40-05 CRESCENT STREET

QUEENS, NEW YORK

Remedial Action Work Plan

NYC VCP Number: 15CVCP021Q
NYC OER Project Number: 14-EHAZ208Q

Prepared for:

Crescent Owners, LLC

40-05 Crescent Street

Queens, New York 11101

gregk@centralcmllc.com; mdifonzo@centralcmllc.com

Prepared by:

Athenica Environmental Services, Inc.

45-09 Greenpoint Avenue

Queens, New York 11104

ekarayel@athenica.com

(718) 784-7490

JULY 2014

REMEDIAL ACTION WORK PLAN
TABLE OF CONTENTS

TABLE OF CONTENTS i
LIST OF ACRONYMS iii
CERTIFICATION .....
EXECUTIVE SUMMARY 1
REMEDIAL ACTION WORK PLAN 1
1.0 SITE BACKGROUND 11
1.1 Site Location and Current Usage 11
1.2 Proposed Redevelopment Plan 11
1.3 Description of Surrounding Property 12
1.4 Remedial Investigation 12
2.0 REMEDIAL ACTION OBJECTIVES 15
3.0 REMEDIAL ALTERNATIVES ANALYSIS 16
3.1 Threshold Criteria 18
3.2 Balancing Criteria 19
4.0 REMEDIAL ACTION 26
4.1 Summary of Preferred Remedial Action 26
4.2 Soil Cleanup Objectives and Soil/Fill Management 28
4.3 Groundwater Investigation 31
4.4 Engineering Controls 29
4.5 Institutional Controls 29
4.6 Site Management Plan 29
4.7 Qualitative Human Health Exposure Assessment 29
5.0 REMEDIAL ACTION MANAGEMENT 43
5.1 Project Organization and Oversight 43
5.2 Site Security 43
5.3 Work Hours 43
5.4 Construction Health and Safety Plan (HASP) 43
5.5 Community Air Monitoring Plan 44

5.6 Agency Approvals 46
5.7 Site Preparation 47
5.8 Traffic Control 50
5.9 Demobilization 50
5.10 Reporting and Record Keeping 51
5.11 Complaint Management 52
5.12 Deviations from the Remedial Action Work Plan 52
6.0 REMEDIAL ACTION REPORT 53
7.0 SCHEDULE 56

FIGURES

- Figure 1: Site Location Map
- Figure 2: Site Map
- Figure 3: Proposed Site Redevelopment Plan
- Figure 4: Planned Excavation Map
- Figure 5: Proposed End-point Sampling Locations
- Figure 6: Proposed Groundwater Monitoring Well Location
- Figure 7: Vapor Barrier Design and Sub-Slab Depressurization System Details
- Figure 8: Proposed Layout of Sub-Slab Depressurization System

TABLES

- Table-1: Track 1 Soil Cleanup Objectives (SCOs)

APPENDICES

- Appendix-1: Citizen Participation Plan
- Appendix-2: Sustainability Statement
- Appendix-3: Soils/Materials Management Plan
- Appendix-4: Construction Health and Safety Plan
- Appendix-5: Proposed Development Plans
- Appendix-6: Specifications of Vapor Barrier and Sub-Slab Depressurization System

LIST OF ACRONYMS

Acronym	Definition
AOC	Area of Concern
AS/SVE	Air Sparging/Soil Vapor Extraction
BOA	Brownfield Opportunity Area
CAMP	Community Air Monitoring Plan
C/D	Construction/Demolition
COC	Certificate of Completion
CQAP	Construction Quality Assurance Plan
CSOP	Contractors Site Operation Plan
ECs/ICs	Engineering and Institutional Controls
HASP	Health and Safety Plan
IRM	Interim Remedial Measure
BCA	Brownfield Cleanup Agreement
MNA	Monitored Natural Attenuation
NOC	Notice of Completion
NYC VCP	New York City Voluntary Cleanup Program
NYC DEP	New York City Department of Environmental Protection
NYC DOHMH	New York State Department of Health and Mental Hygiene
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 DOH	New York State Department of Health
NYS DOT	New York State Department of Transportation
ORC	Oxygen-Release Compound
OSHA	United States Occupational Health and Safety Administration
PE	Professional Engineer
PID	Photo Ionization Detector

QEP	Qualified Environmental Professional
QHHEA	Qualitative Human Health Exposure Assessment
RAOs	Remedial Action Objectives
RAR	Remedial Action Report
RAWP	Remedial Action Work Plan or Plan
RCA	Recycled Concrete Aggregate
RD	Remedial Design
RI	Remedial Investigation
RMZ	Residual Management Zone
SCOs	Soil Cleanup Objectives
SCG	Standards, Criteria and Guidance
SMP	Site Management Plan
SPDES	State Pollutant Discharge Elimination System
SVOC	Semi-Volatile Organic Compound
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compound

CERTIFICATION

I, Reza Sharif, am a Professional Engineer licensed in the State of New York. I have primary direct responsibility for implementation of the remedial action for the 40-05 Crescent Street, Queens, New York Site (NYC VCP Site No. 15CVCP021Q and OER Project No. 14-EHAZ208Q).

I, William Silveri, am a Qualified Environmental Professional as defined in §43-140. I have primary direct responsibility for implementation of the remedial action for the 40-05 Crescent Street, Queens, New York Site (NYC VCP Site No. 15CVCP021Q and OER Project No. 14-EHAZ208Q).

I certify that this Remedial Action Work Plan (RAWP) 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 RAWP has provisions to control nuisances during the remediation and all invasive work, including dust and odor suppression.

Reza Sharif, PE
Name

074803
NYS PE License Number

Signature

Date

PE Stamp

William Silveri
QEP Name

QEP Signature

Date

EXECUTIVE SUMMARY

Crescent Owners, LLC has applied to enroll in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate a 12,500-square foot site located at 40-01 to 40-07 Crescent Street in Queens, New York. A remedial investigation (RI) was performed to compile and evaluate data and information necessary to develop this Remedial Action Work Plan (RAWP). The remedial action described in this document provides for the protection of public health and the environment consistent with the intended property use, complies with applicable environmental standards, criteria and guidance and conforms with applicable laws and regulations.

Site Location and Current Usage

The Site is located at 40-01 to 40-07 Crescent Street in the Dutch Kills section in Queens, New York and is identified as Block 406 and Lot 24 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 12,500-square feet and is bounded by 40th Avenue to the north, parking lot to the south, 1-story warehouse to the east, and Crescent Street to the west. A map of the site boundary is shown in Figure 2. Currently, the Site is used for offices and storage and contains a 1-story commercial warehouse that covers the entire footprint of the Site.

Summary of Proposed Redevelopment Plan

The proposed future use of the Site will consist of a new 5-story mixed commercial and residential use building with a cellar and sub cellar. There will be a 25'-0" setback at the 4th and 5th floors facing 40th Avenue and Crescent Street. The total gross square footage of the building will be 65,234 square feet. The sub cellar and cellar floor area will be approximately 12,276 square feet each. The sub cellar will be utilized as a parking garage, with mechanical room and utility rooms. The proposed construction will require an excavation to approximately 21 to 24 feet below grade surface (bgs). Total amount of soil to be removed is approximately 10,000 cubic yards. The exterior of the building will be brick and stucco finish with classical cornice at parapets. Layout of the proposed site development is presented in Figure 3. The current zoning designation is M1-2/R5D. The proposed use is consistent with existing zoning for the property.

The remedial action contemplated under this RAWP may be implemented independently of the proposed redevelopment plan.

Summary of the Remedy

The proposed remedial action achieves protection of public health and the environment for the intended use of the property. The proposed remedial action achieves all of the remedial action objectives established for the project and addresses applicable standards, criterion, and guidance; is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants; is cost effective and implementable; and uses standards methods that are well established in the industry.

The proposed remedial action will consist of:

1. Preparation of a Community Protection Statement and preformance of all required NYC VCP Citizen Participation activities according to an approved a Citizen Participation Plan.
2. Performance of a Community Air Monitoring Program for particulates and volatile organic carbon compounds.
3. Selection of NYSDEC 6 NYCRR Part 375 Unrestricted Use (Track 1)Soil Cleanup Objectives (SCOs).
4. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.
5. Installation of two soil borings (after building demolition and before building slab installation) at a previously inaccessible area of the Site, and collection of representative soil samples from each boring to evaluate soil quality.
6. Installation of a permanent groundwater monitoring well (after building demolition and before building slab installation) and collection of representative groundwater samples from newly installed well to evaluate impacts to groundwater quality from potential adjacent and upgradient sources of groundwater contamination.

7. Excavation and removal of soil/fill exceeding Tack 1 SCOs. For development purposes the entire site will be excavated to a depth of 21 to 24 feet below grade surface. Approximately 10,000 cubic yards of soil will be removed.

8. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID.

9. Management of excavated materials including temporarily stockpiling and segregating to prevent co-mingling of contaminated material and non-contaminated materials.

10. Removal of underground storage tanks (if encountered) and closure of petroleum spills (if evidence of a spill/leak is encountered during Site excavation) in compliance with applicable local, State and Federal laws and regulations.

11. Transportation and off-Site disposal of all soil/fill material at permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampling and analysis of excavated media as required by disposal facilities. Appropriate segregation of excavated media on-Site.

12. Collection and analysis of end-point samples to determine the performance of the remedy with respect to attainment of SCOs.

13. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.

14. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.

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

16. Submission of a Remedial Action Report (RAR) that describes the remedial activities certifies that the remedial requirements have been achieved, defines the Site boundaries, lists any changes from this RAWP, and if Track 1 SCOs are not achieved, describes all Engineering and Institutional Controls to be implemented at the Site.

If Track 1 SCOs are not achieved, the following construction elements implemented as part of new development will constitute Engineering and Institutional Controls:

17. Construction and operation of a sub cellar level ventilated garage per codes and requirements of NYC Department of Buildings.

18. As part of development, installation of a vapor barrier system beneath the building slab and outside foundation sidewalls below grade. The vapor barrier will consist of Preprufe® 200 32-mil, manufactured by W. R. Grace & Co.

19. As part of development, installation and operation of a passive sub-slab depressurization system within two mechanical rooms of the sub cellar (non-parking areas).

20. As part of development, construction and maintenance of an engineered composite cover consisting of 8” concrete building slab to prevent human exposure to residual soil/fill remaining under the Site;

21. Submission of an approved Site Management Plan (SMP) in the RAR for long-term management of residual contamination, including plans for operation, maintenance, monitoring, inspection and certification of Engineering and Institutional Controls and reporting at a specified frequency.

22. If Track 1 SCOs are not achieved, the property will continue to be registered with an E-Designation by the NYC Buildings Department. Establishment of Engineering Controls and Institutional Controls in this RAWP and a requirement that management of these controls must be in compliance with an approved SMP. Institutional Controls will include prohibition of the following: (1) vegetable gardening and farming; (2) use of groundwater without treatment rendering it safe for the intended use; (3) disturbance of residual contaminated material unless it is conducted in accordance with the SMP; and (4) higher level of land usage without OER- approval.

COMMUNITY PROTECTION STATEMENT

The Office of Environmental Remediation created the New York City Voluntary Cleanup Program (NYC VCP) to provide governmental oversight for the cleanup of contaminated property in NYC. This Remedial Action Work Plan ("cleanup plan") describes the findings of prior environmental studies that show the location of contamination at the site, and describes the plans to clean up the site to protect public health and the environment.

This cleanup plan provides a very high level of protection for neighboring communities and also includes many other elements that address common community concerns, such as community air monitoring, odor, dust and noise controls, hours of operation, good housekeeping and cleanliness, truck management and routing, and opportunities for community participation. The purpose of this Community Protection Statement is to explain these community protection measures in non-technical language to simplify community review.

Remedial Investigation and Cleanup Plan. Under the NYC VCP, a thorough cleanup study of this property (called a remedial investigation) has been performed to identify past property usage, to sample and test soils, groundwater and soil vapor, and identify contaminant sources present on the property. The cleanup plan has been designed to address all contaminant sources that have been identified during the study of this property.

Identification of Sensitive Land Uses. Prior to selecting a cleanup, the neighborhood was evaluated to identify sensitive land uses nearby, such as schools, day care facilities, hospitals and residential areas. The cleanup program was then tailored to address the special conditions of this community.

Qualitative Human Health Exposure Assessment. An important part of the cleanup planning for the Site is the performance of a study to find all of the ways that people might come in contact with contaminants at the Site now or in the future. This study is called a Qualitative Human Health Exposure Assessment (QHHEA). A QHHEA was performed for this project. This assessment has considered all known contamination at the Site and evaluated the potential for people to come in contact with this contamination. All identified public exposures will be addressed under this cleanup plan.

Health and Safety Plan. This cleanup plan includes a Construction Health and Safety Plan (CHASP) that is designed to protect community residents and on-Site workers. The elements of this plan are in compliance with safety requirements of the United States Occupational Safety and Health Administration (OSHA). This plan includes many protective elements including those discussed below.

Site Safety Coordinator. This project has a designated Site safety coordinator to implement the Health and Safety Plan. The safety coordinator maintains an emergency contact sheet and protocol for management of emergencies. The Site safety coordinator is Michael DiFonzo and can be reached at (718) 472-0830.

Worker Training. Workers participating in cleanup of contaminated material on this project are required to be trained in a 40-hour hazardous waste operators training course and to take annual refresher training. This pertains only to workers performing specific tasks including removing hazardous material and installing cleanup systems in contaminated areas.

Community Air Monitoring Plan. Community air monitoring will be performed during this cleanup project to ensure that the community is properly protected from contaminants, dust and odors. Air samples will be tested in accordance with a detailed plan called the Community Air Monitoring Plan or CAMP. Results will be regularly reported to the NYC OER. This cleanup plan also has a plan to address any unforeseen problems that might occur during the cleanup (called a 'Contingency Plan').

Odor, Dust and Noise Control. This cleanup plan includes actions for odor and dust control. These actions are designed to prevent off-Site odor and dust nuisances and includes steps to be taken if nuisances are detected. Generally, dust is managed by application of physical covers and by water sprays. Odors are controlled by limiting the area of open excavations, physical covers, spray foams and by a series of other actions (called operational measures). The project is also required to comply with NYC noise control standards. If you observe problems in these areas, please contact the onsite Superintendent Michael DiFonzo at (718) 472-0830 or NYC Office of Environmental Remediation Project Manager Rebecca Bub at (212) 341-2073.

Quality Assurance. This cleanup plan requires that evidence be provided to illustrate that all cleanup work required under the plan has been completed properly. This evidence will be

summarized in the final report, called the Remedial Action Report. This report will be submitted to the NYC Office of Environmental Remediation and will be thoroughly reviewed.

Storm-Water Management. To limit the potential for soil erosion and discharge, this cleanup plan has provisions for storm-water management. The main elements of the storm water management include physical barriers such as tarp covers and erosion fencing, and a program for frequent inspection.

Hours of Operation. The hours for operation of cleanup will comply with the NYC Department of Buildings construction code requirements or according to specific variances issued by that agency. For this cleanup project, the hours of operation are 7:00 AM to 5:00 PM Monday through Friday.

Signage. While the cleanup is in progress, a placard will be prominently posted at the main entrance of the property with a laminated project Fact Sheet that states that the project is in the NYC Voluntary Cleanup Program, provides project contact names and numbers, and locations of project documents can be viewed.

Complaint Management. The contractor performing this cleanup is required to address all complaints. If you have any complaints, you can call the facility Superintendent Michael DiFonzo at (718) 472-0830, the NYC Office of Environmental Remediation Project Manager Rebecca Bub at (212) 341-2073, or call 311 and mention the Site is in the NYC Voluntary Cleanup Program.

Utility Mark-outs. To promote safety during excavation in this cleanup, the contractor is required to first identify all utilities and must perform all excavation and construction work in compliance with NYC Department of Buildings regulations.

Soil and Liquid Disposal. All soil and liquid material removed from the Site as part of the cleanup will be transported and disposed of in accordance with all applicable City, State and Federal regulations and required permits will be obtained.

Soil Chemical Testing and Screening. All excavations will be supervised by a trained and properly qualified environmental professional. In addition to extensive sampling and chemical testing of soils on the Site, excavated soil will be screened continuously using hand-held

instruments, by sight, and by smell to ensure proper material handling and management, and community protection.

Stockpile Management. Soil stockpiles will be kept covered with tarps to prevent dust, odors and erosion. Stockpiles will be frequently inspected. Damaged tarp covers will be promptly replaced. Stockpiles will be protected with silt fences. Hay bales will be used, as needed to protect storm water catch basins and other discharge points.

Trucks and Covers. Loaded trucks leaving the Site will be covered in compliance with applicable laws and regulations to prevent dust and odor. Trucks will be properly recorded in logs and records and placarded in compliance with applicable City, State and Federal laws, including those of the New York State Department of Transportation. If loads contain wet material that can leak, truck liners will be used. All transport of materials will be performed by licensed truckers and in compliance with all laws and regulations.

Imported Material. All fill materials proposed to be brought onto the Site will comply with rules outlined in this cleanup plan and will be inspected and approved by a qualified worker located on-Site. Waste materials will not be brought onto the Site. Trucks entering the Site with imported clean materials will be covered in compliance with applicable laws and regulations.

Equipment Decontamination. All equipment used for cleanup work will be inspected and washed, if needed, before it leaves the Site. Trucks will be cleaned at a truck inspection station on the property before leaving the Site.

Housekeeping. Locations where trucks enter or leave the Site will be inspected every day and cleaned regularly to ensure that they are free of dirt and other materials from the Site.

Truck Routing. Truck routes have been selected to: (a) limit transport through residential areas and past sensitive nearby properties; (b) maximize use of city-mapped truck routes; (c) limit total distance to major highways; (d) promote safety in entry to highways; (e) promote overall safety in trucking; and (f) minimize off-Site line-ups (queuing) of trucks entering the property. Operators of loaded trucks leaving the Site will be instructed not to stop or idle in the local neighborhood.

Final Report. The results of all cleanup work will be fully documented in a final report (called a Remedial Action Report) that will be available for you to review on OER's website or at a computer available for public use located at Queens Library – Long Island City Branch.

Long-Term Site Management. If long-term protection after the cleanup is complete, the property owner may be required to comply with an ongoing Site Management Plan (if Track 1 is not achieved) that calls for continued inspection of protective controls, such as Site covers. The Site Management Plan is evaluated and approved by the NYC OER. Requirements that the property owner must comply with are established through a city environmental designation. A certification of continued protectiveness of the cleanup will be required from time to time to show that the approved cleanup is still effective.

REMEDIAL ACTION WORK PLAN

1.0 SITE BACKGROUND

Crescent Owners, LLC has applied to enroll in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate a property located at 40-01 to 40-07 Crescent Street in the Dutch Kills section of Queens, New York (the "Site"). A Remedial Investigation (RI) was performed to compile and evaluate data and information necessary to develop this Remedial Action Work Plan (RAWP) in a manner that will render the Site protective of public health and the environment consistent with the contemplated end use. This RAWP establishes remedial action objectives, provides a remedial alternatives analysis that includes consideration of a permanent cleanup, and provides a description of the selected remedial action. The remedial action described in this document provides for the protection of public health and the environment, complies with applicable environmental standards, criteria and guidance and applicable laws and regulations.

1.1 SITE LOCATION AND CURRENT USAGE

The Site is located at 40-01 to 40-07 Crescent Street in the Dutch Kills section in Queens, New York and is identified as Block 406 and Lot 24 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 12,500-square feet and is bounded by 40th Avenue to the north, parking lot to the south, 1-story warehouse to the east, and Crescent Street to the west. A map of the site boundary is shown in Figure 2. Currently, the Site is used for offices and storage and contains a 1-story commercial warehouse that covers the entire footprint of the Site.

1.2 PROPOSED REDEVELOPMENT PLAN

The proposed future use of the Site will consist of a new 5-story mixed commercial and residential use building with a cellar and sub cellar. There will be a 25'-0" setback at the 4th and 5th floors facing 40th Avenue and Crescent Street. The total gross square footage of the building will be 65,234 square feet. Cellar and sub cellar floor area will be approximately 12,276 square feet each with the sub cellar utilized as a parking garage, with mechanical room and utility rooms. The proposed construction will require an excavation to approximately 21 to 24 feet

below grade surface (bgs). Total amount of soil to be removed is approximately 10,000 cubic yards. The exterior of the building will be brick and stucco finish with classical cornice at parapets. Layout of the proposed site development is presented in Figure 3. The current zoning designation is M1-2/R5D. The proposed use is consistent with existing zoning for the property.

The remedial action contemplated under this RAWP may be implemented independently of the proposed redevelopment plan.

1.3 DESCRIPTION OF SURROUNDING PROPERTY

The area surrounding the property consists of commercial and residential buildings. According to the OER Searchable Property Environmental E-Database (SPEED), there is one sensitive receptor (such as schools, hospitals and day-care facilities) within a 500-foot radius of the Site. Newcomers High School is located approximately 475 feet south-southeast of the Site.

Figure 2 shows the surrounding land usage.

1.4 REMEDIAL INVESTIGATION

A remedial investigation was performed and the results are documented in a companion document called "*Remedial Investigation Report, 40-05 Crescent Street*", dated April 2014 (RIR).

Summary of Past Uses of Site and Areas of Concern

Based upon the review of the Phase I Environmental Site Assessment (ESA) Report prepared by Merritt Environmental Consulting in May 2012, a Site history was established. The Site was developed prior to 1898 with multiple 1 and 2-story dwellings. The uses of the buildings are not listed. The Site was then utilized as a heating equipment warehouse during 1950 and a 1-story commercial building between 1970 and 2006. This is consistent with the most recent use of the Site.

The only AOC identified for the Site is urban fill to 8 feet below grade.

Summary of the Work Performed under the Remedial Investigation

1. Conducted a Site inspection to identify AOCs and physical obstructions (i.e. structures, buildings, etc.);
2. Installed seven (7) soil borings across the entire project Site, and collected fourteen (14) soil samples for chemical analysis from the soil borings to evaluate soil quality;
3. Installed three (3) groundwater monitoring wells throughout the Site to establish groundwater flow and collected two (2) groundwater samples for chemical analysis to evaluate groundwater quality;
4. Installed four (4) soil vapor probes around Site perimeter and collected four (4) samples for chemical analysis.

Summary of Environmental Findings

1. Elevation of the property ranges from 65 to 79 feet.
2. Depth to groundwater ranges from 33.90 to 37.55 feet at the Site.
3. Since only two (2) wells could be monitored and sampled, the actual direction of groundwater flow could not be determined during the RI. The groundwater flow is presumed to be generally towards west, following the topography.
4. Bedrock was not encountered during the RI.
5. The stratigraphy of the Site, from the surface down, consists of 8 feet of urban fill, 4 feet of medium sand with gravel and 12 to 24 feet of fine grained silty sand.
6. Soil/fill samples collected during the RI were compared to 6 NYCRR Part 375-6.8 Track 1 Unrestricted Soil Cleanup Objectives (SCOs) and Track 2 Restricted Residential Use SCOs. No PCBs were detected, and no SVOCs or Pesticides above Track 1 Unrestricted SCOs were identified in any of the soil samples. Soil sampling results showed no VOCs except for acetone (max. of 0.0682 ppm) above Unrestricted Use SCOs. TCE (max 4.4 ppb) and PCE (max 4.6 ppb) were detected only at trace levels. Four (4) metals, copper (max. of 52.6 ppm), lead (max. of 238 ppm), zinc (max. of 239 ppm) and mercury (max. of 0.69 ppm) were identified above Track 1 Unrestricted SCOs in five of the soil

samples. None of these metals exceeded their respective Track 2 Residential SCOs in five shallow soil samples. Overall, the findings were consistent with observations for historic fill sites in areas throughout NYC.

7. Groundwater samples collected during the RI showed no pesticides or PCBs and no SVOCs above Class GA Groundwater Standards (GQS). Three (3) VOCs, 1,1,1-trichloroethane (10 ug/L), 1,1-dichloroethylene (7.9 ug/L), and tetrachloroethylene (PCE) (20 ug/L) exceeded their respective GQS in one of the groundwater samples. Trace levels of Trichloroethylene, tert-Butylbenzene and chloroform were also detected. No other VOCs were identified above GQS in any of the groundwater samples. Several metals were identified in both groundwater samples, but only four (4) dissolved metals, magnesium, manganese, selenium and sodium were identified above their respective GQS.

8. Soil vapor samples collected during the RI showed low to moderate levels of petroleum-related and chlorinated VOCs. BTEX were detected at a maximum concentration of 131.4 ug/m^3. Tetrachloroethylene (PCE) was detected in all four of the soil vapor samples, at a maximum concentration of 220 ug/m^3. Trichloroethene (TCE) was detected in two of the soil vapor samples, at a maximum concentration of 48 ug/m^3. 1,1,1-Trichloroethane (TCA) was detected in all four samples, at maximum concentration of 29 ug/m^3. Carbon Tetrachloride was not detected in any of the samples; however, the detection limits for all four samples slightly exceeded the NYS DOH Soil Vapor Guideline value of 5 ug/$m^{3.}$ PCE and TCE Concentrations are within the monitoring level range established by NYSDOH Final Guidance on Soil Vapor Intrusion (October 2006) and require further action.

For more detailed results, consult the RIR. Based on an evaluation of the data and information from the RIR and this RAWP, disposal of significant amounts of hazardous waste is not suspected at this site.

2.0 REMEDIAL ACTION OBJECTIVES

Based on the results of the RI, the following Remedial Action Objectives (RAOs) have been identified for this Site:

Groundwater

- Prevent direct exposure to contaminated groundwater.
- Prevent exposure to contaminants volatilizing from contaminated groundwater.

Soil

- Prevent direct contact with contaminated soil.
- Prevent exposure to contaminants volatilizing from contaminated soil.
- Prevent migration of contaminants that would result in groundwater or surface water contamination.

Soil Vapor

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

3.0 REMEDIAL ALTERNATIVES ANALYSIS

The goal of the remedy selection process under is to select a remedy that is protective of human health and the environment taking into consideration the current, intended and reasonably anticipated future use of the property. The remedy selection process begins by establishing RAOs for media in which chemical constituents were found in exceedance of applicable standards, criteria and guidance values (SCGs). A remedy is then developed based on the following ten criteria:

- Protection of human health and the environment;
- Compliance with SCGs;
- Short-term effectiveness and impacts;
- Long-term effectiveness and permanence;
- Reduction of toxicity, mobility, or volume of contaminated material;
- Implementability;
- Cost effectiveness;
- Community acceptance;
- Land use; and
- Sustainability

The following is a detailed description of the alternatives analysis and remedy selection to address impacted media at the Site. As required, a minimum of two remedial alternatives (including a Track 1 Unrestricted Use scenario) are considered for alternatives analysis for this site:

Alternative 1 involves:

- Selection of NYSDEC 6NYCRR Part 375 Table 6.8 Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs).
- Removal of all soil/fill exceeding Track 1 SCOs throughout the Site and confirmation

that Track 1 SCOs have been achieved with post-excavation endpoint sampling. Based on the results of the Remedial Investigation, it is expected that this alternative would require excavation across the entire Site to a depth of approximately to 8 feet to removal all historic fill. Excavation of the entire Site for construction of the new building's subcellar/cellar level would take place to a depth of approximately 21 to 24 feet. If soil/fill-containing analytes at concentrations above Track 1 SCOs are still present at the base of the excavation, additional excavation will be performed to ensure complete removal of soil that does not meet Track 1 SCOs.

- No engineering or institutional controls can be utilized in a Track 1Unrestricted Use cleanup, however a vapor barrier, a ventilated garage and a passive sub-slab depressurization system beneath the mechanical rooms in the sub cellar will be installed as a part of development to prevent any potential future exposures from remaining fill material.
- Placement of a final cover over the entire Site as part of new development.

Alternative 2 involves:

- Establishment of Site Specific (Track 4) Soil Cleanup Objectives (SCOs).
- Removal of all soils exceeding Track 4 SCOs and confirmation that Track 4 has been achieved with post-excavation endpoint sampling. Excavation for development purposes would take place to a depth of approximately 21 to 24 feet across the Site. Therefore, it is anticipated that remaining soils would be below Track 4 SCOs. If soil/fill containing analytes at concentrations above Track 4 Site-Specific SCOs is still present at the base of the excavation after removal of all soil required for construction of the new building is complete, additional excavation will be performed to meet Track 4 Site-Specific SCOs;
- Eliminating the potential for direct contact with contaminated soil or groundwater by placement of a composite cover system and via institutional controls;
- Placement of a vapor barrier beneath the foundation slab and along foundation side walls up to grade;
- Placement of a passive sub-slab depressurization system beneath the mechanical rooms in the sub cellar;

- Minimizing the potential for migration of soil vapor into occupied structures and associated inhalation exposures by operation of a ventilated parking garage beneath the building
- Establishment of use restrictions including prohibitions on the use of groundwater from the site and prohibitions on other sensitive site uses, such as farming or vegetable gardening, to eliminate future exposure pathways;
- Establishment of an approved Site Management Plan (SMP) to ensure long-term management of these engineering controls, including the performance of periodic inspections and certification that the controls are performing as they were intended; and
- Continued registration as an E-designated property to memorialize the remedial action and the Engineering and Institutional Controls required by this RAWP.

For both Alternatives, potential exposure to contaminated soils during construction would be minimized by implementing a Construction Health and Safety Plan (CHASP) and Community Air Monitoring Plan (CAMP). Potential use of groundwater for potable supply would be prevented as its use is prohibited by city laws and regulations.

3.1 THRESHOLD CRITERIA

Protection of Public Health and the Environment

This criterion is an evaluation of the remedy's ability to protect public health and the environment, and an assessment of how risks posed through each existing or potential pathway of exposure are eliminated, reduced or controlled through removal, treatment, and implementation of Engineering Controls or Institutional Controls. Protection of public health and the environment must be achieved for all approved remedial actions.

Alternative 1 would be protective of human health and the environment by removing the soil/fill exceeding Track 1 Unrestricted Use SCOs and groundwater protection standards,, thus eliminating the potential for human and environmental exposure to contaminated soil/fill once construction is complete and eliminating potential for direct contact with contaminated soil/fill

once construction is complete and eliminating the risk of contamination leaching into groundwater.

Alternative 2 would achieve comparable protection of human health and the environment by excavating and removing soil/fill at the Site and by ensuring that remaining soil/fill on-Site meets Track 4 Site Specific SCOs, as well as by employing institutional and engineering controls, including a vapor barrier, a passive sub-slab depressurization system, a ventilated parking garage and a composite cover system. The composite cover system would prevent direct contact with any remaining on-Site soil/fill. Implementing institutional controls including a deed notice and a Site Management Plan would ensure that the composite cover system remains intact and protective. Establishment of Track 4 Site-Specific SCOs would minimize the risk of contamination leaching into groundwater.

For both Alternatives, potential exposure to contaminated soils during construction would be minimized by implementing a Construction Health and Safety Plan (CHASP), an approved Soils/Materials Management Plan (SMP) and Community Air Monitoring Plan (CAMP). Potential use of groundwater for potable supply would be prevented as its use is prohibited by city laws and regulations. Potential future migration of off-Site soil vapors into the new building would be prevented by the new buildings's sub-basement slab, vapor barrier, passive sub-slab depressurization system and a ventilated parking garage.

3.2. BALANCING CRITERIA

Compliance with Standards, Criteria and Guidance (SCGs)

This evaluation criterion assesses the ability of the alternative to achieve applicable standards, criteria and guidance.

Alternative 1 would address the chemical-specific SCGs for soil by excavation and removal of all material above the Track 1 SCOs. Focused attention on means and methods employed during remedial action would ensure the handling and management of contamination material would be in compliance with applicable SCGs. Compliance with SCGs for soil vapor would also be achieved by a ventilated garage, by installing an passive SSDS and a vapor barrier system below the new building's basement slab and continuing the vapor barrier around foundation walls, as part of development.

Alternative 2 would address chemical-specific SCGs for soil by establishment of Track 4 SCOs and attainment of these standards for onsite soil. Similar to the Track 1, focused attention on means and methods employed during remedial action would ensure the handling and management of contamination material would be in compliance with applicable SCGs. Compliance with the SCGs for soil vapor would be achieved within the building structure by the installing a vapor barrier and a passive sub-slab depressurization system.

Health and safety measures contained in the CHASP and Community Air Monitoring Plan (CAMP) that comply with the applicable SCGs shall be implemented during Site redevelopment under this RAWP. These measures will protect on-site workers and the surrounding community from exposure to Site-related contaminants.

Short-term effectiveness and impacts

This evaluation criterion assesses the effects of the alternative during the construction and implementation phase until remedial action objectives are met. Under this criterion, alternatives are evaluated with respect to their effects on public health and the environment during implementation of the remedial action, including protection of the community, environmental impacts, time until remedial response objectives are achieved, and protection of workers during remedial actions.

Both Alternatives 1 and 2 have similar-short term effectiveness during their respective implementations, as each requires excavation of historic fill material. Both alternatives would result in short-term dust generation impacts associated with excavation, handling, load out of materials, and truck traffic. However, focused attention to means and methods during the remedial action, including community air monitoring and appropriate truck routing, would minimize or negative the overall impact of these activities under either alternative.

Both alternatives would employ appropriate measures to prevent short-term impacts, including a Community Air Monitoring Plan (CAMP) during all on-Site soil disturbance activities and would effectively prevent the release of significant contaminants into the environment. Both alternatives provide short-term effectiveness in protecting the surrounding community by decreasing the risk of contact with on-Site contaminants. Construction workers

operating under appropriate management procedures and a Health and Safety Plan (CHASP) will be protected from on-Site contaminants.

Long-term effectiveness and permanence

This evaluation criterion addresses the results of a remedial action in terms of its permanence and quantity/nature of waste or residual contamination remaining at the Site after response objectives have been met, such as permanence of the remedial alternative, magnitude of remaining contamination, adequacy of controls including the adequacy and suitability of ECs/ICs that may be used to manage contaminant residuals that remain at the Site and assessment of containment systems and ICs that are designed to eliminate exposures to contaminants, and long-term reliability of Engineering Controls.

Alternative 1 would be effective over the long-term by providing a permanent cleanup of on-Site contamination through removal of all soils in excess of the Track 1 SCOs and would eliminate any potential on-Site sources of soil vapors and groundwater contamination consistent with remedial action objectives.

Alternative 2 would also be effective over the long-term by attaining Track 4 SCOs, establishing engineering controls including a composite cover over the entire Site, establishing a Site Management Plan to ensure long-term management of Institutional and Engineering Controls, and continued registration as an E-designated property to memorialize these controls for the long term. Soil and fill removal would also eliminate potential sources of soil vapors, and installation of a vapor barrier would prevent migration of vapors into occupied structures and would eliminate associated inhalation exposures.

Reduction of toxicity, mobility, or volume of contaminated material

This evaluation criterion assesses the remedial alternative's use of remedial technologies that permanently and significantly reduce toxicity, mobility, or volume of contaminants as their principal element. The following is the hierarchy of source removal and control measures that are to be used to remediate a Site, ranked from most preferable to least preferable: removal and/or treatment, containment, elimination of exposure and treatment of source at the point of exposure. It is preferred to use treatment or removal to eliminate contaminants at a Site, reduce

the total mass of toxic contaminants, cause irreversible reduction in contaminants mobility, or reduce of total volume of contaminated media.

Alternative 1 will provide maximum reduction of toxicity, mobility, and volume of contaminated material on-Site by excavation and removal of all soils that exceed the Track 1 unrestricted use SCOs.

Alternative 2 will provide:

- Reduction of toxicity, mobility and volume of contaminated material on-Site by establishing Track 4 SCOs and attainment of these SCOs for onsite soil;
- Placement of a composite cover over the entire Site that will eliminate potential contact with remaining soils and fill below the SCOs;
- Groundwater use restrictions will reduce toxicity by ensuring that there is no direct contact with on-Site groundwater in the future;
- Establishment of a Site Management Plan to memorialize these controls will ensure long-term management of these Engineering and Institutional Controls and provide assurance that protections will continue in perpetuity.

The excavation of soil for the new development in both scenarios would probably result in relatively minor differences between these two alternatives.

Implementability

This evaluation criterion addresses the technical and administrative feasibility of implementing an alternative and the availability of various services and materials required during its implementation, including technical feasibility of construction and operation, reliability of the selected technology, ease of undertaking remedial action, monitoring considerations, administrative feasibility (e.g. obtaining permits for remedial activities), and availability of services and materials.

Both Alternatives are feasible and implementable. They use standard materials, services, and well-established technology. The reliability of these remedies is also high. There are no specific

difficulties associated with any of the activities proposed, which utilize standard/industry methods.

For implementation of both remedies, standard construction equipment utilized for the overall earthwork would be used. OSHSA trained personnel will complete all activities that include excavation and handling of impacted soils.

Cost effectiveness

This evaluation criterion addresses the cost of alternatives, including capital costs (such as construction costs, equipment costs, and disposal costs, engineering expenses) and site management costs (costs incurred after remedial construction is complete) necessary to ensure the continued effectiveness of a remedial action.

Since historic fill at the Site was found during the RI to only extend to a depth of up to 8 feet below grade, and the new building requires excavation of the entire Site to a depth of 24 feet, the costs associated with both Alternative 1 and Alternative 2 will likely be the comparable.
Costs associated with Alternative 1 could potentially be higher than Alternative 2 if soil with analytes above Unrestricted Use SCOs is encountered below the excavation depth required for development. Additional costs would include installation of additional shoring/underpinning, disposal of additional soil, and import of clean soil for backfill. However, long-term costs for Alternative 2 are likely higher than Alternative 1 based on implementation of a Site Management Plan as part of Alternative 2.

Both alternatives satisfy the threshold balancing criterion and other criterion listed here, and each is fully protective of public health and the environment, will control migration of contaminants, will comply with SCGs, are effective for the short-term and long-term, are implementable, and reduce both mobility and toxicity.

Community Acceptance

This evaluation criterion addresses community opinion and support for the remedial action. Observations here will be supplemented by public comment received on the RAWP.

Based on the overall goals of the remedial program and initial observations by the project team, both of the alternatives are expected to be acceptable to the community. This RAWP will

be subject to a public review under the NYC VCP and will provide the opportunity for detailed public input on the remedial alternatives and the selected remedial action. This public comment related to site remediation will be considered by OER prior to approval of this plan. The Citizen Participation Plan for the project is provided in Appendix 1.

Land use

This evaluation criterion addresses the proposed use of the property. This evaluation has considered reasonably anticipated future uses of the Site and takes into account: current use and historical and/or recent development patterns; applicable zoning laws and maps; NYS Department of State's Brownfield Opportunity Areas (BOA) pursuant to section 970-r of the general municipal law; applicable land use plans; proximity to real property currently used for residential use, and to commercial, industrial, agricultural, and/or recreational areas; environmental justice impacts, Federal or State land use designations; population growth patterns and projections; accessibility to existing infrastructure; proximity of the site to important cultural resources and natural resources, potential vulnerability of groundwater to contamination that might emanate from the site, proximity to flood plains, geography and geology; and current Institutional Controls applicable to the site.

Both alternatives for remedial action at the Site are comparable with respect to the proposed use and land uses in the vicinity of the Site. The proposed use is consistent with the existing zoning designation for the property and is consistent with recent development patterns. The Site is surrounded by residential and commercial properties and the proposed alternatives provide comprehensive protection of public health and the environment for these uses. Improvements in the current environmental condition of the property achieved by the alternatives are also consistent with the City's goals for the cleanup of contaminated land and bringing such properties into productive reuse. Both alternatives are equally protective of natural resources and cultural resources. This RAWP will be subject to public review under the NYC VCP and will provide the opportunity for detailed public input on the land use factors described in this section. This public comment will be considered by OER prior to approval of this plan.

Sustainability of the Remedial Action

This criterion evaluates the overall sustainability of the remedial action alternatives and the degree to which sustainable means are employed to implement the remedial action including those that take into consideration NYC's sustainability goals defined in *PlaNYC: A Greener, Greater New York*. Sustainability goals may include: maximizing the recycling and reuse of non-virgin materials; reducing the consumption of virgin and non-renewable resources; minimizing energy consumption and greenhouse gas emissions; improving energy efficiency; and promotion of the use of native vegetation and enhancing biodiversity during landscaping associated with Site development.

Both remedial alternatives are comparable with respect to the opportunity to achieve sustainable remedial action. This program contemplates the utilization of several green remediation methods that are compatible with the alternative. The remedial plan would take into consideration the shortest trucking routes during off-Site disposal of historic fill and other soils, which would reduce greenhouse gas emissions and conserve energy used to fuel trucks. New York City Clean Soil Bank program may be utilized for reuse of native soils.

4.0 REMEDIAL ACTION

4.1 SUMMARY OF PREFERRED REMEDIAL ACTION

The preferred remedial action alternative is Alternative 1 the Track 1 Alternative. The preferred remedial action alternative achieves protection of public health and the environment for the intended use of the property. The preferred remedial action alternative will achieve all of the remedial action objectives established for the project and addresses applicable SCGs. The preferred remedial action alternative is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants. The preferred remedial action alternative is cost effective and implementable and uses standards methods that are well established in the industry.

The proposed remedial action will consist of:

1. Preparation of a Community Protection Statement and performance of all required NYC VCP Citizen Participation activities according to an approved a Citizen Participation Plan.

2. Performance of a Community Air Monitoring Program for particulates and volatile organic carbon compounds.

3. Selection of NYSDEC 6 NYCRR Part 375 Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs).

4. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.

5. Installation of two soil borings (after building demolition and before building slab installation) at a previously inaccessible area of the Site, and collection of representative soil samples from each boring to evaluate soil quality.

6. Installation of a permanent groundwater monitoring well (after building demolition and before building slab installation) and collection of representative groundwater samples from newly installed well to evaluate impacts to groundwater quality from potential adjacent and upgradient sources of groundwater contamination.

7. Excavation and removal of soil/fill exceeding Tack 1 SCOs. For development purposes the entire site will be excavated to a depth of 21 to 24 feet below grade surface. Approximately 10,000 cubic yards of soil will be removed.

8. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID.

9. Management of excavated materials including temporarily stockpiling and segregating to prevent co-mingling of contaminated material and non-contaminated materials.

10. Removal of underground storage tanks (if encountered) and closure of petroleum spills (if evidence of a spill/leak is encountered during Site excavation) in compliance with applicable local, State and Federal laws and regulations.

11. Transportation and off-Site disposal of all soil/fill material at permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampling and analysis of excavated media as required by disposal facilities. Appropriate segregation of excavated media on-Site.

12. Collection and analysis of end-point samples to determine the performance of the remedy with respect to attainment of SCOs.

13. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.

14. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.

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

16. Submission of a Remedial Action Report (RAR) that describes the remedial activities certifies that the remedial requirements have been achieved, defines the Site boundaries, lists any changes from this RAWP, and if Track 1 SCOs are not achieved, describes all Engineering and Institutional Controls to be implemented at the Site.

If Track 1 SCOs are not achieved, the following construction elements implemented as part of new development will constitute Engineering and Institutional Controls:

17. Construction and operation of a sub cellar level ventilated garage per codes and requirements of NYC Department of Buildings.

18. As part of development, installation of a vapor barrier system beneath the building slab and outside foundation sidewalls below grade. The vapor barrier will consist of Preprufe® 200 32-mil, manufactured by W. R. Grace & Co.

19. As part of development, installation and operation of a passive sub-slab depressurization system within two mechanical rooms of the sub cellar (non-parking areas).

20. As part of development, construction and maintenance of an engineered composite cover consisting of 8” concrete building slab to prevent human exposure to residual soil/fill remaining under the Site.

21. Submission of an approved Site Management Plan (SMP) in the RAR for long-term management of residual contamination, including plans for operation, maintenance, monitoring, inspection and certification of Engineering and Institutional Controls and reporting at a specified frequency.

22. If Track 1 SCOs are not achieved, the property will continue to be registered with an E-Designation by the NYC Buildings Department. Establishment of Engineering Controls and Institutional Controls in this RAWP and a requirement that management of these controls must be in compliance with an approved SMP. Institutional Controls will include prohibition of the following: (1) vegetable gardening and farming; (2) use of groundwater without treatment rendering it safe for the intended use; (3) disturbance of residual contaminated material unless it is conducted in accordance with the SMP; and (4) higher level of land usage without OER-approval

4.2 SOIL CLEANUP OBJECTIVES AND SOIL/FILL MANAGEMENT

Track 1 Soil Cleanup Objectives (SCOs) are proposed for this project. The SCOs for this Site are listed in NYSDEC 6NYCRR Part 375, Table 6.8 and are included in Table 1. 1. If Unrestricted Use Track 1 is not achieved, the SCOs for this Site will include Restricted

Residential Use SCO contained in 6NYCRR Part 375, Table 6.8(b) as amended by following Site-Specific (Track 4) SCOs:

Contaminant	Track 4 SCOs
Lead	800 ppm
Mercury	2.0 ppm

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 3. The location of planned excavations is shown in Figure 4.

Discrete contaminant sources (such as hotspots) identified during the remedial action will be identified by GPS or surveyed. This information will be provided in the Remedial Action Report.

Estimated Soil/Fill Removal Quantities

The total quantity of soil/fill expected to be excavated and disposed off-Site is 10,000 tons.

Disposal facilities will be reported to OER when they are identified and prior to the start of remedial action.

End-Point Sampling

Removal actions for development purposes under this plan will be performed in conjunction with confirmation soil sampling. Five confirmation samples will be collected from the base of the excavation at locations to be determined by OER. For comparison to Track 1 SCOs, analytes will include VOCs, SVOC, pesticides, PCBs and metals according to analytical methods described below. For comparison to Track 4 SCOs, analytes will only include trigger compounds.

Hot-spot removal actions, whether established under this RAWP or identified during the remedial program, will be performed in conjunction with post remedial end-point samples to ensure that hot-spots are fully removed. Analytes for end-point sampling will be those

parameters that are driving the hot-spot removal action and will be approved by OER. Frequency for hot-spot end-point sample collection is as follows:

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 end-point 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 ELAP certified labs will be used for all confirmation and end-point sample analyses. Labs performing confirmation and end-point sample analyses will be reported in the RAR. The RAR will provide a tabular and map summary of all confirmation and end-point sample results and will include all data including non-detects and applicable standards and/or

guidance values. End-point samples will be Confirmation samples will be analyzed for compounds and elements as described above utilizing the following methodology:

Soil analytical methods will include:

- Volatile organic compounds by EPA Method 8260;
- Semi-volatile organic compounds by EPA Method 8270;
- Target Analyte List metals; and
- Pesticides/PCBs by EPA Method 8081/8082.

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. Figure 5 shows the locations of proposed end-point samples.

Quality Assurance/Quality Control

Quality assurance (duplicate and trip blanks) and quality control (field blanks) samples will be incorporated into the sampling events, and will consist of duplicate soil and field blank for every 20 end-point soil samples and every groundwater sampling event. In addition, a trip blank will be included in every groundwater sampling event. Soil and ground field blanks will be analyzed for VOCs, SVOCs, Pesticides, PCBs, and metals. The trip blank will be analyzed for only VOCs.

Import and Reuse of Soils

No import of soils onto the property or reuse of on-Site soils is anticipated for the Site. If the plans change during the construction, import of soils onto the property and reuse of soils already onsite will be performed in conformance with the Soil/Materials Management Plan in Appendix 3.

4.3 SOIL AND GROUNDWATER INVESTIGATION

A soil and groundwater investigation will be conducted as part of the RAWP to complete the characterization of subsurface conditions at the Site. The soil and groundwater investigation will be conducted after building demolition activities and prior to installation of the composite

cover system. A motorized drill rig or direct-push drilling unit will be utilized for installation of soil borings and/or the groundwater monitoring well.

The soil investigation will be conducted at a previously inaccessible office area of the Site and will be completed by installation of two borings to approximately two feet below the proposed excavation depths (the "Boring Termination Depth"). The evaluation of soil quality at each boring will follow the protocol of the Remedial Investigation (RI) and will include the continuous screening of soil to the Boring Termination Depth, collection of a minimum of two soil samples from each boring for laboratory analysis, and analysis of soil samples for TCL VOCs, TCL SVOCs, PCBs and pesticides, and TAL metals. From each boring, a shallow soil sample will be collected immediate below the grade surface and another at the Boring Termination Depth. Additional soil samples also will be collected from any depth exhibiting evidence of field contamination.

Groundwater quality evaluation will be completed by installing one additional monitoring well which could not be advanced during the remedial investigation. This groundwater monitoring well will be installed at its proposed location after building demolition and prior to installation of the composite cover system.

A motorized drill rig or direct-push drilling unit will be utilized to install the permanent groundwater monitoring well. Figure 6 shows the proposed location of the soil borings and groundwater monitoring well. As indicated by Figure 6, MW-3 will be located at northeastern portion of the Site. The purpose of this well will be to establish groundwater quality at the presumed upgradient portion of the Site.

Well Construction

Groundwater monitoring wells will be constructed of 2-inch, inner diameter Schedule 40 PVC with a 10-foot slotted PVC screen. The screen will be set to be 5 feet above and 5 below the groundwater table. A solid 2-inch diameter PVC riser will extend from the top of the screen to the surface. A sand pack will be placed around the wells screens to an elevation of one foot above the screen. A two-foot bentonite seal will be placed atop the sand/gravel pack. A cement slurry will be placed around the PVC riser from the bentonite seal to grade. The wells will be finished with a steel flush-mounted manhole cover.

Well Development

Following 48 hours after their installation, the groundwater monitoring wells will be developed via purging a minimum of three well volumes. Purged water will be containerized in a 55-gallon drum and disposed of at an appropriate off-site facility.

Groundwater Sampling Procedures

Groundwater sampling will be performed approximately one week after well development. The newly installed permanent groundwater monitoring wells will be screened for headspace VOC vapors using a PID immediately after opening the well cap. After taking headspace measurements, the groundwater monitoring wells will be gauged for groundwater and/or free product levels. An oil-water interface probe will be utilized to establish the depth to groundwater and/or product.

Representative groundwater samples from each groundwater monitoring well will be collected utilizing low-flow purging and sampling methods. If free product is observed in any of the groundwater monitoring wells, groundwater within that well will not be sampled (See Fingerprinting analysis).

Each groundwater monitoring well will be purged until water quality parameters, such as turbidity, conductivity, pH, and dissolved oxygen, are stabilized (10 percent variation or less) over three consecutive measurements while draw-down during purging is kept to a minimum (0.3 feet or less).

Groundwater samples from each groundwater monitoring well will be placed into laboratory-supplied glassware, immediately stored in an ice-filled cooler, and delivered with a chain-of-custody documentation to an ELAP certified and accredited laboratory. The groundwater samples will be analyzed for TCL VOC by Method 8260, TCL SVOC by Method 8270, TAL metals (dissolved and undissolved) by Methods 6010/7471, and PCBs and pesticides by Methods 8081 and 8082.

Finger Print Analysis

If measurable free product is detected in any groundwater monitoring well, a sample of the free product will be collected from that well. A disposal plastic bailer will be utilized for

collection of the free product sample, and the sample will be submitted for finger print analysis by EPA method 8015.

Surveying

The groundwater monitoring well locations and top of casing elevations to the nearest 0.01 foot will be surveyed. The groundwater well elevations and measured depths to water will be utilized to determine the groundwater flow direction at the Site.

Management of Investigation Derived Waste

Investigation derived waste (IDW) materials generated from the field operations will consist of soil cuttings, and development and purged water. If soil excavation activities are still occurring at the Site, the drill cuttings will be disposed with the excavated soils. If soil excavation has been completed at the Site, the drill cuttings will be stored in 55-gallon drums. The development and purged water will be containerized in 55-gallon drums. After receipt of waste characterization results, the drummed IDW will be disposed at an appropriate off-site facility. The waste manifests documenting the disposal of the IDW will be provided in the final remedial closure report.

4.4 ENGINEERING CONTROLS

The excavation required for the proposed Site development will achieve Track 1 Unrestricted Use SCOs. No Engineering Controls are required to address residual contamination at the Site. However, the following elements will be incorporated into the foundation design as part of the development:

- composite cover system consisting of concrete building slab;
- vapor barrier system;
- passive sub-slab depressurization system;
- ventilated double-level underground parking garage.

If Track 1 is not achieved, these two elements will constitute Engineering Controls that will be employed in the remedial action to address residual contamination remaining at the Site.

Composite Cover System

As part of new development, the entire property will be covered by an engineered permanent cover system. This composite cover system will consist of 8 inches thick concrete building floor slab over the entire footprint of the Site. Figure 7 shows the typical design for each remedial cover type used on this Site.

If Track 1 remedial action is not achieved, the composite cover system will be a permanent engineering control for the Site. The system will be inspected and reported at specified intervals as required by this RAWP and the SMP. A Soil Management Plan will be included in the Site Management Plan and will outline the procedures to be followed in the event that the composite cover system and underlying residual soil/fill is disturbed after the remedial action is complete. Maintenance of this composite cover system will be described in the Site Management Plan in the RAR.

Vapor Barrier

Migration of soil vapor will be mitigated with a combination of building slab and vapor barrier. The vapor barrier, Preprufe® 200 32-mil, manufactured by W. R. Grace & Co., will be installed beneath the proposed building floor, and along the exterior foundation walls to prevent infiltration of vapor into the structure. Penetrations will be grouted if the penetration is not stable, and the membrane will be fitted tight to the penetration. If the membrane is not within 12 mm of the penetration, Preprufe® tape (a self-adhesive 200 mm wide strip) will be used to cover the gap. Bituthene® Liquid Membrane will be applied around the penetrations using a fillet to provide a water tight seal between the Preprufe® membrane and Preprufe® tape. If seams are encountered, Preprufe® tape will be applied. Vertical and horizontal overlaps will be 3 inches. Where applicable, overlap of horizontal and vertical membranes at corners will be 4 inches. Mechanical fastening of overlaps will be in accordance with the manufacturer installation diagram and specifications.

The project's Professional Engineer licensed by the State of New York will have primary direct responsibility for overseen the implementation of the vapor barrier. Figure 8 shows the installation locations and details of the vapor barrier beneath the floor slab and along the exterior foundation walls. Specifications and installation diagrams and a Chemical Compatibility Letter

from the manufacturer are provided in Appendix 5.

Sub-Slab Depressurization System

Migration of soil vapor will be mitigated with the construction of a passive sub-slab depressurization system.

The SSDS will prevent soil gas from accumulating in the building by creating a negative pressure zone beneath the slab. To create this negative pressure zone, a passive SSDS will be installed beneath the mechanical and meter rooms of the proposed sub cellar. The SSDS will consist of one loop per room, installed within porous granular material beneath the sub cellar foundation. The loops will provide sufficient coverage in accordance with USEPA sub-slab depressurization design specifications which recommend a separate vent loop for every 4,000 square feet. The loops will be outfitted with a collection point and riser. The riser will consist of a 4 inch PVC pipe. The PVC riser will be extended approximately 4 feet above roof of the building and will passively exhaust air from beneath the slab to outdoors. The PVC riser will be placed at a minimum distance of 15 feet from all air intakes. Figure 7 shows the details of the passive SSDS. Figure 8 shows the conceptual layout of the passive SSDS.

Ventilation

A double level underground parking garage will be built underneath nearly the entire building and the basement and sub-basement area will be ventilated according to NYC building code. The ventilation system for the basement and sub-basement will act as an additional engineering control to mitigate vapor intrusion.

4.5 INSTITUTIONAL CONTROLS

Institutional Controls are not required on sites that achieve Track 1 Remedial Action. If Track 1 SCOs are not achieved, Institutional Controls (IC) will be utilized in this remedial action to manage residual soil/fill and other media and render the Site protective of public health and the environment. Institutional Controls are listed below. Long-term employment of EC/ICs will be implemented under a site-specific Site Management Plan (SMP) that will be included in the RAR. The property will continue to be registered with an E-Designation by the NYC Buildings Department.

Institutional Controls for this remedial action are:

- The property will continue to be registered with an E-Designation by the NYC Buildings Department. This RAWP includes a description of all ECs and ICs and summarizes the requirements of the Site Management Plan which will note that the property owner and property owner's successors and assigns must comply with the approved SMP;
- Submittal of a Site Management Plan in the RAR for approval by OER that provides procedures for appropriate operation, maintenance, monitoring, inspection, reporting and certification of ECs. SMP will require that the property owner and property owner's successors and assigns will submit to OER a periodic written statement that certifies that: (1) controls employed at the Site are unchanged from the previous certification or that any changes to the controls were approved by OER; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. OER retains the right to enter the Site in order to evaluate the continued maintenance of any controls. This certification shall be submitted at a frequency to be determine by OER in the SMP and will comply with RCNY §43-1407(l)(3).
- Vegetable gardens and farming on the Site are prohibited in contact with residual soil materials;
- Use of groundwater underlying the Site is prohibited without treatment rendering it safe for its intended use;
- All future activities on the Site that will disturb residual material must be conducted pursuant to the soil management provisions in an approved SMP;
- The Site will be used for residential and commercial mixed use and will not be used for a higher level of use without prior approval by OER.

4.6 SITE MANAGEMENT PLAN

Site Management is not required for Track 1 remedial actions. However, if Track 1 SCOs are not achieved, Site Management will be the last phase of remediation and begins with the

approval of the Remedial Action Report and issuance of the Notice of Completion (NOC) for the Remedial Action. The Site Management Plan (SMP) describes appropriate methods and procedures to ensure implementation of all ECs and ICs that are required by this RAWP. The Site Management Plan is submitted as part of the RAR but will be written in a manner that allows its use as an independent document. Site Management continues until terminated in writing by OER. The property owner is responsible to ensure that all Site Management responsibilities defined the Site Management Plan are implemented.

The SMP will provide a detailed description of the procedures required to manage residual soil/fill left in place following completion of the remedial action in accordance with the Voluntary Cleanup Agreement with OER. This includes a plan for: (1) implementation of EC's and ICs; (2) implementation of monitoring programs; (3) operation and maintenance of EC's; (4) inspection and certification of EC's; and (5) reporting.

Site management activities, reporting, and EC/IC certification will be scheduled by OER on a periodic basis to be established in the SMP and will be subject to review and modification by OER. The Site Management Plan will be based on a calendar year and certification reports will be due for submission to OER by July 31 of the year following the reporting period.

4.7 QUALITATIVE HUMAN HEALTH EXPOSURE ASSESSMENT

The objective of the qualitative exposure assessment is to identify potential receptors and pathways for human exposure to the contaminants of concern (COC) that are present at, or migrating from, the Site. The identification of exposure pathways describes the route that the COC takes to travel from the source to the receptor. An identified pathway indicates that the potential for exposure exists; it does not imply that exposures actually occur.

Investigations reported in the Remedial Investigation Report (RIR) are sufficient to complete a Qualitative Human Health Exposure Assessment (QHHEA). As part of the VCP process, a QHHEA was performed to determine whether the Site poses an existing or future health hazard to the Site's exposed or potentially exposed population. The sampling data from the RI were evaluated to determine whether there is any health risk by characterizing the exposure setting, identifying exposure pathways, and evaluating contaminant fate and transport. This QHHEA was

prepared in accordance with Appendix 3B and Section 3.3 (b) 8 of the NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation.

Known and Potential Sources

Urban fill is present at the Site from grade to approximately 8 feet below grade. Based on the results of the RIR, the contaminants of concern are as follows:

Soil:

- Metals including copper, lead, mercury and zinc exceeding Track 1 Unrestricted Use SCOs in shallow soil.

Groundwater:

- VOCs including 1,1,1-Trichloroethane, 1,1-Dichloroethylene and Tetrachloroethylene exceeding GQS in groundwater.
- Metals including magnesium, manganese, selenium and sodium exceeding GQS in groundwater.

Soil Vapor:

- VOCs including 1,1,1-Trichloroethane, PCE and TCE detected at moderate concentrations. PCE and TCE concentrations are within the monitoring level range established by the NYSDOH

Nature, Extent, Fate and Transport of Contaminants

The metals that were detected in the soil were present only in shallow samples collected from the urban fill material with no contamination found in the deeper soil. The contaminants in the fill material also were not found dissolved in the groundwater above their respective GQS. Chlorinated VOCs above their respective GQS were only identified in the sample collected from MW-1 located at southern portion of the Site. Metals slightly above their respective GQS were identified in all the groundwater samples. Chlorinated VOCs were identified in the soil vapor at moderate concentrations.

Potential Routes of Exposure

The five elements of an exposure pathway are: (1) a contaminant source; (2) contaminant release and transport mechanisms; (3) a point of exposure; (4) a route of exposure; and (5) a receptor population. An exposure pathway is considered complete when all five elements of an exposure pathway are documented. A potential exposure pathway exists when any one or more of the five elements comprising an exposure pathway cannot be documented. An exposure pathway may be eliminated from further evaluation when any one of the five elements comprising an exposure pathway has not existed in the past, does not exist in the present, and will never exist in the future. Three potential primary routes exist by which chemicals can enter the body:

- Ingestion of water, fill, or soil;
- Inhalation of vapors and particulates; and
- Dermal contact with water, fill, soil, or building materials.

Existence of Human Health Exposure

Current Conditions: The potential for exposure to urban fill does not exist under current conditions because of the existing concrete slab. Groundwater is not exposed at the Site, and because the Site is served by the public water supply, groundwater is not used at the Site. The only concern is the potential for exposure of soil vapors.
Construction/Remediation Activities: During remedial action, construction workers will be exposed to site constituents including metals in soils as a result of on-Site construction and excavation activities. On-Site construction workers potentially could ingest, inhale or have dermal contact with any exposed impacted soil, and fill. Similarly, off-Site receptors could be exposed to dust and vapors from on-Site activities. During construction, on-Site and off-Site exposures to contaminated dust from on-Site will be addressed through the Soil/Materials Management Plan, dust controls, and through the implementation of the Community Air-Monitoring Program and a Construction Health and Safety Plan.

Proposed Future Conditions: The proposed Site development includes the removal of existing soil to a depth of approximately 21 to 24feet and construction of a new 5-story building with a

full basement floor slab over the entire footprint of the Site. In addition, any soils exhibiting VOC contamination encountered during construction will be excavated and removed from the Site for off-site disposal. These actions will eliminate the potential for direct contact with underlying soil and eliminate the potential for soil in the unsaturated zone to serve as a source of VOCs in soil gas. Any on-Site exposures to residual soil vapor and vapors from off-site sources will be eliminated by installation of a vapor barrier. The site is served by a public water supply, and groundwater is not used at the site. There are no plausible off-site pathways for ingestion, inhalation, or dermal exposure to contaminants derived from the site.

Receptor Populations

On-Site Receptors: Current onsite receptors are limited to workers, site representatives and visitors granted access to the property. During construction, onsite receptors will include construction worker, site representatives, and visitors. After construction, onsite receptors will include child and adult residents and visitors.

Off-Site Receptors: Potential off-site receptors within a 0.25-mile radius of the Site include: adult and child residents; commercial and construction workers; pedestrians; trespassers, and cyclists, based on the following:

1. Commercial Businesses (up to 0.25 miles) – existing and future
2. Residential Buildings (up to 0.25 miles) –existing and future
3. Building Construction/Renovation (up to 0.25 miles) – existing and future
4. Pedestrians, Trespassers, Cyclists (up to 0.25 miles) – existing and future
5. Schools (up to 0.25 mile) – existing and future

Overall Human Health Exposure Assessment

There are no complete exposure pathways for the current site condition. There is a potential complete exposure pathway that requires mitigation during implementation of the remedy. There is no complete exposure pathway under future conditions after the site is developed. This assessment takes into consideration the reasonably anticipated use of the site, which includes residential structures, site-wide impervious surface cover cap, a

ventilated garage and a subsurface vapor barrier system for the building. Potential post-construction use of groundwater is not considered an option because groundwater in this area of New York City is not used as a potable water source.

During the remedial action, on-site exposure pathways will be minimized by preventing access to the Site, through implementation of soils/materials management, storm water pollution prevention, dust controls, employment of a community air monitoring program, and implementation of a construction health and safety plan. After the remedial action is complete, there will be no remaining exposure pathways to on-Site soil/fill, as all soil above Unrestricted Use SCOs will have been removed and a SSDS system and vapor barrier system will have been installed and a ventilated garage will have been built as part of new development.

5.0 REMEDIAL ACTION MANAGEMENT

5.1 PROJECT ORGANIZATION AND OVERSIGHT

Principal personnel who will participate in the remedial action include Reza Sharif, P.E. The Professional Engineer (PE) and Qualified Environmental Professionals (QEP) for this project are Reza Sharif and William Silveri, PG, CHMM.

For the vapor barrier system and passive sub-slab depressurization system installation, Reza Sharif, PE will provide oversight. For the other components of the RAWP, William Silveri, the QEP, will provide oversight.

5.2 SITE SECURITY

Site access will be controlled by DOB approved construction fence. For work areas of limited size, barrier tape will be sufficient to delineate and restrict access.

5.3 WORK HOURS

The hours for operation of remedial construction will be from 7:00 am to 5:00 pm. These hours conform to the New York City Department of Buildings construction code requirements.

5.4 CONSTRUCTION HEALTH AND SAFETY PLAN

The Health and Safety Plan is included in Appendix 4. The Site Safety Coordinator will be Michael DiFonzo. Remedial work performed under this RAWP 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 HASP and applicable laws and regulations. The HASP pertains to remedial and invasive work performed at the Site until the issuance of the Notice of Completion.

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 HASP and be required to sign an HASP 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 HASP. That document will define the specific project contacts for use in case of emergency.

5.5 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, test pit 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.

5.6 AGENCY APPROVALS

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

5.7 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 RAWP. 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 RAWP.

Equipment and Material Staging

Equipment and materials will be stored and staged in a manner that complies with applicable laws and regulations.

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 NYC VCP 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.

Extreme Storm Preparedness and Response Contingency Plan

Damage from flooding or storm surge can include dislocation of soil and stockpiled materials, dislocation of site structures and construction materials and equipment, and dislocation of support of excavation structures. Damage from wind during an extreme storm event can create unsafe or unstable structures, damage safety structures and cause downed power lines creating dangerous site conditions and loss of power. In the event of emergency conditions caused by an extreme storm event, the enrollee will undertake the following steps for site preparedness prior to the event and response after the event.

Storm Preparedness

Preparations in advance of an extreme storm event will include the following: containerized hazardous materials and fuels will be removed from the property; lose materials will be secured to prevent dislocation and blowing by wind or water; heavy equipment such as excavators and

generators will be removed from holes, trenches and depressions on the property to high ground or removed from the property; an inventory of the property with photographs will be performed to establish conditions for the site and equipment prior to the event; stockpile covers for soil and fill will be secured by adding weights such as sandbags for added security and worn or ripped stockpile covers will be replaced with competent covers; stockpiled hazardous wastes will be removed from the property; stormwater management systems will be inspected and fortified, including, as necessary: clean and reposition silt fences, haybales; clean storm sewer filters and traps; and secure and protect pumps and hosing.

Storm Response

At the conclusion of an extreme storm event, as soon as it is safe to access the property, a complete inspection of the property will be performed. A site inspection report will be submitted to OER at the completion of site inspection and after the site security is assessed. Site conditions will be compared to the inventory of site conditions and material performed prior to the storm event and significant differences will be noted. Damage from storm conditions that result in acute public safety threats, such as downed power lines or imminent collapse of buildings, structures or equipment will be reported to public safety authorities via appropriate means such as calling 911. Petroleum spills will be reported to NYS DEC within 2 hours of identification and consistent with State regulations. Emergency and spill conditions will also be reported to OER. Public safety structures, such as construction security fences will be repaired promptly to eliminate public safety threats. Debris will be collected and removed. Dewatering will be performed in compliance with existing laws and regulations and consistent with emergency notifications, if any, from proper authorities. Eroded areas of soil including unsafe slopes will be stabilized and fortified. Dislocated materials will by collected and appropriately managed. Support of excavation structure will be inspected and fortified as necessary. Impacted stockpiles will be contained and damaged stockpile covers will be replaced. Storm-water control systems and structures will be inspected and maintained as necessary. If soil or fill materials are discharged off site to adjacent properties, property owners and OER will be notified and corrective measure plan designed to remove and clean dislocated material will be submitted to OER and implemented following approval by OER and granting of site access by the property owner. Impacted offsite areas may require characterization based on site conditions, at the discretion of OER. If onsite petroleum spills are identified, a qualified environmental

professional will determine the nature and extent of the spill and report to NYS DEC's spill hotline at DEC 800-457-7362. If the source of the spill is ongoing and can be identified, it should be stopped it this can be done safely. Potential hazards will be addressed immediately, consistent with guidance issued by NYS DEC.

Storm Response Reporting

A site inspection report will be submitted to OER at the completion of site inspection. An inspection report established by OER is available on OER's website (www.nyc.gov/oer) and will be used for this purpose. Site conditions will be compared to the inventory of site conditions and material performed prior to the storm event and significant differences will be noted. The site inspection report will be sent to the OER project manager and will include the site name, address, tax block and lot, site primary and alternate contact name and phone number. Damage and soil release assessment will include: whether the project had stockpiles; whether stockpiles were damaged; photographs of damage and notice of plan for repair; report of whether soil from the site was dislocated and whether any of the soil left the site; estimates of the volume of soil that left the site, nature of impact, and photographs; description of erosion damage; description of equipment damage; description of damage to the remedial program or the construction program, such as damage to the support of excavation; presence of onsite or offsite exposure pathways caused by the storm; presence of petroleum or other spills and status of spill reporting to NYS DEC; description of corrective actions; schedule for corrective actions. This report should be completed and submitted to OER project manager with photographs within 24 hours of the time of safe entry to the property after the storm event.

5.8 TRAFFIC CONTROL

Drivers of trucks leaving the NYC VCP 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 are Crescent Street and Queens Boulevard.

5.9 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.

5.10 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 RAWP or other sensitive or time critical information. However, such information will be included in the daily reports. Emergency conditions and changes to the RAWP will be communicated directly to the OER project manager by personal communication. Daily reports will be included as an Appendix in the Remedial Action Report.

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 RAR in digital format (i.e. jpeg files).

5.11 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.

5.12 DEVIATIONS FROM THE REMEDIAL ACTION WORK PLAN

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

- Reasons for deviating from the approved RAWP;
- 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.

6.0 REMEDIAL ACTION REPORT

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

- Information required by this RAWP;
- 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 (if Track 1 is not achieved);
- Description of any changes in the remedial action from the elements provided in this RAWP 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 and DUSR;
- 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.
- Continue registration of the property with an E-Designation by the NYC Department of Buildings.

- Reports and supporting material will be submitted in digital form.

Remedial Action Report Certification

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

I, _____, 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 40-05 Crescent Street Site number.

I, _____, am a qualified Environmental Professional. I had primary direct responsibility for implementation remedial program for the 40-05 Crescent Street, Site number.

I certify that the OER-approved Remedial Action Work 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.

7.0 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 3-month remediation period is anticipated.

Schedule Milestone	Weeks from Remedial Action Start	Duration (weeks)
OER Approval of RAWP	0	2
Fact Sheet 2 announcing start of remedy	2	1
Mobilization	3	2 (days)
Remedial Excavation	3	4
Demobilization	7	2 (days)
Submit Remedial Action Report	12	8

TABLES

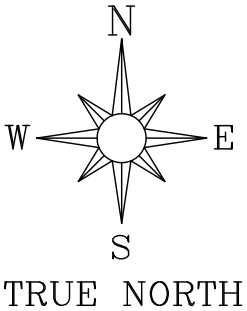
Table 1
Soil Cleanup Objectives (SCOs)
40-05 Crescent Street, Queens, New York

Contaminant	CAS Number	NYSDEC Part 375-6 SCOs for Unrestricted Use (ppm)
Volatile Organic Compounds		
1,1,1-Trichloroethane	71-55-6	0.68
1,1-Dichloroethane	75-34-3	0.27
1,1-Dichloroethene	75-35-4	0.33
1,2-Dichlorobenzene	95-50-1	1.1
1,2-Dichloroethane	107-06-2	0.02
cis-1,2-Dichloroethene	156-59-2	0.25
trans-1,2-Dichloroethene	156-60-5	0.19
1,3-Dichlorobenzene	541-73-1	2.4
1,4-Dichlorobenzene	106-46-7	1.8
1,4-Dioxane	123-91-1	0.1
Acetone	67-64-1	0.05
Benzene	71-43-2	0.06
Butylbenzene	104-51-8	12
Carbon tetrachloride	56-23-5	0.76
Chlorobenzene	108-90-7	1.1
Chloroform	67-66-3	0.37
Ethylbenzene	100-41-4	1
Hexachlorobenzene	118-74-1	0.33
Methyl ethyl ketone	78-93-3	0.12
Methyl tert-butyl ether	1634-04-4	0.93
Methylene chloride	75-09-2	0.05
n-Propylbenzene	103-65-1	3.9
sec-Butylbenzene	135-98-8	11
tert-Butylbenzene	98-06-6	5.9
Tetrachloroethene	127-18-4	1.3
Toluene	108-88-3	0.7
Trichloroethene	79-01-6	0.47
1,2,4-Trimethylbenzene	95-63-6	3.6
1,3,5-Trimethylbenzene	108-67-8	8.4
Vinyl chloride	75-01-4	0.02
Xylene (mixed)	1330-20-7	0.26
Semivolatile Organic Compounds		
Acenaphthene	83-32-9	20
Acenapthylene	208-96-8	100
Anthracene	120-12-7	100
Benz(a)anthracene	56-55-3	1
Benzo(a)pyrene	50-32-8	1
Benzo(b)fluoranthene	205-99-2	1
Benzo(g,h,i)perylene	191-24-2	100
Benzo(k)fluoranthene	207-08-9	0.8
Chrysene	218-01-9	1
Dibenz(a,h)anthracene	53-70-3	0.33
Fluoranthene	206-44-0	100
Fluorene	86-73-7	30
Ideno(1,2,3-cd)pyrene	193-39-5	0.5
m-Cresol	108-39-4	0.33
Naphthalene	91-20-3	12
o-Cresol	95-48-7	0.33
p-Cresol	106-44-5	0.33
Pentachlorophenol	87-86-5	0.8
Phenanthrene	85-01-8	100
Phenol	108-95-2	0.33
Pyrene	129-00-0	100

Table 1
Soil Cleanup Objectives (SCOs)
40-05 Crescent Street, Queens, New York

Contaminant	CAS Number	NYSDEC Part 375-6 SCOs for Unrestricted Use (ppm)
Pesticides/PCBs		
2,4,5-TP Acid (Silvex)	93-72-1	3.8
4,4'-DDE	72-55-9	0.0033
4,4'-DDT	50-29-9	0.0033
4,4'-DDD	72-54-8	0.0033
Aldrin	309-00-2	0.005
alpha-BHC	319-84-6	0.02
beta-BHC	319-85-7	0.036
Chlordane (alpha)	5103-71-9	0.094
delta-BHC	319-86-8	0.04
Dibenzofuran	132-64-9	7
Dieldrin	60-57-1	0.005
Endosulfan I	959-98-8	2.4
Endosulfan II	33213-65-9	2.4
Endosulfan sulfate	1031-07-8	2.4
Endrin	72-20-8	0.014
Heptachlor	76-44-8	0.042
Lindane	58-89-9	0.1
Polychlorinated biphenyls	1336-36-3	0.1
Metals		
Arsenic	7440-38-2	13
Barium	7440-39-3	350
Beryllium	7440-41-7	7.2
Cadmium	7440-43-9	2.5
Chromium hexavalent	18540-29-9	1
Chromium trivalent	16065-83-1	30
Copper	7440-50-8	50
Total Cyanide		27
Lead	7439-92-1	63
Manganese	7439-96-5	1600
Total Mercury		0.18
Nickel	7440-02-0	30
Selenium	7782-49-2	3.9
Silver	7440-22-4	2
Zinc	7440-66-6	109

FIGURES

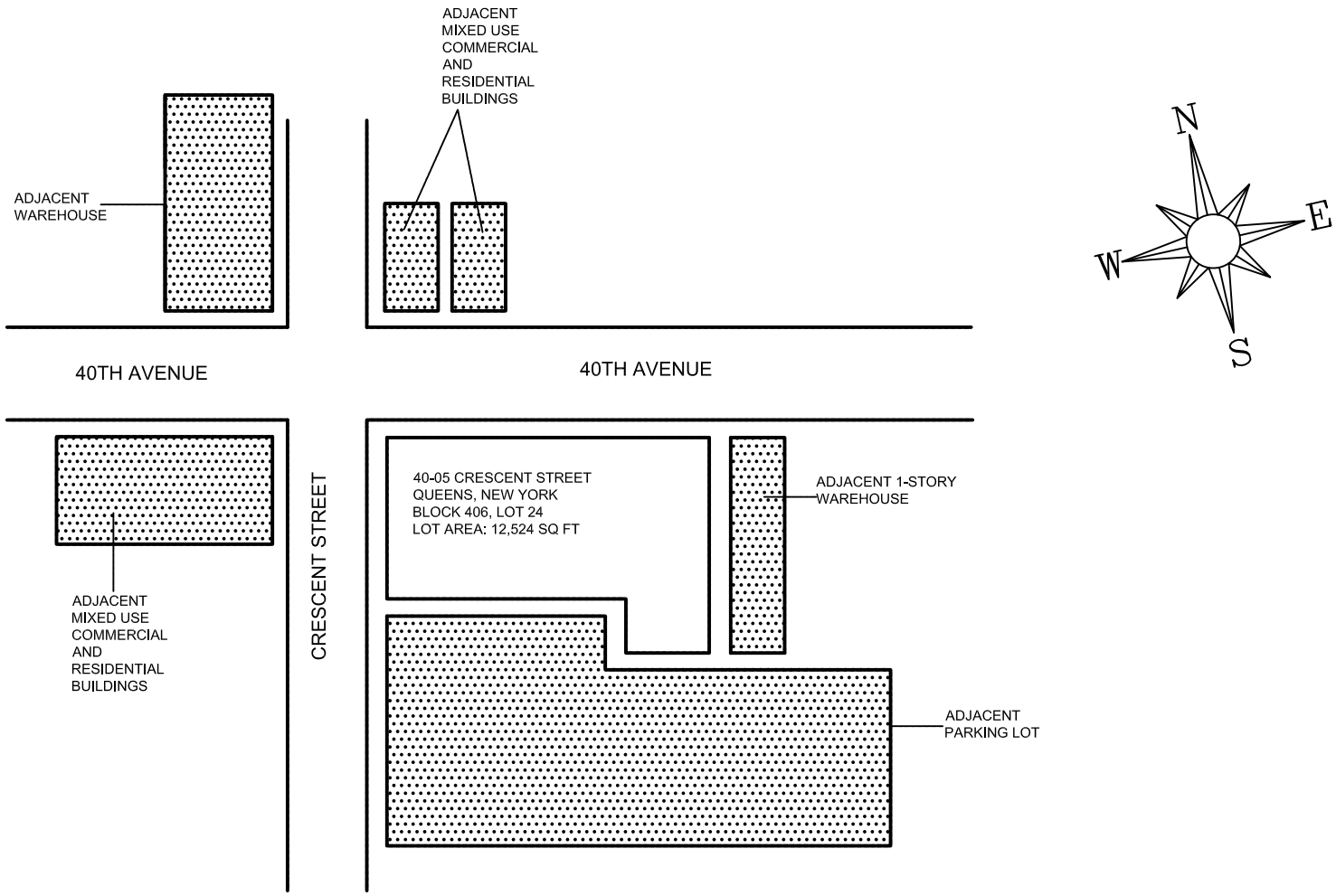


Legend:

PROJECT SITE

ATHENICA ENVIRONMENTAL SERVICES, INC,
Environmental Consultants

Date:	OCTOBER 23, 2013	Site map:	REMEDIAL INVESTIGATION REPORT 40-05 CRESCENT STREET QUEENS, NY 11101
Drawn by:	ALEJANDRO MOREJON CORTINA		
Checked by:	WILLIAM SILVERI		
Drawing Scale:	NTS	Figure:	1
Project No.:	13-1235	Title:	PROJECT SITE LOCATION



Legend:

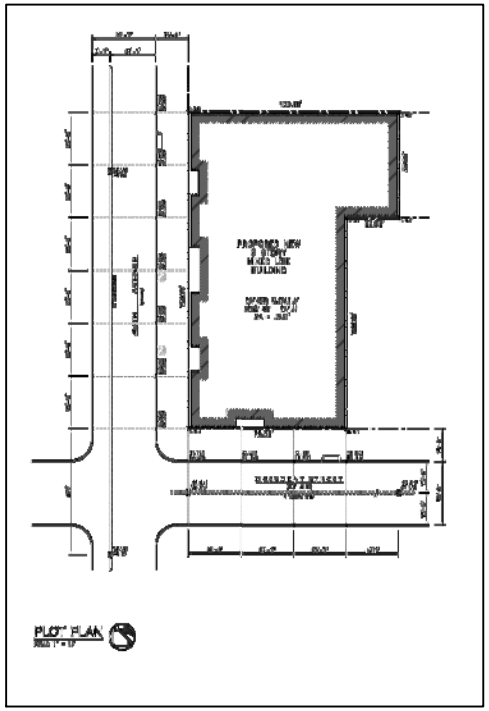
SITE BUILDING BOUNDARY / PROPERTY BOUNDARY

Scale:

0' 50' 100'

ATHENICA ENVIRONMENTAL SERVICES, INC.
Environmental Consultants

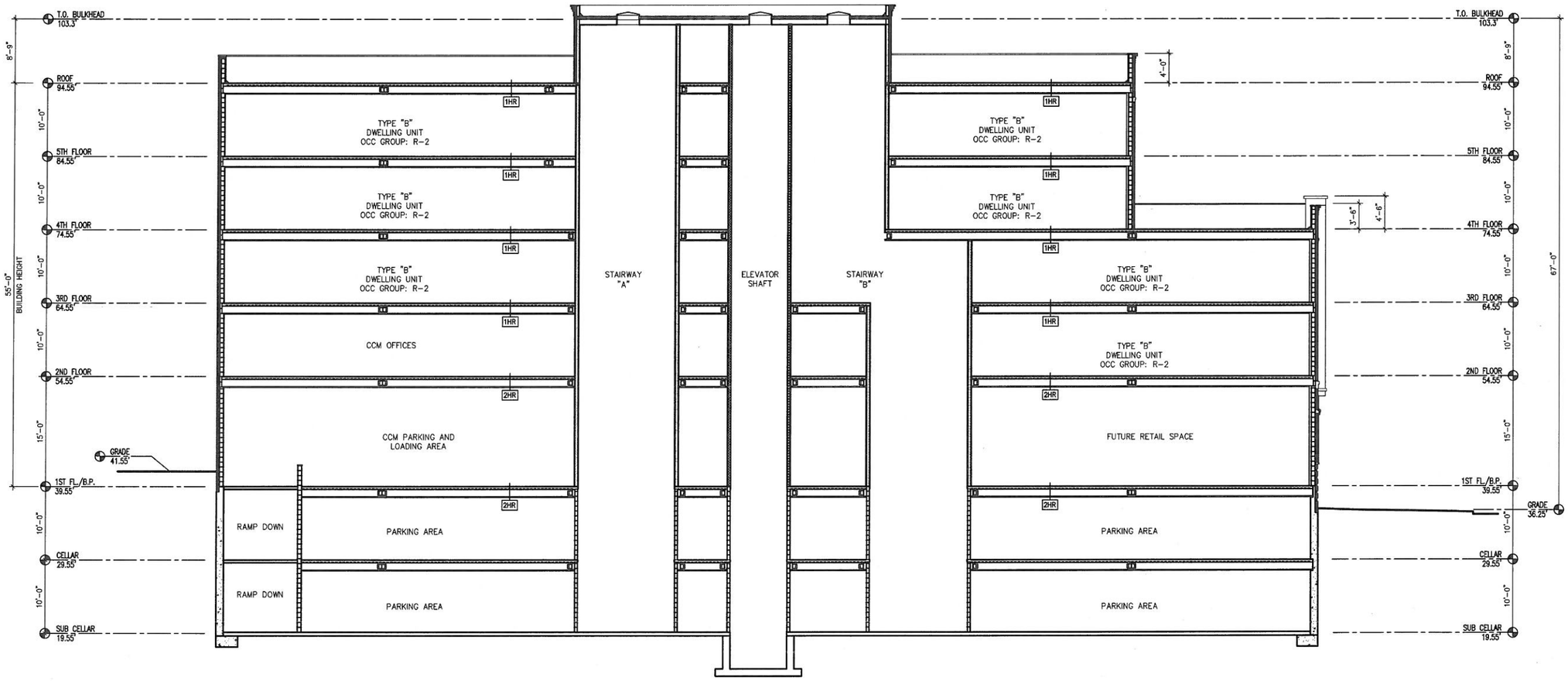
Drawn by:	EZGI KARAYEL	Site Plan:	REMEDIAL INVESTIGATION REPORT 40-05 CRESCENT STREET, QUEENS, NEW YORK
Checked by:	WILLIAM SILVERI		
Drawing Scale:	AS NOTED		
Project No:	13-1235	Figure:	FIGURE 2
Date:	MARCH 28, 2014	Title:	SITE MAP
Sheet in contract:	1		



PLOT PLAN
PROPOSED MIXED USE
5-STORY BUILDING

RENDERED PERSPECTIVE

Scale: AS NOTED	ATHENICA ENVIRONMENTAL SERVICES, INC. Environmental Consultants	Drawn by: EZGI KARAYEL	Site Plan: REMEDIAL INVESTIGATION REPORT 40-05 CRESCENT STREET, QUEENS, NEW YORK
		Checked by: WILLIAM SILVERI	
		Drawing Scale: AS NOTED	
		Project No: 13-1235	Figure: FIGURE 3
		Date: MARCH 28, 2014	Title: PROPOSED SITE REDEVELOPMENT PLAN
		Sheet In contract: 1	

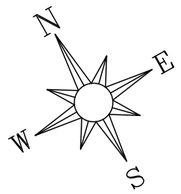


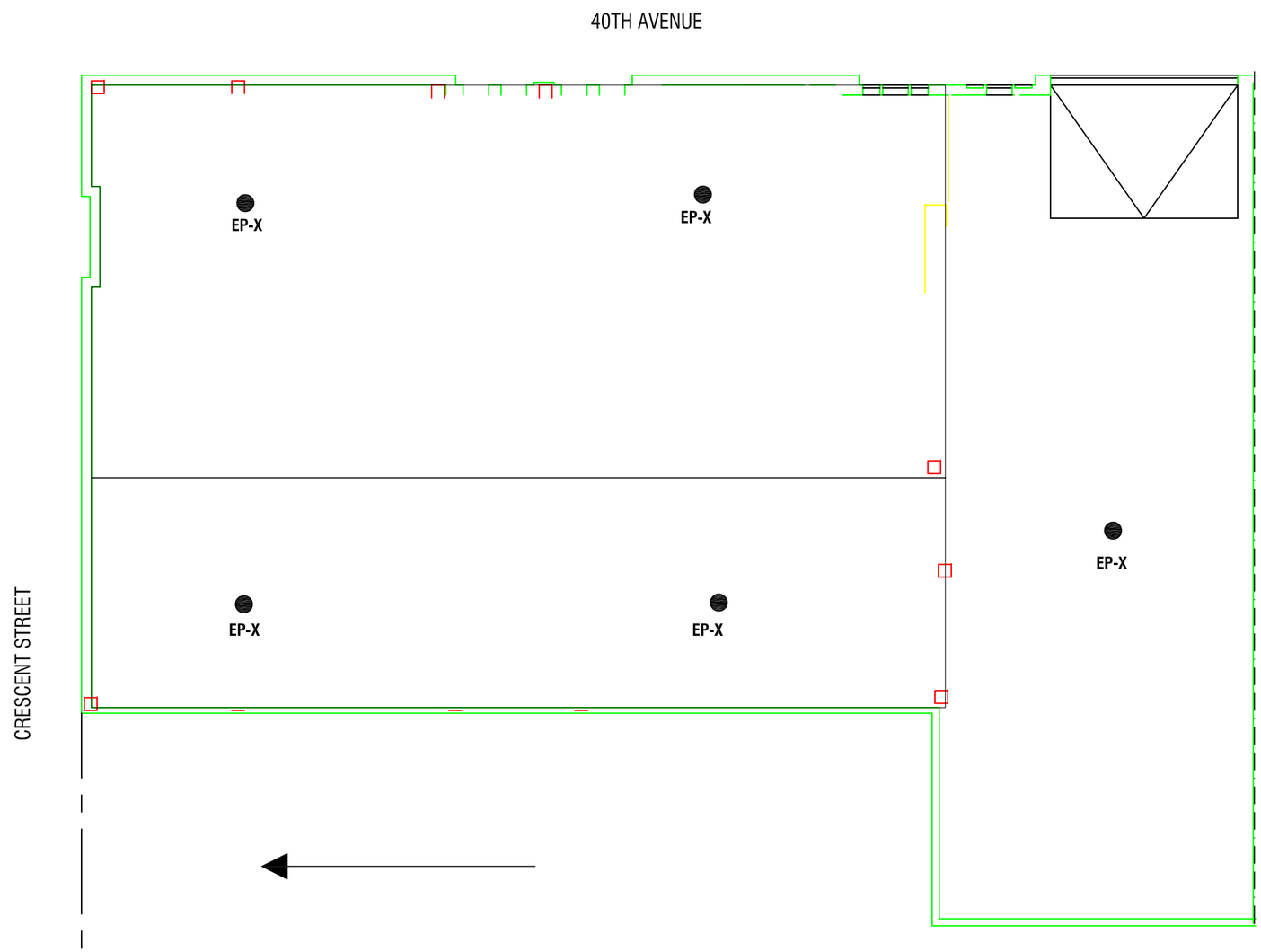
Visual Scale:

0' 5' 10' 20'

ATHENICA ENVIRONMENTAL SERVICES, INC,
Environmental Consultants

Date:	July 7, 2014	Site Map:	REMEDIAL ACTION WORK PLAN 40-05 CRESCENT STREET QUEENS, NY 11101
Drawn by:	ALEJANDRO MOREJON	Figure:	4
Checked by:	WILLIAM SILVERI	Title:	PROPOSED EXCAVATION PLAN
Drawing Scale:	1/16" = 1'-0"		
Project No.:	13-1235		





Legend:

EP-X PROPOSED END-POINT SAMPLE LOCATIONS

— — · — SITE BOUNDARY

Visual Scale:

0' 5' 10' 20'

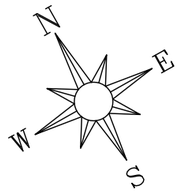
ATHENICA ENVIRONMENTAL SERVICES, INC,
Environmental Consultants

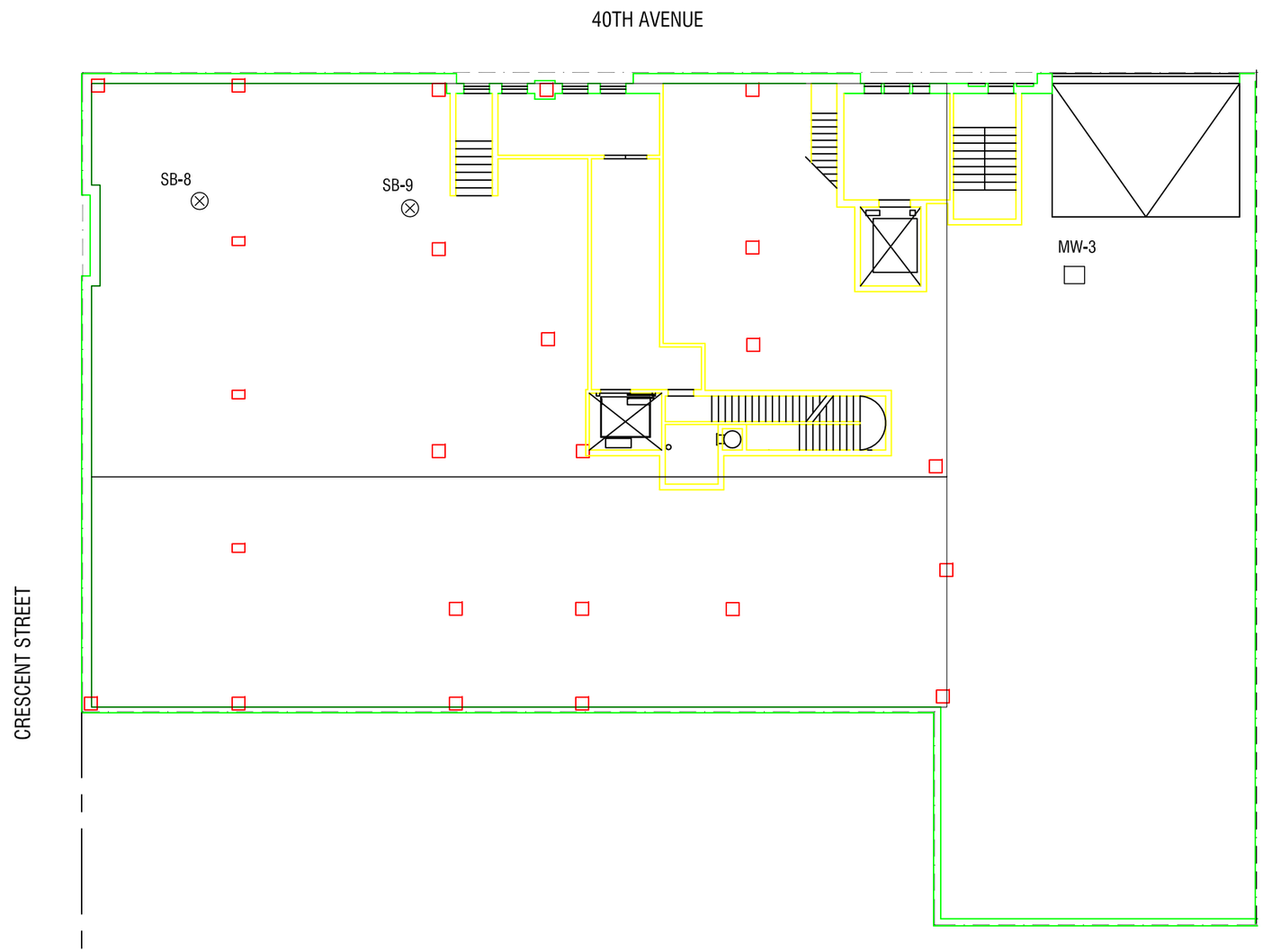
Date:	APRIL 21, 2014
Drawn by:	EZGI KARAYEL
Checked by:	WILLIAM SILVERI
Drawing Scale:	1/32" = 1'-0"
Project No.:	13-1235

Site Map: REMEDIAL ACTION WORK PLAN
40-05 CRESCENT STREET
QUEENS, NY 11101

Figure: 5

Title: PROPOSED END-POINT SAMPLE LOCATIONS





Legend:

⊗ PROPOSED SOIL BORING LOCATIONS

— — · — SITE BOUNDARY

□ PROPOSED MONITORING WELL LOCATION

Visual Scale:

0' 5' 10' 20'

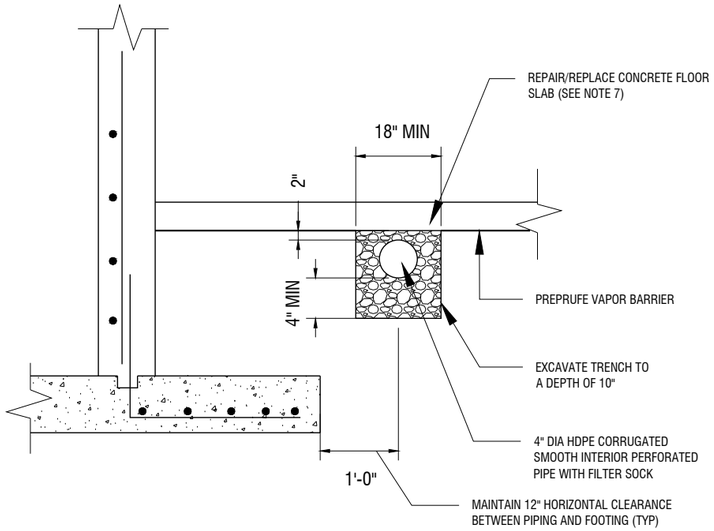
ATHENICA ENVIRONMENTAL SERVICES, INC,
Environmental Consultants

Date:	APRIL 21, 2014
Drawn by:	EZGI KARAYEL
Checked by:	WILLIAM SILVERI
Drawing Scale:	1/32" = 1'-0"
Project No.:	13-1235

Site Map: REMEDIAL ACTION WORK PLAN
40-05 CRESCENT STREET
QUEENS, NY 11101

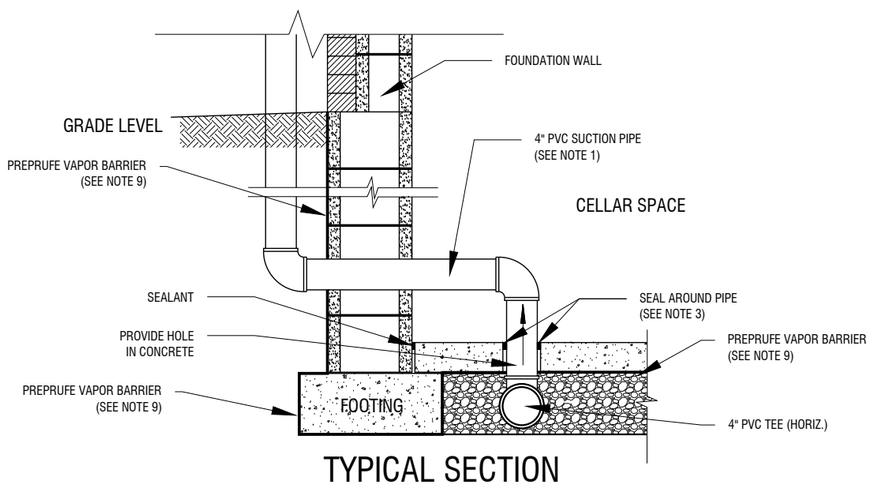
Figure: 6

Title: PROPOSED SOIL BORING AND MONITORING WELL LOCATIONS



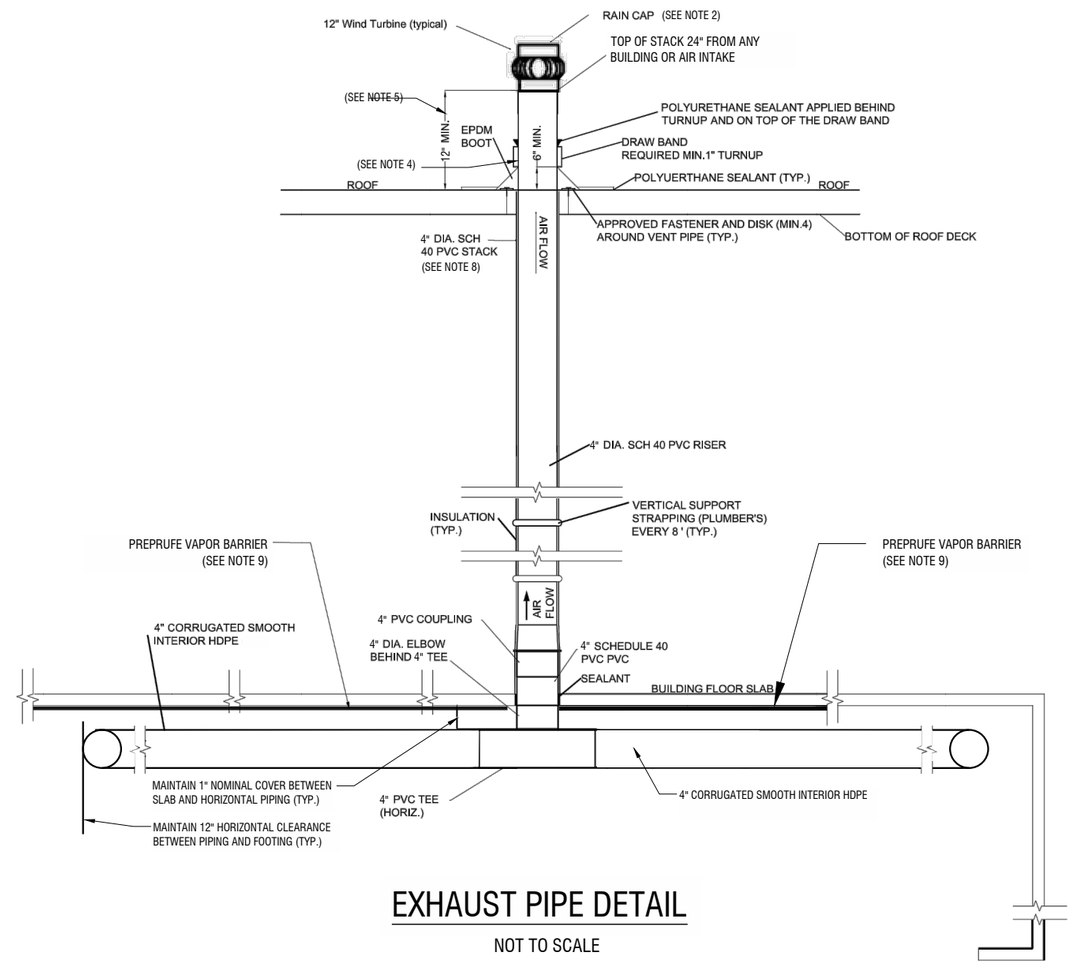
SSD DETAIL FOR PIPE BENEATH FLOOR SLAB

NOT TO SCALE



TYPICAL SECTION

NOT TO SCALE



EXHAUST PIPE DETAIL

NOT TO SCALE

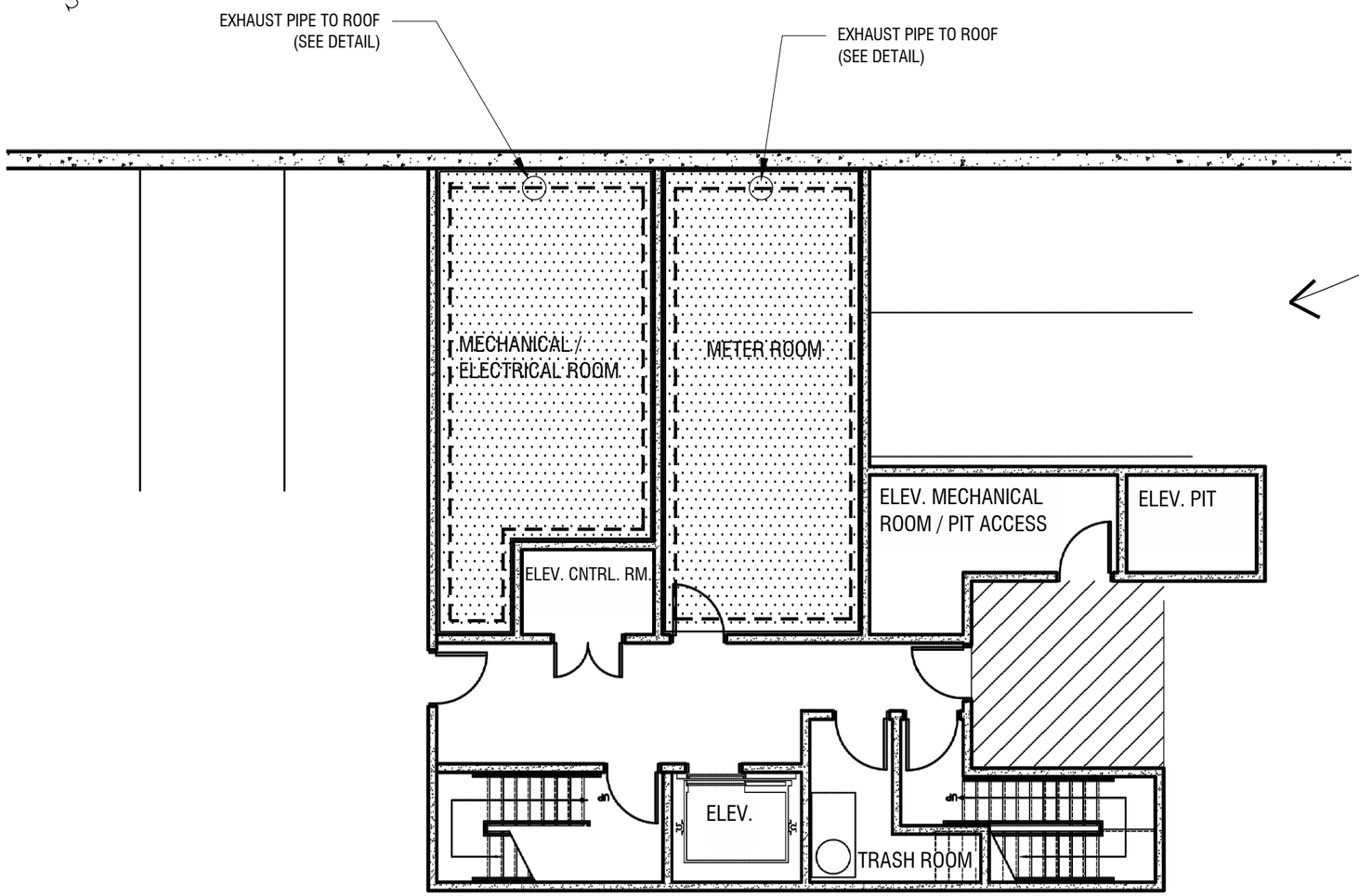
SECTION NOTES:

1. PVC PIPE IS DUAL RATED DWV / SCH. 40 WITH DWV FITTINGS. ALL PIPING SHALL BE INSTALLED WITH CLEAR LOW VOLATILE ORGANIC COMPOUND (VOC) GLUE AND PRIMER (IPS OR HERCULES).
2. RCI RAIN CAP #RC40-4 OR EQUAL. (1-REQUIRED)
3. GEOCEL 3300 POLYURETHANE SEALANT AROUND PIPE OPENING.
4. WRAP PIPE WITH A 6" WIDE PIECE OF EPDM WHERE PIPE COMES INTO CONTACT WITH THE BOX AND SILL OF THE BUILDING.
5. THE EXHAUST SHOULD BE A MINIMUM OF 10 FEET FROM ANY BUILDING OPENING OR AIR INTAKE, ABOVE THE EAVE AND PARAPET OF THE ROOF, AND 12" ABOVE THE ROOF
6. NEW CONCRETE FLOOR SLAB SHALL BE LAID OVER A MINIMUM 20-MIL PREPRUFE®
7. CONCRETE FLOOR SLAB SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL BUILDING CODES. ADDITIONAL REFS AMERICAN CONCRETE INSTITUTE PUBLICATIONS, "ACI302.19" & "ACI332R", OR THE POST TENSIONING INSTITUTE MANUAL, "DESIGN AND CONSTRUCTION OF POST-TENSIONED SLABS ON GROUND".
8. VENT PIPES SHALL BE INSTALLED SO THAT ANY RAIN WATER OR CONDENSATION DRAINS DOWNWARD INTO THE GROUND BENEATH THE SLAB OR SOIL-GAS-RETARDER MEMBRANE A MINIMUM PITCH OF ⅛" PER FOOT.
9. GRACE PREPRUFE® 200 OR BITUTHANE 3000 / 4000 WILL BE USED.

Scale: NTS

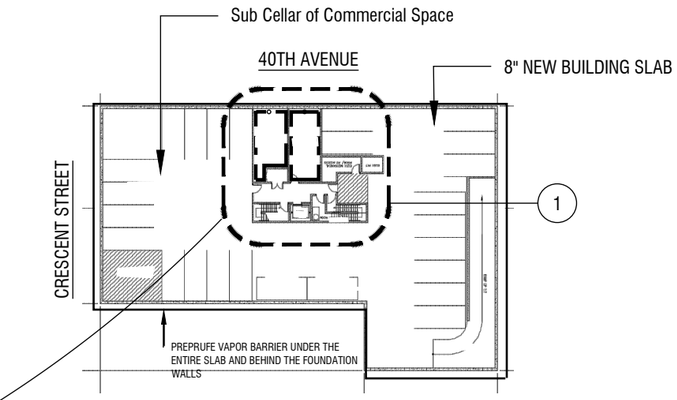
ATHENICA ENVIRONMENTAL SERVICES, INC,
Environmental Consultants

Date:	SEPTEMBER 23, 2014	Site map:	40-05 CRESCENT STREET LONG ISLAND CITY, NY 11101
Drawn by:	ALEJANDRO MOREJON		
Checked by:	EZGI KARAYEL		
Drawing Scale:	NOT TO SCALE	Figure:	7
Project No.:	13-1235	Title:	DETAILS OF SUB-SLAB DEPRESSURIZATION SYSTEM & VAPOR BARRIER SYSTEM



1 SUB CELLAR DETAIL

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



SITE PLAN

NTS

NOTE:

1. THE SUB-SLAB DEPRESSURIZATION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE NEW YORK CITY MECHANICAL CODE NYC 512.
2. THE SUB-SLAB DEPRESSURIZATION SYSTEM (SSDS) SHALL BE INSTALLED IN ACCORDANCE WITH THE NEW YORK STATE DEPARTMENT OF HEALTH GUIDANCE FOR EVALUATING SOIL VAPOR INTRUSION IN THE STATE OF NEW YORK, JUNE 2006.
3. LOCATIONS OF SSDS PITS, TRENCHES & PIPING ARE APPROXIMATE AND ARE TO BE FIELD VERIFIED BY CONTRACTOR AND SUBJECT TO CHANGE BY THE ENGINEER.
4. THE PIPING SHOULD BE SLOPED A MINIMUM OF 1/8" PER FOOT TOWARD THE SUB-SLAB TO REDUCE POTENTIAL SYSTEM SYSTEM IMPEDIMENTS FROM RAIN WATER OR CONDENSATION.
5. SYSTEM BACKFILL SHALL MEET SIZE #5 AGGREGATE SPECIFICATIONS, AS DEFINED BY ASTM C-33-90.
6. NOTES PRESENTED ON THIS FIGURE RELATE SOLELY TO THE SUB-SLAB DEPRESSURIZATION SYSTEM COMPONENTS AND NOT TO ARCHITECTURAL, STRUCTURAL, ELECTRICAL OR OTHER REFERENCES.

Legend:

- STREET LINE
- SSDS PIPING LOOP
- TRENCH AND 4" PVC PIPE
- PROPOSED AREA OF SUB CELLAR SUBJECT TO SUB-SLAB DEPRESSURIZATION SYSTEM (SSDS)

Bar Scale:

0' 1' 5' 10'

ATHENICA ENVIRONMENTAL SERVICES, INC,
Environmental Consultants

Date:	August 15, 2014	Site map:	40-05 CRESCENT STREET LONG ISLAND CITY, NY 11101
Drawn by:	ALEJANDRO MOREJON		
Checked by:	ETHAN RAINEY		
Drawing Scale:	AS NOTED	Figure:	8
Project No.:	13-1235	Title:	LAYOUT OF SUB-SLAB DEPRESSURIZATION SYSTEM

APPENDICES

APPENDIX 1

CITIZEN PARTICIPATION PLAN

The NYC Office of Environmental Remediation and Crescent Owners, LLC have established this Citizen Participation Plan because the opportunity for citizen participation is an important component of the NYC Voluntary Cleanup Program. This Citizen Participation Plan describes how information about the project will be disseminated to the Community during the remedial process. As part of its obligations under the NYC VCP, Crescent Owners, LLC will maintain a repository for project documents and provide public notice at specified times throughout the remedial program. This Plan also takes into account potential environmental justice concerns in the community that surrounds the project Site. Under this Citizen Participation Plan, project documents and work plans are made available to the public in a timely manner. Public comment on work plans is strongly encouraged during public comment periods. Work plans are not approved by the NYC Office of Environmental Remediation (OER) until public comment periods have expired and all comments are formally reviewed. An explanation of cleanup plans in the form of a public meeting or informational session is available upon request to OER's project manager assigned to this Site, Rebecca Bub, who can be contacted about these issues or any others questions, comments or concerns that arise during the remedial process at (212) 788-8841

Project Contact List. OER has established a Site Contact List for this project to provide public notices in the form of fact sheets to interested members of the Community. Communications will include updates on important information relating to the progress of the cleanup program at the Site as well as to request public comments on the cleanup plan. The Project Contact List includes owners and occupants of adjacent buildings and homes, principal administrators of nearby schools, hospitals and day care centers, the public water supplier that serves the area, established document repositories, the representative Community Board, City Council members, other elected representatives and any local Brownfield Opportunity Area (BOA) grantee organizations. Any member of the public or organization will be added to the Site Contact List on request. A copy of the Site Contact List is maintained by OER's project

manager. If you would like to be added to the Project Contact List, contact NYC OER at (212) 788-8841 or by email at brownfields@cityhall.nyc.gov.

Repositories. A document repository is maintained in the nearest public library that maintains evening and weekend hours. This document repository is intended to house, for community review, all principal documents generated during the cleanup program including Remedial Investigation plans and reports, Remedial Action work plans and reports, and all public notices and fact sheets produced during the lifetime of the remedial project. Crescent Owners, LLC will inspect the repositories to ensure that they are fully populated with project information. The repository for this project is:

Queens Public Library – Long Island City Branch

37-44 21st Street, Long Island City, NY

(718) 752-3700

Mon: 9:00 am – 8:00 pm

Tues: 2:00 pm – 7:00 pm

Wed-Thu-Fri: 11:00 am – 7:00 pm

Sat: 10:00 am – 5:30 pm

Sun: Closed

Digital Documentation. NYC OER strongly encourages the use of digital documents in repositories as a means of minimizing paper use while also increasing convenience in access and ease of use.

Identify Issues of Public Concern. Enrollee is required to identify whether there are specific issues of concern to stakeholders proximate to the project site. Such issues include but are not limited to interests of Environmental Justice communities. This section should list any site-specific issues of public concern and the method that they will be used resolved them. If needed, contact OER for additional guidance on how to identify issues of public concern.

Public Notice and Public Comment. Public notice to all members of the Project Contact List is required at three major steps during the performance of the cleanup program (listed below) and at other points that may be required by OER. Notices will include Fact Sheets with descriptive project summaries, updates on recent and upcoming project activities, repository

information, and important phone and email contact information. All notices will be prepared by Crescent Owners, LLC, reviewed and approved by OER prior to distribution and mailed by Crescent Owners, LLC. Public comment is solicited in public notices for all work plans developed under the NYC Voluntary Cleanup Program. Final review of all work plans by OER will consider all public comments. Approval will not be granted until the public comment period has been completed.

Citizen Participation Milestones. Public notice and public comment activities occur at several steps during a typical NYC VCP project. See flow chart on the following page, which identifies when during the NYC VCP public notices are issued: These steps include:

- **Public Notice of the availability of the Remedial Investigation Report and Remedial Action Work Plan and a 30-day public comment period on the Remedial Action Work Plan.**

  Public notice in the form of a Fact Sheet is sent to all parties listed on the Site Contact List announcing the availability of the Remedial Investigation Report and Remedial Action Work Plan and the initiation of a 30-day public comment period on the Remedial Action Work Plan. The Fact Sheet summarizes the findings of the RIR and provides details of the RAWP. The public comment period will be extended an additional 15 days upon public request. A public meeting or informational session will be conducted by OER upon request.

- **Public Notice announcing the approval of the RAWP and the start of remediation**

  Public notice in the form of a Fact Sheet is sent to all parties listed on the Site Contact List announcing the approval of the RAWP and the start of remediation.

- **Public Notice announcing the completion of remediation, designation of Institutional and Engineering Controls and issuance of the Notice of Completion**

Public notice in the form of a Fact Sheet is sent to all parties listed on the Site Contact List announcing the completion of remediation, providing a list of all Institutional and Engineering Controls implemented for to the Site and announcing the issuance of the Notice of Completion.

APPENDIX 2

SUSTAINABILITY STATEMENT

This Sustainability Statement documents sustainable activities and green remediation efforts planned under this remedial action.

Reuse of Clean, Recyclable Materials. Reuse of clean, locally-derived recyclable materials reduces consumption of non-renewable virgin resources and can provide energy savings and greenhouse gas reduction.

An estimate of the quantity (in tons) of clean, non-virgin materials (reported by type of material) reused under this plan will be quantified and reported in the RAR.

Reduce Consumption of Virgin and Non-Renewable Resources. Reduced consumption of virgin and non-renewable resources lowers the overall environmental impact of the project on the region by conserving these resources.

The project will reduce the consumption of virgin materials by substituting recycled gravel for mined gravel whenever possible. In addition, recognizable and uncontaminated construction demolition debris, consisting mainly of bricks and brick fragments will be segregated at the Site and taken to a local facility for off-site re-use, further reducing the consumption of virgin and Non-Renewable Resources by others.

An estimate of the quantity (in tons) of virgin and non-renewable resources, the use of which will be avoided under this plan, will be quantified and reported in the RAR.

Reduced Energy Consumption and Promotion of Greater Energy Efficiency. Reduced energy consumption lowers greenhouse gas emissions, improves local air quality, lessens in-city power generation requirements, can lower traffic congestion, and provides substantial cost savings.

Best efforts will be made to quantify energy efficiencies achieved during the remediation and will be reported in the Remedial Action Report (RAR). Where energy savings cannot be easily quantified, a gross indicator of the amount of energy saved or the means by which energy savings was achieved will be reported.

Conversion to Clean Fuels. Use of clean fuel improves NYC's air quality by reducing harmful emissions.

Recontamination Control. Recontamination after cleanup and redevelopment is completed undermines the value of work performed, may result in a property that is less protective of public health or the environment, and may necessitate additional cleanup work later or impede future redevelopment. Recontamination can arise from future releases that occur within the property or by influx of contamination from off-Site.

Under future conditions, vapor intrusion from potential off-site sources will be prevented though the use of a vapor barrier beneath the building slab and from potential on-site sources by screening of soils VOC-related contamination during excavation.

An estimate of the area of the Site that utilizes recontamination controls under this plan will be reported in the RAR in square feet.

Storm-water Retention. Storm-water retention improves water quality by lowering the rate of combined storm-water and sewer discharges to NYC's sewage treatment plants during periods of precipitation, and reduces the volume of untreated influent to local surface waters.

An estimate of the enhanced storm-water retention capability of the redevelopment project will be included in the RAR.

Linkage with Green Building. Green buildings provide a multitude of benefits to the city across a broad range of areas, such as reduction of energy consumption, conservation of resources, and reduction in toxic materials use.

Paperless Brownfield Cleanup Program. Crescent Owners, LLC is participating in OER's Paperless Brownfield Cleanup Program. Under this program, submission of electronic documents will replace submission of hard copies for the review of project documents, communications and milestone reports.

Low-Energy Project Management Program. Crescent Owners, LLC is participating in OER's low-energy project management program. Under this program, whenever possible, meetings are held using remote communication technologies, such as videoconferencing and

teleconferencing to reduce energy consumption and traffic congestion associated with personal transportation.

Trees and Plantings. Trees and other plantings provide habitat and add to NYC's environmental quality in a wide variety of ways. Native plant species and native habitat provide optimal support to local fauna, promote local biodiversity, and require less maintenance.

An estimate of the land area that will be vegetated, including the number of trees planted or preserved, will be reported in square feet in the RAR.

APPENDIX 3

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 RAR. Soil screening will be performed during invasive work performed during the remedy and development phases prior to issuance of the Notice of Completion.

1.2 STOCKPILE METHODS

Excavated soil from suspected areas of contamination (e.g., hot spots, USTs, 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.

All stockpile activities will be compliant with applicable laws and regulations. Soil stockpile areas will be appropriately graded to control run-off in accordance with applicable laws and regulations. Stockpiles of excavated soils and other materials shall be located at least of 50 feet from the property boundaries, where possible. Hay bales or equivalent will surround soil stockpiles except for areas where access by equipment is required. Silt fencing and hay bales will be used as needed near catch basins, surface waters and other discharge points.

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. Soils proposed for reuse on-Site will be managed as defined in this plan.

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 grading cuts will not interfere with, or otherwise impair or compromise the remedial activities proposed in this RAWP;
- 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 is from Crescent Street towards Queens Boulevard. 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 Enrollee 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 Queens, 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 Enrollee. 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 RAR.

The Remedial Action Report 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 RAR.

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 RAR. A manifest system for off-Site transportation of exported materials will be employed. Manifest information will be reported in the RAR. Hazardous wastes derived from on-Site will be stored, transported, and disposed of in compliance with applicable laws and regulations.

If disposal of soil/fill from this Site is proposed for unregulated disposal (i.e., clean soil removed for development purposes), including transport to a Part 360-16 Registration Facility, a formal request will be made for approval by OER with an associated plan compliant with 6NYCRR Part 360-16. This request and plan will include the location, volume and a description of the material to be recycled, including verification that the material is not impacted by site uses and that the material complies with receipt requirements for recycling under 6NYCRR Part 360. This material will be appropriately handled on-Site to prevent mixing with impacted material.

1.7 MATERIALS REUSE ON-SITE

Soil and fill that is derived from the property that meets the soil cleanup objectives established in this plan may be reused on-Site. The soil cleanup objectives for on-Site reuse are listed in Table 1. 'Reuse on-Site' means material that is excavated during the remedy or development, does not leave the property, and is relocated within the same property and on comparable soil/fill material, and addressed pursuant to the NYC VCP agreement subject to Engineering and Institutional Controls. The PE/QEP will ensure that reused materials are segregated from other materials to be exported from the Site and that procedures defined for material reuse in this RAWP are followed. OER will be notified if soil will be reused on-Site.

Organic matter (wood, roots, stumps, etc.) or other waste derived from clearing and grubbing of the Site will not be buried on-Site. Soil or fill excavated from the site for grading or other purposes will not be reused within a cover soil layer or within landscaping berms.

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 SMP; 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 RAR.

This demarcation will constitute the top of the site management horizon. Materials within this horizon require adherence to special conditions during future invasive activities as defined in the Site Management Plan.

1.9 IMPORT OF BACKFILL SOIL FROM OFF-SITE SOURCES

This Section presents the requirements for imported fill materials to be used below the cover layer and within the clean soil cover layer. All imported soils will meet OER-approved backfill and cover soil quality objectives for this Site. The backfill and cover soil quality objectives are listed in Table 1.

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 RAWP. The RAR will report the source of the fill, evidence that an inspection was performed on the source, chemical sampling results, frequency of testing, and a Site map indicating the locations where backfill or soil cover 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.

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 RAR. 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 RAWP (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 toe 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 TAL metals, TCL volatiles and semi-volatiles, TCL pesticides and PCBs, 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 Remedial Action Report.

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 Action 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 clearing and grubbing, and during the remedial program, as necessary, to prevent nuisances.

APPENDIX 4

HEALTH AND SAFETY PLAN

CONSTRUCTION HEALTH & SAFETY PLAN

40-05 CRESCENT STREET
QUEENS, NEW YORK

Prepared for:

CRESCENT OWNERS, LLC

40-05 CRESCENT STREET

QUEENS, New York 11101

Prepared by:

ATHENICA ENVIRONMENTAL SERVICES, INC.
Environmental Consultants

45-09 GREENPOINT AVENUE
LONG ISLAND CITY, NY 11104

TABLE OF CONTENTS

1.0 GLOSSARY OF TERMS 1-1

2.0 INTRODUCTION 2-3
2.1 SITE HISTORY 2-4
2.2 SCOPE OF WORK 2-4

3.0 KEY PERSONNEL 3-7
3.1 PROJECT MANAGER (PM) 3-7
3.2 CONSTRUCTION SUPERINTENDENT (CS) 3-7
3.3 HEALTH AND SAFETY OFFICER (HSO) 3-8
3.4 PROJECT SAFETY MANAGER (PSM) 3-8
3.5 EMPLOYEE SAFETY RESPONSIBILITIES 3-9

4.0 ACTIVITY HAZARD ANALYSIS 4-1
4.1 CHEMICAL HAZARDS 4-1
4.2 PHYSICAL HAZARDS 4-3
4.3 ENVIRONMENTAL HAZARDS 4-3
4.3.1 Heat Stress 4-4
4.3.2 Exposure to Cold 4-6
4.3.2.1 Cold Stress Conditions and Symptoms 4-6
4.3.2.2 Monitoring and Preventative Actions 4-7
4.3.3 Biological Hazards 4-9
4.3.4 Noise 4-10
4.4 VEHICLE AND HEAVY EQUIPMENT SAFETY 4-10
4.4.1 Vehicle Safety 4-10
4.4.2 Heavy Equipment Safety 4-10
4.5 TASK-SPECIFIC ACTIVITY HAZARD ANALYSES (AHA) 4-10

5.0 WORK AND SUPPORT AREAS 5-1
5.1 EXCLUSION ZONE (EZ) 5-1
5.2 CONTAMINATION - REDUCTION ZONE (CRZ) 5-1
5.3 SUPPORT ZONE (SZ) 5-1
5.4 SITE CONTROL LOG 5-1
5.5 GENERAL 5-2

6.0 PROTECTIVE EQUIPMENT 6-1
6.1 ANTICIPATED PROTECTION LEVELS 6-1
6.2 PROTECTION LEVEL DESCRIPTIONS 6-1
6.2.1 Level D 6-2

7.0 DECONTAMINATION PROCEDURES 7-1
7.1 PERSONNEL DECONTAMINATION 7-1

7.1.1 Suspected Contamination 7-1
7.1.2 Personal Hygiene 7-1
7.2 EQUIPMENT DECONTAMINATION 7-1
7.3 DISPOSAL OF WASTES 7-2
7.4 DUST /EROSION CONTROL 7-2

8.0 AIR MONITORING 8-1
8.1 WORK AREA AIR MONITORING 8-1
8.1.1 Direct Reading Air Monitoring 8-1
8.1.2 Instrumentation 8-1
8.1.3 Use And Maintenance Of Survey Equipment 8-1
8.1.4 Air Monitoring Recordkeeping 8-2
8.1.5 Action Levels 8-2

9.0 EMERGENCY RESPONSE AND CONTINGENCY PLAN (ERCP) 9-4
9.1 PRE-EMERGENCY PLANNING 9-4
9.2 EMERGENCY RECOGNITION AND PREVENTION 9-5
9.3 EMERGENCY TELEPHONE NUMBERS 9-5
9.4 PERSONNEL ROLES, LINES OF AUTHORITY, AND COMMUNICATIONS 9-8
9.4.1 Responsibilities and Duties 9-8
9.4.2 On-Site Emergency Coordinator Duties 9-8
9.5 SAFE DISTANCES AND PLACES OF REFUGE 9-10
9.6 EVACUATION ROUTES AND PROCEDURES 9-11
9.6.1 Evacuation Signals and Routes 9-11
9.6.2 Evacuation Procedures 9-11
9.7 EMERGENCY SPILL RESPONSE PROCEDURES AND EQUIPMENT 9-12
9.7.1 Notification Procedures 9-12
9.7.2 Procedure for Containing/Collecting Spills 9-13
9.7.3 Emergency Response Equipment 9-14
9.7.4 Emergency Spill Response Clean-Up Materials and Equipment 9-14
9.8 EMERGENCY CONTINGENCY PLAN 9-15
9.9 MEDICAL EMERGENCY CONTINGENCY MEASURES 9-15
9.9.1 Response 9-15
9.9.2 Notification 9-17
9.10 FIRE CONTINGENCY MEASURES 9-17
9.10.1 Response 9-17
9.11 HAZARDOUS WEATHER CONTINGENCY MEASURES 9-18
9.11.1 Response 9-18
9.11.2 Notification 9-18
9.12 SPILL/RELEASE CONTINGENCY MEASURES 9-18
9.12.1 Response 9-19

10.0 TRAINING REQUIREMENTS 10-1
10.1 SITE-SPECIFIC TRAINING ORIENTATION 10-1
10.2 DAILY SAFETY MEETINGS 10-1

FIGURES

FIGURE 2-1 SITE LOCATION MAP
FIGURE 9-1 DIRECTIONS AND HOSPITAL ROUTE MAP

TABLES

TABLE 4-1 CHEMICAL DATA
TABLE 4.3.2A COLD WEATHER INJURIES
TABLE 4.3.2B COLD STRESS PREVENTION
TABLE 4.3.2C COLD WEATHER CLOTHING REQUIREMENTS
TABLE 4.3.2D COOLING POWER OF WIND ON EXPOSED FLESH EXPRESSED AS EQUIVALENT TEMPERATURE
TABLE 4.3.2E TLV WORK/WARMUP SCHEDULE FOR FOUR-HOUR SHIFT
TABLE 9-1 EMERGENCY TELEPHONE NUMBERS

APPENDICES

APPENDIX A HEALTH AND SAFETY PLAN CERTIFICATION
HEALTH & SAFETY PLAN ACKNOWLEDGEMENT
NOTICE OF SAFETY VIOLATION
PRE-JOB SAFETY CHECKLIST

APPENDIX B HEALTH AND SAFETY PLAN AMENDMENTS AND DOCUMENTATION FORM

APPENDIX C SAFETY MEETING FORMS
AIR MONITORING FORMS

1.0 *GLOSSARY OF TERMS*

AHA:	Activity Hazard Analysis
BZ:	Breathing Zone
C:	Ceiling Limit
CNS	Central Nervous System
CTPV:	Coal tar pitch volatiles
CRZ:	Contamination Reduction Zone
CSP:	Construction Superintendent
CZ:	Clean Zone
dBA:	Decibels Adjusted
ERCP:	Emergency Response and Contingency Plan
EZ:	Exclusion Zone
FDNY:	New York City Fire Department
GI:	Gastrointestinal
HSO:	Health & Safety Officer
IP:	Ionization Potential
Mg/m^3:	Micrograms per cubic meter
MPH:	Miles per hour
NIOSH:	National Institute for Occupational Safety and Health
OSHA:	Occupational Health and Safety Administration

Owner:	Crescent Owners, LLC
PAHs:	Poly aromatic hydrocarbons
PEL:	Permissible Exposure Limit
PM:	Project Manager
PPE:	Personal Protective Equipment
PPM:	Parts per Million
PSM:	Project Safety Manager
SHASP:	Site-Specific Health and Safety Plan:
SITE:	40-05 Crescent Street, Queens, NY
STEL:	Short-term exposure limit (15 minutes)
SZ:	Support Zone
TLV:	Threshold Limit Value
TWA:	Time-weighted average (8 hours)
USEPA:	United States Environmental Protection Agency
VP:	Vapor Pressure at approximately 68 F° in mm Hg

2.0 *INTRODUCTION*

The site is located at 40-05 Crescent Street, Queens, New York (the "Site"). The Site is approximately 12,500-square feet and is bound by 40th Avenue to the north, parking lot to the south, 1-story warehouse to the east, and Crescent Street to the west. Currently, the Site is used for offices and storage and contains a 1-story commercial warehouse that covers the entire footprint of the Site. Figure 2-1 is a site location map.

This Site-Specific Construction Health and Safety Plan (CHASP) has been developed by Athenica Environmental Services ("Athenica") for specific activities associated with the construction of a new residential building at the Site.

This CHASP documents the policies and procedures which will protect workers from potential chemical hazards associated with the soils and/or fill at this Site. Other plans and documentation will establish the policies and procedures that will protect workers from potential physical hazards associated with traditional demolition and construction activities at the Site.

This plan assigns responsibilities, establishes standard operating procedures, and provides for contingencies that may arise during the disturbance of soil/fill at the Site. This CHASP was prepared by the general contractor's Environmental Consultant, Athenica Environmental Services (Athenica). The general contractor and its subcontractors will be required to utilize this plan when working at the site.

Although this plan focuses on the specific work activities planned for this site, it must remain flexible because of the nature of this work. Conditions may change and unforeseen situations may arise that require modifications from the original plan. Therefore, Athenica only makes representations or warranties as to the adequacy of this CHASP for currently anticipated activities and conditions. This flexibility allows modification by authorized personnel, e.g. Project Manager, Project Safety Manager. All changes to procedures in this plan will be documented in writing using the form provided in Appendix B.

Refusal or failure to comply with this CHASP or violation of any safety procedures by field personnel and/or subcontractors may result in immediate removal from the Site following consultation with the Project Safety Manager (PSM) and the Project Manager (PM).

It is expected that this CHASP will be implemented at a multi-employer work site. Information and references within this plan shall in no way imply or alleviate any other Site contractor from their responsibility to comply with any and all applicable State or Federal statutes or regulations regarding the completion of this project. It is the responsibility of each employer to

communicate and coordinate work planning so as to prevent their work activities from becoming a potential hazard to other workers at the project site. Failure to communicate will not alter an employer's responsibilities or obligations for any resulting injuries to their employees.

2.1 SITE HISTORY

Currently, the Site is used for offices and storage and contains a 1-story commercial warehouse that covers the entire footprint of the Site. A Phase I Environmental Site Assessment (Phase I ESA) by Merritt Environmental Consulting in May 2012of the Site revealed that it was developed prior to 1898 with multiple 1 and 2-story dwellings. The Site was then utilized as a heating equipment warehouse during 1950 and a 1-story commercial building between 1970 and 2006. This is consistent with the most recent use of the Site.

The Phase I ESA identified no recognized environmental conditions that warranted testing of the soils and groundwater at the Site other than its "E" designation for hazardous materials.

The Phase II Environmental Site Assessment (Phase II ESA) by Athenica included the installation of 3 soil borings to a depth of 16 feet below ground surface (bgs) and 4 soil borings to a depth of 22 feet bgs, continuous soil sampling at each boring location, installation of 2 groundwater monitoring wells, installation of 4 soil vapor implants, and collection of representative soil, groundwater, and soil vapor samples for laboratory analysis. The Phase II ESA identified urban fill from the surface to approximately 8 feet bgs. The Phase II also identified elevated levels of chlorinated solvents in select groundwater and soil vapor samples.

Based on the findings of the Phase II ESAs at the Site, chlorinated solvents are present in groundwater and soil vapor beneath the Site.

2.2 SCOPE OF WORK

Although the construction of the new residential and commercial mix use building involves many different activities, only those activities associated with the disturbance and handling of urban fill are addressed in this CHASP.

The principal tasks covered in this HASP include the following:

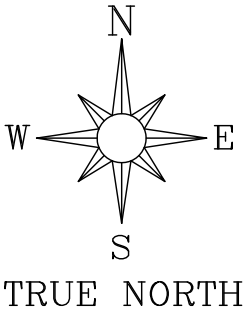
- Mobilization/demobilization,
- Sheeting and shoring,
- Excavation of urban fill and/or soil,
- Loading of urban fill into trucks for disposal,

- Installation of footings for new building, and
- Heavy equipment decontamination

Activity Hazard Analyses for these tasks are provided in Section 4.5.

This CHASP has been prepared and approved for the above scope of work. In order to remain approved, any changes to the scope of work will require amendment of the plan. The Site Health and Safety Amendment Documentation form (Appendix B) will be used for all revisions/amendments to this plan.

FIGURE 2-1
SITE LOCATION MAP



Legend:

PROJECT SITE

ATHENICA ENVIRONMENTAL SERVICES, INC,
Environmental Consultants

Date:	OCTOBER 23, 2013	Site map:	REMEDIAL INVESTIGATION REPORT 40-05 CRESCENT STREET QUEENS, NY 11101
Drawn by:	ALEJANDRO MOREJON CORTINA		
Checked by:	WILLIAM SILVERI		
Drawing Scale:	NTS	Figure:	1
Project No.:	13-1235	Title:	PROJECT SITE LOCATION

3.0 *KEY PERSONNEL*

The Project Manager (PM), Construction Superintendent (CS), Health & Safety Officer (HSO), and Project Safety Manager (PSM) all share responsibilities for formulating and enforcing health and safety requirements, and assuring that the CHASP is implemented as intended. This section outlines the responsibilities for each of these positions. Responsibilities for site employees and subcontractor personnel are also outlined in this section. The General Contractor and/or other authorized personnel may also be involved and identified in future CHASP documents, as appropriate.

3.1 PROJECT MANAGER (PM)

The PM has the overall responsibility for the project and to assure that the requirements of the contract are attained in a manner consistent with the CHASP requirements. The PM will coordinate with the CS and the HSO to assure that the work is completed in a manner consistent with the HASP. The PM will supervise the allocation of resources and staffing to implement specific aspects of the HASP and may delegate authority to expedite and facilitate any application of the program. This role will be filled by the General Contractor or Excavation Subcontractor. Michael DiFonzo will serve as the PM for this project.

3.2 CONSTRUCTION SUPERINTENDENT (CS)

The CS is responsible for field implementation of the CHASP and Site Emergency Response and Contingency Plan and will act as the HSO in his/her absence. This role will be filled by the general contractor or primary subcontractor. Michael DiFonzo will serve as the CS for this project.

Specific responsibilities for the CS include:

- Ensures that the CHASP is implemented;
- Ensures that field work is scheduled with adequate equipment to complete the job safely;
- Enforces site health and safety rules;
- Ensures that proper personal protective equipment is utilized;
- Ensures that the PSM is informed of project changes which require modifications to the CHASP;
- Ensures that the procedure modifications are implemented;
- Investigates incidents;
- Conducts the daily site safety briefing;

- Reports to PSM to provide summaries of field operations and progress; and
- Acts as Emergency Coordinator.

3.3 HEALTH AND SAFETY OFFICER (HSO)

The HSO is authorized to administer the HASP. The HSO's primary operational responsibilities include personal and environmental monitoring, selection and monitoring of personal protective equipment, assignment of protection levels, coordination/review of work permits and observation of work activities. The HSO is authorized to stop work when an imminent health or safety risk exists. The HSO will review the essential safety requirements with all on-site personnel and will facilitate the daily safety meetings. Michael DiFonzo will serve as the HSO for this project.

Specific responsibilities for HSO performance include:

- Monitoring workers for signs of stress, such as cold stress, heat stress, and fatigue. Reevaluating site conditions on an on-going basis.
- Coordinating protective measures including engineering controls, work practices and personal protective equipment.
- Assisting the CS in the preparation, presentation and documentation of daily safety meetings.
- Conducting and preparing reports of daily safety inspections of work processes, site conditions, and equipment conditions. Discussing any necessary corrective actions with the CS and reviewing new procedures.
- Initiating revisions of the CHASP as necessary for new tasks or modifications of existing operations and submitting to the Project Safety Manager for approval (see Appendix B).
- Performing air monitoring as required by the CHASP.
- Assisting the PM and CS in incident investigations.
- Preparing permits for special operations, e.g., hot work, confined spaces, line breaking, etc.
- Maintaining site safety records.
- Conducting inspections of all fire extinguishers, first-aid kits and eye washes on a regular basis.
- Informing subcontractors of the elements of the CHASP.

3.4 PROJECT SAFETY MANAGER (PSM)

The Project Safety Manager (PSM) is responsible for developing/reviewing the CHASP and ensuring that it is complete and accurate. The PSM provides technical and administrative support

and will be available for consultation when required. If necessary, the PSM will direct modifications (Appendix B) to specific aspects of the HASP to adjust for on-site changes that affect safety. The HSO will coordinate with the PSM on necessary modifications to the HASP. The PSM may make periodic visits to the project site to review implementation of this HASP. This role is role will be filled by the General Contractor's representative.

3.5 EMPLOYEE SAFETY RESPONSIBILITIES

Each employee is responsible for personal safety as well as the safety of others in the work area and is expected to participate fully in the site safety and health program. Employees will use all equipment provided in a safe and responsible manner as directed by the CS. Employees shall report any hazardous conditions which might affect the health and safety of site personnel to the CS and/or HSO. To protect the health and safety of all personnel, site employees that knowingly disregard safety policies/procedures will be subject to removal.

Specific requirements include:

- Reading the CHASP and any amendments prior to the start of on-site work.
- Providing documentation of any applicable medical surveillance and training to the CS/HSO prior to the start of work.
- Attending the pre-entry briefing prior to beginning on-site work as well as other scheduled safety meetings.
- Asking any questions or reporting concerns regarding the content of the CHASP to the CS/HSO prior to the start of work.
- Reporting all potentially dangerous situations, incidents, injuries, and illnesses, regardless of their severity, to the CS/HSO.
- Complying with the requirements of this CHASP and the requests of the CS/HSO.

4.0 *ACTIVITY HAZARD ANALYSIS*

This section outlines the potential chemical and physical hazards which workers may be exposed to during work on this project. The assessment of chemical hazards in this section is based on the results provided in the Phase II ESA by Athenica for the Site. This is a representative list of contaminants that have been identified through extensive soil and groundwater testing at this site.

4.1 CHEMICAL HAZARDS

Based on review of the Phase II ESA reports, workers at this Site have the potential to be exposed to copper, lead, mercury and zinc were identified in the soils at low levels, but above the Part 375 Unrestricted Use criteria, and will be considered potential contaminants of concern.

Potential exposure to the contaminants of concern may occur during intrusive soil activities or where direct contact with the contaminated soil takes place. The lead and CTPV are primarily inhalation hazards and exposure can be minimized with simple dust control measures. A summary of hazard information is listed in Table 4-1.

TABLE 4-1
CHEMICAL DATA

COMPOUND	ACGIH TLV	OSHA PEL	ROUTE OF EXPOSURE	SYMPTOMS OF EXPOSURE	TARGET ORGANS	PHYSICAL DATA
Copper	1.0 mg/m^3	1.0 mg/m^3	Inhalation Ingestion Skin contact	Irritant to skin	Lungs, mucous membrane	Bluish lustrous metal, Noncombustible Solid
Lead	0.05 mg/m^3	0.1 mg/m^3	Inhalation Ingestion Skin contact	Weakness, lassitude, insomnia; facial pallor; eye irritation, anorexia, low-weight, malnutrition; constipation; abdominal pain; colic; hypertension, anemia; gingival lead line; tremors; paralysis of wrist, ankles; encephalopathy; neuropathy	GI Tract, CNS, kidneys, blood, gingival tisue	Noncombustible Solid
Mercury	0.25 g/m3	0.1 mg/m^3	Inhalation Ingestion Skin contact	Inflammation of eyes and skin; coughing; choking; shortness of breath; death	Blood, kidneys, liver, brain, peripheral nervous system, CNS	Non-combustible Liquid
Zinc	2.0 mg/m^3 (As ZnO)	5.0 mg/m^3 (as ZnO)	Inhalation Ingestion Skin contact	Irritant to skin	Skin	Noncombustible Solid (as ZnO)

Abbreviations

ACGIH = American Conference of Governmental Industrial Hygienists
C = Ceiling Unit
CNS = Central Nervous System
CVS = Cardiovascular System
GI = Gastrointestinal
TLV = Threshold Level Value
mg/m^3= milligrams per cubic meter
OSHA = Occupational Safety and Health Administration
PNS = Peripheral Nervous System
ppm = parts per million
PEL – Permissible Exposure Level

The following general symptoms may indicate exposure to a hazardous material. Personnel will be removed from the work site and provided immediate medical attention should any of the following symptoms occur:

- Dizziness or stupor
- Nausea, headaches, or cramps
- Irritation of the eyes, nose, or throat
- Euphoria
- Chest pains and coughing
- Rashes or burns

4.2 PHYSICAL HAZARDS

To minimize physical hazards, standard safety protocols will be followed at all times. Failure to follow safety protocols may result in removal of the employee from the site. All personnel shall be familiar with the physical hazards presented by each of the tasks they perform. Task specific hazard analyses are provided in Section 4.5. These hazard analyses shall be reviewed prior to beginning each task and periodically throughout the task. It must be noted that these activity hazard analyses are general in nature. It is the responsibility of the CS to revise and adapt them as necessary to reflect site-specific conditions.

The CS and HSO will observe the general work practices of each crew member and enforce safe procedures. Work areas will be inspected by the crew leaders, CS and HSO. All hazards will be corrected in a timely manner. A variety of physical hazards may be encountered during work activities at this site. Activity Hazard Analyses will be developed for each principal activity and will identify all major hazards to which employees may be exposed. Hard hats, safety glasses, and steel-toe safety boots are required in all work areas of the site. Site-specific hazards and all necessary precautions will be discussed at the daily safety meetings. The General Contractor's Safety Manual will be maintained at the project site as a reference document.

4.3 ENVIRONMENTAL HAZARDS

Environmental factors such as weather, wild animals, insects, and irritant plants may pose a hazard when performing outdoor tasks. The HSO and CS will take necessary actions to alleviate these hazards should they arise.

4.3.1 *Heat Stress*

The combination of warm ambient temperature and protective clothing increases the potential for heat stress. Heat stress disorders include:

- Heat rash
- Heat cramps
- Heat exhaustion
- Heat stroke

This information will be reviewed during safety meetings. Workers are encouraged to increase consumption of water and electrolyte-containing beverages, e.g. Gatorade™. Heat stress can be prevented by assuring an adequate work/rest schedule. Guidelines are presented below.

The CS and HSO will determine the specific work-rest schedule based on project specific conditions. In addition, workers are encouraged to take rests and report symptoms whenever they feel any adverse effects that may be heat-related. The frequency of breaks may need to be increased based on worker recommendation to the HSO and CS. The CS and HSO will determine the specific work-rest schedule based on project specific conditions. In addition, workers are encouraged to take rests and report symptoms whenever they feel any adverse effects that may be heat-related. The frequency of breaks may need to be increased based on worker recommendation to the HSO and CS.

Heat stress can be prevented by assuring an adequate work/rest schedule and adequate fluid consumption. A guide for work-rest schedules for various protection levels (defined in Section 5.0) is given below. The number of hours before a work-rest period is based on experience with similar work. The time periods should be considered maximum. It must also be remembered that individual physical variability and differences in physical work activities may require revisions to site plans. This table should be used as a guide. Professional judgment (evaluation of individual work load, ambient weather conditions, worker acclimatization and PPE levels) of the CS and HSO is necessary to assure a fully protective plan to prevent heat stress disorders.

GUIDELINES FOR WORK-REST PERIODS FOR VARIOUS PROTECTION LEVELS (A-D) NUMBER OF HOURS BEFORE REST PERIOD

Temperature	Level D	Level C	Level B	Level A
90+ F*	2.0	1.5	1.0	0.5
87.5 F	2.5	2.0	1.5	1.0
82.5 F	3.0	2.5	2.0	1.5
77.5 F	3.5	3.0	2.5	1.5
72.5	4.0	3.5	2.5	1.5

**Work above 100 F will be reviewed with the Project Safety Manager to determine specific requirements.*

Alternately the work/rest schedule can be calculated based on heat stress monitoring results. Monitoring consists of taking the radial pulse of a worker for 30 seconds immediately after exiting the work area. The frequency of monitoring is described below.

If the heart rate exceeds 110 beats per minute at the beginning of the rest period, shorten the next work cycle by 1/3 and keep the rest period the same. If the heart rate still exceeds 110 beats per minute at the next rest period, increase the following rest period by 1/3. The initial rest period should be at least 5 minutes.

Body temperature, measured orally or through the ear canal, may also be monitored to assess heat stress. Workers should not be permitted to continue work when their body temperature exceeds 100.4 F (38C). Monitoring should be conducted at the beginning of each break period as noted above.

Monitoring for heat stress will begin when the ambient temperature reaches or exceeds 72.5 degrees Fahrenheit when wearing chemical protective clothing (Level C, B, A), or 80 degrees Fahrenheit for site activities performed with no chemical protective clothing (Level D). Monitoring should include pulse rate, weight loss, oral/ or ear canal temperature, signs and symptoms of heat stress and fluid intake.

An additional measure that can be employed to minimize heat stress is through the utilization of Heat Stress Relief Stations. A Heat Stress Relief Station (HSRS) is a location inside the exclusion zone where workers can partially remove their personal protective equipment, rest and take in fluids. Since the HSRS is established inside the exclusion zone, it is imperative that its use be closely monitored and controlled to ensure that workers do not ingest contamination during use.

The following is a detailed description of the Heat Stress Relief Station:

- Location- The HSRS should be located in an area of the exclusion zone where it will be predominantly upwind of site activities. This can typically be adjacent to the contamination reduction zone.
- Delineation- The HSRS must be separated from the exclusion zone by temporary fencing and must be labeled as “Heat Stress Relief Station”.
- Elements- The HSRS contains several elements:
    - A tarp or tent for shade;
    - A bench or chairs for workers to sit on;
    - A wash station;
    - A table for fluids, cups and clean personal protective equipment (PPE); and
    - A trash can for contaminated PPE.
- Set-Up- Proper set up of the HSRS is imperative its successful use.
    - In the Support Zone, prepare the water cooler with ice and water or Gatorade.

- The person bringing the items to the HSRS must don the appropriate PPE required for the Exclusion Zone.
- Bring the following items to the HSRS:
  - Cooler;
  - Clean disposable cups;
  - Disinfectant wipes;
  - A clean trash bag;
  - Surgical gloves; and
  - Duct tape.
- Ensure the wash station has clean water and paper towels for drying hands/face.

- Procedure for Use- In order for the HSRS to be effective, it must be properly used. It is imperative that workers decontaminate properly before drinking fluids so that ingestion of site contaminants does not take place. The following are the steps to properly use the HSRS:
  - Upon entering the HSRS:
    - If wearing a Tyvek, remove duct tape on wrists and unzip and tie around waist;
    - Remove your outer gloves and surgical gloves; set outer gloves aside and throw surgical gloves into trash;
    - Wash hands and/or face at Wash Station;
    - Use disinfectant wipe on hands;
    - Get drink and/or rest on bench/chair.
  - Before re-entering the Exclusion Zone:
    - Dispose of cups in trash;
    - Put on a clean pair of surgical gloves;
    - If wearing a Tyvek, pull up and rezip;
    - Re-apply duct tape to wrists;
    - Put on outer gloves.
- Monitoring- The CS and HSO are both responsible for monitoring the use of the Heat Stress Relief Station. The HSO should review the procedures for use of the HSRS with the workers before its use begins to ensure that everyone understands the parameters for proper use.

4.3.2 *Exposure to Cold*

With outdoor work in the winter months, the potential exists for hypothermia and frostbite. Several forms of cold stress as well as preventative measures are described in this section of the HASP.

4.3.2.1 *Cold Stress Conditions and Symptoms*

Typical cold stress conditions are included in the tables below, including symptoms and first aid precautions. If cold stress conditions develop, professional medical attention will be sought.

TABLE 4.3.2A COLD WEATHER INJURIES		
Cause	**Symptoms**	**First Aid**
Frostbite		
Freezing of tissue, normally due to exposure below 32°F	Numbness in affected area. Tingling, blistered, swollen or tender areas. Pale, yellowish waxy-looking skin.	Warm affected area with direct body heat. Consult with medical personnel ASAP. **Do not** thaw frozen area if treatment will be delayed. **Do not** massage or rub affected area. **Do not** wet area or rub with snow or ice.
Chilblain		
Repeated exposure of bare skin for prolonged periods to temperatures 20° to 60°F (for those not acclimated to cold weather).	Swollen, red skin. Tender, hot skin, usually accompanied by itching.	Warm affected area with direct body heat. **Do not** massage or rub. **Do not** wet area or rub with snow or ice. Do not expose affected area to open fire, stove or any other intense heat source.
Immersion Foot (Trench Foot)		
Prolonged exposure of the feet to wet conditions at temperatures between 32° to 50°F. Inactivity and damp socks (or tightly laced boots that impair circulation) speed onset and severity.	Cold numb feet may progress to hot with shooting pains. Swelling redness and bleeding.	Rewarm feet by exposing them to warm air. Evacuate victim to a medical facility. **Do not** massage, rub, moisten or expose affected area to extreme heat source.
Dehydration		
Depletion of body fluids.	Dizziness. Weakness.	Replace lost water. Water should be sipped not gulped. Get medical treatment.
Hypothermia		
Prolonged cold exposure and body heat loss. May occur at well above freezing, especially when a person is immersed in water.	Lack of shivering. Drowsiness, mental slowness, lack of coordination. Can progress to unconsciousness, irregular heartbeat and death.	Strip off clothing and wrap victim in blankets or a sleeping bag. Get victim to a heated location and medical treatment as soon as possible.

In cold weather, the potential for frostbite exists, especially in body extremities. Personnel will be instructed to pay particular attention to hands, feet, and any exposed skin when dressing. Personnel will be advised to obtain more clothing if they begin to experience loss of sensation due to cold exposure.

4.3.2.2 *Monitoring and Preventative Actions*

Typical cold stress monitoring procedures are included in the tables below, including temperatures to initiate monitoring, protective clothing uses and administrative practices to prevent or reduce the potential for cold stress related injury/illness. For weather conditions

below -43 °C or -45 °F with no wind and/or similar conditions (see Work/Warm-up Table) all work will cease.

TABLE 4.3.2B COLD STRESS PREVENTION*		
	Temperature	**Preventative Action**
1	<61°F	Use thermometer to measure ambient temperature.
2	<40°F	Cold weather protective clothing available; check core body temperature at breaks using oral or ear canal thermometer. Maintain core body temperature above 96.8°F to avoid hypothermia.
3	<30°F	Record ambient temperature and wind speed every 4 hours; compare to wind chill chart when below 19.4°F.
4	<19°F	Provide and use heated warming shelters for work breaks and when cold stress symptoms appear.
5	<10°F	Constant observation of workers, i.e. "buddy system"; rest in heated shelters (see work-rest schedule); dry clothing available for change-out; acclimate new workers.
6	<0°F/ >5 mph winds	Obtain medical certification for workers subject to hypothermia risk.

** Based on "2009 ACGIH Threshold Limit Values... for Physical Agents."*
Note: refer to wind-chill and work-warmup charts in Table 4.3.2E

TABLE 4.3.2C COLD WEATHER CLOTHING REQUIREMENTS	
1	If wind chill is a factor at a work location, the cooling effect of the wind shall be reduced by shielding the work area or providing employees an outer windbreak layer garment.
2	Extremities, ears, toes, and nose shall be protected from extreme cold by protective clothing.
3	Employees performing light work whose clothing may become wet shall wear an outer layer of clothing which is impermeable to water.
4	Employees performing moderate to heavy work whose clothing may become wet shall wear an outer layer of clothing which is impermeable to water.
5	Outer garments must provide for ventilation to prevent wetting of inner clothing by sweat, or if not possible, a heated shelter for warming/drying clothing, or a change of clothing, shall be provided prior to returning to work in a cold environment.

Protective clothing greatly reduces the possibility of hypothermia in workers. However, personnel will be instructed to wear warm clothing and to stop work to obtain more clothing if they become too cold. Employees will also be advised to change into dry clothes if their clothing becomes wet from perspiration or from exposure to precipitation.

Employees will be instructed to use heated shelters on site, at regular intervals, depending upon the severity of ambient temperatures. Symptoms of cold stress, including heavy shivering, excessive fatigue, drowsiness, irritability, or euphoria necessitate immediate return to the shelter.

TABLE 4.3.2D
COOLING POWER OF WIND ON EXPOSED FLESH EXPRESSED AS EQUIVALENT TEMPERATURE *(under calm conditions)**

Estimated Wind Speed (in MPH)	Actual Temperature Reading (F)											
	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
	Equivalent Chill Temperature (F)											
Calm	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
5	48	37	27	16	6	-5	-15	-26	-36	-47	-57	-68
10	40	28	16	4	-9	-24	-33	-46	-58	-70	-83	-95
15	36	22	9	-5	-18	-32	-45	-58	-72	-85	-99	-112
20	32	18	4	-10	-25	-39	-53	-67	-82	-96	-110	-121
25	30	16	0	-15	-29	-44	-59	-74	-88	-104	-118	-133
30	28	13	-2	-18	-33	-48	-63	-79	-94	-109	-125	-140
35	27	11	-4	-20	-35	-51	-67	-82	-98	-113	-129	-145
40	26	10	-6	-21	-37	-53	-69	-85	-100	-116	-132	-148
(Wind Speeds greater than 40 mph have little additional effect.)	***Little Danger*** In < hr with dry skin. Maximum danger of false sense of security				***Increasing Danger*** Danger of freezing of exposed flesh within one minute.				***Great Danger*** Flesh may freeze within 30 seconds.			
	Trench foot and immersion foot may occur at any point on this chart.											

**Developed by U.S. Army Research Institute of Environmental Medicine, Natick, MA. (Shaded area) Equivalent chill temperature requiring dry clothing to maintain core body temperature above 36 C (98.6 F) per cold stress TLV.*

TABLE 4.3.2E
TLV WORK/WARM-UP SCHEDULE FOR FOUR-HOUR SHIFT*

Air Temperature – Sunny Sky		No Noticeable Wind		5 mph wind		10 mph wind		15 mph wind		20 mph wind	
C (appx.)	F (appx.)	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks
-26 to -28	-15 to -19	Normal	1	Normal	1	75 min	2	55 min	3	40 min	4
-29 to -31	-20 to -24	Normal	1	75 min	2	55 min	3	40 min	4	30 min	5
-32 to –34	-25 to -29	75 min	2	55 min	3	40 min	4	30 min	5	Non-Emergency work should cease	
-35 to –37	-30 to -34	55 min	3	40 min	4	30 min	5	Non-emergency work should cease			
-38 to –39	-35 to -39	40 min	4	30 min	5	Non-emergency work should cease					
-40 to –42	-40 to -44	30 min	5	Non-emergency work should cease							
< -43	< -45	Non-emergency work should cease									

* *Adapted from Occupational Health and Safety Division, Saskatchewan Department of Labor*

4.3.3 *Biological Hazards*

The contractor will be required to monitor and control insects, rodents, and other pests identified on site. Standing water will not be allowed on-site, in an effort to control insects. Pest control procedures used by the contractor will include bait, trap, spray, or other means to abate pest problems that develop on site during disruption activities.

4.3.4 *Noise*

Hearing protection is required for workers operating or working near heavy equipment, where the noise level is greater than 85 dbA (Time Weighted Average) as well as personnel working around heavy equipment. The HSO will determine the need and appropriate testing procedures, (i.e., sound level meter and/or dosimeter) for noise measurement. The provisions for noise protection for workers are presented in other safety-related documents for the Site.

4.4 VEHICLE AND HEAVY EQUIPMENT SAFETY

4.4.1 *Vehicle Safety*

Motor vehicle incidents are the number one cause of occupational fatalities, accounting for one in three deaths. The safety provisions for vehicle use at the Site are presented in other safety-related documents for the Site.

4.4.2 *Heavy Equipment Safety*

The use of backhoes, front-end loaders, etc. for excavation and other material handling equipment will present various physical hazards. The safety provisions for heavy equipment use at the Site are presented on other safety-related documents for the Site.

4.5 TASK-SPECIFIC ACTIVITY HAZARD ANALYSES (AHA)

This section of the HASP provides a breakdown of the hazards and control measures for each principal task. These Activity Hazard Analyses (AHAs) are general in nature and must be made project specific by the Construction Superintendent prior to each task. The AHAs will be field checked by the supervisor on an ongoing basis and revised as necessary. All revisions will be communicated to the work crew.

Project Identification 40-05 Crescent Street	**Location** Queens, NY	**Estimated Dates** September - December 2014
Phase of Work Mobilization/ Demobilization		**Analysis Approved by** Spiro Dongaris
TASKS	**HAZARDS**	**CONTROL MEASURES**
1. Mobilization and demobilization of equipment site tools, personnel. 2. Set up/remove staging and decontamination areas.	Slips/trips/falls	• Maintain alertness to slip/trip/fall hazards • Maintain good housekeeping • Walk, do not run • Wear footwear with soles that grip
	Manual lifting/ material handling	• Observe proper lifting techniques • Obey sensible lifting limits (50 lb. maximum per person manual lifting) • Use mechanical lifting equipment (hand carts, trucks) to move large, awkward loads
	Temperature extremes	• Drink plenty of fluids • Train personnel of signs/symptoms of cold/heat stress • Monitor air temperatures when extreme weather conditions are present • Stay in visual and verbal contact with your buddy
	Hand tool usage	• Daily inspections will be performed • Remove broken or damaged tools from service • Use the tool for its intended purpose • Use in accordance with manufacturer instructions.
	Biological hazards	• Be alert to the presence of biological hazards • Wear insect repellent • CS/HSO should be aware of on-site personnel with allergic reactions in insect bites and stings.

Project Identification 40-05 Crescent Street	**Location** Queens, NY	**Estimated Dates** September - December 2014
Phase of Work Trenching/Excavation		**Analysis Approved by** Spiro Dongaris
TASKS	**HAZARDS**	**CONTROL MEASURES**
1. Trenching and excavation. 2. Install shoring/ sheeting protective system.	Chemical hazards	• Wear appropriate PPE per Section 5.1 • Practice contamination avoidance • Conduct real-time air monitoring per section 7.1.1 • Follow proper decontamination procedures • Wash hands/face before eating, drinking, smoking
	Cave-in	• Do not allow entry into the trench unless approved protective system is in place and has been inspected by the competent person. • Follow OSHA excavation regulations • Place ladder or entry device every 25 feet of lateral travel
	Struck By/ Against Motor Vehicles/ Operating Equipment	• Wear reflective warning vests when exposed to vehicular traffic • Isolate potential equipment swing areas • Make eye contact with vehicle operators before approaching/crossing high traffic areas • Understand and review hand signals • Use a spotter to direct equipment movement in high traffic areas • Audible back-up alarms on equipment • Operator inspects equipment daily for safety defects, including the braking system
	Slips/trips/falls	• Clear walkways, work areas of equipment and tools • Mark, identify, or barricade other obstructions • Use barricades or fencing for trenches greater than 6 feet deep • Maintain alertness to slip/trip/fall hazards • Maintain good housekeeping • Walk, do not run • Wear footwear with soles that grip
	Electrical hazards	• Maintain 10 foot minimum clearance to any overhead power lines • Call for Utility mark out prior to digging

Project Identification 40-05 Crescent Street	**Location** Queens, NY	**Estimated Dates** September - December 2014
Phase of Work Trenching/Excavation		**Analysis Approved by** Spiro Dongaris
TASKS	**HAZARDS**	**CONTROL MEASURES**
1. Trenching and excavation. 2. Install shoring/ sheeting protective system.	Hand and power tool usage	• Daily inspections will be performed on tools and cords • Ensure all guards are in place • Remove broken or damaged tools from service • Use the tool for its intended purpose • Use in accordance with manufacturer instructions
	Noise	• Hearing protection mandatory at or above 85 dBA. • Instruct personnel how to properly wear hearing protective devices. • Disposable ear plugs or other hearing protection required while around noisy equipment.
	Manual lifting/ Material handling	• Observe proper lifting techniques • Obey sensible lifting limits (50 lb. maximum per person manual lifting) • Use mechanical lifting equipment (hand carts, trucks) to move large, awkward loads
	Temperature extremes.	• Drink plenty of fluids: • Train personnel of signs/symptoms of cold/heat stress; • Monitor air temperatures when extreme weather conditions are present; • Stay in visual and verbal contact with your buddy; and • Use procedures in Sections 3.3.1 and 3.3.2

Project Identification 40-05 Crescent Street	**Location** Queens, NY	**Estimated Dates** September - December 2014
Phase of Work Loading of Trucks		**Analysis Approved by** Spiro Dongaris
TASKS	**HAZARDS**	**CONTROL MEASURES**
1. Load trucks with contaminated soils. 2. Cover and clean trucks.	Chemical hazards	• Wear appropriate PPE per Section 6.1 • Practice contamination avoidance • Conduct real-time air monitoring per section 8.1.1 • Follow proper decontamination procedures • Wash hands/face before eating, drinking, smoking
	Struck By/ Against Motor Vehicles/ Operating Equipment	• Wear reflective warning vests when exposed to vehicular traffic • Isolate potential equipment swing areas • Make eye contact with vehicle operators before approaching/crossing high traffic areas • Understand and review hand signals • Use a spotter to direct equipment movement in high traffic areas • Audible back-up alarms on equipment • Operator inspects equipment daily for safety defects, including the braking system
	Slips/trips/falls	• Maintain alertness to slip/trip/fall hazards • Maintain good housekeeping • Walk, do not run • Wear footwear with soles that grip
	Manual lifting/ material handling	• Observe proper lifting techniques • Obey sensible lifting limits (50 lb. maximum per person manual lifting) • Use mechanical lifting equipment (hand carts, trucks) to move large, awkward loads
	Temperature extremes	• Drink plenty of fluids • Train personnel of signs/symptoms of cold/heat stress • Monitor air temperatures when extreme weather conditions are present • Stay in visual and verbal contact with your buddy • Use procedures in Sections 4.3.1 and 4.3.2
	Noise	• Hearing protection mandatory at or above 85 dBA. • Instruct personnel how to properly wear hearing protective devices. • Disposable ear plugs or other hearing protection required while around noisy equipment.

Project Identification 40-05 Crescent Street	**Location** Queens, NY	**Estimated Dates** September - December 2014
Phase of Work Installation of Footers		**Analysis Approved by** Spiro Dongaris
TASKS	**HAZARDS**	**CONTROL MEASURES**
1. Build forms. 2. Pour concrete. 3. Remove forms.	Chemical hazards	• Wear appropriate PPE per Section 6.1 • Practice contamination avoidance • Conduct real-time air monitoring per section 8.1.1 • Follow proper decontamination procedures • Wash hands/face before eating, drinking, smoking
	Struck By/ Against Motor Vehicles/ Operating Equipment	• Wear reflective warning vests when exposed to vehicular traffic • Isolate potential equipment swing areas • Make eye contact with vehicle operators before approaching/crossing high traffic areas • Understand and review hand signals • Use a spotter to direct equipment movement in high traffic areas • Audible back-up alarms on equipment • Operator inspects equipment daily for safety defects, including the braking system
	Concrete pumper	• Make sure nozzle man has eye contact with pump truck operator. • Ensure steady control over nozzle
	Splashing concrete	• Ensure eye protection is worn and other PPE as required by Section 6.1 • A portable eyewash will be maintained in the work area
	Falls from heights	• Fall protection is required over 6 feet when removing forms • Use PFAS where needed • OSHA required training before use of PFAS, scaffold or lift • Competent person inspects PFAS and scaffold
	Sharp Objects	• Wear cut resistant work gloves when the possibility of lacerations or other injury may be caused by sharp edges or objects being handled • Maintain all hand and power tools in a safe condition • Keep guards in place during use

Project Identification 40-05 Crescent Street	**Location** Queens, NY	**Estimated Dates** September - December 2014
Phase of Work Installation of Footers		**Analysis Approved by** Spiro Dongaris
TASKS	**HAZARDS**	**CONTROL MEASURES**
1. Build forms. 2. Pour concrete. 3. Remove forms.	Hand and power tool usage	• Daily inspections will be performed on tools and cords • Ensure all guards are in place • Remove broken or damaged tools from service • Use the tool for its intended purpose • Use in accordance with manufacturer instructions
	Noise	• Hearing protection mandatory at or above 85 dBA. • Instruct personnel how to properly wear hearing protective devices. • Disposable ear plugs or other hearing protection required while around noisy equipment.
	Manual lifting/ material handling	• Observe proper lifting techniques • Obey sensible lifting limits (50 lb. maximum per person manual lifting) • Use mechanical lifting equipment (hand carts, trucks) to move large, awkward loads
	Slips/trips/falls	• Maintain alertness to slip/trip/fall hazards • Maintain good housekeeping • Walk, do not run • Wear footwear with soles that grip
	Temperature extremes.	• Drink plenty of fluids: • Train personnel of signs/symptoms of cold/heat stress; • Monitor air temperatures when extreme weather conditions are present; • Stay in visual and verbal contact with your buddy; and • Use procedures in Sections 4.3.1 and 4.3.2

Project Identification 40-05 Crescent Street	**Location** Queens, NY	**Estimated Dates** September - December 2014
Phase of Work Heavy Equipment Decontamination		**Analysis Approved by** Spiro Dongaris
TASKS	**HAZARDS**	**CONTROL MEASURES**
1. Pressure wash or steam clean heavy equipment and vehicles.	Chemical hazards	• Wear appropriate PPE per Section 6.1 • Practice contamination avoidance • Conduct real-time air monitoring per section 8.1.1 • Follow proper decontamination procedures • Wash hands/face before eating, drinking, smoking
	Struck By/ Against Motor Vehicles/ Operating Equipment	• Wear reflective warning vests when exposed to vehicular traffic • Isolate potential equipment swing areas • Make eye contact with vehicle operators before approaching/crossing high traffic areas • Understand and review hand signals • Use a spotter to direct equipment movement in high traffic areas • Audible back-up alarms on equipment • Operator inspects equipment daily for safety defects, including the braking system
	Steam/heat/ splashing	• Wear face shield + safety glasses • Stay out of splash radius to minimize exposure • Do not direct steam/spray at anyone
	Hand and power tool usage	• Daily inspections will be performed on tools and cords • Ensure all guards are in place • Remove broken or damaged tools from service • Use the tool for its intended purpose • Use in accordance with manufacturer instructions
	Slips/trips/falls	• Maintain alertness to slip/trip/fall hazards • Maintain good housekeeping • Walk, do not run • Wear footwear with soles that grip
	Temperature extremes	• Drink plenty of fluids • Train personnel of signs/symptoms of cold/heat stress • Monitor air temperatures when extreme weather conditions are present • Stay in visual and verbal contact with your buddy • Use procedures in Sections 4.3.1 and 4.3.2

5.0 *WORK AND SUPPORT AREAS*

To prevent migration of contamination from personnel and equipment, work areas will be clearly specified as designated below prior to beginning operations. Each work area will be clearly identified using signs or physical barriers.

5.1 EXCLUSION ZONE (EZ)

The EZ is the area suspected of contamination and presents the greatest potential for worker exposure. Personnel entering the area must wear the mandated level of protection for that area. In certain instances, different levels of protection will be required depending on the tasks and monitoring performed within that zone. The EZ for this project will include the excavation areas, any stockpiling/staging areas, and areas where disturbance of urban fill is likely occurring.

5.2 CONTAMINATION - REDUCTION ZONE (CRZ)

The CRZ or transition zone will be established between the EZ and support zone (SZ). In this area, personnel will begin the sequential decontamination process required to exit the EZ. To prevent off-site migration of contamination and for personnel accountability, all personnel will enter and exit the EZ through the CRZ. The CRZ for this project will be the access/egress routes to/from the EZ and the personnel and equipment decontamination stations.

5.3 SUPPORT ZONE (SZ)

The SZ serves as a clean, control area. Operational support facilities are located within the SZ. Normal work clothing and support equipment are appropriate in this zone. Contaminated equipment or clothing will not be allowed in the SZ. There will be a clearly marked controlled access point from the SZ into the CRZ and EZ that is monitored closely by the HSO and the CS to ensure proper safety protocols are followed. The SZ will be any office areas/trailers and the parking and visitor access ways to the project site.

5.4 SITE CONTROL LOG

A log of all personnel visiting, entering or working on the site shall be maintained in the main office location. The log will record the date, name, company or agency, and time entering or exiting the site.

No visitor will be allowed in the EZ without showing proof of training and compliance with applicable medical monitoring requirements. Visitors will supply their own protective equipment, including hard hat, boots and respiratory equipment, if required. Visitors will attend a site orientation given by the HSO and sign the HASP.

5.5 GENERAL

The following items are requirements to protect the health and safety of workers and will be discussed in the safety briefing prior to initiating work on the site.

- Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand to mouth transfer and ingestion of contamination is prohibited in the EZ and CRZs.
- Hands and face must be washed upon leaving the EZ and before eating, drinking, chewing gum or tobacco and smoking or other activities which may result in ingestion of contamination.
- During site operations, each worker will consider himself as a safety backup to his partner. All personnel will be aware of dangerous situations that may develop.
- Visual contact will be maintained between workers on site when performing hazardous duties.
- No personnel will be admitted to the site without the proper safety equipment, training, and medical surveillance certification.
- All personnel must comply with established safety procedures. Any site personnel, who do not comply with safety policy, as established by the HSO or the CS, will be dismissed from the site.
- Proper decontamination procedures must be followed before leaving the site.
- All site workers are authorized to stop work if they observe unsafe actions of workers or other unsafe conditions on site which may cause an imminent danger.
- All workers and visitors must sign in and out of the site.

6.0 *PROTECTIVE EQUIPMENT*

This section specifies the levels of personal protective equipment (PPE) which are or may be required for each principal activity performed at this site. All site personnel must be trained in the use of all PPE utilized.

6.1 ANTICIPATED PROTECTION LEVELS

The following protection levels have been established for the site work activities based on site information concerning the levels of contaminants and the scope of work. Results of site air monitoring and visual inspection of the work activities may indicate the need for changes in final PPE level(s). Changes in the initial PPE Levels prescribed in the Table below require completion of the HASP amendment form in Appendix B.

Task	Initial PPE Level	Upgrade/ Downgrade PPE Level	Skin Protection	Respiratory Protection	Other PPE
General Support Zone Activities	Level D	—	Generally none	None	Hard-hat, Steel-toe work boots, safety glasses, safety vests. Leather work gloves as needed. Hearing protection when >85 dBA.
Mobilization/ Demobilization	Level D	—	Generally none	None	Hard-hat, Steel-toe work boots, safety glasses, safety vests. Leather work gloves as needed. Hearing protection when >85 dBA.
Excavation, Loading of Trucks with Contaminated Soil/Fill, Equipment Decont-amination	Level D		Generally none,	Initial: None (See Section 7)	Hard-hat, Steel-toe work boots, safety glasses, leather work gloves for material handling, hearing protection >85 dBA

6.2 PROTECTION LEVEL DESCRIPTIONS

This section lists the minimum requirements for each protection level. Modification to these requirements may have been noted in the Table shown above.

6.2.1 *Level D*

Level D consists of the following:

- Safety glasses with side shields
- Hard hat
- Steel-toed work boots
- Work clothing as prescribed by weather
- Leather work gloves when material handling

7.0 *DECONTAMINATION PROCEDURES*

This section describes the procedures necessary to ensure that both personnel and equipment are free from contamination when they leave the work site.

7.1 PERSONNEL DECONTAMINATION

Decontamination procedures will ensure that material which workers may have contacted in the EZ does not result in personal exposure and is not spread to clean areas of the site. This sequence describes the general decontamination procedures for Level D. The specific stages will vary depending on the site, the task, the protection level, etc. Dry decontamination may be used if there is insufficient space to support a full decontamination station as delineated with the steps below and approved by the HSO. The CS and the HSO will ensure that the decontamination procedures are adequate.

Level D Decontamination

1. Go to end of EZ
2. Cross into CRZ
3. Wash face and hands

7.1.1 *Suspected Contamination*

Any employee suspected of sustaining skin contact with chemical materials will first use the emergency shower. Following a thorough drenching, the worker will proceed to the decontamination area. Here the worker will remove clothing and don clean clothing. Medical attention will be provided as determined by the degree of injury.

7.1.2 *Personal Hygiene*

Personnel will wash hands, arms, neck and face, following decontamination and before any eating, smoking, or drinking.

7.2 EQUIPMENT DECONTAMINATION

Heavy equipment and other vehicles operated within the EZ will be decontaminated before being removed from the site. Workers operating the equipment/vehicles will move the equipment to a gross decontamination location near the exit of the EZ. Following gross decontamination the equipment/vehicle will be moved to the decontamination pad. Equipment decontamination will be performed on the pad until the equipment is visually clean. Following decontamination

activities equipment will be inspected by the HSO or CS prior to leaving the site. Once the equipment is inspected it will be removed from the site.

Heavy Equipment / Vehicle Decontamination

1. Equipment operator will move the heavy equipment / vehicle to a position near the EZ / CRZ interchange
2. Worker will use manual equipment (shovel, track spade) to remove gross contamination from tracks, bucket, dump box, and vehicle undercarriage (as required)
3. Following removal of gross decontamination equipment will be moved onto the decontamination pad and pressure washed / steam cleaned until equipment / vehicle is visually clean.
4. Equipment / vehicle decontaminated for removal from the site will be moved to a clean area for the HSO / CS inspection.
5. Once the equipment / vehicle is inspected and approved it will be removed from the site. Vehicles that fail inspection will be returned to the decontamination pad for further cleaning and re-inspected.

7.3 DISPOSAL OF WASTES

Wastes will be disposed according to applicable Local, State and Federal regulations.

7.4 DUST /EROSION CONTROL

The contractor will control dust and implement erosion control measures to be protective of nearby ecologically sensitive areas and sensitive receptors.

8.0 *AIR MONITORING*

Air monitoring will be conducted in order to characterize personnel exposures and fugitive emissions from site contaminants. Principal contaminants of concern are listed in Section 4.0 of this HASP. The target compounds selected for air monitoring purposes for this site include particulates. Results of air monitoring will be used to ensure the proper selection of protective clothing and equipment, including respiratory protection, to protect on-site personnel and off-site receptors from exposure to unacceptable levels of site contaminants. Descriptions of air monitoring strategies, procedures and equipment are provided below. Modification of this plan, including additional monitoring, may be considered as judged necessary by the PSM, in conjunction with the HSO.

8.1 WORK AREA AIR MONITORING

Work area air monitoring will include direct reading methods and personal exposure monitoring. Air monitoring will be conducted during soil/waste excavation, transportation, relocation and/or staging, and any other intrusive activities.

8.1.1 *Direct Reading Air Monitoring*

During active sifting operations, direct reading air monitoring will be performed to determine the potential for worker exposure to airborne hazards. A summary of air monitoring information is provided in section 8.1.5. Real-time air samples will be taken at least four times each 8-hour worker shift in the workers breathing zone (BZ).

8.1.2 *Instrumentation*

The following is a description of the air monitoring equipment to be used:

- MIE PDR-1000 Personal DataRAM, Dust trak or equivalent unit for real-time measuring particulates.

8.1.3 *Use And Maintenance Of Survey Equipment*

All personnel using field survey equipment must have training in its operation, limitations, and maintenance. Maintenance and internal or electronic calibration will be performed in accordance with manufacturer recommendations by individuals familiar with the devices before their use on site. Repairs, maintenance, and internal or electronic calibration of these devices will be recorded in an equipment maintenance logbook. The equipment maintenance logbook for each instrument will be kept in that instrument's case. For rented monitoring equipment, repairs and

maintenance will be conducted by the rental company. Daily calibration records will be documented on a log sheet found in Appendix D.

Air monitoring equipment will be calibrated before work begins. Only basic maintenance (such as changing batteries) will be performed by on-site personnel. Any additional maintenance or repairs will be performed by a trained service technician.

8.1.4 *Air Monitoring Recordkeeping*

The HSO will ensure that all air-monitoring data is recorded on a data sheet found in Appendix D. The PSM may periodically review this data.

8.1.5 *Action Levels*

During soil/waste excavation, transportation, relocation and/or staging or any intrusive activities, direct reading air monitoring will be performed in the EZ to determine exposure to workers. A summary of air monitoring information is provided in the table below.

Monitoring Device	Monitoring Location/ Personnel	Monitoring Frequency	Action Level	Action
pDr-1000 (Dust)	Soil excavation areas/laborers, technicians, equipment operators	Four times every 8-hour shift during soil disturbance activities	<5.0 mg/m^3 * ≥5.0 mg/m^3 *	Level D Stop work; notify PSM Implement dust suppression measures and resume work after dust levels are below action level

* *Sustained levels in the breathing zone for 5 minutes*

As indicated by the below calculations, the action level for PAHs and the metals of concern was selecting based on the OSHA PEL for respirable dust, which was found to be significantly lower than the calculated actions levels for PAHs and copper, lead, mercury, and zinc based on utilizing the highest concentrations of these contaminants found in soil.

- OSHA PEL for respirable dust: 5 mg/m^3,
- Action Level for PAHs: OSHA PEL for PAHs (0.2 mg/m^3) divided by maximum concentration in soil (4.81 ppm or 0.000481%):
  - 0.2 mg/m^3/0.000481 = 415.8 mg/m^3,
- Action Level for Copper: OSHA PEL for Copper (1.0 mg/m^3) divided by maximum concentration of copper found in the soil (181 ppm or 0.0181%):
  - 1.0 mg/m^3/0.0181 = 55.2 mg/m^3

- Action Level for Lead: OSHA PEL for Lead (0.5 mg/m^3) divided by maximum concentration of lead found in the soil (545 ppm or 0.0545%):
    - 0.5 mg/m^3 divided by 0.0545 = 9.17 mg/m^3;
- Action Level for Mercury: OSHA PEL for Mercury (0.025 mg/m^3) divided by maximum concentration of mercury found in the soil (0.381 ppm or 0.0000381%):
    - .025 mg/m3 divided by 0.0000381% = 6561 mg/m^3
- Action Level for Zinc: OSHA PEL for Zinc (5 mg/m3) divided by maximum concentration of zinc found in soil (978 ppm or 0.0978%):
    - 5.0 mg/m3 divided by 0.0978% = 51.12 mg/m^3

9.0 *EMERGENCY RESPONSE AND CONTINGENCY PLAN (ERCP)*

9.1 PRE-EMERGENCY PLANNING

Prior to engaging in construction/remediation activities at the site, the CS will plan for possible emergency situations and have adequate supplies and manpower to respond. In addition, site personnel will be briefed on proper emergency response procedures during the site orientation.

The following situations would warrant implementation of the emergency plan:

Fire/Explosion	• The potential for human injury exists. • Toxic fumes or vapors are released. • The fire could spread on site or off site and possibly ignite other flammable materials or cause heat-induced explosions. • The use of water and/or chemical fire suppressants could result in contaminated run-off. • An imminent danger of explosion exists.
Spill or Release of Hazardous Materials	• The spill could result in the release of flammable liquids or vapors, thus causing a fire or gas explosion hazard. • The spill could cause the release of toxic liquids or fumes in sufficient quantities or in a manner that is hazardous to or could endanger human health.
Natural Disaster	• A rain storm exceeds the flash flood level. • The facility is in a projected tornado path or a tornado has damaged facility property. • Severe wind gusts are forecasted or have occurred and have caused damage to the facility.
Medical Emergency	• Overexposure to hazardous materials. • Trauma injuries (broken bones, severe lacerations/ bleeding, burns). • Eye/skin contact with hazardous materials. • Medical Conditions e.g., loss of consciousness, heat stress (heat stroke), heart attack, respiratory failure, allergic reaction.

The following measures will be taken to assure the availability of adequate equipment and manpower resources:

- Sufficient equipment and materials will be kept on site and dedicated for emergencies only. The inventory will be replenished after each use.
- It will be the responsibility of the CS/HSO to brief on site personnel on anticipated hazards at the site. The CS/HSO shall also be responsible for anticipating and requesting equipment that will be needed for response activities.

Communications will be established prior to commencement of any activities at the remediation site. Communication will be established so that all responders on site have availability to all pertinent information to allow them to conduct their activities in a safe and healthful manner. A telephone will be available to summon assistance in an emergency.

Primary communication with local responders in the event of an emergency will be accomplished using commercial telephone lines.

9.2 EMERGENCY RECOGNITION AND PREVENTION

Because unrecognized hazards may result in emergency incidents, it will be the responsibility of the CS and Health & Safety Officer (HSO), through daily site inspections and employee feedback to recognize and identify hazards that are found at the site. These may include:

Chemical Hazards	• Materials at the site • Materials brought to the site	
Physical Hazards	• Fire/explosion • Slip/trip/fall • Electrocution	• Confined space • IDLH atmospheres • Excessive noise
Mechanical Hazards	• Heavy equipment • Stored energy system • Pinch points	• Electrical equipment • Vehicle traffic
Environmental Hazards	• Electrical Storms • High winds • Heavy Rain/Snow	• Heat Stress • Vehicle traffic

9.3 EMERGENCY TELEPHONE NUMBERS

Emergency telephone numbers can be found in Table 9-1. The emergency numbers will be posted in all site trailers.

Figure 9-1 is the Hospital Route Map with directions to the nearest hospital. Only in a non-emergency situation are personnel to be transported to the hospital by site representatives.

FIGURE 9-1

TABLE 9-1
EMERGENCY TELEPHONE NUMBERS

Emergency Medical Service……...	911
Police: New York City Police Department (NYPD)…….....	911
Hospital: Floating Hospital……..……	(718) 784-0149
Fire: New York City Fire Department (FDNY)…….	911
New York City Office of Emergency Management……...	911
National Response Center……..	(800) 424-8802
Poison Control Center…….....	(800) 222-1222
Chemtrec…….	(800) 262-8200
Center for Disease Control…….	(800) 311-3435
USEPA(Region II)…….	(212) 637-5000
NYSDEC Emergency Spill Response…….……	(800) 457-7362
Contractor Emergency Numbers……...…….	(718) 472-0830

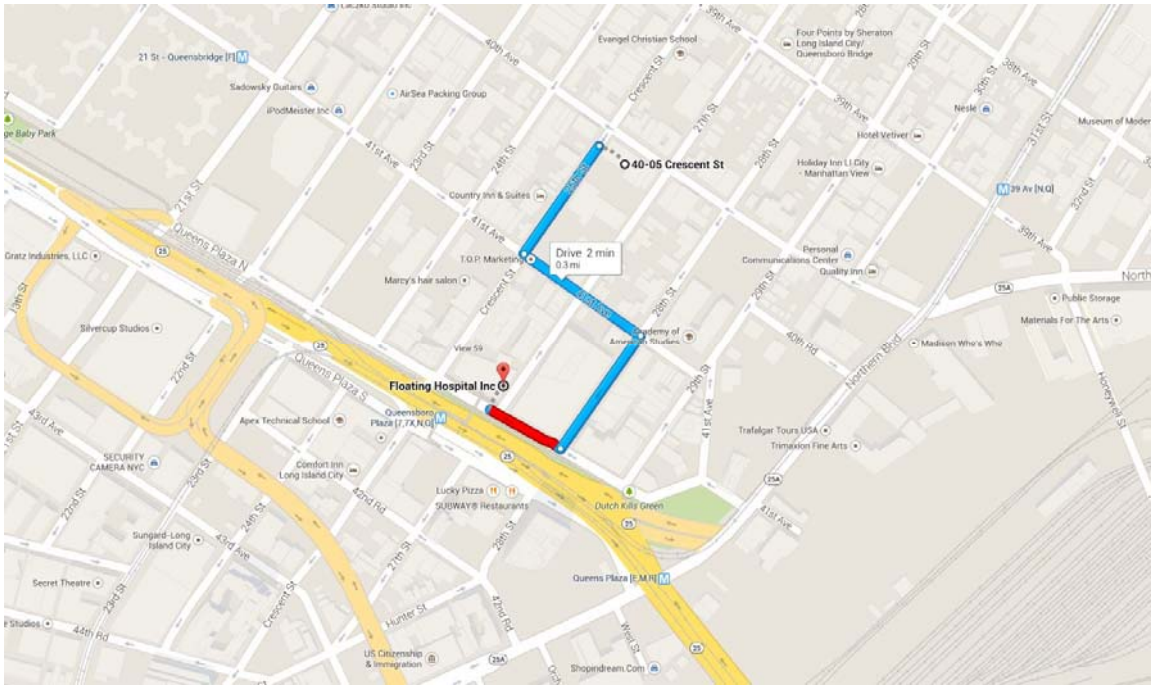
DIRECTIONS AND HOSPITAL ROUTE MAP

FIGURE 1 – HOSPITAL ROUTE PLAN (Floating Hospital)

Site Location: 40-05 Crescent Street, Long Island City, NY
Hospital Location: 2515 Queens Plaza N., Long Island City, NY

Information Line:

	Steps	Maneuvers	Dist.
START	1	Start **Southwest** on Crescent Street toward 41st Avenue	482 ft
	2	Turn **Left** onto **41st Avenue**	0.1 mi
	3	Turn **Right** onto **28th Street**	0.1 mi
	4	Turn **Right** onto **Queens Plaza N**	295 ft
END	5	Follow signs to the Emergency Room	
Total Est. Time: 2 minutes		**Total Est. Distance:** 0.3 miles	



Once a hazard has been recognized, the CS and/or the HSO will take immediate action to prevent the hazard from becoming an emergency. This may be accomplished by the following:

- Daily safety meeting
- Task-specific training prior to commencement of activity
- Personal Protective Equipment (PPE) selection/use
- Written and approved permits for hot work, confined space
- Trenching/shoring procedure
- Air monitoring
- Following all standard operating procedures

9.4 PERSONNEL ROLES, LINES OF AUTHORITY, AND COMMUNICATIONS

This section of the ERCP describes the various roles, responsibilities, and communication procedures that will be followed by personnel involved in emergency responses.

The primary emergency coordinator for this site is the CS. In the event an emergency occurs and the emergency coordinator is not on site, the HSO will serve as the emergency coordinator until the CS arrives. The emergency coordinator will determine the nature of the emergency and take appropriate action as defined by this ERCP.

The emergency coordinator will implement the ERCP immediately as required. The decision to implement the plan will depend upon whether the actual incident threatens human health or the environment.

Immediately after being notified of an emergency incident, the emergency coordinator or his designee will evaluate the situation to determine the appropriate action.

9.4.1 *Responsibilities and Duties*

This section describes the responsibilities and duties assigned to the emergency coordinator.

It is recognized that the structure of the "Incident Command System" will change as additional response organizations are added. Personnel will follow procedures as directed by the fire department, LEPC, State and Federal Agencies as required.

9.4.2 *On-Site Emergency Coordinator Duties*

The on-site emergency coordinator is responsible for implementing and directing the emergency procedures. All emergency personnel and their communications will be coordinated through the emergency coordinator. Specific duties are as follows:

- Identify the source and character of the incident, type and quantity of any release. Assess possible hazards to human health or the environment that may result directly from the problem or its control.
- Discontinue operations in the vicinity of the incident if necessary to ensure that fires, explosions, or spills do not recur or spread to other parts of the site. While operations are dormant, monitor for leaks, pressure build-up, gas generation, or ruptures in valves, pipes, or other equipment, where safe and appropriate.
- Notify the Client Representative and local Emergency Response Teams if their help is necessary to control the incident. Table 9-1 provides telephone numbers for emergency assistance.
- Direct on-site personnel to control the incident until, if necessary, outside help arrives. Specifically: Ensure that the building or area where the incident occurred and the surrounding area are evacuated and shut off possible ignition sources, if safe and appropriate. The Emergency Response Coordinator is responsible for directing site personnel such that they avoid the area of the incident and leave emergency control procedures unobstructed.
- If fire or explosion is involved, notify local Fire Department.
- Have protected personnel, in appropriate PPE, on standby for rescue.

If the incident may threaten human health or the environment outside of the site, the emergency coordinator should immediately determine whether evacuation of area outside of the site may be necessary and, if so, notify the Police Department and the Office of Emergency Management.

When required, notify the National Response Center. The following information should be provided to the National Response Center:

- Name and telephone number
- Name and address of facility
- Time and type of incident
- Name and quantity of materials involved, if known
- Extent of injuries
- Possible hazards to human health or the environment outside of the facility.

The emergency telephone number for the National Response Center is 800-424-8802.

If hazardous waste has been released or produced through control of the incident, ensure that:

- Waste is collected and contained.

- Containers of waste are removed or isolated from the immediate site of the emergency.
- Treatment or storage of the recovered waste, contaminated soil or surface water, or any other material that results from the incident or its control is provided.
- Ensure that no waste that is incompatible with released material is treated or stored in the facility until cleanup procedures are completed.
- Ensure that all emergency equipment used is decontaminated, recharged, and fit for its intended use before operations are resumed.
- Notify the USEPA Regional Administrator that cleanup procedures have been completed and that all emergency equipment is fit for its intended use before resuming operations in the affected area of the facility. The USEPA Regional Administrator's telephone number is included in the Emergency Contacts.
- Record date, time, details of the incident, and submit a written report to the USEPA Regional Administrator. The report is due to the USEPA within 15 days of the incident.

9.5 SAFE DISTANCES AND PLACES OF REFUGE

The emergency coordinator for all activities will be the CS. No single recommendation can be made for evacuation or safe distances because of the wide variety of emergencies which could occur. Safe distances can only be determined at the time of an emergency based on a combination of site and incident-specific criteria. However, the following measures are established to serve as general guidelines.

In the event of minor hazardous materials releases (small spills of low toxicity), workers in the affected area will report initially to the contamination reduction zone. Small spills or leaks (generally less than 55 gallons) will require initial evacuation of at least 50 feet in all directions to allow for cleanup and to prevent exposure. After initial assessment of the extent of the release and potential hazards, the emergency coordinator or his designee will determine the specific boundaries for evacuation. Appropriate steps such as caution tape, rope, traffic cones, barricades, or personal monitors will be used to secure the boundaries.

If a major incident may threaten the health or safety of the surrounding community, the public will be informed and, if necessary, evacuated from the area. The emergency coordinator, or his designee will inform the proper agencies in the event that this is necessary. Telephone numbers are listed in Table 9-1.

Places of refuge will be established prior to the commencement of activities. These areas must be identified for the following incidents:

- Chemical release

- Fire/explosion
- Power loss
- Medical emergency
- Hazardous weather

In general, evacuation will be made to the site entrance, unless the emergency coordinator determines otherwise. It is the responsibility of the emergency coordinator to determine when it is necessary to evacuate personnel to off-site locations.

In the event of an emergency evacuation, all the employees will gather at the entrance to the site until a head count establishes that all are present and accounted for. No one is to leave the site without notifying the emergency coordinator.

9.6 EVACUATION ROUTES AND PROCEDURES

All emergencies require prompt and deliberate action. In the event of an emergency, it will be necessary to follow an established set of procedures. Such established procedures will be followed as closely as possible. However, in specific emergency situations, the emergency coordinator may deviate from the procedures to provide a more effective plan for bringing the situation under control. The emergency coordinator is responsible for determining which situations require site evacuation.

9.6.1 *Evacuation Signals and Routes*

Two-way radio communication or equivalent will be used to notify employees of the necessity to evacuate an area or building involved in a release/spill of a hazardous material. As necessary, each crew supervisor will have a two-way radio. Total site evacuation will be initiated only by the emergency coordinator, however, in his absence, decision to preserve the health and safety of employees will take precedence.

9.6.2 *Evacuation Procedures*

In the event evacuation is necessary the following actions will be taken:

- The emergency signal will be activated.
- No further entry of visitors, contractors, or trucks will be permitted. Vehicle traffic within the site will cease in order to allow safe exit of personnel and movement of emergency equipment.
- Shut off all machinery if safe to do so.

- ALL on-site personnel, visitors, and contractors in the support zone will assemble at the entrance to the site for a head count and await further instruction from the emergency coordinator.
- ALL persons in the exclusion zone and contamination reduction zone will be accounted for by their immediate crew leaders. Leaders will determine the safest exits for employees and will also choose an alternate exit if the first choice is inaccessible.
- During exit, the crew leader should try to keep the group together. Immediately upon exit, the crew leader will account for all employees in his crew.
- Upon completion of the head count, the crew leader will provide the information to the emergency coordinator.
- Contract personnel and visitors will also be accounted for.
- The names of emergency response team members involved will be reported to the emergency coordinator.
- A final tally of persons will be made by the emergency coordinator or designee. No attempt to find persons not accounted for will involve endangering lives of site personnel by re-entry into emergency areas.
- In all questions of accountability, immediate crew leaders will be held responsible for those persons reporting to them. Visitors will be the responsibility of those employees they are seeing. Contractors and truck drivers are the responsibility of the Construction Superintendent.
- Personnel will be assigned by the emergency coordinator to be available at the main gate to direct and brief emergency responders.
- Re-entry into the site will be made only after clearance is given by the emergency coordinator. At his direction, a signal or other notification will be given for re-entry into the facility.

9.7 EMERGENCY SPILL RESPONSE PROCEDURES AND EQUIPMENT

In the event of an emergency involving a hazardous material spill or release, the following general procedures will be used for rapid and safe response and control of the situation. Emergency contacts found in Table 9-1 provide a quick reference guide to follow in the event of a major spill.

9.7.1 *Notification Procedures*

If an employee discovers a chemical spill or process upset resulting in a vapor or material release, he or she will immediately notify the on-site emergency coordinator.

On-site Emergency Coordinator will obtain information pertaining to the following:

- The material spilled or released.
- Location of the release or spillage of hazardous material.
- An estimate of quantity released and the rate at which it is being released.
- The direction in which the spill, vapor or smoke release is heading.
- Any injuries involved.
- Fire and/or explosion or possibility of these events.
- The area and materials involved and the intensity of the fire or explosion.

This information will help the on-site emergency coordinator to assess the magnitude and potential seriousness of the spill or release.

9.7.2 *Procedure for Containing/Collecting Spills*

The initial response to any spill or discharge will be to protect human health and safety, and then the environment. Identification, containment, treatment, and disposal assessment will be the secondary response.

If for some reason a chemical spill is not contained within a dike or sump area, an area of isolation will be established around the spill. The size of the area will generally depend on the size of the spill and the materials involved. If the spill is large (greater than 55 gallons) and involves a tank or a pipeline rupture, an initial isolation of at least 100 ft. in all directions will be used. Small spills (less than or equal to 55 gallons) or leaks from a tank or pipe will require evacuation of at least 50 ft. in all directions to allow cleanup and repair and to prevent exposure. When any spill occurs, only those persons involved in overseeing or performing emergency operations will be allowed within the designated hazard area. If possible the area will be roped or otherwise blocked off.

If the spill results in the formation of a toxic vapor cloud (by reaction with surrounding materials or by outbreak of fire) and its release (due to high vapor pressures under ambient conditions), further evacuation will be necessary. In general an area at least 500 feet wide and 1,000 feet long will be evacuated downwind if volatile materials are spilled. (Consult the DOT Emergency Response Guide for isolation distances for listed hazardous materials.)

If an incident may threaten the health or safety of the surrounding community, the public will be informed and possibly evacuated from the area. The on-site emergency coordinator will inform the proper agencies in the event this is necessary. (Refer to Table 9-1)

As called for in regulations developed under the Comprehensive Environmental Response Compensation Liability Act of 1980 (Superfund), a spill of a pound or more of any hazardous material for which a reportable quantity has not been established and which is listed under the Solid Waste Disposal Act, Clean Air Act, Clean Water Act, or TSCA shall be reported.

Clean up personnel will take the following measures:

- Make sure all unnecessary persons are removed from the hazard area.
- Put on protective clothing and equipment.
- If a flammable material is involved, remove all ignition sources, and use spark and explosion proof equipment for recovery of material.
- Remove all surrounding materials that could be especially reactive with materials in the waste. Determine the major components in the waste at the time of the spill.
- If wastes reach a storm sewer, try to dam the outfall by using sand, earth, sandbags, etc. If this is done, pump this material out into a temporary holding tank or drums as soon as possible.
- Place all small quantities of recovered liquid wastes (55 gallons or less) and contaminated soil into drums for incineration or removal to an approved disposal site.
- Spray the spill area with foam, if available, if volatile emissions may occur.
- Apply appropriate spill control media (e.g. clay, sand, lime, etc.) to absorb discharged liquids.

For large spills, establish diking around leading edge of spill using booms, sand, clay or other appropriate material. If possible, use diaphragm pump to transfer discharged liquid to drums or holding tank.

9.7.3 *Emergency Response Equipment*

The following equipment will be staged in the support zone and throughout the site, as needed, to provide for safety and first aid during emergency responses.

- ABC-type fire extinguisher
- First-aid kit, industrial size
- Portable eyewash

9.7.4 *Emergency Spill Response Clean-Up Materials and Equipment*

A sufficient supply of appropriate emergency response clean-up and personal protective equipment will be available as needed.

The materials listed below may be kept on site for spill control, depending on the types of hazardous materials present on site. The majority of this material will be located in the support zone, in a supply trailer or storage area. Small amounts, as necessary, will be placed on pallets and located in the active work areas.

- Sand or clay to solidify/absorb liquid spills.

* **Note: All contaminated soils, absorbent materials, solvents and other materials resulting from the clean-up of spilled or discharged substances shall be properly stored, labeled, and disposed of off-site.**

9.8 EMERGENCY CONTINGENCY PLAN

This section of the ERCP details the contingency measures the Site Contractor will take to prepare for and respond to fires, explosions, spills and releases of hazardous materials, hazardous weather, and medical emergencies.

9.9 MEDICAL EMERGENCY CONTINGENCY MEASURES

The procedures listed below will be used to respond to medical emergencies. A minimum of one First-Aid/CPR trained personnel should be available on site.

9.9.1 *Response*

The nearest workers will immediately assist a person who shows signs of medical distress or who is involved in an accident. The work crew supervisor will be summoned.

The work crew supervisor will immediately make radio contact with the on-site emergency coordinator to alert him of a medical emergency situation. The supervisor will advise the following information:

- Location of the victim at the work site
- Nature of the emergency
- Whether the victim is conscious
- Specific conditions contributing to the emergency, if known

The Emergency Coordinator will notify the Health & Safety Officer. The following actions will then be taken depending on the severity of the incident:

- *Life-Threatening Incident* – If an apparent life-threatening condition exists, the crew supervisor will inform the emergency coordinator by radio, and the local Emergency Response Services (EMS) will be immediately called. An on-site person will be

appointed who will meet the EMS and have him/her quickly taken to the victim. Any injury within the EZ will be evacuated by personnel to a clean area for treatment by EMS personnel. No one will be able to enter the EZ without showing proof of training, medical surveillance and site orientation.

- *Non Life-Threatening Incident* – If it is determined that no threat to life is present, the Health & Safety Officer will direct the injured person through decontamination procedures (see below) appropriate to the nature of the illness or accident. Appropriate first aid or medical attention will then be administered.

* **Note: The area surrounding an accident site must not be disturbed until the scene has been cleared by the Health & Safety Officer.**

Any personnel requiring emergency medical attention will be evacuated from exclusion and contamination reduction zones if doing so would not endanger the life of the injured person or otherwise aggravate the injury. Personnel will not enter the area to attempt a rescue if their own lives would be threatened. The decision whether or not to decontaminate a victim prior to evacuation is based on the type and severity of the illness or injury and the nature of the contaminant. For some emergency victims, immediate decontamination may be an essential part of life-saving first aid. For others, decontamination may aggravate the injury or delay life-saving first aid. Decontamination will be performed if it does not interfere with essential treatment.

If decontamination can be performed, observe the following procedures:

- Wash external clothing and cut it away.

If decontamination cannot be performed, observe the following procedures:

- Wrap the victim in blankets or plastic to reduce contamination of other personnel.
- Alert emergency and off-site medical personnel to potential contamination, instruct them about specific decontamination procedures.
- Send site personnel familiar with the incident and chemical safety information, e.g. MSDS, with the affected person.

All injuries, no matter how small, will be reported to the HSO or the CS. An accident/injury/illness report will be completely and properly filled out and submitted to the Corporate Health and Safety Manager.

A list of emergency telephone numbers is given in Table 9.1.

9.9.2 *Notification*

The following personnel/agencies will be notified in the event of a medical emergency:

- Local Fire Department or EMS
- On-site Emergency Coordinator
- Workers in the affected areas
- Client Representative

9.10 FIRE CONTINGENCY MEASURES

Because flammable/combustible materials are present at this site, fire is an ever-present hazard. Safety personnel are not trained professional firefighters. Therefore, if there is any doubt that a fire can be quickly contained and extinguished, personnel will notify the emergency coordinator by radio and vacate the structure or area. The emergency coordinator will immediately notify the local Fire Department.

The following procedures will be used to prevent the possibility of fires and resulting injuries:

- Sources of ignition will be kept away from where flammable materials are handled or stored.
- The air will be monitored for explosivity before and during hot work and periodically where flammable materials are present. Hot work permits will be required for all such work.
- "No smoking" signs will be conspicuously posted in areas where flammable materials are present.
- Fire extinguishers will be placed in all areas where a fire hazard may exist.
- Before workers begin operations in an area the foreman will give instruction on egress procedures and assembly points. Egress routes will be posted in work areas and exit points clearly marked.

9.10.1 *Response*

The following procedures will be used in the event of a fire:

- Anyone who sees a fire will notify their supervisor who will then contact the Emergency Coordinator by radio. The emergency coordinator will activate the emergency air horns and contact the local Fire Department.

- When the emergency siren sounds, workers will disconnect electrical equipment in use (if possible) and proceed to the nearest fire exit.
- Work crews will be comprised of pairs of workers (buddy system) who join each other immediately after hearing the fire alarm and remain together throughout the emergency. Workers will assemble at a predetermined rally point for a head count.
- When a small fire has been extinguished by a worker, the emergency coordinator will be notified.

9.11 HAZARDOUS WEATHER CONTINGENCY MEASURES

Operations outside will not be started or continued when the following hazardous weather conditions are present:

- Lightning
- Heavy Rains/Snow
- High Winds

9.11.1 *Response*

- Excavation/soil stock piles will be covered with plastic liner.
- All equipment will be shut down and secured to prevent damage.
- Personnel will be moved to safe refuge. The emergency coordinator will determine when it is necessary to evacuate personnel to off-site locations and will coordinate efforts with fire, police and other agencies.

9.11.2 *Notification*

The emergency coordinator will be responsible for assessing hazardous weather conditions and notifying personnel of specific contingency measures. Notifications will include:

- Site workers and subcontractors
- Client Representative
- Local Emergency Management Agency

9.12 SPILL/RELEASE CONTINGENCY MEASURES

In the event of release or spill of a hazardous material the following measures will be taken:

9.12.1 *Response*

Any person observing a spill or release will act to remove and/or protect injured/contaminated persons from any life-threatening situation. First aid and/or decontamination procedures will be implemented as appropriate.

First aid will be administered to injured/contaminated personnel. All personnel will act to prevent any unsuspecting persons from coming in contact with spilled materials by alerting other nearby persons. Attempt to stop the spill at the source, if possible. Without taking unnecessary risks, personnel will attempt to stop the spill at the source. This may involve activities such as uprighting a drum, closing a valve or temporarily sealing a hole with a plug.

The emergency coordinator will be notified of the spill/release, including information on material spilled, quantity, personnel injuries and immediate life threatening hazards. Air monitoring will be implemented by the emergency coordinator and HSO to determine the potential impact on the surrounding community. Notification procedures will be followed to inform on-site personnel and off-site agencies. The emergency coordinator will make a rapid assessment of the spill/release and direct confinement, containment and control measures. Depending upon the nature of the spill, measures may include:

- Construction of a temporary containment berm utilizing on-site clay absorbent earth
- Digging a sump, installing a polyethylene liner and
- Diverting the spill material into the sump placing drums under the leak to collect the spilling material before it flows over the ground
- Transferring the material from its original container to another container

The emergency coordinator will notify the Client Representative of the spill and steps taken to institute clean-up. Emergency response personnel will clean-up all spills following the spill clean-up plan developed by the emergency coordinator. Supplies necessary to clean up a spill may include, but are not limited to:

- Shovel, rake
- Clay absorbent
- Polyethylene liner
- Personal safety equipment
- Steel drums
- Pumps and miscellaneous hand tools

The emergency coordinator will inspect the spill site to determine that the spill has been cleaned up to the satisfaction of the Client Representative. If necessary, soil, water or air samples may be taken and analyzed to demonstrate the effectiveness of the spill clean-up effort. The emergency coordinator will determine the cause of the spill and determine remedial steps to ensure that recurrence is prevented. The emergency coordinator will review the cause with the Client Representative and obtain his concurrence with the remedial action plan.

10.0 *TRAINING REQUIREMENTS*

All personnel entering the exclusion zone will be trained in the provisions of this site safety plan and be required to sign the CHASP Acknowledgment form in Appendix A.

10.1 SITE-SPECIFIC TRAINING ORIENTATION

Outlines of the orientation for site workers, subcontractor personnel and visitors are presented below:

CONTRACTOR WORKERS	VISITORS

• HASP sign off
• Sign in/out procedures
• Site background/characterization
• Chain of command
• Rules and regulations
• Hours of work
• Absences
• Personal Protective Equipment/respirator fit test (if applicable)
• Emergency Information
  • Emergency signal
  • Gathering point
  • Responsibilities/roles
  • Emergency phone numbers
• Site Control/Work Zones
• Hazards/AHAs
• Air Monitoring Program
• Forms, site-specific
• Incident Reporting
• Lead Awareness (Appendix C)
	• Sign in/out procedures
	• Site Background/ Characterization
	• Review of Site map
	• Work Zones in progress
	• Emergency plan/signals
	• Training/medical requirements
	• Zones/areas open to visitors

10.2 DAILY SAFETY MEETINGS

A safety meeting will be conducted by the CS and the HSO 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.

APPENDIX A

- ***HEALTH AND SAFETY PLAN CERTIFICATION***
- ***GENERAL/SUB-CONTRACTOR HEALTH & SAFETY PLAN ACKNOWLEDGEMENT***
- ***NOTICE OF SAFETY VIOLATION***
- ***PRE-JOB SAFETY CHECKLIST***

HEALTH AND SAFETY PLAN CERTIFICATION

By signing this document, I am stating that I have read and understand the site health and safety plan for _____ (Contractor) personnel, subcontractors and visitors entering the site.

COMPANY NAME	NAME (PRINT)	SIGNATURE	DATE

NOTICE OF SAFETY VIOLATION

TO: _____(Name of Contractor/Subcontractor Supervisor)
FROM: _____(Name of Owner/Contractor's Project Manager)
DATE: _____
SUBJECT: ***Notice of Safety Violations***

The following Safety Violations were observed at the Name of Site/Project on Date.

1. _____
2. _____
3. _____
4. _____
5. _____

You are requested to take the necessary corrective action to alleviate these safety violations by _____ (Date).

Please notify _____(Name of Contractor/Subcontractor's Project Manager) when you have completed this corrective action.

Thank you in advance for your cooperation in this effort.

CONTRACTOR/SUBCONTRACTOR
PRE-JOB SAFETY CHECKLIST

JOB:	SUBCONTRACTOR:
LOCATION:	PROJECT NO.

		Yes	No
1.	Standard emergency signals fully understood?	☐	☐
2.	Subcontractor responsibility in time of emergency understood?	☐	☐
3.	Fire and ambulance telephone numbers known?	☐	☐
4.	Areas for possible evacuation designated?	☐	☐
5.	Special safety rules for the plant or area known?	☐	☐
6.	Nature of Chemical or special hazards for area reviewed with safety officer?	☐	☐
7.	Special safety equipment for the area of job known?	☐	☐
8.	Safety shower and eye wash locations known?	☐	☐
9.	Smoking area designated?	☐	☐
10.	Have you been advised of potential hazards, protective Measures and availability of hazard information? e.g. Health & Safety Plan	☐	☐
11.	Do you understand you are required to provide your employees with the information in (10) above?	☐	☐
12.	Have you provided MSDSs to Athenica for any hazardous material you intend to bring on site?	☐	☐
13.	Have you submitted training/medical certification records?	☐	☐
14.	Are your subcontractors aware of the above rules?	☐	☐

Remarks: (Explain all No Answers) _____

_____

_____

_____ _____

Subcontractor's Supervisor Date

_____ _____

Contractor's Project Manager Date

_____ _____

Contractor's Project Supervisor Date

_____ _____

Health & Safety Officer Date

APPENDIX B

HEALTH AND SAFETY PLAN AMENDMENTS AND DOCUMENTATION FORM

SITE-SPECIFIC HEALTH AND SAFETY PLAN
AMENDMENT DOCUMENTATION

Project Name: _____ **Project No.:** _____

Amendment No.: _____ **Date:** _____

Amendment Revises: Page(s): _____ **Section(s):** _____

Task(s) Amendment Affects:* _____

_____

**(Attach new/revised Job Safety Analyses)*

Reason For Amendment:

_____

_____

_____

Amendment: *(Attach separate sheet(s) as necessary)*

_____

_____

_____

_____

_____

_____

_____

Completed by: _____ **Approved by:** _____

SITE-SPECIFIC HEALTH AND SAFETY PLAN
AMENDMENT DOCUMENTATION

Project Name: _____ **Project No.:** _____

Amendment No.: _____ **Date:** _____

Amendment Revises: Page(s)*:* _____ **Section(s):** _____

SITE-SPECIFIC HEALTH AND SAFETY PLAN
AMENDMENT DOCUMENTATION

Project Name: _____ **Project No.:** _____

Amendment No.: _____ **Date:** _____

Amendment Revises: Page*:* _____ **Section:** _____

Task(s) Amendment Affects:* _____

_____

**(Attach new/revised Job Safety Analyses)*

Reason For Amendment:

_____

_____

_____

Amendment: *(Attach separate sheet(s) as necessary)*

_____

_____

_____

_____

_____

_____

_____

Completed by: _____ **Approved by:** _____

APPENDIX C

DAILY SAFETY REPORT FORM

AIR MONITORING FORMS

DAILY SAFETY REPORT

Date:	Site Name:	Site Location:

Time	Temp.	Wind Dir	Wind Spd	Conditions

Activity	PPE Worn

Time	Observations/Actions

Notes Taken By: _____

DAILY SAFETY REPORT

Date:	Site Name:	Site Location:

Time	Observations/Actions

AIR MONITORING RECORD

Site Name:	**Site Location:**	**Date:**

Time	Respirable Particulates (mg/m^3)	Location	Activity	Init

EQUIPMENT CALIBRATION RECORD

Site Name: **Site Location:**

Date	Instrument	S/N	Battery	Zero	Init. Rdg.	Adjustments	Initials
	pDR-1500, Dusttrack or equivalent			Filter			
	pDR-1500, Dusttrack or equivalent			Filter			
	pDR-1500, Dusttrack or equivalent			Filter			
	pDR-1500, Dusttrack or equivalent			Filter			
	pDR-1500, Dusttrack or equivalent			Filter			
	pDR-1500, Dusttrack or equivalent			Filter			
	pDR-1500, Dusttrack or equivalent			Filter			
	pDR-1500, Dusttrack or equivalent			Filter			
	pDR-1500, Dusttrack or equivalent			Filter			
	pDR-1500, Dusttrack or equivalent			Filter			
	pDR-1500, Dusttrack or equivalent			Filter			
	pDR-1500, Dusttrack or equivalent			Filter			
	pDR-1500, Dusttrack or equivalent			Filter			
	pDR-1500, Dusttrack or equivalent			Filter			
	pDR-1500, Dusttrack or equivalent			Filter			

Calibration gases: 1. 100 ppm isobutylene, 2. 50% LEL methane, 3. 50 ppm CO, 4. 25 ppm H_2S

APPENDIX D

TAILGATE SAFETY MEETING FORM

Daily Safety Meeting Report

Project Name:
Location:
Date:

Today's Tasks/Activities:

_____
_____
_____
_____
_____
_____

Potential Chemical/Physical Hazards:

_____
_____
_____
_____
_____

Personal Protective Equipment:

_____
_____
_____
_____
_____

Attendees:

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

HSO: _____ Const. Supt: _____
(Signature) **(Signature)**

APPENDIX 5

PROPOSED DEVELOPMENT PLANS

PERPSECTIVE NOTE:
RENDERING IS FOR ILLUSTRATION PURPOSES ONLY AND NOT TO BE USED FOR CONSTRUCTION.

PROPOSED NEW :

MIXED USE BUILDING

40-05 CRESCENT ST.
LONG ISLAND CITY, NY 11101

D R A W I N G L I S T

1. T-001.00 – TITLE SHEET
2. Z-001.00 – ZONING CALCULATIONS AND PLOT PLAN
3. N-001.00 – SCHEDULES, DETAILS AND LEGENDS
4. FO-001.00 – FOUNDATION PLAN
5. FO-002.00 – FOUNDATION DETAILS
6. A-001.00 – SUB CELLAR PLAN
7. A-002.00 – CELLAR PLAN
8. A-003.00 – FIRST FLOOR PLAN
9. A-004.00 – SECOND FLOOR PLAN
10. A-005.00 – THIRD FLOOR PLAN
11. A-006.00 – FOURTH FLOOR PLAN
12. A-007.00 – FIFTH FLOOR PLAN
13. A-008.00 – ROOF PLAN
14. A-009.00 – EXTERIOR ELEVATIONS
15. A-010.00 – EXTERIOR ELEVATIONS
16. A-011.00 – BUILDING SECTION A-A
17. A-012.00 – WALL SECTIONS
18. A-013.00 – STAIR & ELEVATOR DETAILS
19. A-014.00 – METAL STUD AND JOIST DETAILS
20. N-002.00 – MULTIPLE DWELLING & H.C. NOTES
21. N-003.00 – GENERAL NOTES
22. EC-001.00 – ENERGY CODE ANALYSIS
23. S-001.00 – CELLAR STRUCTURAL PLAN
24. S-002.00 – FIRST FLOOR STRUCTURAL PLAN
25. S-003.00 – SECOND FLOOR STRUCTURAL PLAN
26. S-004.00 – THIRD FLOOR STRUCTURAL PLAN
27. S-005.00 – FOURTH FLOOR STRUCTURAL PLAN
28. S-006.00 – FIFTH FLOOR STRUCTURAL PLAN
29. S-007.00 – ROOF AND BULKHEAD STRUCTURAL PLANS
30. M-001.00 – MECHANICAL SCHEDULE & NOTES AND PLOT PLAN
31. M-002.00 – SUB CELLAR MECHANICAL PLAN
32. M-003.00 – CELLAR MECHANICAL PLAN
33. M-004.00 – FIRST FLOOR MECHANICAL PLAN
34. M-005.00 – SECOND FLOOR MECHANICAL PLAN
35. M-006.00 – THIRD FLOOR MECHANICAL PLAN
36. M-007.00 – FOURTH FLOOR MECHANICAL PLAN
37. M-008.00 – FIFTH FLOOR MECHANICAL PLAN
38. M-009.00 – MECHANICAL NOTES AND DETAILS
39. P-001.00 – PLUMBING RISER DIAGRAM
40. P-002.00 – GAS RISER DIAGRAM
41. SP-001.00 – SPRINKLER RISER DIAGRAM, LEGEND AND PLOT PLAN
42. SP-002.00 – SUB CELLAR SPRINKLER PLAN
43. SP-003.00 – CELLAR SPRINKLER PLAN
44. SP-004.00 – FIRST FLOOR SPRINKLER PLAN
45. SP-005.00 – SECOND FLOOR SPRINKLER PLAN
46. SP-006.00 – THIRD FLOOR SPRINKLER PLAN
47. SP-007.00 – FOURTH FLOOR SPRINKLER PLAN
48. SP-008.00 – FIFTH FLOOR SPRINKLER PLAN
49. SP-009.00 – BULKHEAD SPRINKLER PLAN
50. SP-010.00 – SPRINKLER PIPE CONNECTION AND RACING DETAILS

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

BSCAN STICKER

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :

RENDERED PERSPECTIVE

PAGE NUMBER
1 OF 50

Z:\Clients\1391nj-Dolonzo-Crescent Street\Construction Drawings\1391nj_C01.dwg

T-001.00

ZONING CALCULATIONS

PREMISE: 40–05 CRESCENT ST. (60' WIDE)
BLOCK: 406
LOT: 24

MAP NO.: 9B
ZONE(S): M1–2/R5D
LOT AREA: 12,524.5 SF

AREAS AND LOT COVERAGE

SEC. 23–64: FLOOR AREA & LOT COVERAGE

		MAX. PERMITTED	PROPOSED
TOTAL LOT AREA: 12,524.5 SF			
LOT COVERAGE: 80% (CORNER LOT)		10,019.6 SF	10,002 SF
OPEN SPACE: 20% (CORNER LOT)		2,505.1 SF	2,522.5 SF
(23–141) RESIDENTIAL F.A.R.:	= 2.0	25,051 SF	25,018 SF
(43–12) MANUFACTURING F.A.R.:	= 2.0	25,051 SF	11,415 SF
(117–631) MAX F.A.R.:	= 3.0	37,573.5 SF	36,433 SF

RESIDENTIAL FLOOR AREA BREAKDOWN

	ACT. AREA	DEDUCTIONS	ZONING FLOOR AREA
CELLAR	0.0	0.0	0.0
FIRST FLOOR	890.0	96.0	794.0
SECOND FLOOR	6117.0	96.0	6021.0
THIRD FLOOR	9597.0	152.0	9445.0
FOURTH FLOOR	4475.0	96.0	4379.0
FIFTH FLOOR	4475.0	96.0	4379.0
	25554.0	536.0	25018.0

RESIDENTIAL FLOOR AREA 25018.0

MANUFACTURING FLOOR AREA BREAKDOWN

	ACT. AREA	DEDUCTIONS	ZONING FLOOR AREA
CELLAR	0.0	0.0	0.0
FIRST FLOOR	12040.0	4659.0	7381.0
SECOND FLOOR	3978.0	0.0	3978.0
THIRD FLOOR	56.0	0.0	56.0
	16074.0	4659.0	11415.0

MANUFACTURING FLOOR AREA 11415.0
0.0
TOTAL BUILDING FLOOR AREA 36433.0
0.0

DENSITY

SEC. 23–22: MAXIMUM NUMBER OF DWELLING UNITS 33 32

FACTOR FOR D.U. = 760
25,051 / 760 = 32.96

YARDS & SETBACKS

SEC. 123–652: FRONT YARDS 0' 0'

SEC. 23–471: REAR YARD 30' 30'

SEC. 123–652: SIDE YARDS 0' 0'

SEC. 123–661: SETBACK REGULATIONS 25'–0" 25'

NO BUILDING OR OTHER STRUCTURE SHALL EXCEED A HEIGHT OF 35' WITHIN 25 FEET OF A STREET LINE. BEYOND 25 OF A STREET LINE NO BUILDING OR OTHER STRUCTURE SHALL EXCEED A HEIGHT OF 60'

SEC. 23–131: BALCONIES

LOCATED AT OR HIGHER THAN THE LEVEL OF THE 2ND STORY OR AT LEAST 7' ABOVE.

SEC. 25–81 BICYCLE PARKING 16 16

1 PER TWO DWELLING UNITS.
32 UNITS/2 = 16

SEC. 123–30: SUPPLEMENTAL USE REGULATIONS (C)

PARKING

SEC. 25–241: REDUCTION FOR SMALL LOTS 21 48

66% OF DWELLING UNITS
32 X .66 = 21.12 OR 21

THE QUALITY HOUSING PROGRAM *(R5D ONLY)*

SEC. 28–23: REFUSE STORAGE AND DISPOSAL

1 ON EACH FLOOR 12 S.F. MIN (DEDUCT FROM F.A.)

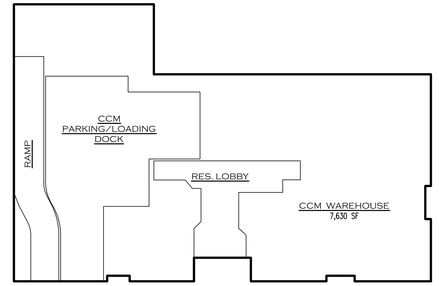
SEC. 28–33: PLANTING AREAS

THE AREA BETWEEN THE STREET WALL AND STREET LINE SHALL BE PLANTED AT GROUND LEVEL

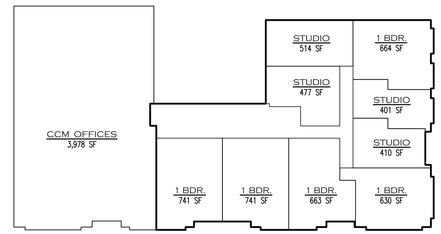
SEC. 28–53: LOCATION OF ACCESSORY PARKING

ACCESSORY OFF STREET PARKING SHALL; NOT BE PERMITTED BETWEEN THE STREET LINE AND THE STREET WALL OF THE BUILDING.

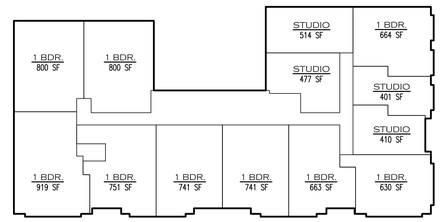
FLOOR AREA DIAGRAMS



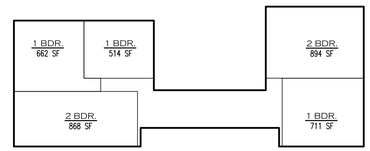
FIRST FLOOR



SECOND FLOOR



THIRD FLOOR

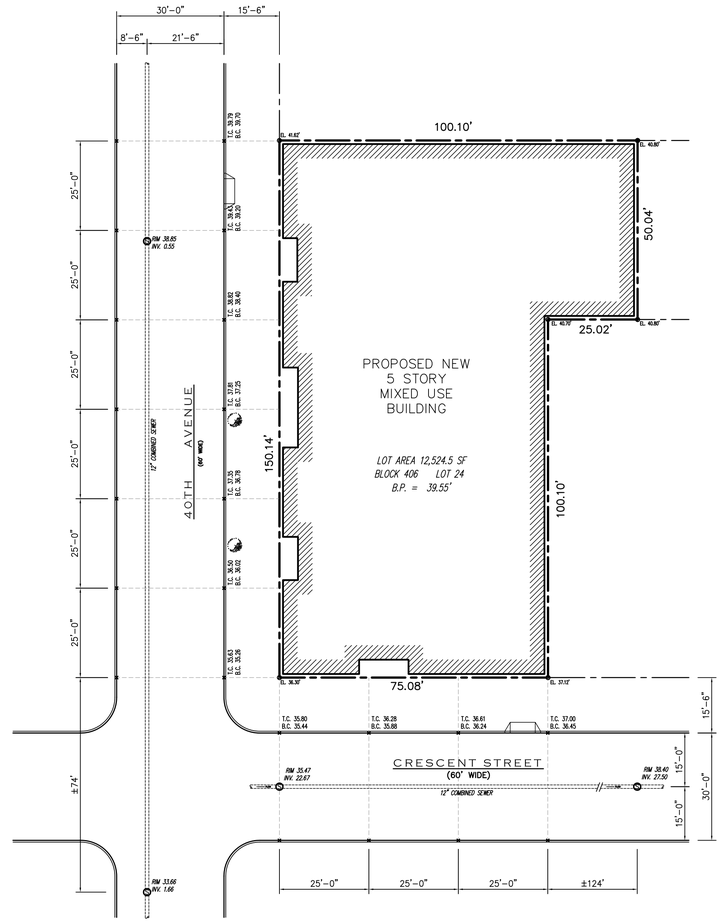


4TH AND 5TH FLOOR

APARTMENT COUNT AND BREAKDOWN

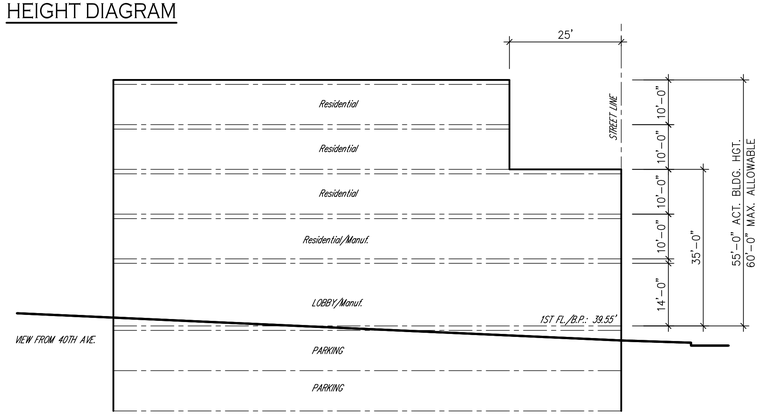
FLOOR	STUDIO	1 BEDROOM	2 BEDROOM
SECOND FLOOR	4	5	0
THIRD FLOOR	4	9	0
FOURTH FLOOR	0	3	2
FIFTH FLOOR	0	3	2
	8	20	4

32 TOTAL APARTMENTS



PLOT PLAN
SCALE: 1" = 20'

HEIGHT DIAGRAM



PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

BSCAN STICKER

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
PLOT PLAN AND ZONING CALCULATIONS

PAGE NUMBER
2 OF 50

Z:\Clients\1391nj-Dilorzo-Crescent Street\Construction Drawings\1391nj_C01.dwg

Z-001.00

LIST OF ABBREVIATIONS

A/C	AIR CONDITIONER
ASPH.	ASPHALT
AVG.	AVERAGE
A.F.F.	ABOVE FINISHED FLOOR
ACT.	ACTUAL
A.D.	AREA DRAIN
BSMT.	BASEMENT
BD.	BOARD
B.C.	BOTTOM OF CURB
BRG.	BEARING
B.O.	BOTTOM OF
BOTT.	BOTTOM
B.P.	BASE PLATE
CAB.	CABINET
C.F.M.	CUBIC FEET PER MINUTE
CLG.	CEILING
COL.	COLUMN
C.M.U.	CONCRETE MASONRY UNIT
C.O.	CLEAN OUT
℄	CENTER LINE
C.J.	CEILING JOIST
C.T.	COLLAR TIES
C.W.	CLOTHES WASHER
CONC.	CONCRETE
DET.	DETAIL
DIAM.	DIAMETER
DRWG.	DRAWING
DN	DOWN
D.W.	DISH WASHER
ELEV.	ELEVATOR
EL.	ELEVATION
EXH.	EXAUST
EXT.	EXTERIOR
EA.	EACH
E.W.	EACH WAY
F.B.	FACE BRICK
F.O.S.	FACE OF STUDS
FIN.	FINISH
F.P.	FIRE PROTECTED
FTG.	FOOTING
FND.	FOUNDATION
FL.	FLOOR
F.C.	FIRE CODE
F.P.S.C.	FIRE PROT. SOLID CORE
F.D.	FLOOR DRAIN
F.A.I.	FRESH AIR INTAKE
G.C.	GENERAL CONTRACTOR
GL.BLK.	GLASS BLOCK
GYP.BD.	GYPSUM WALL BOARD
GA.	GAUGE
GR.	GRADE
HDR.	HEADER
HVAC	HEAT./VENT./A-C
H.D.	HEAVY DUTY
HT.	HEIGHT
H.C.	HOLLOW CORE
H.M.	HOLLOW METAL
H.B.	HOSE BIB
INSUL.	INSULATION
INV.	INVERT
KIT.	KITCHEN
KITTE.	KITCHENETTE
K.S.	KITCHEN SINK
LDR.	LEADER
L.G.	LEGAL GRADE
MFR.	MANUFACTURER
MAS.	MASONRY
M.O.	MASONRY OPENING
MISC.	MISCELLANEOUS
M.L.	MICROLAM (GEORGIA PACIFIC)
MTL.	METAL
N.T.S.	NOT TO SCALE
N.B.	NON BEARING
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
PART.	PARTITION
P.LAM.	PLASTIC LAMINATE
PL.	PLATE
PLY.	PLYWOOD
P.V.C.	POLY VINYL CHLORIDE
P.C.F.	POUNDS PER CUBIC FEET
P.S.F.	POUNDS PER SQUARE FEET
P.S.I.	POUNDS PER SQUARE INCH
PL.	PROPERTY LINE
RAD.	RADIUS
REF.	REFERENCE
REG.	REGISTER
R.O.W.	RIGHT OF WAY
R.	RISER
R.D.	ROOF DRAIN
RM.	ROOM
R.O.	ROUGH OPENING
R.L.	ROOF LEADER
SEC.	SECTION
SIM.	SIMILAR
S.C.	SOLID CORE
S.D.	SMOKE DETECTOR
S.L.	STRUCLAM (WILLAMETTE)
SQ.	SQUARE
SPEC.	SPECIFICATION
S.P.	SOLE PLATE
STR.	STRUCTURAL
S.S.	SOIL STACK
TEL.	TELEPHONE
THK.	THICKNESS
T & G	TONGUE AND GROOVE
T.O.S.	TOP OF SLAB
T.TRD.	TREAD
T.C.	TOP OF CURB
T.O.	TOP OF
T.O.P.	TOP OF PLATE
TYP.	TYPICAL
V.S.	VENT STACK
W.C.	WATER CLOSET
W/	W/
W/O	WITHOUT
WD.	WOOD
W.W.M.	WELDED WIRE MESH
X.H.C.I.	EXTRA HEAVY CAST IRON

ROOM FINISH MATIERIAL CODE LIST

	FLOOR/BASE		WALLS/WAINSCOAT		CEILING	REMARKS
0	EXPOSED STRUCTURE W/ SLAB SEALANT	0	EXPOSED STRUCTURE	0	EXPOSED STRUCTURE NO FINISH	
1	VINYL ASPHALT TILE / 4" WOOD BASE	A	GYPSUM BOARD W/ VINYL WALL COVERING	1	GYPSUM BOARD W/ PAINT FINISH SEE REMARK	(CROWN MOLDING TO BE SELECTED BY OWNER)
2	VINYL ASPHALT TILE / 4" VINYL BASE	B	GLASS	2	5/8" TYPE "X" F.C. GYPSUM BD. SEE REMARK	1 HOUR RATED
3	CARPET / 6" WOOD BASE	C	GLASS BLOCK	3	SUSPENDED GYPSUM BOARD W/ PAINT FINISH	
4	CARPET / 4" VINYL BASE	D	CERAMIC TILE	4	SUSPENDED ACOUSTICAL TILE	
5	HARDWOOD FLOOR/ 4" VINYL BASE	E	GYPSUM BOARD W/ PAINT FINISH /CER. TILE @ 4'-0"	5	SUSPENDED METAL	
6	HARDWOOD FLOOR/ 6" WOOD BASE	F	PLASTER ON METAL LATH	6	CERAMIC TILE	
7	CERAMIC TILE / CERAMIC TILE BASE	G	ARCHITECTURAL PANELING	7	LUMINOUS PANEL IN SUSPENDED CEILING	
8	CERAMIC TILE / WOOD BASE TO MATCH EXISTING	H	BRICK	8	CEMENT PLASTER	
9	QUARRY TILE / 8" VINYL BASE	I	EXPOSED CONC. BLOCK W/ PAINT FINISH	9		
10	QUARRY TILE / 8" WOOD BASE	J	GYPSUM BOARD W/ PAINT FINISH	10		
11	QUARRY TILE / QUARRY BASE	K	F.C. GYPSUM BOARD W/ PAINT FINISH	11		SEE WALL DETAILS FOR WALL CONSTRUCTION
12	RUBBER FLOOR / 4" VINYL BASE	L		12		
13	SLATE/6" WOOD BASE	M		13		

BUILDING CODE ANALYSIS

OCCUPANCY CLASS	R2 – RESIDENTIAL	
USE GROUP	(2A)	
WITHIN FIRE DISTRICT	YES	
AREA AND HEIGHT LIMITATIONS	IIA CONSTRUCTION	U.L. AREA / 6 STORIES

TABLE 601

	COMBUSTIBLE CONSTRUCTION		RATING (HRS)	EXTERIOR OPENING DISTANCE	EXTERIOR OPENING UNPROTECTED	EXTERIOR OPENING PROTECTED
EXTERIOR WALLS	5'-0" OR LESS	BEARING	2	0 – 3'-0"	N.P.	N.P.
	MORE THAN 3'-0" LESS THAN 15'-0"	NON-BEARING	1	>3' to ≤ 5'	N.P.	15%
		BEARING	2	>5' to ≤ 10'	10%	25%
		NON-BEARING	1	>10' to ≤ 15'	15%	45%
	15'-0" – 30'-0"	BEARING	1	>15' to ≤ 20'	25%	75%
		NON-BEARING	1	>20' to ≤ 25'	45%	N.L.
	30'-0" OR MORE	BEARING	0	>25' to ≤ 30'	70%	N.L.
		NON-BEARING	0	≥30'	N.L.	N.L.
INTERIOR BEARING WALLS AND BEARING PARTITIONS			1	--		
ENCLOSURE OF VERTICAL EXITS, EXIT PASSAGEWAYS, HOISTWAYS, AND SHAFTS.			2	--		
FIRE DIVISIONS AND FIRE SEPERATIONS (TENNANT SEPERATION)			1	--		
COLUMNS GIRDERS TRUSSES (OTHER THAN ROOF TRUSSES) AND FRAMING	SUPPORTING ONE FLOOR		1	--		
	SUPPORTING MORE THAN ONE FLOOR		1	--		
STRUCTURAL MEMBERS SUPPORTING A WALL			SAME AS WALL SUPPORTED			
FLOOR CONSTRUCTION INCLUDING BEAMS			1	0		
ROOF CONSTRUCTION, INCLUDING BEAMS, TRUSSES & FRAMING ARCHES, DOMES SHELLS CABLE SUPPORTED ROOFS AND ROOF DECKS.	15'-0" OR LESS IN HEIGHT ABOVE FLOOR TO LOWEST MEMBER		1	0		
	15 – 20' IN HEIGHT ABOVE FLOOR TO LOWEST MEMBER		1	0		
	20' OR MORE IN HEIGHT ABOVE FLOOR TO LOWEST MEMBER		0	0		
REQUIREMENTS FOR CONSTRUCTION OF MAJOR BUILDINGS						

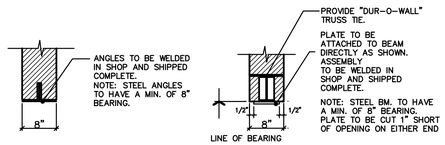
MAJOR BUILDING: BUILDING WITH 10 OR MORE STORIES

BUILDINGS UNDER 15 STORIES ONLY REQUIRES:

A SITE SAFETY COORDINATOR CERTIFIED BY THE BUILDING DEPARTMENT IN ACCORDANCE WITH CHAPTER 4 OF TITLE 28 OF ADMINISTRATIVE CODE.

LINTEL SCHEDULE

W.T.	MARK	M.O.	SIZE	
12"	LC-1	0'0"–4'0"	(3)4" x 3 1/2" x 5/16"	⅃LL
	LC-2	0'0"–4'0"	(2)4" x 3 1/2" x 5/16"	⅃L
	LC-3	5'1"–6'6"	(3)5" x 3 1/2" x 5/16"	⅃LL
	LC-4	5'1"–6'6"	(3)5" x 3 1/2" x 5/16"	⅃L
8"	LB-1	0'0"–4'0"	(2)4"x3 1/2"x5/16"	⅃L
	LB-2	4'1"–5'0"	(2)4"x3 1/2"x3/8"	⅃L
	LB-3	5'1"–6'6"	(2)5"x3 1/2"x5/16"	⅃L
	LB-4	6'7"–8'0"	W8X15+5/16"X7" PL.	I
	LB-5	8'1"–10'0"	W8X18+5/16X7" PL.	I



SPECIAL INSPECTIONS

BY OTHERS: INSPECTIONS & TESTS	CODE/SECTION
STRUCTURAL– ERECTION & BOLTING	BC 1704.3.2, 1704.3.3
STRUCTURAL– COLD FORMED STEEL	BC 1704.3.4
CONCRETE– CAST IN PLACE	BC 1704.4
MASONRY	BC 1704.5
SOILS– SITE PREPARATION	BC 1704.7.1
UNDERPINNING	BC 1704.9.1
MECHANICAL SYSTEMS	BC 1704.15
EXCAVATION–SHEATHING,SHORING AND BRACING	BC 1704.15
SITE STORM DRAINAGE DISPOSAL AND DETENTION SYSTEM INSTALLATION	BC 1704.20
SPRINKLER SYSTEMS	1704.21
HEATING SYSTEMS	1704.23
CHIMNEYS	1704.24
FIRESTOP, DRAFTSTOP & FIREBLOCK	1704.25
CONCRETE TEST CYLINDERS	1905.6
FIRESTOP, DRAFTSTOP & FIREBLOCK	1704.25
CONCRETE DESIGN MIX	1905.3

PROGRESS INSPECTIONS

PRELIMINARY	28–116.2.1 BC 109.2
FOOTING AND FOUNDATION	BC 109.3.1
FRAME INSPECTION	109.3.3
ENERGY CODE COMPLIANCE	109.3.5
FIRE RESISTANCE RATED CONSTRUCTION	109.3.4

ENERGY CODE PROGRESS INSPECTIONS

BY OTHERS: INSPECTIONS & TESTS	1RCNY 5000-01 TABLE REFERENCE
PROTECTION OF FOUNDATION INSULATION	(IIA1)
INSULATION PLACEMENT AND R-VALUES	(IIA2)
FENESTRATION THERMAL VALUES AND RATINGS	(IIA3)
FENESTRATION AREAS	(IIA5)
AIR SEALING AND INSULATION (VISUAL)	(IIA6)
DAMPERS INTEGRAL TO BUILDING ENVELOPE	(IIB2)
HVAC AND SERVICE WATER HEATING EQUIPT.	(IIB3)
HVAC AND SERVICE WATER HEATING SYSTEM CONTROLS	(IIB4)
DUCT PLENUM AND PIPING INSULATION & SEALING	(IIB5)
DUCT LEAKAGE TESTING	(IIB6)
ELECTRICAL METERING	(IIC1)
LIGHTING IN DWELLING UNITS	(IIC2)
INTERIOR LIGHTING POWER	(IIC3)
EXTERIOR LIGHTING POWER	(IIC4)
EXIT SIGNS	(IIC6)

NOTE:
REFER TO TABLE I & II,PROVIDED, FOR DETAILED INSPECTION REQUIREMENTS FOR EACH CATEGORY

"TO THE BEST OF MY KNOWLWDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE."

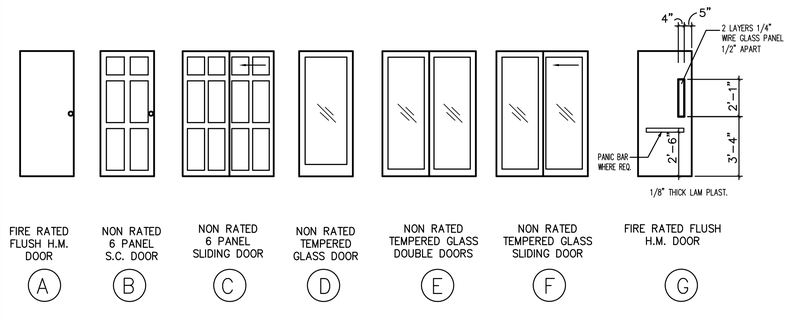
REQUIRED WORK TO BE FILED UNDER SEPARATE APPLICATION

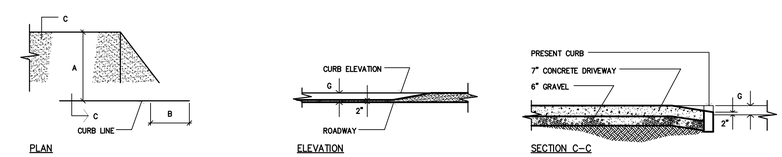
BY OTHERS:
SIDEWALK SHED
SAFETY NET AND SCAFFOLDING
SHORING AND UNDERPINNING
FIRE ALARM

DOOR SCHEDULE

SYM	WIDTH	HEIGHT	THK.	HC/SC	MATERIAL	TYPE	SADDLE	REMARKS
A	3'-0"	7'-0"	1¾"	H.C.	H.M.	G	–	1 1/2 HR FPSC CLASS "B" WITH VISION PANEL
B	3'-0"	7'-0"	1¾"	H.C.	H.M.	A	–	3/4 HR FPSC CLASS "C" WITH PEEP HOLE AT APT ENT. ONLY
C	3'-0"	7'-0"	1¾"	H.C.	H.M.	G	–	1 1/2 HR FPSC CLASS "B" EXTERIOR DOOR WITH VISION PANEL & PANIC HARDWARE
D	3'-0"	7'-0"	1¾"	H.C.	H.M.	A	–	3/4 HR FPSC CLASS "C"
E	3'-0"	7'-0"	1¾"	H.C.	H.M.	A	–	NO RATED
F	3'-0"	7'-0"	1¾"	H.C.	H.M.	D	WEATHER PROOF	NON-RATED TEMPERED GLASS EXTERIOR DOORS
G	6'-0"	7'-0"	1¾"	H.C.	ALUM.	E	WEATHER PROOF @ EXT. DOOR	NON-RATED TEMPERED GLASS INTERIOR & EXTERIOR DOUBLE DOORS
H	6'-0"	7'-0"	1¾"	H.C.	ALUM.	F	WEATHER PROOF	NON-RATED TEMPERED GLASS SLIDING DOORS
I	2'-0"	7'-0"	1¾"	H.C.	WOOD	B	–	NON-RATED 6 PANEL COLONIAL
J	2'-6"	7'-0"	1¾"	H.C.	WOOD	B	–	NON-RATED 6 PANEL COLONIAL
K	2'-8"	7'-0"	1¾"	H.C.	WOOD	B	–	NON-RATED 6 PANEL COLONIAL
L	2'-10"	7'-0"	1¾"	H.C.	WOOD	B	CERAMIC (IN BATH ONLY)	NON-RATED 6 PANEL COLONIAL 1" UNDERCUT (FOR HANDICAPPED)
M	5'-0"	7'-0"	1¾"	H.C.	WOOD	C	–	NON-RATED 6 PANEL COLONIAL SLIDING DOORS
N	6'-0"	7'-0"	1¾"	H.C.	H.M.	A	–	1 1/2 HR FPSC CLASS "B" DOUBLE DOOR
O	3'-2"	7'-0"	1¾"	H.C.	H.M.	A	–	3/4 HR FPSC CLASS "C" WITH AUTOMATIC DOOR OPENER AND OCC. SENSOR.

NOTE: ALL DOORS TO HAVE PAINT FINISH AS SELECTED BY OWNER.





NOTE: IF SIDEWALKS AND/OR CURBS ARE POURED PRIOR TO OBTAINING A PERMIT FROM THE DEPARTMENT OF HIGHWAYS, CORES FOR SIDE– WALKS, CURBS, AND DRIVEWAYS WILL HAVE TO BE OBTAINED REGARDLESS OF LENGTH OR WIDTH.

DEPTH OF GUTTER " G "	A	B
4 1/2"	2'-0"	1'-6"
5"	2'-3"	1'-8"
5 1/2"	2'-6"	1'-11"
6"	2'-9"	2'-1"
6 1/2"	3'-1"	2'-4"
7"	3'-4"	2'-6"
7 1/2"	3'-7"	2'-9"
8"	3'-11"	2'-11"
8 1/2"	4'-2"	3'-2"
9"	4'-6"	3'-4"

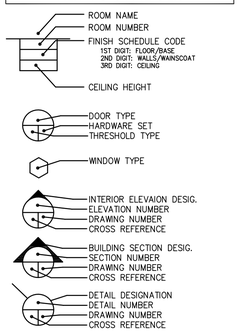
CURB CUT DETAILS

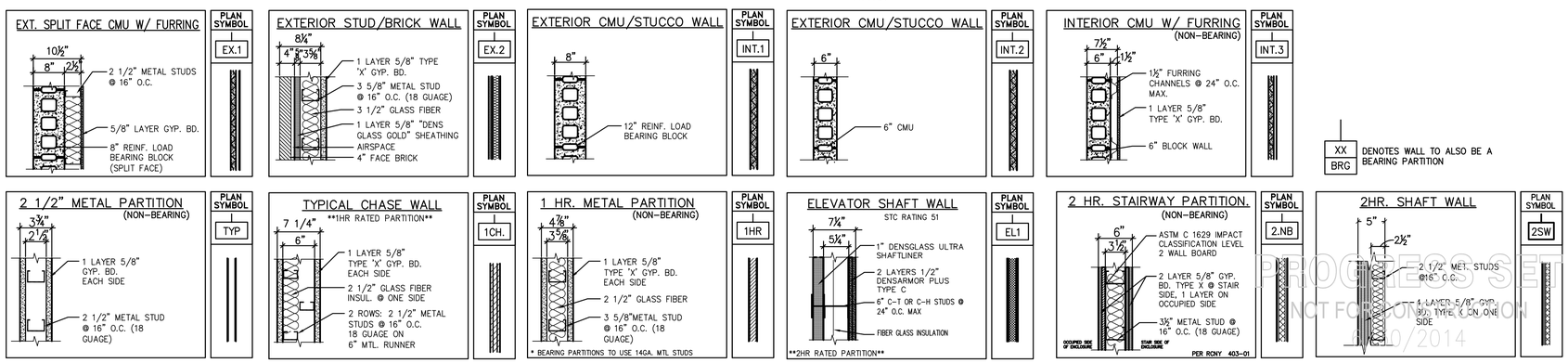
N.T.S.

MATERIALS SCHEDULE

- BRICK
- CONCRETE BLOCK
- POURED CONCRETE
- INSULATION: BATTEN
- INSULATION: RIGID
- STEEL OR METAL
- GRANULAR FILL
- STONE
- WOOD: FINISH
- WOOD: FRAME

KEY TO SYMBOLS





XX / BRG — DENOTES WALL TO ALSO BE A BEARING PARTITION

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK: PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE
	ISSUES	

DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY: VF	DATE: 06.26.14

DWG. TITLE :

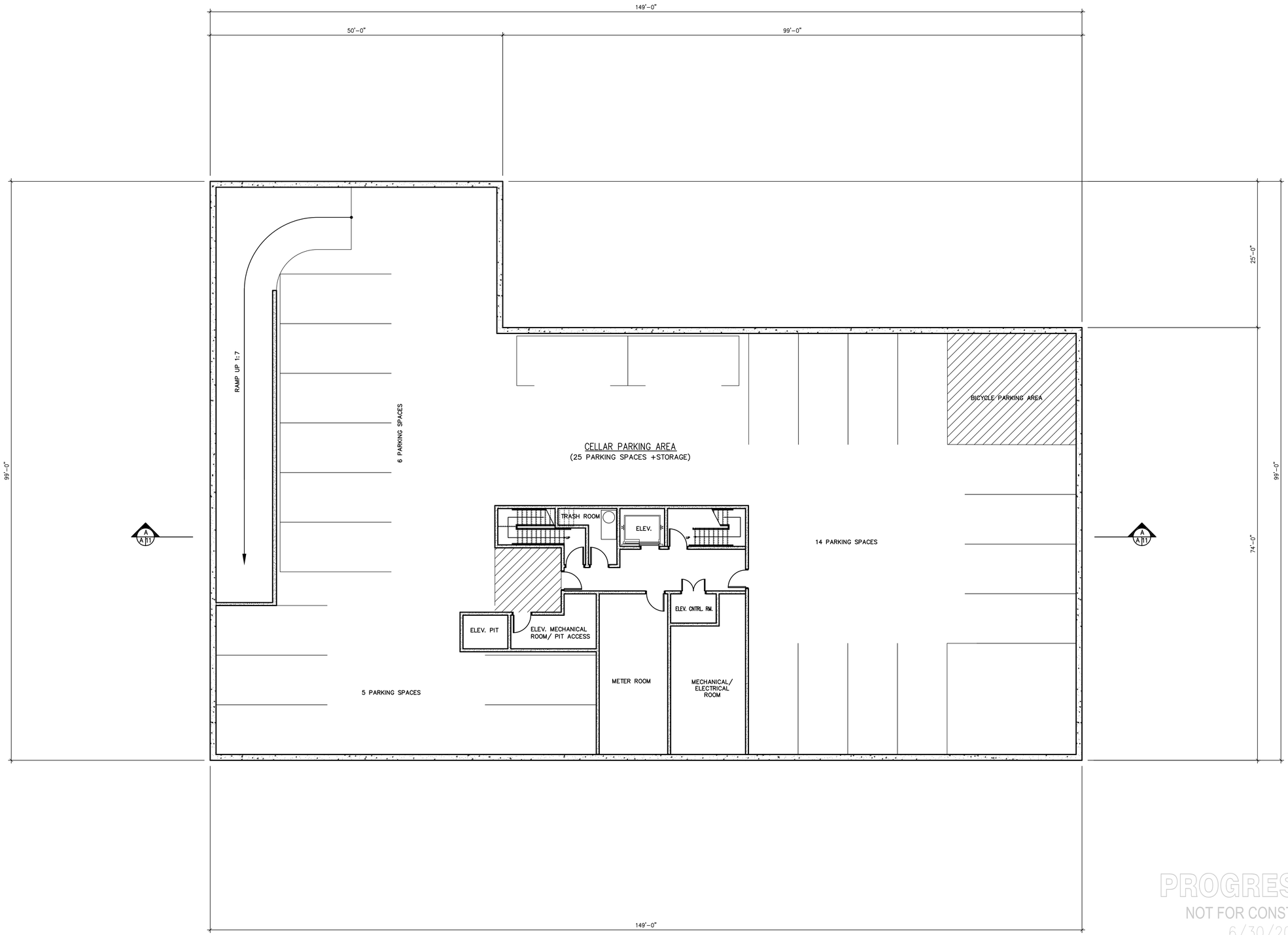
SCHEDULES, DETAILS AND LEGENDS

PAGE NUMBER 3 OF 50

PROGRESS SET
NOT FOR CONSTRUCTION
10/2014

N - 001.00

Z:\Clients\1391nj-Dilorzo-Crescent Street\Construction Drawings\1391nj_C01.dwg



SUB CELLAR FLOOR PLAN

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

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

BSCAN STICKER

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

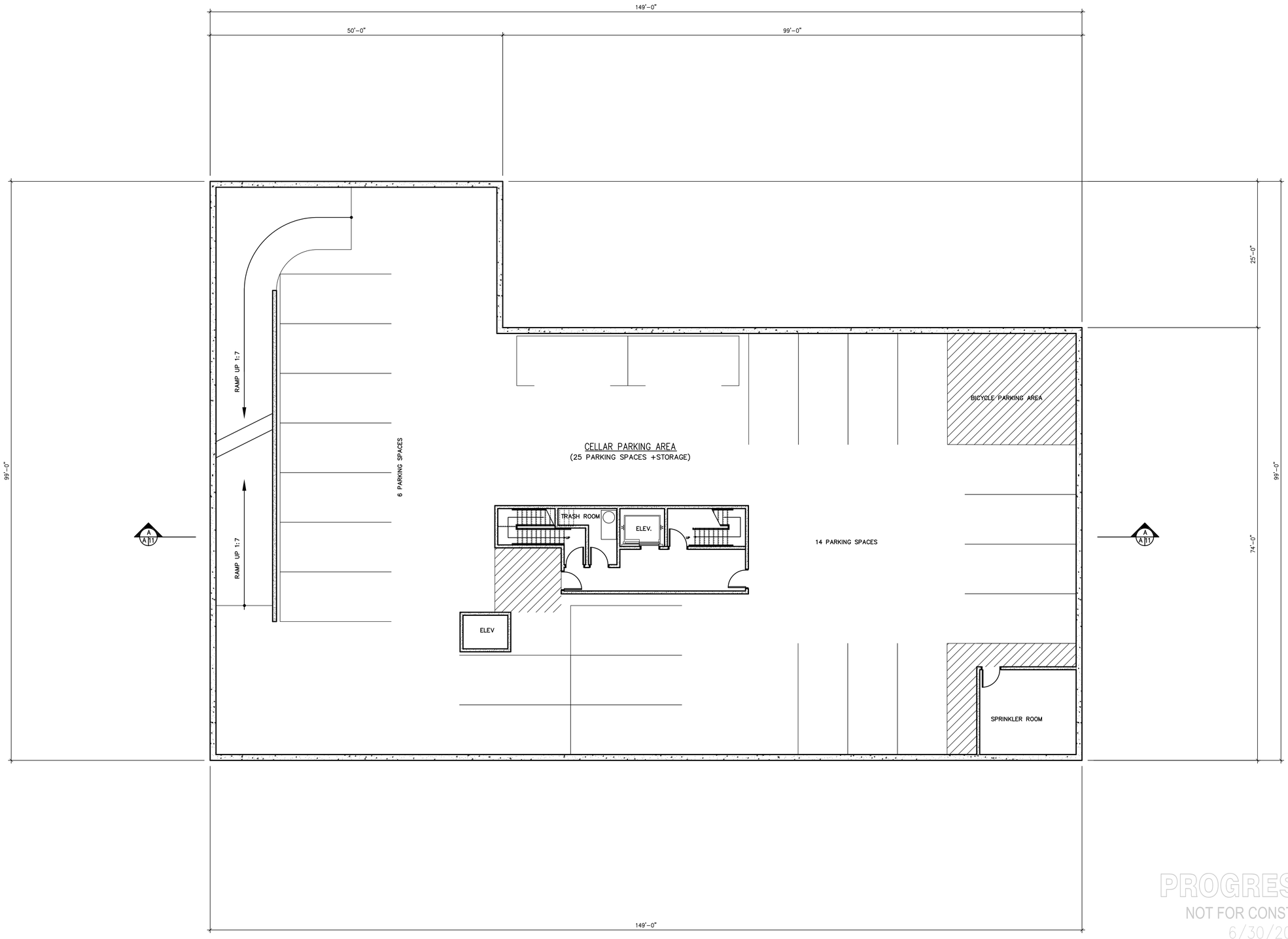
DWG. TITLE :

SUB CELLAR PLAN

PAGE NUMBER
5 OF 50

Z:\Clients\1391nj-Dforzo-Crescent Street\Construction Drawings\1391nj_C01.dwg

A-001.00



CELLAR FLOOR PLAN

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

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40-05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

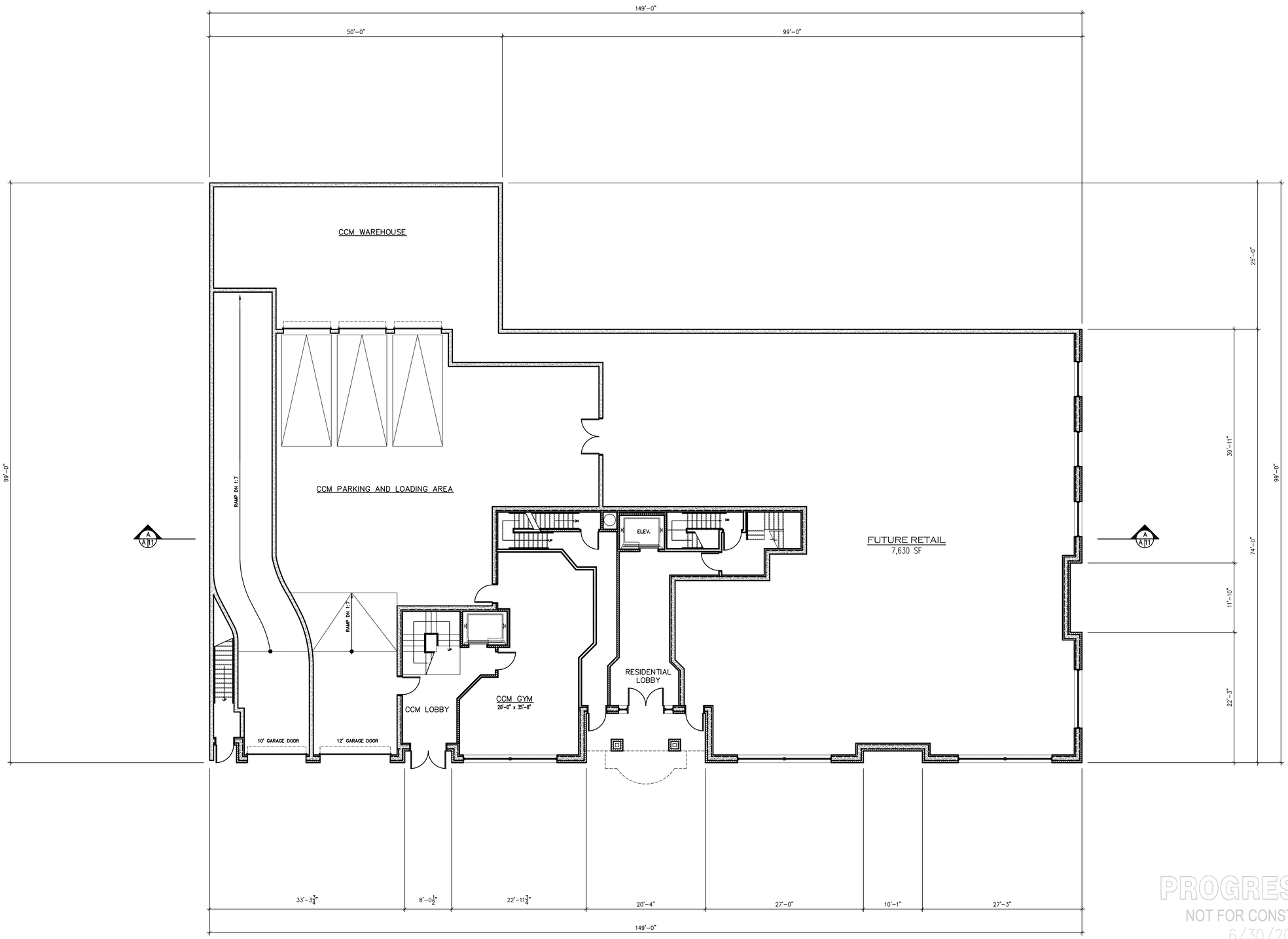
DWG. TITLE :

CELLAR PLAN

PAGE NUMBER
5 OF 50

Z:\Clients\1391nj-Dilonzo-Crescent Street\Construction Drawings\1391nj_LD01.dwg

A-002.00



PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

FIRST FLOOR PLAN

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

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :

FIRST FLOOR PLAN

PAGE NUMBER
5 OF 50

A - 003.00

Z:\Clients\1391nj-Difiorzo-Crescent Street\Construction Drawings\1391nj_C01.dwg

SECOND FLOOR PLAN

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

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :

SECOND FLOOR PLAN

PAGE NUMBER
5 OF 50

A - 004.00

Z:\Clients\1391nj-Diforzo-Crescent Street\Construction Drawings\1391nj_C01.dwg

THIRD FLOOR PLAN

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

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40-05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :

THIRD FLOOR PLAN

PAGE NUMBER
5 OF 50

A-005.00

Z:\Clients\1391nj-Bilonzo-Crescent Street\Construction Drawings\1391nj_LD1.dwg

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

FOURTH FLOOR PLAN

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

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40-05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
FOURTH FLOOR PLAN

PAGE NUMBER
5 OF 50

A-006.00

Z:\Clients\1391nj-Difonzo-Crescent Street\Construction Drawings\1391nj_CD1.dwg

FIFTH FLOOR PLAN

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

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

BISCAN STICKER

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40-05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
FIFTH FLOOR PLAN

PAGE NUMBER
5 OF 50

A-007.00

Z:\Clients\1391nj-Dilonzo-Crescent Street\Construction Drawings\1391nj_LD01.dwg

40TH AVENUE ELEVATION

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

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

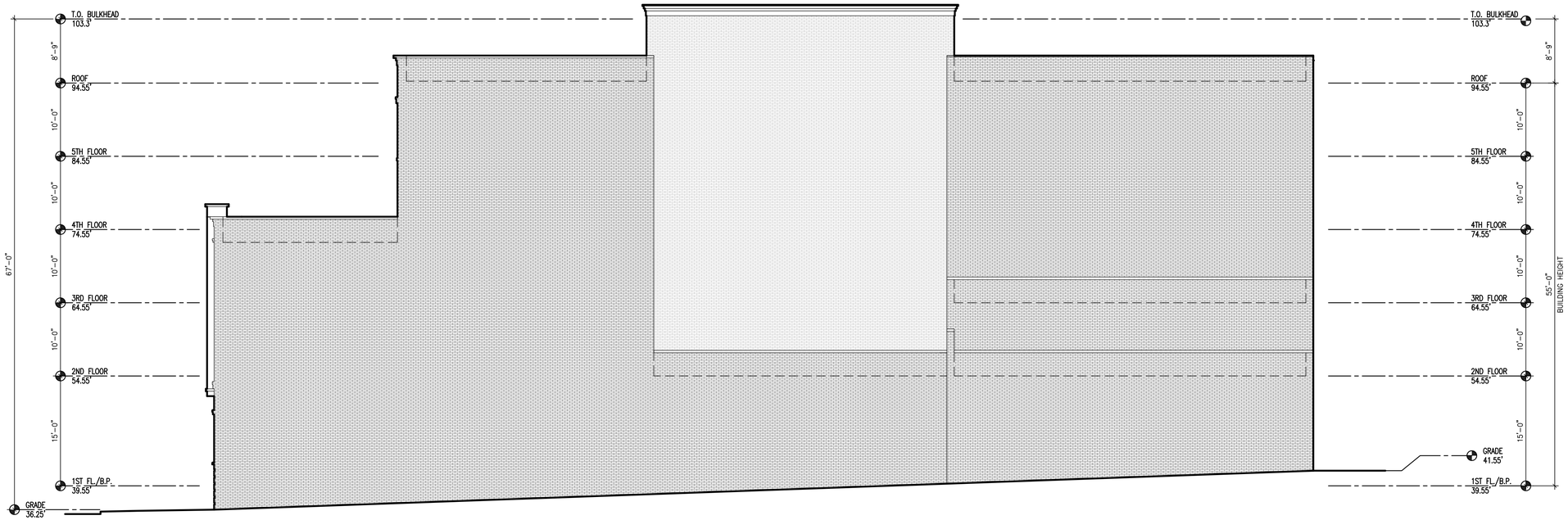
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
EXTERIOR ELEVATIONS

PAGE NUMBER
– OF 50

A - 009.00

Z:\Clients\1391nj-Dilorzo-Crescent Street\Construction Drawings\1391nj_C01.dwg

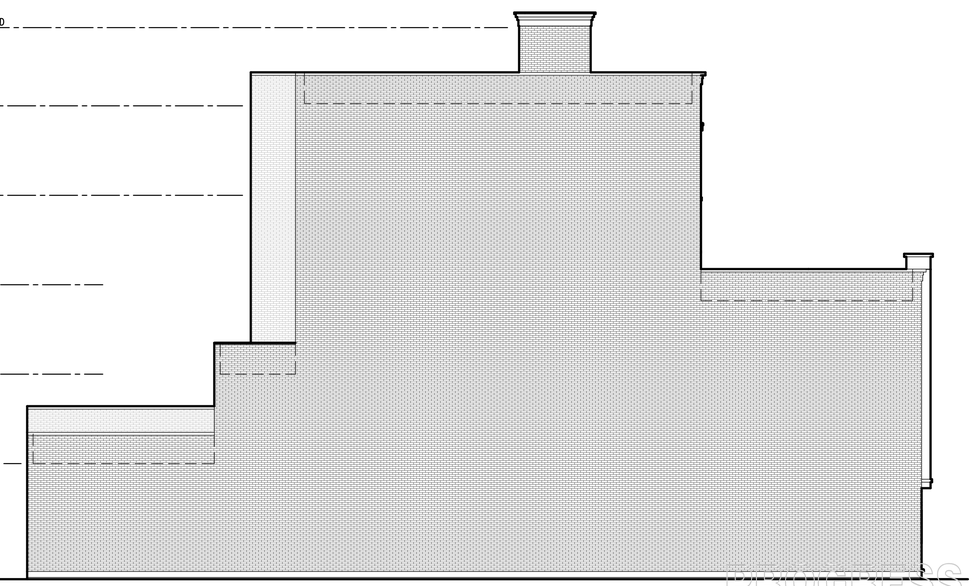


WEST "SIDE" ELEVATION

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

CRESCENT ST. ELEVATION

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



SE "SIDE" ELEVATION

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

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40-05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

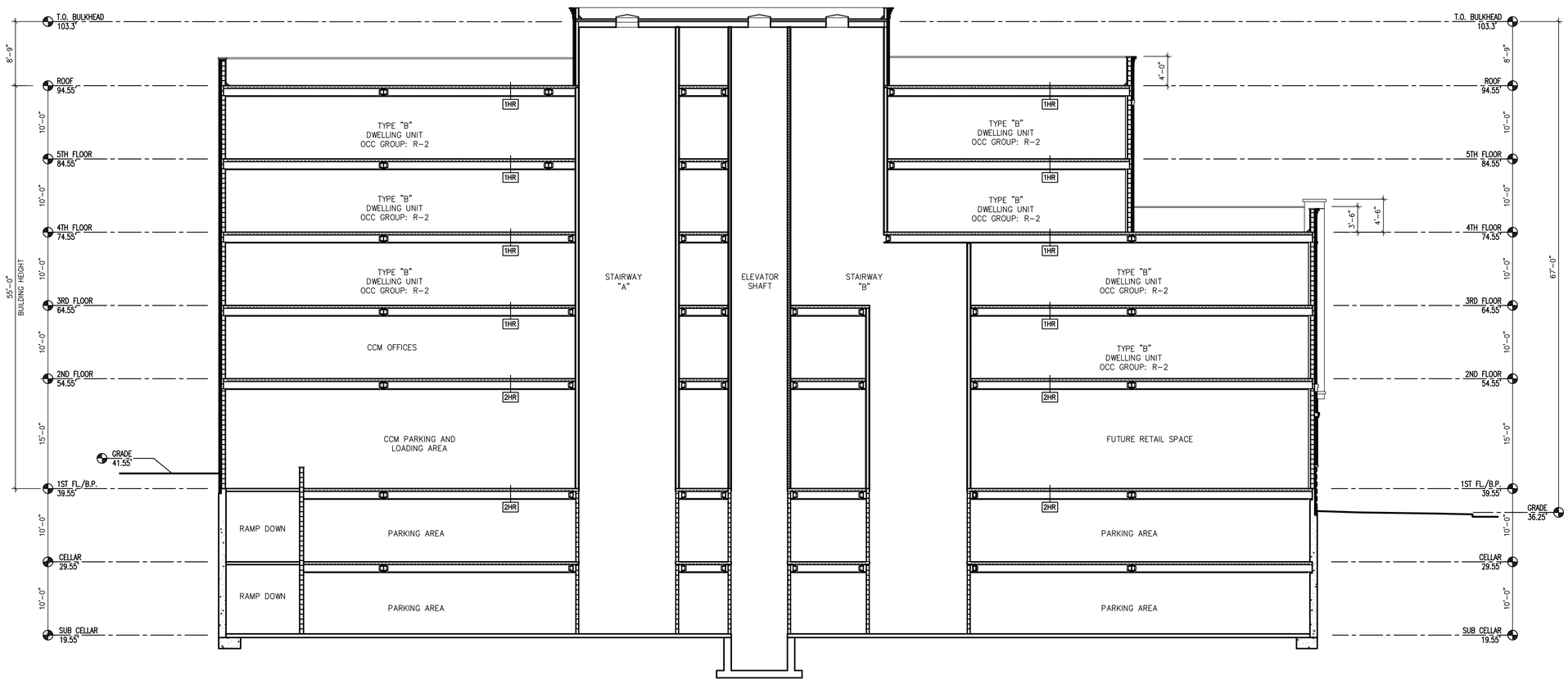
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
EXTERIOR ELEVATIONS

PAGE NUMBER
– OF 50

A-010.00

Z:\Clients\1391nj-Dilorzo-Crescent Street\Construction Drawings\1391nj_C01.dwg



BUILDING SECTION A-A

SCALE: 1/4" = 1'-0"

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

BSCAN STICKER

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

T.F. CUSANELLI & FILLETTI ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

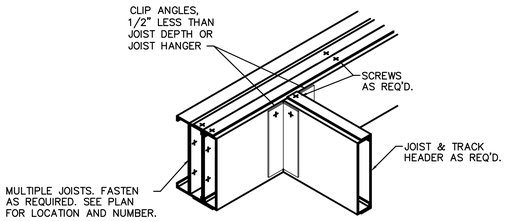
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
BUILDING SECTION A-A

PAGE NUMBER
– OF 50

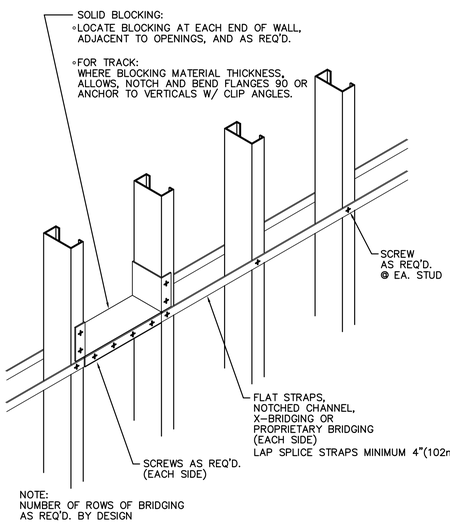
A-011.00

Z:\Clients\1391nj-Dilonzo-Crescent Street\Construction Drawings\1391nj_C01.dwg



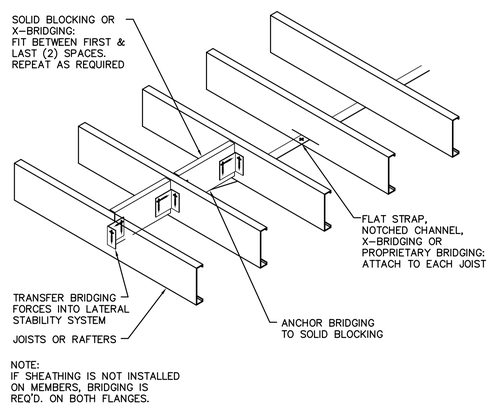
JOIST HEADER TO BUILT-UP JOISTS (1 / A-11)

SCALE: 3/4"=1'-0"



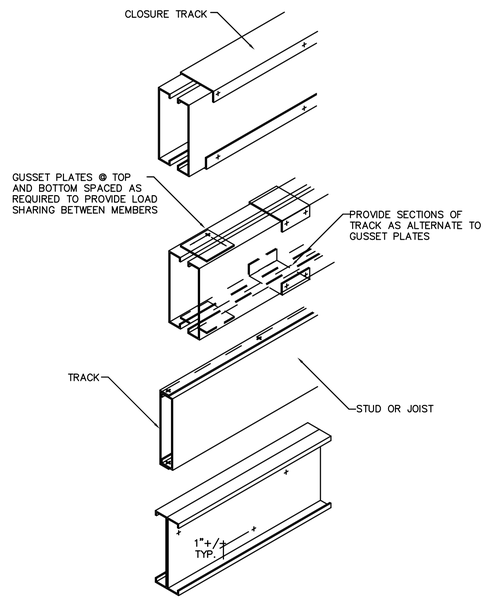
WALL BRIDGING (2 / A-11)

NO SCALE



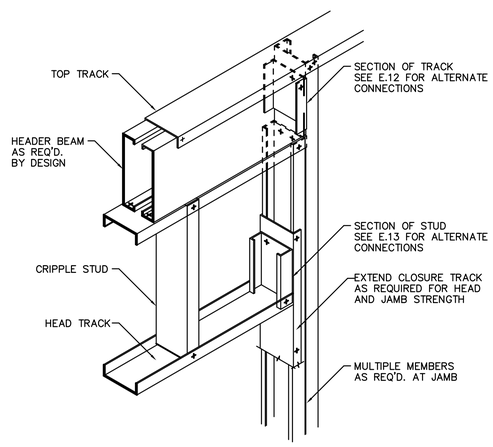
JOIST AND RAFTER BRIDGING (3 / A-11)

NO SCALE



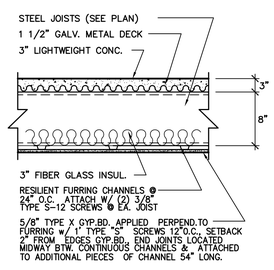
MULTIPLE MEMBER CONFIGURATIONS (4 / A-11)

NO SCALE



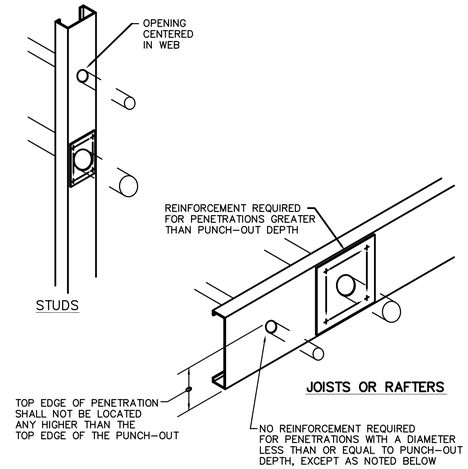
LOAD BEARING JAMB & HEAD (5 / A-11)

SCALE: 3/4"=1'-0"



1 HR. RATED FLR. / CEIL. (6 / A-11)

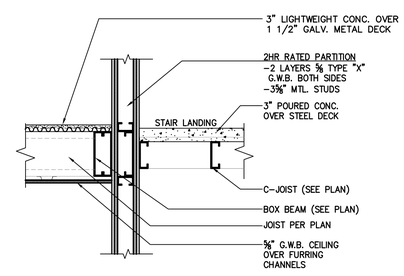
SCALE: 3/4"=1'-0" TYPICAL FOR FLOORS 1-4



NOTES:
1. FLANGES SHALL NOT BE NOTCHED OR CUT.
2. CAPACITY VERIFICATION BY DESIGN IS REQ'D. FOR ANY OPENINGS LOCATED AT CONCENTRATED LOADS AND BEARING ENDS.
3. FOR UNPUNCHED MEMBERS CONSULT THE MANUFACTURER.

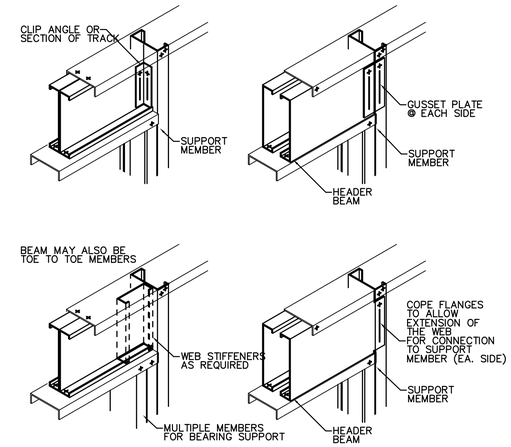
JOIST,STUD OR RAFTER WEB PENETRATIONS (7 / A-11)

SCALE: 3/4"=1'-0"



DETAIL @ STAIRWAY PARTITION (8 / A-11)

SCALE: 3/4" = 1'-0"



ALTERNATE HEADER BEAM CONNECTIONS (10 / A-11)

NO SCALE

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

BSCAN STICKER

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

T.F. CUSANELLI & FILLETTI ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE:

ISSUES

DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
METAL STUD & JOIST DETAILS SUSPENDED CEILING DETAILS

PAGE NUMBER
16 OF 50

Z:\Clients\1391nj-Dionzo-Crescent Street\Construction Drawings\1391nj_CD1.dwg

A-014.00

MULTIPLE DWELLING NOTES

THESE NOTES ARE PART OF THE PLANS AND SPECS AND ARE TO BE COMPLETED WITHIN ALL RESPECTS. MORE RESTRICTIVE NOTES MENTIONED ELSEWHERE ARE TO TAKE PRECEDENCE OVER THE FOLLOWING: THE CONTRACTOR IS TO CHECK AND VERIFY ALL DIMENSIONS AND JOB CONDITIONS AND HE WILL BE RESPONSIBLE FOR SAME. ALL DIMENSIONS ARE TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO CONTINUATION OF THE WORK. ALL BUILDING AND LOT LINES, GRADES, AND ELEVATIONS ARE TO BE LOCATED BY A LICENSED SURVEYOR.

MULTIPLE DWELLING LAW AND HOUSING MAINTENANCE

1. PAINTING (SEC. 29 MDL & ART. 12 HMC)
   A. PAINTING OF PUBLIC PARTS AND WITHIN DWELLINGS SHALL COMPLY WITH SECTION D26–12.01 H.M.C.
   B. PAINTING OF WINDOW FRAMES SHALL COMPLY WITH SECTION D26–12.03 H.M.C.
   C. WALLS OF COURTS AND SHAFTS SHALL BE OF LIGHT COLORED SURFACE.

2. EXTERMINATION AND RAT PROOFING (SEC. 80 M.D.L. & ART. 13 H.M.C.)
   A. DWELLING SHALL BE SO CONSTRUCTED AS TO BE RAT–PROOF.
   B. PREMISES SHALL BE MAINTAINED AND KEPT FREE OF RODENT AND INSECT INFESTATION.

3. RECEPTACLES FOR AND COLLECTION OF WASTE MATTER (SEC. MDL. & ART.14 H.M.C.)
   A. PROPER AND SUITABLE CONVENIENCE OR RECEPTACLES SHALL BE PROVIDED FOR COLLECTION OF WASTE MATTER.

4. PLUMBING AND DRAINAGE (SEC.77 M.D.L. & ART.16 H.M.C.)
   A. ENTIRE PLUMBING AND DRAINAGE SYSTEM INCLUDING ALL PLUMBING FIXTURES SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD REPAIR AT ALL TIMES.
   B. ROOFS, TERRACES, SHAFTS, COURTS, AREAS AND YARDS SHALL BE PROPERLY GRADED AND DRAINED. (SEE SITE PLAN).

5. HEAT AND HOT WATER (SEC.79 M.D.L. & ART. 17 H.M.C.)
   A. YEARLY INSPECTIONS OF CENTRAL HEATING PLANTS SHALL BE MADE BY QUALIFIED PERSON.
   B. MINIMUM TEMPERATURES FOR HEATING AND HOT WATER SHALL BE MAINTAINED.

6. GAS METERS AND GAS APPLIANCES (SEC. 64 M.D.L & ART.18 H.M.C.)
   A. GAS METAL SHALL COMPLY WITH SEC. 64 M.D.L.
   B. GAS APPLIANCE SHALL, IN ADDITION TO THESE SECTIONS, COMPLY WITH THE BOARD OF STANDARD AND APPEALS.
   C. YEARLY INSPECTION OF GAS APPLIANCES BY QUALIFIED PERSON SHALL BE MADE TO "OLD LAW TENEMENTS" OR ROOMING UNITS.

7. ARTIFICIAL LIGHTING AND ENTRANCE DOORS(SEC.26& 35 M.D.L. & ART.19 H.M.C.)
   A. PROPER ELECTRICAL LIGHTING AND EQUIPMENT SHALL BE PROVIDED AND MAINTAINED WITHIN ALL DWELLINGS.
   B. PROPER ELECTRIC LIGHTS SHALL BE INSTALLED AND MAINTAINED AT OR NEAR THE OUTSIDE OF FRONT ENTRANCE WAY AND IN EVERY REAR YARD, FRONT YARD, AND COURTS. MINIMUM OF 60 WATTS INCANDESCENT ILLUMINATION OF EQUIVALENT AT FRONT ENTRANCE WAY AND MINIMUM 40 WATTS IN YARDS AND COURTS AND SHALL BE KEPT BURNING FROM SUNSET EACH DAY AND TO SUNRISE ON THE DAY FOLLOWING.
   C. MAIN ENTRANCE AND VESTIBULE DOORS SHALL HAVE NOT LESS THAN FIVE (5) SQ. FT. OF GLAZED SURFACE.

8. ENTRANCE DOORS (sec. 50a M.D.L.& ART.20 H.M.C.)
   A. BUILDING ENTRANCES AND ALL OTHER EXTERIOR ENTRANCES SHALL BE EQUIPPED WITH APPROVED TYPE AUTOMATIC SELF–CLOSING AND SELF–LOCKING DOORS.
   B. ENTRANCE DOORS TO EACH DWELLING UNITS SHALL HAVE KEY LOCK WITH AT LEAST ONE KEY TO BE PROVIDED BY OWNER.
   C. CLASS "A" DWELLINGS CONTAINING EIGHT OR MORE APARTMENTS SHALL BE EQUIPPED WITH AN APPROVED TYPE INTERCOMMUNICATION SYSTEM LOCATED AT THE DOOR GIVING ACCESS TO THE MAIN ENTRANCE HALL OR LOBBY.

9. PEEPHOLES (SEC.51–A M.D.L. & ART.20 H.M.C.)
   A. PEEPHOLES SHALL BE PROVIDED IN ENTRANCE DOORS OF EACH DWELLING UNIT, MANUFACTURED BY S. PARKER HARDWARE, 27 LUDLOW STREET, NEW YORK MODEL NO. 1606, MEA 1027–05SM.

10. BELLS AND MAIL SERVICE (SEC. 27 M.D.L.& ART.21 H.M.C.)
   A. BELL OR BUZZER SYSTEM SHALL BE APPROVED TYPE AND SHALL BE KEPT IN GOOD WORKING ORDER.
   B. PROVIDE AND MAINTAIN APPROVED TYPE MAIL RECEPTACLES AND DIRECTORIES OF PERSONS LIVING IN THE DWELLINGS AS PROVIDED BY FEDERAL LAW AND AS PER REGULATIONS OF THE POST OFFICE DEPARTMENT.

11. FLOORS, SIGNS AND STREET NUMBERS (ART. 21 H.M.C.)
   A. PROPER FLOOR SIGNS SHALL BE PROVIDED AND MAINTAINED IN PUBLIC HALL NEAR STAIRS AND ELEVATOR AND WITHIN STAIR ENCLOSURE.
   B. PROPER STREET NUMBERS SHALL BE POSTED AND MAINTAINED IN FRONT OF THE DWELLING IN ACCORDANCE WITH THE ADMINISTRATIVE CODE AND THE RULES AND REGULATIONS OF THE BOROUGH PRESIDENT.

12. JANITORIAL SERVICE (SEC.83 N.U.L.& ART.22 H.M.C.)
   A. PROPER JANITORIAL SERVICE SHALL BE PROVIDED IN DWELLING CONTAINING NINE OR MORE DWELLING UNITS.

13. LIGHTING AND VENTILATION (SEC.30 M.D.L.& ART.30 H.M.C.)
   A. WINDOWS IN ALL ROOMS, EXCEPT BATHROOM AND KITCHENETTES, SHALL BE AT LEAST ONE TENTH THE AREA OF THE ROOM AND BE AT LEAST 12 SQUARE FEET IN AREA B.S.B.
   B. ROOMS HAVING ONLY ONE WINDOW LESS THAN 18 SQ. FT. IN AREA SHALL HAVE A TRANSOM OF LOUVER, OVER THE DOOR, HAVING A MINIMUM AREA OF 144 SQ. IN.

14. WATER CLOSET AND BATH ACCOMODATIONS (SEC 76 M.D.L. & ART. 31 H.M.C.)
   A. WALLS AND FLOORS OF WATER CLOSET COMPARTMENTS, BATHROOMS AND LAVATORIES SHALL COMPLY WITH REQUIREMENTS OF THESE SECTIONS.
   B. EVERY WATER CLOSET COMPARTMENT, BATHROOM OR LAVATORY SHALL HAVE A WINDOW OF AT LEAST 3 SQ. FT. IN AREA AND ONE HALF THE AREA SHALL BE OPEN.
   C. IN LIEU OF A WINDOW MECHANICAL VENTILATION MAY BE INSTALLED WHICH WILL PROVIDE AT LEAST FOUR CHANGES OF AIR PER HOUR OR A MINIMUM OF 50 CU. FT. OF AIR OF EACH SUCH WATER CLOSET COMPARTMENT, BATHROOM OR LAVATORY AND SHALL BE PROVIDED WITH APPROVED TYPE REGISTER AND TENANT OPERATED FAN WITH FUSIBLE LINK DAMPER U.S. & A. CAL #638–41–SM.
   D. PROVIDE MIN. CERAMIC TILE FLOOR AND 6" TILE BASE.

15. KITCHEN AND KITCHENETTES (SEC.33 M.D.L. & ART.32 H.M.C.)
   A. EVERY KITCHEN AND KITCHENETTE SHALL BE PROVIDED WITH GAS OR ELECTRICITY OR BOTH FOR COOKING AND SHALL BE EQUIPPED FOR ARTIFICIAL LIGHTING.
   B. EVERY KITCHEN AND KITCHENETTE SHALL BE AS PROVIDED WITH A SINK HAVING MINIMUM 2" WATER AND TRAP.
   C. LIGHTING AND VENTILATION OF KITCHENS SHALL BE PROVIDED UNDER SEC. 30 M.D.L. & ART. 30 H.M.C.
   D. WALL EXCLUSIVE OF DOORS, OF ALL KITCHENETTES SHALL BE FIRE RETARDED WITH 5/8" FIRECODE "60" BOTH SIDES.
   E. KITCHENETTES SHALL BE PROVIDED WITH A WINDOW AT LEAST ONE FOOT WIDE. 3 SQ. FT. IN AREA AND BE AT LEAST 10% OF THE FLOOR AREA. IN LIEU OF WINDOW MECHANICAL VENTILATION MAY BE INSTALLED WHICH WILL PROVIDE AT LEAST 6 CHANGES OF AIR PER HOUR.
   F. ALL COMBUSTIBLE MATERIALS IMMEDIATELY UNDERNEATH AND WITHIN ONE FOOT OF COOKING APPARATUS SHALL BE PROPERLY FIRE RETARDED WITH 3/16" ASBESTOS AND 26 GAUGE METAL. THERE SHALL BE AT LEAST TWO FEET OF CLEAR SPACE ABOVE THE EXPOSED COOKING SURFACE OF ANY SUCH APPARATUS.

16. OCCUPANCY OF CELLAR AND BASEMENTS (SEC.34 M.D.L. & ART.34 H.M.C.)
   A. ALL ROOMS IN CELLARS AND BASEMENTS SHALL COMPLY WITH REQUIREMENTS OF THESE SECTIONS.

17. REGISTRATION (ART.9 M.D.L. & ART.41 H.M.C.)
   A. REGISTRATION SHALL BE FILED.
   B. REGISTRATION IDENTIFICATION SIGN CONTAINING DWELLING SERIAL NUMBER SHALL BE POSTED.
   C. IDENTIFICATION OF MANAGING AGENT OR OWNER SHALL BE INDICATED ON TENANTS RENT RECEIPT.

18. BOILER ROOMS (SEC.65 M.D.L.)
   A. BOILER ROOM SHALL COMPLY WITH REQUIREMENTS OF THIS SECTION.

19. SECURITY REQUIREMENTS (604.4)
   A. BUILDING ENTRANCE DOORS AND OTHER EXTERIOR DOORS SHALL BE PROVIDED WITH HEAVY DUTY LOCK SETS WITH AUXILIARY BOLTS TO PREVENT THE LATCH FROM BEING MANIPULATED.
   B. DOORS TO DWELLING UNITS SHALL BE EQUIPPED WITH A HEAVY DUTY LOCK SET, A DEAD BOLT, THUMB TURN INSIDE AND CHAIN DOOR GUARD.
   C. ALL OPENABLE WINDOWS SHALL BE EQUIPPED WITH SASH LOCKS DESIGNED TO BE OPERABLE FROM THE INSIDE ONLY.
   D. BUILDING CLASSIFIED IN OCCUPANCY GROUP J–2 CONTAINING EIGHT OR MORE DWELLING UNITS SHALL BE PROVIDED WITH AN INTERCOMMUNICATION SYSTEM LOCATED AT THE DOOR GIVING ACCESS TO THE MAIN ENTRANCE HALL OR LOBBY.

20. PRIVATE GARAGE (711.0)
   A. BUILDING OR ENCLOSED SPACE USED FOR PARKING OR STORAGE OF NOT MORE THAN FOUR MOTOR VEHICLES, HAVING FUEL STORAGE TANKS OF 26 GALLON CAPACITY OR LESS.
   B. PRIVATE GARAGES SHALL BE CLASSIFIED IN STORAGE OCCUPANCY GROUP B–2.
   C. IF ATTACHED OR LOCATED WITHIN A BUILDING SEPARATION TO HAVE 1 HOUR FIRE RESISTANT RATING (1 3/4" SOLID CORE WOOD DOOR OR EQUIVALENT).
   D. FLOOR SHALL BE CONCRETE OR EQUIVALENT NON–COMBUSTIBLE MATERIAL THAT WILL NOT ABSORB FLAMMABLE LIQUIDS.
   E. SILLS OR DOOR CONNECTING TO DWELLING TO BE MINIMUM 4 INCHES ABOVE GARAGE FLOOR.

21. GLASS (1011.0)
   A. MINIMUM THICKNESS OF GLASS LOCATED LESS THAN 300 FEET ABOVE GRADE SHALL BE AS FOLLOWS:

MINIMUM AREA OF GLASS PANE (SQ.FT.)	MINIMUM THICKNESS
9	SINGLE STRENGTH
13	DOUBLE STRENGTH
25	3/16" OF 13/64" PLATE GLASS
32	7/32"
37	1/4" PLATE GLASS
54	5/16" PLATE GLASS
74	3/8" PLATE GLASS

   B. IF GLASS TO BE USED IS "SPECIAL GLASS" AS DEFINED IN SEC. 1011.5 OF CODE MAXIMUM PANE AREA CAN BE INCREASED IN ACCORDANCE WITH TABLE 10–8 OF THE CODE.
   C. INSTALLATION PROTECTION AND DESIGN OF SUPPORTS OF ALL GLASS SHALL CONFORM TO SECTIONS 1011.6, 1011.7, AND 1011.9 OF CODE.
   D. GLASS PANELS SUBJECT TO HUMAN IMPACT SHALL MEET THE REQUIREMENTS OF TABLE 10–9 OF THE CODE.

GENERAL NOTES

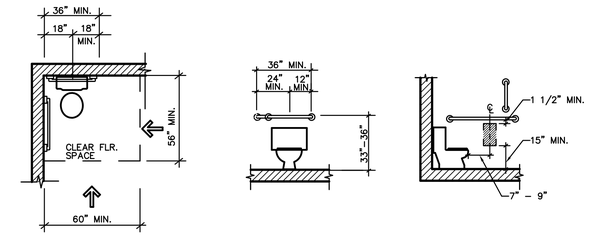
1. LAUNDRY SHALL BE FOR TENANTS USE ONLY, MACHINE SHALL BE APPROVED SELF–SERVICE TYPE. NO EMPLOYEES SHALL BE ENGAGED IN OPERATION OF EXTRACTORS OR DRYER.
2. MASON CONTRACTOR SHALL PROVIDE ALL CHASES AND POCKETS REQUIRED BY OTHER TRADES.
3. WALL UNDER WINDOWS SHALL BE RECESSED FOR RADIATOR WHERE SHOWN ON PLANS. SAME SHALL BE WATERPROOFED AND INSULATED. RADIATORS SHALL NOT OBSTRUCT STAIRS OR PUBLIC HALLS.
4. ALL F.P.S.C. DOORS AND TRIM SHALL HAVE FIRE RATING AS SPECIFIED ON PLAN OR DOOR SCHEDULE.
5. BATHROOMS AND LAVATORIES SHALL HAVE TITLE FLOOR AND 4'–0" HIGH TILE WAINSCOT 8'–0" HIGH IN WAY OF SHOWERS AT TUBS AND STALL SHOWERS. AS PER SEC. 76 M.D.L.
6. CARPENTER SHALL PROVIDE RECESS OR MEDICINE CABINETS IN BATHROOMS AND LAVATORIES.
7. ALL BATHTUBS, RECESSED OR OTHERWISE, SHALL BE PROVIDED WITH SUFFICIENT CURTAIN RODS.
8. PROVIDE AND SET WOOD SHELVES AND 1 1/2" DIAMETER HORIZONTAL WOOD OR METAL POLE IN EACH CLOSET. LINEN CLOSETS SHALL HAVE FIVE SHELVES.
9. TEMPERATURE IN ALL ROOMS TO BE MAINTAINED AT MIN. 70 DEGREES FAHRENHEIT. HEATING SYSTEM SHALL BE CAPABLE OF PRODUCING REQUIRED TEMPERATURE WHEN OUTDOOR TEMPERATURE IS 15 DEGREES FAHRENHEIT AND WIND VELOCITY IS 15MPH.

SECTION 17 – SMOKE DETECTOR NOTES:

1. SCOPE. COVERS THE REQUIREMENTS FOR THE PROPER SELECTION, INSTALLATION, OPERATION AND MAINTENANCE OF FIRE WARNING EQUIPMENT FOR USE WITHIN DWELLING UNITS OR ROOMING UNITS.
2. THE INSTALLATION OF WIRING AND EQUIPMENT SHALL BE IN ACCORDANCE WITH THE NEW YORK CITY ELECTRICAL CODE.
3. SMOKE DETECTORS SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS IN DWELLING UNITS IN OCCUPANCY GROUPS J–2 AND J–3 AND IN BASEMENTS AND BASEMENT RECREATION ROOMS IN OCCUPANCY GROUP J–3. SMOKE DETECTORS SHALL BE INSTALLED WITHIN SLEEPING AREA OF HOTEL OR MOTEL UNITS, ROOMING UNITS OR STUDIO DWELLING UNITS IN OCCUPANCY GROUP J–1.
4. EACH SMOKE DETECTOR SHALL HAVE AN INTEGRAL TEST MEANS TO PERMIT THE OCCUPANT TO CHECK THAT IT IS OPERATIONL. A CONTINOUS POWER DISPLAY INDICATOR LIGHT IS RECOMMENDED.
5. A SMOKE DETECTOR INSTALLED TO PROTECT A SLEEPING AREA IN ACCORDANCE WITH (3) SHALL BE LOCATED OUTSIDE THE BEDROOM BUT IN THE IMMEDIATE VICINITY OF THE SLEEPING AREA, EXCEPT AS SET FORTH FOR ROOMING UNITS.
6. SMOKE DETECTORS SHALL BE LOCATED ON OR NEAR CEILING, AND WITHIN FIFTEEN FEET OF ALL ROOMS USED FOR SLEEPING PURPOSES IN J–2 OR J–3 OCCUPANCIES. IN ALL DWELLING UNITS WITH MULTIPLE LEVELS, WHEN ANY LEVEL HAS ONLY ONE MEANS OF EGRESS, THE DWELLING UNIT SHALL BE PROVIDED WITH SMAKE DETECTORS ON ALL LEVELS.
7. IF CEILING MOUNTED, THE CLOSET EDGE OF THE DETECTOR SHALL A MINIMUM OF FOUR INCHES FROM ANY WALL.
8. IF WALL MOUNTED, THE CLOSET EDGE OF THE DETECTOR SHALL BE A MINIMUM OF FOUR INCHES AND A MAXIMUM OF TWELVE INCHES FROM THE CEILING.

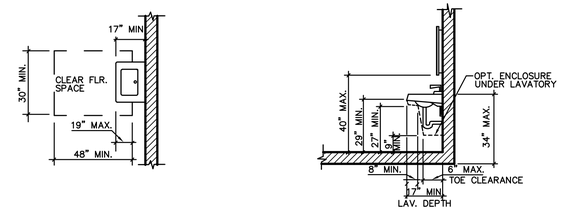
HANDICAPPED ADAPTABILITY NOTES

1. ALL DETAILS AND GENERAL NOTES PERTAINING TO HANDICAPPED ADAPTABILITY SHALL SUPERSEDE OTHER DETAILS AND NOTES HEREIN.
2. ALL COMPONENTS OF SPACES REQUIRED TO COMPLY WITH HANDICAPPED ADAPTABILITY NOT COVERED BY THE SCOPE OF THESE DOCUMENTS SHALL ALSO COMPLY WITH REQUIREMENTS OF RS4–6, THIS INCLUDES (BUT IS NOT LIMITED TO) INTERIOR FINISHES; CONTROLS FOR BATHROOM, KITCHEN AND HVAC APPLIANCES AND FOR LIFTS & ELEVATORS; AND HARDWARE FOR DOORS, WINDOWS AND STORAGE AREAS.
3. DOORWAYS INTENDED FOR USER PASSAGE SHALL HAVE A MINIMUM CLEAR OPENING OF 32 IN. WITH THE DOOR OPEN 90 DEGREES. MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP.
4. THE DOOR AND DOOR BUCK AT THE BATHROOM (S) SHALL BE DESIGNED AND CONSTRUCTED SO THAT REMOUNTING THE HINGES IS THE ONLY CHANGE REQUIRED TO SWING THE DOOR OUT.
5. THRESHOLDS AT DOORWAYS SHALL NOT EXCEED 3/4 IN. IN HEIGHT FOR EXTERIOR RESIDENTIAL SLIDING DOORS OR 1/2 IN. FOR OTHER TYPES OF DOORS. RAISED THRESHOLDS AND FLOOR LEVEL CHANGES AT ACCESSIBLE DOORWAYS SHALL BE BEVELED WITH A SLOPE NOT GREATER THAN 1:2
6 IN DWELLING UNITS THE HEIGHT OF THE WATER CLOSETS SHALL BE AT LEAST 15 IN. AND NO MORE THAN 19 IN. MEASURED TO THE TOP OF THE TOILET SEAT.
7. STRUCTURAL REINFORCEMENT OR OTHER PROVISIONS SHALL BE MADE THAT WILL ALLOW INSTALLATION OF GRAB BARS IN THE LOCATIONS SHOWN IN THE DETAILS.
8. IF A CABINET IS PROVIDED UNDER THE LAVATORY, IT SHALL BE EASILY REMOVABLE FOR A WIDTH OF 30". FINISHED FLOORING SHALL EXTEND UNDER THIS AREA TO THE WALL.
9. THE SINK AND SURROUNDING COUNTER IN ADAPTABLE DWELLING UNITS SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:
   1. THE SINK AND SURROUNDING COUNTER SHALL BE ADJUSTABLE OR REPLACEABLE AS A UNIT AT VARIABLE HEIGHTS BETWEEN 28 IN. AND 36 IN. MEASURED FROM THE FINISHED FLOOR TO THE TOP OF THE COUNTER SURFACE OR SINK RIM, OR SHALL BE MOUNTED AT A FIXED HEIGHT NO GREATER THAN 34 IN., MEASURED FROM THE FINISHED FLOOR TO THE TOP OF THE COUNTER SURFACE OR SINK RIM.
   2. WHERE SINKS ARE INSTALLED TO BE ADJUSTABLE IN HEIGHT, ROUGH–IN PLUMBING SHALL BE LOCATED TO ACCEPT CONNECTIONS OF SUPPLY AND DRAIN PIPES FOR SINKS MOUNTED AT THE HEIGHT OF 28 IN.
   3. BASE CABINETS, IF PROVIDED, SHALL BE REMOVABLE UNDER THE FULL 30–IN. MINIMUM FRONTAGE OF THE SINK AND SURROUNDING COUNTER. THE FINISHED FLOORING SHALL EXTEND UNDER THE COUNTER TO THE WALL.
   4. COUNTER THICKNESS AND SUPPORTING STRUCTURE SHALL BE 2 IN. MAXIMUM OVER THE REQUIRED CLEAR SPACE.
   5. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER SINKS. HOT–WATER PIPES AND DRAIN PIPES UNDER SINKS SHALL BE INSULATED OR OTHERWISE COVERED.
10 OVERHEAD KITCHEN CABINETS (EXCEPT OVER STOVES, COOKTOPS AND PASS THROUGHS) SHALL BE INSTALLED SO AS TO BE EASILY LOWERED TO A HEIGHT OF 48" FROM FINISHED FLOOR TO TOP OF LOWEST SHELF.
11. IF A MEDICINE CABINET IS PROVIDED ABOVE THE LAVATORY, THEN THE BOTTOM OF THE MEDICINE CABINET SHALL BE LOCATED WITH A USABLE SHELF NO HIGHER THAN 44IN. ABOVE THE FLOOR.
12. AN IN–TUB SEAT OR A SEAT AT THE HEAD END OF THE TUB SHALL BE PROVIDED IN BATHTUBS. SEATS SHALL BE MOUNTED SECURELY AND SHALL NOT SLIP DURING USE.
13. A SEAT SHALL BE PROVIDED IN SHOWER STALLS (SEE DETAIL). THE SEAT SHALL BE MOUNTED 17 IN. TO 19 IN. FROM THE BATHROOM FLOOR AND SHALL EXTEND THE FULL DEPTH OF THE STALL. THE SEAT SHALL BE ON THE WALL OPPOSITE THE CONTROLS.
14. A SHOWER SPRAY UNIT SHALL BE PROVIDED WITH A HOSE AT LEAST 60 IN. LONG THAT CAN BE USED AS A FIXED SHOWER HEAD OR AS A HAND–HELD SHOWER. IF AN ADJUSTABLE–HEIGHT SHOWER HEAD MOUNTED ON A VERTICAL BAR USED, THE BAR SHALL BE INSTALLED SO AS NOT TO OBSTRUCT THE USE OF GRAB BARS.
15. THE 30 IN. KITCHEN WORK SURFACE SHOWN ON THE PLANS SHALL PROVIDE A WORK SURFACE THAT COMPLIES WITH THE FOLLOWING REQUIREMENTS:
   1. THE COUNTER SHALL BE ADJUSTABLE OR RELACEABLE AS A UNIT AS A VARIABLE HEIGHTS BETWEEN 28 IN. AND 36 IN., MEASURED FROM THE FLOOR TO THE TOP COUNTER SURFACE, OR SHALL BE MOUNTED AT A FIXED HEIGHT NO GREATER THAN 34 IN., MEASURED FROM THE FLOOR TO THE TOP OF THE COUNTER SURFACE.
   2. BASE CABINETS, IF PROVIDED, SHALL BE REMOVABLE UNDER THE FULL 30 IN. MINIMUM FRONTAGE COUNTER. THE FINISHED FLOOR SHALL EXTEND COUNTER TO THE WALL.
   3. COUNTER THICKNESS AND SUPPORTING STRUCTURE SHALL BE 2IN. MAXIMUM OVER THE COUNTER TO THE WALL.
   4. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER SUCH COUNTERS.
16. WASHING MACHINES AND CLOTHES DRYERS IN COMMON–USE LAUNDRY ROOMS SHALL BE FRONT LOADING.
17. CLOTHES RODS SHALL BE A MAXIMUM OF 54 IN. FROM THE FLOOR; OR SHALL BE EASILY ADJUSTABLE TO THIS HEIGHT.
18. CHANGES IN GROUND LEVEL UP TO 1/4 IN. MAY BE VERTICAL AND WITHOUT EDGE TREATMENT. CHANGES IN LEVEL BETWEEN 1/4 IN. AND 1/2IN. SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2.
19. DOORS TO HAZARDOUS AREAS SHALL BE MADE IDENTIFIABLE TO THE TOUCH BY A TEXURED SURFACE ON THE DOOR HANDLE, KNOB, PULL OR OTHER OPERATING HARDWARE. THIS TEXTURED SURFACE MAY BE MADE BY KNURLING OR ROUGHENING OR BY A MATERIAL APPLIED TO THE CONTACT SURFACE. (HAZARDOUS AREAS INCLUDE LOADING PLATFORMS, BOILER ROOMS, STAGES, ETC.).
20. DETECTABLE WARNING TEXTURES ON WALKING SURFACES AS SHOWN ON PLANS SHALL CONSIST OF EXPOSED AGGREGATE CONCRETE, CUSHIONED SURFACES MADE OF RUBBER OR PLASTIC, RAISED STRIPS, OR GROOVES. TEXTURES SHALL CONTRAST WITH THAT OF THE SURROUNDING SURFACE. RAISED STRIPS OR GROOVES SHALL COMPLY WITH RS 4–6. GROOVES MAY BE USED INDOORS ONLY.
21. AUDIBLE EMERGENCY ALARMS SHALL PRODUCE A SOUND THAT EXCEEDS THE PRAVAILING EQUIVALNT SOUND LEVEL IN THE ROOM OR SPACE BY AT LEAST 15 DECIBELS OR EXCEEDS ANY MAXIMUM SOUND LEVEL WITH A DURATION OF 30 SECONDS BY 5 DECIBELS, WHICHEVER IS LOUDER. SOUND LEVELS FOR ALARM SIGNALS SHALL NOT EXCEED 120 DECIBALS.
22. VISUAL ALARMS SHALL BE FLASHING LIGHTS ARRAGNED TO FLASH IN CONJUCTION WITH THE AUDIBLE EMERGENCY ALARMS. THE FLASHING FREQUENCY OF VISUAL ALARMS SHALL BE APPROXIMATELY 1 HZ.. SPECIALIZED SYSTEMS USING ADVANCED TECHNOLOGY MAY BE SUBSTITUTED IF EQUIVALENT PROTECTION IS AFFORDED HANDICAPPED USERS OF THE BUILDING OR FACILITY.
23. SENSORY ALARMS PROVIDED FOR PERSONS WITH HEARING IMPAIRMENTS SHALL BE CONNECTED TO THE BUILDING EMERGENCY SYSTEM OR THERE SHALL BE A STANDARD 110–VOLT ELECTRICAL RECEPTACLE INTO WHICH AN ALARM UNIT CAN BE CONNECTED TO BE ACTIVATED BY THE BUILDING ALARM SYSTEM. INSTRUCTIONS FOR USE OF THE AUXILIARY ALARM OR CONNECTIONS SHALL BE PROVIDED.
24. THE STRUCTURAL STRENGTH OF GRAB BARS, TUB AND SHOWER SEATS, FASTENERS, AND MOUNTING DEVICES SHALL MEET THE FOLLOWING SPECIFICATIONS.
   1. BENDING STRESS IN A GRAB BAR OR SEAT INDUCED BY THE MAXIMUM BENDING MOMENT FROM THE APPLICATION OF 250 LBF (112N) SHALL BE LESS THAN THE ALLOWABLE STRESS FOR THE MATERIAL OF THE GRAB BAR OR SEAT.
   2. SHEAR STRESS INDUCED IN A GRAB BAR OR SEAT BY THE APPLICATION OF 250 LBF (112N) SHALL BE LESS THAN THE ALLOWABLE SHEAR STRESS FOR THE MATERIAL OF THE GRAB BAR OR SEAT. IF THE CONNECTION BETWEEN THE GRAB BAR OR SEAT AND ITS MOUNTING BRACKET OR OTHER SUPPORT IS CONSIDERED TO BE FULLY RESTRAINED, THEN DIRECT AND TORSIONAL SHEAR STRESSES SHALL BE TOTALED FOR THE COMBINED SHEAR STRESS, WHICH SHALL NOT EXCEED THE ALLOWABLE SHEAR STRESS.
   3. SHEAR FORCE INDUCED IN A FASTENER OR MOUNTING DEVICE FROM THE APPLICATION OF 250 LBF (1112N) SHALL BE LESS THAN THE ALLOWABLE LATERAL LOAD OF EITHER THE FASTENER OR MOUNTING DEVICE OR THE SUPPORTING STRUCTURE, WHICHEVER IS THE SMALLER ALLOWABLE LOAD.
   4. TENSILE FORCE INDUCED IN A FASTENER BY A DIRECT TENSION FORCE OF 250 LBF (112N) PLUS THE MAXIMUM MOMENT FROM THE APPLICATION OF 250 LBF (112N) SHALL BE LESS THAN THE ALLOWABLE WITHDRAWAL LOAD BETWEEN THE FASTENER AND THE SUPPORTING STRUCTURE.
   5. GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTING.



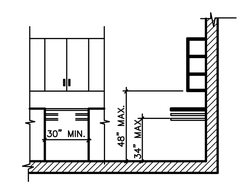
WATER CLOSET CLEARANCES

SCALE: 1/4"=1'–0"



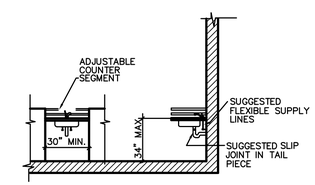
LAVATORY CLEARANCES

SCALE: 1/4"=1'–0"



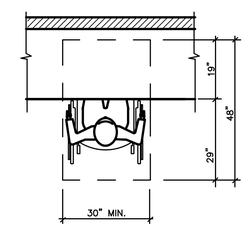
COUNTER WORK SURFACE
(AFTER REMOVAL OF CABINETS)

SCALE: 1/4"=1'–0"



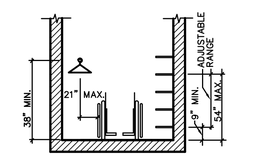
KITCHEN SINK
(AFTER REMOVAL OF CABINETS)

SCALE: 1/4"=1'–0"



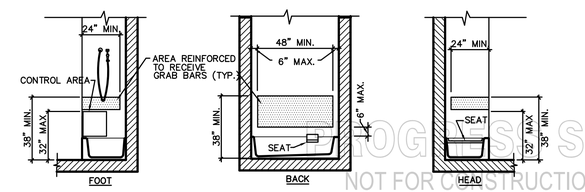
CLEAR FLOOR SPACE UNDER WORK SURFACE

SCALE: 1/2"=1'–0"



CLOSET AND SHELVES

SCALE: 1/4"=1'–0"



BATHTUB WITH SEAT

SCALE: 1/4"=1'–0"

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

BSCAN STICKER

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:

MIXED USE BUILDING

40-05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE:

ISSUES

DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
MULTIPLE DWELLING & HANDICAPPED NOTES

PAGE NUMBER
17 OF 50

N-002.00

Z:\Clients\1391nj-Dilonzo-Crescent Street\Construction Drawings\1391nj_CD1.dwg

SECTION 1 – GENERAL AND ADMINISTRATIVE INFORMATION

1–1. THE ARCHITECT HAS NOT BEEN RETAINED FOR THE SUPERVISION OF ANY WORK INDICATED HEREWITH.

1–3. NO WORK IS TO BE STARTED UNTIL A BUILDING PERMIT HAS BEEN SECURED AS REQUIRED BY THE APPLICABLE GOVERNING AGENCY OR AGENCIES.

1–4. ALL CONDITIONS AND DIMENSIONS ARE TO BE VERIFIED BEFORE START OF ANY WORK AND DISCREPANCIES OR VARIATIONS TO APPROVED PLAN ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER BEFORE PROCEEDING.

1–5. ALL WORK OF THE VARIOUS TRADES INVOLVED WITH THE CONSTRUCTION OF THIS PROJECT IS TO BE PERFORMED BY CAPABLE AND REPUTABLE CONTRACTORS, LICENSED IN THE STATE OF NEW YORK AND AS REQUIRED BY THE LOCAL GOVERNING AGENCY.

1–6. ALL WORK OF THE VARIOUS TRADES IS TO BE PERFORMED IN ACCORDANCE WITH STATE AND LOCAL CODES, AND ALL OTHER APPLICABLE AGENCIES AND STANDARDS GOVERNING THAT PARTICULAR TRADE, AND AS HEREINAFTER STATED OR IMPLIED.

1–7. ANY WORK HEREINAFTER STATED OR IMPLIED WHICH IS CONTRARY TO THAT REQUIRED BY THE APPLICABLE GOVERNING AGENCIES AND CODES IS TO BE BROUGHT TO THE ATTENTION OF THE OWNER, AND CORRECTED IN ORDER TO CONFORM TO THOSE GOVERNING REQUIREMENTS.

1–8. ANY DISCREPANCIES FROM THIS PLAN AND THE ACTUAL CONDITIONS ARE TO BE REPORTED IMMEDIATELY TO THE ARCHITECT OR HIS REPRESENTATIVE.

1–9. ALL CONSTRUCTION MATERIALS ARE TO BE NEW AND OF A LEVEL OF QUALITY WHICH WILL INSURE THE QUALITY OF WORK DESIRED BY THE OWNER.

1–13. NO WORK IS TO COMMENCE UNTIL PLANS ARE APPROVED BY THE N.Y.C. DEPARTMENT OF BUILDINGS AND A PERMIT TO BUILD IS OBTAINED.

1–15. WHERE MATERIALS OR WORKMANSHIP ARE REQUIRED BY THESE CONTRACT DOCUMENTS, TO MEET OR EXCEED THE SPECIFICALLY NAMED CODE OR STANDARD, IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIALS AND WORKMANSHIP WHICH MEET OR EXCEED THE SPECIFICALLY NAMED CODE OR STANDARD.

1–18. PRIOR TO COMPLETION OF THE WORK, REMOVE FROM THE JOB SITE ALL TOOLS, SURPLUS MATERIALS, EQUIPMENT, SCRAP, DEBRIS, AND WASTE, EXCEPT AS OTHERWISE NOTED BY THE OWNER.

1–19. ALL NEW FOOTINGS ARE TO REST ON UNDISTURBED, 2 TON/SF. FT. SOIL AS A MINIMUM REQUIREMENT. NOTIFY ARCHITECT PRIOR TO PLACEMENT OF ANY FOOTINGS, OR SUBMIT VERIFICATION OF SOIL BEARING CAPACITY.

1–24. ALL MATERIALS AS WELL AS METHODS AND PROCESSES USED IN THE PERFORMANCE OF THE WORK SHALL CONFORM TO THE STANDARDS OF THE BUILDING.

1–27. CONTRACTORS SHALL MAKE AVAILABLE FIRE EXTINGUISHERS BASED ON THE FOLLOWING: ALTERATIONS UP TO 3,000 SQ.FT. – ONE (1) FIRE EXTINGUISHER. ALTERATIONS OVER 3,000 SQ.FT. – ONE (1) FIRE EXTINGUISHER FOR EVERY ADDITIONAL 3,000 SQ.FT. THEREOVER. SAID FIRE EXTINGUISHER SHALL BE 25LB. TYPE APPROVED FOR TYPE A,B,C FIRES AND SHALL BE KEPT AND MAINTAINED ON THE PREMISES BY TENANT'S CONTRACTOR FOR THE DURATION OF THE ALTERATION.

1–41. FOUNDATIONS AND SUBSOIL CONDITIONS HAVE BEEN DESIGNED BASED ON INFORMATION CONTAINED WITHIN BORINGS AND/TEST PITS AS FURNISHED BY OWNER. EXACT FOUNDATION REQUIREMENTS ARE SUBJECT TO CHANGE BASED ON CONTROLLED INSPECTION OF SUBSOIL CONDITIONS, AND MAY VARY FROM THOSE INDICATED ON THE CONSTRUCTION DOCUMENTS.

1–42. PRIOR TO COMMENCEMENT OF ANY WORK, CONTRACTOR/OWNER SHALL VERIFY THE INTEGRITY OF ALL EXISTING STRUCTURAL ELEMENTS TO REMAIN, AND TO VERIFY ADEQUATE SOIL BEARING CAPACITY FOR PROPOSED CONSTRUCTION, THROUGH INDEPENDENT ANALYSIS.

1–46. DO NOT SCALE DIMENSIONS FROM DRAWINGS. WRITTEN DIMENSIONS ARE TO BE FOLLOWED FOR CONSTRUCTION PURPOSES.

1–49. DAMP PROOF ALL NEW FOUNDATIONS AND EXPOSED EXISTING FOUNDATIONS WITH 2 COATS OF CELOTEX "FLAT–TOPP EMULSION" IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS. APPLY PROTECTION COURSE OF 1/8" ELASTIBORD.

1–50. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND USING THE LATEST DEPARTMENT OF TRANSPORTATION CONSTRUCTION DETAILS AND SPECIFICATIONS WHICH ARE APPLICABLE TO THIS JOB; INCLUDING NEW CONCRETE SIDEWALK, STEEL FACED CONCRETE CURB, PAVEMENT, PEDESTRIAN RAMPS, CATCH BASINS, OR TREE PLANTING PITS.

1–51. ALL CONSTRUCTION, EXPRESSLY INDICATED OR IMPLIED HEREIN, SHALL COMPLY IN FULL TO THE PROVISIONS OF N.Y. CITY LOCAL LAW 58/87, AND THE ACCOMPANYING REFERENCE STANDARD 4–6, FOR HANDICAPPED ADAPTABILITY.

1–52. THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI ARCHITECTS AND PLANNERS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW.

SECTION 2 – SITE WORK

2–8. FINISH GRADE TO ELEVATIONS AS NOTED ON THE CONTRACT DOCUMENTS. CUT REMOVED FROM NEW EXCAVATED AREAS IS TO BE USED FOR FILL WHERE REQUIRED TO OBTAIN DESIRED GRADE.

2–9. ALL FILL MATERIAL SHALL BE SOIL OR SOIL–ROCK MIXTURE FREE FROM ORGANIC MATTER AND OTHER OBJECTIONABLE MATERIAL. IT SHALL CONTAIN NO ROCKS OR LUMPS OVER SIX INCHES IN GREATEST DIMENSION AND NOT MORE THAN 15% OF THE ROCKS OR LUMPS SHALL BE LARGER THAN 2 1/2 INCHES IN GREATEST DIMENSION.

2–10. TOP 6" OF NEWLY GRADED AREAS IS TO BE TOP SOIL RAKED FREE FROM DEBRIS, STICKS, STONES OVER 2" IN SIZE AND OBJECTIONABLE MATERIAL.

2–11. A SURVEY AS REQUIRED BY SECTION C27–219 OF THE ADMINISTRATIVE CODE IS FILED HEREWITH. I HAVE THOROUGHLY CHECKED THIS SURVEY AND ACCEPT AS SPECIFICALLY NOTED BELOW, THIS SURVEY, TO THE BEST OF MY KNOWLEDGE AND BELIEF CONTAINS ALL OF THE INFORMATION REQUIRED BY SECTION C27–219 AND THE INFORMATION SHOWN THEREIN AGREES WITH THE APPROVED PLANS AND SPECIFICATIONS.

2–17. CONTRACTOR/OWNER IS RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES AND VERIFYING LOCATION OF SAME UTILITY COMPANIES LINES, SERVICES AND OTHER POSSIBLE EQUIPMENT OF UTILITY COMPANIES.

2–18. GENERAL CONTRACTOR OR OWNER SHALL FIELD VERIFY ALL INVERT ELEVATIONS AND SEWER CONDITIONS INDICATED PRIOR TO CONSTRUCTION, ARCHITECT ASSUMES NO RESPONSIBILITY FOR INFORMATION CONTAINED IN SURVEYS OR SEWER DEPARTMENT RECORDS.

2–19. INSTALLATION OF GAS METERS SHALL BE IN STRICT ACCORDANCE WITH LOCAL GAS CO. SPECIFICATIONS.

2–20. INSTALLATION OF ELECTRIC METERS SHALL BE PERFORMED IN STRICT ACCORDANCE WITH "CON EDISON" SPECIFICATIONS.

2–21. VERIFY DEPTH OF ADJACENT EXISTING FOOTINGS PRIOR TO CONSTRUCTION. UNDERPINNING MAY BE NECESSARY AND WILL BE FILED UNDER SEPARATE APPLICATION.

SECTION 3 – CONCRETE

3–1. NEW POURED CONCRETE TO BE MINIMUM 3500 P.S.I. COMPRESSIVE STRENGTH IN 28 DAYS. 6.0 BAGS OF CEMENT (MIN. PER CUBIC YARD OF CONCRETE AND MAXIMUM 7 1/4 GALLONS OF WATER PER 94 POUND SACK OF CEMENT. 6 1/4 GALLONS OF WATER PER 94 POUND SACK OF CEMENT FOR AIR ENTRAINED CONCRETE. SUBMIT TESTING REPORTS PERFORMED BY APPROVED TESTING LABORATORY, AS REQUIRED BY LOCAL OFFICIALS.

3–2. CONCRETE DESIGN, MATERIALS, AND METHODS OF CONSTRUCTION SHALL COMPLY WITH THE APPLICABLE ACI STANDARD 318 OF THE AMERICAN CONCRETE INSTITUTE.

3–3. ALL MASONRY OR CONCRETE ANCHORS AND FASTENERS OF ANY KIND, TO BE GALVANIZED OR ZINC COATED.

3–4. ALL NEW POURED CONCRETE TO MINIMUM 3500 P.S.I. COMPRESSIVE STRENGTH IN 28 DAYS. CONTRACTOR TO SUBMIT RECEIPT FOR CONCRETE OR VERIFICATION OF STRENGTH.

3–5. CONTRACTOR IS TO FURNISH ALL TESTING AND REPORTS AS REQUIRED BY THE LOCAL GOVERNING AGENCY OR AGENCIES.

3–6. COMPLY WITH ACI 306 TO PROTECT ALL CONCRETE WORK FROM PHYSICAL DAMAGE AND REDUCED STRENGTH WHICH WOULD BE CAUSED BY FROST, FREEZING ACTIONS OR LOW TEMPERATURES.

3–7. ALL REINFORCED CONCRETE WORK SHALL BE INSPECTED BY AND UNDER DIRECT SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER AS REQUIRED BY ARTICLE 10 OF THE NEW YORK CITY BUILDING CODE. PARAGRAPH C26–106.3. FORM 10A SHALL BE FILED WITH BUILDING DEPARTMENT FOR APPROVAL OF SAID ENGINEER.

3–9. QUALITY CONTROL AND INSPECTION OF MATERIALS AND OF BATCHING SHALL BE MADE IN ACCORDANCE WITH ARTICLE 10 OF THE NEW YORK CITY BUILDING CODE.

3–10. ALL FIELD TESTS SHALL BE MADE AS REQUIRED BY ARTICLE 10 OF THE NEW YORK CITY BUILDING CODE.

3–11. REINFORCING STEEL TO BE DEFORMED BARS ON NEW BILLET STEEL IN ACCORDANCE WITH ASTM DESIGNATION A 615 GRADE 40; LAP LENGTH OF BARS TO CONFORM TO BUILDING CODE REGULATION.

3–12. WIRE MESH TO BE ELECTRICALLY WELDED AND HAVE AN ULTIMATE STRENGTH OF NOT LESS THAN 70,000 PSI.

3–13. FORMWORK FOR ALL STRUCTURES TO COMPLY WITH ARTICLE 19 OF THE NEW YORK CITY BUILDING CODE.

3–14. PLACE FLOOR SLAB ON GROUND IN ALTERNATE CHECKER BOARD PANELS NOT EXCEEDING 900 SQUARE FOOT IN SIZE. ALSO APPLIES FOR SLABS ON METAL SLAB FORMS.

3–15. CONCRETE COVERING OF REINFORCING STEEL SHALL BE AS FOLLOWS:
A. 3/4" FOR SLABS, 3" WHERE SLABS ARE FORMED ON GROUND
B. 1" FOR INSIDE FACE OF WALLS, 2" FOR BACK FILL SIDE
C. 2" FOR PIERS
D. 1/2" FOR BEAMS

3–16. CHAMFER ALL EXPOSED CONCRETE 3/4" MINIMUM.

3–17. NO FOOTING SHALL BE INSTALLED UNTIL THE BEARING SURFACE HAS BEEN INSPECTED AND APPROVED BY A REPRESENTATIVE OF LOCAL BUILDING AUTHORITIES AND OR SOIL ENGINEER ENGAGED BY THE OWNER.

3–18. ALL FOUNDATION WALLS TO BE POURED IN ONE OPERATION FROM THE BOTTOM TO THE TOP, NO HORIZONTAL JOINTS WILL BE PERMITTED.

3–19. ALL CONSTRUCTION JOINTS TO COMPLY WITH REQUIREMENTS OF THE NEW YORK CITY BUILDING CODE.

3–20. ALL SLABS ON GROUND TO REST ON UNDISTURBED OR COMPACTED SOIL.

3–21. WATERPROOF EXTERIOR FACE OF FOUNDATION WALL (@ CELLAR) WITH "THOROSEAL" HEAVY CEMENT BASE WATERPROOF COATING AS MANUFACTURED BY THORO SYSTEM PRODUCTS.

3–22. WATERPROOF ALL EXPOSED (EXTERIOR) CONCRETE WITH "THOROSEAL" HEAVY CEMENT BASE COATING. THEN APPLY THORO–SYSTEMS "SUPER PLASTIC MIX" COATING FOR FINAL FINISH COAT. REFER TO MANUFACTURER'S SPECIFICATIONS FOR APPLICATION PROCEDURE.

SECTION 4 – MASONRY

4–1. CONCRETE MASONRY UNITS TO BE HOLLOW LOAD BEARING BLOCK AS PER ASTM C90–1966.

4–2. MORTAR SHALL COMPLY WITH ASTM C270–1964, TYPE N PROPORTIONED. 1 PART OF PORTLAND CEMENT, 1 PART OF HYDRATED LIME OR LIME PUTTY, AND 6 PARTS OF AGGREGATE.

4–3. METAL ANCHORS AND TIES SHALL BE CORROSION–RESISTANT.

4–4. PROVIDE "DUR–O–WAL" MTL. TRUSS WALL TIES AT EVERY OTHER BLOCK COURSE. PROVIDE CORNER PIECES AND OVERLAP JOINTS AND TIE AS PER MANUFACTURER'S SPECIFICATIONS.

4–5. ALL SLEEVE ANCHORS ARE TO BE GALVANIZED "RED HEAD" AS MANUFACTURED BY PHILLIPS ANCHORS, MICH. CITY, INDIANA, AND OF SIZE AND TYPE SPECIFIED BELOW FOR VARIOUS SIZE MEMBERS.

1" X 3"	FS–1420	2'–0" O.C.
2" X 4"	FS–1430	2'–0" O.C.
3" X 3"	FS–1440	2'–0" O.C.
3" X 6"	FS–1440	2@2'–0" O.C.
3" X 8"	FS–1440	2@2'–0" O.C.
3" X 8"		

PLATE OF PARAPET HN–3462 16" O.C. STAGGERED

4–6. ALL MASONRY OR CONCRETE ANCHORS AND FASTENERS OF ANY KIND, AT NEW FACADE AND PARAPET, TO BE GALVANIZED OR ZINC COATED.

4–7. KEY ALL MASONRY INTO EXISTING MASONRY WITH SAME BONDING PATTERN AS USED AT EXISTING MASONRY.

4–8. ALL CONCRETE BLOCK CONSTRUCTION TO COMPLY WITH THE STANDARDS OF MASONRY INSTALLATION DESCRIBED IN "CONCRETE BLOCK MASONRY INSPECTORS' MANUAL PUBLISHED BY THE TECHNICAL COMMITTEE OF CALIFORNIA CONCRETE MASONRY MANUFACTURERS ASSOCIATION.

4–12. FABRIC FLASH ALL MASONRY LINTELS AND WEEP AT MINIMUM 32" O.C.

4–14. FACE BRICK TO BE SOLID MASONRY UNITS AS PER ASTM C216.

4–16. PROVIDE CORRUGATED METAL WALL TIES AT 2'–0" O.C. (HORIZ.) AND 1'–4" O.C. (VERT.) NAIL TO STUD ONLY.

SECTION 5 – METALS

5–1. PROVIDE ALL MISCELLANEOUS METAL AND METAL FABRICATIONS COMPLETE, IN PLACE, AS SHOWN ON THE DRAWINGS, SPECIFIED HEREIN, OR NEEDED FOR A COMPLETE AND PROPER INSTALLATION AND NOT SPECIFICALLY CALLED FOR UNDER SECTION OR DRAWINGS OF THE CONTRACT DOCUMENTS.

5–2. PERFORM ALL SHOP AND FIELD WELDING REQUIRED IN CONNECTION WITH THE WORK OF THIS SECTION, ADHERING STRICTLY TO THE CURRENT PERTINENT RECOMMENDATIONS OF THE AMERICAN WELDING SOCIETY. ALL WELDS SHALL BE DRESSED SMOOTH.

5–3. FABRICATE PIPE RAILINGS OF STANDARD WEIGHT GALVANIZED STEEL PIPE IN SIZES AS NOTED ON DRAWINGS. FORM TO DESIGN INDICATED WITH ALL TURNS AND EASINGS; USE FLUSH TYPE FITTINGS WITH FULL WELDED CONNECTIONS FOR ELBOWS AND CAPS. SUBMIT SHOP DRAWINGS.

5–4. ALL STEEL LINTELS TO BE ASTM A–50 NEW STEEL, GALVANIZED WITH TWO COATS OF RUST INHIBITING PRIMER.

5–5. ALL EXPOSED STEEL TO BE GALVANIZED

5–7. STRUCTURAL STEEL HAS BEEN DESIGNED AND SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE A.I.S.C. SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF THE STRUCTURAL STEEL FOR BUILDING (BOLTED AND ARC WELDED CONSTRUCTION).

5–8. FOR ALL STRUCTURAL MEMBERS ASTM A–50 STEEL TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

5–12. ALL BEAMS PARALLEL TO MASONRY WALLS TO HAVE WALL STRAP ANCHORS 4'–0" O.C. WELDED TO BEAM FLANGES AND EMBEDDED IN MASONRY WALLS. STRAP ANCHORS TO BE 2" X 1/8" AND HAVE 3/8" ROUND DOWEL 3" LONG EMBEDDED IN MASONRY WALL.

5–13. ALL BEAMS PARALLEL TO MASONRY WALLS TO HAVE WALL STRAP ANCHORS 4'–0" O.C. WELDED TO BEAM FLANGES AND EMBEDDED IN MASONRY WALLS. STRAP ANCHORS TO BE 2" X 1/8" AND HAVE 3/8" ROUND DOWEL 3" LONG EMBEDDED IN MASONRY WALL.

5–14. LOOSE LINTELS TO HAVE A MINIMUM BEARING OF 6" EACH SIDE UNLESS OTHERWISE NOTED.

5–15. FOR LOCATION OF OPENINGS AND RECESSES IN MASONRY WALL AND PARTITIONS WHERE LOOSE LINTELS ARE REQUIRED SEE ARCHITECTURAL AND MECHANICAL DRAWINGS.

5–16. GENERAL CONTRACTOR SHALL PROVIDE COMPLETE ENGINEERED SHOP DRAWINGS SHOWING ALL APPLICABLE DETAILS FOR METAL STUD AND METAL JOIST CONNECTIONS.

5–17. VERIFY UNIT SIZE & BOLT DOWN LOCATION BEFORE FABRICATION.

5–18. ALL NON EXPOSED STEEL MEMBERS TO BE PAINTED WITH SHOP COAT OF AND FIELD COAT OF CORROSION RESISTANT PAINT.

5–19. ALL WELDING TO BE PERFORMED BY A CERTIFIED WELDER AND INSPECTED BY A LICENSED TESTING LABORATORY WITH WRITTEN REPORT FURNISHED.

5–21. FIRE STOP IN THE FOLLOWING SPECIFIC LOCATIONS:
A. ALL STUD BEARING AND EXTERIOR WALLS AT CEILING AND FLOOR LEVELS INCLUDING ATTIC FLOOR
B. AT STAIR WELL PARTITIONS
C. ALL OTHER LOCATIONS WHERE OPENINGS COULD AFFORD PASSAGE FOR FLAMES OR AS REQUIRED BY LOCAL GOVERNING AGENCIES.

5–22. ALL STEEL JOISTS SHALL BE SPACED AS SHOWN ON PLANS, WEBS ALIGNING WITH WEBS OF STUDS (SAME SPACING); TYPICAL OF ALL BEARING WALLS.

5–23. FRAMING DETAILS FOR STEEL JOIST AND STEEL STUD CONSTRUCTION ARE FOR ILLUSTRATIVE PURPOSES FOR FRAMING CONDITIONS CONTAINED HEREIN. ACTUAL SIZES AND RELATIONSHIPS OF MEMBERS MAY VARY. SEE PLANS FOR INDIVIDUAL CONDITIONS.

5–24. ALL STEEL (STUD AND) JOIST SIZES AND DETAILS HAVE BEEN DESIGNED BASED ON INFORMATION CONTAINED IN THE TECHNICAL SPECIFICATIONS OF "MARINO IND." OF WESTBURY N.Y. REFER TO MARINO INC. SPECIFICATIONS FOR ALL CONSTRUCTION DETAILS AND CONNECTIONS, AND RECOMMENDED PROCEDURES

5–25. PROVIDE DOUBLE JOISTS BENEATH ALL BATHROOMS.

5–26. PROVIDE JOIST BRIDGING (STRAPPING) AS REQUIRED BY MARINO SPECIFICATIONS.

5–27. ALL BUILT–UP STEEL STUD POSTS SHALL BE CONTINUOUS THRU ALL FLOORS TO FOUNDATION WALL.

5–28. PROVIDE DOUBLE JOISTS BENEATH ALL PARTITIONS RUNNING PARALLEL TO JOISTS.

5–32. STEEL DECKING SHALL CONFORM TO AISI–1980 SPECIFICATION FOR THE DESIGN OF COLD–FORMED STEEL STRUCTURAL MEMBERS (SEPT. 3, 1980); AND MODIFICATIONS OUTLINED IN REF. STANDARD 10–6 OF THE 1987 NYC BLDG. CODE.

5–33. STEEL DECKING SHALL CONFORM TO THE APPLICABLE PROVISIONS OF REF. STANDARD 10–5 AS OUTLINED IN REF. STANDARD 10–6 OF THE 1987 NYC BLDG. CODE.

5–34. ALL WELDING AND OTHER CONNECTIONS OF STEEL DECKING TO STRUCTURAL FRAMING SHALL BE IN STRICT COMPLIANCE WITH STEEL DECKING MANUFACTURER'S RECOMMENDATIONS.

5–35. ALL METAL DECKING TO BE SHORED AT MID. SPAN WHILE CONCRETE SLAB IS POURED. SHORING IS TO REMAIN IN PLACE UNTIL CONCRETE IS CURED PROPERLY.

SECTION 7 – THERMAL AND MOISTURE PROTECTION

7–1. ALL VENT PIPES OR OTHER PROTRUSIONS IN THE ROOF ARE TO BE PROPERLY FLASHED WITH BASE AND CAP FLASHING OR EQUAL AS APPROVED BY THE OWNER/ARCHITECT.

7–2. ALL HOLES REMAINING IN THE EXISTING ROOF AS A RESULT OF A REMOVED PLUMBING OR VENTING IS TO BE PATCHED BACK TO A 2'–0" X 2'–0" SQUARE AREA WITH ALL CONDITIONS AND MATERIALS TO MATCH EXISTING SAME.

7–4. ALL ROOF INSTALLATIONS, INCLUDING BUILT–UP ROOFING AND BUILT–UP FLASHINGS, SHALL BE FURNISHED WITH A WRITTEN GUARANTEE STATING THAT IT WILL REMAIN IN A WATERTIGHT CONDITION FOR FIVE (5) YEARS AFTER FINAL ACCEPTANCE.

7–6. ASPHALT SHINGLE ROOF WHERE INDICATED ON DRAWINGS SHALL BE STANDARD SELF–SEALING 235LBS. PER SQUARE AS MANUFACTURED BY GAF CORPORATION, AND IS TO BE INSTALLED OVER #15 ASPHALT FELT UNDERLAYMENT AND AS RECOMMENDED BY THE MANUFACTURER. SUBMIT SAMPLE FOR COLOR SELECTION.

7–9. PROVIDE ALL FLASHING AND SHEET METAL NOT SPECIFICALLY DESCRIBED BUT REQUIRED TO PREVENT PENETRATION OF WATER THROUGH EXTERIOR SHELL OF THE BUILDING.

7–11. USE ONLY GALVANIZED NAILS AND FASTENERS FOR ALL ROOFING AND FLASHING APPLICATIONS.

7–13. CAULK AND SEAL ALL JOINTS WITH SILICONE CAULK WHERE SHOWN ON THE DRAWINGS AND ELSEWHERE AS REQUIRED TO PROVIDE A POSITIVE BARRIER AGAINST PASSAGE OF AIR AND PASSAGE OF MOISTURE.

7–16. INSULATION IS TO BE OWENS/CORNING FIBERGLAS OR/AND EQUAL APPROVED BY THE ARCHITECT, WITH A KRAFT FACED VAPOR BARRIER AND THE FOLLOWING R–VALUES FOR THICKNESS NOTED ON DRAWINGS:
3 1/2 THICKNESS – R – 11
6" THICKNESS – R – 19
9" THICKNESS – R – 30
VAPOR BARRIER IS TO BE INSTALLED ON WARM SIDE ONLY.

7–17. ALL GUTTERS ARE TO BE .032 INCHES THICK STOCK ALUMINUM, 3 3/4"H X 5"W FORMED CONTINUOUS AT THE JOB SITE FROM GIRTH WIDTH NOT EXCEEDING 16 INCHES. FINISH TO BE SELECTED BY ARCHITECT. PROVIDE EXPANSION JOINTS ON LENGTH EXCEEDING 30 FEET.

7–18. ALL LEADERS (DOWNSPOUTS) ARE TO BE 3" X 4" STOCK CORRUGATED RECTANGULAR COMPLETE WITH ALL FITTINGS AND SPECIAL SHAPES REQUIRED. PROVIDE 45 ELBOW AT TERMINATION OF LEADERS OR AS OTHERWISE NOTED ON THE DRAWINGS.

SECTION 8 – DOORS, WINDOWS, AND GLASS

8–1. ALL INTERIOR NON–RATED DOORS ARE TO BE FLUSH, 1 3/4" THICK OAK VENEER 6'–8" IN HEIGHT, WOOD EXPANDED HONEYCOMB HOLLOW CORE OF CORRUGATED FIBERBOARD WITH 1" MINIMUM WIDTH VERTICAL STILES, 2 1/4" MINIMUM HORIZONTAL RAILS, AND 2 5/8" WIDE X 20" LONG LOCKBLOCKS, AS MANUFACTURED BY WEYERHAEUSER OR APPROVED EQUAL.

8–3. PREHUNG DOORS ARE PERMITTED AND ENCOURAGED ON THIS JOB.

8–7. PROVIDE ALL FINISH HARDWARE REQUIRED TO COMPLETE THE WORK AS INDICATED ON THE DRAWINGS. PROVIDE ALL TRIM ATTACHMENTS AND FASTENINGS REQUIRED FOR PROPER AND COMPLETE INSTALLATION.

8–9. EXTERIOR WOOD DOORS ARE TO BE SOLID, RAISED PANEL IN HARDWARE AND FINISH AS SELECTED BY OWNER.

8–13. FIRE RATED DOORS ARE TO BE MINERAL CORE DFM–45 (3/4 HOUR RATING) WITH OAK VENEER FINISH, 1 3/4" THICK SET IN RATED FRAME AS MANUFACTURED BY WEYERHAEUSER COMPANY.

8–36. ALL NEW DOORS AND FRAMES IN WIDTHS AS NOTED ON THE PLANS ARE TO BE MINIMUM 6'8" IN HEIGHT, AND OF A CONSTRUCTION AND ASSEMBLY INCLUDING ALL HARDWARE THAT IS APPROVED BY THE NEW YORK CITY DEPARTMENT OF BUILDINGS, AND AS REQUIRED BY THE NEW YORK CITY BUILDING CODE.

8–41. PROVIDE ALL HARDWARE FOR DOORS INCLUDING BUT NOT LIMITED TO 1 1/2 PAIR HINGES, LATCH OR LOCKSET AS SELECTED BY OWNER, AND WALL MOUNTED DOOR STOP. FINISH AS SELECTED BY THE OWNER.

8–43. WEATHER STRIP ALL EDGES OF DOORS SEPARATING UNHEATED FROM HEATED AREAS, AND WHERE OTHERWISE NOTED ON PLANS.

8–59. ALL WINDOWS AND DOORS (INTERIOR & EXTERIOR) SHALL BE SELECTED BY OWNER.

SECTION 9 – FINISHES

9–1. GYPSUM WALLBOARD TO BE 5/8" THICK LAID HORIZONTAL WITH VERTICAL JOINTS BROKEN. ALL INTERNAL CORNERS AND SEAMS TO HAVE REINFORCED TAPE AND ALL EXTERNAL CORNERS TO RECEIVE GALVANIZED STEEL CORNER BEADS.

9–4. PROVIDE MARBLE THRESHOLD AT BATH OR TOILET DOOR OPENING AND SET IN ACCORDANCE WITH APPROPRIATE THIN–SET METHOD.

9–16. SOUND INSULATION WHERE INDICATED ON THE DRAWINGS TO BE "NOISE BARRIER BATTS" 3 1/2" THICKNESS AS MANUFACTURED BY OWENS CORNING FIBERGLAS.

9–43. SELECTION OF ALL INTERIOR FINISH MATERIALS REMAINS THE RESPONSIBILITY OF THE OWNER.

SECTION 10 – SPECIALTIES

10–1. PROVIDE STANDARD TOILET AND BATH ACCESSORIES AT NEW AND RENOVATED BATHROOMS INCLUDING BUT NOT LIMITED TO: TOILET TISSUE HOLDER, SOAP TRAYS, RECESSED CABINET WITH MIRROR AND CUP HOLDER. SUBMIT SAMPLES OR LITERATURE OF PROPOSED ACCESSORIES TO OWNER.

10–2. LOCATION AND TYPE OF ACCESSORIES IS TO BE AS DIRECTED BY THE OWNER OR ARCHITECT.

10–5. LOUVER AT EXISTING BOILER AREA IS TO BE RUST INHIBITIVE PRIME COATED STEEL WITH EXPOSED FRAME FLANGE SIZED TO FIT EXISTING OPENING.

SECTION 11 – EQUIPMENT

11–3. SELECTION OF ALL NEW KITCHEN APPLIANCES AND EQUIPMENT REMAINS THE RESPONSIBILITY OF THE OWNER.

SECTION 15 – MECHANICAL/HEATING, VENTILATION, & AIR CONDITIONING

15–1. SEE APPLICABLE NOTE IN SECTIONS 1 AND 2.

15–2. SEE APPLICABLE NOTES IN SECTION 1.

15–3. HEATING SYSTEM DESIGN AND ALL PIPE INSTALLATION IS TO CONFORM TO THE NEW YORK STATE ENERGY CODE.

15–6. ALL HEATING, AIR CONDITIONING, AND MECHANICAL VENTILATION AND RELATED WORK REMAINS THE RESPONSIBILITY OF THE OWNER AND RESPECTIVE CONTRACTOR INCLUDING BUT NOT LIMITED TO: FILING NECESSARY PLANS OR DOCUMENTS, OBTAINING ALL PERMITS, PAYING OF REQUIRED FEES, OBTAINING ALL APPROVALS, PERFORMING ALL TESTS, AS MAY BE REQUIRED BY THE NEW YORK CITY CODES AND GENERAL PROVISIONS.

15–8. ALL HEATING, AIR CONDITIONING AND WORK SHALL BE INSTALLED TO CONFORM TO NEW YORK CITY ELECTRICAL CODE AND BUREAU OF GAS AND ELECTRICITY, NEW YORK CITY BUILDING CODE, NFPA NEW YORK STATE ENERGY CODE, NEC, UL, ASHRAE. SMACNA, NEW YORK CITY PLUMBING CODE, AS REQUIRED.

15–14. EACH CONTRACTOR SHALL COORDINATE WITH WORK OF ALL OTHER TRADES.

15–21. THE CONTRACTOR SHALL FURNISH AND SET ALL SLEEVES USED TO ACCOMMODATE PIPES PASSING THROUGH WALLS, FLOORS AND PARTITIONS. UNLESS OTHERWISE SPECIFIED SLEEVES SHALL BE 26 GAUGE STEEL. PACK WITH ROPE AND NON–SHRINK CEMENT.

15–33. HEAT SPACE WITH "NEW YORK CITY" APPROVED HEATING SYSTEM CAPABLE OF PRODUCING A MINIMUM TEMPERATURE OF 72 F WHEN THE OUTDOOR TEMPERATURE IS 5 F AND THE WIND VELOCITY IS 15 MPH. SYSTEM DESIGN TO COMPLY WITH THE NEW YORK STATE ENERGY CODE.

BUILDING DEPARTMENT NOTES

1. ACTUAL OUTDOOR AIR TO BE AT LEAST 33–1/3% OF REQUIRED TOTAL (REF. C26–1206.3(B) (2) BUT NOT LESS THAN 5 CFM PER OCCUPANT.

2. ALL EXTERIOR MECHANICAL EQUIPMENT SHALL MEET THE NOISE LIMITATION REQUIREMENTS OF C26–1208.3 (A) 4 AND SHALL BE LOCATED 100FT. SPHERICAL RADIUS FROM ALL WINDOWS IN J OCCUPANCY BUILDINGS.

3. ALL INSPECTIONS, TESTS, REPORTS, AND STATEMENTS REQUIRED BY C26–1301.0 MECHANICAL VENTILATION, AIR CONDITIONING AND REFRIGERATION SYSTEMS REQUIRED BY C26–1301.0 SHALL BE MADE.

4. ALL CODE REQUIREMENTS OF OTHER CITY DEPARTMENTS SHALL BE MET AS REQUIRED BY C26–1304.0.

5. VENTILATION SYSTEM COMPONENTS SHALL CONFORM TO REQUIREMENTS OF RS 13–1 SECTION 3.

6. ONLY APPROVED AIR FILTERS AND FIRE DAMPERS CONFORMING TO SECTION'S 5 & 9 OF RS 13–1 SHALL BE USED.

7. ELECTRICAL WIRING AND EQUIPMENT SHALL CONFORM TO REQUIREMENTS OF RS 13–1 SECTION 7.

8. ALL SAFETY REQUIREMENTS OF RS 13–1, SECTION 8 SHALL BE MET.

9. ALL INSPECTIONS, TESTS, REPORTS, AND STATEMENTS REQUIRED BY C26–1401.0 FOR BOILERS AND FUEL OIL SYSTEMS SHALL BE MADE.

10. GAS FIRED HEATING EQUIPMENT SHALL CONFORM TO REFERENCE STANDARD RS14–2 AND RS14–6 AS REQUIRED BY C26–1415.0.

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

BSCAN STICKER

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40-05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

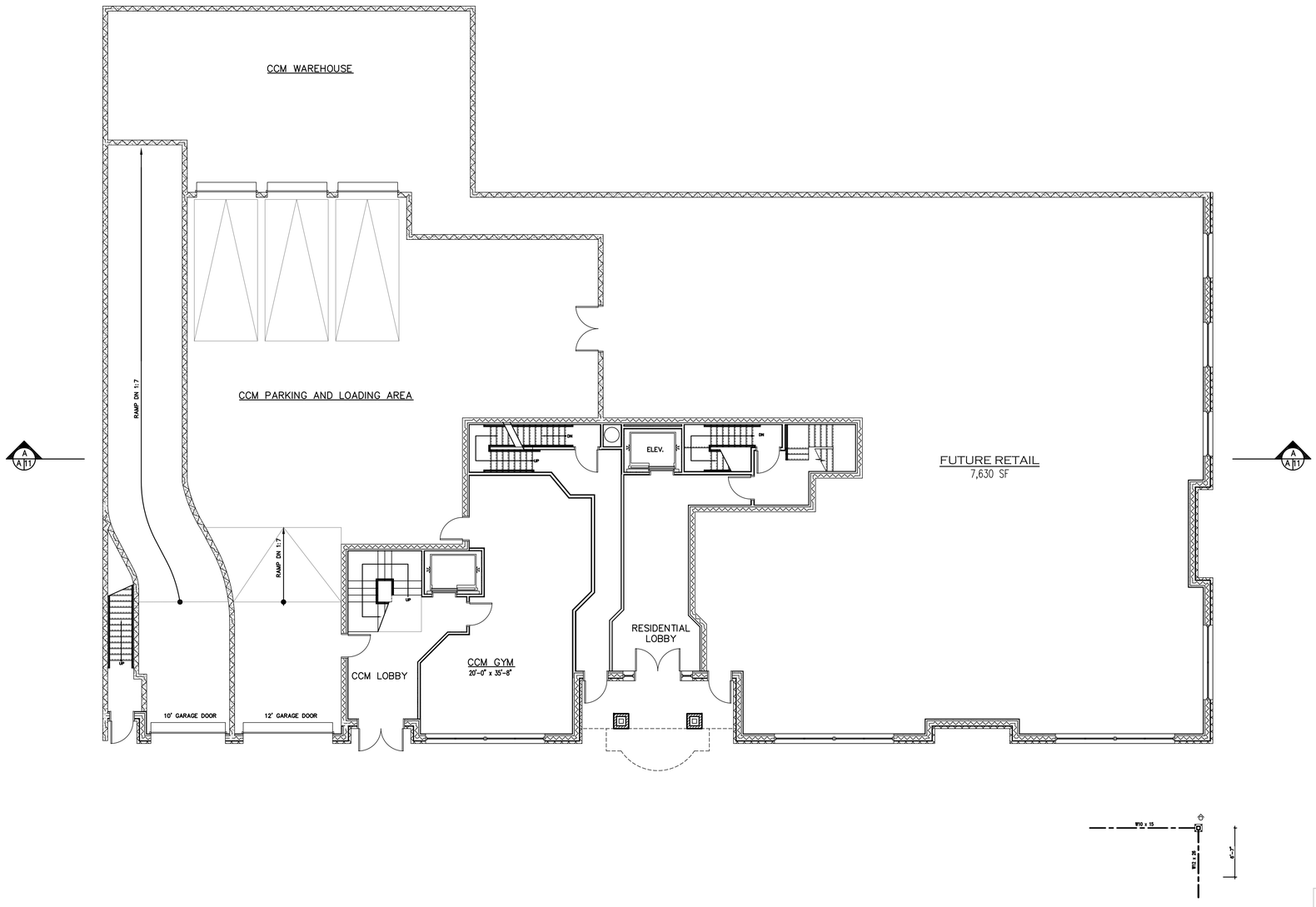
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
GENERAL NOTES

PAGE NUMBER
18 OF 50

N-003.00

Z:\Clients\1391nj-Dilonzo-Crescent Street\Construction Drawings\1391nj_C01.dwg



PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

FIRST FLOOR STRUCTURAL PLAN

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

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

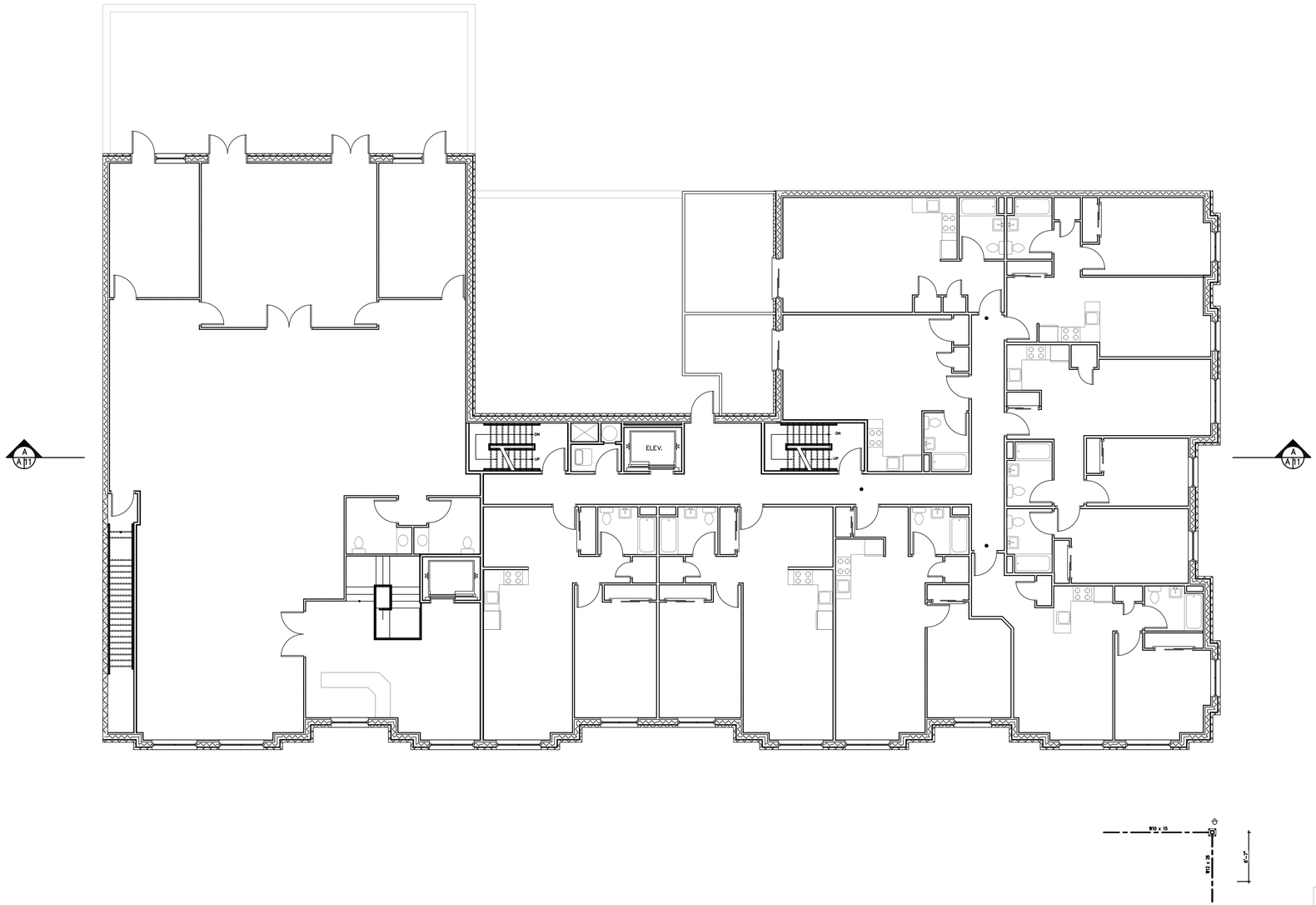
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
FIRST FLOOR STRUCTURAL PLAN

PAGE NUMBER
5 OF 50

S-002.00

Z:\Clients\1391nj-Difonzo-Crescent Street\Construction Drawings\1391nj_CD1.dwg



PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

SECOND FLOOR STRUCTURAL PLAN

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

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40-05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

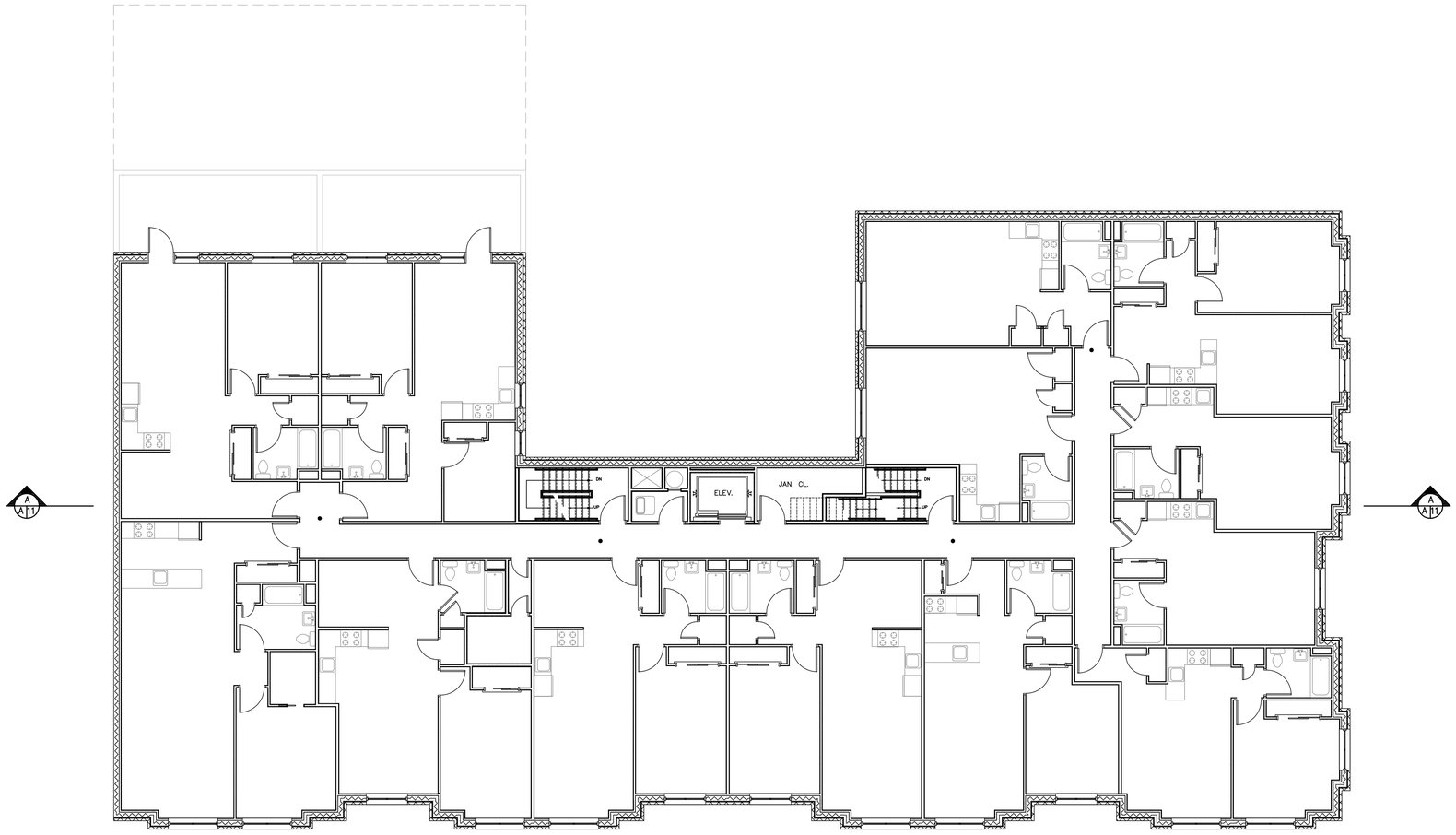
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

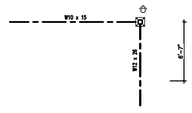
DWG. TITLE :
SECOND FLOOR STRUCTURAL PLAN

PAGE NUMBER
5 OF 50

Z:\Clients\1391nj-Diforzo-Crescent Street\Construction Drawings\1391nj_LCD1.dwg

S-003.00





PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

THIRD FLOOR STRUCTURAL PLAN

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

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40-05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

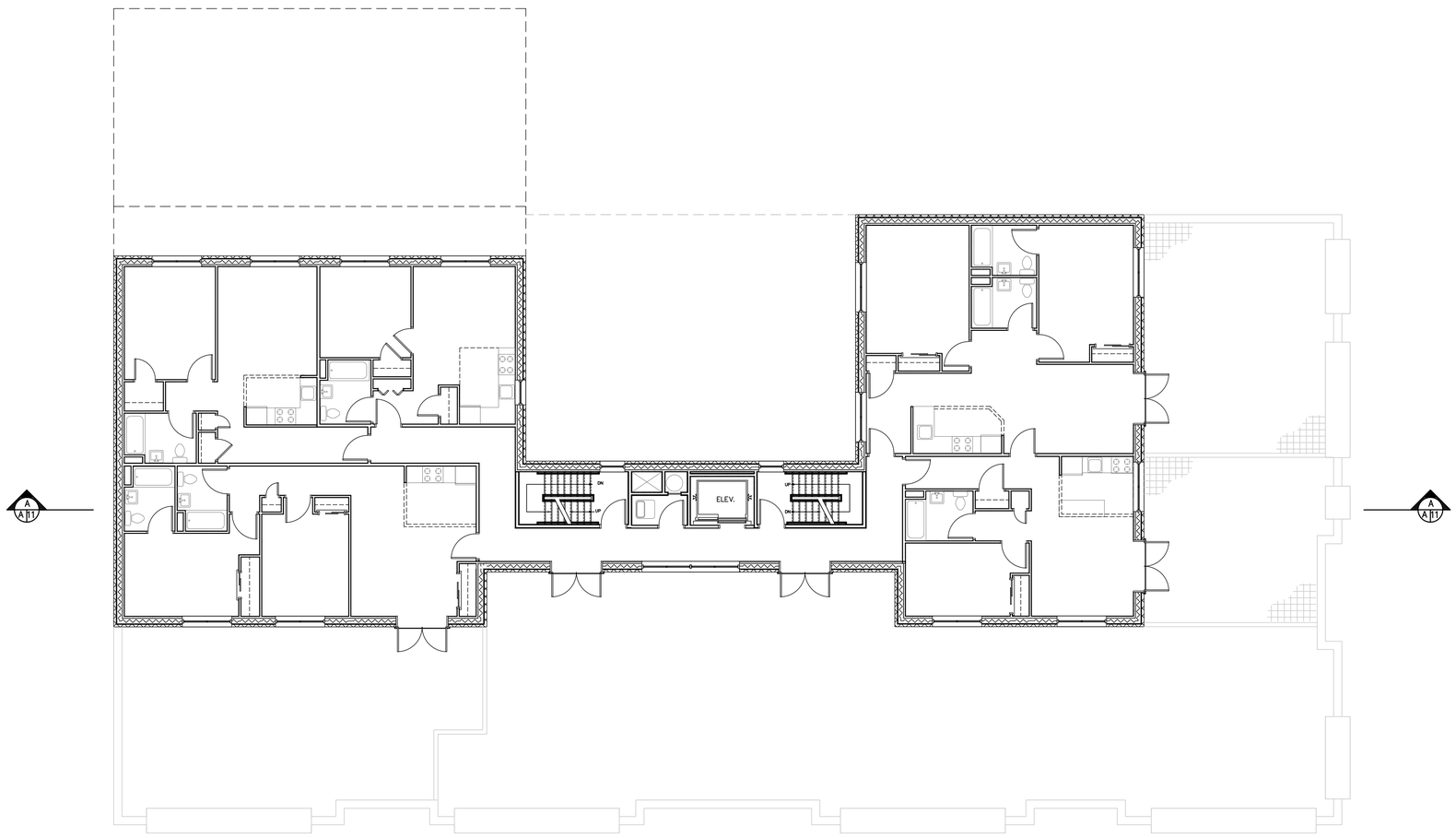
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

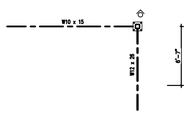
DWG. TITLE :
THIRD FLOOR STRUCTURAL PLAN

PAGE NUMBER
5 OF 50

Z:\Clients\1391nj-Difonzo-Crescent Street\Construction Drawings\1391nj_CD1.dwg

S-004.00





PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

FOURTH FLOOR STRUCTURAL PLAN

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

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

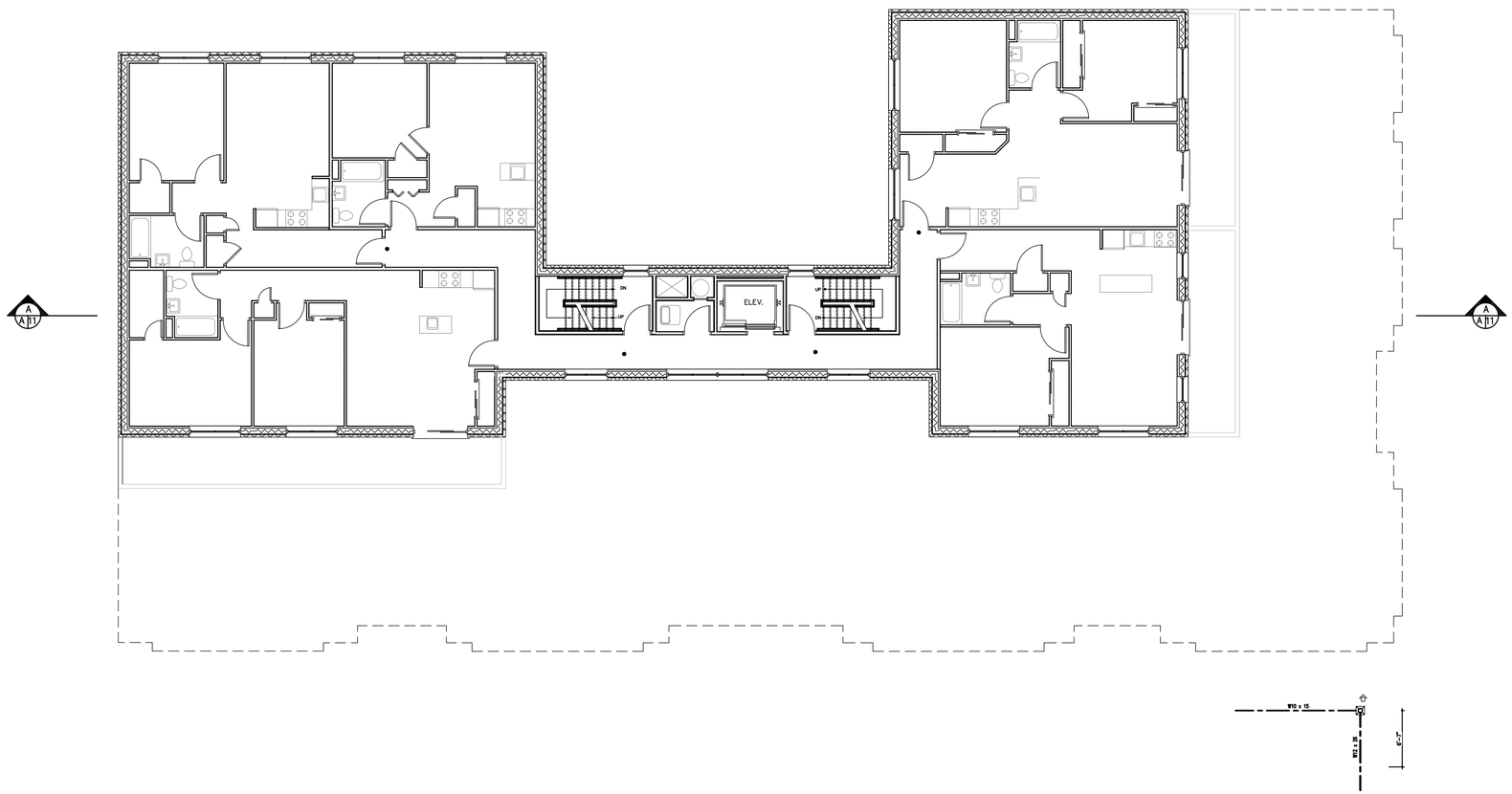
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
FOURTH FLOOR STRUCTURAL PLAN

PAGE NUMBER
5 OF 50

Z:\Clients\1391nj-Dilorzo-Crescent Street\Construction Drawings\1391nj_C01.dwg

S-005.00



FIFTH FLOOR STRUCTURAL PLAN

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

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

BSCAN STICKER

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
FIFTH FLOOR STRUCTURAL PLAN

PAGE NUMBER
5 OF 50

Z:\Clients\1391nj-Dilorzo-Crescent Street\Construction Drawings\1391nj_C01.dwg

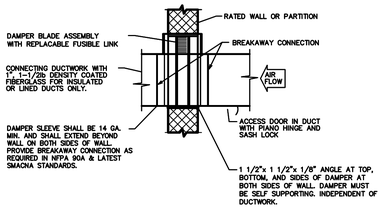
S - 006.00

UNIT SCHEDULE

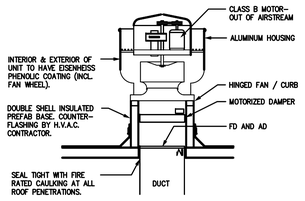
EQUIPMENT SCHEDULE – BOILERS		
UNIT	MODEL	AREA BEING SERVED
APT. UNITS		
COMMON AREAS		

EQUIPMENT SCHEDULE – PTAC UNITS			
UNIT	MANUF.	MODEL NUMBER	AREA BEING SERVED
APT. UNITS			
COMMON AREAS			

AIR COOLED CONDENSING UNITS			
UNIT	MANUF.	MODEL NUMBER	AREA BEING SERVED
APT. UNITS			
COMMON AREAS			

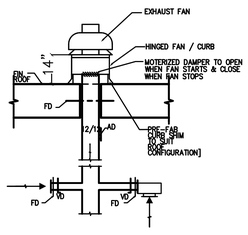


TYPICAL FIRE DAMPER – INSTALLATION AT RATED WALL PENETRATION
SCALE: NONE



ROOF TYPE KITCHEN UPBLAST EXHAUST FAN
NO SCALE

PLOT PLAN
1" = 10'



ROOF TYPE TOILET EXHAUST FAN
NO SCALE

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

BSCAN STICKER

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

T.F. CUSANELLI & FILLETTI ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40-05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE:

ISSUES

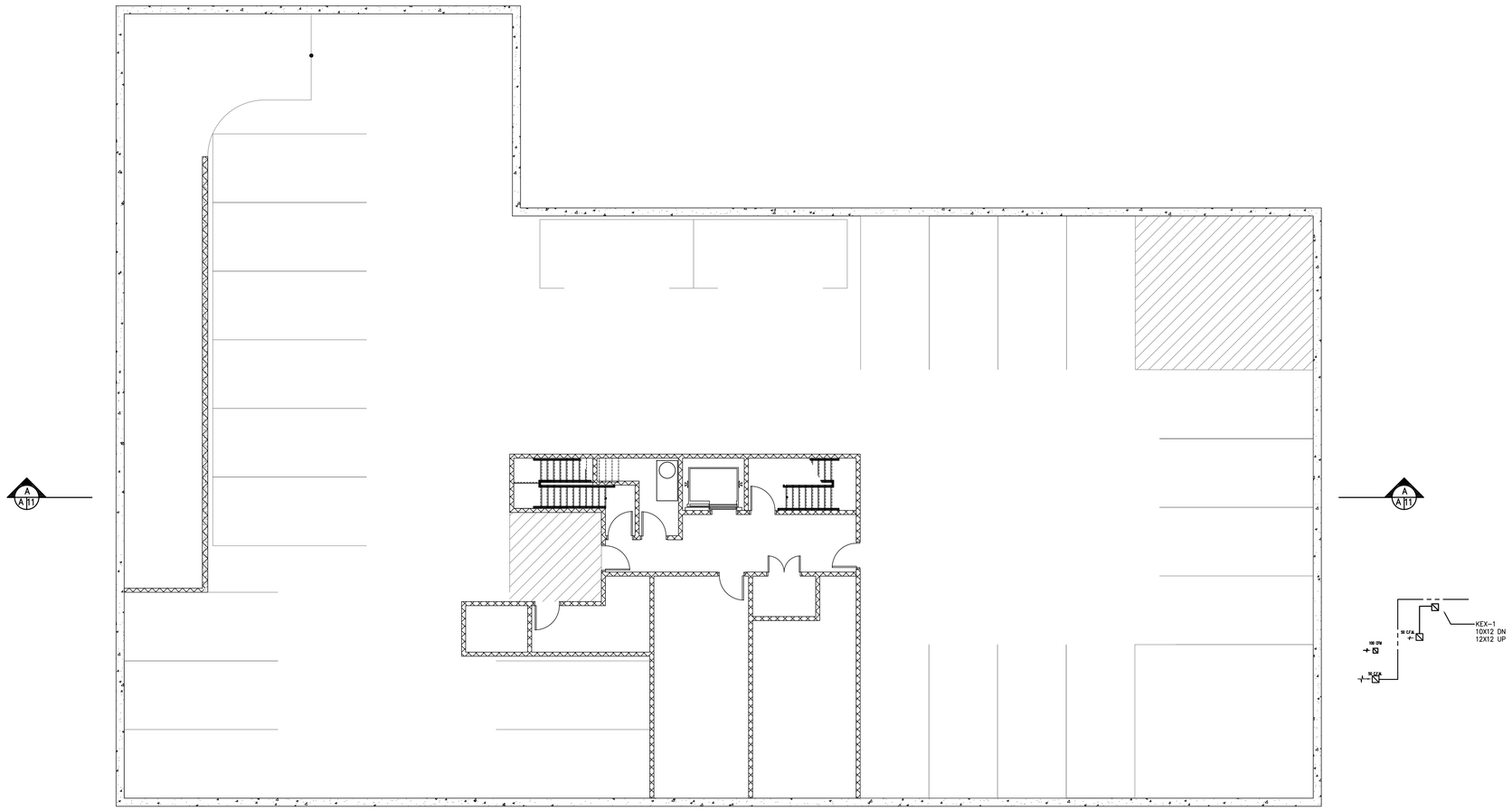
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
MECHANICAL NOTES, SHCEDULES AND PLOT PLAN

PAGE NUMBER
24 OF 50

Z:\Clients\1391nj-Dilonzo-Crescent Street\Construction Drawings\1391nj_LD1.dwg

M-001.00



SUB CELLAR MECHANICAL PLAN

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

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

BSCAN STICKER

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

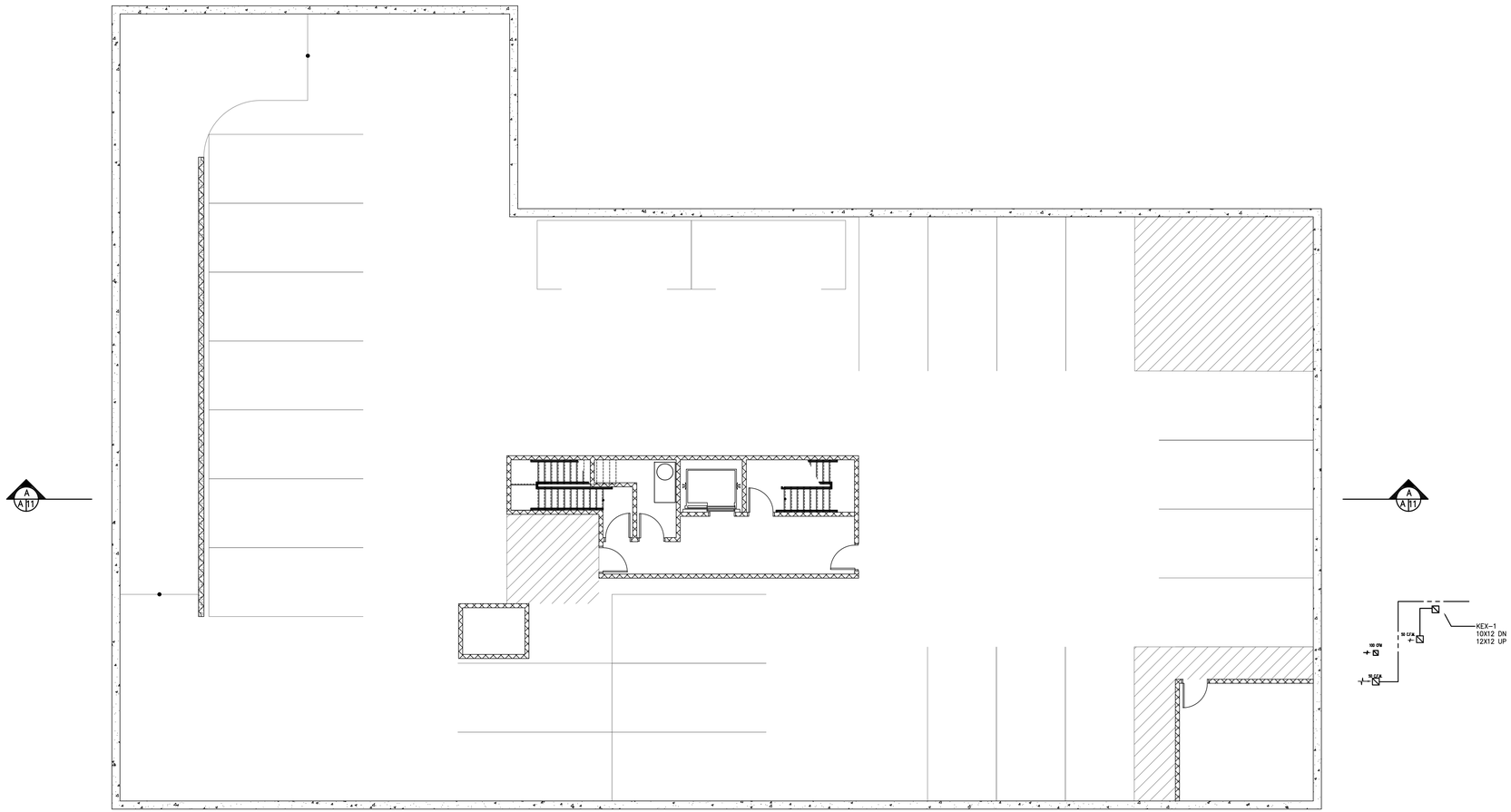
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
SUB CELLAR MECHANICAL PLAN

PAGE NUMBER
5 OF 50

Z:\Clients\1391nj-Dforzo-Crescent Street\Construction Drawings\1391nj_C01.dwg

M - 002.00



CELLAR MECHANICAL PLAN

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

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

BSCAN STICKER

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40-05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

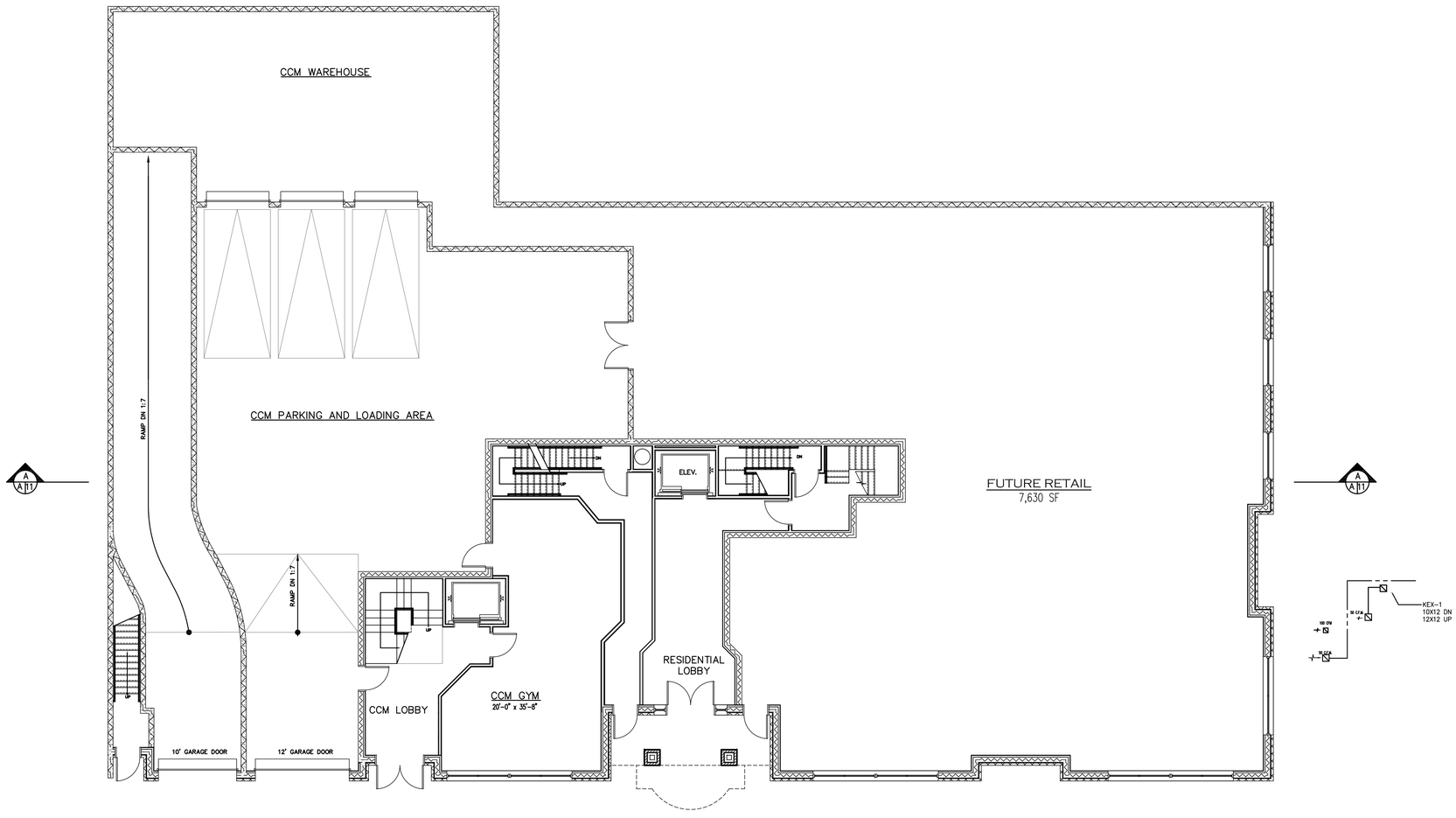
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
CELLAR MECHANICAL PLAN

PAGE NUMBER
5 OF 50

M-003.00

Z:\Clients\1391nj-Dilonzo-Crescent Street\Construction Drawings\1391nj_C01.dwg



PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

FIRST FLOOR MECHANICAL PLAN

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

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

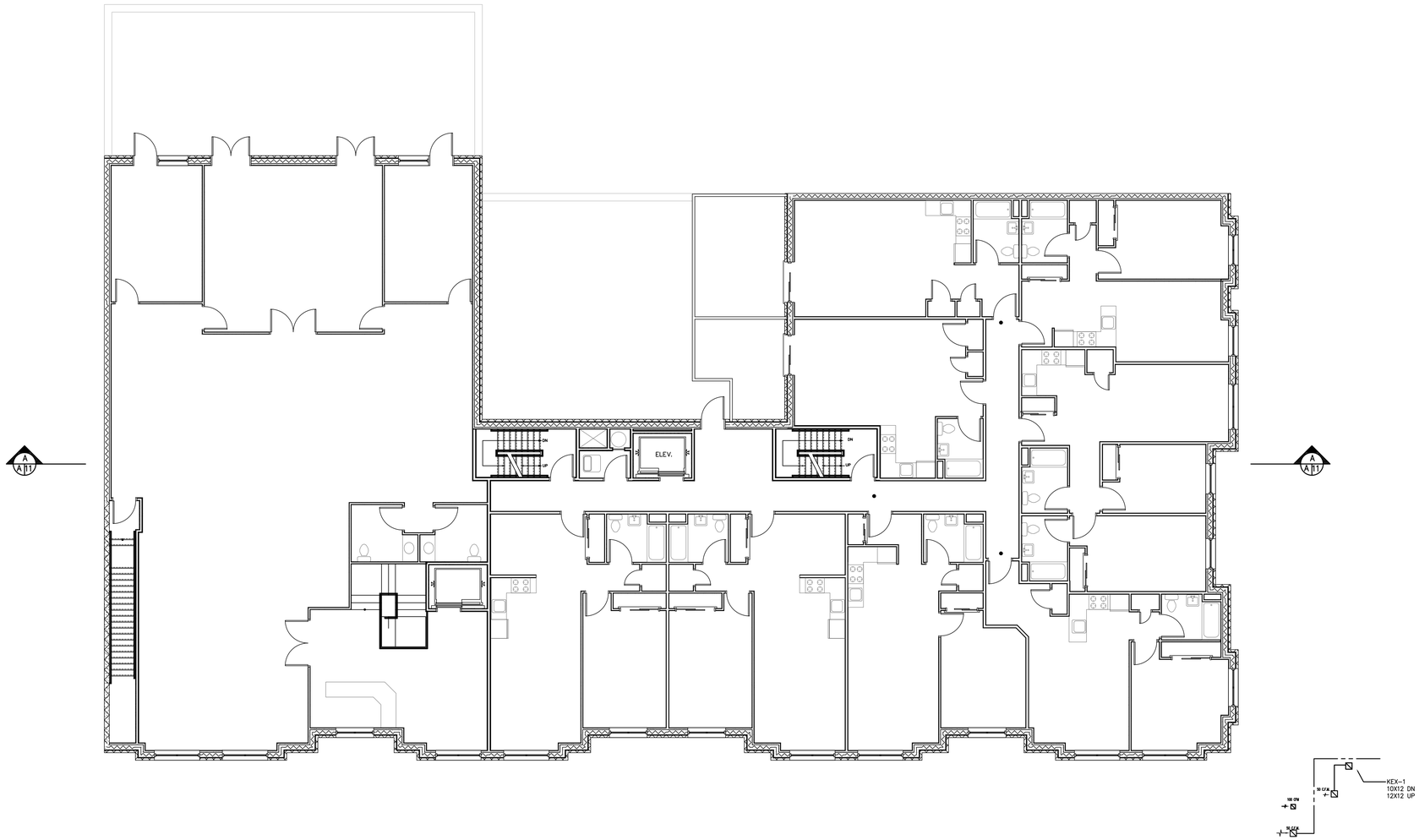
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
FIRST FLOOR MECHANICAL PLAN

PAGE NUMBER
5 OF 50

M - 004.00

Z:\Clients\1391nj-Difonzo-Crescent Street\Construction Drawings\1391nj_CD1.dwg



PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

SECOND FLOOR MECHANICAL PLAN

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

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

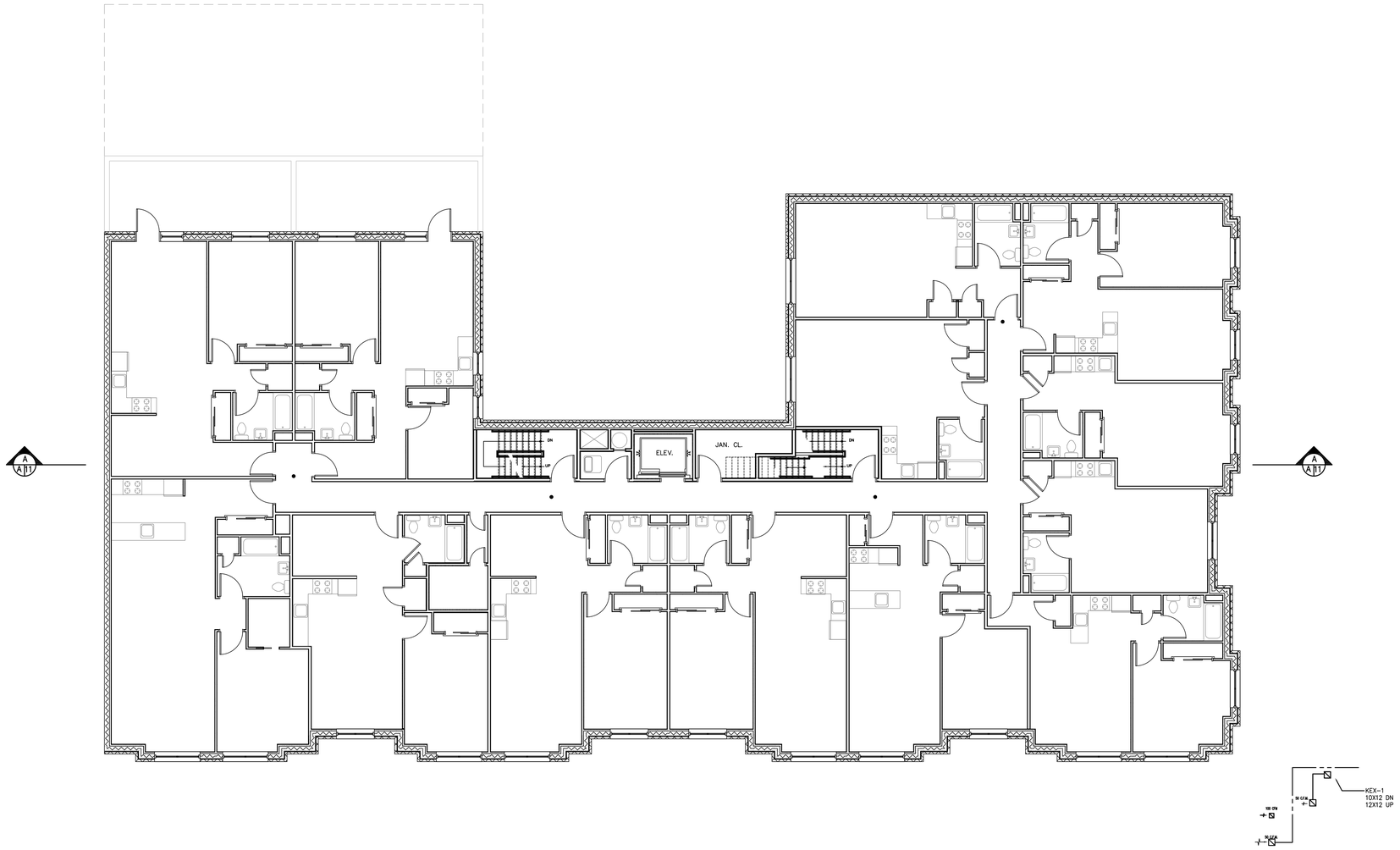
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
SECOND FLOOR MECHANICAL PLAN

PAGE NUMBER
5 OF 50

Z:\Clients\1391nj-Diforzo-Crescent Street\Construction Drawings\1391nj_LCD1.dwg

M - 005.00



THIRD FLOOR MECHANICAL PLAN

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

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40-05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

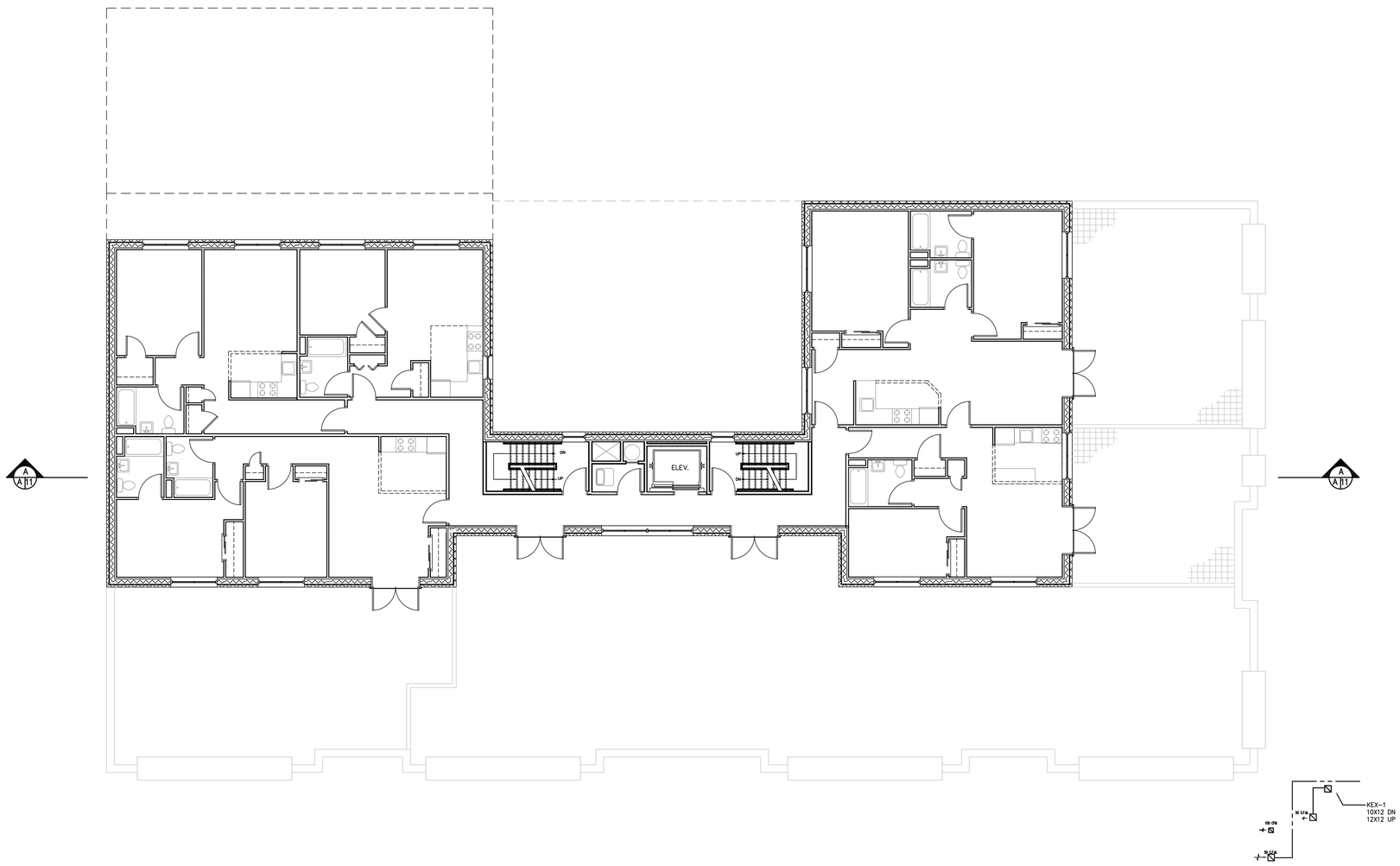
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
THIRD FLOOR MECHANICAL PLAN

PAGE NUMBER
5 OF 50

M - 006.00

Z:\Clients\1391nj-Difonzo-Crescent Street\Construction Drawings\1391nj_CD1.dwg



PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

FOURTH FLOOR MECHANICAL PLAN

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

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

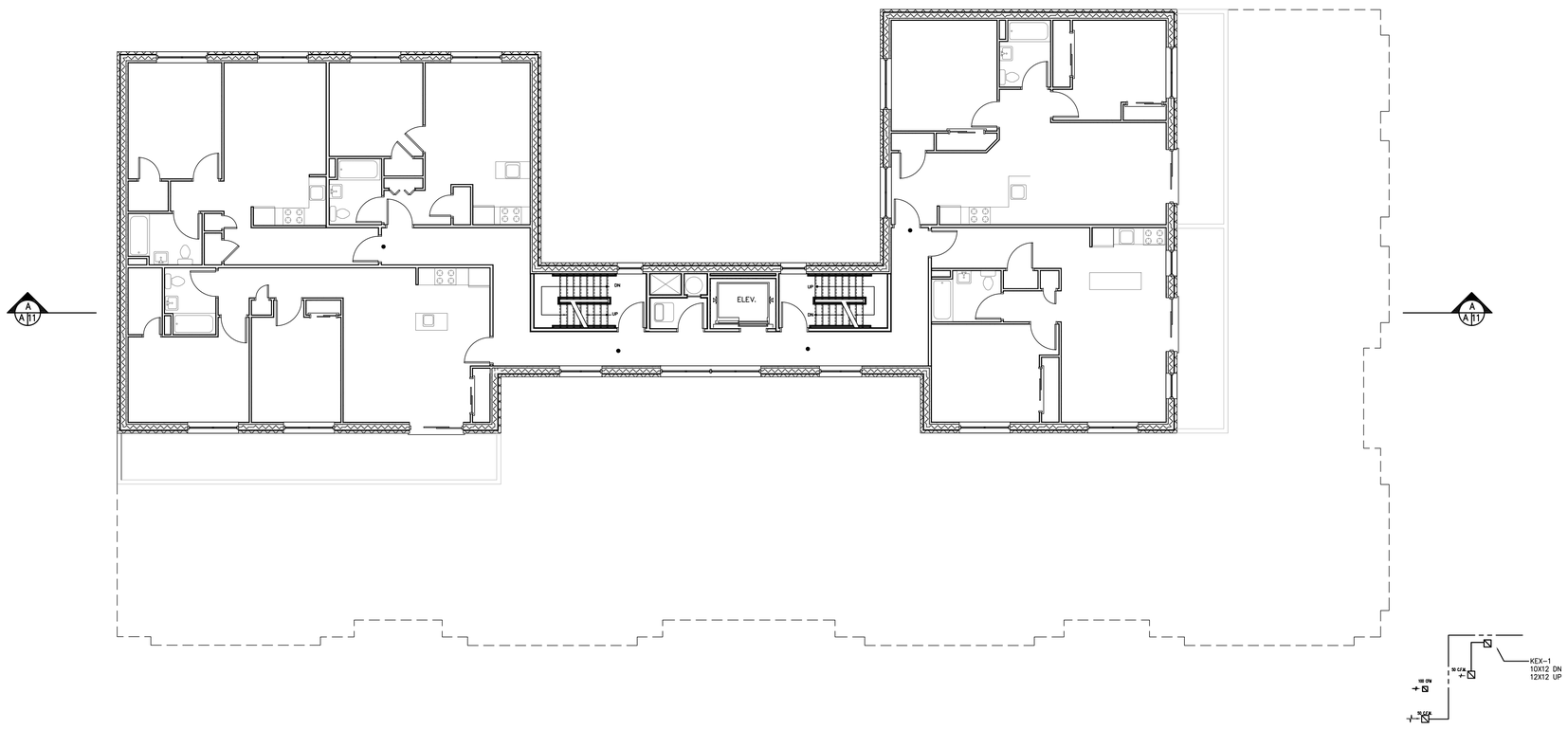
DWG. TITLE :

FOURTH FLOOR MECHANICAL PLAN

PAGE NUMBER
5 OF 50

Z:\Clients\1391nj-Dilorzo-Crescent Street\Construction Drawings\1391nj_C01.dwg

M - 007.00



PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

FIFTH FLOOR MECHANICAL PLAN

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

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

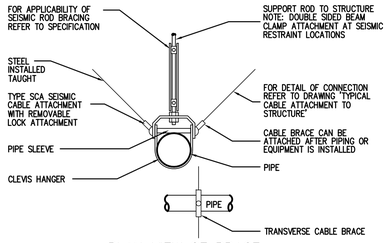
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
FIFTH FLOOR MECHANICAL PLAN

PAGE NUMBER
5 OF 50

Z:\Clients\1391nj-Dilorzo-Crescent Street\Construction Drawings\1391nj_C01.dwg

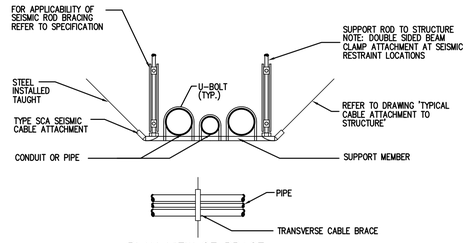
M- 008.00



PLAN VIEW OF BRACE

NOTE:
1. SEE MANUFACTURER FOR CABLE BRACING DISTANCE REQUIREMENTS.
2. SLACK CABLE 1/2" IN CENTER IF ISOLATED.

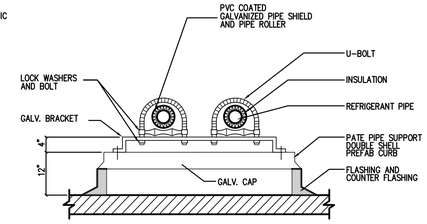
TRANSVERSE CABLE BRACE FOR CLEVIS HUNG PIPE AND CONDUIT (1 / M2)
NO SCALE



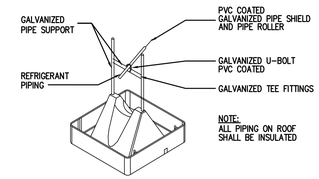
PLAN VIEW OF BRACE

NOTE:
1. SEE MANUFACTURER FOR CABLE BRACING DISTANCE REQUIREMENTS.
2. SLACK CABLE 1/2" IN CENTER IF ISOLATED.

TRANSVERSE CABLE BRACE FOR TRAPEZE HUNG PIPE AND CONDUIT (2 / M2)
NO SCALE



DETAIL OF REFRIGERANT PIPE SUPPORT ON ROOF #1 (3 / M2)
NO SCALE



REFRIGERANT PIPING SUPPORT ON ROOF #2 (4 / M2)
NO SCALE

SECTION 15 – MECHANICAL/HEATING, VENTILATION, & AIR CONDITIONING

15–2. SEE APPLICABLE NOTES IN SECTION 1.

15–8. ALL HEATING, AIR CONDITIONING AND WORK SHALL BE INSTALLED TO CONFORM TO NEW YORK CITY ELECTRICAL CODE AND BUREAU OF GAS AND ELECTRICITY, NEW YORK CITY BUILDING CODE, NFPA NEW YORK STATE ENERGY CODE, NEC, UL, ASHRAE. SMACNA, NEW YORK CITY PLUMBING CODE, AS REQUIRED.

15–9. NO WORK SHALL BE LEFT UNFINISHED TO CREATE ANY HAZARDOUS FINISH.

15–10. ALL HOLES THROUGH FLOORS, SHALL BE CORE DRILLED BY RESPECTIVE CONTRACTOR. CONTRACTOR SHALL VERIFY, PRIOR TO CUTTING, WITH STRUCTURAL ENGINEER.

15–18. CONTRACTOR SHALL FURNISH THE OWNER WITH CERTIFICATES OF INSPECTION AND APPROVAL FROM REQUIRED AUTHORITIES.

15–28. PROVIDE ACCESS DOORS FOR ITEMS REQUIRING SERVICES OR ADJUSTMENT OR SETTING.

15–29. RE–BALANCE DUCT WORK FOR AIR QUANTITIES INDICATED.

15–30. ALL DUCTWORK (NEW AND EXISTING TO REMAIN) SHALL BE INSULATED WITH 1" VB FOIL FACED, 3 POUND DENSITY FIBERGLAS INSULATION DUCT WRAP AROUND BLANKET. ADHERE TO DUCT WORK WITH MASTIC ADHESIVE AND WIRE 12" ON CENTERS.

BUILDING DEPARTMENT NOTES:

1. ACTUAL OUTDOOR AIR TO BE ATY LEAST 33 1/3% OF REQUIRED TOTAL (REF. C26–1206.3 (B) (2) BUT NOT LESS THAN 5 CFM PER OCCUPANT. 27–754.

2. ALL EXTERIOR MEHANICAL EQUIPMENT SHALL MEET THE NOISE LIMITATION REQUIREMENTS OF C26–1208.3 (A) 4 AND SHALL BE LOCATED 100 FT.

3. ALL INSPECTIONS, TESTS, REPORTS, AND STATEMENTS REQUIRED BY C–26–1301.0 MECHANICAL VENTILATION, AIR CONDITIONING AND REFRIGERATION SYSTEMS REQUIRED BY C26–1301.0 SHALL BE MAKE. 27–778 THRU 781.

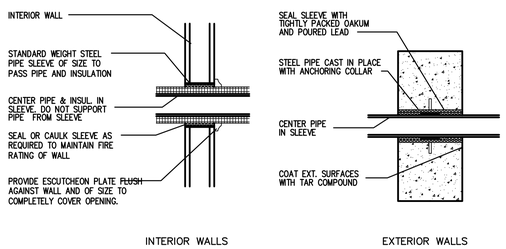
4. ALL CODE REQUIREMENTS OF OTHER CITY DEPARTMENTS SHALL BE MET AS REQUIRED BY C26–1304.0 27–785, 786, 783, & 784.

5. VENTILATION SYSTEM COMPONENTS SHALL CONFORM TO REQUIREMENTS OF RS 13–1 SECTION 3.

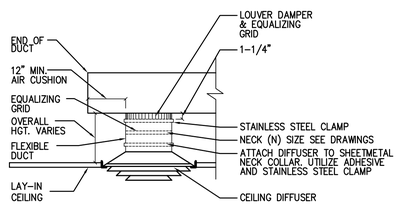
6. ONLY APPROVED AIR FILTERS AND FIRE DAMPERS CONFORMING TO SECTIONS 5 AND 9 OF RS 13–1 SHALL BE USED.

7. ELECTRICAL WIRING AND EQUIPMENT SHALL CONFORM TO REQUIREMENTS OF RS 13–1, SECTION 7.

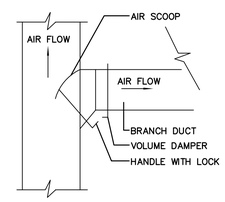
8. ALL SAFETY REQUIREMENTS OF RS 13–1, SECTION 8 SHALL BE MET.



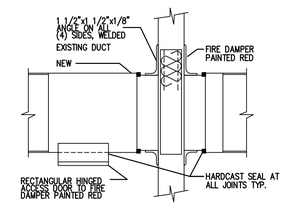
PIPE SLEEVES THRU WALL (6 / M2)
NO SCALE



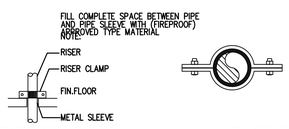
CEILING DIFFUSER DETAIL (7 / M2)
NO SCALE



TYP. BRANCH DUCT (8 / M2)
NO SCALE



TYPICAL FIRE DAMPER (9 / M2)
NO SCALE



RISER CLAMP
NO SCALE

PLAN VIEW OF RISER CLAMP
NO SCALE

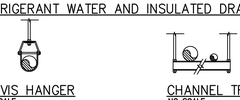
FOR ALL PIPING

CLEVIS HANGER WITH INSULATING SADDLE
NO SCALE

CLEVIS TRAPEZE HANGER WITH INSULATING SADDLE
NO SCALE

TWO–ROD ROLLER HANGER WITH PROTECTION SHIELD
NO SCALE

REFRIGERANT WATER AND INSULATED DRAINAGE PIPING



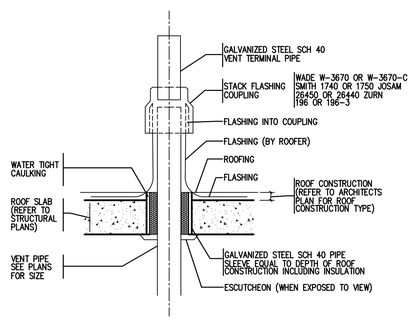
CLEVIS HANGER
NO SCALE

CHANNEL TRAPEZE HANGER
NO SCALE

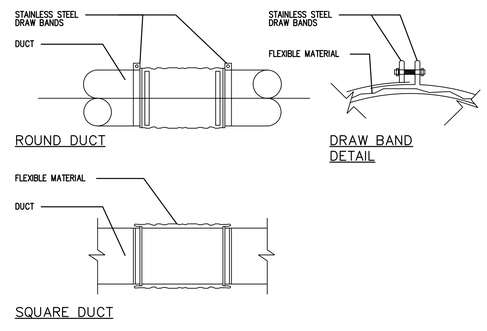
DRAINAGE PIPING

DETAIL OF PIPE HANGERS (11 / M2)
NO SCALE

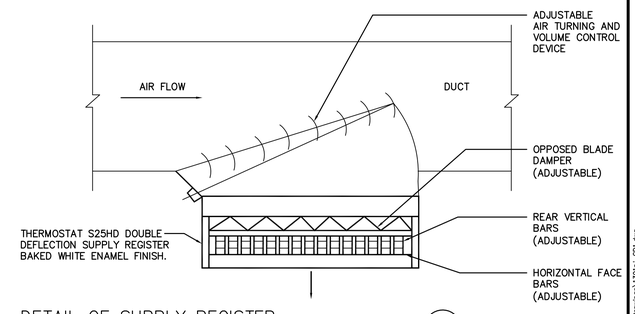
NOTE:
1. PLUMBING CONTRACTOR SHALL COMPLY WITH DETAILS # 1, 2, 5, 6, & 11.



VENT THRU ROOF (5 / M2)
NO SCALE



DETAIL OF FLEXIBLE DUCT CONNECTOR (10 / M2)
NO SCALE



DETAIL OF SUPPLY REGISTER (11 / M2)
NO SCALE

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

BSCAN STICKER

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

T.F. CUSANELLI & FILLETTI ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40-05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

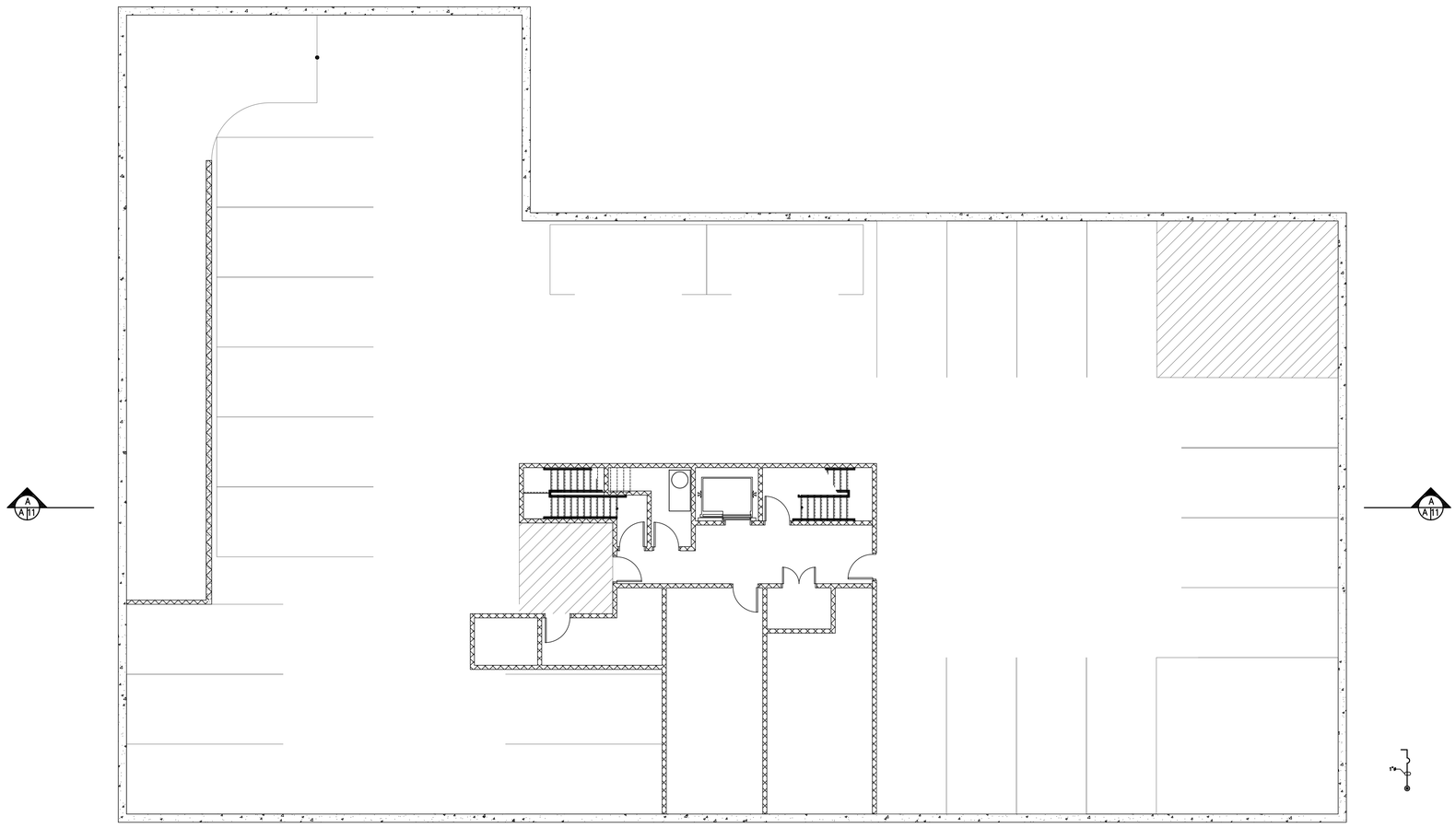
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
MECHANICAL NOTES & DETAILS

PAGE NUMBER
29 OF 50

Z:\Clients\1391nj-Dilonzo-Crescent Street\Construction Drawings\1391nj_C01.dwg

M-009.00



SUB CELLAR SPRINKLER PLAN

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

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

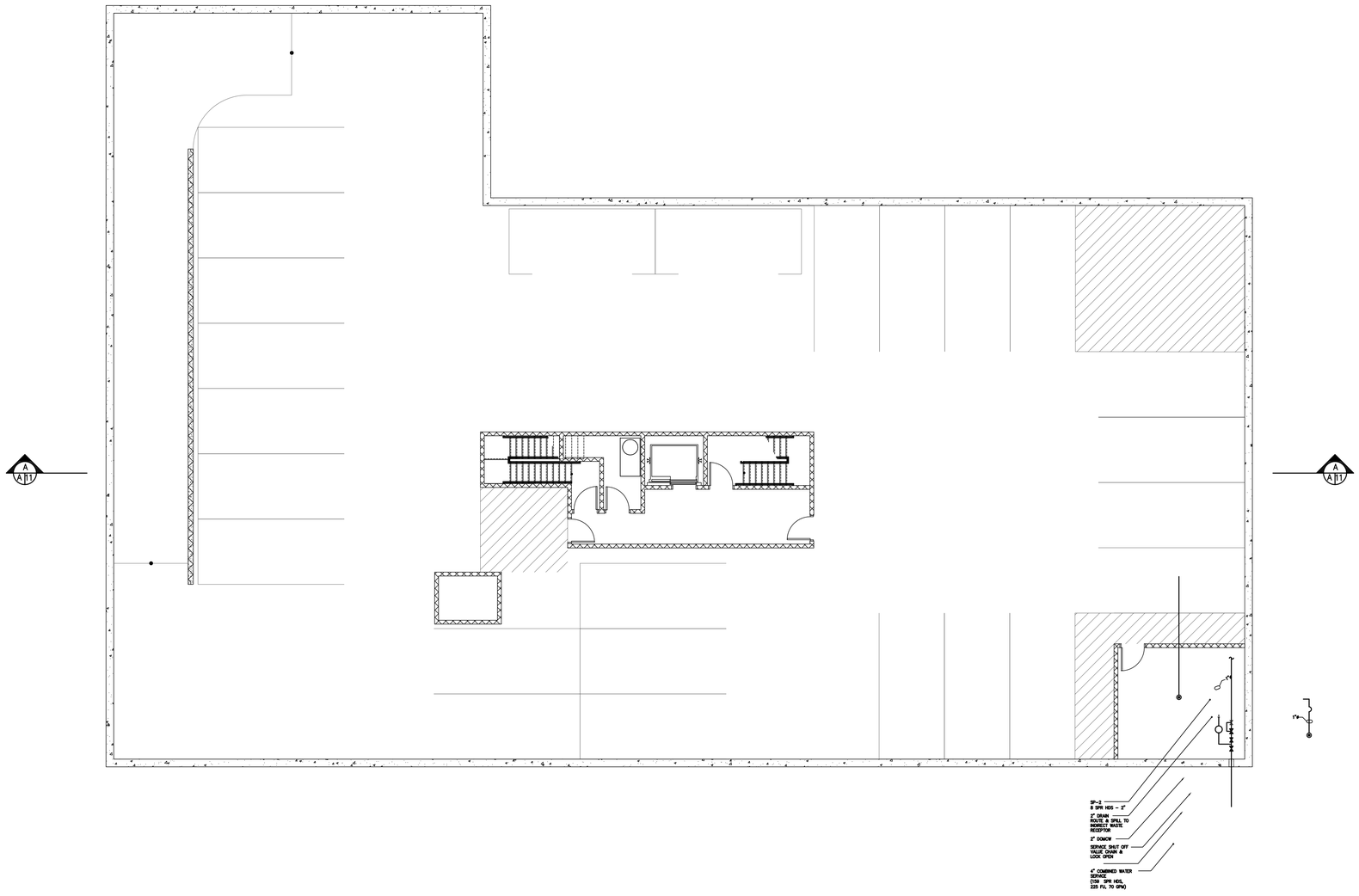
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
SUB CELLAR SPRINKLER PLAN

PAGE NUMBER
5 OF 50

SP-002.00

Z:\Clients\1391nj-Difonzo-Crescent Street\Construction Drawings\1391nj_CD1.dwg



PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

CELLAR SPRINKLER PLAN

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

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40-05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

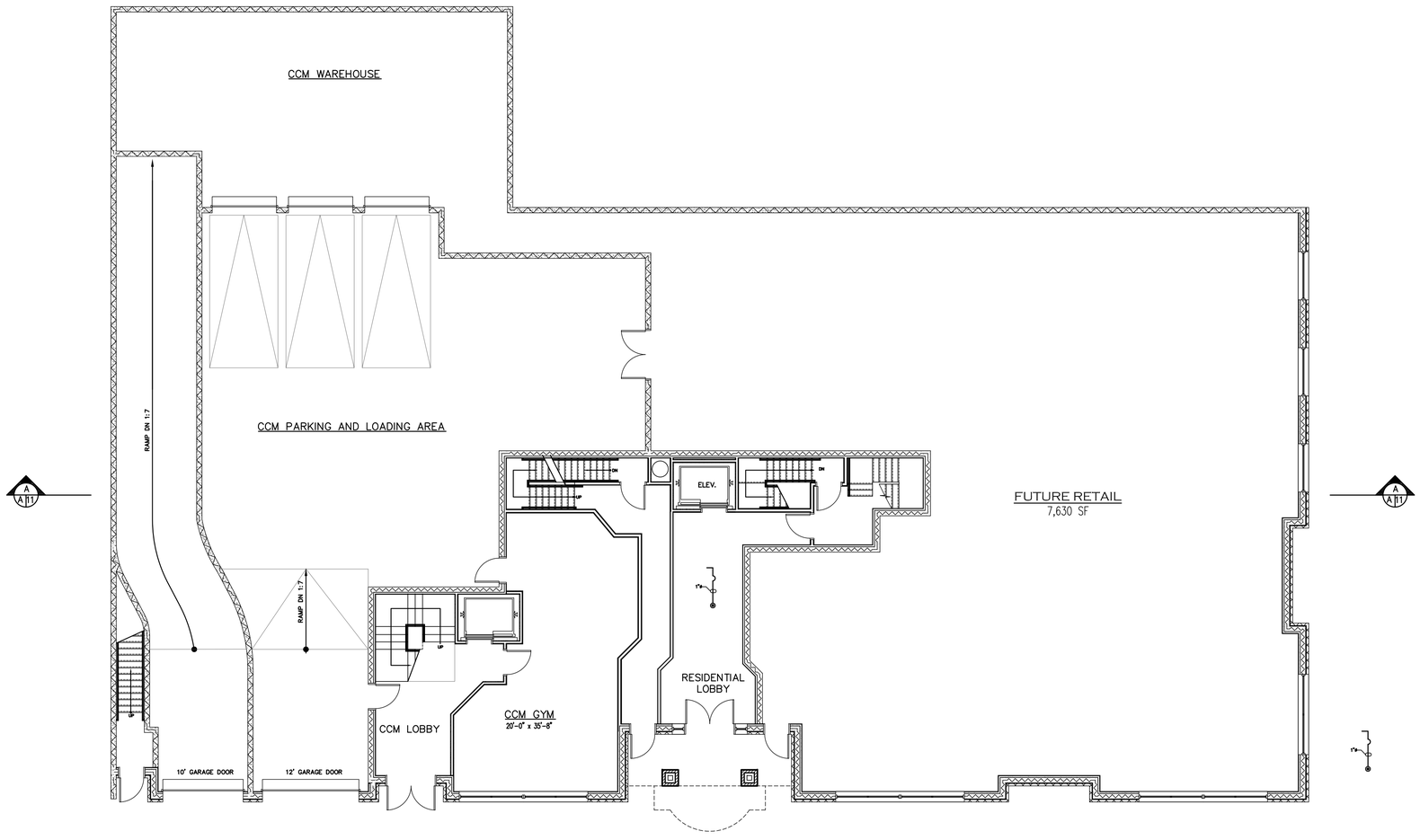
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
CELLAR
SPRINKLER PLAN

PAGE NUMBER
5 OF 50

Z:\Clients\1391nj-Dilonzo-Crescent Street\Construction Drawings\1391nj_C01.dwg

SP - 003.00



PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

FIRST FLOOR SPRINKLER PLAN

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

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

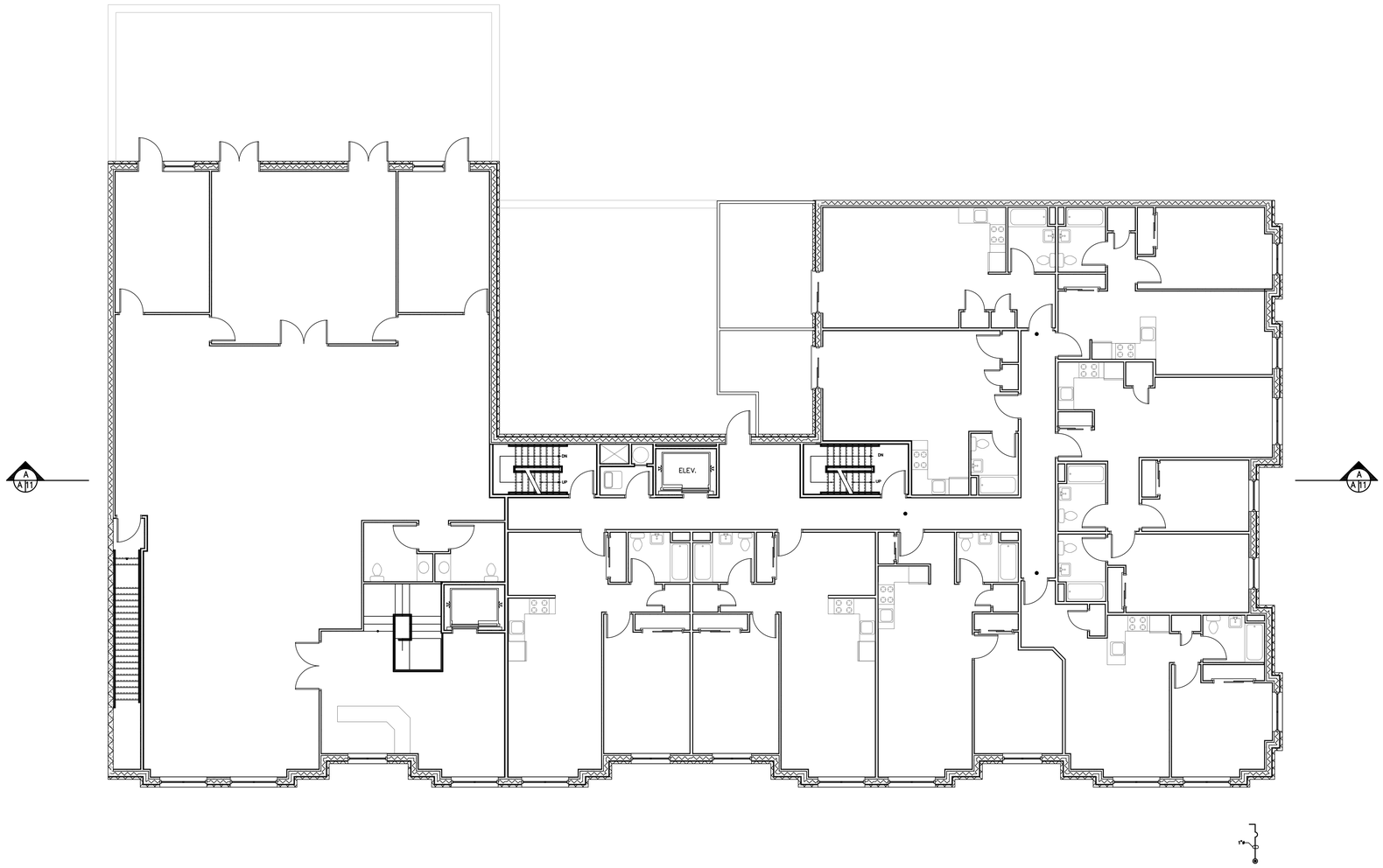
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
FIRST FLOOR SPRINKLER PLAN

PAGE NUMBER
5 OF 50

SP - 004.00

Z:\Clients\1391nj-Difonzo-Crescent Street\Construction Drawings\1391nj_CD1.dwg



SECOND FLOOR SPRINKLER PLAN

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

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

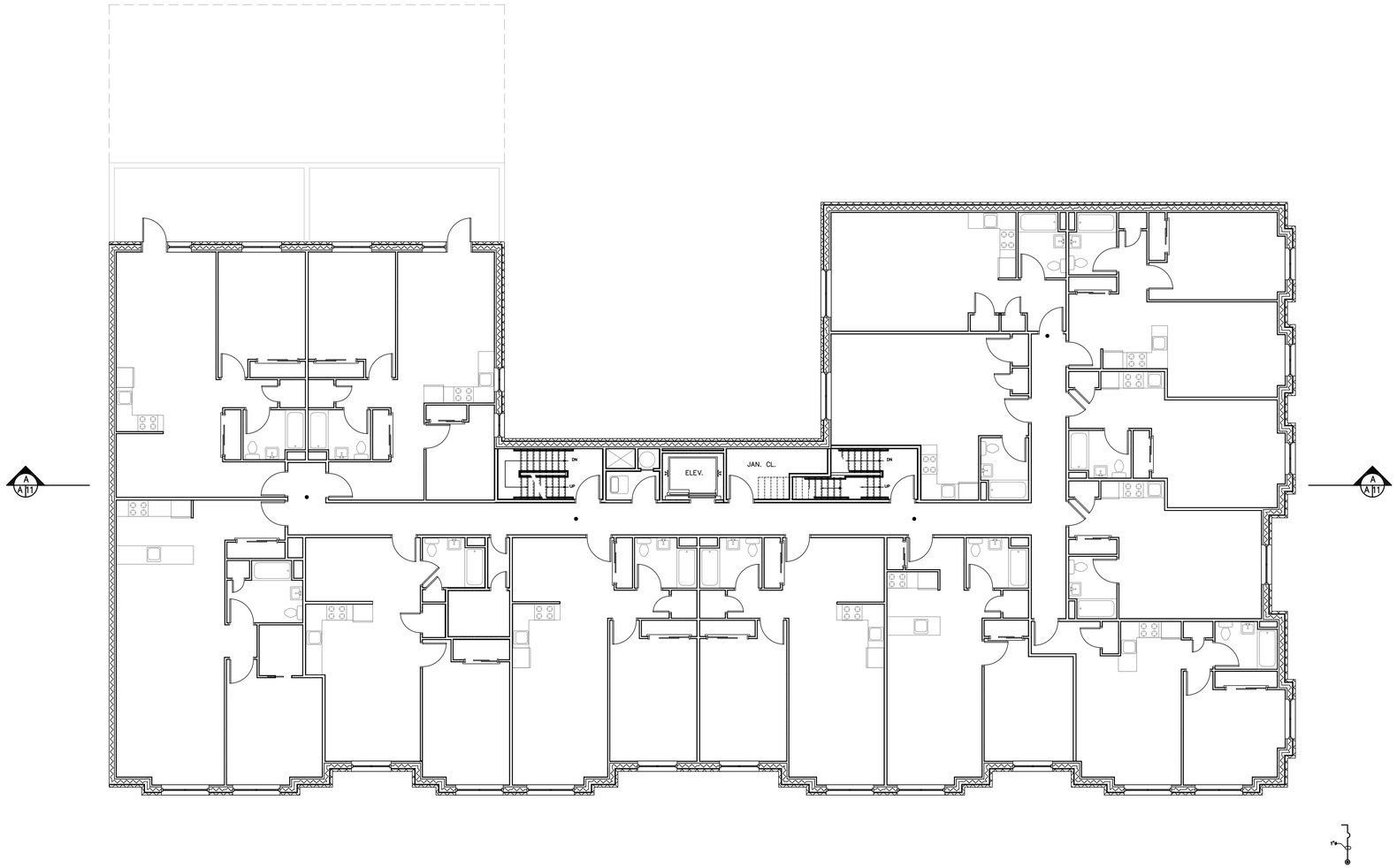
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
SECOND FLOOR SPRINKLER PLAN

PAGE NUMBER
5 OF 50

Z:\Clients\1391nj-Diforzo-Crescent Street\Construction Drawings\1391nj_LCD1.dwg

SP - 005.00



THIRD FLOOR SPRINKLER PLAN

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

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40-05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

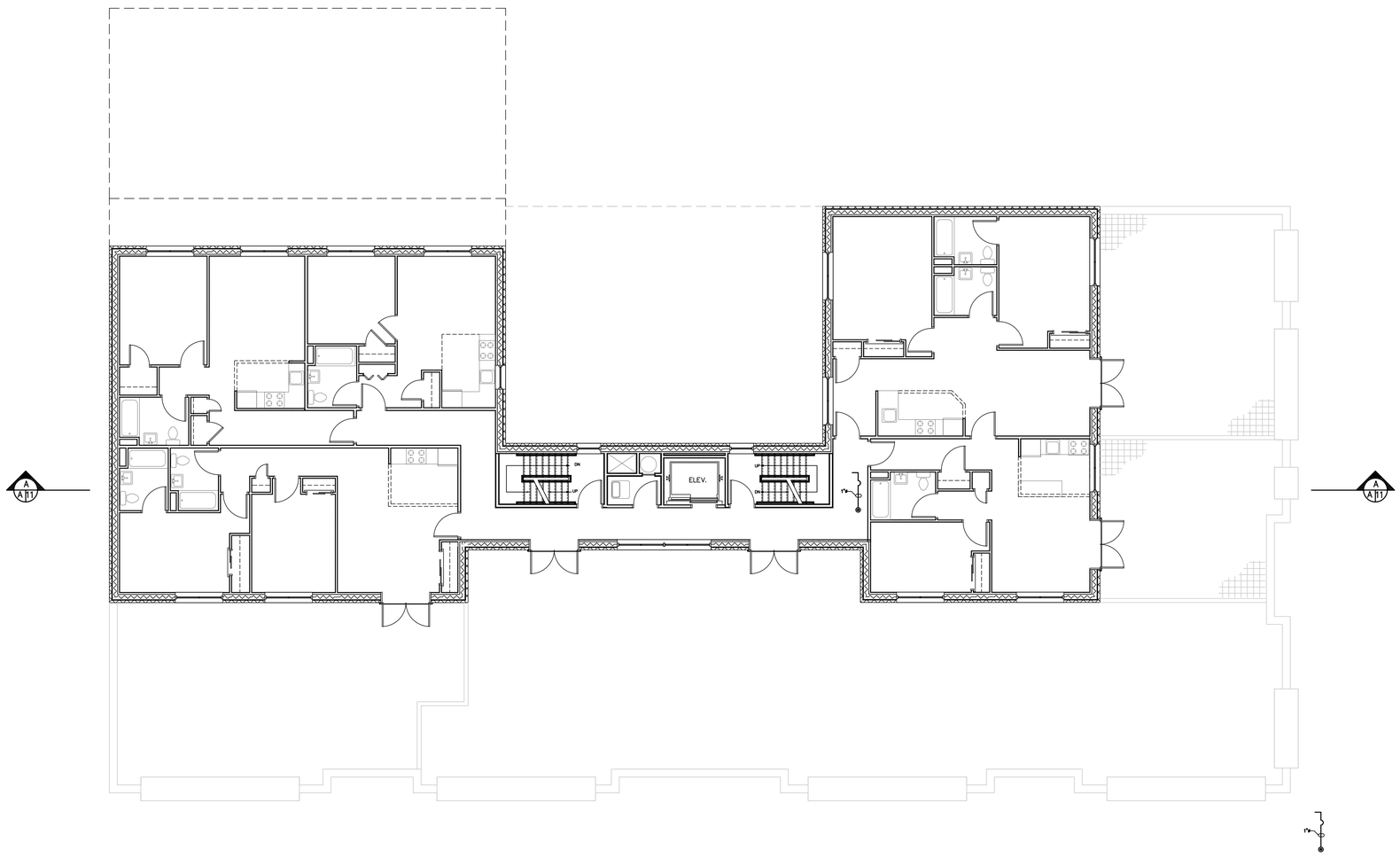
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
THIRD FLOOR SPRINKLER PLAN

PAGE NUMBER
5 OF 50

Z:\Clients\1391nj-Difonzo-Crescent Street\Construction Drawings\1391nj_CD1.dwg

SP-006.00



PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

FOURTH FLOOR SPRINKLER PLAN

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

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40 - 05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

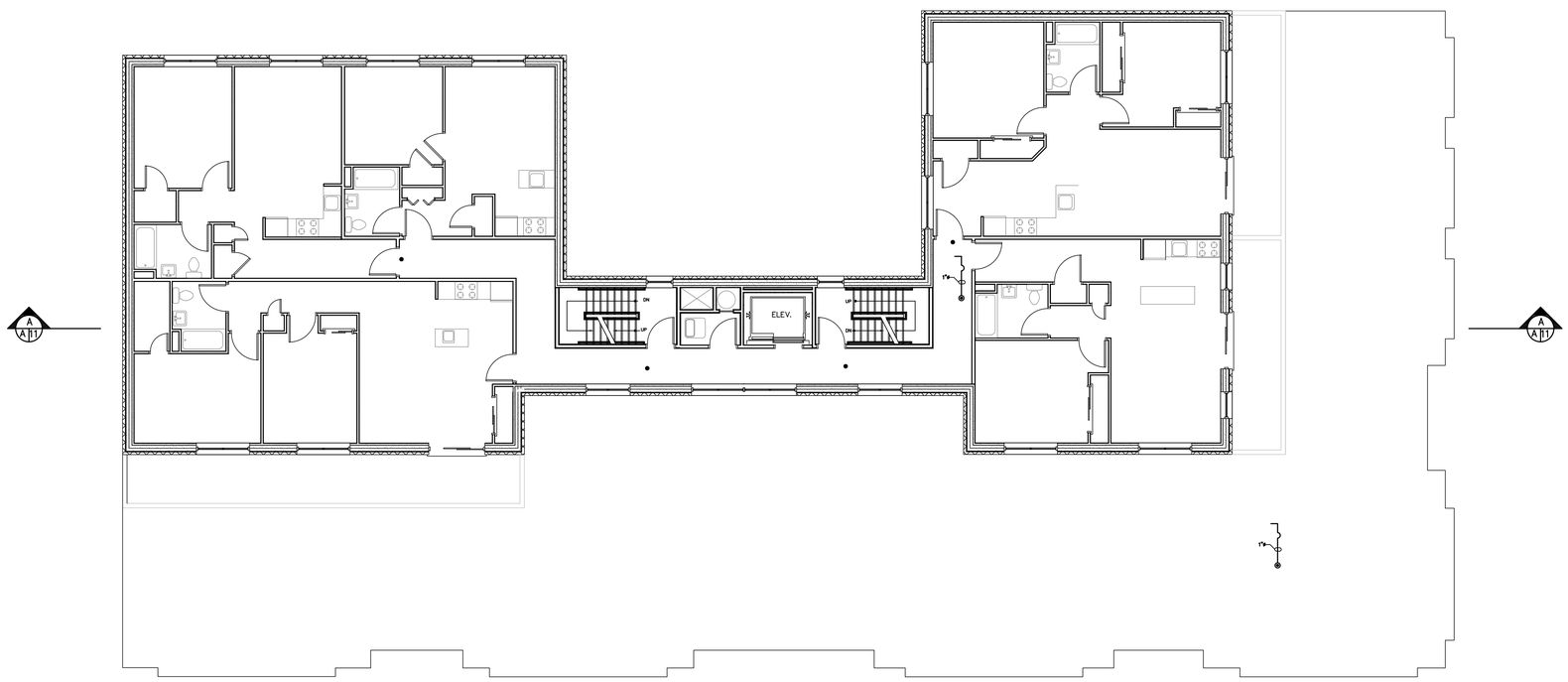
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
FOURTH FLOOR SPRINKLER PLAN

PAGE NUMBER
5 OF 50

Z:\Clients\1391nj-Dilorzo-Crescent Street\Construction Drawings\1391nj_C01.dwg

SP - 007.00



FIFTH FLOOR SPRINKLER PLAN

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

PROGRESS SET
NOT FOR CONSTRUCTION
6/30/2014

BSCAN STICKER

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

T.F. CUSANELLI & FILLETTI
ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40-05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE

ISSUES

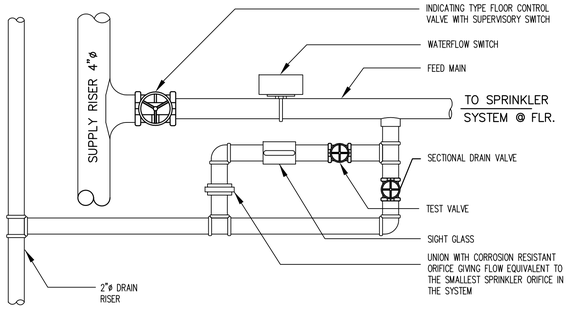
DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
FIFTH FLOOR
SPRINKLER PLAN

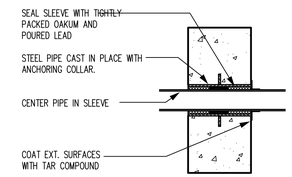
PAGE NUMBER
5 OF 50

Z:\Clients\1391nj-Difiorzo-Crescent Street\Construction Drawings\1391nj_C01.dwg

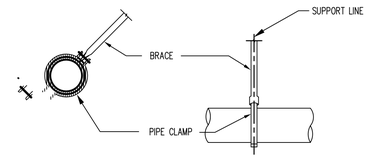
SP-008.00



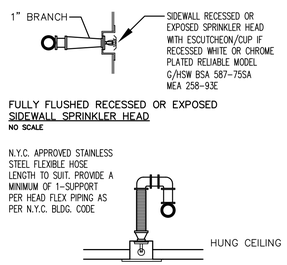
SPRINKLER FLOOR CONTROL VALVE
NOT TO SCALE



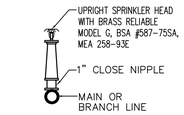
PIPE SLEEVE AT EXTERIOR WALL
NOT TO SCALE



DETAIL OF CONNECTION TO BRACE PIPE
NO SCALE



FULLY FLUSHED RECESSED OR EXPOSED SIDEWALL SPRINKLER HEAD
NO SCALE

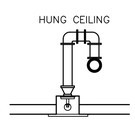


UP RIGHT SPRINKLER HEAD
NO SCALE

FLUSH FULLY RECESSED PENDANT QUICK RESPONSE SPRINKLER HEAD WITH WHITE OR CROMED CEILING PLATE, RELIABLE MODEL G4FR, BSA # 587-75SA, K=5.62 MEA # 258-93E

FULLY FLUSHED RECESSED PENDENT SPRINKLER HEAD WITH CEILING PLATE (A)
NO SCALE

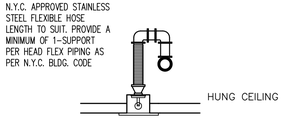
COMMERCIAL



FLUSH FULLY RECESSED PENDANT QUICK RESPONSE SPRINKLER HEAD WITH WHITE OR CROMED CEILING PLATE, RELIABLE MODEL G4FR, BSA # 587-75SA, K=5.62 MEA # 258-93E

FULLY FLUSHED RECESSED SPRINKLER HEAD WITH ESCUTCHEON/CUP (B)
NO SCALE

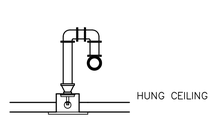
COMMERCIAL



FLUSH FULLY RECESSED PENDANT SPRINKLER HEAD WITH WHITE OR CROMED CEILING PLATE, RELIABLE MODEL FIFR, BSA # 587-75SA, MEA # 258-93E

FULLY FLUSHED RECESSED PENDENT SPRINKLER HEAD WITH CEILING PLATE (C)
NO SCALE

RESIDENTIAL

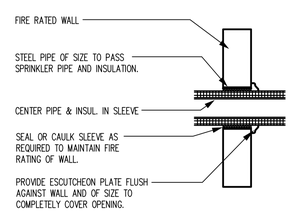


FLUSH FULLY RECESSED PENDANT SPRINKLER HEAD WITH WHITE OR CROMED CEILING PLATE, RELIABLE MODEL FIFR, BSA # 587-75SA, MEA #258-93E

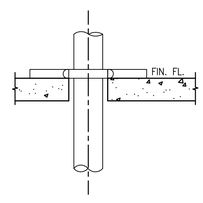
FULLY FLUSHED RECESSED SPRINKLER HEAD WITH CEILING PLATE (D)
NO SCALE

RESIDENTIAL

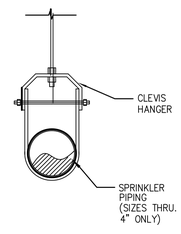
ACCEPTABLE STANDARD INSTALLATION DETAILS
NOT TO SCALE



PIPE SLEEVE AT INTERIOR WALL
NOT TO SCALE

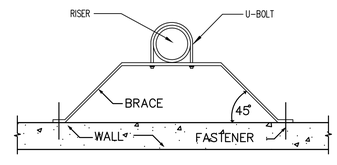


RISER CLAMP



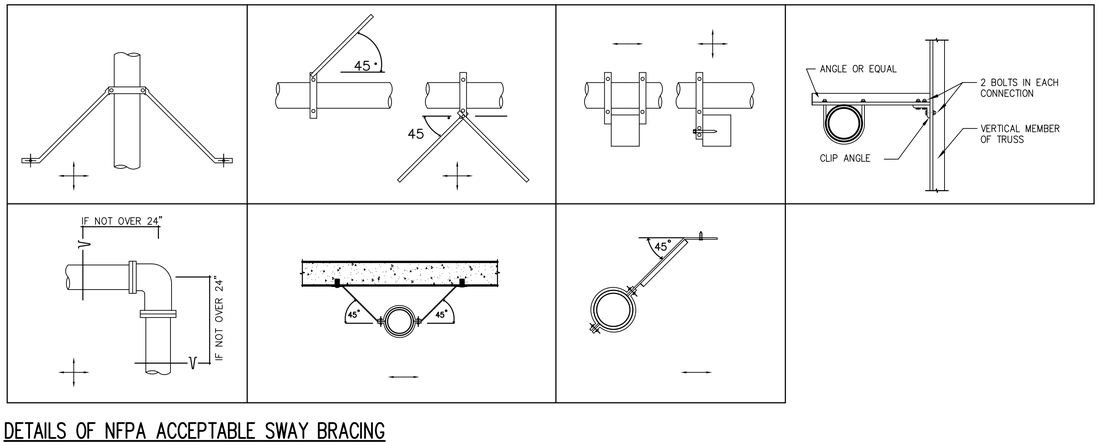
CLEVIS HANGER

HANGER FOR SPRINKLER PIPING
NO SCALE



DETAIL OF FOUR-WAY BRACE AT RISER
NO SCALE

	SPRINKLER LEGEND
⊙	RELIABLE MODEL G4FR FLUSH FULLY RECESSED PENDANT SPRINKLER HEAD WITH CEILING PLATE BSA 587-75 SA MEA 258-93E COMMERCIAL
⊙	RELIABLE MODEL FIFR FLUSH FULLY RECESSED SPRINKLER HEAD WITH CEILING PLATE BSA 587-75 SA MEA 258-93E RESIDENCIAL
U⊙	RELIABLE MODEL G UPRIGHT BRASS SPRINKLER HEAD BSA 587-75 SA, MEA 258-93E
	CHECK VALVE W/ TH ABD
ABD	AUTOMATIC BALL DRIP
——	SPRINKLER PIPING
	UL/FM OS & Y GATE VALVE 175 WWP
T	TAMPER SWITCH
	FLOW SWITCH
DCDA	DOUBLE CHECK DETECTOR ASSEMBLY



DETAILS OF NFPA ACCEPTABLE SWAY BRACING
NOT TO SCALE

NEW YORK CITY BUILDING DEPARTMENT SPRINKLER NOTES:

1. THE INSTALLATION COMPONENT, SIZING, SPACING, CLEARANCES, POSITION AND TYPE OF SYSTEMS SHALL CONFORM TO APPENDIX Q, SECTION BC Q102 AND SECTION BC903.
2. ONLY APPROVED MATERIALS WILL BE USED AS PER CHAPTER 6 OF APPENDIX Q, SECTION BCQ102.
3. DIRECT CONNECTION OF SPRINKLERS TO THE PUBLIC WATER SYSTEM SHALL CONFORM TO SECTION BCQ102.1 SEE 15.2.1 AND 15.1.1 (D).
4. SPRINKLERS SHALL BE PROTECTED AGAINST FREEZING AND INJURY AS PER APPENDIX Q BCQ102, SEC. 8.15.3 AND 6.2.8.
5. INSPECTIONS AND TESTS OF SPRINKLERS SHALL BE CONDUCTED AS PER SEC. 901.5 AND APPENDIX Q, SEC. BCQ102, CH. 16.
6. THE OCCUPANCY OF THE AREAS TO BE SPRINKLERED IN ACCORDANCE WITH SECTIONS 5.2 AND A.5.2 OF APPENDIX Q SECTION BCQ102.
7. WATER SUPPLY TEST PIPES AND GAUGES SHALL BE PROVIDED AS PER SECTION 8.16.1 AND 8.16.4 OF APPENDIX Q SECTION BCQ102.
8. PIPING, FITTINGS, SPECIFICATIONS, PIPE SCHEDULES, SYSTEM TEST PIPES, PROTECTION AGAINST CORROSION, DAMAGE, VALVES, HANGERS, SPRINKLER GUARDS AND SHIELDS SHALL BE AS PER APPENDIX Q SECTION BCQ12, CHAPTERS 6
9. STOCK OF EXTRA SPRINKLERS SHALL BE FURNISHED AS PER SECTION 6.2.9 APPENDIX Q SECTION BCQ102 (REQUIRED FOR EACH TEMPERATURE RATING).
10. SPRINKLER ALARM WILL BE IN ACCORDANCE WITH SECTION 8.16.1 OF APPENDIX Q SECTION BCQ102.
11. SPACING, LOCATION AND POSITION OF SPRINKLER WILL BE AS PER SECTION 8 OF APPENDIX Q SECTION BCQ102.
12. ALL BLIND SPACES EXCEEDING 6 IN. IN WIDTH OR DEPTH WHICH CONTAIN COMBUSTIBLE MATERIAL WILL BE SPRINKLERED.
13. ALL PIPE PASSING THROUGH WALLS WILL COMPLY WITH SECTION BC712.
14. THERE IS NO HIGH PILED STORAGE AS DEFINED IN SECTION 3-3.12 OF APPENDIX Q SECTION BCQ102.
15. DISTANCE OF SPRINKLERS FROM HEAT SOURCE SHALL BE AS PER TABLES 9.3.2.5(A) AND 8.3.2.5(B).
16. AS PER SECTION BC903.1.2. PROVIDE DEPARTMENT OF WATER SUPPLY LETTER WITH FLOW TEST DATA IF THERE IS A DIRECT CONNECTION TO THE STREET WATER SUPPLY.
17. ALL PIPES PASSING THROUGH FOUNDATION WALLS SHALL BE PROTECTED AS PROVIDED BY SECTION 305.5 OF THE PLUMBING CODE.
18. THIS APPLICATION IS NOT FILED AS A RESULT OF ACTINS BY THE FIRE COMMISSIONER AS AUTHORIZED BY THE BS&A, TO MODIFY THE CERTIFICATE OF OCCUPANCY NOR IS SUCH ACTION PENDING.
19. ALL VALVES SHALL BE IDENTIFIED AS REQUIRED BY SECTION 6-7.4 OF APPENDIX Q SECTION BCQ102.
20. DRAINAGE SHALL CONFORM TO SECTION 8.15.2 OF APPENDIX Q SECTION BCQ102.
21. A ONE PIECE REDUCED FITTING OF GOOD DESIGN SHOULD BE USED WHEREVER A CHANGE IS MADE IN THE SIZE OF PIPE, AS PER SECTION 6.4.6 OF APPENDIX Q SECTION BCQ102.
22. ALL VALVES ON CONNECTIONS TO WATER SUPPLY TO SPRINKLER SHALL BE APPROVED OS&Y OR APPROVED INDICATOR TYPE.
23. DRAIN VALVES AND TEST VALVES SHALL BE APPROVED TYPE AS PER SECTION 6.7.3 OF APPENDIX Q SECTION BCQ102.
24. HANGERS SHOULD BE SUPPORTED BY WROUGHT-IRON U-TYPE OR APPROVED ADJUSTABLE HANGERS. HANGERS SHALL BE OF THE TYPE APPROVED FOR USE WITH THE PIPE OR TUBE INVOLVED, AS PER CHAPTER 9 OF APPENDIX Q SECTION
25. PROVISIONS SHOULD BE MADE TO FACILITATE FLUSHING SYSTEM PIPING BY PROVIDING FLUSHING CONNECTIONS CONSISTING OF A CAPPED NIPPLE 4" LONG ON END OF CROSS MAIN AS PER SECTION 8.14.16 OF APPENDIX Q SECTION BCQ102.
26. SPRINKLER SHALL BE AN APPROVED TYPE AS PER SECTION 8.3 OF APPENDIX Q SECTION BCQ102.
27. TEMPERATURE RATING SHALL COMPLY WITH SECTION 8.3 OF APPENDIX Q SECTION
28. 18" MINIMUM CLEARANCE TO BELOW SPRINKLER DEFLECTOR AS PER SECTION 8.5.6 OF APPENDIX Q SECTION BCQ102.
29. SPACING AND LOCATION OF SPRINKLERS SHALL COMPLY WITH CHAPTER 8 OF APPENDIX Q SECTION BCQ102.
30. SPRINKLER SYSTEM COMPLIES WITH NFPA 13-2002 AS MODIFIED BY APPENDIX Q SECTION BCQ102.
31. SOURCES OF WATER SUPPLY FOR SPRINKLER SYSTEMS AS PER CHAPTER 15 OF APPENDIX Q SECTION BCQ102.
32. PIPE SCHEDULE SYSTEMS SHALL BE IN ACCORDANCE WITH SECTION 14.5 OF APPENDIX Q SECTION BCQ102.
33. AUTOMATIC INTERLOCK CUTOFF SWITCH FOR VENTILATION WILL CONFORM TO CHAPTER 6 OF THE MECHANICAL CODE (APPLICABLE ONLY IF THERE IS AN AIR SYSTEM UTILIZING RECIRCULATING AIR REQUIRING A THERMOSTATIC DEVICE).
34. HYDRAULICALLY DESIGNED SPRINKLER SYSTEMS SHALL BE IN ACCORDANCE WITH CHAPTER 14 OF APPENDIX Q SECTION BCQ102. MINIMUM BRANCH SIZE TO BE ONE INCH (1").

GENERAL NOTES PERTAINING TO ALL DRAWINGS

1. CONTRACTOR SHALL VERIFY SPRINKLER SYSTEM PIPING ROUTING, SIZES AND LOCATION IN FIELD.

2. SPRINKLER PIPING SHALL CLEAR ALL ELECTRIC FIXTURE OUTLETS, BEAMS, OBSTRUCTIONS, DUCTS, AIR TERMINALS, ETC.

3. THE DIMENSION OF THE SPRINKLER HEADS ARE APPROXIMATE AND SHALL BE VERIFIED BEFORE INSTALLATION AND FABRICATION OF SYSTEMS.

4. SYSTEM IS A TABLE DESIGN TYPE SYSTEM. CONTRACTOR SHALL ENGAGE A LICENSED PROFESIONAL ENGINEER TO PREPARE DRAWINGS, CALCULATIONS FOR FILING SAME AND OBTAINING APPROVALS FROM BUILDING DEPARTMENT AND ISO. COST OF ENGENEER, FILLINGS, ETC, SHALL BE INCLUDED IN THE CONTRACTOR BID PRICE

5. ELECTRIC CONTRACTOR SHALL WIRE FLOW AND TAMPER SWITCHES TO FIRE ALARM SYSTEM.

6. SPRINKLER HEADS SHALL BE FLUSH FULLY RECESED PENDENT SPRINKLER HEADS WITH CHROME PLATED OR BAKED WHITE ENAMEL FINISH CEILING PLATE

7. SPRINKLER HEADS SHALL BE PENDENT WITH AN ESCUTCHEON CHROME PLATED OR BAKED WHITE ENAMEL HEAD AND ESCUTCHEON, RELIABLE MODEL G BSA 587 – 75SA

8. SPRINKLER HEADS SHALL BE UPRIGHT WITH GUARD CHROME PLATED HEAD PAINTED RED GUARD, RELIABLE MODEL G BSA 587 – 75SA

9. ALL WORK WITHIN SPACE/PROJECT SHALL BE NEW YORK CITY BUILDING CODE AND NFPA 13 CONFORMING IN FABRICATION AND INSTALLATIÓN.

10. CONTRACTOR SHALL PROVIDE SUPLEMENTARY CHANNEL ANGLES, STEEL BEAMS \, ETC, FOR SUPPORT OF PIPING AND CONDUITS AS REQUIRED

11. ANY ITEM REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE NOTED CONTRACTOR SHALL TRANSPORT ALL REMOVALS FROM THE SITE AND DISPOSE OF SAME AS REQUIRED BY ALL PARTIES HAVING PIPE SLEEVES, SLEEVES THROUGH FLOOR SLAB AT GRADE, WALLS AND

12. ALL PIPING PENETRATION THROUGH FLOOR, WALL AND PARTITIONS SHALL HAVE

13. NEW PIPING SHALL RISE AND DROP WITHIN HUNG CEILING TO AVOID CONFLICTS WITH NEW PIPING, DUCTWORK, CONDUIT, ETC.

14. ALL PIPES AND CONDUIT PENETRATIONS OF PARTITIONS, WALLS, FLOOR AND CEILING SHALL BE FIRESTOPED.

15. CONTRACTOR SHALL PROVIDE ANY APPLIANCE WORK PROCESS, SCAFFOLDING, TOOL EQUIPMENT, ETC., REQUIRED TO MAKE WORK SCOPE 100% COMPLETE AND FULLY OPERATIONAL.

16. CONTRACTOR SHALL PROVIDE ALL CUTTING AND ROUGH PATCHING REQUIRED TO MAKE WORK SCOPE 100% COMPLETE AND FULLY OPERATIONAL.

17. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION AND INSTALLATION FOR REVIEW/APPROVAL/COMMENTS FROM I.S.O., LANDLORD'S AND OWNER'S INSURANCE CARRIER AND ARCHITECT & ENGINEER.

18. CONTRACTOR SHALL PROVIDE UNIT PRICES FOR SPRINKLER HEAD, PIPE AND FITTING (ALL SIZES UTILIZED/10 LINEARFEET)

19. WORK INDICATED ON PLANS IS DIAGRAMMATIC AND INDICATES SCOPE OF WORK CONTRACTOR MAY RESIZE AND RELAYOUT SPRINKLER WORK TO SUIT PROJECT

THESE DRAWINGS ARE FOR THE EXPRESS USE OF T.F. CUSANELLI & FILLETTI ARCHITECTS P.C., NO REUSE OR REPRODUCTION PERMITTED BY LAW. COPYRIGHT 2014

BSCAN STICKER

PRELIMINARY NOT FOR CONSTRUCTION

T.F. CUSANELLI & FILLETTI ARCHITECTS, P.C.
143 TERRACE STREET
HAWORTH N.J. 07641
201-384-9555
N.J. R.A. LIC # 07976, 16378

PROPOSED NEW:
MIXED USE BUILDING
40-05 CRESCENT STREET
LONG ISLAND CITY NY 11101

SCOPE OF WORK:
PROPOSED NEW MIXED USE BUILDING

REVISIONS

NO.	DESCRIPTION	DATE
1	PLANS FOR FILING	07.07.14

NO.	TO WHOM:	DATE:

ISSUES

DRAWN BY:	JOB NO.
NP	1391NJ
CHECKED BY:	DATE:
VF	06.26.14

DWG. TITLE :
SPRINKLER NOTES AND DETAILS

PAGE NUMBER
37 OF 50

Z:\Clients\1391nj-Dforzo-Crescent Street\Construction Drawings\1391nj_CD1.dwg

SP-010.00

APPENDIX 6

SPECIFICATIONS FOR VAPOR BARRIER

Mark A. Franciosi
Technical Service Engineer - Americas

T 617-498-4303

mark.a.franciosi@grace.com

W. R. Grace & Co.-Conn.
62 Whittemore Avenue
Cambridge, MA 02140

April 23rd, 2014

Ezgi Karayel
Project Manager
Athenica Environmental Services, Inc
45-09 Greenpoint Avenue,
Long Island City, NY 11104

Project: 40-45 Crescent Street Queens, NY - NYC VCP Site Number: 14-EHAZ208Q

Dear Ezgi,

I have reviewed the following documents for the above referenced project:

- Remedial Investigation Report prepared by Athenica Environmental Services, Inc dated April 2014, pages 1-41
- Table 11 - Volatile Organic Compounds in Soil Vapor Samples

The identified contaminants at the levels reported will not have an adverse effect on the waterproofing or vapor barrier properties of Preprufe® 200 or Bituthene® 3000/4000 and all system accessories, provided standard design and application procedures are followed.

Standard installation instructions and details can be found on our website at www.graceconstruction.com. If you have any questions, please feel free to call me at the number above.

Sincerely,

Mark Franciosi

Mark Franciosi

Technical Services Engineer - Americas

cc: J. Ridgeway

GRACE

PREPRUFE® 200

Fast, simple, pre-applied waterproofing membrane and vapor barrier that bonds to poured concrete for use below slabs or behind basement walls on confined sites

Description

Preprufe® 200 Membrane is a composite sheet comprising a thick HDPE film, an aggressive pressure sensitive adhesive and a weather resistant protective coating.

Using patented Advanced Bond Technology, Preprufe 200 Membrane provides a continuous seal that resists water ingress and migration between the membrane and the structure.

The Preprufe 200 System includes—

- **Preprufe 200 Membrane**—robust membrane for horizontal use below concrete slabs or vertically against soil retention systems.
- **Preprufe CJ Tape LT**—self-adhesive 8 in. (200 mm) wide strip applied to the surface of the membrane along the line of all concrete joints (application temperature range 25°F to 86°F (-4°C to +30°C)).
- **Preprufe CJ Tape HC**—as above for use in hot climates (minimum 50°F (10°C)).
- **Bituthene® Liquid Membrane**—for sealing around penetrations, etc.

Preprufe 200 Membrane is applied either horizontally to smooth prepared concrete, well-rolled and compacted sand, or compacted crushed stone blinding; or vertically to permanent formwork or adjoining structures. Concrete is then cast directly against the adhesive side of the membranes. The specially developed Preprufe adhesive layers work together to form a continuous and integral seal to the poured concrete.

Advantages

- **Prevents water migration**—Preprufe's Advanced Bond Technology™ forms a unique integral seal to concrete poured against it
- **Fast and easy installation**—loose laid, mechanically fastened laps
- **Avoids delays**—unaffected by wet or cold conditions, can even be laid during rain
- **Excellent vapor barrier**—typical MVER 0.11 lb/1000 ft²/24 hr ASTM F1869-98
- **Inherently waterproof, non-reactive system**—
  - Cannot activate prematurely or be washed away
  - Not reliant on confining pressures or hydration
  - Unaffected by freeze/thaw, wet/dry cycling
- **Chemical resistant**—effective in all types of soils and waters, protects structure from salt or sulphate attack
- **Self protecting**—ready for immediate placement of reinforcing steel and concrete without costly protective layers

Applications

Typical applications include garages, plant rooms, utility grade basements, tunnels; vapor barrier for ground bearing floor slabs with moisture sensitive finishes, e.g. schools, hospitals, wood flooring, etc.

For more critical waterproofing applications consider Preprufe 300R. See separate data sheet.

Limitations

Preprufe 200 Membrane is intended for low, medium or intermittent water pressures.

Preprufe 200 Membrane can be returned up the inside face of slab formwork but is not recommended for conventional twin-sided formwork on walls, etc. Use Bituthene self-adhesive membrane or Procor® fluid applied membrane to walls after removal of formwork for a fully-bonded system to all structural surfaces.

Use

Preprufe 200 Membrane is supplied in rolls 4 ft (1.2 m) wide, interwound with a disposable plastic release liner which must be removed before placing reinforcement and concrete.

Substrate Preparation

All surfaces—It is essential to create a sound and solid substrate to eliminate movement during the concrete pour. Substrates must be regular and smooth, with no gaps or voids greater than 0.5 in. (12 mm). Grout around all penetrations such as utility conduits, etc. for stability.

Horizontal—The substrate must be free of loose aggregate and sharp protrusions. An angular profiled blinding is recommended rather than a sloping or rounded substrate. The surface does not need to be dry but standing water must be removed.

Vertical—Use concrete, plywood, insulation or other approved facing to sheet piling to provide support to the membrane. Board systems such as timber lagging must be close butted to provide support and not more than 0.5 in. (12 mm) out of alignment.

Membrane Installation

Preprufe 200 Membrane can be applied at temperatures of 25°F (-4°C) or above. Membrane installation is unaffected by wet weather.

Horizontal substrates—Place the membrane HDPE film side to the substrate with printed coated side up facing towards the concrete pour. End laps should be staggered to avoid a build up of layers.

Accurately position succeeding sheets to overlap the previous sheet 3 in. (75 mm) along the marked lap line. Completely remove the plastic liner to expose the protective coating. Any initial tack will quickly disappear.

Lap fastening—To prevent the membrane from moving and gaps opening, the laps should be fastened together at maximum 39 in. (1.0 m) on-center. Fix through the center of the lap area using 0.5 in. (12 mm) long washer-head self-tapping screws, or similar, allowing the head of the screw to bed into the adhesive compound to self seal. It is not necessary to fix the membrane to the substrate, only to itself. Ensure the membrane lays flat and no openings occur. Additional fastening may be required at corners, details etc.

Galvanized fasteners are suitable for most applications. Stainless steel or other non-corrosive fasteners are recommend for aggressive soil conditions containing chloride or sulphate.

Alternatively, 3 in. (75 mm) strips of Preprufe Tape may be used 39 in. (1.0 m) on center to prevent gaps or movement. Or, Preprufe Tape may be used to seal the entire length of the overlap. Apply tape centrally over lap and roll firmly. Remove plastic liner.

Vertical substrates—Mechanically fasten the membrane vertically using fasteners appropriate to the substrate with the printed coated side facing towards the concrete pour. The membrane may be installed in any convenient length. Secure the top of the membrane using a batten such as a termination bar or similar 2 in. (50 mm) below the top edge. Fastening should be made through the overlap area at 20 in. (0.5 m) maximum on-center so that the membrane lays flat without fishmouths. Immediately remove the plastic release liner.

Roll ends and cut edges—Overlap all roll ends and cut edges by a minimum 3 in. (75 mm) and fasten as above.

Penetrations

Use the following steps to seal around penetrations such as service pipes, piles, lightning conductors, etc.

Grout around the penetration if the penetration is not stable. Fit the membrane tight to the penetration. If the membrane is not within 0.5 in. (12 mm) of the penetration, apply Preprufe Tape to cover the gap.

Wrap the penetration with Preprufe Tape by positioning the tape 0.5 in. (12 mm) above the membrane.

Apply Bituthene Liquid Membrane around the penetrations using a fillet to provide a watertight seal between the Preprufe membrane and Preprufe Tape.

Membrane Repair

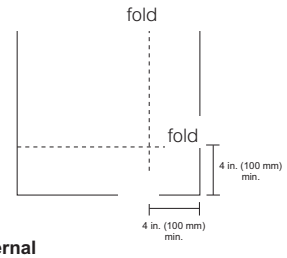
Inspect the membrane before installation of reinforcement steel, formwork and final placement of concrete. The membrane can be easily cleaned by power washing with water if necessary.

Repair damage by placing a patch of Preprufe 200 Membrane over the damaged area ensuring a minimum 3 in. (75 mm) overlap. Secure the patch using screw fasteners as above.

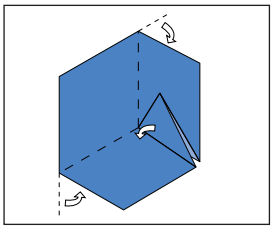
Any areas of damaged adhesive should be covered with Preprufe Tape. Remove printed plastic liner from tape.

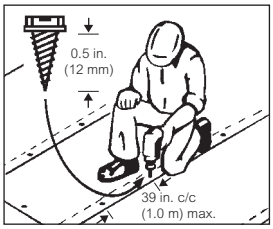
Corners

Internal and external corners should be formed as shown in the diagrams returning the membrane a minimum of 4 in. (100 mm). Crease and fold the membrane to ensure a close fit to the substrate profile and avoid gaps. Fasten using screw fasteners.

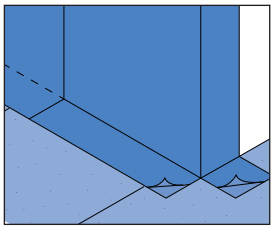


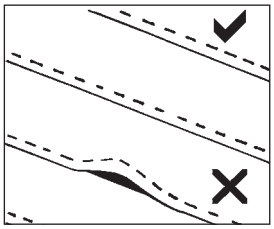
Internal



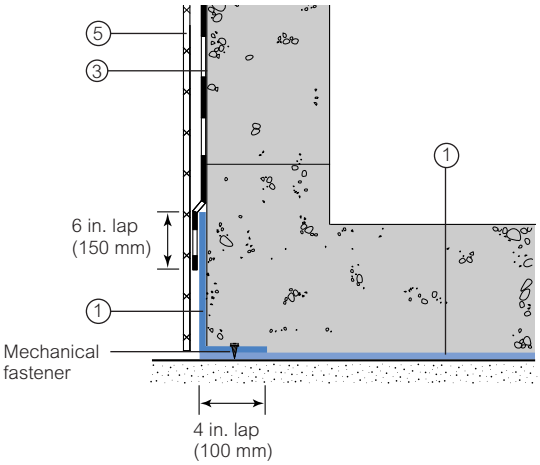


External

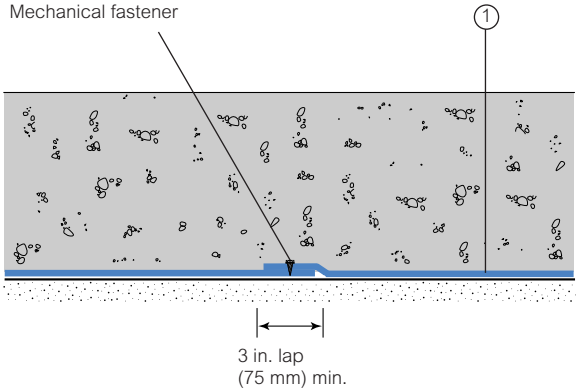




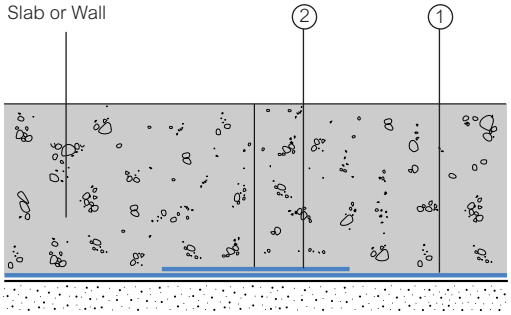
Wall base detail



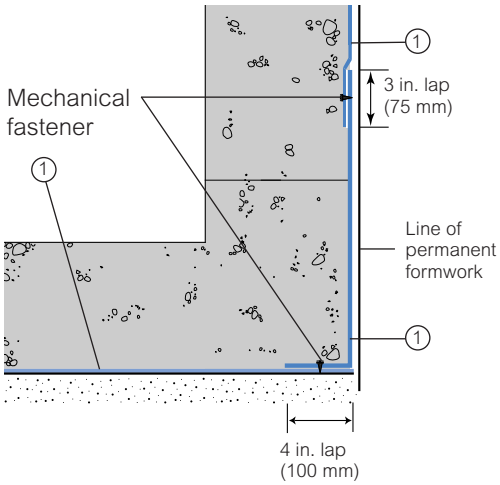
Side/end lap detail



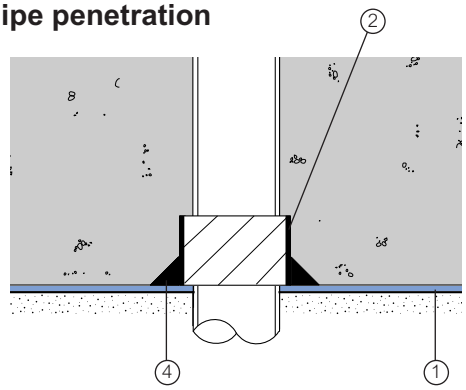
Concrete joint



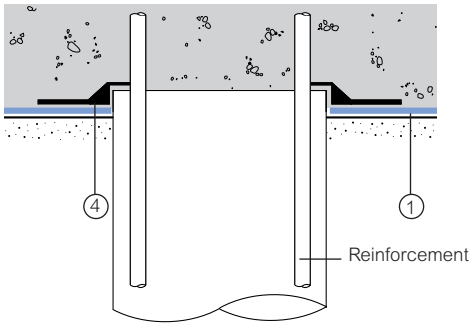
Wall base detail against permanent shutter



Pipe penetration



Pile detail



---

1 Preprufe 200 Membrane
2 Preprufe CJ Tape
3 Procor® (use Preprufe Tape to tie-in) or Bituthene® 4000
4 Bituthene Liquid Membrane
5 Hydroduct®

Details shown are typical illustrations and not working details. For assistance with detailing and problem solving please contact Grace Technical Department at 866-333-3SBM (3726).

Supply

Dimensions (Nominal)	Preprufe 200 Membrane	Preprufe CJ Tape (LT or HC*)	Preprufe Tape (LT or HC*)
Thickness	0.032 in. (0.8 mm)		
Roll size	4 ft x 115 ft (1.2 m x 35 m)	8 in. x 49 ft (200 mm x 15 m)	4 in. x 49 ft (100 mm x 15 m)
Roll area	460 ft^2 (42 m^2)		
Roll weight	92 lbs (42 kg)	8.6 lbs (4 kg)	4.3 lbs (2 kg)
Minimum side/end laps	3 in. (75 mm)	3 in. (75 mm)	3 in. (75 mm)
* LT denotes Low Temperature (between 25°F and 86°F), HC denotes Hot Climate (>50°F)			
Ancillary Products			
Bituthene Liquid Membrane (LM) 1.5 gal (5.7 liter)			
Screw Fasteners (by others) Self Tapping Washer Head Screws 0.5 in. (12 mm) long, galvanized or stainless steel as appropriate			

Physical Properties

Property	Typical Value	Test Method
Color	White	
Film thickness (nominal)	0.020 in. (0.5 mm)	ASTM D3767—method A
Low temperature flexibility	Unaffected at -10°F (-23°C)	ASTM D1970
Elongation	300% min.	ASTM D412 modified[1]
Crack cycling at -10°F (-23°C)	Pass	ASTM C836
Tensile strength, film	4000 psi (27.6 MPa) min.	ASTM D412
Peel adhesion to concrete	5.0 lbs/in. (880 N/m) min.	ASTM D903 modified[2]
Resistance to hydrostatic head	30 ft (10 m)	ASTM D5385 modified[3]
Puncture resistance	135 lbs (600 N) min.	ASTM E154
Permeance	0,01 perms (0.6 ng/m^2Pa)	ASTM E96—method B
Water absorption	0.5% maximum	ASTM D570
Moisture vapor emission rate	0.11 lb/1000 ft^2/24 hr	ASTM F1869-98 modified

Footnotes:
1. Elongation of membrane is run at 2 in. (50 mm) per minute.
2. Concrete is cast against the protective coating surface of the membrane and allowed to properly cure (7 days min.). Peel adhesion of membrane to concrete is measured at a rate of 2 in. (50 mm) per minute at room temperature.
3. Hydrostatic tests are performed by casting concrete against the membrane with a lap across a 0.040 in. (1 mm) formed crack.

Pouring of Concrete

Ensure the plastic release liner is removed from all areas of Preprufe 200 Membrane and Tape.

It is recommended that concrete be poured within 56 days (42 days in hot climates) of application of the membrane. Concrete must be placed and compacted carefully to avoid damage to the membrane. Never use a sharp object to consolidate the concrete.

Removal of Formwork

Preprufe 200 Membrane can be applied to removable formwork, such as slab perimeters, elevator and lift pits, etc. Once the concrete is poured the formwork must remain in place until the concrete has gained sufficient compressive strength to develop the surface bond. Preprufe 200 Membrane is not recommended for conventional twin-sided wall forming systems.

A minimum concrete compressive strength of 1500 psi (10 N/mm^2) is recommended prior to stripping formwork supporting Preprufe 200 Membrane. Premature stripping may result in displacement of the membrane and/or spalling of the concrete.

As a guide, to reach the minimum compressive strength stated above, a structural concrete mix with an ultimate strength of 6000 psi (40 N/mm^2) will typically require a cure time of approximately 6 days at an average ambient temperature of 25°F (-4°C), or 2 days at 70°F (21°C).

www.graceconstruction.com

For technical assistance call toll free at 866-333-3SBM (3726)

Preprufe, Bituthene and Hydroduct are registered trademarks of W. R. Grace & Co.–Conn.
Procor is a U.S. registered trademark of W. R. Grace & Co.-Conn., and is used in Canada under license from PROCOR LIMITED.

We hope the information here will be helpful. It is based on data and knowledge considered to be true and accurate and is offered for the users' consideration, investigation and verification, but we do not warrant the results to be obtained. Please read all statements, recommendations or suggestions in conjunction with our conditions of sale, which apply to all goods supplied by us. No statement, recommendation or suggestion is intended for any use which would infringe any patent or copyright. W. R. Grace & Co.–Conn., 62 Whittemore Avenue, Cambridge, MA 02140. In Canada, Grace Canada, Inc., 294 Clements Road, West, Ajax, Ontario, Canada L1S 3C6.

This product may be covered by patents or patents pending. Copyright 2007. W. R. Grace & Co.–Conn.
PF-155E Printed in U.S.A. 7/07 FA/LI/1M

GRACE

GRACE

Chemical Resistance
Technical Letter 4

Several series of tests have been conducted to define the chemical resistance of Preprufe® and Bituthene® waterproofing membranes. Both Preprufe and Bituthene membranes are highly resistant to normal ground water conditions which range from alkaline to acidic. In addition, Preprufe and Bituthene waterproofing membranes are unaffected by exposure to salt water.

Occasionally Preprufe and Bituthene may be used in applications which will be subjected to intermittent or even continuous exposure to chemicals. The following guidelines can be used to evaluate the applicability of the Preprufe and Bituthene membrane system.

NOTE: Most solvents and fuels will not significantly affect polyethylene film but may soften or dissolve the adhesive compounds exposed at the edge laps. Detailed information on the type of exposure is necessary to make recommendations.

For below slab and blind side applications, a concrete mud-slab or continuous soil retention system will reduce the exposure of the Preprufe membrane laps. For Bituthene wall applications, the use of Bituthene Edgeguard®, or a solvent resistant tape, should be used over the membrane edges to protect the rubberized asphalt from prolonged exposure.

Exposure Conditions	Preprufe and Bituthene Membrane Resistance Rating
Sea water, de-icing salt	Excellent
Acids in solution e.g. sulfuric, acetic, hydrochloric and nitric acid	Excellent
Alkalis e.g. Sodium hydroxide, ammonium hydroxide	Excellent
Alcohols	Very Good
Organic or fuel oils, solvents	Variable (See note.)

www.graceconstruction.com

For technical assistance call toll free at 866-333-3SBM (3726)

Preprufe, Bituthene and Edgeguard are registered trademarks of W. R. Grace & Co.–Conn.

We hope the information here will be helpful. It is based on data and knowledge considered to be true and accurate and is offered for the users' consideration, investigation and verification, but we do not warrant the results to be obtained. Please read all statements, recommendations or suggestions in conjunction with our conditions of sale, which apply to all goods supplied by us. No statement, recommendation or suggestion is intended for any use which would infringe any patent or copyright. W. R. Grace & Co.–Conn., 62 Whittemore Avenue, Cambridge, MA 02140. In Canada, Grace Canada, Inc., 294 Clements Road, West, Ajax, Ontario, Canada L1S 3C6.

This product may be covered by patents or patents pending. Copyright 2008. W. R. Grace & Co.–Conn.

WP-004 Printed in U.S.A. 4/08 FA/pdf