Office of Environmental Remediation

"E" Designation Program

Hazardous Materials

Phase II Work Plan (Short Form)

For

1888 Bathgate Avenue

Bronx, New York 10457

Block 2924, Lots 7, 10, 25, 30 and 34

OER Project Number 16TEMP084X

Prepared for:

Mega Consulting Group

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Introduction

This Phase II Investigation Work Plan has been developed for the above referenced site. The site is located within the East Tremont section of the borough of Bronx. The following work scope has been developed in response to Phase I Environmental Site Assessment (ESA) findings and proposed development project, as per the Office of Environmental Remediation (OER) meeting on May 26, 2016.

Site Location, Current Use, and Proposed Development Plan

The Site is located in the East Tremont section of the borough of Bronx, and is identified as Block 2924 and Lots 7, 10, 25, 30 and 34. Currently, the Site is vacant and contains five interconnected single-story commercial buildings with no basement. The Site was most recently occupied by a steel door manufacturing company known as ABCO Steel Door, and has been vacant for approximately three years. Various equipment and supplies from the former occupant remain onsite. The development project consists of the new construction of a mixed-use affordable housing building, comprised of two 9-story residential buildings fronting Third and Bathgate Avenues, totaling 211 units. The cellar will consist of a parking garage and residential mechanical rooms. The ground floor will consist of residential lobbies, a community facility, commercial units, and a parking ramp to the cellar, accessible from Bathgate Avenue. The second through 9th floors will consist of a total of 204 residential units. As part of the development, the referenced five lots are expected to be merged into one. The proposed development will occupy the entire footprint of the existing lots. The proposed foundation depth is approximately 15 feet below grade surface (bgs) and the proposed maximum depth of excavation is approximately 17 feet bgs. Layout of the proposed site redevelopment is presented in Figure II.

Phase I ESA Summary

On March 29, 2016, ALC Environmental (ALC) performed a Phase I ESA at the Site. The Findings are included in ALC's Phase I ESA report dated April 15, 2016. Below is a summary of identified recognized environmental conditions (the Phase I ESA report is included in Figure III).

- As per the historical sources reviewed and information provided by property ownership, the Site has historically been occupied by various manufacturing facilities, including a plastics company, a rebar factory, a bed spring company, and a steel door manufacturing facility. The historical usage of the Subject Property as a manufacturing facility is considered a recognized environmental condition (REC) given that the nature and extent of storage, usage and disposal of hazardous materials likely associated with these former facilities is not known.

- ALC identified a concrete filled pipe on the northwestern exterior of one of the subject buildings, known as 1888 Bathgate Avenue. The piping is approximately one foot in height and is adjacent to the northwestern exterior wall in the concrete sidewalk along Bathgate Avenue. Although requested, no information regarding the nature of this piping was provided by property ownership. The piping may be an inactive former vent pipe associated with an underground storage tank (UST).

Phase II Investigation Work Scope

Geophysical Survey

A geophysical survey will be performed along the sidewalk fronting the 1888 Bathgate Avenue building (Lot 10) to investigate the presence of potential USTs, associated with the filled pipe observed at the Site.

Soil, Groundwater and Soil Vapor Summary

An investigation of soil, soil vapor and groundwater is being performed to properly characterize the Site for potential environmental impacts from historic on-site/off-site uses, operations, etc. The proposed sampling event will address both RECs and historic fill, as well as to provide general horizontal/vertical characterization across the site for development purposes. The sampling procedures of this investigation will be performed in accordance with the NYSDEC Technical Guidance for Site Investigation and Remediation DER-10.

Eleven (11) test borings will be completed at the Site. Please see attached site plan depicting sample point locations, where soil, groundwater, and soil vapor samples will be collected. At a minimum, a total of twenty (20) soil samples will be collected from ten (10) test borings. A minimum of three (3) groundwater samples will be collected. A total of five (5) soil vapor/sub-slab samples will be collected. The depth of groundwater is unknown. The general groundwater flow direction is expected to be to the west. Each sample point location at the site will be accurately measured to fixed benchmarks (i.e., select properly lines, adjacent structures, etc.) or by a precision GPS that is capable of coordinating a fixed point with within +/- 1 foot.

Soil Sampling

A geologist/engineer/QEP will screen the soil samples during borehole advancement for organic vapors with a photo-ionization detector (PID) and evaluated for visual and olfactory impacts prior to collecting environmental samples. All field work will be recorded in a field log. A Geoprobe® direct-push rig (or equivalent) outfitted with a macro-core sampler and dedicated acetate liners will be used and if necessary, more advanced drilling technology will be used to complete the site investigation. At a minimum, two soil samples will be collected from each of the ten soil test borings (for a total of 20 soil samples) for laboratory analysis. In areas that will be excavated, a subsurface soil sample from the two (2) foot interval beneath the proposed maximum excavation depth of 17 feet bgs will be collected per soil test boring. A second sample will be collected for each test boring if) elevated PID readings and/or visual and olfactory observations are noted during borehole advancement and/or 2) field observations identify an upper fill layer underlain by native material. The additional soil sample from the upper zone of the native layer will help delineate the vertical migration of impacts (if any), as well as determine a more detailed remedy and potentially provide a cost savings for disposal options. In the proposed unexcavated areas, a surface soil sample (from the 0-2 foot bgs interval) and second sample from the 4-6 foot bgs interval will be collected in each test boring.

Discrete (grab) samples will be taken from the aforementioned sampling intervals. The subsurface soil samples may also serve as in-situ post-excavation soil samples for the remedial plan.

Monitoring Well Installation and Groundwater Sampling

Three 1-inch diameter temporary groundwater monitoring wells will be installed. Representative groundwater samples will be collected using low-flow sampling techniques. Properly sized screen and silica sand pack will be used for noted site conditions. A representative groundwater sample will be collected from each well with a peristaltic pump and dedicated tubing. Sampling will be conducted in accordance with NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation, dated May 2010, and Sampling Guidelines and Protocols, dated March 1991. Groundwater wells will be gauged with a water level meter to record a depth to groundwater reading (1/100 foot), and if necessary, an interface meter to determine the thickness of LNAPL or DNAPL. The well casings will be surveyed by a trained QEP and/or NYS licensed surveyor to facilitate preparation of a groundwater contour map and determine the direction of groundwater flow.

Soil Vapor Sampling

Samples will be collected in accordance with the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH October 2006). Conditions in the field may require adjustment of sampling locations. Groundwater depth is unknown.

Five (5) soil vapor samples will be collected. Soil vapor implants will be set at a depth of approximately 16 feet in areas that will be excavated, and approximately 6 inches beneath the existing building slab in the proposed unexcavated areas. If groundwater is encountered during the boring advancement, the soil vapor probe will be installed approximately one and two feet above the groundwater interface. A Geoprobe® direct push drilling machine will be used to install the vapor implants. The soil vapor samples will be collected using 6-Liter SUMMA canisters equipped with 4-hour regulators. Sampling will occur for the duration of 4 hours.

Samples will be collected in appropriate sized Summa canisters that have been certified clean by the laboratory and samples will be analyzed by using USEPA Method TO-15. Flow rate for both purging and sampling will not exceed 0.2 L/min. 24-hours following soil vapor probe installation, one to three implant volumes shall be purged prior to the collection of any soil-gas samples. A sample log sheet will be maintained summarizing sample identification, date and time of sample collection, sampling depth, identity of samplers, sampling methods and devices, soil vapor purge volumes, volume of the soil vapor extracted, vacuum of canisters before and after the samples are collected, apparent moisture content of the sampling zone, and chain of custody protocols.

As part of the vapor intrusion evaluation, a tracer gas will be used in accordance with NYSDOH protocols to serve as a quality assurance/quality control (QA/QC) device to verify the integrity of the soil vapor probe seal. A container (box, plastic pail, etc.) will serve to keep the tracer gas in contact with the probe during testing. A portable monitoring device will be used to analyze a sample of soil vapor for the tracer gas prior to sampling. If the tracer sample results show a significant presence of the tracer, the probe seals will be adjusted to prevent infiltration. At the conclusion of the sampling round, tracer monitoring will be performed a second time to confirm the integrity of the probe seals.

Sample Analysis

Soil, groundwater, and soil vapor samples will be submitted to a NYSDOH Environmental Laboratory Accreditation Program (ELAP)-certified laboratory for Full analysis:

- Volatile Organic Compounds by EPA Method 8260;
- Semi-volatile organic compounds by EPA Method 8270;
- Pesticides/PCBs by EPA Method 8081/8082; and
- Target Analyte List metals by EPA Method 6010 and 7471;
- Soil vapor samples will be analyzed for VOCs by using USEPA Method TO-15.

All groundwater samples will be analyzed for both filtered (dissolved) and unfiltered (total) metals.

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. NYSDEC spills hotline) will be performed.

Quality Assurance/Quality Control Procedures

QA/QC procedures will be used to provide performance information with regard to accuracy, precision, sensitivity, representation, completeness, and comparability associated with the sampling and analysis for this investigation. Field QA/QC procedures will be used (1) to document that samples are representative of actual

conditions at the Site and (2) identify possible cross-contamination from field activities or sample transit. Laboratory QA/QC procedures and analyses will be used to demonstrate whether analytical results have been biased either by interfering compounds in the sample matrix, or by laboratory techniques that may have introduced systematic or random errors to the analytical process. QA/QC samples (field and trip blanks, duplicates, etc.) will be collected and analyzed at an ELAP-certified laboratory.

Investigation Derived Waste

Cuttings may be disposed at the site within the borehole that generated them to within 24 inches of the surface unless:

- Free product or grossly contaminated soil, are present in the cuttings;
- The borehole has penetrated an aquitard, aquiclude or other confining layer; or extends significantly into bedrock;
- Backfilling the borehole with cuttings will create a significant path for vertical movement of contaminants. Soil additives (bentonite) may be added to the cuttings to reduce permeability;
- The soil cannot fit into the borehole.

Those soil cuttings needing to be managed on-site will be containerized in properly labeled DOT approved 55-gallon drums for future off-site disposal at a permitted facility. All boreholes which require drill cuttings disposal would ultimately be filled with bentonite chips (hydrated) and asphalt/concrete capping. Disposable sampling equipment including, spoons, gloves, bags, paper towels, etc. that came in contact with environmental media will be double bagged and disposed as municipal trash in a facility trash dumpster as non-hazardous trash.

Reporting

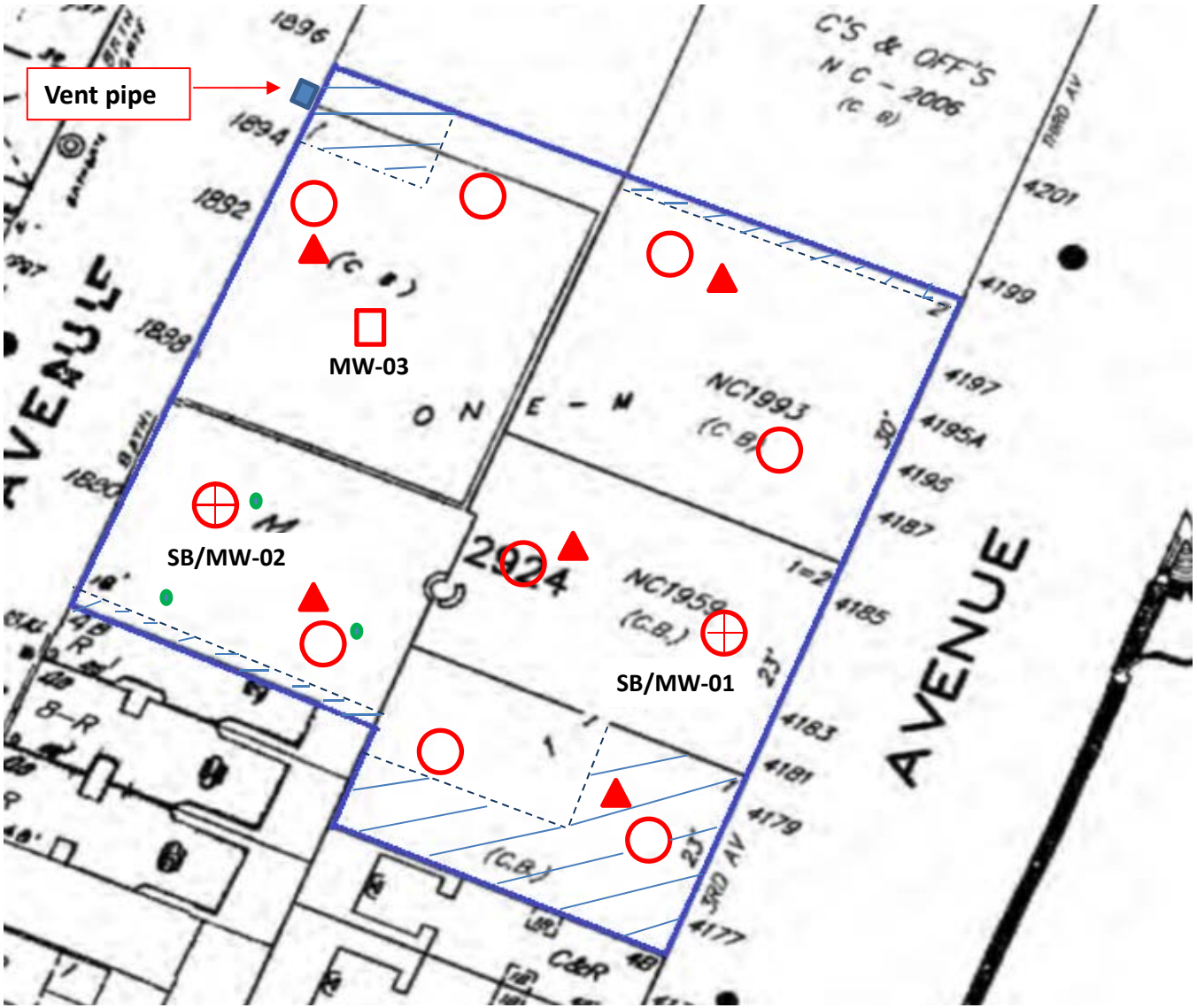
A Phase II Investigation Report (template version) will be prepared following completion of the field activities and receipt of the laboratory data. The report will provide detailed summaries of the investigative findings. Soil and groundwater analytical results will be compared to the NYSDEC Part 375-6.8(a) Unrestricted Used Soil Cleanup Objectives, appropriate Part 375-6.8(b) Restricted Soil Cleanup Objectives and NYSDEC Part 703 Groundwater Quality Standards (GQS) (class GA) or Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS). Soil vapor analytical results will be compared to the NYSDOH October 2006 Final Guidance for Evaluating Soil Vapor Intrusion Matrices. The report will include an updated sampling plan, spider diagrams, analytical data tables for all reported constituent compounds (including non-detectable concentrations) and remedial recommendations, as warranted.

Investigation HASP

An OSHA compliant Health and Safety Plan that meets all OSHA HAZWOPER requirements will be implemented during the site work to protect worker safety. The Site Safety Coordinator will ensure full compliance of the HASP in accordance with applicable health and safety laws and regulations. All field personnel involved in investigation activities will participate in training required under OSHA HAZWOPER 29 CFR 1910.120, including 40-hour hazardous waste operator training and annual 8-hour refresher training. Emergency telephone numbers will be posted at the site location before any 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 including a highlighted route map to the nearest hospital/emergency room. Meetings will be documented in a log book or specific form. Potential on-site chemicals of concern include VOCs, SVOCs, Pesticides/PCBs, and Metals (specifically arsenic, lead, and mercury at a minimum). Information fact sheets and/or summary tables for each contaminant group are included in the HASP. A copy of this HASP will be on-site during each sampling event.

Figure I

Proposed Boring Locations



ALC Environmental

1888 Bathgate Avenue, Bronx, NY 10457

Sampling Locations

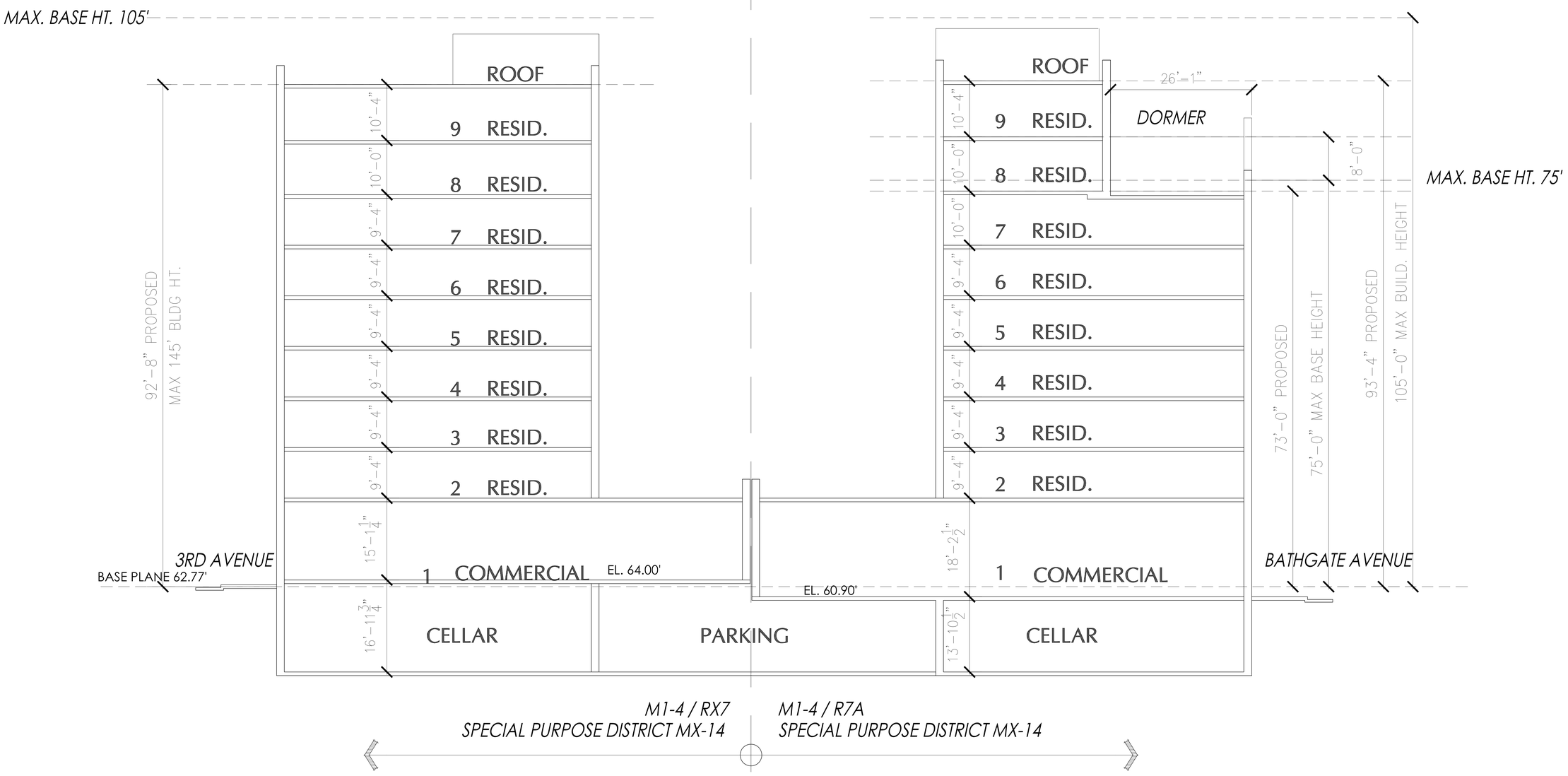
Figure II

Proposed Development Site

3rd AVE. & BATHGATE AVE. APTs.

BRONX, NEW YORK

LIST OF DRAWINGS:



SCHEMATIC SECTION A

SLCE*Architects*
1359 BROADWAY, NEW YORK, NEW YORK 10018

3RD AVE. & BATHGATE AVE. APARTMENTS
BRONX, NEW YORK

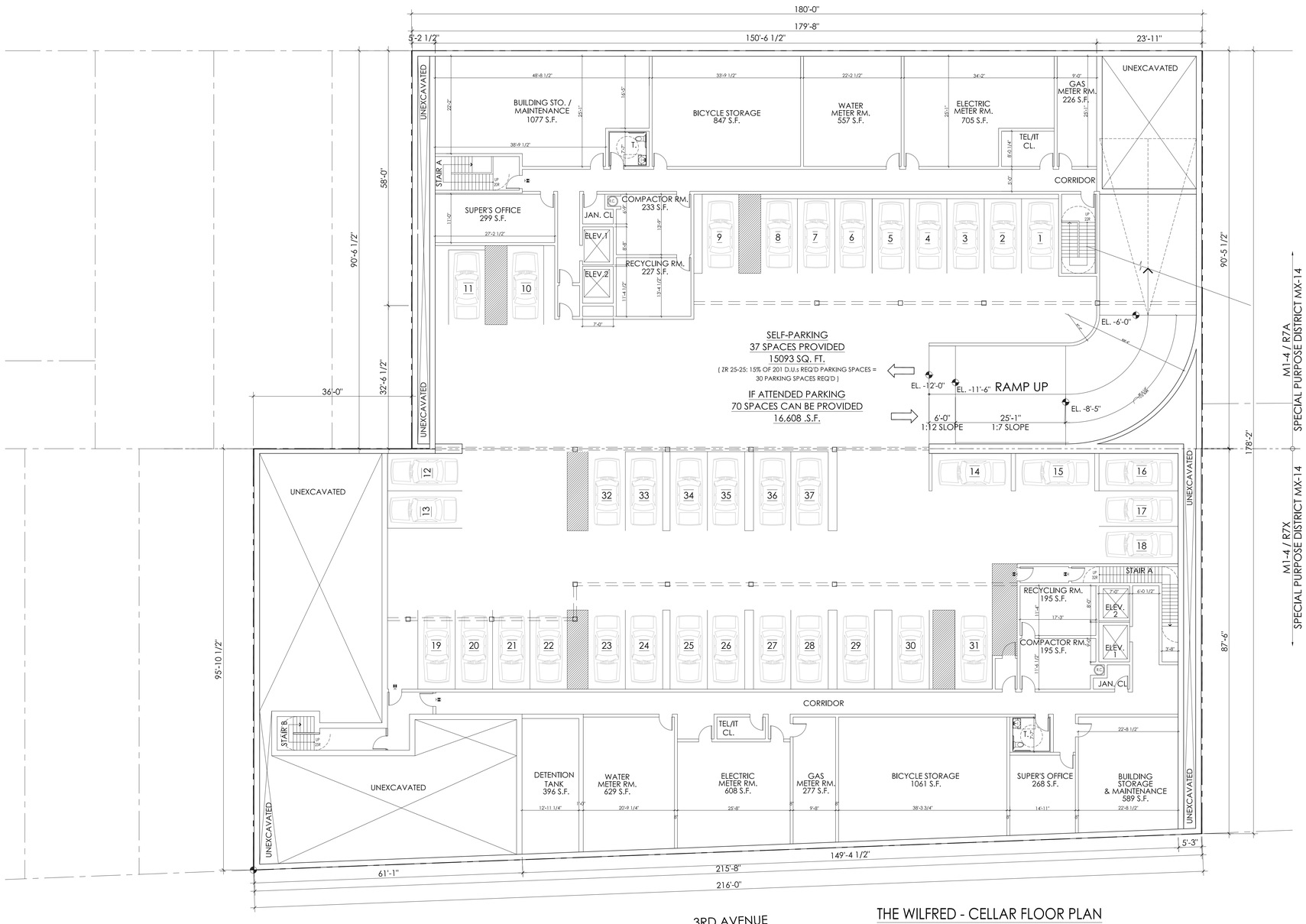
SECTION A
#2014-64
APRIL 14, 2016

A-02

THE ABCO - CELLAR FLOOR PLAN

GROSS BUILDING AREA: 14978 SQ. FT.

BATHGATE AVENUE



3RD AVENUE

THE WILFRED - CELLAR FLOOR PLAN

GROSS BUILDING AREA: 15915 SQ. FT.

0' 10' 20' 40' TRUE NORTH

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1359 BROADWAY, NEW YORK, NEW YORK 10018

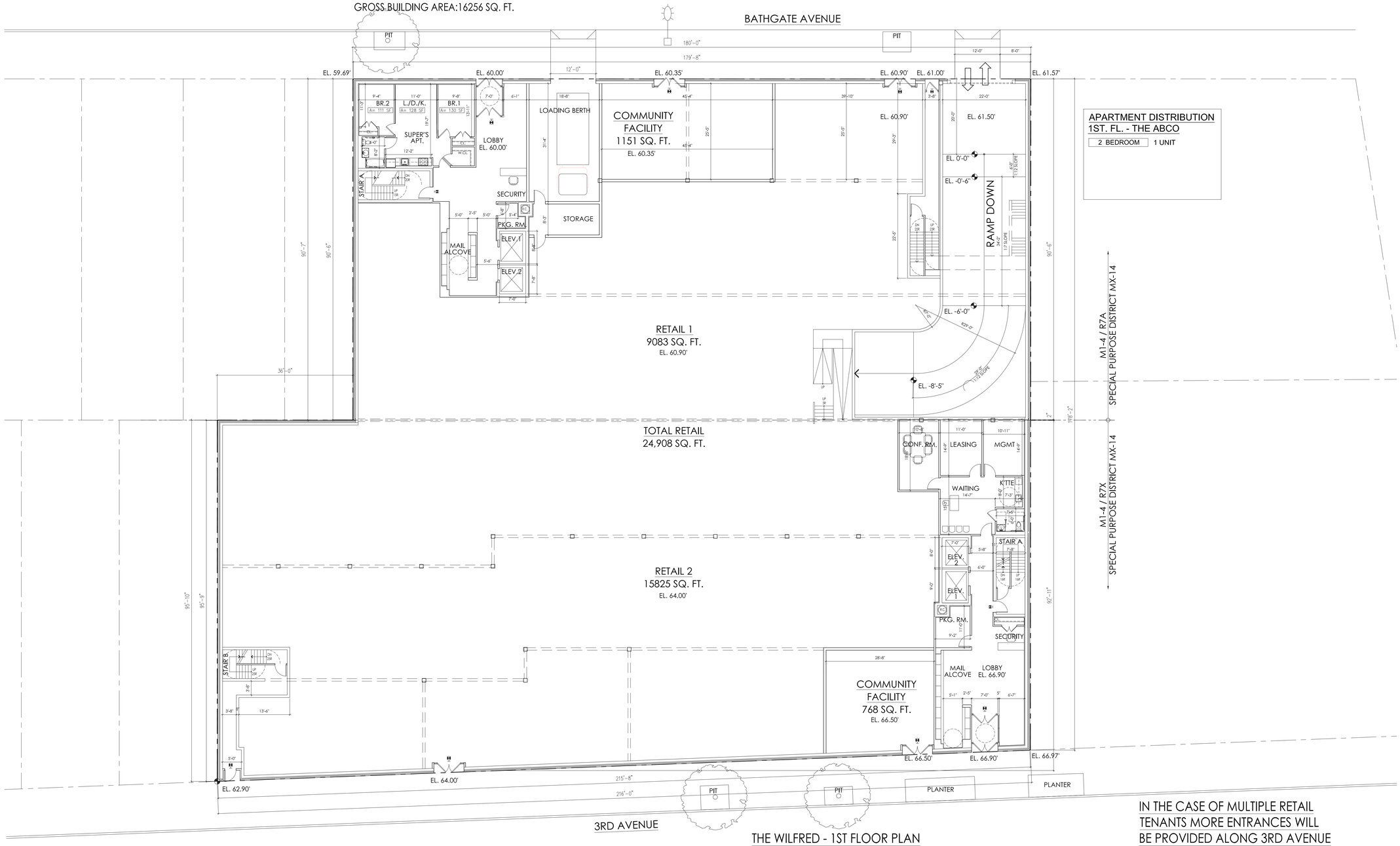
3RD AVE. & BATHGATE AVE. APARTMENTS
BRONX, NEW YORK

CELLAR FLOOR PLANS
#2014-64
APRIL 14, 2016

A-05

THE ABCO - 1ST FLOOR PLAN

GROSS BUILDING AREA:16256 SQ. FT.



APARTMENT DISTRIBUTION
1ST. FL. - THE ABCO

2 BEDROOM	1 UNIT

THE WILFRED - 1ST FLOOR PLAN

GROSS BUILDING AREA= 19752 SQ. FT.
COMBINED (WILFRED & ABCO)
GROSS RETAIL AREA: 24,908 SQ. FT.

IN THE CASE OF MULTIPLE RETAIL TENANTS MORE ENTRANCES WILL BE PROVIDED ALONG 3RD AVENUE AND BATHGATE AVENUE

IN CASE OF THRU RETAIL TENANT ELEVATION TRANSITION TO BE PROVIDED VIA STAIRS AND RAMP

0' 10' 20' 40' TRUE NORTH

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1359 BROADWAY, NEW YORK, NEW YORK 10018

3RD AVE. & BATHGATE AVE. APARTMENTS
BRONX, NEW YORK

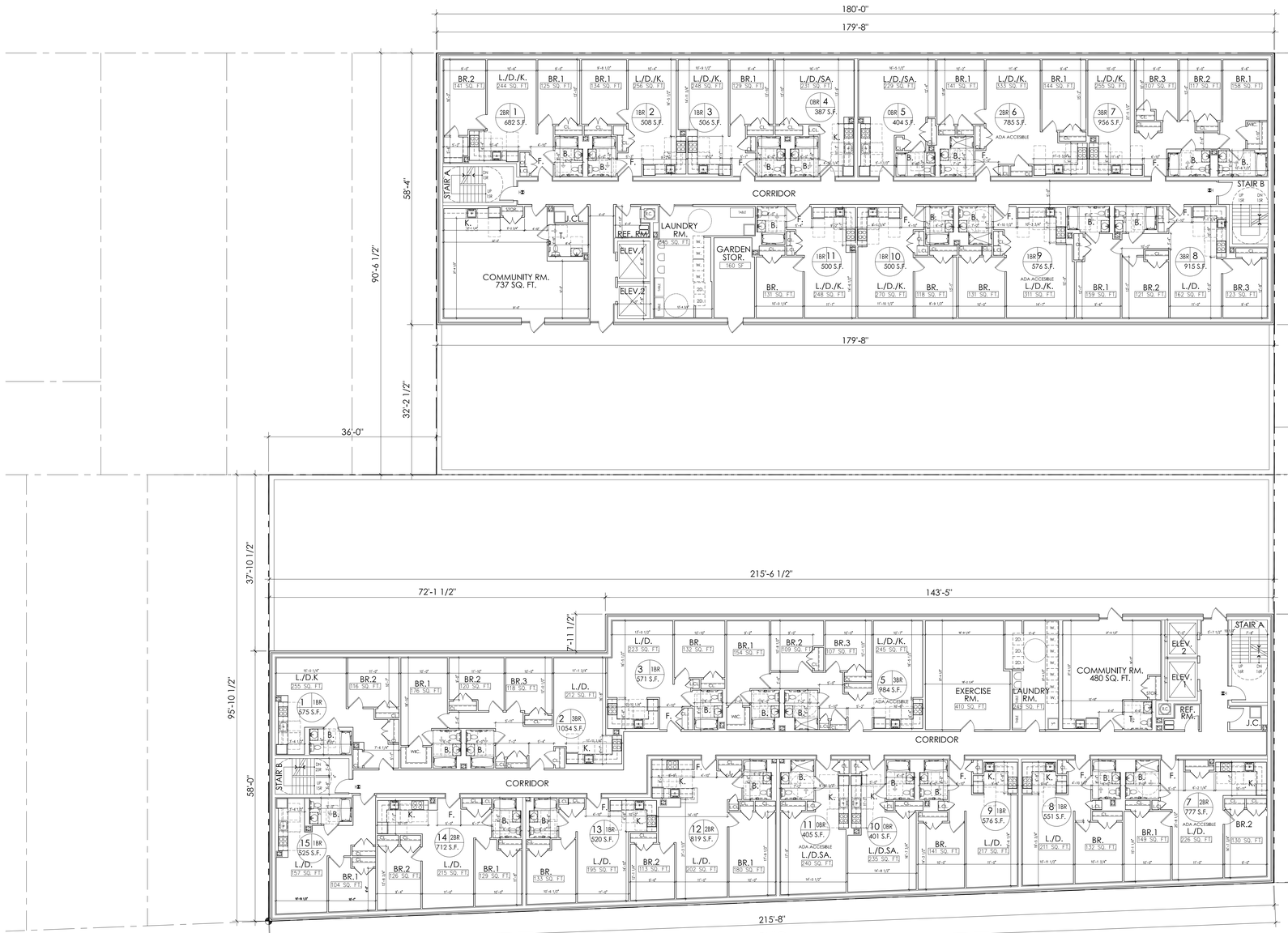
1ST FLOOR PLANS
#2014-64
APRIL 14, 2016

A-06

THE ABCO - 2ND FLOOR PLAN

GROSS BUILDING AREA: 10,481 SQ. FT.

BATHGATE AVENUE



APARTMENT DISTRIBUTION 2ND FL. - THE ABCO

0 BEDROOM	2 UNITS
1 BEDROOM	5 UNITS
2 BEDROOM	2 UNITS
3 BEDROOM	2 UNITS

TOTAL: **11 UNITS**

APARTMENT DISTRIBUTION 2ND FL. - THE WILFRED

0 BEDROOM	2 UNITS
1 BEDROOM	6 UNITS
2 BEDROOM	3 UNITS
3 BEDROOM	2 UNITS

TOTAL: **13 UNITS**

THE WILFRED - 2ND FLOOR PLAN

GROSS BUILDING AREA: 12747 SQ. FT.

0' 10' 20' 40' TRUE NORTH

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1359 BROADWAY, NEW YORK, NEW YORK 10018

3RD AVE. & BATHGATE AVE. APARTMENTS

BRONX, NEW YORK

2ND FLOOR PLANS

#2014-64

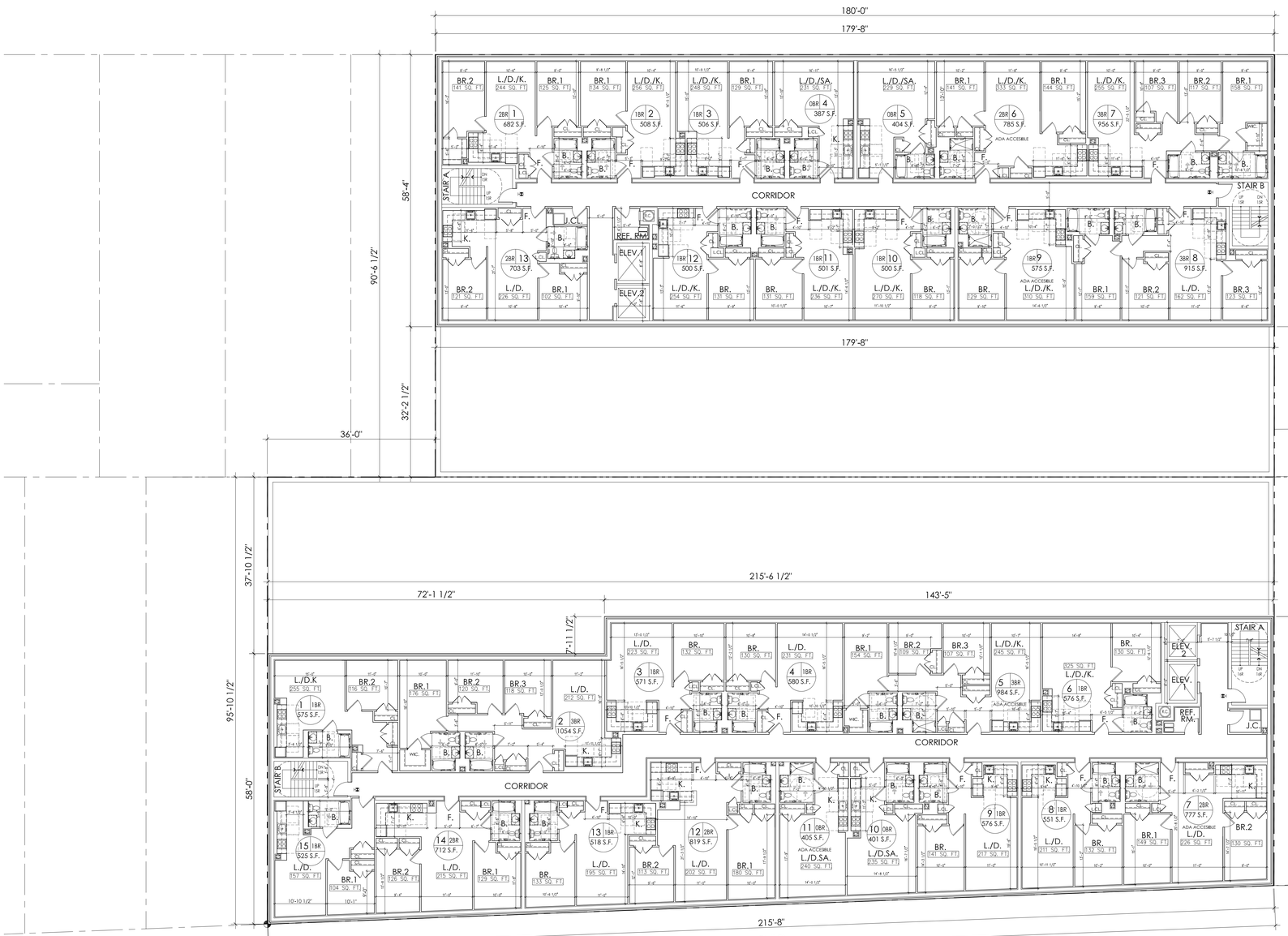
APRIL 14, 2016

A-07

THE ABCO - TYPICAL 3RD THRU 7TH FLOOR PLAN

GROSS BUILDING AREA: 10,481 SQ. FT. x 5 FLOORS = 52,105 SQ. FT.

BATHGATE AVENUE



APARTMENT DISTRIBUTION
3RD THRU 7TH FL. - THE ABCO

0 BEDROOM	2 UNITS / FLOOR x 5 FLOORS	= 10 0-BRs
1 BEDROOM	6 UNITS / FLOOR x 5 FLOORS	= 30 1-BRs
2 BEDROOM	3 UNITS / FLOOR x 5 FLOORS	= 15 2-BRs
3 BEDROOM	2 UNITS / FLOOR x 5 FLOORS	= 10 3-BRs

TOTAL: **13 UNITS / FLOOR x 5 FLOORS = 65 UNITS**

APARTMENT DISTRIBUTION
3RD THRU 8TH FL. - THE WILFRED

0 BEDROOM	2 UNITS / FLOOR x 7 FLOORS	= 14 0-BRs
1 BEDROOM	8 UNITS / FLOOR x 7 FLOORS	= 56 1-BRs
2 BEDROOM	3 UNITS / FLOOR x 7 FLOORS	= 21 2-BRs
3 BEDROOM	2 UNITS / FLOOR x 7 FLOORS	= 14 3-BRs

TOTAL: **15 UNITS / FLOOR x 7 FLOORS = 105 UNITS**

3RD AVENUE

THE WILFRED - TYPICAL 3RD THRU 9TH FLOOR PLAN

GROSS BUILDING AREA: 12747 SQ. FT. PER FLOOR X 7 FLOORS = 89,229 SQ.FT.

0' 10' 20' 40' TRUE NORTH

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1359 BROADWAY, NEW YORK, NEW YORK 10018

3RD AVE. & BATHGATE AVE. APARTMENTS

BRONX, NEW YORK

TYPICAL FLOOR PLANS

#2014-64

APRIL 14, 2016

A-08

THE ABCO - 8TH FLOOR PLAN

GROSS BUILDING AREA: 8,165 SQ. FT.

BATHGATE AVENUE

APARTMENT DISTRIBUTION
8TH FL. - THE ABCO

0 BEDROOM	1 UNIT
1 BEDROOM	6 UNITS
2 BEDROOM	2 UNITS
3 BEDROOM	1 UNIT

TOTAL: **10 UNITS**

APARTMENT DISTRIBUTION
3RD THRU 8TH FL. - THE WILFRED

0 BEDROOM	2 UNITS / FLOOR x 7 FLOORS	= 14 0-BRs
1 BEDROOM	8 UNITS / FLOOR x 7 FLOORS	= 56 1-BRs
2 BEDROOM	3 UNITS / FLOOR x 7 FLOORS	= 21 2-BRs
3 BEDROOM	2 UNITS / FLOOR x 7 FLOORS	= 14 3-BRs

TOTAL: **15 UNITS / FLOOR x 7 FLOORS = 105 UNITS**

3RD AVENUE

THE WILFRED - TYPICAL 3RD THRU 9TH FLOOR PLAN

GROSS BUILDING AREA: ############## PER FLOOR X 7 FLOORS = 89,229 SQ.FT.

0' 10' 20' 40' TRUE NORTH

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1359 BROADWAY, NEW YORK, NEW YORK 10018

3RD AVE. & BATHGATE AVE. APARTMENTS
BRONX, NEW YORK

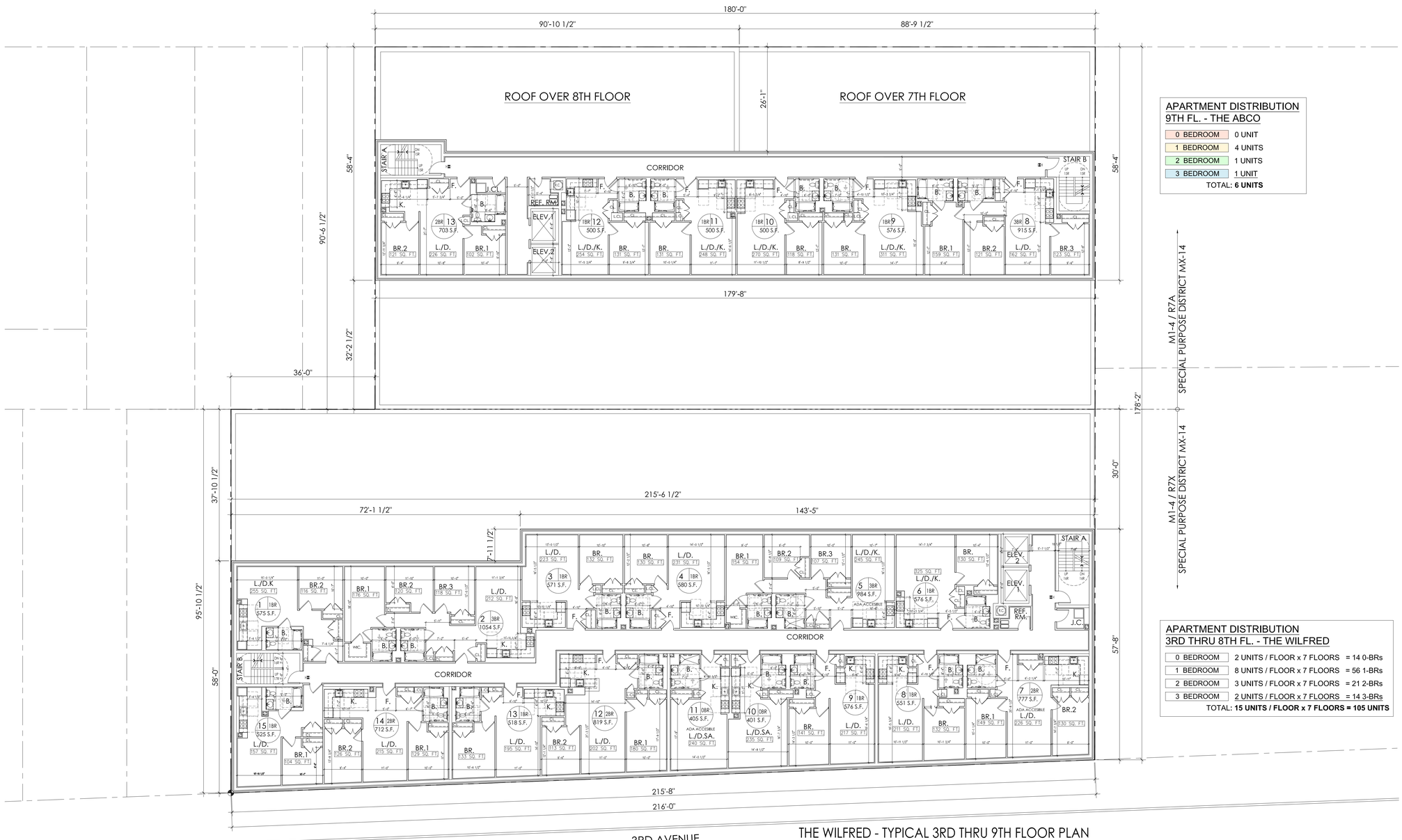
8th FLOOR PLANS
#2014-64
APRIL 14, 2016

A-09

THE ABCO - 8TH FLOOR PLAN

GROSS BUILDING AREA: 5,846 SQ. FT.

BATHGATE AVENUE



APARTMENT DISTRIBUTION 9TH FL. - THE ABCO

0 BEDROOM	0 UNIT
1 BEDROOM	4 UNITS
2 BEDROOM	1 UNITS
3 BEDROOM	1 UNIT
TOTAL: **6 UNITS**	

APARTMENT DISTRIBUTION 3RD THRU 8TH FL. - THE WILFRED

0 BEDROOM	2 UNITS / FLOOR x 7 FLOORS	= 14 0-BRs
1 BEDROOM	8 UNITS / FLOOR x 7 FLOORS	= 56 1-BRs
2 BEDROOM	3 UNITS / FLOOR x 7 FLOORS	= 21 2-BRs
3 BEDROOM	2 UNITS / FLOOR x 7 FLOORS	= 14 3-BRs
TOTAL: **15 UNITS / FLOOR x 7 FLOORS = 105 UNITS**		

THE WILFRED - TYPICAL 3RD THRU 9TH FLOOR PLAN

GROSS BUILDING AREA: ############## PER FLOOR X 7 FLOORS = 89,229 SQ.FT.

0' 10' 20' 40' TRUE NORTH

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3RD AVE. & BATHGATE AVE. APARTMENTS

BRONX, NEW YORK

9th FLOOR PLANS

#2014-64

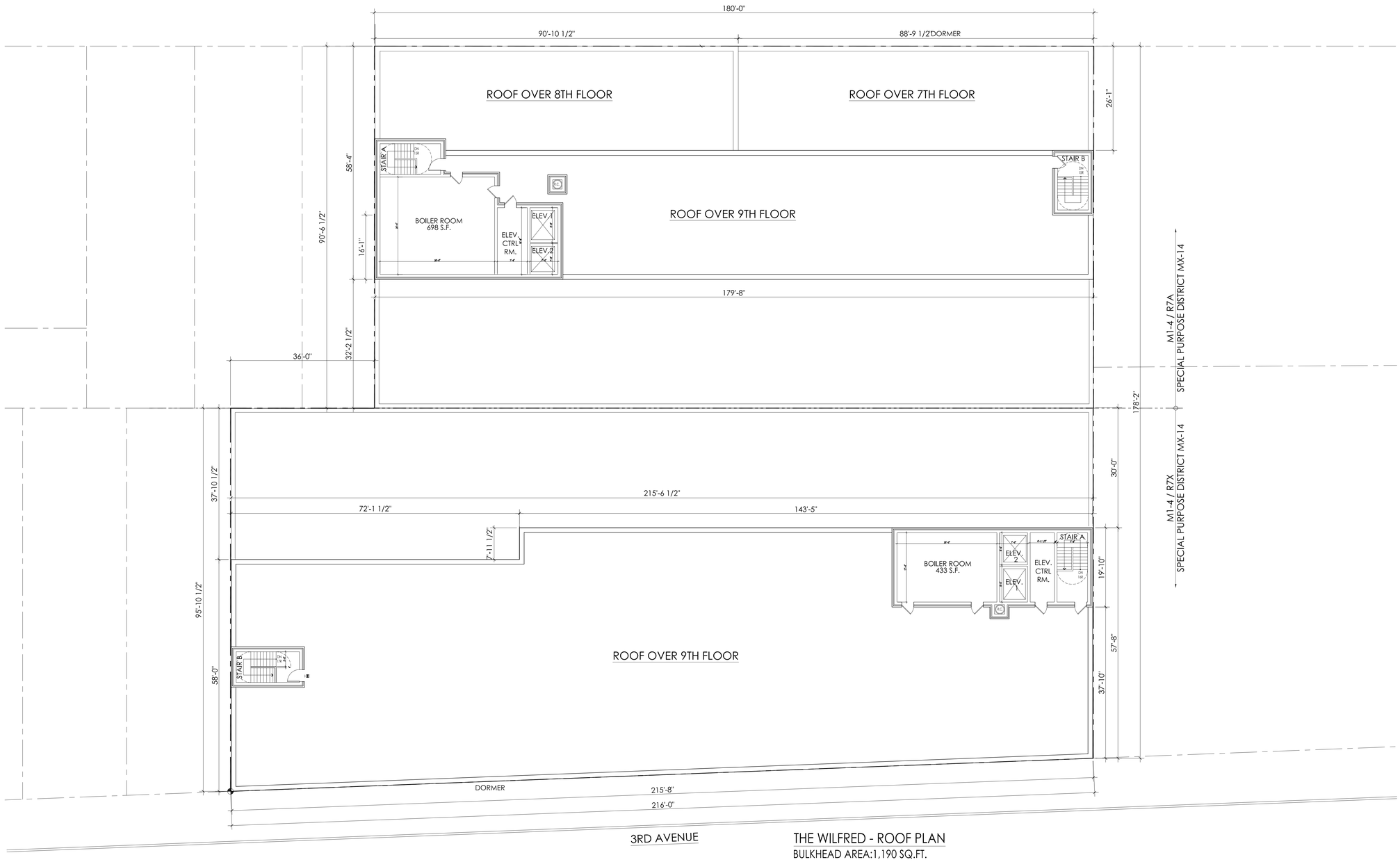
APRIL 14, 2016

A-10

THE ABCO - ROOF PLAN

BULKHEAD AREA
= 1,455 SQ.FT.

BATHGATE AVENUE



3RD AVENUE

THE WILFRED - ROOF PLAN

BULKHEAD AREA:1,190 SQ.FT.

0' 10' 20' 40' TRUE NORTH

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1359 BROADWAY, NEW YORK, NEW YORK 10018

3RD AVE. & BATHGATE AVE. APARTMENTS

BRONX, NEW YORK

ROOF PLAN

#2014-64

APRIL 14, 2016

A-11