encompasses the surrounding neighborhood**.** Properties to the east and southeast operate as industrial-manufacturing facilities with Wythe Avenue and additional commercial operations and residential properties beyond. Properties to the west and northwest are utilized as industrial and manufacturing facilities with Kent Avenue and the Bushwick Inlet Park beyond. Properties to the north and northeast are utilized as commercial office and warehouse buildings. Residential properties are found to the south and southwest intermingled with additional commercial office and warehousing facilities along North 8th Street. No sensitive receptors such as schools, hospitals and day care facilities are identified within 500 feet of the subject property. **Figure 3** shows the surrounding land usage.

1.4 Environmental Investigation Reports

The following environmental work plans and reports were developed for the Site:

- *Phase I Environmental Site Assessment Report, 62 North 9th Street, Brooklyn, New York 11211, December 5*, 2011, prepared by Singer Environmental Group Ltd.
- *Phase II Environmental Assessment Work Plan, 62 North 9th Street, Brooklyn, New York, 11211, E-138, Block 2309, Lot 13, Brooklyn CD #1, OER Project #12EHAZ301K*, March 16, 2011, prepared by Associated Environmental Services, Ltd.

- *Phase II Subsurface Investigation Report, OER Project #12EHAZ301K*, July 26, 2012, prepared by Associated Environmental Services, Ltd.

The following work has been performed at the site:

1. Conducted a Site inspection to identify AOCs and physical obstructions (i.e. structures, buildings, etc.);
2. Installed three (3) soil borings across the entire project Site, and collected six (6) soil samples for chemical analysis from the soil borings to evaluate soil quality;
3. Installed two (2) temporary groundwater monitoring wells at the Site to collect two (2) groundwater samples for chemical analysis to evaluate groundwater quality;
4. Installed two (2) sub-slab soil vapor points within the building's basement and first floor and collected two (2) soil vapor, two (2) indoor air and one (1) ambient air samples for chemical analysis.

Digital (PDF) copies of the above-referenced environmental work plans and reports have been previously submitted to NYC OER.

1.5 Summary of Regulatory Correspondence

The following is a summary of pertinent regulatory correspondence related to the Site:

Project Submittal Cover Sheet (with Attachments), January 30, 2012, prepared by Associated Environmental Services Ltd, sent to NYC Office of Environmental Remediation.

Digital (PDF) copies of the above-referenced regulatory correspondence have already been submitted to the NYC OER.

1.6 Findings of Environmental Investigation

1. The property is generally flat with an elevation of the property at approximately 25 feet above mean sea level.
2. The depth to groundwater ranges from 18 to 20 feet below grade at the Site, approximately 10 feet below basement grade.

3. Groundwater flow is generally from east to west beneath the Site.
4. Depth to bedrock is estimated to be approximately 70 feet at the Site.
5. The stratigraphy of the site, from the grade surface down, consists of approximately 11 feet of brown medium to fine sand and gravel underlain by three to five feet of brown and gray clay units underlain by red-brown medium-fine sand observed to the terminal depth of borings at approximately 22 feet below grade.
6. Soil samples collected during the Phase II Investigation did not detect concentrations of VOC, SVOCs, PCBs or metals in exceedance of the 6NYCRR Part 375 UUSCOs. Very low concentrations of trichloroethylene (TCE) were identified in soil samples at the site. Concentrations of one metal, iron, in the soil samples above the Part CP-51 Residential Supplemental SCOs are present in the subsurface soil at the subject property.
7. Groundwater samples collected during the Phase II Investigation detected TCE in sample GW-1 at a concentration (37 ug/L) above its NYSDEC Water Quality Value (5 ug/L). No concentrations of SVOCs and PCBs were detected above the NYSDEC Water Quality Values. The pesticide dieldrin was also detected above its Water Quality Value in GW-2. The analysis of metals in groundwater detected various metals concentrations above the Water Quality Values in the unfiltered samples, however, the analysis of filtered groundwater samples detected concentrations of only iron, magnesium, manganese, and sodium above the respective Water Quality Values in the groundwater samples. No indication of a potential contaminant source was detected in the soil sampling discussed above. The results of the groundwater sample analysis indicate that groundwater quality does not comply with NYSDEC Water Quality Values, but the occurrence and distribution of contaminant would be consistent with poor regional groundwater quality.
8. Soil vapor samples collected during the Phase II Investigation detected concentrations of VOCs in the two sub-slab vapor samples. 1,1,1-trichloroethane (1,1,1-TCA) (878 ug/m^3), tetrachloroethylene (PCE) (570 ug/m^3), TCE (304 – 197,000 ug/m^3), and chloroform (40.8 – 301 ug/m^3) and low level BTEX were detected in

soil gas samples at the site. Indoor air concentrations of TCE (10.3 – 14.4 ug/m^3) raise concern for potential vapor intrusion into the building. Interpreting the data using Matrix 2 of the NYSDOH 2006 Vapor Intrusion guidance, mitigation is required at the site.

9. While soil sample data does not indicate VOC impacts, groundwater and sub-slab soil vapor data collected at the rear of the Site indicate VOC impacts (Chloroform, PCE, TCE and 1,1,1-TCA) are likely present in the vicinity of the floor drain within the slab-on-grade portion of the building.

For environmental investigation data, consult reports listed in Section 1.4. Based on an evaluation of the environmental data and information, disposal of significant amounts of hazardous waste is not suspected at this site.

2.0 DESCRIPTION OF REMEDIATION

2.1 Objectives

The Site remediation and mitigation objectives are:

Soil

- Remove potentially impacted soil beneath the floor drain within the slab-on-grade portion (rear) of the building.
- Prevent direct contact with contaminated soil.

Groundwater

- Prevent exposure to contaminants volatilizing from contaminated groundwater.

Soil Vapor

- Prevent exposure to contaminants in soil vapor.
- Prevent migration of soil vapor into dwelling and other occupied structures.

Remedial and mitigation measures described herein will be performed in accordance with applicable laws and regulations, and the site-specific CHASP. This remedy is protective of public health and/or the environment for the intended use.

2.2 Summary of Remedial Action

The proposed plan achieves all of the remedial action goals established for the project. The proposed remedial action is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants and uses standard methods that are well established in the industry.

The proposed remedial action will consist of:

1. Perform a Construction Worker Air Monitoring Program for particulates and volatile organic carbon compounds.
2. Removal of the existing floor drain in the rear of the building and the excavation of apparent VOC-impacted soil found beneath the floor drain.
3. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID.
4. Field screening of the excavation will be conducted using a PID to determine the limits of the remedial excavation. Excavation endpoint soil samples will be collected for laboratory analysis to demonstrate successful removal of VOC impacts.
5. Transportation and off-Site disposal of all disturbed soil at permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampling and analysis of excavated media asImport of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.
6. Installation and operation of an active sub-slab depressurization system.
7. Installation of a vapor barrier system beneath the building slab wherever sub-slab work such as underpinning or installation of sub-slab depressurization system is performed.

8. Installation of a flooring topcoat sealant, Locktite Novolac Epoxy, on the entire interior slab of both the slab-on-grade and basement areas of the building, as well as all sub-grade walls, and breaches for utility inlets will be resealed with appropriate sealant (Locktite Fixmaster High Performance Quartz or similar).
9. Performance of all activities required for the remedial action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations.
10. Submission of a Remedial Closure Report (RCR) that describes the remedial activities, certifies that the remedial requirements have been achieved, and describes all Engineering and Institutional Controls to be implemented at the Site, and lists any changes from this RAP.

2.3 Soil/Fill Management

Soil and materials management on-Site and off-Site, including excavation, handling and disposal, will be conducted in accordance with the Soil/Materials Management Plan in Appendix 1. The location of planned excavations is shown in **Figure 4**.

Discrete contaminant sources (such as hotspots) identified during the remedial action will be horizontally and vertically identified by GPS or surveyed. This information will be provided in the RCR.

Estimated Soil/Fill Removal Quantities

The total quantity of soil/fill expected to be excavated and disposed off-Site is 15 tons. The proposed disposal locations for Site-derived impacted materials are listed below. Additional disposal locations established at a later date will be reported promptly to the OER Project Manager.

Disposal Facility	**Waste Type**	**Estimated Quantities**
SoilSafe, Logan Township, New Jersey	Excavated soil	15 tons

End-Point Sampling

Removal actions under this plan will be performed in conjunction with remedial end-point sampling. Removal will be limited to the excavatiom of the slab-on-grade floor drain located within the rear of the building and surrounding soil to the extent necessary to remove contamination, excavation required for the installation of suction pits, and soil removal for the installation of utilities and plumbing. Post-excavation endpoint soil sampling will be conducted within the floor drain excavation. A total of five endpoint soil samples are proposed, one from each sidewall and one from the bottom of the excavation.

1. For excavations less than 20 feet in total perimeter, at least one bottom sample and one sidewall sample biased in the direction of surface runoff.

2. For excavations 20 to 300 feet in perimeter:

- For surface removals, one sample from the top of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.
- For subsurface removals, one sample from each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.

3. For sampling of volatile organics, bottom samples should be taken within 24 hours of excavation, and should be taken from the zero to six-inch interval at the excavation floor. Samples taken after 24 hours should be taken at six to twelve inches.

4. For contaminated soil removal, post remediation soil samples for laboratory analysis should be taken immediately after contaminated soil removal. If the excavation is enlarged horizontally, additional soil samples will be taken pursuant to bullets 1-3 above.

Post-remediation sample locations and depth will be biased towards the areas and depths of highest contamination identified during previous sampling episodes unless field indicators such as field instrument measurements or visual contamination identified during the remedial action indicate that other locations and depths may be more heavily contaminated. In all cases, post-

remediation samples should be biased toward locations and depths of the highest expected contamination.

New York State Department of Health ELAP certified labs will be used for all end-point sample analyses. Labs for end-point sample analyses will be reported in the RCR. The RCR will provide a tabular and map summary of all end-point sample results. End-point samples will be analyzed for trigger analytes (those for which SCO exceedence is identified) utilizing the following methodology:

Soil analytical methods for Full List will include:

- Volatile organic compounds by EPA Method 8260;

Soil analytical results will be compared with Part 375 Unrestricted Use, Restricted Residential, and Commercial Soil Cleanup Objectives.

If either LNAPL and/or DNAPL are detected, appropriate samples will be collected for characterization and "finger print analysis" and required regulatory reporting (i.e. spills hotline) will be performed.

Quality Assurance / Quality Control

The following quality assurance measures will be conducted during the Remedial Action. A Quality Assurance Officer (QAO) is not believed to be required for this project. These measures will be conducted to provide accurate, representative data in the characterization of environmental conditions at the subject property.

Instrument Calibration

The field instruments used to field screen the soil during excavation will be calibrated daily prior to the start of the sampling activities. The calibration and operation of the field instruments will be within manufacturer's recommendations during the Remedial Action.

Decontamination Procedures

In order to ensure sample integrity and reduce the risk of cross-contamination, all non-disposable sampling equipment will be decontaminated before and after each use. The

equipment will be washed with a detergent and water solution to remove all residual materials, rinsed with distilled water, and then allowed to air dry. All disposable materials, such as the acetate liners, will be used new and then discarded after a single use.

Chain-of-Custody Protocol

The endpoint soil samples submitted for laboratory analysis will be recorded on a chain-of-custody form. The chain-of-custody form includes information such as the site location, the sample date, the time of sample collection, the required analysis, preservatives utilized, sample designation, and the name and signature of the person who conducted the sampling. Finally, the chain-of-custody will be signed by the laboratory representative who received the samples for analysis. Completed copies of the chain-of-custody forms will be provided as attachment to the laboratory data packages.

Import and Reuse of Soils

Import of soils or other fill materials (i.e. crushed stone for the suction pits) onto the property will be performed in conformance with the Soil/Materials Management Plan in **Appendix 1**. The estimated quantity of soil to be imported into the Site for backfill is 30 tons. Onsite soil/fill will not be reused/relocated on Site. The imported soil will be installed below the basement floor surrounding foundation modifications (underpinning), and for the installation of the sub-slab depressurization system.

2.4 Engineering Controls

Engineering Controls were employed in the remedial action to address residual contamination remaining at the site. The Site has three primary Engineering Control (EC) Systems. These are:

- Composite cover system consisting of concrete building slabs;
- a vapor barrier system; and
- an active sub-slab depressurization system.

Composite Cover System

Exposure to residual soil will be prevented by the existing surface cover comprised of the current building slab. As noted above, underpinning is proposed to be excavated within the basement of the building. These trenches will be backfilled with construction aggregate and the concrete floor replaced consistent with the existing conditions. Utility pits within the building will also be lined with poured concrete to prevent exposure to the subsurface soil.

Vapor Barrier System

Prior to repairing the floor, the slab-on grade area of the building where the drain and surrounding soils will be removed, and in the areas where the SSDS suction pits will be installed, a VaporBlock Plus geomembrane, or equivalent, will be placed atop the backfilled material immediately beneath the slab to mitigate potential vapor intrusion in these areas. The seams of the geomembrane will be sealed against the existing concrete slab bordering the utility trenches using double-sided adhesive sealant tape. In addition, all penetrations, including the repairs to the drain in the hot spot removal area, will be properly sealed. Details of the vapor barrier installation and penetration sealing are provided in **Appendix 3**.

So as to minimize the potential for soil vapor intrusion, we are proposing that flooring topcoat sealant, Locktite Novolac Epoxy (see attached manufacturer's information), will be applied to the entire slab of both the slab-on-grade and basement areas of the building, as well as all sub-grade walls. Additionally, as applicable, all cracks and breaches for utility inlets will be resealed with appropriate sealant (Locktite Fixmaster High Performance Quartz or similar) to ensure the integrity of the slab-on-grade and basement floors. Appendix 3 includes the manufacturer specifications for all products that will be used, as well as a compatibility chart from the manufacturer indicating that the proposed vapor mitigation materials are compatible with the site conditions.

An engineering inspection letter and as-built drawings will be prepared by a Professional Engineer and submitted with the final Remedial Closure Report.

Sub-slab Depressurization System

As a result of the VOC concentrations detected in the sub-slab vapor samples beneath the building slab in the slab-on-grade and basement areas, a sub-slab depressurization system will be installed beneath the slab-on-grade and basement floors of the building. The sub-slab depressurization system will be designed in conformance with the USEPA Radon Prevention in the Design and Construction of Schools and Other Large Buildings, June 1994. This will mitigate potential long-term exposure to VOCs found in the sub-slab vapor beneath the building.

Conceptually, two vapor collection points will be installed at equidistant points beneath the building's footprint area. The proposed layout of the sub-slab depressurization system is provided on **Figure 5**. The southern vapor collection point will be installed beneath the slab-on-grade foundation in the rear of the building. The northern vapor collection point will be installed beneath the basement slab toward the front of the building. Both vapor collection points will be equipped with an in-line blower and piped to the exterior of the building so as to actively remove VOCs that may accumulate beneath the building. Both vapor collection systems will be fitted with sampling ports to allow for the quality of the sub-grade soil vapor to be tested. It may be possible at a later date, should future monitoring data warrant, to convert the depressurization points to operate passively. Crushed stone will be used for construction of the SSD System vapor collection points, and will not include blended materials or RCA.

All cracks and voids will be sealed with a 50-year rated commercial grade caulking Locktite Top Choice 5570 or similar) and breaches for utility inlets will be resealed with appropriate sealant (Locktite Fixmaster High Performance Quartz or similar) to ensure the integrity of the slab-on-grade and basement floors and facilitate proper operation of the depressurization system. The sub-slab depressurization system will be inspected following installation to ensure its proper operation. An engineering inspection letter and as-built drawings will be prepared by a Professional Engineer and submitted with the final Remedial Closure Report. Details of the sub-slab depressurization system design are provided on Figure 5.

3.0 REMEDIAL ACTION MANAGEMENT

3.1 Project Organization and Oversight

Principal personnel who will participate in the remedial action include Cho Koon Yeung, the property owner and Qina Tan, expeditor. The Professional Engineer (PE) and Qualified Environmental Professional (QEP) for this project are Ariel Czemerinski, PE and Gregory Ernst, QEP, respectively.

3.2 Site Security

Site access will be controlled by gated entries to the property. Access to the existing building will be maintained and controlled through the existing doorways into the building.

3.3 Work Hours

The hours for operation of remedial construction will be from 8:00 AM to 5:00 PM. These hours conform to the New York City Department of Buildings construction code requirements.

3.4 Construction Health and Safety Plan

The site-specific Construction Health and Safety Plan (CHASP) is included in Appendix 2. The Site Safety Coordinator will be Ryan Jensen. Remedial work performed under this RAP will be in full compliance with applicable health and safety laws and regulations, including Site and OSHA worker safety requirements and HAZWOPER requirements. Confined space entry, if any, will comply with OSHA requirements and industry standards and will address potential risks. The parties performing the remedial construction work will ensure that performance of work is in compliance with the CHASP and applicable laws and regulations. The CHASP pertains to remedial and invasive work performed at the Site until the issuance of the Notice of Satisfaction.

All field personnel involved in remedial activities will participate in training required under 29 CFR 1910.120, including 40-hour hazardous waste operator training and annual 8-hour refresher training. Site Safety Officer will be responsible for maintaining workers training records.

Personnel entering any exclusion zone will be trained in the provisions of the CHASP and be required to sign a CHASP acknowledgment. Site-specific training will be provided to field personnel. Additional safety training may be added depending on the tasks performed. Emergency telephone numbers will be posted at the site location before any remedial work begins. A safety meeting will be conducted before each shift begins. Topics to be discussed include task hazards and protective measures (physical, chemical, environmental); emergency procedures; PPE levels and other relevant safety topics. Meetings will be documented in a log book or specific form.

An emergency contact sheet with names and phone numbers is included in the CHASP. That document will define the specific project contacts for use in case of emergency.

3.5 Community Air Monitoring Plan

Real-time air monitoring for volatile organic compounds (VOCs) and particulate levels at the perimeter of the exclusion zone or work area will be performed. Continuous monitoring will be performed for all ground intrusive activities and during the handling of contaminated or potentially contaminated media. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, floor drain excavation or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be performed during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. Periodic monitoring during sample collection, for instance, will consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. Depending upon the proximity of potentially exposed individuals, continuous monitoring may be performed during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence. Exceedences of action levels observed during performance of the Community Air Monitoring Plan (CAMP) will be reported to the OER Project Manager and included in the Daily Report.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) will be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis during invasive work. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work will be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment will be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities will resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities will resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will be shutdown.

All 15-minute readings must be recorded and be available for OER personnel to review. Instantaneous readings, if any, used for decision purposes will also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate

monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work will continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

All readings will be recorded and be available for OER personnel to review.

3.6 Agency Approvals

All permits or government approvals required for remediation and construction have been or will be obtained prior to the start of remediation and construction. Acceptance of this RAP by OER does not constitute satisfaction of these requirements and will not be a substitute for any required permit.

3.7 Site Preparation

Pre-Construction Meeting

OER will be invited to attend the pre-construction meeting at the Site with all parties involved in the remedial process prior to the start of remedial construction activities.

Mobilization

Mobilization will be conducted as necessary for each phase of work at the Site. Mobilization includes field personnel orientation, equipment mobilization (including securing all sampling equipment needed for the field investigation), marking/staking sampling locations and utility mark-outs. Each field team member will attend an orientation meeting to become familiar with the general operation of the Site, health and safety requirements, and field procedures.

Utility Marker Layouts, Easement Layouts

The presence of utilities and easements on the Site will be fully investigated prior to the performance of invasive work such as excavation or drilling under this plan by using, at a minimum, the One-Call System (811). Underground utilities may pose an electrocution, explosion, or other hazard during excavation or drilling activities. All invasive activities will be performed incompliance with applicable laws and regulations to assure safety. Utility companies and other responsible authorities will be contacted to locate and mark the locations, and a copy of the Markout Ticket will be retained by the contractor prior to the start of drilling, excavation or other invasive subsurface operations. Overhead utilities may also be present within the anticipated work zones. Electrical hazards associated with drilling in the vicinity of overhead utilities will be prevented by maintaining a safe distance between overhead power lines and drill rig masts.

Proper safety and protective measures pertaining to utilities and easements, and compliance with all laws and regulations will be employed during invasive and other work contemplated under this RAP. The integrity and safety of on-Site and off-Site structures will be maintained during all invasive, excavation or other remedial activity performed under the RAP.

Equipment and Material Staging

Equipment and materials will be stored and staged in a manner that complies with applicable laws and regulations. The location of proposed equipment and material staging areas, stockpile areas, and other pertinent remedial management features is within the garage area within the front portion of the building.

Stabilized Construction Entrance

Steps will be taken to ensure that trucks departing the site will not track soil, fill or debris off-Site. Such actions may include use of cleaned asphalt or concrete roads or use of stone or other aggregate-based egress paths between the truck inspection station and the property exit. Measures will be taken to ensure that adjacent roadways will be kept clean of project related soils, fill and debris.

Truck Inspection Station

An outbound-truck inspection station will be set up close to the Site exit. Before exiting the Site, trucks will be required to stop at the truck inspection station and will be examined for evidence of contaminated soil on the undercarriage, body, and wheels. Soil and debris will be removed. Brooms, shovels and potable water will be utilized for the removal of soil from vehicles and equipment, as necessary.

3.8 Traffic Control

Drivers of trucks leaving the Site with soil/fill will be instructed to proceed without stopping in the vicinity of the site to prevent neighborhood impacts. The planned route on local roads for trucks leaving the site is to exit the Site and proceed along North 9th Street, then turning left onto Withers Street, right onto Union Avenue, and right onto Meeker Avenue. Following Meeker Avenue approximately three blocks and turning right onto Metropolitan Avenue and then first left onto Marcy Avenue approximately one block to enter onto I-278 West – Brooklyn-Queens Expressway.

3.9 Demobilization

Demobilization will include:

- As necessary, restoration of temporary access areas and areas that may have been disturbed to accommodate support areas (e.g., staging areas, decontamination areas, storage areas, temporary water management areas, and access area);
- Removal of sediment from erosion control measures and truck wash and disposal of materials in accordance with applicable laws and regulations;

- Equipment decontamination, and;
- General refuse disposal.

Equipment will be decontaminated and demobilized at the completion of all field activities. Investigation equipment and large equipment (*e.g.*, soil excavators) will be washed at the truck inspection station as necessary. In addition, all investigation and remediation derived waste will be appropriately disposed.

3.10 Reporting and Record Keeping

Daily Reports

Daily reports providing a general summary of activities for each day of *active remedial work* will be emailed to the OER Project Manager by the end of the following day. Those reports will include:

- Project number and statement of the activities and an update of progress made and locations of work performed;
- Quantities of material imported and exported from the Site;
- Status of on-Site soil/fill stockpiles;
- A summary of all citizen complaints, with relevant details (basis of complaint; actions taken; etc.);
- A summary of CAMP excursions, if any;
- Photograph of notable Site conditions and activities.

The frequency of the reporting period may be revised in consultation with OER project manager based on planned project tasks. Daily email reports are not intended to be the primary mode of communication for notification to OER of emergencies (accidents, spills), requests for changes to the RAP or other sensitive or time critical information. However, such information will be included in the daily reports. Emergency conditions and changes to the RAP will be

communicated directly to the OER project manager by personal communication. Daily reports will be included as an Appendix in the RCR.

Record Keeping and Photo-Documentation

Job-site record keeping for all remedial work will be performed. These records will be maintained on-Site during the project and will be available for inspection by OER staff. Representative photographs will be taken of the Site prior to any remedial activities and during major remedial activities to illustrate remedial program elements and contaminant source areas. Photographs will be submitted at the completion of the project in the RCR in digital format (i.e. jpeg files).

3.11 Complaint Management

All complaints from citizens will be promptly reported to OER. Complaints will be addressed and outcomes will also be reported to OER in daily reports. Notices to OER will include the nature of the complaint, the party providing the complaint, and the actions taken to resolve any problems.

3.12 Deviations from the Remedial Action Plan

All changes to the RAP will be reported to the OER Project Manager and will be documented in daily reports and reported in the RCR. The process to be followed if there are any deviations from the RAP will include a request for approval for the change from OER noting the following:

- Reasons for deviating from the approved RAP;
- Effect of the deviations on overall remedy; and
- Determination that the remedial action with the deviation(s) is protective of public health and the environment.

4.0 REMEDIAL CLOSURE REPORT

A Remedial Closure Report (RCR) will be submitted to OER following implementation of the remedial action defined in this RAP. The RCR will document that the remedial work required under this RAP has been completed and has been performed in compliance with this plan. The RCR will include:

- Information required by this RAP;
- As-built drawings for all constructed remedial elements, required certifications, manifests and other written and photographic documentation of remedial work performed under this remedy;
- Site Management Plan;
- Description of any changes in the remedial action from the elements provided in this RAP and associated design documents;
- Tabular summary of all end point sampling results and all material characterization results, QA/QC results for end-point sampling, and other sampling and chemical analysis performed as part of the remedial action;
- Test results or other evidence demonstrating that remedial systems are functioning properly;
- Account of the source area locations and characteristics of all contaminated material removed from the Site including a map showing source areas;
- Account of the disposal destination of all contaminated material removed from the Site. Documentation associated with disposal of all material will include transportation and disposal records, and letters approving receipt of the material.
- Account of the origin and required chemical quality testing for material imported onto the Site.
- Reports and supporting material will be submitted in digital form.

Remedial Closure Report Certification

The following certification will appear in front of the Executive Summary of the Remedial Closure Report. The certification will include the following statements:

I, Ariel Czemerinski, am currently a professional engineer licensed by the State of New York. I had primary direct responsibility for implementation of the remedial program for the 62 North 9th Street, Brooklyn, New York Site 12EHAZ301K.

I, John Schretzmayer, am a Qualified Environmental Professional. I had primary direct responsibility for implementation of the remedial program for the 62 North 9th Street, Brooklyn, New York Site 12EHAZ301K.

I certify that the OER-approved Remedial Action Plan dated month day year and Stipulations in a letter dated month day, year; if any were implemented and that all requirements in those documents have been substantively complied with. I certify that contaminated soil, fill, liquids or other material from the property were taken to facilities licensed to accept this material in full compliance with applicable laws and regulations.

4.0 SCHEDULE

The table below presents a schedule for the proposed remedial action and reporting. If the schedule for remediation and development activities changes, it will be updated and submitted to OER. Currently, a four month remediation period is anticipated.

Schedule Milestone	Weeks from Remedial Action Start	Duration (weeks)
OER Approval of RAP	0	-
Mobilization	4	1
Remedial Construction	5	1
Demobilization	6	1
Submit Remedial Closure Report	8	2

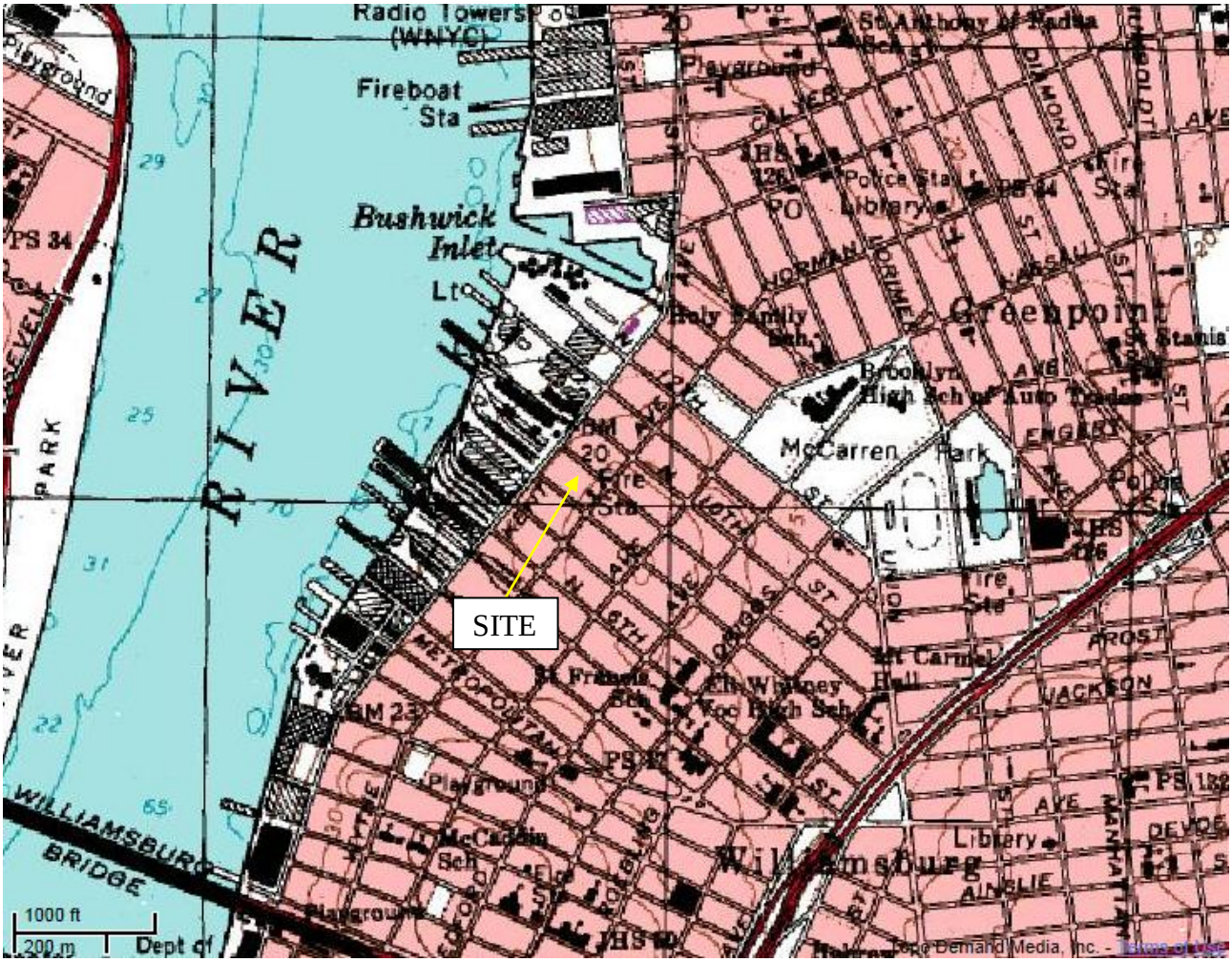
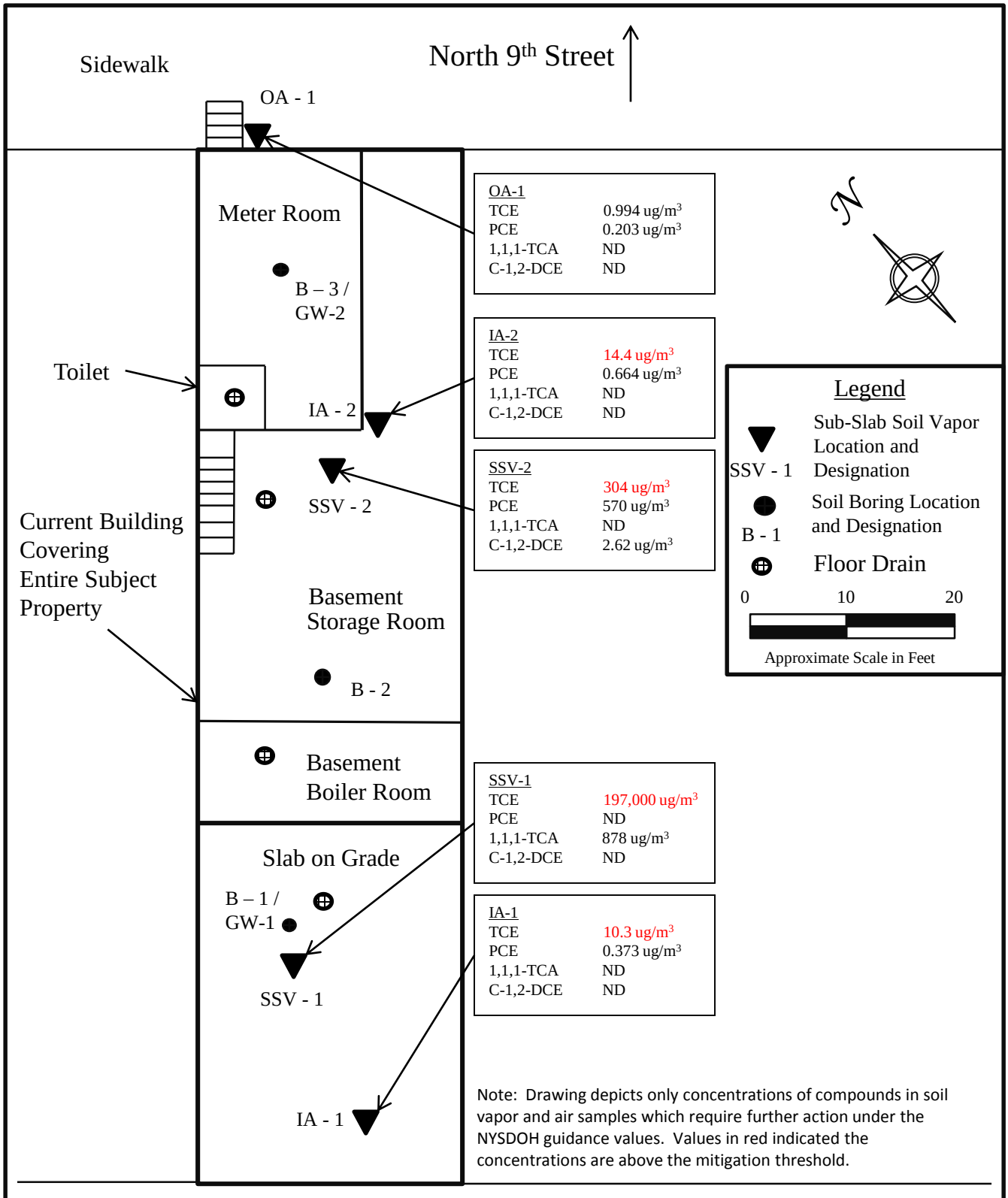


FIGURE 1.0 SITE LOCATION

62 NORTH 9TH STREET
BROOKLYN, NEW YORK

Associated
Environmental
Services, Ltd.



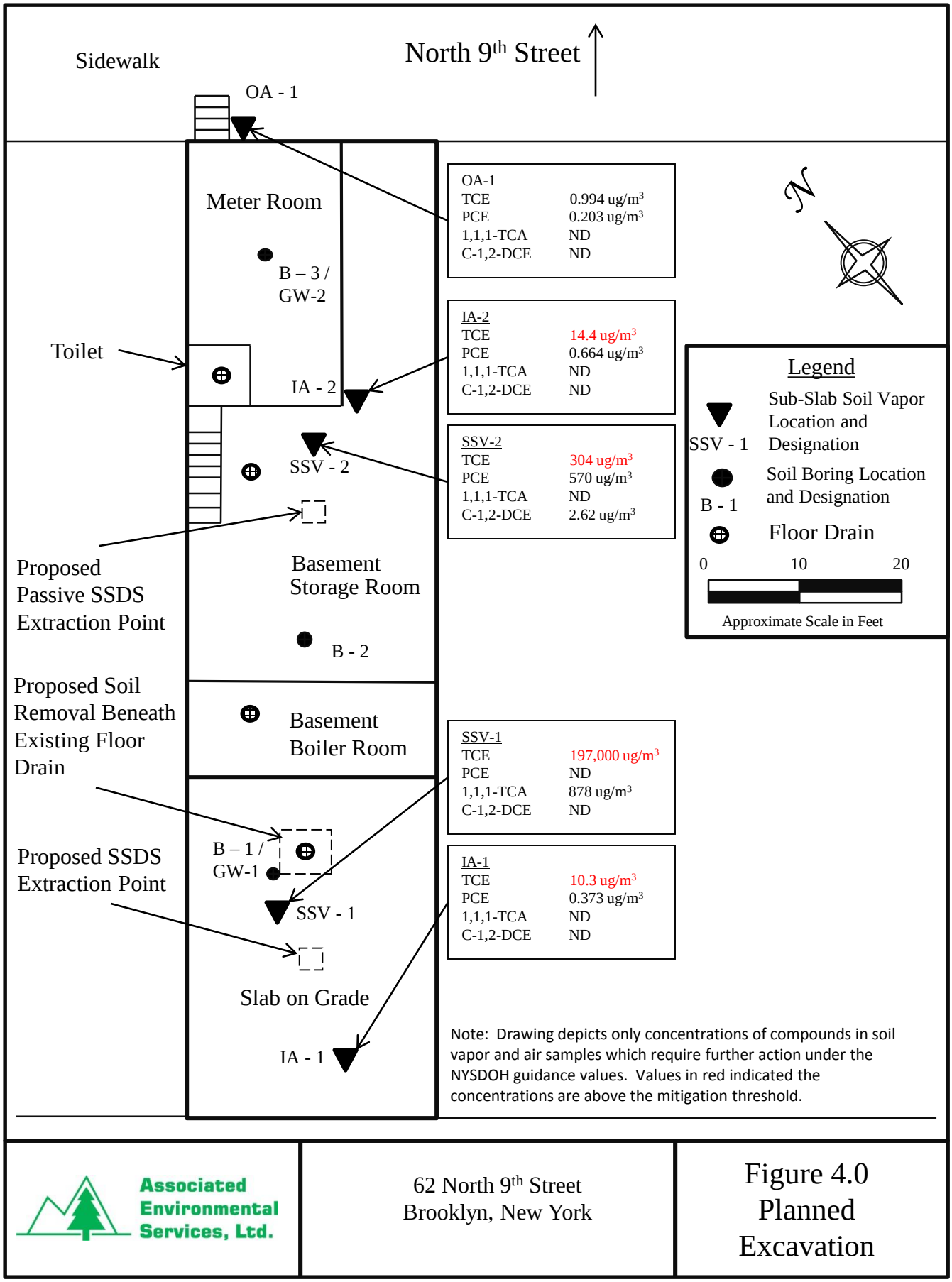
Note: Drawing depicts only concentrations of compounds in soil vapor and air samples which require further action under the NYSDOH guidance values. Values in red indicated the concentrations are above the mitigation threshold.

Associated Environmental Services, Ltd.

62 North 9th Street
Brooklyn, New York

Figure 2.0
Site Plan

Figure 3
Surrounding Properties
62 North 9th Street, Brooklyn, New York



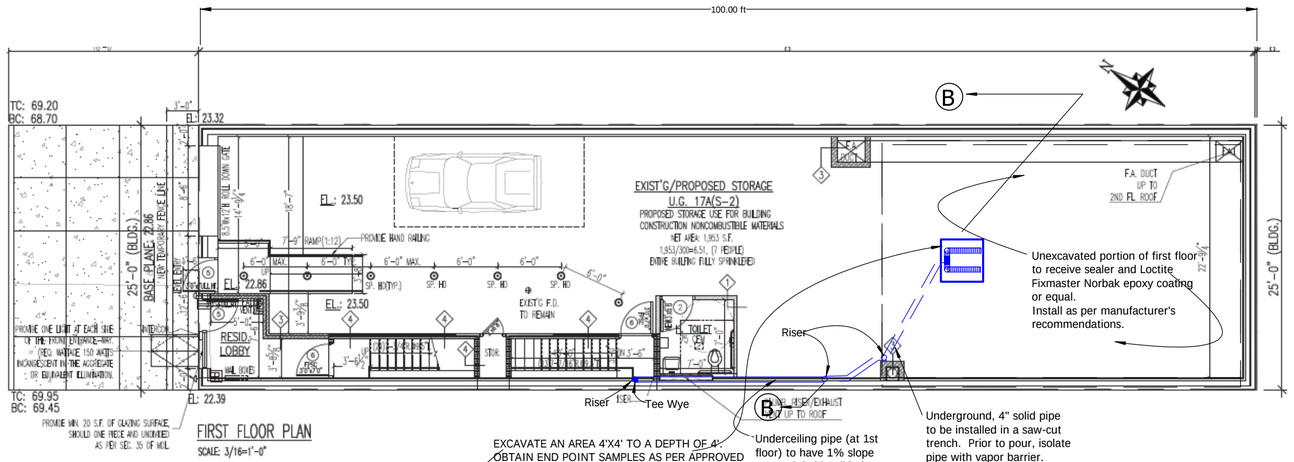
Associated Environmental Services, Ltd.

62 North 9th Street
Brooklyn, New York

Figure 4.0
Planned Excavation

Sealer and Coating Note:

1. For hairline cracks and sealing the entire floor floor use Loctite Nordbak Chemical Resistant coating from Henkel part number 96092.
2. To repair concrete cracks use Loctite Fixmaster Crack Filler (PN 1291113) and then use sealer (Item 1)
3. For spalding concrete use Loctite Fixmaster floor fill (PN 99365).
4. Follow all manufacturer's installation recommendations.
5. Substitutions allowed as long as they are chemical resistent concrete sealers of equal or better properties.

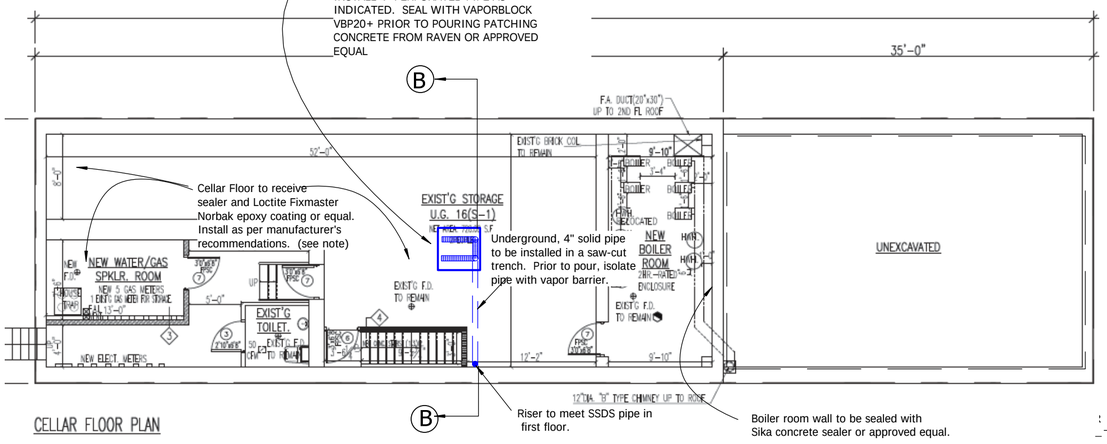


NOTES TO GC AND INSTALLER

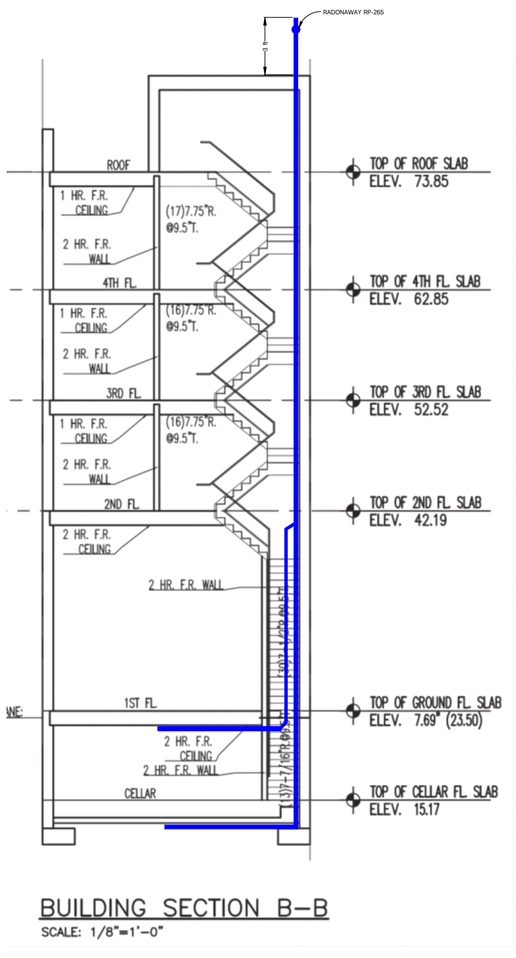
SEAL SAW CUT SECTIONS OF SLAB WITH VAPORBLOCK VBP20+ FOLLOWING MANUFACTURER'S RECOMMENDATIONS.
VERIFY ALL DIMENSIONS ONSITE.

PROVIDE VAPOR BARRIER / WATERPROOFING ON ALL HORIZONTAL AND VERTICAL LOCATIONS, AS INDICATED ON PLANS.

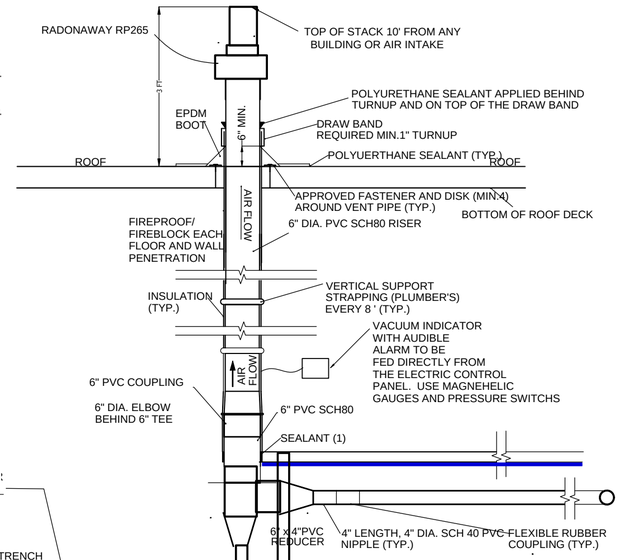
EXCAVATE AN AREA 4'X4' TO A DEPTH OF 4'. OBTAIN END POINT SAMPLES AS PER APPROVED RAWP. BACKFILL WITH CLEAN SOIL (3'), INSTALL GEOTEXTILE AND 3/4" ROUND EDGE GRAVEL (1').
INSTALL 4" PERFORATED PIPE AS INDICATED. SEAL WITH VAPORBLOCK VBP20+ PRIOR TO POURING PATCHING CONCRETE FROM RAVEN OR APPROVED EQUAL



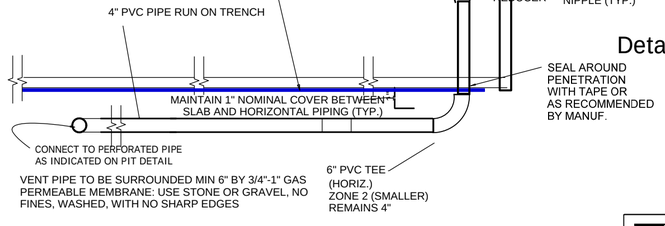
CELLAR FLOOR PLAN

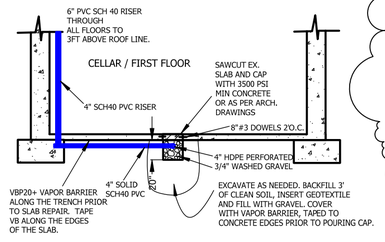


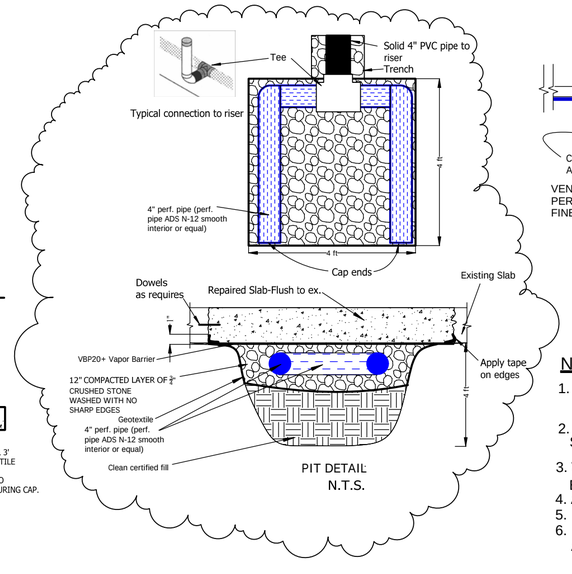
BUILDING SECTION B-B
SCALE: 1/8"=1'-0"



Detail C







NOTES:

1. SEAL OPENING WITH ELASTOMERIC JOINT SEALANT AS DEFINED IN ASTM C920.
2. HIGH DENSITY POLYETHYLENE CORRUGATED PERFORATED PIPE WITH SMOOTH INTERIOR WATERWAY. ADS N-12 OR APPROVED EQUAL.
3. WRAP 4" HDPE PIPE WITH GEOTEXTILE FABRIC, GSE NW4 OR APPROVED EQUAL.
4. AMC MUST PRE-APPROVE ALL FILLMATERIAL BEFORE DELIVERY TO SITE.
5. FAN AND ON/OFF SWITCH TO BE HARDWIRED TOGETHER TO CIRCUIT.
6. DWYER MAGNEHELIC DIAL TYPE VACUUM GAUGE MODEL 2002-M OR APPROVED EQUAL

AMC ENGINEERING PLLC
99 Jericho Turnpike
Jericho, NY 11753
516 417-8588

PROJECT

62 N 9th STREET
BROOKLYN, NY 11211

TITLE:

VAPOR BARRIER / WATERPROOFING SSDS

DATE: 7/16/13
PROJECT No:
DRAWING BY: AC
CHK BY:
DWG No:
ENV-001-02
CADD FILE No:
1 of 1

STATE OF NEW YORK · ARIEL CZEMERINSKI · 076508 · LICENSED PROFESSIONAL ENGINEER

Appendix 1

SOIL/MATERIALS MANAGEMENT PLAN

1.1 Soil Screening Methods

Visual, olfactory and PID soil screening and assessment will be performed under the supervision of a Qualified Environmental Professional and will be reported in the Remedial Closure Report (RCR). Soil screening will be performed during invasive work performed during the remedy and development phases prior to issuance of the Notice of Satisfaction.

1.2 Stockpile Methods

Excavated soil from suspected areas of contamination (e.g., hot spots, trenches, SSDS collection pits, drains, etc.) will be stockpiled separately and will be segregated from clean soil and construction materials. Stockpiles will be used only when necessary and will be removed as soon as practicable. While stockpiles are in place, they will be inspected daily, and before and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by OER. Excavated soils will be stockpiled on, at minimum, double layers of 8-mil minimum sheeting, will be kept covered at all times with appropriately anchored plastic tarps, and will be routinely inspected. Broken or ripped tarps will be promptly replaced.

Excavated soil from beneath the floor drain within the slab-on-grade portion of the building will be stockpiled within DOT-approved 55-gallon drums and will be segregated from clean gravel and construction materials. The 55-gallon drums will be removed as soon as practicable. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by OER. The 55-gallon drums with excavated soils will be kept covered at all times with appropriately anchored plastic tarps, and will be routinely inspected. Broken or ripped tarps will be promptly replaced.

All stockpile activities will be compliant with applicable laws and regulations. The 55-gallon drums will be properly filled no higher than the container's sidewall in accordance with

applicable laws and regulations. Drums of excavated soils and other materials shall be located at least of 50 feet from the property boundaries, where possible.

1.3 Characterization of Excavated Materials

Soil/fill or other excavated media that is transported off-Site for disposal will be sampled in a manner required by the receiving facility, and in compliance with applicable laws and regulations. Excavated soils will not be reused on-Site.

1.4 Materials Excavation, Load-Out and Departure

The PE/QEP overseeing the remedial action will:

- oversee remedial work and the excavation and load-out of excavated material;
- ensure that there is a party responsible for the safe execution of invasive and other work performed under this work plan;
- ensure that Site development activities and development-related construction activities will not interfere with, or otherwise impair or compromise the remedial activities proposed in this RAP;
- ensure that the presence of utilities and easements on the Site has been investigated and that any identified risks from work proposed under this plan are properly addressed by appropriate parties;
- ensure that all loaded outbound trucks are inspected and cleaned if necessary before leaving the Site;
- ensure that all egress points for truck and equipment transport from the Site will be kept clean of Site-derived materials during Site remediation.

Locations where vehicles exit the Site shall be inspected daily for evidence of soil tracking off premises. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site-derived materials.

Open and uncontrolled mechanical processing of historical fill and contaminated soil on-Site will not be performed without prior OER approval.

1.5 Off-Site Materials Transport

Loaded vehicles leaving the Site will comply with all applicable materials transportation requirements (including appropriate covering, manifests, and placards) in accordance with applicable laws and regulations, including use of licensed haulers in accordance with 6 NYCRR Part 364. If loads contain wet material capable of causing leakage from trucks, truck liners will be used. Queuing of trucks will be performed on-Site, when possible in order to minimize off Site disturbance. Off-Site queuing will be minimized.

Outbound truck transport routes are in Section 3.8 of the RAP. This routing takes into account the following factors: (a) limiting transport through residential areas and past sensitive sites; (b) use of mapped truck routes; (c) minimizing off-Site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport. To the extent possible, all trucks loaded with Site materials will travel from the Site using these truck routes. Trucks will not stop or idle in the neighborhood after leaving the project Site.

1.6 Materials Disposal Off-Site

The following documentation will be established and reported by the PE/QEP for each disposal destination used in this project to document that the disposal of regulated material exported from the Site conforms with applicable laws and regulations: (1) a letter from the PE/QEP or Applicant to each disposal facility describing the material to be disposed and requesting written acceptance of the material. This letter will state that material to be disposed is regulated material generated at an environmental remediation Site in New York under a governmental remediation program. The letter will provide the project identity and the name and phone number of the PE/QEP or Applicant. The letter will include as an attachment a summary of all chemical data for the material being transported; and (2) a letter from each disposal facility stating it is in receipt of the correspondence (1, above) and is approved to accept the material. These documents will be included in the RCR.

The RCR will include an itemized account of the destination of all material removed from the Site during this remedial action. Documentation associated with disposal of all material will include records and approvals for receipt of the material. This information will be presented in the RCR.

All impacted soil/fill or other waste excavated and removed from the Site will be managed as regulated material and will be disposed in accordance with applicable laws and regulations. Historic fill and contaminated soils taken off-Site will be handled as solid waste and will not be disposed at a Part 360-16 Registration Facility (also known as a Soil Recycling Facility).

Waste characterization will be performed for off-Site disposal in a manner required by the receiving facility and in conformance with its applicable permits. Waste characterization sampling and analytical methods, sampling frequency, analytical results and QA/QC will be reported in the RCR. A manifest system for off-Site transportation of exported materials will be employed. Manifest information will be reported in the RCR. Hazardous wastes derived from on-Site will be stored, transported, and disposed of in compliance with applicable laws and regulations.

1.7 Materials Reuse On-Site

Soil and fill that is derived from the property will not be reused on-Site. The PE/QEP will ensure that all excavated soil and fill will be exported from the Site and is not reused.

1.8 Demarcation

After completion of hotspot removal and any other invasive remedial activities, and prior to backfilling, the top of the residual soil/fill will be defined by one of three methods: (1) placement of a demarcation layer. The demarcation layer will consist of geosynthetic fencing or equivalent material to be placed on the surface of residual soil/fill to provide an observable reference layer. A description or map of the approximate depth of the demarcation layer will be provided in the RCR; or (2) a land survey of the top elevation of residual soil/fill before the placement of cover soils, pavement and associated sub-soils, or other materials or structures or, (3) all materials beneath the approved cover will be considered impacted and subject to site management after the

remedy is complete. Demarcation may be established by one or any combination of these three methods. As appropriate, a map showing the method of demarcation for the Site and all associated documentation will be presented in the RCR. This demarcation will constitute the top of the site management horizon.

1.9 Import of Backfill from Off-Site Sources

This Section presents the requirements for imported fill materials to be used below the basement floor within the utility trench excavations. All imported materials will meet OER-approved backfill and cover soil quality objectives for this Site. The backfill and cover soil quality objectives are listed in the RAP. All imported fill will be comprised of structural stone or aggregate purchased from registered suppliers in compliance with OER approval. Clean, unblended recycled concrete aggregate (RCA) with minimal fines will be purchased from facilities permitted or registered and regulated by the NYS DEC. Only crushed stone will be used for the SSD System vapor collection points, no blended materials or RCA will be used for the SSDS.

A process will be established to evaluate sources of backfill and cover soil to be imported to the Site, and will include an examination of source location, current and historical use(s), and any applicable documentation. Material from industrial sites, spill sites, environmental remediation sites or other potentially contaminated sites will not be imported to the Site.

The following potential sources may be used pending attainment of backfill and cover soil quality objectives:

- Clean soil from construction projects at non-industrial sites in compliance with applicable laws and regulations;
- Clean soil from roadway or other transportation-related projects in compliance with applicable laws and regulations;
- Clean recycled concrete aggregate (RCA) from facilities permitted or registered by the regulations of NYS DEC.

All materials received for import to the Site will be approved by a PE/QEP and will be in compliance with provisions in this RAP. The RCR will report the source of the fill, evidence that an inspection was performed on the source, chemical sampling results and frequency of testing if applicable, and a Site map indicating the locations where fill was placed.

Source Screening and Testing

Inspection of imported fill material will include visual, olfactory and PID screening for evidence of contamination. Materials imported to the Site will be subject to inspection, as follows:

- Trucks with imported fill material will be in compliance with applicable laws and regulations and will enter the Site at designated locations;
- The PE/QEP is responsible to ensure that every truck load of imported material is inspected for evidence of contamination; and
- Fill material will be free of solid waste including pavement materials, debris, stumps, roots, and other organic matter, as well as ashes, oil, perishables or foreign matter.

If applicable, composite samples of imported material will be taken at a minimum frequency of one sample for every 500 cubic yards of material. Once it is determined that the fill material meets imported backfill or cover soil chemical requirements and is non-hazardous, and lacks petroleum contamination, the material will be loaded onto trucks for delivery to the Site.

Recycled concrete aggregate (RCA) will be imported from facilities permitted or registered by NYSDEC. Facilities will be identified in the RCR. A PE/QEP is responsible to ensure that the facility is compliant with 6NYCRR Part 360 registration and permitting requirements for the period of acquisition of RCA. RCA imported from compliant facilities will not require additional testing, unless required by NYSDEC under its terms for operation of the facility. RCA imported to the Site must be derived from recognizable and uncontaminated concrete. RCA material is not acceptable for, and will not be used as cover material.

1.10 Fluids Management

All liquids to be removed from the Site, including dewatering fluids, will be handled, transported and disposed in accordance with applicable laws and regulations. Liquids discharged into the New York City sewer system will receive prior approval by New York City Department of Environmental Protection (NYC DEP). The NYC DEP regulates discharges to the New York City sewers under Title 15, Rules of the City of New York Chapter 19. Discharge to the New York City sewer system will require an authorization and sampling data demonstrating that the groundwater meets the City's discharge criteria. The dewatering fluid will be pretreated as necessary to meet the NYC DEP discharge criteria. If discharge to the City sewer system is not appropriate, the dewatering fluids will be managed by transportation and disposal at an off-Site treatment facility.

Discharge of water generated during remedial construction to surface waters (i.e. a stream or river) is prohibited without a SPDES permit issued by New York State Department of Environmental Conservation.

1.11 Storm-water Pollution Prevention

Applicable laws and regulations pertaining to storm-water pollution prevention will be addressed during the remedial program. Erosion and sediment control measures identified in this RAP (silt fences and barriers, and hay bale checks) will be installed around the entire perimeter of the remedial construction area and inspected once a week and after every storm event to ensure that they are operating appropriately. Discharge locations will be inspected to determine whether erosion control measures are effective in preventing significant impacts to receptors. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by OER. All necessary repairs shall be made immediately. Accumulated sediments will be removed as required to keep the barrier and hay bale check functional. Undercutting or erosion of the silt fence anchor will be repaired immediately with appropriate backfill materials. Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

1.12 Contingency Plan

This contingency plan is developed for the remedial construction to address the discovery of unknown structures or contaminated media during excavation. Identification of unknown contamination source areas during invasive Site work will be promptly communicated to OER's Project Manager. Petroleum spills will be reported to the NYS DEC Spill Hotline. These findings will be included in the daily report. If previously unidentified contaminant sources are found during on-Site remedial excavation or development-related excavation, sampling will be performed on contaminated source material and surrounding soils and reported to OER. Chemical analytical testing will be performed for Full List volatiles and semi-volatiles, pesticides/PCBs, and TAL metals, as appropriate.

1.13 Odor, Dust and Nuisance Control

Odor Control

All necessary means will be employed to prevent on- and off-Site odor nuisances. At a minimum, procedures will include: (a) limiting the area of open excavations; (b) shrouding open excavations with tarps and other covers; and (c) use of foams to cover exposed odorous soils. If odors develop and cannot otherwise be controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-Site disposal; and (e) use of chemical odorants in spray or misting systems.

This odor control plan is capable of controlling emissions of nuisance odors. If nuisance odors are identified, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. OER will be notified of all odor complaint events. Implementation of all odor controls, including halt of work, will be the responsibility of the PE/QEP's certifying the RCR.

Dust Control

Dust management during invasive on-Site work will include, at a minimum:

- Use of a dedicated water spray methodology for roads, excavation areas and stockpiles.

- Use of properly anchored tarps to cover stockpiles.
- Exercise extra care during dry and high-wind periods.
- Use of gravel or recycled concrete aggregate on egress and other roadways to provide a clean and dust-free road surface.

This dust control plan is capable of controlling emissions of dust. If nuisance dust emissions are identified, work will be halted and the source of dusts will be identified and corrected. Work will not resume until all nuisance dust emissions have been abated. OER will be notified of all dust complaint events. Implementation of all dust controls, including halt of work, will be the responsibility of the PE/QEP's responsible for certifying the Remedial Closure Report.

Other Nuisances

Noise control will be exercised during the remedial program. All remedial work will conform, at a minimum, to NYC noise control standards.

Rodent control will be provided, during Site reconstruction and during the remedial program, as necessary, to prevent nuisances.

1.14 Import of Clean Cover

No cover soil will be needed for the proposed reconstruction. Thus no soil will be imported to the Site for use as clean cover.

Appendix 2

Construction Health and Safety Plan

CONSTRUCTION HEALTH AND SAFETY PLAN (CHASP)

62 North 9th Street
Brooklyn, NY 11211
E-138, Block 2309, Lot 13,
OER Project # 12EHAZ301K

December 2012

Prepared by:

Associated Environmental Services Ltd.
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GLOSSARY OF COMMON ACRONYMS

ACGIH - American Conference of Governmental Industrial Hygienists

ANSI - American National Standards Institute

APR - Air Purifying Respirator

CFR - Code of Federal Regulations

CGI - Combustible Gas Indicator

CSEP - Confined Space Entry Permit

DECON - Decontamination

FID - Flame Ionization Detector

CHASP - Health and Safety Plan

IDLH - Immediately Dangerous to Life and Health

MSDS - Material Safety Data Sheets

LEL - Lower Explosive Limit

NIOSH - National Institute for Occupational Safety and Health

OSHA - Occupational Safety and Health Administration

OVA - Organic Vapor Analyzer

PID - Photoionization Detector

PEL - Permissible Exposure Limit

PPE - Personal Protective Equipment

SCBA - Self Contained Breathing Apparatus

SOP - Standard Operating Procedure

SPCC - Spill Prevention Controls and Countermeasures

TLV - Threshold Limit Value

TWA - Time Weighted Average

UEL - Upper Explosive Limit

STATEMENT OF COMMITMENT

On-site workers may be exposed to risks from hazardous materials identified during the Subsurface Investigation performed at 62 North 9th Street, Brooklyn, New York. This Construction Health and Safety Plan (CHASP) has been prepared to minimize the possibility of work-related injury through qualified supervision, health and safety training, medical monitoring, use of appropriate personal protective equipment, and the following activity specific safety protocols contained in this CHASP. Associated Environmental Services (AES) provides the following guidance program to implement the procedures and protocols designed to protect personnel to the maximum reasonable extent.

This CHASP, which applies to personnel actually or potentially exposed to safety or health hazards, describes emergency response procedures for actual and potential physical and chemical hazards. This CHASP is also intended for use by all personnel entering the work area or exclusion zone. All persons are to acknowledge that they understand the potential hazards and the contents of this Health and Safety policy by signing off upon review of the document (**Appendix A**). Contractors and suppliers are retained as independent contractors and are responsible for ensuring the health and safety of their own employees.

AES may require that its personnel take certain precautions in accordance with this CHASP, and AES requests that others protect their personnel in a manner that they deem necessary or sufficient.

1.0 INTRODUCTION AND SITE ENTRY REQUIREMENTS

This document describes the health and safety guidelines developed by AES at 62 North 9th Street, Brooklyn, New York to protect on-site personnel, visitors, and the public from physical harm and potential exposure to hazardous materials or wastes. In accordance with the Occupational Safety and Health Administration (OSHA) 29 CFR Part 1910.120 Hazardous Waste Operations and Emergency Response Final rule, this CHASP, including the attachments, addresses safety and health hazards relating to each phase of site operations and is based on the best information available. A notice shall be posted at the field office and all contractor's bulletin boards used to post legal and labor related materials that the CHASP is available for examination by any person working on the project. The CHASP may be revised by AES upon receipt of new information regarding site conditions. All changes will be documented by written amendments signed by the AES project superintendent, site safety officer and the AES health and safety consultant.

1.1 Site Safety Plan Acceptance and Acknowledgment

The project superintendent and the site safety officer are responsible for informing all personnel (AES employees, owner, or owners representatives) entering the work area of the contents of this plan and ensuring that each person signs the safety plan acknowledging the potential on-site hazards and procedures required to minimize exposure to adverse effects of these hazards. Amendments to the CHASP are acknowledged by completing forms included in **Appendix B**.

1.2 Daily Safety Meetings

Each day before work begins, the site safety officer will hold safety (tailgate or tool box) meetings to ensure that all on-site personnel understand the site conditions and operating procedures and to address safety questions and concerns. Meeting minutes and attendance will be recorded. All personnel eligible to enter the exclusion and decontamination zones must attend the meetings. Project staff will discuss and remedy any health and safety issues at these meetings.

1.3 Roles and Responsibilities

AES project superintendent (John Schretzmayer) is responsible for overall project administration and, with guidance from the site safety officer (Gregory Ernst) and AES's health and safety supervisor (Ryan Jensen), for supervising the implementation of this CHASP. All relevant OSHA health and safety standards will apply. The site safety office will conduct daily (tail gate or tool box) safety meetings at the project site and oversee daily safety issues. Each subcontractor and supplier (defined as an OSHA employer) is also responsible for the health and safety of its employees. If there is any dispute about health and safety or project activities, on-site personnel will attempt to resolve the issue. If the issue cannot be resolved at the site, then the project superintendent will be consulted.

AES site safety officer is also responsible for coordinating and enforcing health and safety activities on-site. The site safety officer must meet the emergency response and hazardous materials training requirements of OSHA 29 CFR Part 1910.120; must have completed OSHA supervisor training, 29 CFR 1910.120 (e) 4; and must have appropriate experience to the related site work. The site safety officer is authorized to suspend the site work based on safety concerns, and is responsible for the following:

1. Educating personnel about all of the information in this CHASP and any other safety requirements to be observed during site operations, including, but not limited to, decontamination procedures, designation of work zones and levels of protection, air monitoring, fit testing, and emergency procedures dealing with fire and first aid.
2. Coordinating site safety decisions with the project superintendent and the project manager.
3. Designating exclusion, decontamination and support zones on a daily basis.
4. Monitoring the condition and status of known on-site hazards and maintaining and implementing the air quality-monitoring program specified in this CHASP.
5. Maintaining the exclusion zone entry/exit log and site entry/exit log.
6. Maintaining records of safety problems, corrective measures and documentation of any chemical exposures or physical injuries (the site safety officer will document these conditions in a bound notebook and maintain a copy of the notebook on-site).

Any person who observes safety concerns and potential hazards that have not been addressed in the daily safety meetings should immediately report their observations/concerns to the site safety officer or appropriate key personnel.

2.0 SITE BACKGROUND AND SCOPE OF WORK

2.1 Site Location and Description

The subject property is identified as Block 2309, Lot 13, in the borough of Brooklyn, New York. The subject property is improved with a one (1) story commercial building with a partial basement. The proposed project includes the renovation of the existing building and the construction of a three (3)-story addition atop the existing building. The planned renovation is for mixed use with the construction of five (5) residential units within the 3-story addition, and commercial warehousing and storage space on the ground floor and utilities and storage areas in the basement. The existing basement will be renovated by removing and replacing interior walls to create various utility and storage rooms. The existing building structure will be retrofitted with additional plumbing and utility systems installed into the subsurface soil at select locations within the basement, however, the existing cellar will remained unchanged.

Lot 13 has been identified with a Hazardous Materials E-Designation as part of the May 11, 2005 Greenpoint-Williamsburg Rezoning Action (CEQR number 04DCP003K). The E-138 designation requires the completion of an environmental review by the New York City Department of Environmental Protection (NYCDEP) before building permits will be released by the Department of Buildings.

The Phase II Subsurface Investigation was conducted at the site to identify and characterize potential contaminants within the surface/subsurface soils and groundwater at the site for purposes of satisfying the hazardous materials 'E' Designation (E-138).

Results from this investigation were used to help determine what actions may be required, if any, to prevent exposure to on-site contaminants from the change in use of the site.

2.2 Site History and Background

A Phase I Environmental Site Assessment (ESA) was completed by Singer Environmental Group (SEG) in December 2011 for the subject property. The Phase I report which researched the history of the site and, indicated the property had been developed since 1950. It was noted that subject property has been used as a sheet metal and countertop fabrication shop for approximately 10 years. Site records indicate the property was once formerly used as a coal storage yard. Several manufacturing operations occupied the adjacent properties facility including metal production and chemical storage facilities.

The Phase I ESA did note that the property was assigned a hazardous materials 'E' designation (E-138) requiring an environmental quality declaration review by the NYC Office of Environmental Remediation (OER) which must be satisfied before the Department of Buildings (DOB) will issue building permits for the property. SEG recommended that a Phase II investigation be performed in response to the 'E'-designation should work permits from the NYC DOB be required.

The existing building is to be completely renovated for use as a mixed-use residential and commercial facility in conformance with the present zoning.

2.2.1 Soil Quality

Three soil borings were drilled at selected locations within the subject property. Soil samples collected at the site were analyzed for volatile organic compounds (VOCs), semi-organic compounds (SVOCs), PCBs, pesticides and metals. The laboratory results of the soil indicated that shallow soil, which consisted of inter-bedded horizons of medium to fine sands and clay, contained slightly elevated levels of the metal iron above the New York State Department of Environmental Conservation (NYSDEC) 6NYCRR Part 375

Unrestricted Use Soil Cleanup Objectives (UUSCOs).

2.2.2 Groundwater Quality

Groundwater samples were collected from two locations spaced across the subject property. Groundwater samples were analyzed for VOCs, SVOCs, PCBs, Pesticides and Metals. The Phase II subsurface investigation detected slightly elevated levels of the VOC trichloroethene, the pesticide dieldrin, and the metals iron, magnesium, manganese and sodium in one sample from the rear (southern portion) of the property above their respective NYSDEC Water Quality Standards.

2.2.3 Sub-Slab Vapor Quality

Sub-slab vapor samples were collected from two locations, one within the partial basement area and one within the slab-on-grade area of the building. The sub-slab vapor samples were analyzed for VOCs. The results of the Phase II analysis detected concentrations of trichloroethene and 1,1,1-trichloroethane beneath the slab-on-grade area of the building at levels which require mitigation under the New York State Department of Health (NYSDOH) Soil Vapor Intrusion Guidance.

2.3 Scope of Work

The proposed use of the Site will renovate the existing building and construct a three (3)-story addition atop the existing building. The existing basement will be renovated by removing and replacing interior walls to create various utility and storage rooms. The existing building structure will be retrofitted with additional plumbing and utility systems installed into the subsurface soil at select locations within the basement, however, the existing cellar will remained unchanged.

3.0 HAZARD ASSESSMENT

This section identifies the hazards associated with site operations and the standard operating procedures (SOPs) that should be implemented to reduce the hazards; identifies general physical hazards that can be expected at most sites; and presents a summary of documented or potential chemical hazards at the site. Every effort must be made to reduce or eliminate these hazards. Those that cannot be eliminated must be guarded against using engineering controls and/or personal protective equipment.

3.1 Activity-Specific Hazards and Standard Operating Procedures

3.1.1 Operation of Heavy Equipment

OSHA guidelines will be followed for operating heavy equipment as outlined in 29 CFR 1926.602.

3.1.2 Excavation/Earthwork

The Occupational Safety and Health Administration (OSHA) 29 CFR 1926.651 (February 20, 1990) established construction industry standards relating to excavation work. These standards include shoring and cutback requirements, equipment specifications, entry requirements, etc. To avoid exposure to site-specific contaminants and to ensure acceptable atmospheric conditions, the following additional requirements apply:

- Dust suppression will be performed during excavation and grading activities (See Section 3.1.5).
- Air quality will be tested before employees enter excavations over four feet deep if a hazardous atmosphere exists or is suspected to exist. If the site safety officer determines that excavations are, by OSHA's definition, "confined space," the confined space entry policy (Section 8.0) will be followed.

- Open excavations will be backfilled as soon as practicable. While excavations remain open, appropriate warnings will be posted and barricades will be erected to protect pedestrian and worker safety. Where possible, excavation side walls will be cut at a gradual slope to maximize egress and access. Workers will not enter excavations unless absolutely required.
- To ensure atmospheric quality, tests shall be conducted as often as necessary as determined by the site safety officer. This includes tests for flammable gas and oxygen deficiency.
- When the site safety officer identifies hazardous atmospheres, emergency rescue equipment and PPE must be on the work site (Level C PPE) and readily accessible to employees (29 CFR 1926.651(g)(2)(I)).
- Daily site safety inspections will be conducted by the site safety officer.

3.1.3 Work in Extreme Temperatures

Work under extremely hot or cold weather conditions requires special protocols to minimize the chance that employees will be affected by heat or cold stress. The heat and cold stress safety protocols are described in **Appendix C**.

3.1.4 Excavation Operations

Excavation will be conducted as part of this project. The excavation safety protocols are described in **Appendix D**.

3.1.5 Dust Control and Monitoring During Earthwork

Dust generated during site activities may contain contaminants associated with the site characteristics. The site Contractor(s) will control the dust by wetting the working surface with water. Calcium chloride may be used if the problem cannot be controlled with water. Site workers will not be required to wear APR's unless dust concentrations are consistently over 150 µg/m^3 over site-specific background in the breathing zone as measured by a dust monitor unless the site safety officer directs workers to wear APRs. The primary sources of dust will be equipment and construction activities.

3.2 General Site Hazards

Applicable OSHA 29 CFR 1910.120(m) standards for illumination shall apply. All work is to be conducted during daylight hours whenever possible.

All electrical power must be provided through a ground fault circuit interrupter. All equipment that will enter an excavation must be suitable and approved (i.e. intrinsically safe) for use in potentially explosive environments. Applicable OSHA 29 CFR 1926 Subpart K standards for use of electricity shall apply.

Work where there is a fall hazard will be performed using appropriate ladders and/or protection (e.g. body harness and lifeline). All work should be conducted at the ground surface or in trench excavations.

In accordance with 29 CFR 1910.151(c), workers involved in operations where there is the risk of eye injury, (chemical splash, etc.), must have ready access to an approved eye wash unit. Protective eyewear shall be donned in Level D, when directed by the site safety officer. (The full-face APR required by Level C and the pressure demand self-contained breathing apparatus mask required by Level B provide eye protection.)

Operations where there is a potential for fire will be conducted in a manner that minimizes risk. Non-sparking tools and fire extinguishers shall be used or available as directed by the site safety officer when work is in potentially explosive atmospheres. Ignition sources shall be removed from work areas. Explosion-proof instruments and/or bonding and grounding will be used to prevent fire or explosion when the site safety officer directs their use.

Overhead and underground utilities shall be identified and/or inspected and appropriate safety precautions taken before conducting operations where there is any potential for contact or interference.

3.2.1 Miscellaneous Tasks

The following work tasks require specific SOPs and safety measures:

- site inspections;
- drum handling;
- opening drums and overpacking;
- drum staging and overpacking;
- compatibility testing and composting of samples;
- work around heavy equipment;
- corrosive liquid transfer;
- flammable/combustible liquid transfer;
- lab packing and lab inventory;
- soil excavation;
- drum sampling;
- use of high pressure water cleaner;
- drum excavation;
- soil sampling;
- handling compressed gas cylinders; and,
- empty drum crushing.

The safety hazards associated with each site and the SOPs followed by AES are contained in **Appendix E**.

3.3 Chemical Hazards

Soil may include VOCs and Metals, which may exceed the NYSDEC UUSCOs in portions of the site. **Appendix F** includes a list of chemicals known to be present at the site along with pertinent health information (NIOSH, 2003).

3.3.1 Respirable Dust

Dust may be generated from construction activities. If visible observation monitoring detects concentrations greater than 150 µg/m^3 over daily background, the site safety officer will take corrective actions as defined herein, including increasing the amount of water applied to the material and if this is not effective, requiring workers to wear APRs with efficiency particulate air (HEPA) cartridges. The respiratory protection policy is included as **Appendix G**.

3.3.2 Organic Vapors

Based on the Phase II subsurface investigation, organic vapors may be expected during excavation activities. The site safety officer will monitor organic vapors with a photo-ionization detector (PID) during all activities involving soil excavation to determine whether organic vapor concentrations exceed action level.

4.0 PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment (PPE) shall be selected in accordance with the site air monitoring program, OSHA 29 CFR 1910.120(c), (g), and 1910.132. Protective equipment shall be NIOSH-approved and respiratory protection shall conform to OSHA 29 CFR Part 1910.133 and 1910.134 specifications; head protection shall conform to 1910.135; eye and face protection shall conform to 1910.133; and foot protection shall conform to 1910.136. The only true difference among the levels of protection from D thru B is the addition of the type of respiratory protection.

4.1 Level D

Level D PPE shall be donned when the atmosphere contains no known hazards and work functions preclude splashes, immersion, or the potential for inhalation of, or contact with, hazardous concentrations of harmful chemicals. Level D PPE consists of:

- standard work uniform, or coveralls, as needed;
- steel toe and steel shank work boots;
- hard hat;
- gloves, as needed;
- safety glasses;
- hearing protection.

4.2 Level C

Level C PPE shall be donned when the concentrations of measured total organic vapors in the breathing zone exceed background concentrations (using a PID, or equivalent), but are less than 5 ppm, or otherwise when required by SOPs or the Respiratory Protection Policy (**Appendix G**). The specifications on the APR filters used must be appropriate for contaminants identified or expected to be encountered. Level C PPE shall be donned

when the identified contaminants have adequate warning properties and criteria for using APR have been met. Level C PPE consists of:

- chemical resistant or coated tyvek coveralls;
- steel-toe and steel-shank workboots;
- chemical resistant overboots or disposable boot covers;
- disposable inner gloves (surgical gloves);
- disposable outer gloves;
- full-face APR fitted with organic vapor/dust and mist filters or filters appropriate for the identified or expected contaminants;
- hard hat;
- splash shield, as needed; and,
- ankles/wrists taped with duct tape.

The site safety officer will verify if Level C is appropriate by checking organic vapor concentrations using compound and/or class-specific detector tubes.

4.3 Level B

Level B PPE shall be donned when the contaminants have not been identified and/or the concentrations of unknown measured total organic vapors in the breathing zone exceed 25 ppm (using a PID, or equivalent). Level B PPE shall be donned if the IDLH of a known contaminant is exceeded. If a contaminant is identified or is expected to be encountered for which NIOSH and/or OSHA recommend the use of a positive pressure self-contained breathing apparatus (SCBA) when that contaminant is present, Level B PPE shall be donned even though the total organic vapors in the breathing zone may not exceed 25 ppm. Level B shall be donned for confined space entry, and when the atmosphere is oxygen deficient (oxygen less than 19.5%) or potentially oxygen deficient. If Level B PPE is required for a task, at least three people shall be donned in Level B at any one time

during that task. PPE shall only be donned at the direction of the site safety officer. Level B PPE consists of:

- supplied air SCBA or airline system with five minute egress system;
- chemical resistant coveralls;
- steel-toe and steel-shank workboots;
- chemical resistant overboots or disposable boot covers;
- disposable inner gloves;
- disposable outer gloves;
- hard hat; and,
- ankles/wrists taped.

The exact PPE ensemble is decided on a site-by-site basis by the Health and Safety Officer with the intent to provide the most protective and efficient worker PPE.

4.4 Activity-Specific Levels of Personal Protection

The required level of PPE is activity-specific and is based on air monitoring results (Section 4.0) and properties of identified or expected contaminants. Positive displacement ventilation equipment for work within the building will allow workers engaged in excavation activities to remain in Level D. All other site work will be conducted in Level D, with the possibility of upgrade to Level C as directed by the site safety officer.

5.0 AIR MONITORING AND ACTION LEVELS

According to 29 CFR 1910.120(h) specifies that air shall be monitored to identify and quantify levels of airborne hazardous substances and health hazards, and to determine the appropriate level of worker protection.

5.1 Perimeter Air Monitoring

To establish ambient air background concentrations, air will be monitored at several locations around the site perimeter before construction activities begin. These points will be monitored periodically in series during the site work. VOCs will be monitored with a portable MiniRAE Model 3000 PID, or the equivalent.

The specific guidelines for actions to be taken based on air monitoring at the site perimeter are listed below:

- PID readings for VOCs less than 5.0 ppm over background: continue.
- PID readings for VOCs greater than 5.0 ppm over background: stop work and implement vapor release contingency plan until readings return to acceptable levels.

All air monitoring data is documented in a site log book by the designated site safety officer (**Appendix H**). The site safety officer or delegate must ensure that air monitoring instruments are calibrated and maintained in accordance with manufacturer's specifications. All instruments will be zeroed daily and checked for accuracy. A daily log will be kept. Monitoring will conform to the NYSDOH guidance included in **Appendix H**.

6.0 SITE CONTROL

6.1 Work Zones

The primary purpose of site controls is to establish the perimeter of a hazardous area, to reduce the migration of contaminants into clean areas, and to prevent access or exposure to hazardous materials by unauthorized persons. When operations are to take place involving hazardous materials, the site safety officer will establish an exclusion zone, a decontamination zone, and a support zone. These zones "float" (move around the site) depending on the tasks being performed on any given day. The site safety officer will outline these locations before work begins and when zones change. The site safety officer records this information in the site log book.

Tasks requiring OSHA 40-hour Hazardous Waste Operations and Emergency Response Operations training are not anticipated on this project, however, if necessary they will be carried out in the exclusion zone. The exclusion zone is defined by the site safety officer but will typically be a 50-foot area around work activities. Gross decontamination (as determined by the site safety officer) is conducted in the exclusion zone, all other decontamination is performed in the decontamination zone or trailer.

Protective equipment is removed in the decontamination zone. Disposable protective equipment is stored in receptacles staged in the decontamination zone, and non-disposable equipment is decontaminated according to the procedures outlined in Section 8.0. All personnel and equipment exit the exclusion zone through the decontamination zone. If a decontamination trailer is provided the first aid equipment, an eye wash unit, and drinking water are kept in the decontamination trailer.

The support zone is used for vehicle parking, daily safety meetings, and supply storage. Eating, drinking, and smoking are permitted only in the support zone. When a decontamination trailer is not provided, the eye wash unit, first aid equipment, and drinking water are kept at a central location designated by the site safety officer.

6.2 General Field Safety and Standard Operating Procedures

These policies are to control hazards at all site areas by limiting entrance to the work site to essential personnel and by implementing the following rules:

- Non-essential (as judged by the site safety officer) personnel and unauthorized persons will not enter the exclusion or decontamination zone.
- Before entering the exclusion or decontamination zones, all personnel must be familiar with emergency response procedures (Section 10.0), site safety locations, first aid and communication equipment, and the location of the map to the hospital and the list of emergency telephone numbers.
- The buddy system will be used at all times by field personnel in the exclusion zone; no one is to perform work within the exclusion zone alone. When in Level D or C, visual contact or radio contact shall be maintained at all times. In Level B, visual contact shall be maintained at all times, and radio contact shall be maintained with the decontamination and/or support zone.
- Contact with contaminated and potentially contaminated surfaces should be avoided. Walk around (not through) puddles and discolored surfaces. Do not kneel on the ground or place equipment on the ground. Protect equipment from contamination.
- All personnel exiting the exclusion zone must exercise the decontamination procedures described in Section 8.0 of this CHASP.
- Beards or other facial hair that interferes with respirator fit will preclude admission to the exclusion zone. Contact lenses shall not be worn in the

exclusion or decontamination zones, or if the worker may be expected to enter these zones under routine or emergency situations.

- Eating, drinking, or smoking is permitted only in designated areas in the support zone.
- Each worker must be supplied with and maintain his/her own personal protective equipment.

Note: These policies will be enforced by the designated site safety officer.

7.0 DECONTAMINATION PROCEDURES

All equipment and PPE exiting the exclusion zone must be decontaminated or properly discarded upon exit. All personnel must enter and exit the exclusion zone through the decontamination area. The exclusion and decontamination zones may change depending on the nature of the site work. Plastic bags containing personal protective clothing and equipment will be placed in designated receptacles.

All boots and other potentially contaminated garments that have come in contact with hazardous materials will be cleaned in wash tubs with detergent/water solution and rinsed with water and must remain on site. The wash water, rinse water, and residues will be collected and properly stored until sampling results are received and the final method of disposal can be determined. Disposable PPE, including spent respirator cartridges and canisters, will be properly bagged and disposed of. All contaminated boots, clothing, and equipment (e.g. leather boots, equipment carrying straps) that cannot be decontaminated will be disposed of with the disposable garments or left on site in the decontamination trailer.

The *minimum* measures for Level B doffing and decontamination are:

- deposit equipment on plastic drop cloths;
- scrub outer boots and gloves with a water and detergent solution and rinse;
- remove outer boots and outer gloves. Discard disposable outer garments in receptacle provided;
- remove SCBA and face piece and place on rack provided;
- remove tyvek/outer garment and place in receptacle provided;
- remove inner gloves and deposit in receptacle provided; and,
- shower/wash face and hands.

The *minimum* measures for Level C doffing and decontamination are:

- deposit equipment on plastic drop cloths;
- scrub outer boots and gloves (if worn) with a water and detergent solution and rinse;
- remove outer boots and outer gloves. Discard disposable outer garments in receptacle provided;
- remove tyvek/outer garment and place in receptacle provided;
- remove first pair of inner gloves;
- remove respirator (using "clean" inner gloves) and place on rack provided;
- remove last pair of inner gloves and deposit in receptacle provided; and,
- shower/wash face and hands.

The second to last item to be removed is the APR, and the last item to be removed is the last of several pairs of surgical gloves. Wearing several pairs of inner gloves permits layers to be removed as needed during various stages of the doffing procedure, and if the APR inadvertently becomes contaminated, inner gloves guard against bare hands contacting the APR.

Equipment that comes into contact with site contaminants is decontaminated according to manufacturer specifications. Decontamination is done in the exclusion or decontamination zones.

8.0 CONFINED SPACE

OSHA published a Final Rule on permit-required confined spaces on January 14, 1993, for General Industry at 29 CFR 1910.146 et seq., with an implementation date of April 15, 1993. The rule specifically excludes agriculture, construction, or shipyard employment. Prudence requires that there is a confined space entry plan, and the OSHA rule will be followed. OSHA defines confined space as:

1. Is large enough and so configured that an employee can bodily enter and perform assigned work;
2. Has limited or restricted areas for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited entry); and
3. Is not designed for continuous worker occupancy.

OSHA further requires that an "entry supervisor" (the site designated safety officer) decides at the time of entry whether the space is permit-required or non-permit required space. The site safety officer will monitor the space two hours prior to entry and continuously during work to ensure that the atmosphere is not hazardous. OSHA defines as hazardous atmosphere as:

1. Flammable gas, vapor, or mist in excess of 10 percent of its lower explosive limit (LEL);
2. Airborne combustible dust at a concentration that meets or exceeds its LEL; NOTE: This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet (1.52 m) or less.
3. Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent;

4. Atmospheric concentration of any substance for which a dose or a permissible exposure limit is published in Subpart G, Occupational Health and Environmental Control, or in Subpart Z. Toxic and Hazardous Substances, of this part and which could result in employee exposure in excess of its dose or permissible exposure limit;
5. Any other atmospheric condition that is immediately dangerous to life or health.

A space is non-permit required if none of the above defined hazardous conditions are present. OSHA requires that an attendant (e.g., an individual stationed outside one or more spaces who monitors the entrants and who performs air monitoring of the space(s)) be assigned to each space. The attendant is not allowed to perform any direct rescue related duties, but is there to communicate with the entrant and call for rescue procedures if required. The following protocol applies when AES employees must enter a confined space:

- The site safety officer evaluates the space and site conditions to determine whether the space must be considered "confined".
- If so, the site safety officer monitors the space for hazardous atmospheres prior to entry and fills out a pre-entry checklist (**Appendix I**) to determine whether an entry-permit is required.
- If there is no hazardous atmosphere, the space will be continuously monitored during the entry to assure that the atmosphere remains non-hazardous.
- If the space contains a hazardous atmosphere, an entry permit (**Appendix I**) will be prepared and the space will only be entered in accordance with 29 CFR 1910.146.

9.0 CONTINGENCY PLAN/EMERGENCY RESPONSE PLAN

Site personnel must be prepared in the event of an emergency. Emergencies can take many forms: illnesses, injuries, chemical exposure, fires, explosions, spills, leaks, releases of harmful contaminants, or sudden changes in the weather.

Emergency telephone numbers and a map to the hospital will be posted in the command post. Site personnel should be familiar with the emergency procedures, and the locations of site safety, first aid, and communication equipment. These will be outlined in the site specific CHASP.

9.1 Emergency Equipment On-site

Private telephones:	Site personnel.
Two-way radios:	Site personnel where necessary.
Emergency Alarms:	On-site vehicle horns*.
First aid kits:	On-site, in vehicles or office.
Fire extinguisher:	On-site, in office or on equipment.

* Horns: Air horns will be supplied to personnel at the discretion of the project superintendent or site safety officer.

9.2 Emergency Telephone Numbers

General Emergencies	911
New York City Police	911
NYSDEC Spills Division	1-800-457-7362
NYSDEC Hazardous Waste Division	1-718-482-4994
NYCDEP	1-718-699-9811
NYC Department of Health	1-212-788-4711
NYC Fire Department	911 or 311
National Response Center	1-800-424-8802
Poison Control	1-212-340-4494

A copy of this page shall be posted in the office and a copy is provided in **Appendix J**.

9.3 Personnel Responsibilities During an Emergency

The *project superintendent* is primarily responsible for responding to and correcting any emergency situations. However, in the absence of the project superintendent, the *site safety officer* shall act as the project superintendent's on-site designee and perform the following tasks:

- Take appropriate measures to protect personnel including: withdrawal from the exclusion zone, evacuate and secure the site, or upgrade/downgrade the level of protective clothing and respiratory protection;

- Ensure that appropriate federal, state, and local agencies are informed and emergency response plans are coordinated. In the event of fire or explosion, the local fire department should be summoned immediately. If toxic materials are released to the air, the local authorities should be informed in order to assess the need for evacuation;

- Ensure appropriate decontamination, treatment, or testing for exposed or injured personnel;

- Determine the cause of incidents and make recommendations to prevent recurrence; and,

- Ensure that all required reports have been prepared.

9.4 Medical Emergencies

Any person who becomes ill or injured in the exclusion zone will be decontaminated to the maximum extent possible. If the injury or illness is minor, full decontamination will be completed and first aid administered prior to transport. First aid will be administered while waiting for an ambulance or paramedics. A Field Accident Report (**Appendix J**) must be filled out for any injury.

Any person transporting an injured/exposed person to a clinic or hospital for treatment will take the directions to the hospital (Figure 2) and information on the chemical(s) to which they may have been exposed.

9.5 Fire or Explosion

In the event of a fire or explosion, the local fire department will be summoned immediately. The site safety officer or his designated alternate will advise the fire commander of the location, nature and identification of the hazardous materials on-site. If it is safe to do so, site personnel may:

- use fire-fighting equipment available on site; or,

- remove or isolate flammable or other hazardous materials that may contribute to the fire.

9.6 Evacuation Routes

Evacuation routes established by work area locations for each site will be reviewed prior to commencing site operations. As the work areas change, the evacuation routes will be altered accordingly, and the new route will be reviewed.

Under extreme emergency conditions, evacuation is to be immediate without regard for equipment. The evacuation signal will be a continuous blast of a vehicle horn, if possible, and/or by verbal/radio communication. When evacuating the site, personnel will follow these instructions:

- Keep upwind of smoke, vapors, or spill location.
- Exit through the decontamination corridor if possible.
- If evacuation through the decontamination corridor is not possible, personnel should remove contaminated clothing once they are in a safe location and leave it near the exclusion zone or in a safe place.
- The site safety officer will conduct a head count to ensure that all personnel have been evacuated safely. The head count will be correlated to the site and/or exclusion zone entry/exit log.
- If emergency site evacuation is necessary, all personnel are to escape the emergency situation and decontaminate to the maximum extent practical.

9.7 Spill Control Procedures

In the event of a leak or a release, site personnel will:

- inform their supervisor immediately;
- locate the source of the spillage and stop the flow if it can be done safely; and,
- begin containment and recovery of the spilled materials.

Field monitoring equipment and spill control equipment available at each site will be outlined in the site specific CHASP.

9.8 Vapor Release Plan

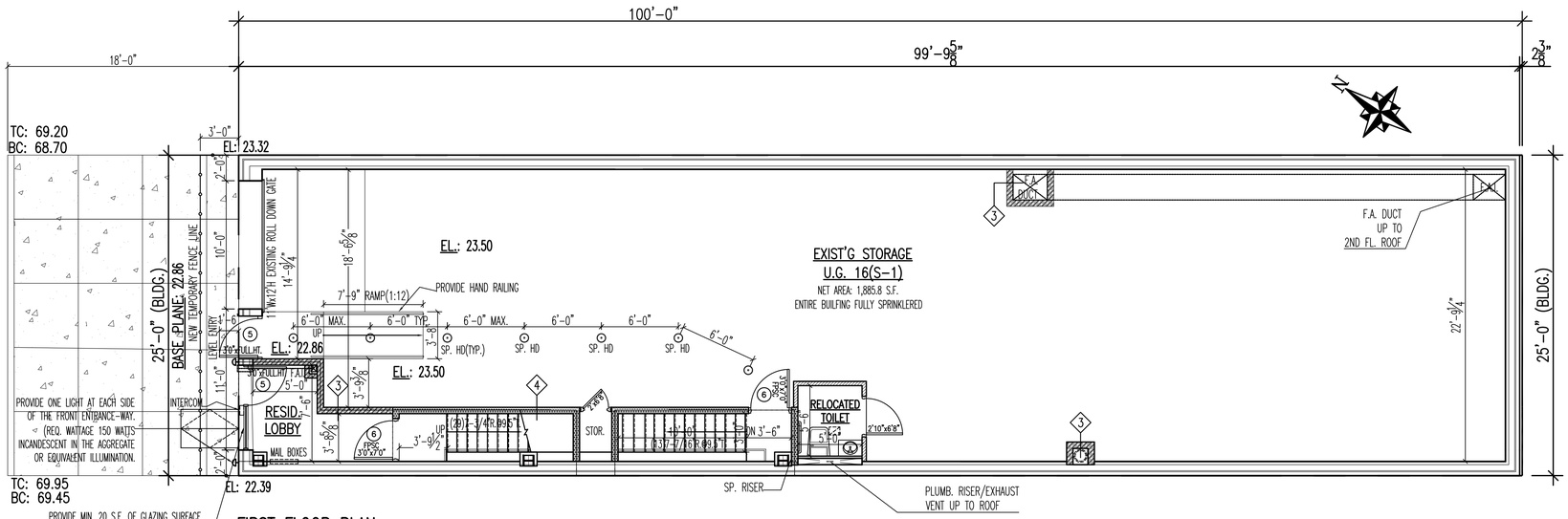
If work zone organic vapor (excluding methane) exceeds 5 ppm, then a downwind reading will be made either 200 feet from the work zone or at the property line, whichever is closer. If readings at this location exceed 5 ppm over background, the work will be stopped.

If 5 ppm of volatile organics are recorded over background on a PID at the property line, then an off-site reading will be taken within 20 feet of the nearest residential or commercial property, whichever is closer. If efforts to mitigate the emission source are unsuccessful for 30 minutes, then the designated site safety officer will:

- contact the local police;
- continue to monitor air every 30 minutes, 20 feet from the closest off-site property. If two successive readings are below 5 ppm (non-methane), off-site air monitoring will be halted.
- all property line and off-site air monitoring locations and results associated with vapor releases will be recorded in the site safety log book.

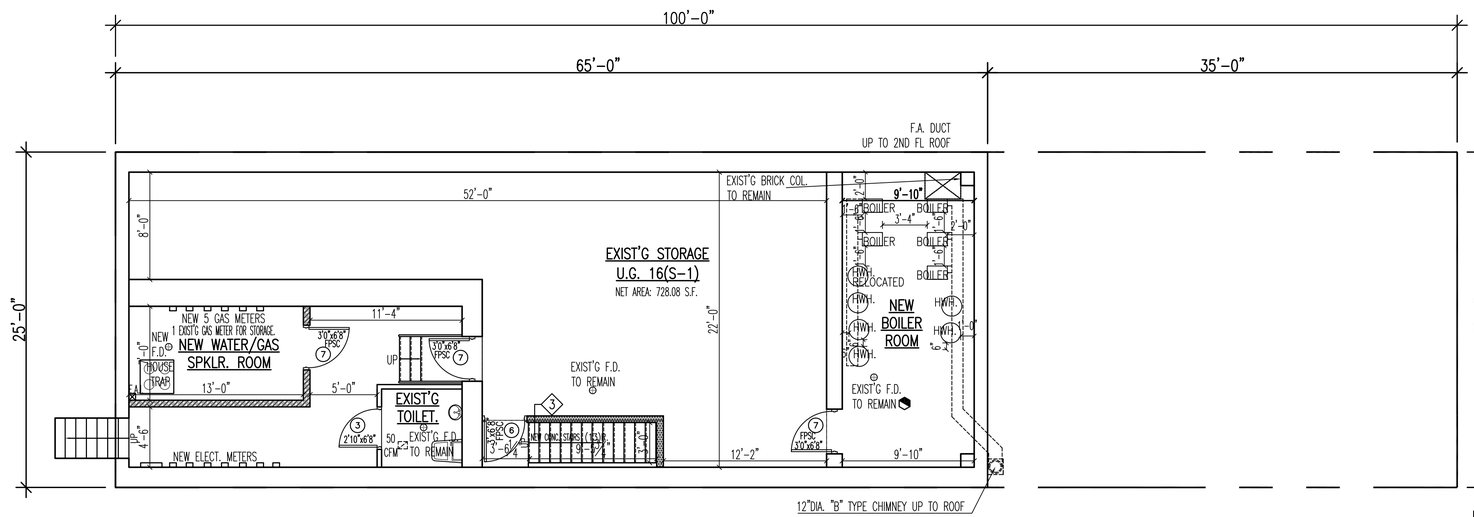
Appendix 3

Proposed Reconstruction Plans



FIRST FLOOR PLAN

SCALE: 3/16=1'-0"



CELLAR FLOOR PLAN

SCALE: 3/16=1'-0"

BOILER & H.W.H. INFORMATION

(6)H.W.HS.: A.O.SMITH
MODEL#:XCV-50
MEA #:385-04-E

(5)BOILER: BY WEIL MCLAIN
MOD.# CGA-3-SPDN
70KBTU GAS WATER HEATER
MEA #:155-00-E

BOILER ROOM REQUIRED FRESH AIR CALCULATION AS PER D.O.B. MEMO 12/21/1977

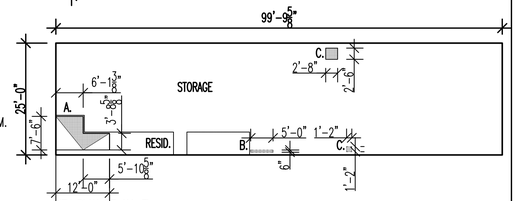
-REQUIRE FRESH AIR:
ONE SQUARE INCH PER 1,000 B.T.U. INPUT
-PROVIDED:
5 UNIT BOILER 1- 70,000 BTU
6 UNITS GAS FIRED H.W.H. 1=40,000 BTU
TOTAL PROVIDED:
(5x70,000+6x40,000=590,000 BTU
590,000 / 1000 = 590 SQ.IN.
PROVIDED FRESH INTAKE SIZE:
(20"x30")=600 SQ. in.>590 sq.in.---O.K.

BOILER, BOILER FLUE & VENT NOTES

1. FIXED VENT FOR BOILER COMBUSTION AIR TO BE PROVIDED AT A RATE OF 1 SQ-IN. PER 1000 BTU OF BOILER INPUT.
2. BOILER TO BE MEA/BSA APPROVED AND OF A CAPACITY TO MEET REQUIREMENTS OF N.Y.S. ENERGY CODE AND N.Y.C. BUILDING CODE. WHICHEVER IS MORE STRINGENT. (WEIL McLAIN MEA #159-75-E OR APPROVE EQUAL).
3. ALL GAS-BURNING EQUIPMENT THAT PRODUCES FLUE GAS TEMPERATURES IN EXCESS OF 480°F SHALL PROVIDE CHIMNEY AS PER TABLE 15-4,5 OR 6.
4. FACTORY-BUILT CHIMNEYS AND GAS VENTS SHOULD BE INSTALLED AS PER C26-1500.7.
5. DUCTS PASSING THROUGH TWO OR MORE FLOORS OR MORE FLOORS OR THROUGH ROOF AND HAVING CROSS-SECTIONAL AREA OF MORE THAN 2 SQ. FT. SHALL BE ENCLOSED IN SHAFT WITH NON-COMBUSTIBLE MATERIALS HAVING 2 HOUR FIRE RESISTANCE.
6. FLUE DAMPERS-DAMPERS IN FLUES SHALL BE CONSTRUCTED SO THAT THEY CANNOT COMPLETELY CUT OFF THE PASSAGE OF THE FLUE GASES AT ANY TIME. TIGHT CLOSING DAMPERS MAY INSTALLED WITH APPROVED AUTOMATIC DRAFT AND COMBUSTION CONTROLS.

BOILER ENCLOSURE

1. THE AREA OF THE BOILER ENCLOSURE NOT TO EXCEED 300 SQUARE FEET.
2. BOILER ENCLOSURE TO BE CONSTRUCTED OF "4" GYPSUM BLOCK BSA CAL 638-41-SM.
3. REGISTER DAMPER AND FUSIBLE LINK ON THE BOILER ENCLOSURE SIDE BSA CAL # 292-71-SM.
4. FIRE RETARD THE BOILER ENCLOSURE CEILING WITH 1/2" SHEET ROCK ONE HOUR RATED.
5. THE DOOR TO THE BOILER ENCLOSURE TO BE ONE (1) HOUR TEST FIREPROOF SELF CLOSING.
6. BOILER ENCLOSURE TO HAVE A CONCRETE FLOOR.
7. PROVIDE 18" MINIMUM CLEARANCE FOR THE BOILER.
8. EMERGENCY SHUTOFF CONTROLS FOR THE BOILER TO BE LOCATED OUTSIDE THE BOILER ENCLOSURE.
9. REGISTER DAMPER AREA TO BE ONE SQUARE INCH PER 1,000 BTU INPUT.
10. NO METERS IN BOILER ENCLOSURE.
11. NO STORAGE IN BOILER ENCLOSURE.



KEY PLAN OF ALL FL.
BLDG. GROSS AREA: 2,495.00 S.F.

A.	CORRIDOR DEDUCTION AREA: 0.5x(7.5'x6.11'+3.72'x5.89')=33.87 S.F.	
B.	MECHANICAL DEDUCTION :	0.5'x5' = 2.50 S.F.
C.	MECHANICAL DEDUCTION :	1.2'x1.2' = 1.44 S.F.
D.	MECHANICAL DEDUCTION :	2.67'x2.5' = 6.68 S.F.
	TOTAL DEDUCTION :	44.49 S.F.

DEDUCTION OF FIRST FLOOR

LEGEND

- EXIST'G WALL TO REMAIN
- NEW CONC. FOUNDATION WALL
- NEW EXTERIOR (2HR-RATED) WALL; SEE WALL SECTION DETAIL
- NEW EXTERIOR WALL-BRICK MASONRY WALL -CAVITY WALL: 4" BRICK W/1" OR 2" AIR SPACE, ANCHORED TO 6" REINFORCED CONCRETE BLOCK WALL W/22GA., 7/8" WIDE CALV. MTL TIES @ 24" O.C. MAX. VERT. & 32" O.C. MAX. HORIZ., MTL. STUDS @16" O.C. W/ R-11 BATT INSUL. & 5/8" GYP. BOARD (TYPE "X") ON THE INTERIOR.(2HR. RATED PER U.L. # U-302.)
- NEW CMU BLOCK WALL
  UL DESIGN NO.: U-905 -8" CMU BLOCK WALL
  UL DESIGN NO.: U-906 -6" CMU BLOCK WALL
- 4 NEW 2HOUR RATED WALL (STAIR ENCLOUSURE) EACH SIDE ON 2-1/2" MTL. STUD. STC 55 MASONRY EQUIV.
- 3 (PROVIDE 24GA 36"x45" STL. SHEET ABOVE 18" IN BET. SHEETROCK) NEW 2HOUR RATED WALL (PUBLIC HALL) - 2LAYERS 5/8" GYP. BOARD EACH SIDE ON 2-1/2" MTL. STUD. STC 55 (BSA #301-60 SM)
- 2 NEW 1HOUR RATED WALL-1 LAYER 5/8" GYP. BOARD ON 2-1/2" MTL. STUD INCLUDING SOUND ATTENUATION BLANKET- STC 50 (BSA #453-73 SM)
- 1 NON-RATED PARTITION -1 LAYER OF FULL HT. 5/8" SHEET ROCK 3-1/2" BOTH SIDES (WITHIN APARTMENT)
- HIDDEN LINE
- MECHANICAL VENTILATION
- COMBINATION SMOKE DETECTOR/CO DETECTOR "HARDWIRED CARBON MONOXIDE DETECTORS INSTALLED COMPLY W/ LL7/2004"
- FPSC FIRE PROOF SELF CLOSING DOOR
- EXIT
- SPRINKLER HEAD

* NOTE: SHAFT FOR GAS, ELEC, WATER COOLING WATER, PLUMBING, TEL, DATA WALL SEPARATION COORDINATE WITH SUB CONTRACTORS SHOP DRAWINGS, SEPARATION TO BE TWO HOUR CONSTRUCTION. PROVIDE FIRE DAMPER WITH ALL DUCT PENETRATING FIRE RATED WALL/CEILING.
MANUFACTURER: PHILIPS-AIRE
MODEL NO.: 119AV MEA #: NFPA-90A

III. BOILER ROOM AS PER MDL65

**1. EXCEPT AS HEREAFTER PROVIDED. IN EVERY MULTIPLE DWELLING ERECTED AFTER APRIL EIGHTEENTH , NINETEEN HUNDRED TWENTY- NINE, WHICH IS FOUR STORIES OR MORE IN HEIGHT THE BOILER SHALL BE ENCLOSED IN A ROOM OR SPACE CONSTRUCTED WITH FIREPROOF WALLS EXTENDING FROM THE FLOOR CONSTRUCTION TO THE CEILING CONSTRUCTION, AND ALL OPENINGS THEREFROM TO OTHER PORTIONS OF THE DWELLING SHALL BE EQUIPPED WITH FIREPROOF DOORS AND ASSEMBLIES WITH THE DOORS SELF-CLOSING. HOWEVER, IN ALL MULTIPLE DWELLINGS, ON THE AFTER JANUARY FIRST, NINETEEN HUNDRED SIXTY-SIX, A ROOM OR SPACE PROVIDED WITH A CENTRAL HEATING PLANT SHALL BE COMPLETELY ENCLOSED WITH INCOMBUSTIBLE MATERIALS HAVING A STANDARD FIRE-RESISTIVE RATING OF AT LEAST ONE HOUR.

2. IN SUCH A DWELLING ACCESS TO A CELLAR OR LOWEST STORY IN WHICH A BOILER IS LOCATED SHALL NOT BE THROUGH ANY BOILER ROOM, NOR SHALL ANY CELLAR OR BASEMENT STAIR OR ANY SHAFT BE INSTALLED WITHIN A BOILER ROOM.

**3. THE DEPARTMENT SHALL HAVE THE POWER TO MAKE SUPPLEMENTARY REGULATIONS RELATING TO BOILER OR FURNACE ROOMS
NOTE: SEC. 65 OF THE M.D.L., SINCE IT WAS AMENDED JANUARY 1, IS NOW APPLICABLE TO ARTICLES 6 (CONVERTED DWELLINGS) AND 7 (TENEMENTS, OLD LAW AND NEW LAW).
**(AS AMENDED, CH. 842, L. 1965, EFFECTIVE JANUARY 1, 1966)

PROJECT:

62 N9TH STREET
BROOKLYN, NY 11211

NYC DOB FILING

REVISIONS:

REVISION	ISSUE DATE	SHEET NO.

D.O.B./DEP REFERENCE JOB NO.

PROJECT ARCHITECT:

THOMAS C. TUNG ENGINEER, P.E
38 MARKET STREEET
TEL: (646)240-5371/FAX:212-334-9506
E-MAIL: QINATAN@HOTMAIL.COM

DRAWING TITLE:

CELLAR & 1ST FL. PLANS, NOTES

D.O.B. JOB NUMBER:

BSCAN JOB STICKER:

SCALE: AS NOTED	P.E. / R.A. SEAL
DRAWN BY: S.P.	
CHECKED: J.W.C.	
DATE: 11/12/2011	
REVISED:	
D.O.B. JOB TYPE	ALT-I

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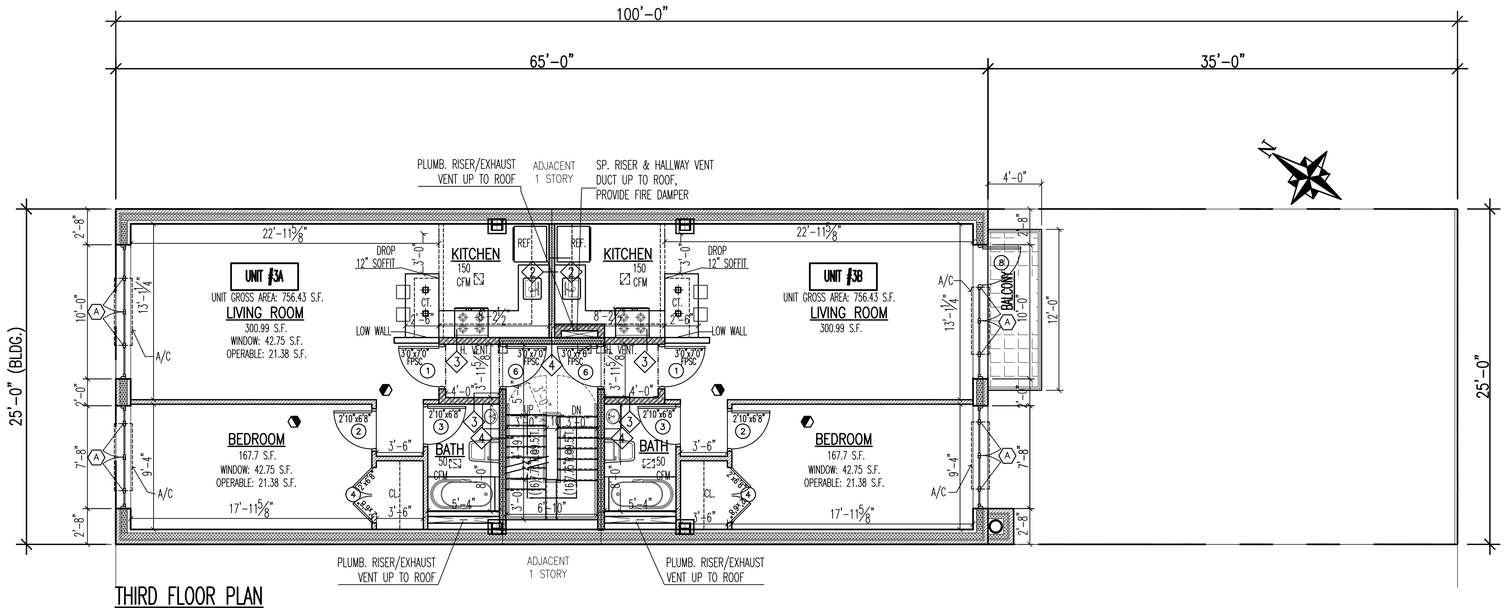
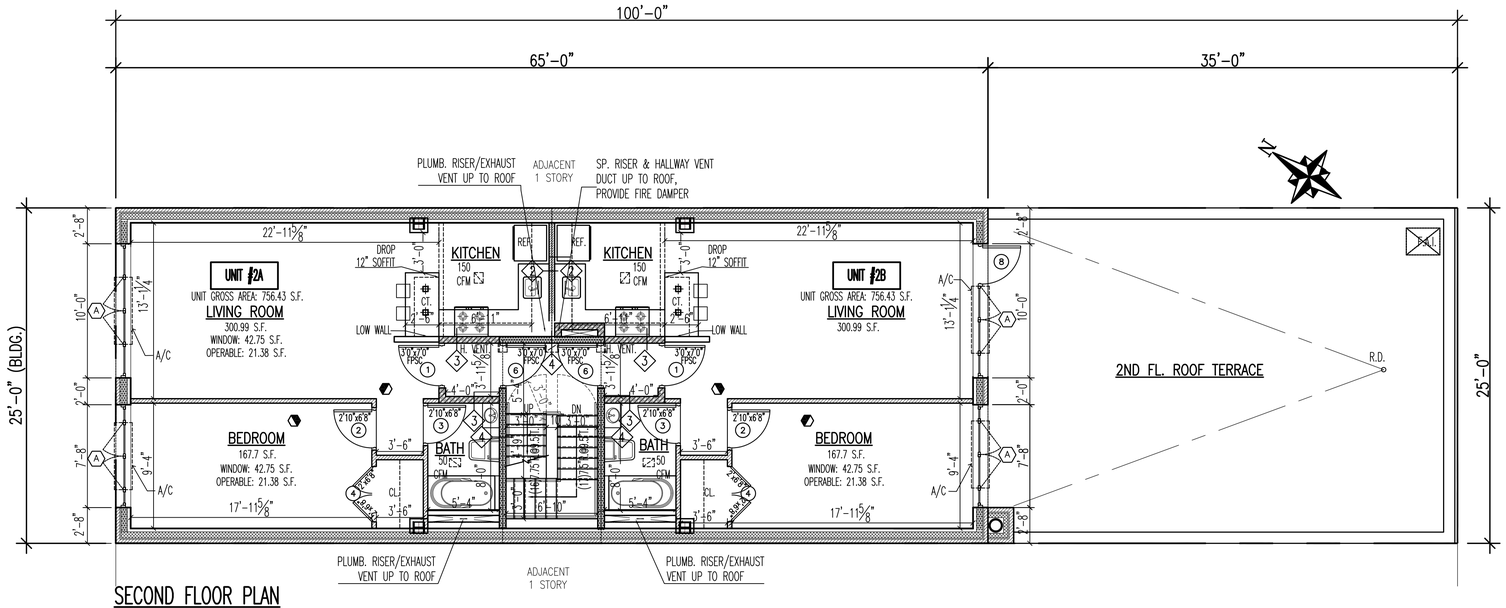
SHEET 04 OF 11



THIRD FLOOR PLAN

SCALE: 3/16=1'-0"



SECOND FLOOR PLAN

SCALE: 3/16=1'-0"

LEGEND

- EXIST'G WALL TO REMAIN
- NEW CONC. FOUNDATION WALL
- NEW EXTERIOR WALL–BRICK MASONRY WALL –CAVITY WALL: 4" BRICK W/1" OR 2" AIR SPACE, ANCHORED TO 6" REINFORCED CONCRETE BLOCK WALL W/22GA, 7/8" WIDE CALV. MTL TIES @ 24" O.C. MAX. VERT. & 32" O.C. MAX. HORIZ., MTL. STUDS @16" O.C. W/ R-11 BATT INSUL. & 5/8" GYP. BOARD (TYPE "X") ON THE INTERIOR.(2HR. RATED PER U.L. # U-302.)
- NEW CMU BLOCK WALL UL DESIGN NO.: U-905 –8" CMU BLOCK WALL UL DESIGN NO.: U-906 –6" CMU BLOCK WALL
- 4 NEW 2HOUR RATED WALL (STAIR ENCLOUSURE) EACH SIDE ON 2-1/2" MTL. STUD. STC 55 MASONRY EQUIV.
- 3 NEW 2HOUR RATED WALL (PUBLIC HALL) – 2LAYERS 5/8" GYP. BOARD EACH SIDE ON 2-1/2" MTL. STUD. STC 55 (BSA #301-60 SM)
- 2 NEW 1HOUR RATED WALL–1 LAYER 5/8" GYP. BOARD ON 2-1/2" MTL. STUD INCLUDING SOUND ATTENUATION BLANKET – STC 50 (BSA #453-73 SM)
- 1 NON–RATED PARTITION –1 LAYER OF FULL HT. 5/8" SHEET ROCK 3-1/2" BOTH SIDES (WITHIN APARTMENT)
- HIDDEN LINE
- MECHANICAL VENTILATION
- COMBINATION SMOKE DETECTOR/CO DETECTOR "HARDWIRED CARBON MONOXIDE DETECTORS INSTALLED COMPLY W/ LL7/2004"
- FPSC FIRE PROOF SELF CLOSING DOOR
- EXIT
- SPRINKLER HEAD
- CEILING PENDANT LIGHTING

– Z.R. 28-25 DAYLIGHT IN CORRIDORS

FIFTY PERCENT OF THE SQUARE FOOTAGE OF A CORRIDOR MAY BE EXCLUDED FROM THE DEFINITION OF FLOOR AREA IF A WINDOW WITH A CLEAR, NON–TINTED, GLAZED AREA OF AT LEAST 20 SQUARE FEET IS PROVIDED IN SUCH CORRIDOR, PROVIDED THAT SUCH WINDOW:

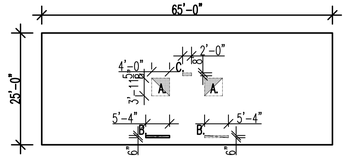
(A) SHALL BE DIRECTLY VISIBLE FROM 50 PERCENT OF THE CORRIDOR OR FROM THE VERTICAL CIRCULATION CORE. THIS STANDARD SHALL BE ACHIEVED WHEN A VISUALLY UNOBSTRUCTED STRAIGHT LINE CAN BE DRAWN BETWEEN SUCH CORRIDOR, ELEVATOR OR STAIRWELL, AND THE WINDOW; AND

(B) IS LOCATED AT LEAST 20 FEET FROM A WALL OR A #SIDE# OR #REAR LOT LINE# MEASURED IN A HORIZONTAL PLANE AND PERPENDICULAR TO THE ROUGH WINDOW OPENING.

– Z.R. 28-41 DENSITY PER CORRIDOR

IF THE NUMBER OF DWELLING UNITS OR ROOMING UNITS SERVED BY A VERTICAL CIRCULATION CORE AND CORRIDOR ON EACH STORY DOES NOT EXCEED THE NUMBER SET FORTH IN THE FOLLOWING TABLE, 50 PERCENT OF THE SQUARE FEET OF THE CORRIDOR SERVING SUCH DWELLING UNITS OR ROOMING UNITS ON SUCH STORY MAY BE EXCLUDED FROM THE DEFINITION OF FLOOR AREA.

DENSITY OF DWELLING UNITS PER CORRIDOR	
NUMBER OF DWELLING UNITS AND ROOMING UNITS SERVED BY A CORRIDOR PER STORY	DISTRICT
11	R6



KEY PLAN OF TYP. FL.

BLDG. GROSS AREA: 1,625.00 S.F.

A.	CORRIDOR DEDUCTION AREA:	2x3.97'x4'= 31.76 S.F.
B.	MECHANICAL DEDUCTION :	2x5.33'x0.5'= 5.33 S.F.
C.	MECHANICAL DEDUCTION :	2'x0.67'= 1.34 S.F.
	TOTAL DEDUCTION :	38.43 S.F.

DEDUCTION OF TYP. FLOOR

PROJECT:

62 N9TH STREET
BROOKLYN, NY 11211

NYC DOB FILING

REVISIONS:

REVISION	ISSUE DATE	SHEET NO.

D.O.B./DEP REFERENCE JOB NO.

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DRAWING TITLE:

2ND FL&3RD FL. PLANS

D.O.B. JOB NUMBER:

BSCAN JOB STICKER:

SCALE: AS NOTED	P.E. / R.A. SEAL
DRAWN BY: S.P.	
CHECKED: J.W.C.	
DATE: 11/12/2011	
REVISED:	
D.O.B. JOB TYPE	ALT-I

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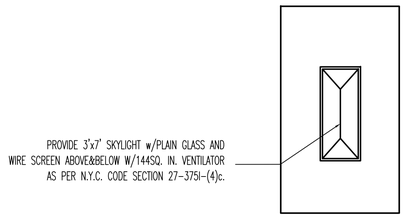
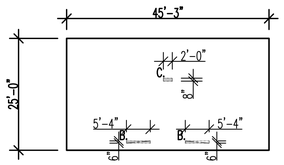
SHEET 05 OF 11



BULKHEAD PLAN

SCALE: 3/16=1'-0"

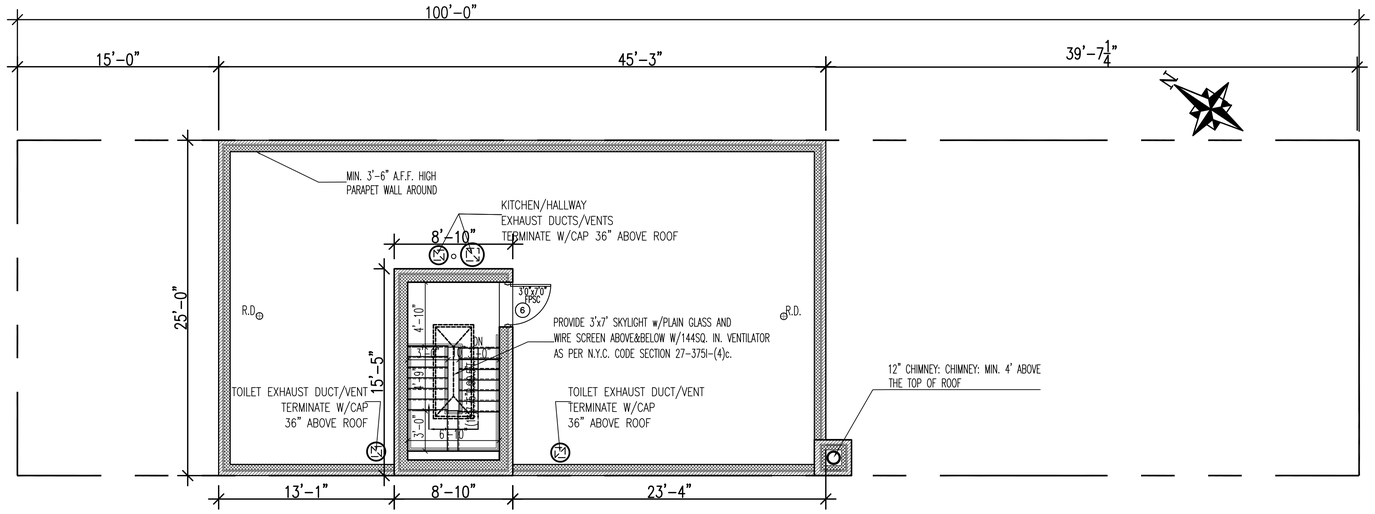


KEY PLAN OF TYP. FL.

BLDG. GROSS AREA: 1,131.25 S.F.

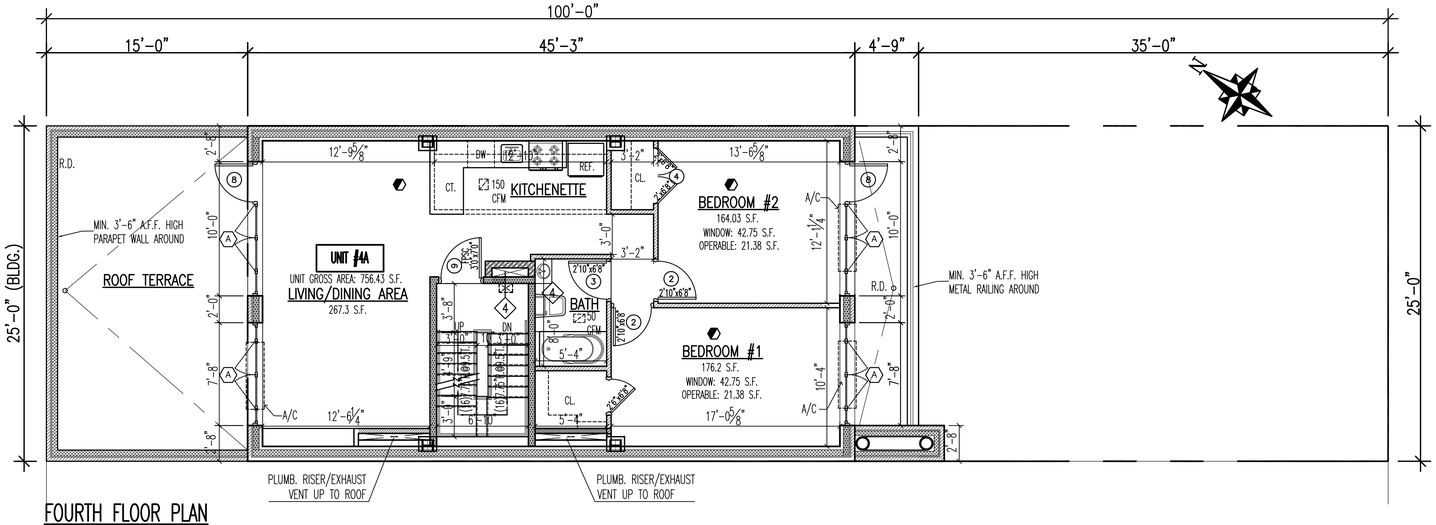
B. MECHANICAL DEDUCTION :	2x5.33'x0.5'= 5.33 S.F.
C. MECHANICAL DEDUCTION :	2'x0.67'= 1.34 S.F.
TOTAL DEDUCTION :	6.67 S.F.

DEDUCTION OF 4TH FLOOR



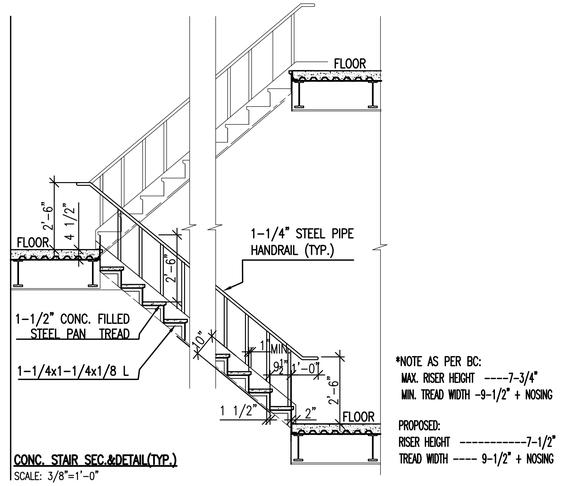
ROOF PLAN

SCALE: 3/16=1'-0"



FOURTH FLOOR PLAN

SCALE: 3/16=1'-0"

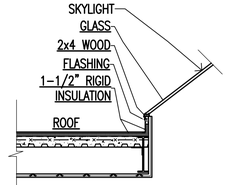


*NOTE AS PER BC:
MAX. RISER HEIGHT ----7-3/4"
MIN. TREAD WIDTH -9-1/2" + NOSING

PROPOSED:
RISER HEIGHT ----------7-1/2"
TREAD WIDTH ---- 9-1/2" + NOSING

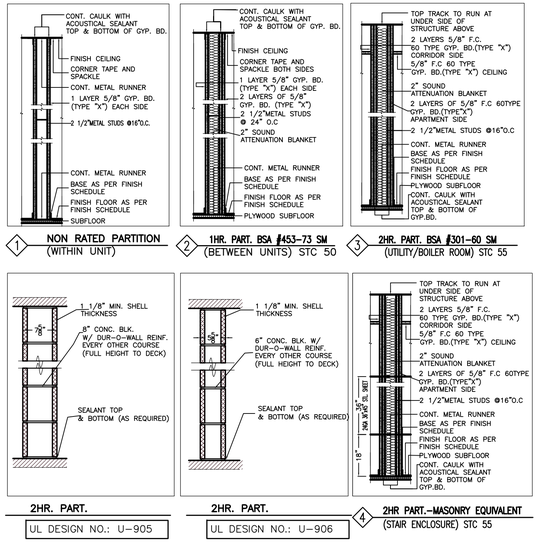
CONC. STAIR SEC.&DETAIL(TYP.)

SCALE: 3/8"=1'-0"



SKYLIGHT DETAIL(TYP.)

SCALE: 3/8"=1'-0"



1 NON RATED PARTITION (WITHIN UNIT)

2 1HR. PART. BSA #453-73 SM (BETWEEN UNITS) STC 50

3 2HR. PART. BSA #301-60 SM (UTILITY/BOILER ROOM) STC 55

2HR. PART.
UL DESIGN NO.: U-905

2HR. PART.
UL DESIGN NO.: U-906

4 2HR PART.-MASONRY EQUIVALENT (STAIR ENCLOSURE) STC 55

PROJECT:

62 N9TH STREET
BROOKLYN, NY 11211

NYC DOB FILING

REVISIONS:

REVISION	ISSUE DATE	SHEET NO.

D.O.B./DEP REFERENCE JOB NO.

PROJECT ARCHITECT:

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DRAWING TITLE:

4TH FL. & ROOF PLANS SCHEDULES & NOTES

D.O.B. JOB NUMBER:

BSCAN JOB STICKER:

SCALE: AS NOTED	P.E. / R.A. SEAL
DRAWN BY: S.P.	
CHECKED: J.W.C.	
DATE: 11/12/2011	
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D.O.B. JOB TYPE	ALT-I

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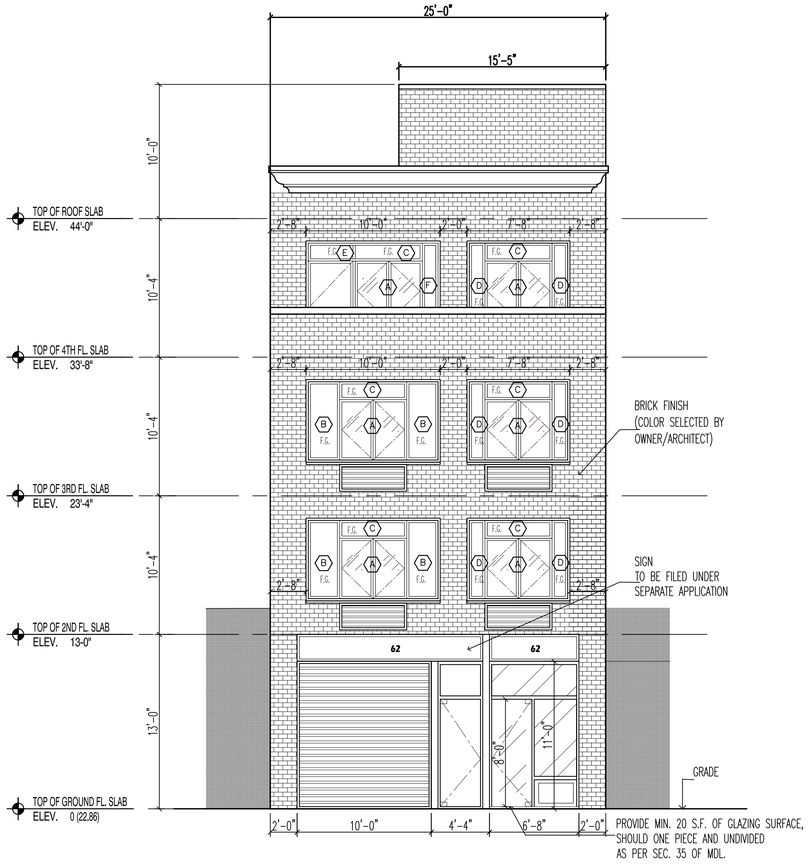

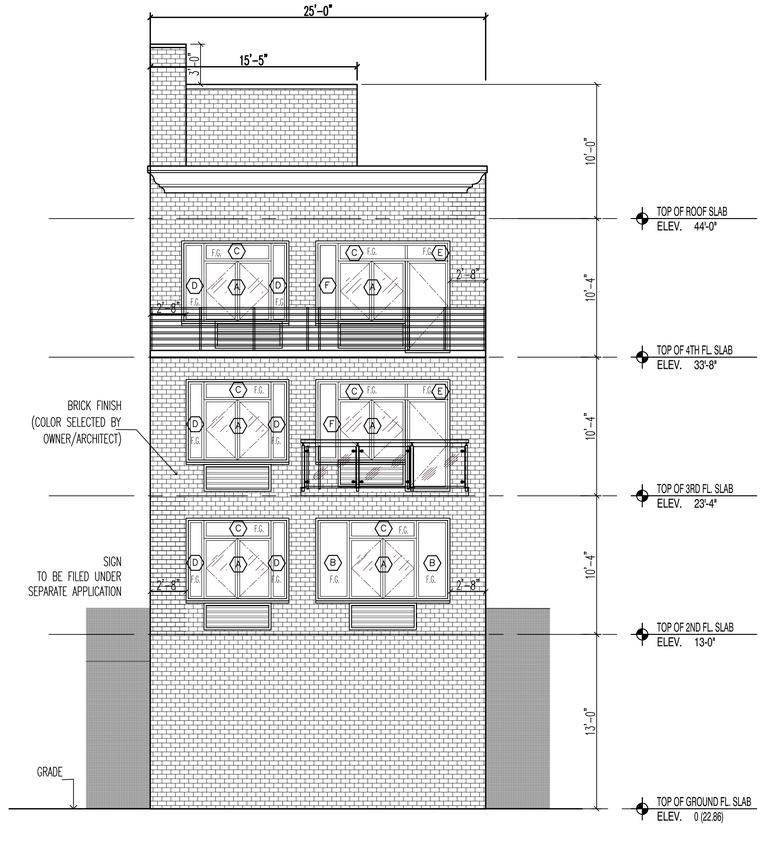

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62 N9TH STREET
BROOKLYN, NY 11211

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DRAWING TITLE:

ELEVATIONS

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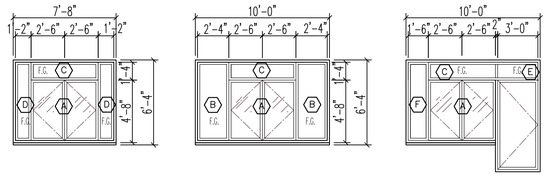
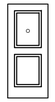
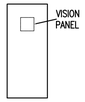
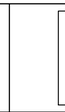
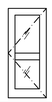
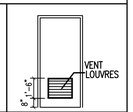
SHEET 07 OF 11

WINDOW SCHEDULE			
NO.	SIZE(WxH)		TYPE & MATERIAL(ANDERSEN OR APPROVE EQUAL)
A	(2)2'-6" x 4'-8"		AWNING TYPE-ST. STEEL(ANDERSEN OR APPROVE EQUAL)
B	2'-4" x 6'-4"	WIN. SILL HT. 30" A.F.F.	FIXED GLASS STEEL(ANDERSEN OR APPROVE EQUAL)
C	5'-0" x 1'-4"		FIXED GLASS STEEL(ANDERSEN OR APPROVE EQUAL)
D	1'-2" x 6'-4"		FIXED GLASS STEEL(ANDERSEN OR APPROVE EQUAL)
E	3'-0" x 1'-4"		FIXED GLASS STEEL(ANDERSEN OR APPROVE EQUAL)
F	1'-6" x 6'-4"		FIXED GLASS STEEL(ANDERSEN OR APPROVE EQUAL)

*NOTE: ALL WINDOWS SHOULD BE DOUBLE-GLAZED.

*NOTE: DIMENSIONS SHOWN ON THIS SCHEDULE ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD MEASURE ALL WINDOW OPENINGS.



D O O R S C H E D U L E									
ELEVATION									
DESIGNATION	(1)	(2)	(3)	(4) (4a)	(5)	(6)	(7)	(8)	(9)
LOCATION	APARTMENT ENTRY	BEDROOM	BATHROOM/TOILET	CLOSET	BUILDING ENTRY	STAIRCASE	UTILITY ROOM	TERRACE DOOR	STORAGE
SIZE	1: 3'-0"x7'-0"x1 3/4"	2: 2'-10"x6'-8"x1 3/8"	3: 2'-10"x6'-8"x1 3/8"	4 : 1'-6"x6'-8"x1 3/8" 4a: 1'-3"x6'-8"x1 3/8"	5: 3'-0"X8'-0"(FULL HEIGHT) PROVIDE MIN. 20 S.F. OF GLAZING SURFACE,	6: 3'-0"X6'-8"X1 3/4"	7: 3'-0"X6'-8"X1 3/4"	8: 3'-0"X6'-8"	9: 3'-0"X6'-8"X1 3/4"
DOOR MATERIAL	HOLLOW METAL	HOLLOW CORE WOOD	HOLLOW CORE WOOD	HOLLOW CORE WOOD	ALUMINUM&TEMPERED GL.	HOLLOW METAL	HOLLOW METAL	TEMPERED GL.	HOLLOW METAL
BUCK MATERIAL	HOLLOW METAL	HOLLOW METAL	HOLLOW METAL	——	HOLLOW METAL	HOLLOW METAL	HOLLOW METAL	HOLLOW METAL	HOLLOW METAL
SADDLE	MARBLE	——	MARBLE	——	ALUMINUM	ALUMINUM	ALUMINUM	ALUMINUM	ALUMINUM
REMARK	1. 1 1/2HR. FPSC WITH PEEP HOLE & CHIME. 2. PROVIDE SELF CLOSING HARDWARE		1. 1" UNDERCUT AT INTERIOR BATH ONLY		1. PROVIDE WEATHER STRIPPING-4 SIDES. 2. PROVIDE SELF CLOSING HARDWARE	1. 1 1/2HR. FPSC 2. STAIR DOOR EQUIPPED WITH WIRE GL. VISION PANEL 3. PROVIDE SELF CLOSING HARDWARE	1. 1 1/2HR. FPSC 2. PROVIDE SELF CLOSING HARDWARE	1. PROVIDE WEATHER STRIPPING-4 SIDES.	1. PROVIDE SELF CLOSING HARDWARE

DOOR AND WINDOW SCHEDULE

SCALE: N.I.S.

NYC ENERGY CONSERVATION CODE NOTE(NYCECC)

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS, ALL WORK UNDER THIS APPLICATION ARE IN COMPLIANCE WITH THE ENERGY CONSERVATION CODE OF NEW YORK STATE USING CHAPTER 5, 2010 NYS ENERGY CODE.

TABLE 502.2(1) BUILDING ENVELOPE REQUIREMENTS-OPAQUE ASSEMBLIES
----ENERGY CONSERVATION CONSTRUCTION CODE OF NYS 2010.

ENERGY CODE COMPLIANCE-TABULAR COMPARISON TABLE ENERGY ANALYSIS - CLIMATE ZONE 4a (NON-RESIDENTIAL)		
ITEM DESCRIPTION	CODE PRESCRIPTIVE VALUE	PROPOSED DESIGN VALVE
NEW FLOOR(SLAB ON GRADE FLOORS) HEATED SLABS	R-15 FOR 24IN. BELOW	R-19
BELOW GRADE WALLS	NR	NR
ABOVE GRADE WALLS	R=13	R=13
NEW ROOF INSULATION ENTIRELY ABOVE DECK	R-20ci	R-30
ROLL-UP OR SLIDING	U-0.50	U-0.85

TABLE 502.3. BUILDING ENVELOPE REQUIREMENTS-OPAQUE ASSEMBLIES----ENERGY CONSERVATION CONSTRUCTION CODE OF NYS 2010.

ENERGY CODE COMPLIANCE-TABULAR COMPARISON TABLE ENERGY ANALYSIS - CLIMATE ZONE 4a (NON-RESIDENTIAL)		
ITEM DESCRIPTION	CODE PRESCRIPTIVE VALUE	PROPOSED DESIGN VALVE
METAL FRAMING WITH OR WITHOUT THERMAL BREAK		
ENTRANCE DOOR U-FACTOR	0.85	0.85
ALL OTHER U-FACTOR OPERABLE WINDOWS, FIXED WINDOWS	0.55	0.85

ENERGY CODE COMPLIANCE-TABULAR COMPARISON TABLE ENERGY ANALYSIS - CLIMATE ZONE 4 (RESIDENTIAL)		
ITEM DESCRIPTION	PROPOSED DESIGN VALVE	CODE PRESCRIPTIVE VALUE
NEW BOILER: BY WEIL MCLAIN MOD.# CGA-3-SPDN INPUT 70,000 BTU MEA# 155-00-E QTY.: 3	82% EFFICIENCY AFUE	MINIMUM 75% EFFICIENCY AFUE (TABLE 403.7)
NEW HWH: INPUT 40,000 BTU, 50 GAL. A.O.SMITH MODEL#:XCV-50 MEA #:385-04-E	78% EFFICIENCY AFUE	78% E ANSIZ21.103
ANY PIPING REQUIRED FOR BOILER (AUTOMATIC CIRCULATING SYSTEM)	R-2	MINIMUM R-2 (SEC. 403.3)

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE ENERGY CONSERVATION CODE OF NEW YORK STATE USING CHAPTER 4, 2010 NYS ENERGY CODE.

PROJECT:

62 N9TH STREET
BROOKLYN, NY 11211

NYC DOB FILING

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PROJECT ARCHITECT:

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DRAWING TITLE:

ENERGY ANALYSIS / DOOR &WINDOW SCHEDULES

D.O.B. JOB NUMBER:

BSCAN JOB STICKER:

SCALE: AS NOTED	P.E. / R.A. SEAL
DRAWN BY: S.P.	
CHECKED: J.W.C.	
DATE: 11/12/2011	
REVISED:	
D.O.B. JOB TYPE	ALT-I

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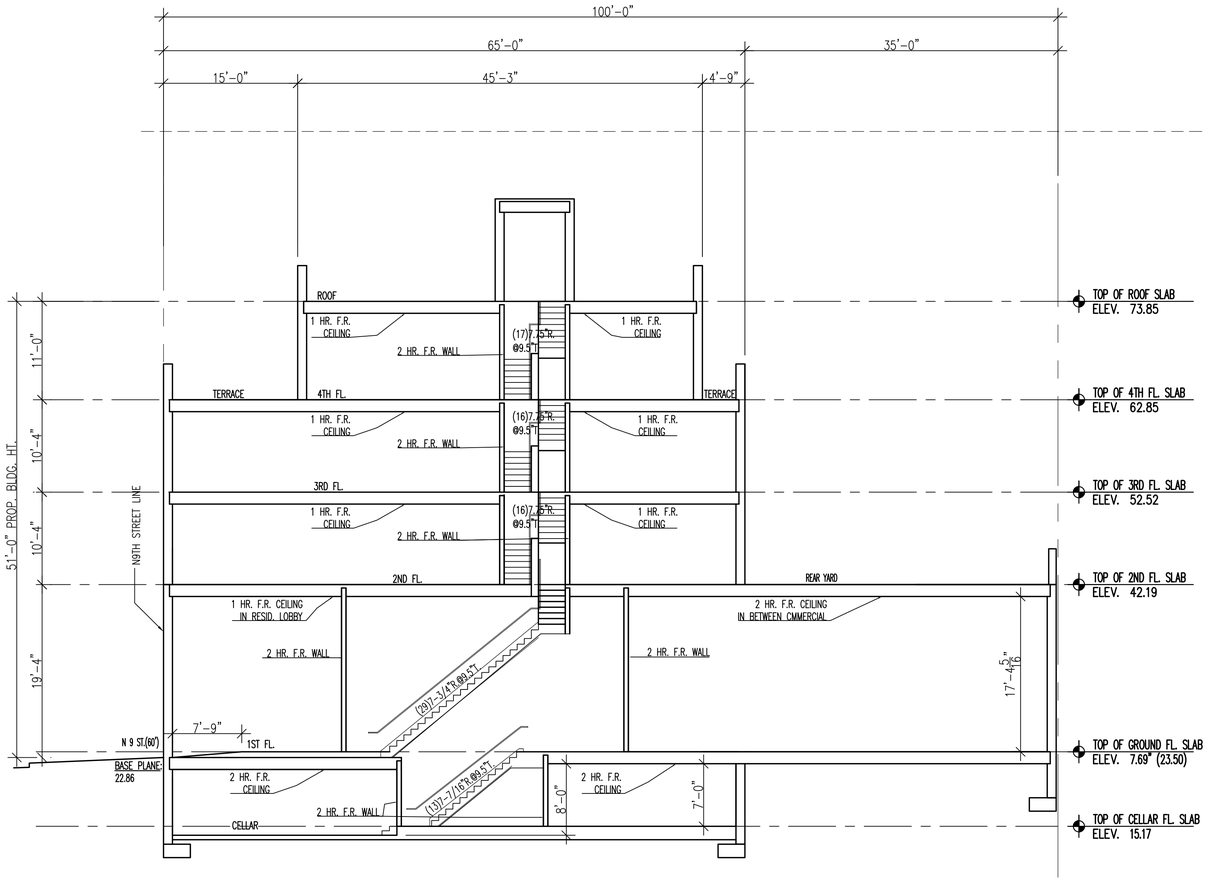
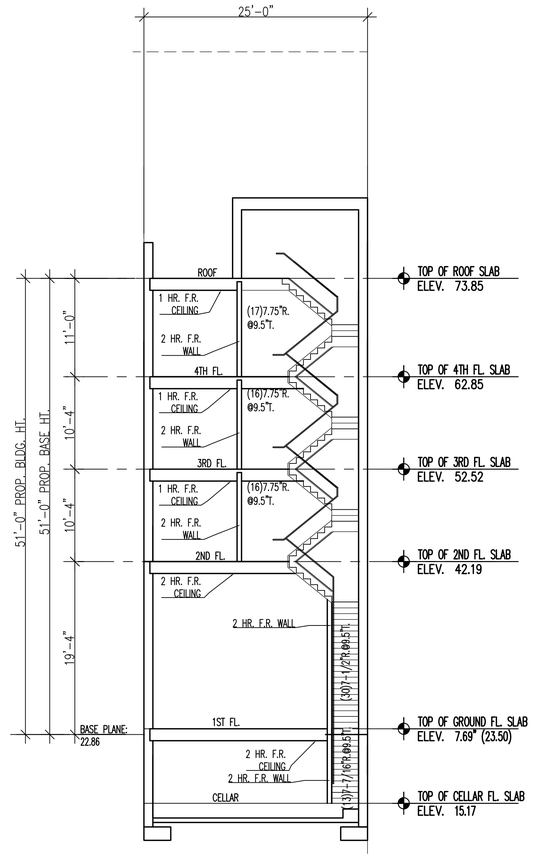
SHEET 08 OF 11



BUILDING SECTION A–A

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



BUILDING SECTION B–B

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

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62 N9TH STREET
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DRAWING TITLE:

BUILDING SECTIONS

D.O.B. JOB NUMBER:

BSCAN JOB STICKER:

SCALE: AS NOTED	P.E. / R.A. SEAL
DRAWN BY: S.P.	
CHECKED: J.W.C.	
DATE: 11/12/2011	
REVISED:	
D.O.B. JOB TYPE	ALT-I

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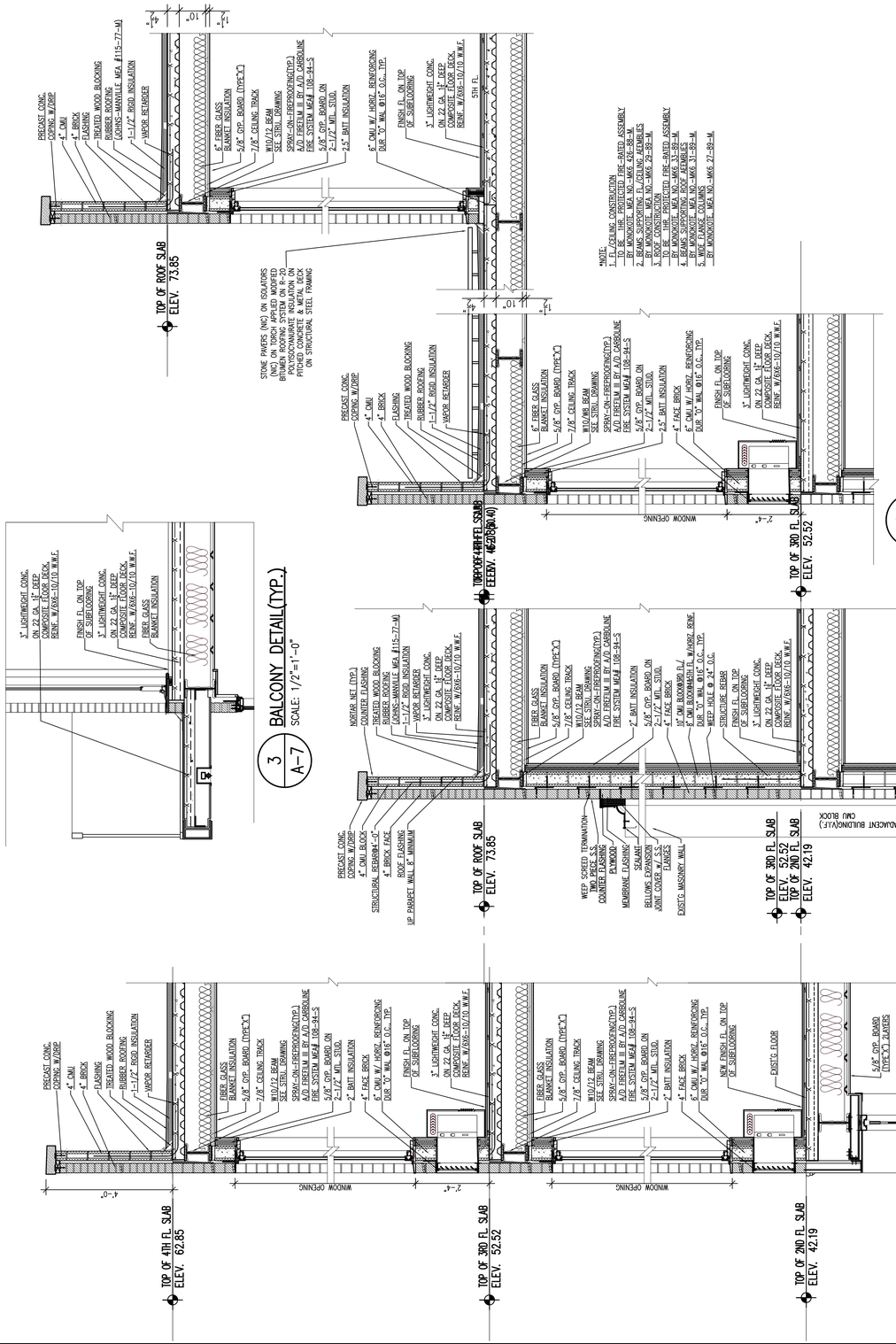

PROJECT:

62 N9TH STREET
BROOKLYN, NY 11211

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D.O.B./DEP REFERENCE JOB NO.

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DRAWING TITLE:

WALL SECTIONS

D.O.B. JOB NUMBER:

BSCAN JOB STICKER:

SCALE: AS NOTED	P.E. / R.A. SEAL
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CHECKED: J.W.C.	
DATE: 11/12/2011	
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D.O.B. JOB TYPE	ALT-I

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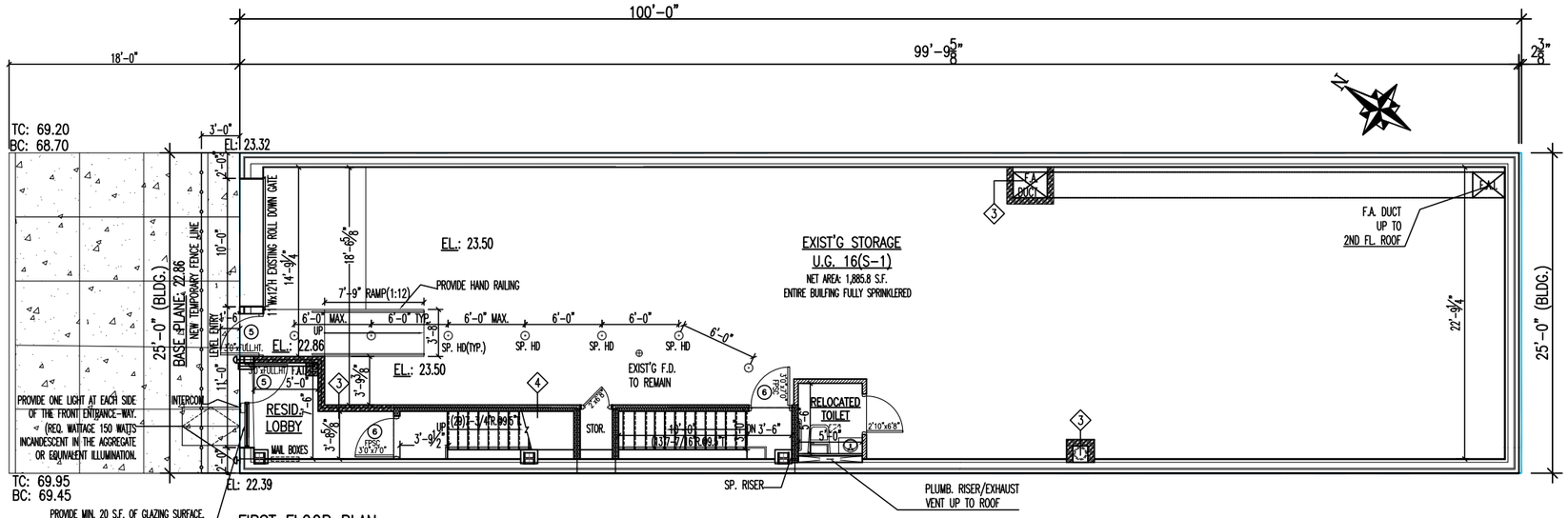
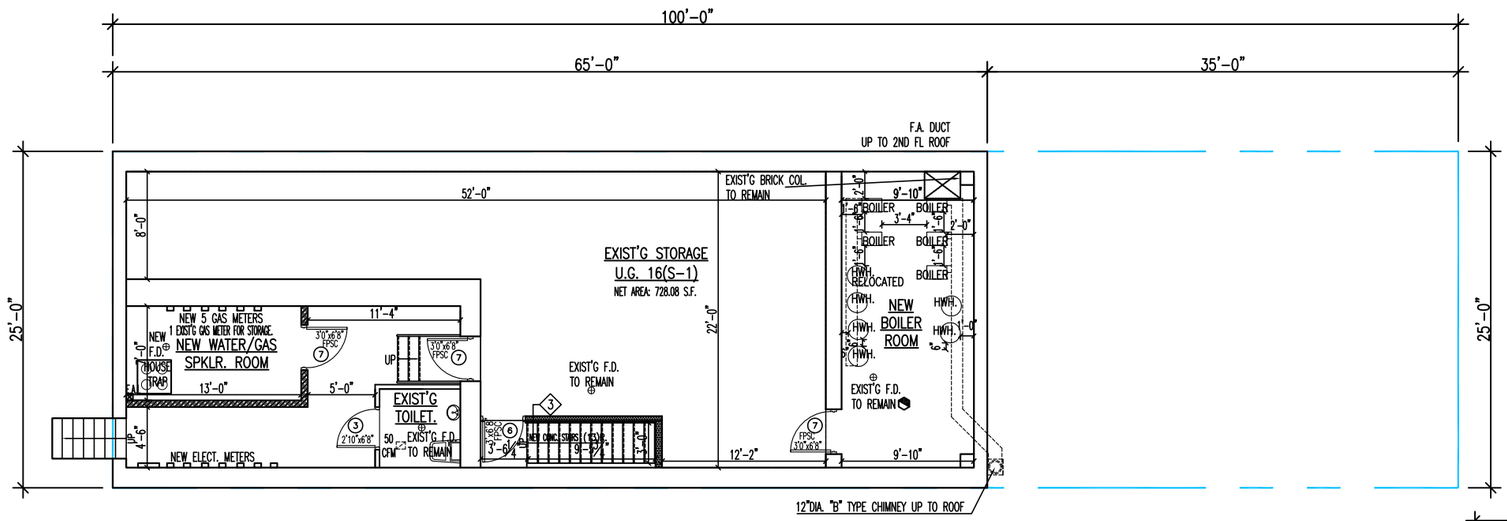


FIRST FLOOR PLAN

SCALE: 3/16=1'-0"



CELLAR FLOOR PLAN

SCALE: 3/16=1'-0"

BOILER & H.W.H. INFORMATION :

(6)H.W.HS.: A.O.SMITH
MODEL#:XCV-50
MEA #:385-04-E

(5)BOILER: BY WEIL MCLAIN
MOD.# CGA-3-SPDN
70KBTU GAS WATER HEATER
MEA #:155-00-E

BOILER ROOM REQUIRED FRESH AIR CALCULATION AS PER D.O.B. MEMO 12/21/1977

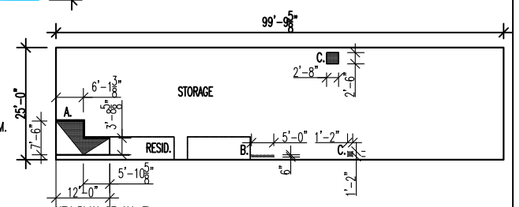
-REQUIRE FRESH AIR:
ONE SQUARE INCH PER 1,000 B.T.U. INPUT
-PROVIDED:
5 UNIT BOILER 1- 70,000 BTU
6 UNITS GAS FIRED H.W.H. 1=40,000 BTU
TOTAL PROVIDED:
(5x70,000+6x40,000=590,000 BTU
590,000 / 1000 = 590 SQ.IN.
PROVIDED FRESH INTAKE SIZE:
(20"x30")=600 SQ. in.>590 sq.in.---O.K.

BOILER, BOILER FLUE & VENT NOTES

1. FIXED VENT FOR BOILER COMBUSTION AIR TO BE PROVIDED AT A RATE OF 1 SQ-IN. PER 1000 BTU OF BOILER INPUT.
2. BOILER TO BE MEA/BSA APPROVED AND OF A CAPACITY TO MEET REQUIREMENTS OF N.Y.S. ENERGY CODE AND N.Y.C. BUILDING CODE. WHICHEVER IS MORE STRINGENT. (WEIL McLAIN MEA #159-75-E OR APPROVE EQUAL).
3. ALL GAS-BURNING EQUIPMENT THAT PRODUCES FLUE GAS TEMPERATURES IN EXCESS OF 480'F SHALL PROVIDE CHIMNEY AS PER TABLE 15-4,5 OR 6.
4. FACTORY-BUILT CHIMNEYS AND GAS VENTS SHOULD BE INSTALLED AS PER C26-1500.7.
5. DUCTS PASSING THROUGH TWO OR MORE FLOORS OR MORE FLOORS OR THROUGH ROOF AND HAVING CROSS-SECTIONAL AREA OF MORE THAN 2 SQ. FT. SHALL BE ENCLOSED IN SHAFT WITH NON-COMBUSTIBLE MATERIALS HAVING 2 HOUR FIRE RESISTANCE.
6. FLUE DAMPERS-DAMPERS IN FLUES SHALL BE CONSTRUCTED SO THAT THEY CANNOT COMPLETELY CUT OFF THE PASSAGE OF THE FLUE GASES AT ANY TIME. TIGHT CLOSING DAMPERS MAY INSTALLED WITH APPROVED AUTOMATIC DRAFT AND COMBUSTION CONTROLS.

BOILER ENCLOSURE

1. THE AREA OF THE BOILER ENCLOSURE NOT TO EXCEED 300 SQUARE FEET.
2. BOILER ENCLOSURE TO BE CONSTRUCTED OF "4" GYPSUM BLOCK BSA CAL 638-41-SM.
3. REGISTER DAMPER AND FUSIBLE LINK ON THE BOILER ENCLOSURE SIDE BSA CAL # 292-71-SM.
4. FIRE RETARD THE BOILER ENCLOSURE CEILING WITH 1/2" SHEET ROCK ONE HOUR RATED.
5. THE DOOR TO THE BOILER ENCLOSURE TO BE ONE (1) HOUR TEST FIREPROOF SELF CLOSING.
6. BOILER ENCLOSURE TO HAVE A CONCRETE FLOOR.
7. PROVIDE 18" MINIMUM CLEARANCE FOR THE BOILER.
8. EMERGENCY SHUTOFF CONTROLS FOR THE BOILER TO BE LOCATED OUTSIDE THE BOILER ENCLOSURE.
9. REGISTER DAMPER AREA TO BE ONE SQUARE INCH PER 1,000 BTU INPUT.
10. NO METERS IN BOILER ENCLOSURE.
11. NO STORAGE IN BOILER ENCLOSURE.



KEY PLAN OF ALL FL.

BLDG. GROSS AREA: 2,495.00 S.F.

A. CORRIDOR DEDUCTION AREA: 0.5x(7.5'x6.11'+3.72'x5.89')=33.87 S.F.
B. MECHANICAL DEDUCTION : 0.5'x5' = 2.50 S.F.
C. MECHANICAL DEDUCTION : 1.2'x1.2' = 1.44 S.F.
D. MECHANICAL DEDUCTION : 2.67'x2.5' = 6.68 S.F.
TOTAL DEDUCTION : 44.49 S.F.

DEDUCTION OF FIRST FLOOR

LEGEND

- EXIST'G WALL TO REMAIN
- NEW CONC. FOUNDATION WALL
- NEW EXTERIOR (2HR-RATED) WALL; SEE WALL SECTION DETAIL
- NEW EXTERIOR WALL-BRICK MASONRY WALL -CAVITY WALL: 4" BRICK W/1" OR 2" AIR SPACE, ANCHORED TO 6" REINFORCED CONCRETE BLOCK WALL W/22GA., 7/8" WIDE CALV. MTL TIES @ 24" O.C. MAX. VERT. & 32" O.C. MAX. HORIZ., MTL. STUDS @16" O.C. W/ R-11 BATT INSUL. & 5/8" GYP. BOARD (TYPE "X") ON THE INTERIOR.(2HR. RATED PER U.L. # U-302.)
- NEW CMU BLOCK WALL
  UL DESIGN NO.: U-905 -8" CMU BLOCK WALL
  UL DESIGN NO.: U-906 -6" CMU BLOCK WALL
- (4) NEW 2HOUR RATED WALL (STAIR ENCLOUSURE) EACH SIDE ON 2-1/2" MTL. STUD. STC 55 MASONRY EQUIV. (PROVIDE 24GA 36"x45" STL. SHEET ABOVE 18" IN BET. SHEETROCK)
- (3) NEW 2HOUR RATED WALL (PUBLIC HALL) - 2LAYERS 5/8" GYP. BOARD EACH SIDE ON 2-1/2" MTL. STUD. STC 55 (BSA #301-60 SM)
- (2) NEW 1HOUR RATED WALL-1 LAYER 5/8" GYP. BOARD ON 2-1/2" MTL. STUD INCLUDING SOUND ATTENUATION BLANKET- STC 50 (BSA #453-73 SM)
- (1) NON-RATED PARTITION -1 LAYER OF FULL HT. 5/8" SHEET ROCK 3-1/2" BOTH SIDES (WITHIN APARTMENT)
- HIDDEN LINE
- MECHANICAL VENTILATION
- COMBINATION SMOKE DETECTOR/CO DETECTOR "HARDWIRED CARBON MONOXIDE DETECTORS INSTALLED COMPLY W/ LL7/2004"
- FPSC FIRE PROOF SELF CLOSING DOOR
- EXIT
- SPRINKLER HEAD

* NOTE: SHAFT FOR GAS, ELEC, WATER COOLING WATER, PLUMBING, TEL, DATA WALL SEPARATION COORDINATE WITH SUB CONTRACTORS SHOP DRAWINGS, SEPARATION TO BE TWO HOUR CONSTRUCTION. PROVIDE FIRE DAMPER WITH ALL DUCT PENETRATING FIRE RATED WALL/CEILING.
MANUFACTURER: PHILIPS-AIRE
MODEL NO.: 119AV MEA #: NFPA-90A

III. BOILER ROOM AS PER MDL65

**1. EXCEPT AS HEREAFTER PROVIDED. IN EVERY MULTIPLE DWELLING ERECTED AFTER APRIL EIGHTEENTH , NINETEEN HUNDRED TWENTY- NINE, WHICH IS FOUR STORIES OR MORE IN HEIGHT THE BOILER SHALL BE ENCLOSED IN A ROOM OR SPACE CONSTRUCTED WITH FIREPROOF WALLS EXTENDING FROM THE FLOOR CONSTRUCTION TO THE CEILING CONSTRUCTION, AND ALL OPENINGS THEREFROM TO OTHER PORTIONS OF THE DWELLING SHALL BE EQUIPPED WITH FIREPROOF DOORS AND ASSEMBLIES WITH THE DOORS SELF-CLOSING. HOWEVER, IN ALL MULTIPLE DWELLINGS, ON THE AFTER JANUARY FIRST, NINETEEN HUNDRED SIXTY-SIX, A ROOM OR SPACE PROVIDED WITH A CENTRAL HEATING PLANT SHALL BE COMPLETELY ENCLOSED WITH INCOMBUSTIBLE MATERIALS HAVING A STANDARD FIRE-RESISTIVE RATING OF AT LEAST ONE HOUR.

2. IN SUCH A DWELLING ACCESS TO A CELLAR OR LOWEST STORY IN WHICH A BOILER IS LOCATED SHALL NOT BE THROUGH ANY BOILER ROOM, NOR SHALL ANY CELLAR OR BASEMENT STAIR OR ANY SHAFT BE INSTALLED WITHIN A BOILER ROOM.

**3. THE DEPARTMENT SHALL HAVE THE POWER TO MAKE SUPPLEMENTARY REGULATIONS RELATING TO BOILER OR FURNACE ROOMS
NOTE: SEC. 65 OF THE M.D.L., SINCE IT WAS AMENDED JANUARY 1, IS NOW APPLICABLE TO ARTICLES 6 (CONVERTED DWELLINGS) AND 7 (TENEMENTS, OLD LAW AND NEW LAW).
**(AS AMENDED, CH. 842, L. 1965, EFFECTIVE JANUARY 1, 1966)

PROJECT:

62 N9TH STREET
BROOKLYN, NY 11211

NYC DOB FILING

REVISIONS:

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DRAWING TITLE:

CELLAR & 1ST FL. PLANS, NOTES

D.O.B. JOB NUMBER:

BSCAN JOB STICKER:

SCALE: AS NOTED	P.E. / R.A. SEAL
DRAWN BY: S.P.	
CHECKED: J.W.C.	
DATE: 11/12/2011	
REVISED:	
D.O.B. JOB TYPE	ALT-I

A — 001 . 00

SHEET 04 OF 11

TABLE 601
FIRE–RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS(hours)

BUILDING ELEMENT	TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V[i]	
	A	B	A[d]	B	A[d]	B	HT	A[d]	B
Structural frame[a] Including columns, girders, trusses	3[b]	2[b]	1	0	1	0	HT	1	0
Bearing walls Exterior[f,g] interior	3 3[b]	2 2[b]	1 1	0 0	2 1	2 0	2 1/HT	1 1	0 0
Nonbearing walls and partitions Exterior	See table 602								
Nonbearing walls and partitions Interior[e]	0	0	0	0	0	0	See Section 602.4.6	0	0
Floor consturction[h] Including supporting beams and joists	2	2	1	0	1	0	HT	1	0
Roof construction Including supporting beams and joists	1 1/2[c]	1[c]	1[c]	0[c]	1[c]	0	HT	1[c]	0

For SI: 1 foot = 304.8 mm
a. The structural frame shall be considered to be the columns and the girders, beams, trusses and spandrels having direct connections to the columns and bracing members designed to carry gravity loads. the members of floor or roof panels which have no connection to the columns shall be considered secondary members and not a part of the structural frame.
b. Roof supports: fire–resistance ratings of structural frames and bearing walls are permitted to be reduced by 1 hour where supporting a roof only.
c. 1. Except in Factory– Industrial(F–1), Hazardous(H), Mercantile(M) and Moderate–Hazard Storage(S–1) occupancies, fire Protection of structural members shall not be required, including protection of roof framing and decking where every part of the roof construction is 20 feet or more above any floor immediately below, fire–retardant–treated wood members shall be allowed to be used for such unprotected members.
2. Except in Factory– industurial(F) occupancies subject to regulation under Sections 264(1) and 264(2) of the *New York State Labor Law*, and in Group I–1, R–1, and Group R–2 occupancies, in all occupancies heavy timber shall be allowed where a 1 hour or less fire–resistance rating is required
3. Except in Factory– industurial(F) occupancies subject to regulation under Sections 264(1) and 264(2) of the *New York State Labor Law*, and in Group I–1, R–1, and Group R–2 occupancies, in Type I and II construction, fire–retardant–treated wood shall be allowed in buildings including girders and trusses as part of the roof construction when the building is:
i. Type II construction of any height; or
ii. Type I construction two stories or less; or when over two stories, the vertical distance from the upper floor to the roof is 20 feet or more.
d. An approved automatic sprinkler system in accordance with Section 903.3.1.1 shall be allowed to be substituted for 1–hour fire–resistance–rated construction, provided such system is not otherwise required by other provision of the code or used for an allowable area increase in accordance with Section 506.3 or an allowable height increase in accordance with Section 504.2. The1–hour substitution for the fire resistance of exterior walls shall not be permitted.
e. Not less than the fire–resistance rating required by other sections of this code.
f. Not less than the fire resistance rating based on fire separation distance(see Table 602).
g. See footnote(d) of table 602.
h. See section711.3 for additional requirements.
i. Type V construction is not permitted inside fire districts except as provided for in section D105.1 of Appendix D.

TABLE 503 ALLOWABLE HEIGHT AND BUILDING AREAS [a]
Height limitations shown as stories and feet above grade plane
Area limitations as determined by the definition of " Area, building" per floor

		TYPE OF CONSTUCTION								
		TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V	
	Hgt(feet)	A	B	A	B	A	B	HT	A	B
GROUP	Hgt(S)	UL	160e	65	55	65	55	65	50	40
B	S	UL	UL	6	3	6	3	6	3	2
	A	UL	UL	37,500	105,500	28,500	5,600	36,000	8,400	5,500
M	S	UL	UL	6	3	6	3	6	3	2
	A	UL	UL	21,500	7,500	18,500	5,600	14,000	8,400	5,500
F–1	S	UL	6	5	3	5	2	5	3	2
	A	UL	UL	12,500	7,500	7,500	3,000	10,000	3,000	1,000
S–1	S	UL	6	6	3	4	3	4	3	2
	A	UL	48,000	12,000	7,500	7,500	7,500	7,500	5,000	1,000
S–2[b,c]	S	UL	UL	6	3	6	4	6	3	2
	A	UL	UL	15,000	10,000	10,000	8,500	10,000	8,400	5,500
U[c]	S	UL	5	4	2	3	2	4	2	1
	A	UL	35,000	19,000	8,500	14,000	8,500	18,000	9,000	5,500
R–2	S	UL	UL	6	NP	6	3	6	NP	NP
	A	UL	UL	UL	NP	24,000	5,600	20,500	NP	NP

Not permitted in Fire Distrct
Not permitted In Fire District without sprinklers

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m2
UL = Unlimited, NP = Not permitted.
a. See the following sections for general exception to table 503:
1. Section 504.2, Allowable height increase due to automatic sprinkler system installation
2. Section 506.2, Allowable area increase due to frontages
3. Section 506.3, Allowable area increase due to automatic sprinkler system installation
4. Section 507, Unlimited are building.
b. For open parking structures, see Section 406.3.
c. For private garages, see Section 406.1
d. See Section 415.5 for limitations
e. Except for Occupancy Groups F–1, H–1 through H–5, I–2, I–3, S–1 and U. Buildings equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 shall be unlimited in height.

TABLE 602
FIRE–RESISTANCE RATING REQUIREMENTS
FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE [a,d,e]

FIRE SEPARATION DISTANCE (feet)	TYPE OF CONSTURCTION	OCCUPANCY GROUP H	OCCUPANCY GROUP F–1, M, S–1	OCCUPANCY GROUP A, B, E, F–2, I, R[b] S–2, U
< 5[c]	All	3	2	1
≤5 to <10	IA Others	3 2	2 1	1 1
≥10 to <30	IA, IB IIB,VB Others	2 1 1	1 0 1	1 0 1
≥30	All	0	0	0

For SI: 1 foot = 304.8 mm
a. Load–bearing exterior walls shall also comply with the fire–resitance rating requirements of table 601
b. Group R–3 and Group U when used as accessory to Group R–3, shall not be required to have a fire–resistance rating where the fire separation distance is 3 feet or more.
c. See Section 705.1.1. for party walls
d. Inside the fire district, exterior load– bearing walls of type II buildings shall have a fire–resitance rating not less than prescribed below:

<5	2 hours
>(or equal)5 and <10	2 hours
>(or equal)10<30	1 hours
>(or equal)30	As per table 602

e. Inside the fire district, exterior nonload–bearing walls type II buildings shall have a fire resistance rating not less than prescribed below:

<5	As per table 602
>(or equal)5 and <10	As per table 602
>(or equal)10<30	1 hours
>(or equal)30	As per table 602

REQUIRED AND PROPOSED FIRE–RESISTANCE RATING
FOR BUILDING ELEMENTS(hours)AS PER TABLE 601

CONSTRUCTION CLASSIFICATION OF PROPOSED ADDITION BUILDING: TYPE I–A.
PROPOSED OCCUPANCY GROUP OF PROPOSED ADDITION BUILDING: R–2
PROPOSED OCCUPANCY GROUP OF EXISTING BUILDING: S–2 (LOW–HAZARD STORAGE)

TABLE 601 FIRE–RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS(hours)

REQUIRED	TYPE II	PROPOSED	REMARK
BUILDING ELEMENT	A[d]		
Structural frame[a] Including columns, girders, trusses	1	1	COMPLIES. O.K.!
Bearing walls Exterior[f,g] interior	1 1	2 1	COMPLIES. O.K.!
Nonbearing walls and partitions Exterior	See table 602	2	COMPLIES. O.K.!
Nonbearing walls and partitions Interior[e]	0	0	COMPLIES. O.K.!
Floor consturction[h] Including supporting beams and joists	1	2	COMPLIES. O.K.!
Roof construction Including supporting beams and joists	1[c]	1	COMPLIES. O.K.!
		1	COMPLIES. O.K.!

MULTIPLE DWELLING NOTES (APPLICABLE ART. 3&4)
PROPOSED R–2 : MUTIPLE DWELLING CLASSIFICATION – HAEA

1. DOORS LEADING TO BATHROOMS TO HAVE 1/2" CLEAR SPACE BETWEEN BOTTOM OF DOORS AND SADDLES.
2. KITCHENETTE WALLS AND CEILINGS TO BE FIRE RETARDED WITH 5/8" THICK SHTROCK FIRE CODE 60, UNLESS OTHERWISE NOTED.
3. NEW 144 SQUARE INCH KITCHENETTE VENT DUCT TO BE A MINIMUM 8" WIDTH OF 24 GAUGE METAL, FIRE RETARDED WITH 5/8" S.R.F.C. 60 FOR ENTIRE RUN. PROVIDE GRAVITY DAMPERS, REGISTERS, FUSIBLE LINKS AND FAN PROVIDING AT LEAST 6 CHANGES OF AIR PER HOUR, 180 CFM PER KITCHENETTE. FAN TO BE CONNECTED TO LIGHT SWITCH. DUCT TO EXTEND 4'–0" ABOVE ROOF. FAN ON ROOF TO RUN CONTINUOUSLY.
4. ALL FIRE DAMPERS ARE TO BE APPROVED BY THE BOARD OF FIRE UNDERWRITERS.
5. ALL DOORS LEADING TO PUBLIC HALLS SHALL BE SELF–CLOSING.
6. SKYLIGHT OVER PUBLIC HALL TO HAVE AT LEAST 20 SQ. FEET OF PLAIN GLASS 144 SQ. INCHES OF FIXED RIDGE VENTS, WIRE SCREEN OVER AND UNDER. (OR 9 SQ. FEET WITH 40 SQ. INCHES IN FIXED RIDGE VENT, AS PER PLAN).
7. BUILDING TO COMPLY WITH SEC. D26–3.1 OF THE MULTIPLE DWELLING CODE. REGISTRATION OF OWNERSHIP.
8. SIGN IDENTIFYING OWNER OR AGENT AND SUPERINTENDENT AS PER D26–3.2 MULTIPLE DWELLING CODE.
9. ALL FLOORS TO BE PROPERLY DESIGNATED BY SIGNS AS PER SEC. C26–1453 ADMIN. CODE D26–3.19 M.D.C.
10. PROPER HOUSE NUMBER TO BE DISPLAYED AS PER SEC. 885 CHARTER.
11. PREMISES TO COMPLY WITH SEC. D26–3.4 M.D.C. REFERENCE TO KITCHENETTES.
12. BUILDING TO COMPLY WITH SEC. D26–3.10 REFERENCE TO HEATING AND WATER SUPPLY.
13. BUILDING TO COMPLY WITH SEC. D26–3.0 MAXIMUM OCCUPANCY MINIMUM FROM AREA.
14. ENTIRE BUILDING TO COMPLY WITH LOCAL LAWS APPLICABLE TO ART. 6 WITH M.D.C. AND DEPARTMENT RULES AND REGULATIONS.
15. ALL NEW LUMBER TO BE GRADE MARKED BEFORE DELIVERY TO SITE.
16. ALL NEW STRUCTURAL LUMBER TO BE DOUGLAS FIR #1 COM. F=1450
17. ALL WINDOW SIZES GIVEN ARE B.S.B. ALL WINDOWS ARE DOUBLE HUNG.
18. ALL MASONRY WORK TO BE LAID IN 1:3 MORTAR.
19. ALL BATHROOMS TO HAVE TILE FLOOR AND 6" MIN. TILE BASE. WALLS AND CEILING PLASTERED, UNLESS OTHERWISE NOTED.
20. INDIVIDUAL C.I. VENT DUCTS FOR NEW BATHROOMS TO BE OF 24 GAUGE METAL, HAVING A MIN. GROSS SECTIONAL AREA OF ONE SQUARE FOOT. FIRE RETARDED WITH 5/8" SHEETROCK F.C. 60. ALSO PROVIDE REGISTER AND GRAVITY DAMPER WITH FUSIBLE LINK. FAN TO RUN CONTINUOUSLY FROM 6 A.M. TO 12 P.M. WITH FAN HOUSING EXTENDING 4'–0" ABOVE ROOF, M.D.L.
21. BUILDING TO COMPLY WITH SEC. 64 M.D.L. GAS METERS, GAS APPLIANCES, AND ARTIFICIAL LIGHTING.
22. SEPARATE APPLICATIONS WILL BE FILED IF SPRINKLER SYSTEM IS NECESSARY.
23. BUILDING TO COMPLY WITH SECTIONS D26–3–28 AND D267 OF M.D. CODE SPRINKLER TEST.
24. DRAINS FOR AREAWAY, YARD AND ROOF TO COMPLY WITH SEC. 77 M.D.L.
25. TENANTS' LAUNDRY TO COMPLY WITH SEC. D26–7B.C. M.D.L.
26. NEW STEEL STAIRS TO COMPLY WITH SEC. 8.6.4. B.C.
27. THERE ARE NO TRANSOMS IN THE BUILDING. REFER TO DRAWINGS FOR OTHER APPLICABLE NOTES.
28. PEEPHOLES OR DOOR INTERVIEWERS, APPROVED AS PER BOARD OF STANDARDS AND APPEALS, TO BE PROVIDED IN ENTRANCE DOOR TO EACH HOUSING UNIT AS PER SEC. 51 M.D.L.
29. TWO LIGHTS, MINIMUM 50 WATTS, ONE EACH SIDE OF ENTRANCE WAY TO BE PROVIDED AS PER SEC. 35 M.D.L. AND DEPARTMENT OF WATER SUPPLY, GAS AND ELECTRICITY AND BUILDING DEPARTMENT RULES AND REGULATIONS.
30. PROPER AND ADEQUATE LIGHTING WITH A MINIMUM OF 40 WATTS TO BE PROVIDED IN YARDS AND COURTS AS PER SEC. 26 SUBD. 7A, AND DEPARTMENT OF WATER SUPPLY, GAS AND ELECTRICITY AND BUILDING DEPARTMENT RULES AND REGULATIONS.
31. EVERY VESTIBULE, ENTRANCE, PUBLIC AND STAIR HALL TO BE PROVIDED WITH A MINIMUM OF 60 WATTS LIGHTS AS PER SEC. 37, SUBD. 1, M.D.L.

MULTIPLE DWELLING NOTES (ART. 4)

101. REQUIREMENTS FOR FIREPROOF CONSTRUCTION.
– EVERY SUCH DWELLING EXCEEDING SIX STORIES OR SEVENTY–FIVE FEET IN HEIGHT SHALL BE FIREPROOF.

102. STAIRS.
– EVERY MULTIPLE DWELLING WHICH EXCEEDS TWO STORIES IN HEIGHT SHALL HAVE AT LEAST TWO FIRE–STAIRS. SUCH FIRE STAIRS SHALL EXTEND FROM ENTRANCE STORY TO THE ROOF AND BE EQUIPPED WITH FIREPROOF SELF–CLOSING DOORS GLAZED WITH WIRE GLASS AND WITHOUT TRANSOMS. NO WINDOWS SHALL BE REQUIRED IN SUCH STAIRS, BUT ANY OPENINGS IN EXTERIOR WALLS, EXCEPT ANY WINDOW OPENINGS FACING A STREET OR YARD, SHALL BE EQUIPPED WITH FIREPROOF FRAME AND SASH GLAZED WITH WIRE GLASS.

103. EGRESS FROM APARTMENTS.
– THERE SHALL BE AT LEAST ONE MEANS OF EGRESS FROM EACH APARTMENT ON EACH AND EVERY STORY OF SUCH APARTMENT, AND A SECOND MEANS OF EGRESS IF THE FIRST MEANS IS NOT WITHIN FIFTY FEET OF EVERY LIVING ROOM IN SUCH APARTMENT ON SUCH STORY. WHEN TWO MEANS OF EGRESS ARE REQUIRED, THEY SHALL OPEN FROM DIFFERENT ROOMS.

104. BULKHEADS.
–EVERY STAIR, FIRE–STAIR AND FIRE–TOWER REQUIRED BY THIS CHAPTER TO EXTEND TO THE LEVEL OF THE ROOF OR TO ANY TERRACE FORMED BY A SETBACK SHALL EXTEND TO AND THROUGH A FIREPROOF BULKHEAD OR OTHER FIREPROOF ENCLOSURE IN SUCH ROOF OR TERRACE APPROVED BY THE DEPARTMENT. SUCH BULKHEAD OR ENCLOSURE SHALL GIVE UNOBSTRUCTED ACCESS AT ALL TIMES TO SUCH ROOF OR TERRACE BY MEANS OF A FIREPROOF DOOR AND DOOR ASSEMBLY WITH THE DOOR SELF–CLOSING. SUCH A DOOR SHALL NEVER BE SELF–LOCKING AND SHALL BE FASTENED ON THE INSIDE BY MOVABLE BOLTS, HOOKS OR A LOCK WHICH DOES NOT REQUIRE A KEY TO OPEN FROM THE INSIDE OF THE DWELLING. STAIRS TO A BULKHEAD OR ENCLOSURE SHALL HAVE A HANDRAIL. WHEN A DWELLING HAS A PITCHED OR SLOPING ROOF WITH A PITCH OR SLOPE OF MORE THAN FIFTEEN DEGREES, NO BULKHEAD OR STAIR LEADING THERETO SHALL BE REQUIRED.

105. SEPARATION AND VENTILATION OF STAIRS.
1. IN A DWELLING IN WHICH ONE OR MORE PASSENGER ELEVATORS ARE MAINTAINED AND OPERATED OPENING UPON A PUBLIC HALL AT EVERY STORY, ALL STAIRS, FIRE–STAIRS AND FIRE–TOWER SHALL BE COMPLETELY SEPARATED FROM ONE ANOTHER AND FROM EVERY ELEVATOR SHAFT BY FIREPROOF WALLS. THEY SHALL BE CONSTRUCTED OF OF FIREPROOF MATERIAL THROUGHOUT AND SHALL CONTAIN NO WOOD OR OTHER INFLAMMABLE MATERIAL OF ANY KIND, EXCEPT THAT HANDRAILS OF HARDWOOD MAY BE PROVIDED.
2. ACCESS TO STAIRS, FIRE STAIRS AND FIRE–TOWER BALCONIES FROM ANY PUBLIC VESTIBULE OR OTHER PUBLIC HALL SHALL BE THROUGH FIRE–PROOF DOORS AND ASSEMBLIES, WITH DOORS SELF–CLOSING AND AT LEAST THREE FEET WIDE, OR THROUGH PAIRS OF SUCH DOORS AT LEAST FOUR FEET WIDE, CONTAINING IN EITHER CASE A FIXED SASH GLAZED WITH A WIRE GLASS AT LEAST 360 SQ. INCH IN AREA.
3. EVERY STAIR HALL SHALL BE VENTILATED BY A WINDOW, OR BY MOVABLE LOUVERS IN THE SKYLIGHT HAVING AN OPENING OF AT LEAST 144 SQ. INCHES, OR BY AN OPENING OF AT LEAST 144 SQ. INCHES NEAR THE TOP OF THE STAIR SHAFT AND COMMUNICATING DIRECTLY WITH THE OUTER AIR. IF A WINDOW IS PROVIDED WHICH DOES NOT OPEN UPON A STREET OR YARD, IT SHALL BE FIREPROOF AND GLAZED WITH WIRE GLASS OF GOOD QUALITY AND HAVE NO PANE MORE THAN 360 SQ. INCHES IN AREA.

106. CELLAR AND BASEMENT STAIRS.
A CELLAR OR BASEMENT STAIR MAY BE LOCATED INSIDE THE DWELLING, BUT SHALL NOT BE LOCATED UNDERNEATH A STAIR LEADING TO THE UPPER STORIES UNLESS IT IS A BASEMENT STAIR LEADING UPWARD FROM A BASEMENT WHICH IS THE MAIN ENTRANCE STORY OF THE DWELLING, OR UNLESS IT IS A STAIR LEADING DOWNWARD FROM THE ENTRANCE STORY WHICH IS SEPARATED BY A FIREPROOF ARCH FROM THE STAIR LEADING UPWARD FROM THE ENTRANCE STORY. EXCEPT AS OTHERWISE PROVIDED IN SUBDIVISION FIVE OF SECTION 52, ALL INSIDE CELLAR OR BASEMENT STAIRS SHALL BE ENTIRELY ENCLOSED WITH FIREPROOF WALLS AND BE PROVIDED WITH FIREPROOF DOORS AND ASSEMBLIES, WITH THE DOOR SELF–CLOSING, AT ALL OPENINGS.

107. PUBLIC HALLS.
–EVERY PUBLIC HALL VESTIBULE SHALL COMPLY EITHER WITH THE PROVISIONS OF SECTION 149 FOR NON–FIREPROOF MULTIPLE DWELLINGS, SO FAR AS APPLICABLE, OR WITH THE PROVISIONS OF SUBDIVISION TWO OF THIS SECTION, EXCEPT THAT THE PROVISIONS AS TO VENTILATION SHALL NOT APPLY TO ANY PART OF AN ENTRANCE HALL WITHIN SIXTY FEET IN A STRAIGHT LINE FROM AN ENTRANCE DOOR.

108. PARTITIONS.
–ALL PARTITIONS SHALL REST DIRECTLY UPON THE FIREPROOF FLOOR CONSTRUCTION AND NEVER UPON ANY WOOD FLOORING, AND SHALL EXTEND TO THE FIREPROOF CONSTRUCTION OF THE FLOOR OR ROOF ABOVE.

PROJECT:
62 N9TH STREET
BROOKLYN, NY 11211

NYC DOB FILING

REVISIONS:

REVISION	ISSUE DATE	SHEET NO.

D.O.B./DEP REFERENCE JOB NO.

PROJECT ARCHITECT:

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DRAWING TITLE:
GENERAL BUILDING CODE NOTES & ENERGY NOTES

D.O.B. JOB NUMBER:

BSCAN JOB STICKER:

SCALE: AS NOTED	P.E. / R.A. SEAL
DRAWN BY: S.P.	
CHECKED: J.W.C.	
DATE: 11/12/2011	
REVISED:	
D.O.B. JOB TYPE	ALT-I

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SHEET 02 OF 11

HOUSING MAINTENANCE NOTES

1. PAINTING OF PUBLIC PARTS AND WITHIN DWELLING TO COMPLY WITH SEC. D26-12.01 H.M.C. & SED. 80 M.D.L.

2. PAINTING OF WINDOW FRAMES AND FIRE ESCAPES TO COMPLY WITH SEC. D26-12.03 H.M.C.

3. WALLS OF COURTS AND SHAFTS TO BE OF A LIGHT COLORED SURFACE AS PER SEC. D26-12.05 H.M.C.& SEC.29 M.D.L.

4. PREMISES TO BE MAINTAINED AND KEPT FREE OF RODENT AND INFESTATION AS PER SEC. D26-13.03 & D26-13.05H.M.C.

5. RECEPTACLES FOR COLLECTION OF WASTE MATTER TO BE PROVIDED AS PER SEC. D26-14.03, D26-14.05 H.M.C.& SEC.81 M.D.L.

6. DRAINAGE OF ROOFS, COURTS AND YARDS TO COMPLY WITH SEC. D26-16.03 H.M.C.& SEC.77 SUBD.3 M.D.L.

7. YEARLY INSPECTIONS OF CENTRAL HEATING PLANT BY QUALIFIED PERSON TO BE MADE AS PER SEC.D25-17.05 H.M.C. CENTRAL HEAT AND HOT WATER TO BE PROVIDED AS PER SEC.79 SUBD.1 M.D.L.

8. PROPER ELECTRIC LIGHTING EQUIPMENT WITHIN DWELLING TO BE PROVIDED AND MAINTAINED AS PER SEC. D26-19.01, D26-19.03 & D26-19.05 H.M.C.

9. PROPER ELECTRIC LIGHTS TO BE PROVIDED NEAR ENTRANCE WAYS, YARDS AND COURTS AS PER SEC. D26-19.07 H.M.C. ON SEPARATE CIRCUIT OR CONNECTED TO HOUSE LINE SERVICING PUBLIC HALLS, AND IN ACCOUDANCE WITH REQUIREMENTS AND APPROVAL OF THE DEPARTMENT OF WATER SUPPLY, GAS AND ELECTRICITY. AS PER SEC.35 & SEC.26 SUBD.7A M.D.L. & DEPARTMENT OF RULES AND REGULATIONS.

10. BOARD OF STANDARDS AND APPEALS APPROVED PEEPHOLES APPROXOMATELY 5 FEET ABOVE FINISHED FLOOR TO BE PROVIDED IN ENTRANCE DOORS OF DWELLING UNITS AS PER SEC. D26-20.01 H.M.C. & DEPARTMENT RULES AND REGULATIONS & SEC. 51A M.D.L.

11. PROPERLY MOUNTED AND SECURED POLISHED METAL VIEWING MIRRORS TO TO PROVIDED WITHIN SELF SERVICE ELEVATORS AS PER SEC. D26-20.03 H.M.C. & DEPARTMENT RULES AND REGULATIONS.

12. KEY LOCK IN THE ENTRANCE DOOR TO EACH DWELLING UNIT WITH AT LEAST ONE KEY TO BE PROVIDED BY OWNER AS PER SEC.D26-20.05 H.M.C. HEAVY DUTY LATCH SET DEAD BOLT THUMB TURN INSIDE.

13. APPROVED TYPE MAIL RECEPTACLES AND DIRECTORY OF PERSONS LIVING IN DWELLING TO BE PROVIDED AS PER SEC. D26 -21.01 H.M.C. & REGULATIONS OF POST OFFICE DEPARTMENT & SEC. 57 M.D.L.

14. PROPER FLOOR SIGNS TO B PROVIDED IN PUBLIC HALL, NEAR STAIRS AND ELEVATOR AND WITHIN STAIR ENCLOSURE AS PER SEC. D26-21.03 H.M.C. & DEPARTMENT RULES & REGULATIONS.

15. PROPER STREET NUMBERS TO BE PROVIDED IN FRONT OF THE DWELLING AS PER SEC. 82(3)-1.0 ADMINISTRATIVE CODE. SEC.D26 -21.05 H.M.C. & RULES & REGULATIONS OF BOROUGH PRESIDENT.

16. PROPER JANITORIAL SERVICES TO BE PROVIDED AS PER SEC. D26-22.03 7 D26-22.05 H.M.C.

17. EVERY KITCHEN AND KITCHENETTE TO BE PROVIDED WITH SINK HAVING MINIMUM 2 INCH WASTE AND TRAP AS PER SEC. D26-32.01 H.M.C.

18. ALL COMBUSTIBLE MATERIALS WITHIN ONE FOOT OF COOKING APPARATUS TO BE PROPERLY FIRE RETARDED AND MINIMUM 2 FEET CLEARANCE MAINTAINED ABOVE EXPOSED COOKING SURFACE. COMBUSTIBLE MATERIAL BETWEEN 2 FEET AND 3 FEET ABOVE EXPOSED SURFACE TO BE FIRE RETARD SEC. D26-32.05 ABOVE H.M.C. & DEPARTMENT RULES & REGULATIONS & SEC. SUBD.3 M.D.L. (SEE M.D. NOTES #2)

19. NO KITCHEN SHALL BE OCCUPIED FOR SLEEPING PURPOSES SEC. D26-33.05 H.M.C.

20. REGISTRATION STATEMENT TO BE FILED AS PER SEC. D26-41.01 & D26-41.03 H.M.C.

21. REGISTRATION IDENTIFICATION SIGN CONTAINING DWELLING SERIAL NUMBER TO BE POSTED AS PER SEC. D26-41.15 H.M.C.

22. IDENTIFICATION OF MANAGING AGENT OR OWNER TO BE INDICATED ON TENANTS' RENT RECEIPT AS PER SEC.D26-41.17 H.M.C.

23. ALL BATHROOMS, TOILETS AND BATHING COMPARTMENTS TO HAVE CERAMIC TILE FLOOR AND 6" MIN. CERAMIC TILE BASE. WALL AND CEILING PLASTER, AS PER SEC. 76 M.D.L. & SEC.D26-31.03 H.M.C.
24. ALL DOORS LEADING TO PUBLIC HALL SHALL BE SELF CLOSING, NO TRANSOMS OR PLAIN GLASS PANEL.

25. BUILDING TO COMPLY WITH SEC. 64 M.D.L. GAS METERS, GAS APPLIANCES AND ARTIFICAL LIGHTING.

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE RULES AND REGULATIONS. CODES AND ORDINANCES OF FEDERAL, STATE AND LOCAL GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE PROJECT, NO WORK SHOWN;SPECIFID OR IMPLIED SHALL BE CONSTRUCTED TO CONFLICT WITH ANY GOVERNMENT AGENCY OR BUILDING AUTHORITY MANDATE.

2. NO WORK SHALL BEGIN UNTIL A BUILDING PERMIT HAS BEEN ISSUED.

3. GENERAL CONTRACTOR SHALL PROVIDE GENERAL LIABILITY INSURANCE, WORKMEN COMPENSATION INSURANCE AND DISABILITY INSURANCE BEFORE PERFORMING ANY WORK IN THIS BUILDING.

4. THE CONTRACTOR SHALL INSPECT THE SITE AND CHECK AND VERIFY EXISTING AND PROPOSED CONDITIONS BEFORE STARTING ANY WORK. THE CONTRACTOR SHALL BRING THE DISCREPANCIES TO THE ARCHITECT'S OR ENGINEER'S ATTENTION BY WRITING PRIOR TO SUBMIT ANY QUOTES OR ESTIMATES PRIOR TO COMMENCING WORK.

5. ALL NEW WORK CONFORMS TO THE NEW YORK STATE ENERGY CODE.

6. ALL FEES, PERMITS APPLICATIONS, INSPECTIONS, CERTIFICATES AND SIGN-OFF SHALL BE SECURED BY THE CONTRACTOR AND PAID FOR BY THE OWNER UNLESS OTHERWISE NOTED.

7. ALL NOTES HEREIN MENTIONED ALONG WITH THOSE ON THE VARIOUS DRAWINGS SHALL APPLY TO ALL DRAWINGS AND FORM PART OF THE CONTRACT.

8. THE CONTRACTOR SHALL PROVIDE ALL THE LABOR AND MATERIAL NECESSARY FOR THE COMPLETION OF THE WORK AS SHOWN ON THE DRAWINGS.

9. THE CONTRACTOR SHALL CARRY OUT ALL THE WORK IN A FIRST CLASS WORKMANLIKE MANNER. HE SHALL MAINTAIN A SAFE, CLEAN JOB SITE AT ALL TIMES, FREE FROM DEBRIS ACCUMULATION., AND SHALL LEAVE THE JOB SITE BROOM CLEAN AT THE COMPLETION OF THE PROJECT.

10. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY AND ALL DAMAGE TO NEW OR EXISTING CONDITIONS CAUSED BY HIMSELF. HIS WORKMEN OR HIS SUBCONTRACTOR. HE SHALL REPAIR SUCH DAMAGE AT NO ADDITIONAL COST TO THE OWNER UNLESS OTHERWISE NOTED IN WRITING PRIOR TO STARTING WORK.

11. ALL MATERIALS AND CONSTRUCTION TO BE INCORPORATED IN THE WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE ASTM SPECIFICATIONS APPLICABLE AND TO CONFORM TO THE STANDARDS AND RECOMMENDATIONS OF THE VARIOUS TRADE INSTITUTES (ACI, AISC, ETC.) WHERE APPLICABLE. ALL MATERIALS INCORPORATED INTO THE WORK SHALL BE NEW. FREE FROM DEFECTS UNLESS OTHERWISE NOTED.

12. CONTRACTORS SHALL BE RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING ALL WORK DURING CONSTRUCTION AGAINST DAMAGE, BREAKAGE, COLLAPSE, DISTORTIONS, STANDARDS AND GOOD PRACTICE. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS &7 THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY & HOLD THE ARCHITECT OR ENGINEER HARMLESS FROM ANY ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.

13. THE ARCHITECT OR ENGINEER OF DESIGN HAS NOT BEEN RETAINED FOR ANY FILED SUPERVISION OR INSPECTION. HIS RESPONSIBILITY IS LIMITED TO THE ACCURACY OF THE PLANS.

14. MATERIALS NOT SPECIFIED SUCH AS MAKE, STYLE, COLOR ETC. SHALL BE APPROVED BY THE OWNER PRIOR TO PURCHASING AND INSTALLATION BY CONTRACTORS.

15. ALL PLUMBING WORK SHALL BE PERFORMED BY LICENSED PLUMBER.

16. ALL ELECTRICAL WORK SHALL BE PERFORMED BY LICENSED ELECTRICIAN.

NEW YORK CITY BUILDING DEPARTMENT PLUMBING NOTES

THE PLUMBING SYSTEMS (SANITARY, WASTE, VENT, WATER DISTRIBUTION AND GAS) AND ALL ASSOCIATED EQUIPMENT WILL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE FULL REQUIREMENTS OF THE NEW YORK CITY 2008 PLUMBING CODE.

1) THE SANITARY SYSTEM SHALL BE PROVIDED IN FULL ACCORDANCE WITH THE GENERAL PROVISION OF SECTION PC301.
2) THE MATERIAL USED IN THE PLUMBING SYSTEM WILL BE PROVIDED IN FULL ACCORDANCE WITH SECTIONS PC302 AND PC303.
3) EQUIPMENT HOOK-UP AND THE JOINING WILL BE FULL COMPLIANCE WITH SECTIONS PC605 AND PC705.
4) THE INSTALLATION OF FIXTURES WILL BE IN FULL ACCORDANCE WITH PC CHAPTER 4.
5) TRAPS FOR FIXTURES AND DRAIN LINES WILL BE PROVIDED AND CLEAN OUTS INSTALLED IN FULL COMPLIANCE WITH SECTIONS PC412, PC708 AND PC CHAPTER 10.
6) VERTICAL AND HORIZONTAL PIPING WILL BE HUNG AND SUPPORTED AS DIRECTED IN SPECIFICATIONS AND WITH THE FULL COMPLIANCE WITH SECTION PC308.
7) THE WATER SUPPLY SYSTEMS OF THE SUBJECT BUILDING SHALL BE INSTALLED AND MAINTAINED IN FULL COMPLIANCE WITH PC CHAPTER 6.
8) THE SANITARY DRAINAGE SYSTEM WILL BE SIZED AND INSTALLED IN FULL COMPLIANCE WITH PC CHAPTER 7.
9) THE VENT PIPING FOR THE SANITARY DRAINAGE SYSTEM OF THE SUBJECT BUILDING WILL BE INSTALLED IN FULL COMPLIANCE WITH SECTION PC702 AND PC CHAPTER 9.
10) THE STORM DRAINAGE SYSTEM AND PIPING WILL BE INSTALLED IN FULL COMPLIANCE WITH PC CHAPTER 11.
11) GAS PIPING AND EQUIPMENT WILL BE INSTALLED IN FULL COMPLIANCE WITH THE NEW YORK CITY FUEL GAS CODE.
12) ALL TRENCHING SHALL BE DONE IN ACCORDANCE WITH REQUIREMENT OF SECTION PC306.
13) RAT PROOFING SHALL BE IN ACCORDANCE WITH SECTION PC304.
14) TEMPORARY TOILET FACILITIES SHALL BE PROVIDED FOR WORKMAN AS PER SECTION PC311.

TENANT PROTECTION PLAN (28-104.8.4, 2008 CONSTRUCTION CODE)

CONSTRUCTION DOCUMENTS FOR ALTERATIONS OF BUILDINGS IN WHICH ANY DWELLING UNIT WILL BE OCCUPIED DURING CONSTRUCTION SHALL INCLUDE A TENANT PROTECTION PLAN. SUCH PLAN SHALL CONTAIN A STATEMENT THAT THE BUILDING CONTAINS DWELLING UNITES THAT TWILL BE OCCUPIED DURING CONSTRUCTION AND SHALL INDICATE IN SUFFICIENT DETAIL THE SPECIFIC UNITS THAT ARE OR MAY BE OCCUPIED DURING CONSTRUCTION, THE MEANS AND METHODS TO BE EMPLOYED TO SAFEGUARD THE SAFETY AND HEALTH OF THE OCCUPANTS, INCLUDING, WHERE APPLICABLE, DETAILS SUCH AS TEMPORARY FIRE-RATED ASSEMBLIES, OPENING PROTECTIVES, OR DUST CONTAINMENT PROCEDURES. THE ELEMENTS OF THE TENANT PROTECTION PLAN MAY VARY DEPENDING ON THE NATURE AND SCOPE OF THE WORK BUT AT TA MINIMUM SHALL MAKE DETAILED AND SPECIFIC PROVISIONS FOR:

1. EGRESS. AT ALL TIMES IN THE COURSE OF CONSTRUCTION PROVISION SHALL BE MADE FOR ADEQUATE EGRESS AS REQUIRED BY THIS CODE AND THE TENANT PROTECTION PLAN SHALL IDENTIFY THE EGRESS THAT WILL BE PROVIDED. REQUIRED EGRESS SHALL NOT BE OBSTRUCTED AT ANY TIME EXCEPT WHERE APPROVED BY THE COMMISSIONER.

2. FIRE SAFETY. ALL NECESSARY LAWS AND CONTROLS, INCLUDING THOSE WITH RESPECT TO OCCUPIED DWELLINGS, AS WELL AS ADDITIONAL SAFETY MEASURES NECESSITATED BY THE CONSTRUCTION SHALL BE STRICTLY OBSERVED.

3. HEALTH REQUIREMENTS. SPECIFICATION OF METHODS TO BE USED FOR CONTROL OF DUST, DISPOSAL OF CONSTRUCTION DEBRIS, PEST CONTROL AND MAINTENANCE OF SANITARY FACILITIES, AND LIMITATION OF NOISE TO ACCEPTABLE LEVELS SHALL BE INCLUDED.

3.1. THERE SHALL BE INCLUDED A STATEMENT OF COMPLIANCE WITH APPLICABLE PROVISIONS OF LAW RELATING TO LEAD AND ASBESTOS.

4. COMPLIANCE WITH HOUSING STANDARD. THE REQUIREMENTS OF THE NEW YORK CITY HOUSING MAINTENANCE CODE, AND WHERE APPLICABLE. THE NEW YORK STATE MULTIPLE DWELLING LAW SHALL BE STRICTLY OBSERVED.

5. STRUCTURAL SAFETY. NO STRUCTURAL WORK SHALL BE DONE THAT MAY ENDANGER THE OCCUPANTS.

6. NOISE RESTRICTIONS. WHERE HOUSE OF THE DAY OR THE DAYS OF THE WEEK IN WHICH CONSTRUCTIONS WORK MAY BE UNDERTAKEN ARE LIMITED PURSUANT TO THE NEW YORK CITY NOISE CONTROL CODE, SUCH LIMITATIONS SHALL BE STATED.

CARBON MONOXIDE(CO) DETECTOR NOTES

CARBON MONOXIDE ALARMS AND DETECTORS SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH SECTIONS 908.7.1 THROUGH 908.7.3.

908.7.1 GROUP I-1 ANDROCCUPANCIES. LISTED CARBON MONOXIDE ALARMS OR DETECTORS SHALL BE INSTALLED AS FOLLOWS:
1. GROUP R-1. CARBON MONOXIDE DETECTORS AND AUDIBLE NOTIFICATION APPLIANCES SHALL BE INSTALLED IN AFFECTED DWELLING UNITS AS PER SECTION 908.7.1.1 AND SHALL BE ANNUNCIATED BY DWELLING UNIT AT A CONSTANTLY ATTENDED LOCATION FROM WHICH THE FIRE ALARM SYSTEM IS CAPABLE OF BEING MANUALLY ACTIVATED.
2. GROUPS I-1, R-2 AND R-3. CARBON MONOXIDE ALARMS SHALL BE INSTALLED IN AFFECTED DWELLING UNITS AS PER SECTION 908.7.1.1.

908.7.1.1 AFFECTED DWELLING UNITS. CARBON MONOXIDE ALARMS OR DETECTORS SHALL BE REQUIRED WITHIN THE FOLLOWING DWELLING UNITS:
1. UNITS ON THE SAME STORY WHERE CARBON MONOXIDEPRODUCING EQUIPMENT OR ENCLOSED PARKING IS LOCATED.
2. UNITS ON THE STORIES ABOVE AND BELOW THE FLOOR WHERE CARBON MONOXIDE-PRODUCING EQUIPMENT OR ENCLOSED PARKING IS LOCATED.
3. UNITS IN A BUILDING CONTAINING A CARBON MONOXIDEPRODUCING FURNACE, BOILER, OR WATER HEATER AS PART OF A CENTRAL SYSTEM.
4. UNITS IN A BUILDING SERVED BY A CARBON MONOXIDEPRODUCING FURNACE, BOILER, OR WATER HEATER AS PART OF A CENTRAL SYSTEM THAT IS LOCATED IN AN ADJOINING OR ATTACHED BUILDING.

908.7.1.1.1 REQUIRED LOCATIONS WITHIN DWELLING UNITS. CARBON MONOXIDE ALARMS OR DETECTORS SHALL BE LOCATED WITHIN DWELLING UNITS AS FOLLOWS:
1. OUTSIDE OF ANY ROOM USED FOR SLEEPING PURPOSES, WITHIN 15 FEET (4572 MM) OF THE ENTRANCE TO SUCH ROOM.
2. IN ANY ROOM USED FOR SLEEPING PURPOSES.
3. ON ANY STORY WITHIN A DWELLING UNIT, INCLUDING BELOW-GRADE STORIES AND PENTHOUSES OF ANY AREA, BUT NOT INCLUDING CRAWL SPACES AND UNINHABITABLE ATTICS.

908.7.1.1.2 INSTALLATION REQUIREMENTS. CARBON MONOXIDE ALARMS OR DETECTORS SHALL COMPLY WITH THE POWER SOURCE, INTERCONNECTION, AND ACCEPTANCE TESTING REQUIREMENTS AS REQUIRED FOR SMOKE ALARMS IN ACCORDANCE WITH SECTIONS 907.2.10.2 THROUGH 907.2.10.4.

GENERAL NOTES FOR SMOKE DETECTORS

907.1 GENERAL. THIS SECTION COVERS THE APPLICATION, INSTALLATION, PERFORMANCE AND MAINTENANCE OF FIRE ALARM SYSTEMS AND THEIR COMPONENTS. SYSTEMS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 72 AS MODIFIED IN APPENDIX Q AND THE NEW YORK CITY ELECTRICAL CODE.
907.2.6.2.3 SMOKE DETECTORS. AN APPROVED AUTOMATIC SMOKE DETECTION SYSTEM SHALL BE INSTALLED THROUGHOUT RESIDENT HOUSING AREAS, INCLUDING SLEEPING AREAS AND CONTIGUOUS DAY ROOMS, GROUP ACTIVITY SPACES AND OTHER COMMON SPACES NORMALLY ACCESSIBLE TO RESIDENTS. EXCEPTIONS:
1. OTHER APPROVED SMOKE DETECTION ARRANGEMENTS PROVIDING EQUIVALENT PROTECTION INCLUDING, BUT NOT LIMITED TO, PLACING DETECTORS IN EXHAUST DUCTS FROM CELLS OR BEHIND PROTECTIVE GUARDS LISTED FOR THE PURPOSE ARE ALLOWED WHEN NECESSARY TO PREVENT DAMAGE OR TAMPERING.
2. SLEEPING UNITS IN USE CONDITIONS 2 AND 3.
3. SMOKE DETECTORS ARE NOT REQUIRED IN SLEEPING UNITS WITH FOUR OR FEWER OCCUPANTS IN SMOKE COMPARTMENTS THAT ARE EQUIPPED THROUGHOUT WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM.

907.2.8.3 SMOKE DETECTORS WITHIN DWELLING UNITS. SMOKE DETECTORS AND AUDIBLE NOTIFICATION APPLIANCES SHALL BE INSTALLED IN DWELLING UNITS AND SHALL BE ANNUNCIATED BY DWELLING UNIT AT A CONSTANTLY ATTENDED LOCATION FROM WHICH THE FIRE ALARM SYSTEM IS CAPABLE OF BEING MANUALLY ACTIVATED. SMOKE DETECTORS ARE REQUIRED IN THE FOLLOWING AREAS:
1. IN SLEEPING AREAS.
2. IN EVERY ROOM IN THE PATH OF THE MEANS OF EGRESS FROM THE SLEEPING AREA TO THE DOOR LEADING FROM THE DWELLING UNIT.
3. IN EACH STORY WITHIN THE UNIT, INCLUDING BELOW-GRADE STORIES. FOR DWELLING UNITS WITH SPLIT LEVELS AND WITHOUT AN INTERVENING DOOR BETWEEN THE ADJACENT LEVELS, A SMOKE ALARM INSTALLED ON THE UPPER LEVEL SHALL SUFFICE FOR THE ADJACENT LOWER LEVEL.
907.2.10.1.1 SMOKE ALARMS IN GROUPS R-2, R-3, AND I-1. SINGLE- OR MULTIPLE-STATION SMOKE ALARMS SHALL BE INSTALLED AND MAINTAINED IN GROUPS R-2, R-3, AND I-1, REGARDLESS OF OCCUPANT LOAD AT ALL OF THE FOLLOWING LOCATIONS WITHIN A DWELLING UNIT:
1. ON THE CEILING OR WALL OUTSIDE OF EACH ROOM USED FOR SLEEPING PURPOSES WITHIN 15 FEET (4572 MM) FROM THE DOOR TO SUCH ROOM.
2. IN EACH ROOM USED FOR SLEEPING PURPOSES
3. IN EACH STORY WITHIN A DWELLING UNIT, INCLUDING BELOW-GRADE STORIES AND PENTHOUSES OF ANY AREA, BUT NOT INCLUDING CRAWL SPACES AND UNINHABITABLE ATTICS. IN DWELLINGS OR DWELLING UNITS WITH SPLIT LEVELS AND WITHOUT AN INTERVENING DOOR BETWEEN THE ADJACENT LEVELS, A SMOKE ALARM INSTALLED ON THE UPPER LEVEL SHALL SUFFICE FOR THE ADJACENT LOWER LEVEL PROVIDED THAT THE LOWER LEVEL IS LESS THAN ONE FULL STORY BELOW THE UPPER LEVEL.

A MINIMUM OF ONE SMOKE DETECTOR LISTED FOR THE INTENDED PURPOSE SHALL BE INSTALLED IN THE FOLLOWING AREAS:
1. MECHANICAL EQUIPMENT, ELECTRICAL, TRANSFORMER, TELEPHONE EQUIPMENT, ELEVATOR MACHINE OR SIMILAR ROOMS.
2. ELEVATOR LOBBIES.
3. THE MAIN SUPPLY AND RETURN AND EXHAUST AIR PLENUM OF EACH AIR-CONDITIONING SYSTEM SERVING MORE THAN ONE STORY AND LOCATED IN A SERVICEABLE AREA DOWNSTREAM FROM FILTERS ON SUPPLY DUCTS AND IN RETURN/EXHAUST DUCTS DOWNSTREAM OF THE LAST DUCT INLET.
4. EACH CONNECTION TO A VERTICAL DUCT OR RISER SERVING TWO OR MORE FLOORS FROM RETURN AIR DUCTS OR PLENUMS OF HEATING, VENTILATING AND AIR-CONDITIONING SYSTEMS, EXCEPT THAT IN GROUP R OCCUPANCIES, A LISTED SMOKE DETECTOR IS ALLOWED TO BE USED IN EACH RETURN AIR RISER CARRYING NOT MORE THAN 5,000 CFM (2.4 M3/S) AND SERVING NOT MORE THAN 10 AIR INLETOPENINGS.

PROJECT:

62 N9TH STREET
BROOKLYN, NY 11211

NYC DOB FILING

REVISIONS:

REVISION	ISSUE DATE	SHEET NO.

D.O.B./DEP REFERENCE JOB NO.

PROJECT ARCHITECT:

THOMAS C. TUNG ENGINEER, P.E
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DRAWING TITLE:

GENERAL BUILDING CODE NOTES

D.O.B. JOB NUMBER:

BSCAN JOB STICKER:

SCALE: AS NOTED	P.E. / R.A. SEAL
DRAWN BY: S.P.	
CHECKED: J.W.C.	
DATE: 11/12/2011	
REVISED:	
D.O.B. JOB TYPE	ALT-I

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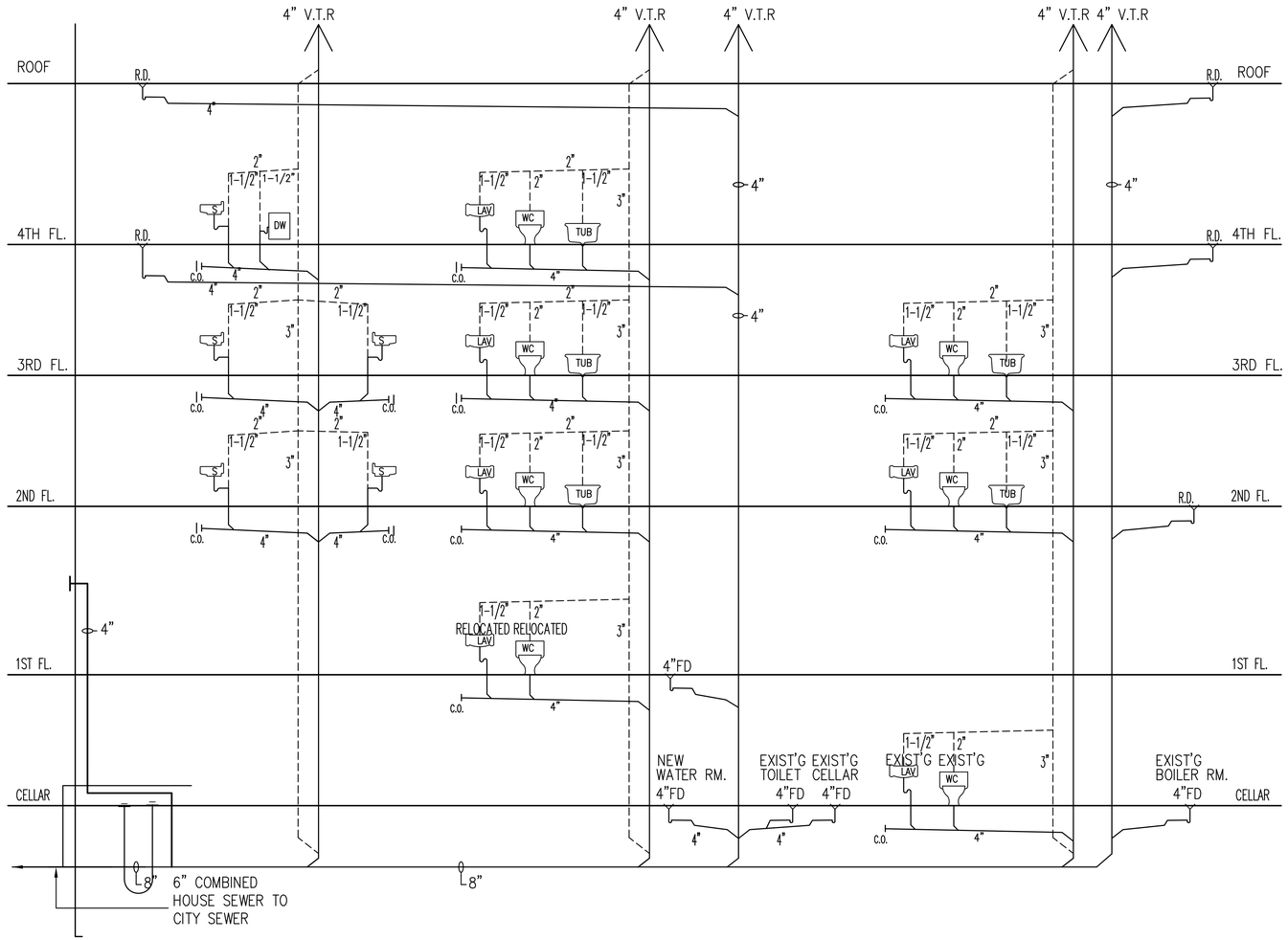
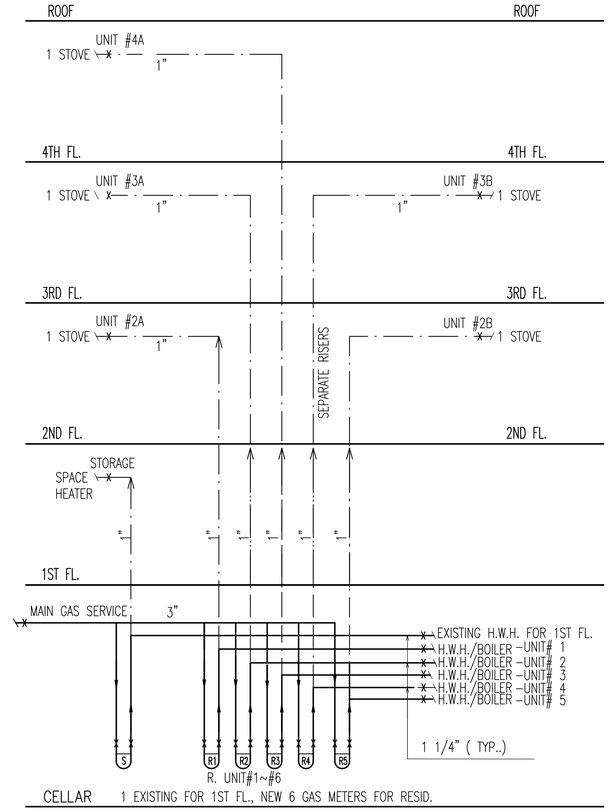


PLUMBING RISER DIAGRAM

N.T.S.



GAS METER & RISER DIAGRAM

N.T.S.

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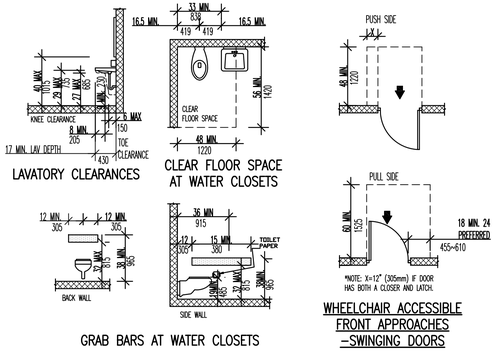

LOCAL LAW 58/87 NOTES

1. THE BUILDING SHALL COMPLY WITH PROVISIONS OF LOCAL LAW 58 OF 1987 AND APPLICABLE REQUIREMENTS OF ANSI A117.1–1986 REFERRED TO IN THE AMENDMENTS AS REFERENCE STANDARD RS 4–6.

2. AS PER SECTIONS 27–232, 27–292.5 AND 27–308 L.L.58, AN ACCESSIBLE ROUTE THAT CAN BE NEGOTIATED BY ALL CATEGORIES OF PEOPLE HAVING PHYSICAL DISABILITIES SHALL BE PROVIDED FROM THE PUBLIC SIDEWALK THROUGH THE PRIMARY ENTRANCE OF THE BUILDING TO ALL ACCESSIBLE SPACES IN THE BUILDING. RAMPS SHALL BE IN COMPLIANCE WITH REFERENCE STANDARD SECTION 4.8 RS 4–6. MANEUVERING CLEARANCE AT DOORS SHALL BE IN COMPLIANCE WITH REFERENCE STANDARD SECTIONS 4.13.6 AND RS 4–6.

3.AS PER SECTION 27–292.10 L.L.58, SPACES AND ROOMS INTENDED FOR GENERAL AND PUBLIC OCCUPANT USE SHALL BE ACCESSIBLE AND USABLE.

4. FACILITIES FOR PEOPLE HAVING PHYSICAL DISABILITIES SHALL BE PROVIDED IN TOILET ROOMS IN COMPLIANCE WITH REFERENCE STANDARD SECTION 4.16 RS 4–6 FOR WATER CLOSETS NOT IN STALLS AND SECTION 4.17 RS 4–6 FOR WATER CLOSETS IN STALLS. LAVATORIES, SINKS AND MIRRORS SHALL BE IN COMPLIANCE WITH REFERENCE STANDARD SECTION 4.19 RS 4–6. AS PER SECTION 27–292.10 (b)(2)L.L.58, WHERE SUCH TOILET ROOM IS DESIGNED FOR USE BY NOT MORE THAN ONE PERSON AT A TIME AND HAS PROVISION FOR LOCKING FROM THE INSIDE, SUCH TOILET ROOM SHALL BE PERMITTED TO BE USED BY EITHER SEX.

5. AS PER SECTIONS 27–29.10 L.L.58, AND REFERENCE STANDARD 4.5 RS 4–6, GROUND AND FLOOR SURFACES ALONG ACCESSIBLE ROUTES AND IN ACCESSIBLE ROOMS AND SPACES, INCLUDING FLOORS, WALKS, RAMPS, STAIRS AND CURB RAMPS, SHALL BE STABLE, FIRM AND SLIP RESISTANT, AND SHALL BE MAINTAINED IN A DRY CONDITION.

6. AS PER SECTION 27–292.8(a)(2) L.L.58, ADAPTABLE UNITS SHALL BE PROVIDED WITH CLEAR DOOR OPENINGS(32") AND CLEAR FLOOR SPACES AS SET FORTH IN REFERENCE STANDARD RS 4–6.

PROJECT:

62 N9TH STREET
BROOKLYN, NY 11211

NYC DOB FILING

REVISIONS:

REVISION	ISSUE DATE	SHEET NO.

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PROJECT ARCHITECT:

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DRAWING TITLE:

PLUMB./GAS RISER DIAGRAM, NOTES

D.O.B. JOB NUMBER:

BSCAN JOB STICKER:

SCALE: AS NOTED	P.E. / R.A. SEAL
DRAWN BY: S.P.	
CHECKED: J.W.C.	
DATE: 11/12/2011	
REVISED:	
D.O.B. JOB TYPE	ALT-I

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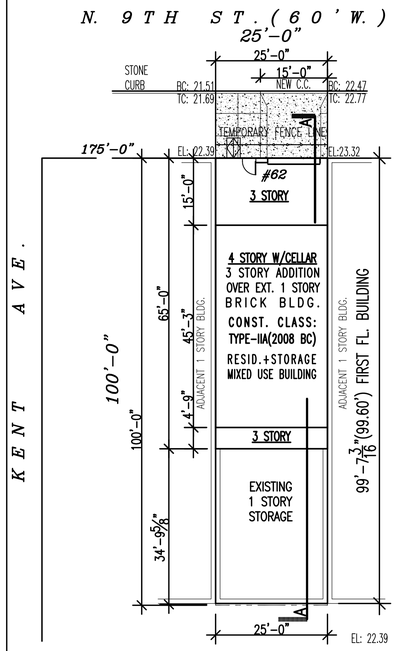
PROJECT LOCATION: 62 N 9TH ST.,
BROOKLYN, NY 11211

BLOCK: 2309
LOT: 13
MAP: 12c
ZONE : M1-2/R6A
SPECIAL ZONE: MX-8
INCLUSIONARY HOUSING DESIGNATED AREA



PLOT PLAN
1/16"=1'-0"

BASE PLANE CALCULATION : EL: 0.5(22.39+23.32)=22.86
MEAN CURB CALCULATION : EL: 0.5(21.69+22.77)=22.23

SCOPE OF WORK
1. NEW (3) STORY ADDITION TO EXISTING 1 STORY STORAGE BUILDING.
2. REMAIN EXISTING STORAGE USE ON 1ST FLOOR AND CREATE 5 DWELLING UNITS ABOVE.
3. REVIEW BY 2008 CODE.

SPECIAL INSPECTION ITEMS/PROGRESS INSPECTION ITEMS (TR-1)

STRUCTURAL STEEL-ERECTION & BOLTING	BC1704.3.2, BC 1704.3.3
CONCRETE-CAST-IN-PLACE	BC 1704.4
CONCRETE TEST CYLINDERS	BC 1905.6
CONCRETE DESIGN MIX	BC 1905.3
MASONRY	BC 1704.5
SOILS-SITE PREPARATION	BC 1704.7.1
SOILS-INVESTIGATIONS (BORINGS/TEST PITS)	BC 1704.7.4
MECHANICAL SYSTEMS	BC1704.15
SITE STORM DRAINAGE DISPOSAL AND DETENTION SYSTEM INSTALLATION	BC 1704.20
FIRE STOP, DRAFTSTOP, AND FIREBLOCK SYSTEMS	BC 1704.25
FOOTING AND FOUNDATION	BC 109.2
ENERGY CODE COMPLIANCE INSPECTIONS	BC 109.3.5
FIRE-RESISTIVE RATED CONSTRUCTION	BC 109.3.1
SMOKE CONTROL SYSTEMS	BC 1704.14

EXCAVATION/UNDERPINNING JOB TO BE FILED UNDER SEPARATE APPLICATION.

ENERGY CODE PROGRESS INSPECTIONS(TR-8)

INTERIOR LIGHTING POWER	IIC3
INSULATION PLACEMENT AND R-VALUES	IA2, IIA2
FENESTRATION RAILINGS FOR AIR LEAKAGE	IA4, IIA4
FENESTRATION AREAS	
AIR SEALING AND INSULATION-VISUAL	
AIR SEALING AND INSULATION-TESTING	
HVAC AND SERVICE WATER HEATING CONTROLS	
ELECTRICAL METERING	
ELECTRIC MOTORS	
TANDEM WIRING	
EXIST SIGNS	
MAINTENANCE INFORMATION	
PERMANENT CERTIFICATE	
LIGHTING CONTROLS	
FENESTRATION THERMAL VALUES & RATINGS	
FENESTRATION RATINGS FOR AIR LEAKAGE	

TREE NOTES:
1. REQUIRED 1 TREE PLANTING TO COMPLY WITH QUALITY HOUSING AS PER ZR 28-12.
(1)TREE TO MAKE PAYMENT OR BE PLANTED IN AN ALTERNATIVE LOCATION, TO BE SELECTED BY THE DEPARTMENT OF PARKS AND RECREATION. TREE SHALL BE OF AT LEAST 3 INCH CALIPER.
2. FINAL LOCATION OF TREES TO BE DETERMINED BY THE DEPT. OF PARKS AND RECREATION.

FOLLOWING APPLICATIONS FILED SEPARATELY-CONJUNCTION WITH NB

SPRINKLER
STRUCTURE
EXCAVATION/SHORING/FOUNDATION
BPP

1. BUILDING INFORMATION

PROJECT LOCATION: 62 N9ST., BROOKLYN, NY 11211
ZONING: : M1-2/R6A
SPECIAL DISTRICT: SPECIAL MIXED USE DISTRICT 8- GREENPOINT-WILLIAMSBURG, BROOKLYN
LOT AREA: 25'x100'=2,500.00 S.F.

PROPOSED USE GROUP
ZONING USE GROUP : 2, 16D
BLDG. OCCUPANCY GROUP : R-2, S-2

ALLOWABLE AREA AND HEIGHT LIMITATION FOR BUILDINGS AND SPACES AS PER 2008 CODE
PROPOSED BUILDING IS EQUIPPED THROUGHOUT WITH AUTOMATIC SPRINKLER SYSTEM. (TABLE 503)
CONSTRUCTION CLASSIFICATION: EXISTING BUILDING/PROPOSED: TYPE II-A(2008 CODE)
ALLOWABLE HEIGHT AND BUILDING AREA FOR TYPE II-A IN OCCUPANCY M(2008 CODE)
AREA: 21,500 S.F., HEIGHT: 6 ----- PROPOSED : 1 STORY W/2,326 S.F. O.K.!
ALLOWABLE HEIGHT AND BUILDING AREA FOR TYPE II-A IN OCCUPANCY R-2(2008 CODE)
AREA: UL, HEIGHT: 6 -------- PROPOSED 4 STORY W/4,422 S.F. O.K.!

2. ZONING CALCULATION

BULK REGULATIONS

RESIDENTIAL USE
BASE F.A.R : 2.70 (AS PER ZR 23-952)
INCLUSIONARY HOUSING DESIGNATED AREAS
LOT AREA: 2,500.00 S.F.
MAX F.A. OF THE BUILDING:
2,500.00 S.F.x2.7=6,750.00 S.F

MANUFACTURING OR COMM. USE
F.A.R : 1.0 (AS PER ZR 123-64/43-1)

LOT AREA: 2,500.00 S.F.
MAX F.A. OF THE BUILDING:
2,500.00 S.F.x1.0=2,500.00 S.F

NOTES:
IN INCLUSIONARY HOUSING DESIGNATED AREAS, THE MAXIMUM FLOOR AREA RATIO PERMITTED FOR ZONING LOTS CONTAINING RESIDENTIAL AND COMMERCIAL, COMMUNITY FACILITY OR MANUFACTURING USES SHALL BE THE BASE FLOOR AREA RATIO SET FORTH IN SECTION 23-952. SUCH BASE FLOOR AREA RATIO MAY BE INCREASED TO THE MAXIMUM FLOOR AREA RATIO SET FORTH IN SUCH SECTION ONLY THROUGH THE PROVISION OF AFFORDABLE HOUSING, PURSUANT TO SECTION 23-90.

EXIST'G & PROPOSED BUILDING FLOOR AREA & DESCRIPTION

	EXIST'G BLDG. F.A.			PROPOSED				
FLOOR	DESCRIPTION	ZONING U.G.	FL. AREA	DESCRIPTION	ZONING U.G.	BLDG. GROSS AREA	DEDUCTION	ZONING AREA
CELLAR	UTILITY/STOR.	-	25'x65'=1,625.00 SQ/FT.	UTILITY/STOR.	-	25'x65'=1,625.00 SQ/FT.	1,625.00 SQ/FT.	0.00 SQ/FT.
1ST FLOOR	STORAGE	U.G. 16D	25'x99.8'=2,495.00 SQ/FT.	STORAGE	U.G. 16D	2,336.56 SQ/FT.	10.62 SQ/FT.	2,325.94 SQ/FT.
	RESIDENTIAL	NONE	NONE	RESIDENTIAL	U.G. 2	158.44 SQ/FT.	33.87 SQ/FT.	124.57 SQ/FT.
2ND FLOOR	NONE	-	-	RESIDENTIAL	U.G. 2	25'x65'=1,625.00 SQ/FT.	38.43 SQ/FT.	1,586.57 SQ/FT.
3RD FLOOR	NONE	-	-	RESIDENTIAL	U.G. 2	25'x65'=1,625.00 SQ/FT.	38.43 SQ/FT.	1,586.57 SQ/FT.
4TH FLOOR	NONE	-	-	RESIDENTIAL	U.G. 2	25'x45.25'=1,131.25 SQ/FT.	6.67 SQ/FT.	1,124.58 SQ/FT.
TOTAL ZONING FL. AREA			STORAGE: 2,495.00 SQ/FT.			6,876.25 SQ/FT.	130.40 SQ/FT.	6,745.85 SQ/FT.

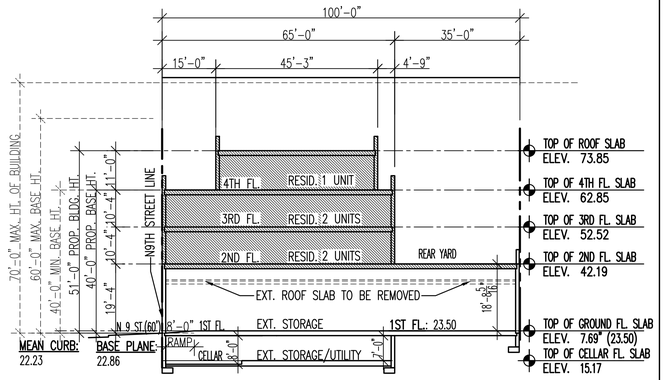
TOTAL PROPOSED RESID. FLOOR AREA : 4,422.29 S.F. < 6,750.00 S.F

TOTAL PROPOSED MANUFACTURING FLOOR AREA : 2325.94 S.F. < 2,500.00 S.F

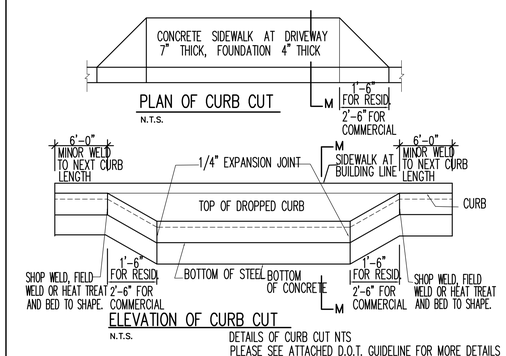
TOTAL PROPOSED BUILDING FLOOR AREA : 6,748.23 S.F. < 6,750.00 S.F

YARD, PARKING &HEIGHT REQUIREMENT	ALLOWABLE/ REQUIRED	PROPOSED
FRONT YARD/SIDE YARD (ZR 123-651)	NONE /MIN. 8'-0" SIDE YARD (IF PROVIDED)	NONE
REAR YARD (ZR 123-652/23-541)	NONE (WITHIN 100' OF CORNERS)	30'-2"
FRONT SETBACK (ZR 123-662)	15' REQ. FROM FRONT WALL @BASE WALL HEIGHT(NARROW ST.)	15'-0"
MIN. BASE HT. (ZR 123-662)	40'	40' FROM BASE PLANE
MAX. BASE HT. (ZR 123-662)	60'	
MAX. HT. OF BLDG. (ZR 123-662)	70'	51'-0" FROM BASE PLANE
AUTOMOBILE PARKING FOR MANU.(ZR 44-21)	1 PER 2,000 SQUARE FEET OF FLOOR AREA, OR 1 PER 3 EMPLOYEES, WHICHEVER WILL REQUIRE A LESSER NUMBER OF SPACES, 1 REQ.	EXIST'G 1 PARKING
AUTOMOBILE PARKING FOR RESID.(ZR123-72(b)/25-23	1/2 PER 1 DWELLING UNIT: 0.5x5=2.5 3 REQ. LESS THAN 5 CAN BE WAIVED	NONE
WAIVER OF REQ. FOR SMALL NO. OF SPACES(AS PER 25-261)	MAX. 5 SPACES CAN BE WAIVED IF 5 OR FEWER SPACES REQUIRED	
BICYCLE PARKING (ZR 25-81)	1 PER 2 DWELLING UNITS, 3 PARKING REQ. LESS THAN 10UNITS CAN BE WAIVED	NONE

MAXIMUM ALLOWABLE DWELLING UNIT (ZR 23-22)	PROPOSED
REQUIRED LOT AREA PER DWELLING UNIT IN R6: 680 S.F. MAX. ALLOWED RESIDENTIAL AREA: 6,750-2,325.94=4,424.06 4,424.06/680=6.51 D.U. 6 D.U. ALLOWED	PROPOSED TOTAL 5 DWELLING UNITS (O.K.)
EXIT REQUIREMENTS	**PROPOSED**
AS PER BC 1018.2, ONE MEAN OF EGRESS ALLOWED IN CONDITION THAT ; BUILDINGS CLASSIFIED IN OCCUPANCY GROUP "R-2" OF CONSTRUCTION TYPE I OR II THAT IS NOT MORE THAN 6 STORY IN HEIGHT, HAVE A GROSS AREA OF 2,000 SQ. FT. OR LESS PER FLOOR, AND HAVE A MAX. TRAVEL DISTANCE OF 50 FT. ON ANY FLOOR W/AUTOMATIC SPRINKLER THROUGHOUT BUILDING.	1. CONSTRUCTION CLASSIFICATION: II-A 2. GROSS AREA PER FLOOR LESS THAN 2,000 S.F.: 3. MAX. TRAVEL DISTANCE: 49' +/-. 4. PROVIDED SPKLR. HD. FULLY IN THE BUILDING.

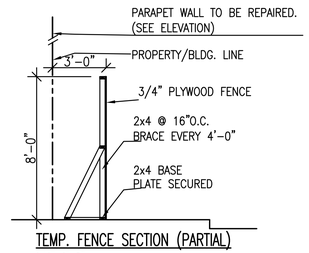


ZONING SECTION "A-A" AS PER ZR 123-663
1/20"=1'-0"



CURB CUT NOTES AS PER 406.7.6

1. THE AGGREGATE LENGTH OF CURB CUTS SHALL NOT EXCEED 60 PERCENT OF ANY STREET FRONTAGE 100 FEET (30 480 MM) OR LESS IN LENGTH. NO SINGLE CURB CUT SHALL EXCEED 30 FEET (9144 MM) IN LENGTH, AND THERE SHALL NOT BE MORE THAN TWO CURB CUTS ON ANY STREET FRONTAGE 100 FEET (30 480 MM) OR LESS IN LENGTH. THE MINIMUM DISTANCE BETWEEN TWO CURB CUTS SHALL BE 5 FEET (1524 MM).
2. FOR EACH 50 FEET (15 240 MM) OF STREET FRONTAGE LENGTH OVER 100 FEET (30 480 MM), AN ADDITIONAL CURB CUT NO GREATER THAN 30 FEET (9144 MM) IN LENGTH MAY BE PERMITTED.
3. NO CURB CUT SHALL COMMENCE WITHIN 8 FEET (2438 MM) OF A SIDE LOT LINE, EXCEPT THAT ON CORNER LOTS AND LOTS WITH STREET FRONTAGE LENGTH OF 50 FEET (15 240 MM) OR LESS, THE CURB CUT MAY COMMENCE 30 INCHES (762 MM) FROM THE SIDE LOT LINE.
4. NO CURB CUT, INCLUDING SPLAYS, SHALL BE LESS THAN 10 FEET (3048 MM) IN LENGTH.



TEMP. FENCE SECTION (PARTIAL)
1/4"=1'-0"

PROJECT:

62 N9TH STREET
BROOKLYN, NY 11211

NYC DOB FILING

REVISIONS:

REVISION	ISSUE DATE	SHEET NO.

D.O.B./DEP REFERENCE JOB NO.

PROJECT ARCHITECT:

THOMAS C. TUNG ENGINEER, P.E
38 MARKET STREEET
TEL: (646)240-5371/FAX:212-334-9506
E-MAIL: QINATAN@HOTMAIL.COM

DRAWING TITLE:

ZONING ANALYSIS PLOT PLAN

D.O.B. JOB NUMBER:

BSCAN JOB STICKER:

SCALE: AS NOTED	P.E. / R.A. SEAL
DRAWN BY: S.P.	
CHECKED: J.W.C.	
DATE: 11/12/2011	
REVISED:	
D.O.B. JOB TYPE	ALT-I

Z - 001 . 00

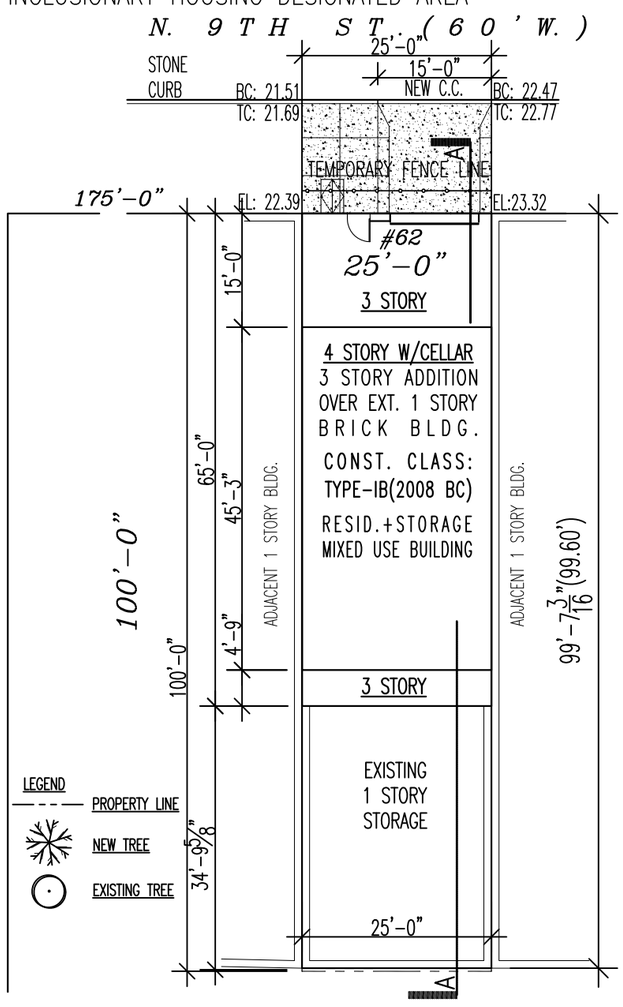
SHEET 01 OF 11

SITE PLAN DIAGRAM

1/20"=1'-0"

PROJECT LOCATION: 62 N 9TH ST., BROOKLYN

BLOCK: 2309
LOT: 13
MAP: 12c
ZONE : M1-2/R6A
SPECIAL ZONE: MX-8
INCLUSIONARY HOUSING DESIGNATED AREA



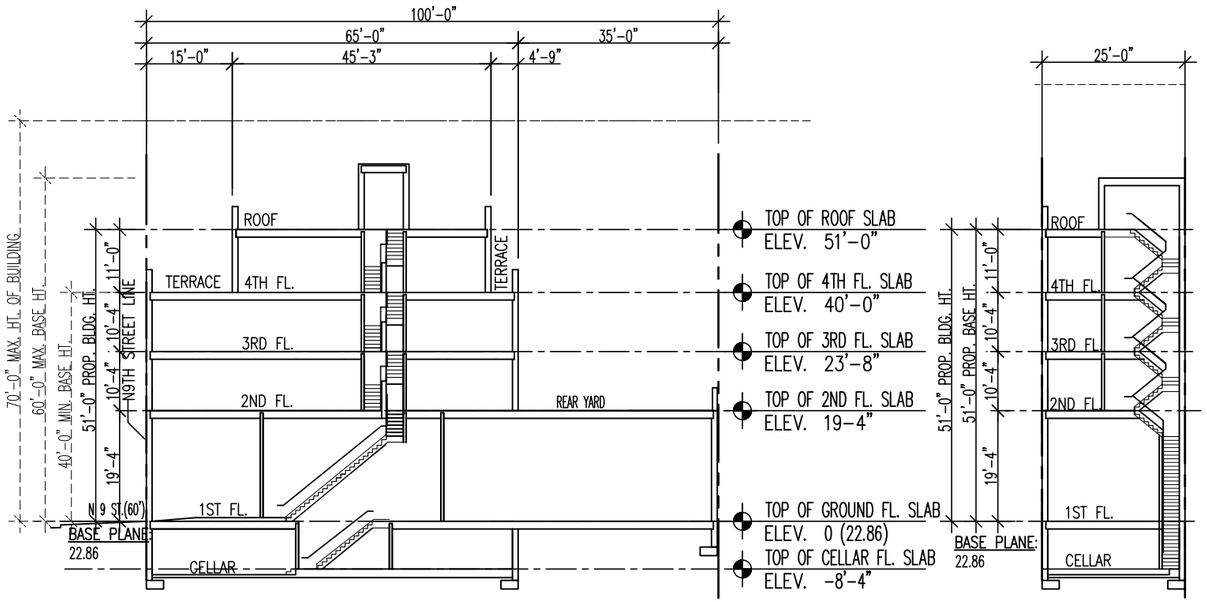
RESIDENTIAL USE
BASE F.A.R : 2.70 (AS PER ZR 23-952)
INCLUSIONARY HOUSING DESIGNATED AREAS
LOT AREA: 2,500.00 S.F.
MAX F.A. OF THE BUILDING:
2,500.00 S.F.x2.7=6,750.00 S.F

MANUFACTURING OR COMM. USE
F.A.R : 1.0 (AS PER ZR 123-64/43-1)
LOT AREA: 2,500.00 S.F.
MAX F.A. OF THE BUILDING:
2,500.00 S.F.x1.0=2,500.00 S.F

MIN./MAX. BLDG. BASE W. HT.(123-662)-40'/60', PROPOSED 40'
MAX. BLDG. HEIGHT (123-662) 70', PROPOSED 51'
DWELLING UNIT: 7 D.U. ALLOWED PROPOSED 5 D.U. O.K.!

SECTION DIAGRAM

NTS

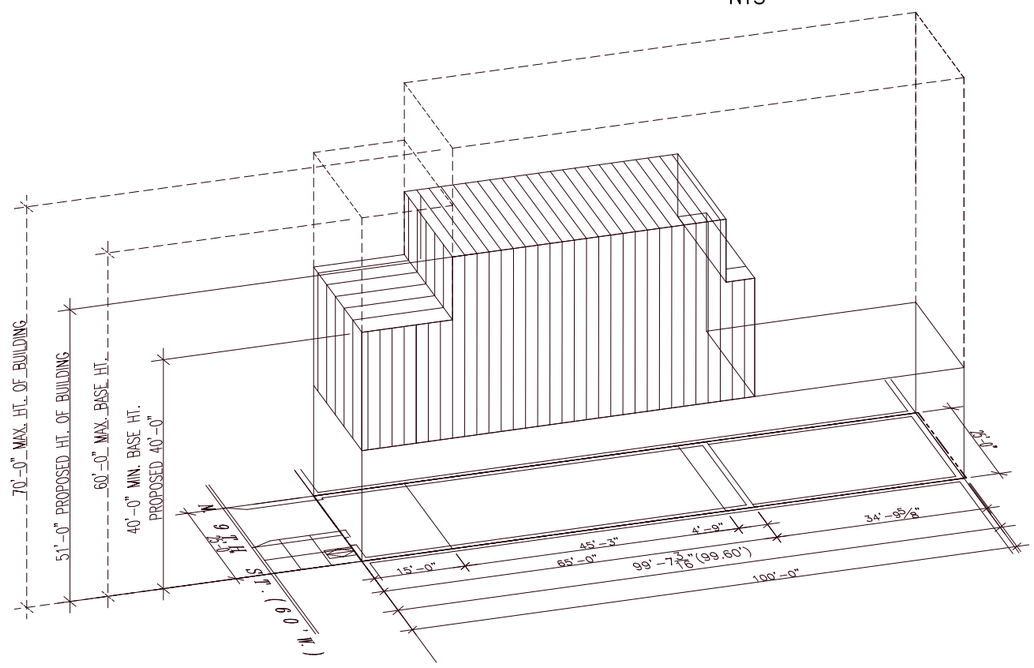


SKY EXPOSURE PLANE A-A AS PER ZR 123-662

BLDG. SECTION B-B

AXONOMETRIC DIAGRAM

NTS



NYC Buildings

ZD1 Zoning Diagram

Must be typewritten.

Orient and affix BIS job number label here

Submitted to resolve objections stated in a notice of intent to revoke issued pursuant to rule 101-15.

☐ Yes ☒ No

Location Information

House No(s)	62
Street Name	N9TH STREET
Borough	BROOKLYN
Block	2309
Lot	13
BIN	3061728

Falsification of any statement is a misdemeanor and is punishable by a fine or imprisonment, or both. It is unlawful to give to a city employee, or for a city employee to accept, any benefit, monetary or otherwise, either as gratuity for properly performing the job or in exchange for special consideration. Violation is punishable by imprisonment or fine or both. I understand that if I am found after hearing to have knowingly or negligently falsified or allowed to be falsified any certificate, form, signed statement, application, report or certification of the correction of a violation required under the provisions of this code or of a rule of any agency, I may be barred from filing further applications or documents with the Department.

NAME(PLEASE PRINT)

THOMAS C. TUNG

SIGNATURE DATE

01-02-12

P.E./ R.A. Seal (apply seal, then sign and date over seal)

Internal Use Only

BIS Doc # _____

PLAN EXAMINER SIGN AND DATE

07/09

Appendix 4

RCR Deliverable Requirements

Sub-Slab Depressurization System

The active sub-slab depressurization system (SSDS) will be designed to maintain negative pressure beneath the slab of the building addressed by this RAP. The proposed layout of the SSDS extraction locations are provided on Figure 5. The Remedial Closure Report will include photographs of the installation of SSDS system as well as if any deviations have occurred due to construction scope changes. The Remedial Closure Report will include PE/RA certified as-built plans depicting SSDS extraction points/laterals, blower (if active), and riser pipe configuration and locations, as well as documentation proving that the active SSDS was appropriately designed to maintain negative pressure beneath the entire area of the slab-on-grade portion of the building.

Waterproofing/Vapor Barrier Membrane

The Remedial Closure Report will include PE/RA certified as-built plans depicting the extent of the proposed waterproofing/vapor barrier membrane and the installation details (penetrations, joints, etc.) with respect to the proposed utility trenches within the existing building foundation and the area where the drain and surrounding soil will be removed in the slab-on grade area of the building, and product specification sheets are provided as Appendix 3. The Remedial Closure Report will include photographs (maximum of two photos per page) of the installation process, PE/RA certified letter (on company letterhead) from primary contractor responsible for installation oversight and field inspections, and a copy of the manufacturers certificate of warranty.

LOCTITE

1001 Trout Brook Crossing
Rocky Hill, CT 06067-3910
Telephone: (860) 571-5100
FAX: (860) 571-5465

Product Description Sheet

Fixmaster® High Performance Quartz

Maintenance, Repair & Operations, October 1998

PRODUCT DESCRIPTION

LOCTITE® Fixmaster® High Performance Quartz is a highly filled quartz epoxy system designed for restoring old concrete or for the maximum protection of new concrete under typical dry service temperatures of –29° to +66°C (–20° to +150°F). Areas damaged by chemical attack may be resurfaced with HPQ once the concrete has been adequately reconditioned to a natural, clean state. HPQ provides a highly resistant surface to concentrated acids, alkalis, and solvents. It is an easily applied, trowelable system that should be applied at a minimum ¼" build in order to provide maximum chemical resistance.

Advantages:

- Chemical resistant
- Non-shrinking
- Bonds to concrete

TYPICAL APPLICATIONS

- Chemical containment areas
- Repairing spalled areas and holes and cracks in floors
- Resurfacing ramps and stairs and chemical spill areas
- Grouting

DIRECTIONS FOR USE

To ensure optimum performance, the surface must be prepared correctly. Concrete must be cured for at least 30 days. Remove all grease, oils, and dirt by washing thoroughly. Remove all surface contaminants such as old coatings, loose concrete, dust by dry abrasive blasting, water blasting, scarifying or by thoroughly acid etching and rinsing. Prepared surface must be rough and porous with no excess water – dampness is acceptable.

TECHNICAL TIPS FOR WORKING WITH EPOXIES

Working time and cure time depends on temperature and mass:

- The higher the temperature, the faster the cure.
- The larger the mass of the material mixed, the faster the cure.

To speed the cure of epoxies at low temperatures:

- Store epoxy at room temperature.
- Pre-heat repair surface until warm to the touch.

To slow the cure of epoxies at high temperatures:

- Mix epoxy in small masses to prevent rapid curing.
- Cool resin/hardener component(s).

Primer:

1. The two component primer is packaged to the proper mix ratio and must be mixed thoroughly resulting in a clear solution.
2. Primer can be applied by brush, roller, squeegee, or spray to a uniform light coat 2-4 mils.
3. Working time of the primer is 45 minutes at 25°C (77°F).

Top Coat:

1. Topcoat must be applied within 4 hours after the primer.
2. Material must be between 21°C-32°C (70°F-90°F) to allow for proper mixing.
3. Thoroughly mix the topcoat resin and hardener.
4. Transfer the mix into a concrete mixer, gradually add the quartz and mix for 3-4 minutes. All quartz must be thoroughly wetted out.

Application:

1. The primer must be wet prior to applying HPQ topcoat. If area has dried – reprime.
2. HPQ must be applied a minimum thickness of 6mm (¼") at a minimum application temperature of 16°C (60°F). The higher the temperature, the easier the application.
3. Use a screed guide and rigid bar or a screed box not exceeding 1.2m (4 feet) in width and apply a minimum of 6mm (¼").
4. To finish use steel trowels. When working on a large area, a power trowel can be used. The area must be worked and all trowel marks removed before the end of working time.
5. Seams and cold joints should run parallel with traffic patterns.
6. Working time of the topcoat is 60 minutes at 25°C (77°F).

PROPERTIES OF UNCURED MATERIAL

Mixture	**Typical Value**
Appearance	Thick Gray Liquid
Mix Ratio (R:H) by Volume, Primer	100:61
by Volume, Topcoat	100:60 to 282 Filler
Coverage	1.4m^2 @ 6mm thick per 42 lb.kit
	15 ft^2 @ ¼" in thick per 42 lb. kit

TYPICAL CURING PERFORMANCE

Curing Properties (@ 25°C unless noted)	**Typical Value**
Working Life, minutes, Primer	45
Minutes, Topcoat	60 (1,000 g mass)
Cure Time, hours	24

TYPICAL PROPERTIES OF CURED MATERIAL (@ 25°C)

Physical Properties	**Typical Value**
Compressive Strength, ASTM D695, psi (N/mm^2)	12,000 (82.7)

CHEMICAL RESISTANCE

ACIDS	
10% acetic	2
20% acetic	3
10% hydrochloric	1
20% hydrochloric	1
37% hydrochloric	2
10% nitric	1
ALKALIS	
25% ammonium hydroxide	1
10% sodium hydroxide	1
20% potassium hydroxide	1
SOLVENTS	
Methanol	2
Xylene	1
Deionized Water	1
Trichloroethane	1
Toluene	2
Diesel Fuel	1
Ethanol	2

Compatibility Rating:
1 - long-term exposure
2 - intermittent exposure
3 - splash or spillage service - immediate chemical decontamination

Samples were cured seven days at 25°C (77°F). Testing solutions were at 25°C (77°F).

NOT FOR PRODUCT SPECIFICATIONS.
THE TECHNICAL DATA CONTAINED HEREIN ARE INTENDED AS REFERENCE ONLY.
PLEASE CONTACT LOCTITE CORPORATION QUALITY DEPARTMENT FOR ASSISTANCE AND RECOMMENDATIONS ON SPECIFICATIONS FOR THIS PRODUCT.
ROCKY HILL, CT FAX: +1 (860)-571-5473 DUBLIN, IRELAND FAX: +353-(1)-451 - 9959

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

Ordering Information

Part Number	Container Size
96495	42 lb. kit

Storage

Product shall be ideally stored in a cool, dry location in unopened containers at a temperature between 8°C to 28°C (46°F to 82°F) unless otherwise labeled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused product, do not return any material to its original container. For further specific shelf life information, contact your local Technical Service Center.

Data Ranges

The data contained herein may be reported as a typical value and/or range. Values are based on actual test data and are verified on a periodic basis.

Note

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Loctite Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Loctite Corporation's products. Loctite Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Loctite Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. One or more United States or foreign patents or patent applications may cover this product.

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