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September 18, 2017**REVISED STATEMENT OF FACTS****45 Vernon Blvd****Queens, NY 11101****Block 26, Lots 4 & 8****I. Introduction**

This statement is submitted in support of an application (the "Application") pursuant to Section 72-21 of the New York City Zoning Resolution ("Zoning Resolution" or "ZR") seeking variances from the terms of the Zoning Resolution to allow: (i) residential use in a manufacturing district (ZR 42-10); (ii) waiver of required loading berth (ZR 44-52); (iii) a maximum building height of 291.67 feet, in excess of 150 feet (ZR 62-341 Table A & 62-341(a)(4)(ii)); (iv) a tower floor plate above the base height of 60 ft., in excess of 7,000 sq. ft. (ZR 62-341(c)(4)); and (v) development within 15 feet of a residential district boundary line (ZR 43-303). The approval of the aforementioned variances would permitted a total of 212,867 square feet if floor area on a 38,574.8 square foot zoning lot.

If granted, these variances would facilitate a predominantly residential development (the "Proposed Project") on Block 25, Lots 4 and 8 (the "Site" or "Project Site") within Long Island City, Queens. The Site is located in an M1-4 zoning district, which does not permit residential use but permits commercial and manufacturing use at 2.0 FAR and community facility use at 6.5 FAR. The Proposed Project seeks a total FAR of 5.518, consisting of 5.285 FAR for residential use and 0.232 FAR for commercial use.

The variances are sought to offset the premium remediation costs resulting from unique physical conditions, including historical paint and varnish manufacturing and storage on a site that adjoins an inlet of the East River and an obsolete manufacturing building constructed in 1923. The manufacturing activities, which were legal when they were undertaken, have resulted in the Site being classified as a "significant hazard to human health" by the New York State Departments of Environmental Conservation ("DEC") and Health ("DOH") and a large-quantity generator under the Resource Conservation and Recovery Act ("RCRA").

The Site is characterized by environmental contamination and abnormal sub-surface conditions, including soil and groundwater contamination, soil contaminate vapors, volatile organic compounds ("VOCs") and semi-volatile organic compounds ("SVOCs"). As described below, Roux Associates, Inc., a national environmental consulting and management firm with expertise in Superfund, RCRA and Brownfield redevelopment projects, reported that as a result of these conditions, any new building on the Site would require special remediation and excavation measures, generating premium construction costs.

II. Project Site

The Site is an irregularly shaped parcel of land located within an M1-4 zoning district in Long Island City and bounded by Vernon Boulevard, 46th Avenue and Anable Basin, an inlet of the East River. The Site is “L”-shaped and has 100 feet of frontage on 46th Avenue between 5th Street and Vernon Boulevard, 154.5 feet of frontage on Vernon Boulevard between 45th and 46th Avenues, and 42 feet of frontage along Anable Basin. The Project Site is approximately nine-tenths of an acre (38,574.8 sq. ft.) and excludes a 75’ x 100’ residentially zoned parcel located at the intersection of Vernon and 46th Avenue.

The Site is currently improved with three buildings: a vacant 4-story manufacturing building (the former Paragon Paint factory) fronting on Vernon Boulevard; a vacant three-story warehouse, formerly used in conjunction with the Paragon Paint factory, fronting on 46th Avenue; and a one-story manufacturing building fronting on Vernon Boulevard (not part of the Paragon Paint Factory operations). The buildings contain a total of 74,805 sq. ft. of floor area (1.94 FAR).

III. Surrounding Land Use and Building Context

Land uses are mixed within a 600 foot radius of the Site (the “Surrounding Area”). Three mixed-use commercial and residential buildings are located adjacent to the Site at the northwest intersection of Vernon Boulevard and 46th Avenue. Several three-story buildings with ground floor commercial and residential use above are located on Vernon Boulevard to the south of 46th Avenue. In addition, an array of high-density residential buildings within the Queens West development, ranging from 18 to 41 stories, are located to the west of the Site along the East River waterfront and Anable Basin.

A large custom plastic manufacturing and packaging facility (“Plaxall”) is located to the west, southwest and between 46th Road and Anable Basin, and also occupies property to the northwest, on the north side of Anable Basin. A steel manufacturer and installer (Empire City Iron Works) is located to the east between 46th Avenue and 45th Road and a printing service/graphic designer (Falcon Perspectives) is located within the Site at the head of Anable Basin, facing Vernon Boulevard. Other commercial uses within the Surrounding Area include an auto body repair shop (Universal Auto Repair & Body Works Inc.) to the southeast and two vehicle fueling stations (NYC Taxi and Ryder Truck Rental) to the north along Vernon Boulevard.

IV. Zoning History

Long Island City was formerly a manufacturing area, with industrial uses dating back to the 19th Century. While other manufacturing uses existed prior to Paragon Paint, paint and varnish manufacturing and storage on the Project Site commenced 94 years ago, in 1923, and was discontinued in 1998. The factory has been vacant for the last 19 years.

Under the 1916 Resolution, the Site was located in an Unrestricted District. In 1961, the Site was rezoned to M3-1 (heavy manufacturing). In 1995, reflecting a Citywide decline in

manufacturing, the underlying zoning district was changed from M3-1 to M1-4 (light manufacturing and commercial use). In addition to the underlying M1-4 district regulations, the Site is subject to the Waterfront Zoning (ZR Art. VI, Ch. 2) and Flood Hazard Area (ZR Art. VI, Ch. 4) regulations of the Zoning Resolution.

V. Prior BSA Action

The BSA has not considered or adopted any variances or any other actions on the Project Site in the past. However, BSA has undertaken several actions in the near vicinity. For example, on September 23, 2008, the Board granted a variance (BSA 238-07 BZ) for residential and Use Group 3 community facility use on a 66,838 square foot site located two blocks away from the Project Site at 5-11 47th Avenue. A large portion of this site was located within the same M1-4 district and the application presented many of the same facts as the Proposed Project, including the following: vacant site; historical manufacturing use (ink and varnish) resulting in unique contamination; proposed residential use; and subject to the Voluntary Brownfield Cleanup Program and RCRA. In that earlier case, the Board recognized the premium remediation costs as a basis for a variance.

VI. Prior CPC Actions

There have been a number of City Planning Commission (“CPC”) actions to facilitate residential use and development within Long Island City, including the following:

Summary of Prior CPC Actions		
Cal. No.	Date Issued	Description
C140275 ZMQ	June 11, 2014	49 th Avenue Rezoning
N 140274 ZRQ	June 11, 2014	49 th Avenue Rezoning
C 110253 MMQ	May 22, 2013	Queens West Park Addition
N 130134 ZRQ	April 10, 2013	Special Long Island City Text
N 090304 ZRQ	May 20, 2009	Special Long Island City District Text Amendment
C 080365 HAQ	September 24, 2008	Hunters Point South
C 080364 PCQ	September 24, 2008	Hunters Point South
C 080362 ZMQ	September 24, 2008	Hunters Point South
C 080276 MMQ	September 24, 2008	Hunters Point South
N 080363 ZRQ	September 24, 2008	Hunters Point South
N 040272 ZRQ	June 23, 2004	Hunters Point Rezoning, Text Amendment
C 040273 ZMQ	June 23, 2004	Hunters Point Rezoning, Map Change
C 890367 ZMQ	July 29, 1991	R.A.K. Tennis Corporation (a/k/a/ River East)

VII. Concurrent CPC Application

The Applicant has filed a Pre-Application Statement (“PAS”) for certification by the Chair of the City Planning Commission for a waterfront public access area (“WPAA”), pursuant

to ZR 62-811. This is a ministerial act confirming that a waterfront public access area, consisting of a shore public walkway, will be provided on the Site.

VIII. Applicable Use and Bulk Regulations

Within M1-4 districts, certain community facility, commercial and manufacturing uses in Use Groups 4-14, 16 and 17 are permitted as-of-right. Residential use is not permitted. As-of-right community facility uses include ambulatory medical facilities (medical offices), houses of worship, and certain museums.¹ The FAR for commercial and manufacturing use is 2.0 (ZR 43-12) and the FAR for community facility use is 6.50 (ZR 43-122). On an as-of-right basis, the Site could be developed with up to 77,150 sq. ft. of commercial/manufacturing floor area, 250,738 sq. ft. of community facility floor area, or a mixed-use building containing both.

The height and setback regulations of the underlying M1-4 district at the Project Site are modified by the Waterfront Zoning regulations. For predominantly community facility buildings, the maximum base height is 80 feet (ZR 62-341(c)(1)) and the maximum building height is 225 feet. For commercial and manufacturing buildings, the maximum base height is 60 feet (ZR 43-43 and 62-341(c)(1)) and the maximum building height is 110 feet (ZR 62-341(c)(2)). A 10 foot setback is required above the base height on Vernon Boulevard and a 15 foot setback is required above the base height on 46th Avenue (ZR 62-341(a)(2)). In addition, a 15 foot setback is required along the visual corridor extending west from Vernon Boulevard to the waterfront public access area and a 30 foot setback is required from the boundary of the waterfront public access area (ZR 62-341(a)(2)). Above the maximum base height, building floor plates are limited to 7,000 square feet (ZR 62-341(c)(4)). For developments having portions above the maximum base height, the minimum lot coverage landward of the shoreline at a height of 20 feet must be at least 30% (ZR 62-341(c)(3)).

IX. As-of-Right Alternatives

The Applicant has considered as-of-right alternatives for manufacturing, community facility and commercial use, as described below.

Manufacturing Use

M1-4 districts permit Use Group 17 light manufacturing uses at 2.0 FAR (77,156 sq. ft.). Manufacturing rents in the vicinity of the Project would be \$20-\$30 per square foot. A projected rental income of \$20-\$30 per sq. ft., would not overcome the construction, operations and premium remediation costs.

In addition, the local infrastructure, site constraints and parking and loading requirements, specific to manufacturing uses, would increase construction costs and interfere with the functioning of such development. The Site is located 50 feet away from the intersection of Vernon Blvd. and 46th Drive; Vernon Blvd. is a two-way, 80-foot wide street which is the

¹ Museums are limited to those ancillary to existing motion picture production studios or radio or television studios and located within 500 feet of such studios.

only north-south local truck route along the East River between the Queens Midtown Tunnel and Astoria Blvd. and 46th Avenue is a 60 foot wide, one way street. In addition, a 77,156-sq. ft., manufacturing facility would require up to four loading docks under ZR §44-52. These docks are required by zoning to be 50 feet in length and 12 feet in width, and with a vertical clearance of 14 feet (ZR §44-581).² And, because the Site is adjacent to a residential zoning district, any loading berth within 60 feet of the district boundary must be completely enclosed (ZR §44-583).

It would be impractical for 50-foot long trailers to back into enclosed loading berths. A reverse back-in turn from Vernon Blvd into the Site would adversely impact traffic conditions at the intersection of Vernon Blvd. and 45th Road directly across from the Site. In addition, in order to execute a reverse back-in turn from 46th Avenue, the trailer would have to reverse against the flow of traffic on 46th Avenue. These maneuvering options are not practical and are likely to generate traffic hazards on both streets. Maneuverability on the Site, within the building, is impractical because to do so would require large floorplates and wide column spacing/spans to allow for a proper turning radius.

Community Facility Use

In M1-4 Districts, the maximum FAR for community facility use is 6.50 FAR, which would permit a 250,757-sq. ft. development. However, the only community facility uses allowed as of right are “museums ancillary to existing motion picture, radio, or television studios”;³ (ii) houses of worship; and (iii) ambulatory diagnostic health care facilities. These restrictions limit the types of potential tenants. Community Facility rents in the vicinity of the Project would be \$30-\$50 per square foot. A projected rental income of \$30-\$50 per sq. ft., would not overcome the construction, operations and premium remediation costs.

Houses of worship of 250,000 sq. ft. are too large to be feasible. Leaving aside the St. John the Divine complex in Morningside Heights, which includes 13 buildings, the next largest house of worship in the City is the Brooklyn Tabernacle, with 130,000 square feet of floor area, and the next largest is Congregation Emanu-El in Manhattan, with 125,863 square feet of floor area. A 250,000 sq. ft. facility at the Project Site would be roughly twice as large and is not a realistic development scenario.

While there may be some demand for diagnostic and ambulatory care facilities, there is no precedent for a 250,000 sq. ft. facility at a waterfront location. The next largest facilities in Long Island City, apart from a five building medical center, are the Hyperbaric Wound Center, Mount Sinai Multispecialty Clinic, Floating Hospital Clinic, and Queens Health Center, all of which are in the 55,000 sq. ft. range. And, even if there was a user for all of this space, rents

² The following minimum loading berth dimensions are listed by length (L), width (W) and vertical clearance (V). For loading berths accessory to commercial uses require 33 ft. (L), 12 ft. (W) and 14 ft. (V). For manufacturing uses with less than 10,000 of floor area, accessory loading berths require 33 ft. (L), 12 ft. (W) and 14 ft. (V). Above 10,000 sf of floor area, loading berth length requirements increase to 50 ft. (L) (ZR 44-581).

³ Under ZR §42-12, museums must be ancillary to an existing motion picture production studio or radio or television studio that is located within 500 feet of the museum. There are no studios meeting this description and therefore a museum is not a permitted use.

could only be projected at \$30-\$50 per sq. ft. Rents at this level would not overcome the construction, operations, and premium remediation costs.

Commercial Use

The maximum FAR for commercial use is 2.0 FAR, which would permit 77,156 sq. ft. of floor area. As set forth in the Financial Analysis, the projected income per sq. ft. for a hotel (Use Group 5) is more profitable than for other permitted commercial uses. Therefore, a hotel has been selected as the as-of-right commercial alternative. It is assumed that such hotel would include approximately 73,268 sq. ft. (1.90 FAR) of hotel floor area and 3,913 sq. ft. of ground floor retail, including 132 hotel keys at an average net area of approximately 394 sq. ft. per key. The most likely hotel type would be a “select service” hotel with limited amenities, similar to other hotels located within the surrounding area.

The hotel design that maximizes the available FAR would be a single building with street frontage on Vernon Blvd. and a height of 110 feet, with the existing Paragon Building demolished to facilitate the development of the hotel. The western portion of the Site would be landscaped.

The total development cost of this hotel alternative is estimated at \$77,291,000 and the estimated capitalized net operating income is estimated at \$59,400,000, resulting in a loss of \$15,013,000. The development costs of the hotel alternative would be less than its value and would not be sufficient to overcome the premium remediation costs.

X. Description of Proposed Project

The Proposed Project would include approximately 203,857 sq. ft. (5.285 FAR) of residential floor area (Use Group 2) and 9,010 sq. ft. (0.232 FAR) of retail floor area (Use Group 6), for a total of 212,867 sq. ft. of floor area and an FAR of 5.518.

The Proposed Project consists of one new mixed-use building and the residential conversion of the former Paragon Paint factory building with ground floor retail. The mixed-use building, referred to herein as the “Anable Building,” is set back 37.5’ from Vernon Boulevard and located behind and above the Paragon Paint building, with a common residential entrance serving both buildings. The Anable Building also has a one story extension on 46th Avenue (the “South Annex”) with local retail, a second entrance to the residential lobby, and building amenities. The Paragon Paint building will be converted to a series of loft-like units on the upper floors and retail and residential amenity areas on the ground floor. A total of 248 residential units are proposed in the new and converted buildings.

The ground floors of the Paragon Building and the South Annex will include retail space accessible from Vernon Blvd. and 46th Avenue. Building entrances will be elevated by means of stairs and ramps in accordance with the applicable Flood Hazard regulations.

Waterfront Public Access Area (WPAA)

Under Article VI of the Zoning Resolution, the Site is a Waterfront Zoning Lot within the Queens LIC Waterfront Access Plan. This designation generally requires that a waterfront public access area (“WPAA”) be developed and maintained for public use in accordance with the

Department of City Planning's Queens Waterfront Access Area Plan. However, as the Project Site has less than 100 feet of shoreline and will retain an existing building, the upland connection and typical WPAA are not required; only a Shore Public Walkway ("SPW") and access to the SPW are required.

The Proposed Project's publicly accessible open space, in addition to the required SPW, supplements the SPW required by zoning and has been designed to achieve the following goals: (1) engage the waterfront and encourage public access; (2) create a vibrant space that allows the public to engage with the Basin; and (3) reintroduce a diversity of native and coastal-adapted plant species.

This public space includes the SPW (esplanade), an upland connection from Vernon Boulevard to the walkway, and supplemental public access areas. These areas total 9,195 square feet, which equals approximately one-quarter of the Project Site. While the waterfront public access area will be built as an independent public amenity, it will connect to public access areas on adjoining properties when those sites are developed to create a continuous waterfront network along the East River and Anable Basin in Long Island City.⁴

XI. DOB Objections

The objections issued by the Department of Buildings ("DOB"), dated September 2, 2015 acting on Application No. 420654456, and are as follows:

1. The proposed mixed use buildings, within a M1-4 District, have a primary use of Residential (UG2) contrary to the permitted use provisions of Section ZR 43-122.
2. The proposed mixed use buildings, within a M1-4 District, proposes 5.285 FAR for residential and 0.232 FAR for commercial for a total of 5.518 FAR contrary to Sections ZR 43-12 and ZR 62-326.*
3. The proposed mixed use buildings do not provide a loading berth required for the proposed 9,010 sf of commercial use contrary to the provisions of Section ZR 44-52.

⁴ The adjacent site (Plaxall) has filed a Pre-Application Statement with the Department of City Planning seek a rezoning and zoning text changes to construct a large-scale development with eight buildings containing a total of 4.2 million sf of floor area, including 3.6 million sf of residential, 250,000 sf of commercial, and 259,000 sf of manufacturing/production use, at an average of 7.58 FAR). The lowest building in the development is 220' and the tallest is 695' in height. The lot adjacent to the Proposed Project on the west, and the lot immediately adjacent to that lot, are proposed with 451 and 601 dwelling units, and heights of 300 and 400 feet, respectively.

4. The proposed mixed use buildings, within a M1-4 District, have a maximum building height of 291.67 ft. contrary to the provisions of Section ZR 62-314 (Table A).*
5. The proposed mixed use buildings, on a zoning lot of less than 1.5 acres, have a residential story above the permitted maximum base height in excess of 7,000 sf, contrary to the provisions of Section ZR 62-341(c)(4).*
6. The proposed mixed use building along 46th Avenue is located within the required open space adjacent to Lots 2 & 3, contrary to the provisions of Section ZR 43-303.

XII. Requested Variances and Rationale

Use

The Applicant is requesting a variance to permit residential use (Use Group 2) in an M1-4 District. As discussed above, conforming manufacturing, commercial and community facility uses would not result in a feasible development project. Thus, as the financial analysis documents, a residential use, in conjunction with the bulk waivers discussed below, is the only proposed use that will yield a reasonable return to overcome the unique physical conditions/environmental hardship of the Project Sites.

FAR

The underlying FAR is 6.5 for community facility use (ZR 43-122), 2.0 for commercial use, and 2.0 for manufacturing use (ZR 43-12). This application seeks a variance to permit a residential FAR of 5.285 and a total FAR of 5.518. As set forth in the Financial Analysis, the proposed FAR yields a net capital gain of \$352,000, and is the minimum necessary to constitute a reasonable economic return.

Loading Berth

The underlying requirements for loading within an M1-4 district provide that one berth is required for commercial floor area between 8,001 sq. ft. to 25,000 sq. ft. (ZR 44-52).

The Proposed Project has a total of 3,946 sq. ft. of retail use within the South Annex and 5,064 sq. ft. of retail use within the Paragon Building. These two retail spaces operate independently from another and neither would independently require a loading berth, but in the aggregate (9,010 sq. ft.) require one loading dock. A waiver of this requirement is sought because a berth would not be required if each retail establishment were considered individually. Moreover, providing a berth for the aggregated retail uses, would reduce the retail floor area to below 8,000 sq. ft., at which point no loading dock would be required. In addition, construction of a loading dock would reduce the amount of retail floor area, affect its suitability for particular retail uses, and result in less income and a lower return.

Building Height

The Waterfront Zoning mandates a maximum base height of 60 ft. (ZR 62-341(c)(1)) and a maximum building height of 110 ft. for commercial and manufacturing uses, and a maximum base height of 85 ft. and a maximum building height of 225 ft. for permitted community facility uses (ZR 62-341(c)(2)).⁵ The Applicant is requesting a variance to permit a maximum building height of 291.67 ft. for the Anable Building in order to accommodate the residential floor area. Not only is this height consistent with or lesser than other waterfront developments in the vicinity, it will permit a residential tower form which will maximize at-grade open space, preserve the visual corridor to the waterfront and increase the average rental value of the units.

Accommodating the required residential floor area in two towers while reducing the height, would increase the construction costs (e.g., doubling vertical circulation core, MEP infrastructure, etc.), not afford relief from the premium remediation costs. The required minimum distance between two residential buildings would have a greater neighborhood impact because it would push the buildings closer to Vernon Blvd. and 46th Street (rather than the 37.5 foot setback proposed along Vernon Blvd.) making the buildings more visually pronounced from the adjoining streets.

Floorplate

The Waterfront Zoning limits the size of any story above the maximum permitted base height to a maximum of 7,000 sq. ft. (ZR 62-341(c)(4)). Above the maximum base height of 60 feet, the proposed Anable Building has typical floorplates of 7,408 sq. ft. As illustrated on the Proposed Conditions Plans (Exhibit 15, page 12), this relatively small increase in the size of the floor plate results in an efficient residential floor plate while limiting the overall height of the building. (See Section XIV.)

Open Space

The underlying M1-4 district requires that 15 feet of open space be provided along the side lot line of a zoning lot in a manufacturing district when such side lot line is also the rear lot line of a zoning lot in a residential district (ZR 43-303). As noted above, the Project Site does not include the property located at the intersection of 46th Avenue and Vernon Boulevard, creating the need for additional open space similar to a side yard. The excluded property is comprised of three narrow (25' x 100') zoning lots and is located in an R6A zone with a C1-5 overlay, requiring 15 feet of open space extending from the rear lot lines of Lots 2 and 3. On the Project Site, the existing three story building with a height of 40 feet fronting on 46th Avenue is built to the side lot line and does not comply with this provision. The one story commercial retail building proposed to be built to the Project's side lot line to a height of 20 ft. would decrease the existing degree of non-compliance by 50%. Thus, although still requiring a variance, the Proposed Project reduces the degree of non-compliance that has existed for the past 80 years.

⁵ These heights are permitted where community facility uses are 75 percent or more of the total floor area of a building.

XIII. Environmental History and Status

The Site has a long history of industrial uses that has resulted in unique forms and quantities of contamination. While the existing buildings were reportedly constructed between 1923 and 1947, the Site had been used for heavy industrial purposes since 1898. Prior uses included: paint and varnish manufacturing, packaging, storage and shipping; bottle and crate storage; chalk products; sheet metal works; and metal painting.

DEC admitted the Site into the Brownfield Cleanup Program (“BCP”) on September 4, 2008 on a voluntary basis and entered into a Brownfield Cleanup Agreement (“BCA”) with the owner at that time. However, no remedial work was completed pursuant to this agreement.

On January 14, 2009, the New York State Department of Health (“DOH”) declared the Site to be a “significant threat to public health.” The Site is the only BCP site located on the Long Island City waterfront within the Surrounding Area that received a “significant threat” declaration.

Remedial Work under the Brownfield Program

Roux Associates completed remedial investigation activities in accordance with a Remedial Investigation Work Plan (“RIWP”) approved by DEC on February 7, 2013. The objectives of the investigation were to determine the nature and extent of contamination on Lot 4, assess the potential exposure of receptors to these contaminants, and generate sufficient information to allow the development of a Remedial Action Work Plan (“RAWP”). The results of the investigation were presented in the Remedial Investigation Report (“RIR”) dated May 15, 2015 (see Exhibit 19). As discussed in the RIR, the primary contaminants of concern (“COCs”) were semi-volatile organic compounds (“SVOCs”) and metals in soil, volatile organic compounds (“VOCs”), SVOCs and metals in groundwater, and soil vapor.

The primary source of the soil and groundwater contamination was traced to a light non-aqueous phase liquid (“LNAPL”) plume that resulted from leaks and spills from underground storage tanks and associated pipes and conduits. As documented in the RIR, there were two distinct LNAPL plumes that required remediation: one under the courtyard; and the other under the driveway.

Following the completion of the RIR, the Applicant prepared the RAWP designed to achieve compliance with the applicable standards, criteria and guidance (“SCGs”) and remedial action objectives (“RAOs”). The plan elements included removal of grossly contaminated soil in LNAPL source areas to meet standards for benzene, ethylbenzene, isopropyl benzene and xylenes. The groundwater was addressed through the removal of the LNAPL plumes and treatment of VOCs in groundwater through in-situ chemical oxidation. The soil vapor issues were addressed by capping Lot 4 with a composite cover and the installation of sub-slab pressurization systems in occupied buildings. A Site Management Plan was developed to insure that the appropriate engineering controls would remain on a long-term basis.

The RAWP was submitted to the DEC for approval in October, 2015. After a public comment period, DEC approved the RAWP and the Applicant undertook the remedial work. Upon completion of the remedial work in 2016, the Applicant submitted a final engineering

report (“FER”) to DEC that documented all of the work that had been performed, including investigations, interim remedial measures, and the soil and groundwater cleanup performed under the RAWP.

Remedial Work under RCRA

Prior to the implementation of the RAWP, DEC required that the Applicant prepare and implement a Closure Plan for the Paragon Paint factory due to the Site’s designation as a Large Quantity Generator (“LQG”) of hazardous waste. Hazardous wastes are substances known to be harmful to human health and the environment when not managed properly. The RCRA Closure Plan focused on the removal of contamination within the Paragon Paint building resulting from the manufacture of paints and varnish and the storage of hazardous waste prior to off-site shipment and disposal. This remediation work is a federally mandated obligation and would have been required regardless of whether the Paragon Paint building was demolished or reused.

Actual Remediation Work Performed

The remedial work, as performed, was a major undertaking and, as explained below, a number of factors combined to require substantially more remedial work, at a substantially higher cost, than was assumed during the investigation and planning phase.

A) RAWP and IRM Work

Prior to the performance of the remedial work, various interim remedial measures (“IRMs”) were implemented. A summary of these measures is included below, and a more detailed discussion is included in the FER (Section 3.1).

2009 Interim Remedial Measures

On February 11, 2010, DEC approved a Revised Interim Remedial Measure Work Plan prepared by Apex Companies, LLC (Apex). The Work Plan prescribed the use of vacuum extraction on a monthly basis to recover LNAPL, contaminated groundwater, and soil vapor. One gauging and sampling event occurred in March 2010 followed by six vacuum extraction events which occurred on a monthly basis, with the last reported event occurring in August 2010. Apex reported that in total, 434 gallons of fluid and 224 gallons of LNAPL, primarily attributed to mineral spirits, were recovered during the extraction events.

2011 Supplemental Interim Remedial Measures

Roux Associates reinitiated LNAPL IRM recovery events in December 2011. Between this date and June 2014, approximately 2,239 gallons of LNAPL, primarily attributed to mineral spirits were recovered.

2013 Removal of Underground Storage Tank Contents

During completion of the Remedial Investigation UST inventory task, LNAPL was observed to be present in three USTs. An interim work plan was submitted by Roux Associates to NYSDEC that included removing LNAPL from these USTs with a vacuum truck. The plan was approved by NYSDEC on June 26, 2013 was initiated on July 10, 2013. In total, 1,865-

gallons of mineral spirits (GT-2 and CT-3/4) and 5,748 gallons of water containing diesel/ fuel oil (CT-1) were removed using a vacuum truck and transported offsite for proper disposal. With regards to each UST, the following additional information is noted:

- The size of G-2 was not confirmed at the time the IRM was performed. It was considered to be a mineral spirit tank with the performance of the 2015 IRM.
- The size of CT-1 was estimated to be 20,000 gallons. It was confirmed to be a diesel/ fuel oil tank with the performance of the 2015 IRM.
- The size of CT-3/4 was estimated to be 10,000 gallons. It was confirmed to be a mineral spirit tank with the performance of the 2015 IRM.

2015 Removal of Underground Storage Tanks and Contents

UST removal activities were completed prior to RAWP implementation in accordance with a UST Removal Notification letter dated December 22, 2014. These activities originally consisted of the removal of three USTs below the courtyard and two USTs below the driveway. During the performance of the work, USTs were accessed and sampled, where possible, for fingerprint analysis; removed; cleaned out; and disposed off-site. As part of the tank removal process, the contents of each tank that could be easily pumped out was initially removed prior to excavating each tank. A total of 75,404 gallons of non-hazardous oily water was pumped from the USTs prior to removal. This consisted of a mixture of mineral spirits (60 gallons from CT-3/4), diesel fuel (680 gallons from CT-1) and water (74,664 gallons that had accumulated within the two fuel tanks in the driveway [F-1 and F-2] and the six other tanks in the courtyard [CT-1, CT-2/5, CT-3/4, CT-6/7, CR-8 and CT-9]). Additional information on each of these tanks is provided below:

- F-1: The size of F-1 was estimated to be 550 gallons. It was previously confirmed to be a diesel/ fuel oil tank.
- F-2: The size of F-2 was estimated to be 550 gallons. It was previously confirmed to be a diesel/ fuel oil tank.
- CT-1 (single chamber): The size of CT-1 was estimated to be 20,000 gallons. It was considered to be a diesel/ fuel oil tank based on fingerprint analysis on LNAPL sampled from CT-1.
- CT-2/5 (double chamber): The size of CT-2/5 was estimated to be 20,000 gallons. Only water was observed in the tank. Therefore, the type of product previously stored in the tank could not be confirmed.
- CT-3/4 (double chamber): The size of CT-3/4 was estimated to be 10,000 gallons. It was considered to be a mineral oil tank based on fingerprint analysis on LNAPL sampled from CT-4 chamber.
- CT-6/7 (double chamber): The size of CT-6/7 was estimated to be 10,000 gallons. Only water was observed in the tank at CT-6 Chamber. The CT-7 chamber was not accessible. Therefore, the type of product previously stored in the tank could not be confirmed.

- The size of CT-8 (single chamber) was estimated to be 20,000 gallons. It was not accessible. Therefore, the type of product previously stored in the tank could not be confirmed.
- The size of CT-9 (single chamber) was estimated to be 20,000 gallons. Only water was observed in the tank. Therefore, the type of product previously stored in the tank could not be confirmed.

In addition, the following was also removed as part of this IRM:

- 151 cubic yards (“CY”) of clean concrete from UST vaults or overlay;
- 70.9 tons of soil surrounding the USTs;
- Eighty-one 55-gallon drums of non-hazardous tank bottom, solid material; and
- Six 55-gallon drums of hazardous, solid material from the 550-gallon USTs.

The tank closure reports are set forth in Appendix D of the FER.

Following the completion of the interim remedial measures, the remedial action phase was initiated. In accordance with the RAWP, a “Track 4” cleanup was pursued, including the following elements: (i) excavation and off-site disposal of grossly contaminated soil that exceeded site-specific standards; (ii) closure of remaining USTs by removal or abandonment; (iii) backfill of excavated areas; (iv) dewatering, treatment and off-site disposal of groundwater to facilitate excavation; (v) treatment of VOCs in groundwater; (vi) installation of five automatic LNAPL recovery pumps at property boundaries where the LNAPL plume extended off-Site and underneath the warehouse; and (vii) installation of a site-wide composite cover system. Additionally, nine new monitoring wells were installed as required by DEC. A description of each element of the “Track 4” cleanup is provided in detail in the FER; these elements are summarized below.

Excavation, Backfilling and Dewatering

The volume of material excavated and disposed of off-site increased significantly based on the results of post-excavation soil samples and visual observation that dictated additional lateral and vertical excavation beyond the limits identified in the RAWP. (See Section 4.5 of the FER.) Between October 9, 2015 and March 11, 2016, approximately 4,800 cubic yards of soil that exceeded the Restricted Residential and/or Protection of Groundwater standards were excavated. This was more than twice the volume anticipated in the RAWP. Approximately 6,100 tons of excavated material could not be disposed of at a non-hazardous disposal facility as originally contemplated, due to the strong odors emitted by this material, and had to be disposed of at a hazardous waste disposal facility. More than twice the tonnage of backfill, consisting of approximately 5,300 tons of fill and recycled concrete aggregate, had to be procured and installed as areas of excavation were completed and a greater amount of groundwater had to be pumped, managed, treated and disposed of.

UST Closure

The size and number of USTs excavated and removed in the courtyard area also changed significantly based on field observations. The original UST inventory in 2013 determined that three dished USTs (used for the storage of industrial liquids) and a single fuel oil UST were present, with the dished USTs varying in size from 2,000 to 5,000 gallons. However, during the remediation, five dished USTs were encountered, excavated and removed from the courtyard.

Additionally, the actual size and number of USTs abandoned in the former garage area also changed based on field work. The UST inventory assumed that there were 11 separate USTs, the majority of which were 2,000 to 5,000 gallons in size and one of which was 10,000 gallons. During the remediation, it was determined that the USTs, although fewer in number than had been assumed, were much larger. Three of the six UST's that were found ranged in size from 9,000 to 21,000 gallons.

In-situ Chemical Oxidation Program

A single round of chemical injections was conducted to address VOCs in groundwater and soils underneath the warehouse and was completed on December 2, 2015. The chemical oxidant was injected at a total of 20 locations consisting of 16 permanent points installed in the basement and four temporary points along the length of the driveway adjacent to the warehouse.

A combined total of 2,240 pounds of chemical oxidant was injected. While groundwater quality had improved following the first-round of injections in the warehouse area, some residual VOCs in groundwater still exceed NYSDEC standards. As a result, additional in-situ treatment and monitoring was required post-remediation.

LNAPL Recovery System Installation

In accordance with the RAWP, five automatic product-only recovery pumps were installed in five new recovery wells (RW-1 through RW-5) to address any remaining LNAPL following excavation activities. Each recovery well was connected to a system that recovers LNAPL using a pressure/vacuum pump. Once the pump canister is filled, the pump reverses, pressurizes the system and pumps the recovered LNAPL to the surface and into a 55-gallon drum that is stored on top of a secondary containment pallet. It is anticipated that the LNAPL recovery system would be operated, maintained and monitored for a period of at least 18 months following the completion of remediation activities.

Monitoring Well Installation

As part of the remedial action, a total of nine new monitoring wells were installed as discussed below:

- Three monitoring wells (MW-40 through MW-42) were installed within the excavated and backfilled area in the garage to replace wells that were removed during excavation.
- Five monitoring wells (MW-43 through MW-47) were installed within the excavated and backfilled area in the courtyard to replace wells that were removed during excavation.

- One monitoring well (MW-48) was installed within the footprint of the Paragon Paint building in close proximity to MW-4 and MW-22 to facilitate continued monitoring of free-product.

B) RCRA Cleanup

A RCRA Closure Plan for the former paint factory was subsequently implemented between March 25, 2015 and August 11, 2015. The scope of this work focused on the decontamination of the following areas: (i) the second, third, and fourth floors of the building, which contained approximately 65 ASTs and other vessels, as well as pumps and piping formerly used in paint and varnish manufacturing; and (ii) the first floor of the garage, which was used to store hazardous waste prior to off-site shipment and disposal. This work is summarized in the RCRA Closure Report in Appendix C of the FER.

As part of the RCRA Closure, all AST's and vessels within the hazardous waste storage areas were decontaminated and removed from Site. Pneumatic chipping guns, pumps, vacuums, scrapers, shovels and a mini-excavator were used to remove residue on the sides and bottom of these containers. The following types and quantities of waste material were removed:

- six 55-gallon drums (330 gallons) of hazardous PCB gel;
- three 275-gallons totes (750 gallons) of hazardous flammable paint liquids;
- twenty-nine 55-gallon drums (11,600 lbs.) of hazardous flammable paint gel;
- three one-cubic yard boxes (5,500 lbs.) of hazardous flammable paint solids;
- 6.95 tons of hazardous solid waste containing lead;
- 7.01 tons of hazardous solid waste containing mercury;
- 18.29 tons of hazardous lead paint gel;
- seven 275-gallon totes (19,500 lbs.) of non-hazardous white liquid;
- six 275-gallon totes (15,000 lbs.) of non-hazardous brown liquid;
- nine one-cubic yard boxes (25,000 lbs.) of non-hazardous titanium dioxide;
- nine one-cubic yard boxes (11,700 lbs.) of non-hazardous paint gel (solid);
- fifty-seven 55-gallon drums (19,950 lbs.) of non-hazardous paint gel;
- 24.93 tons of non-hazardous paint solids/resins; and
- 160 cubic yards of scrap metal from 60 ASTs/vessels and their piping and equipment.

In addition to the above, the RCRA closure required decontamination of the floor, wall and ceiling surfaces within the hazardous waste storage areas. These areas were decontaminated by pressure washing, abrasion and removal of concrete overlay. The following waste was generated during decontamination and disposed of off-Site:

- 8,465 gallons of non-hazardous wash and rinse water;
- 28.47 tons of floor paint residue;
- 18.29 tons of floor paint residue with lead; and
- 18.94 tons of concrete.

Following decontamination, post-cleanup rinsate samples were collected from each of the four floors of the former paint factory to verify whether the cleanup goals had been met. A total of 40 samples were collected and analyzed for VOCs, SVOCs, Toxicity Characteristics Leaching Procedure (TCLP), RCRA metals, RCRA hazardous waste characteristics, and PCBs.

The initial round of rinsate sampling found three exceedances of the applicable standards, including PCBs in two samples and SVOCs in one sample. All three of these sample locations were then re-cleaned using a degreaser coupled with a high pressure rinse and a second round of sampling was undertaken.

C) Anable Basin Bulkhead Replacement

When the Applicant acquired the Site, the timber bulkhead within Anable Basin was deteriorated and collapsed in some areas. This condition increased the risk that contaminants from the Site would migrate into Anable Basin and from there into the East River due to tidal action and ground water flow. For this reason, the repair and remediation of the bulkhead was critical before any site work, including the measures outlined in the RAWP, were performed.

The Applicant submitted an application to DEC for the replacement of the bulkhead that was approved on October 23, 2015 (see Exhibits 22.1 and 22.2). The application to DEC, prepared by BlueShore Inc., for the bulkhead work provided three alternatives: (i) no action; (ii) riprap revetment; or (iii) new sheet-piles with the existing bulkhead in-place. In the discussions of the alternatives, the no action was not viable because of the continued risk loss of contaminated sediments entering the watercourse. The riprap revetment was deemed inappropriate because it "...would not sufficiently seal groundwater or prevent contaminants from the...Site...from potentially migrating ... into the wetland." The sheet-pile alternative was mandated and resulted in additional approximately \$1.687 million in premium costs.

The new bulkhead sheet-piles were driven as close as practicable to the seaward face of the existing bulkhead timbers to minimize streambed disturbance and soil loss. Full sheet-pile length interlock sealants, providing chemical resistance and low permeability, was utilized provided to prevent potential contaminant migration into the watercourse.

Current Status

All of the work required by the RAWP and BCP Program, except for ongoing site management as discussed below, has been completed to the satisfaction of DEC. which issued a Certificate of Completion on January 13, 2017. See Exhibit 24.

Continuing Work

During the post-remediation phase, the Applicant is required to implement a SMP that includes the following tasks: (i) operation, maintenance, monitoring and decommissioning of the LNAPL recovery system for approximately 18 months; (ii) quarterly groundwater monitoring and monthly, quarterly and annual reporting; (iii) design and implementation (in multiple phases) of measures to address residual soil contamination; (iv) abandonment of on-site and off-site monitoring wells; and (v) performance of annual site inspections.

XIV. Financial Analysis

The financial analysis submitted herewith as Exhibit 6 documents actual premium remediation costs of \$14.364 million. The more notable premiums costs include the following:

- \$2,024,125 for engineering;
- \$1,850,321 for RCRA cleanup;
- \$1,687,221 for bulkhead replacement;
- \$1,687,221 for site mobilization;
- \$1,386,271 for transport/disposal/treatment of hazardous waste; and
- \$1,106,869 for site preparation; and
- Over \$4,500,000 of the remaining premium remediation costs are listed in the Financial Analysis (see Exhibit C).

While ongoing monitoring and reporting expenses of \$330,000 will be required over the next two years they are not included in the premium costs.

XV. Applicant's Efforts to Minimize Requested Relief

The Applicant has made significant efforts to minimize the cost of the remediation, in order to reduce the financial hardship and seek the minimum variance necessary. As discussed below, these measures include: (i) selection of the less costly BCP remediation program;⁶ (ii) design changes to the proposed building; (iii) retention of the former paint factory building; and (iv) reduction in size of the southernmost building.

Selection of Remediation Program

The RAWP identified two alternative remediation tracks for the Site. Track 1 remediation would have required full excavation of soil down to rock. Although a Track 1 cleanup would have permitted the unrestricted use of the Site in the future, the costs would have increased clean-up cost by a factor of 3 times or more. Track 1 clean up would have included: (i) complete excavation and soil remove down to rock, which is cost prohibitive for site with high ground water levels; (ii) deep sheet-piling/stabilization and associated de-watering; (iii) increased quantities of hazardous and non-hazardous waste disposal; and (iv) increased quantities of clean fill. The instability of the deteriorated bulkhead also made deep excavation risky and thus cost prohibitive. Track 1 was therefore rejected as both unnecessary and infeasible. The alternative track, Track 4, resulted in lower remediation costs while permitting multiple dwellings as well as commercial and industrial uses. Track 4 includes, but is not limited to,: (i) excavation and off-site disposal of contaminated soil in select areas to two feet below the water table level; (ii) closure and removal of USTs and associated piping; (iii) site monitoring for airborne VOCs and particulates; (iv) screening (by visual, odor, and photoionization detection methods) of excavated soil during site work; (v) in-situ chemical oxidation injections for treatment of VOCs in ground

⁶ If the previous owner did not volunteer the Project Site into the BCP, the State would have declared the site a Class II site under the Superfund Cleanup Law, which is likely to have resulted in a more costly remediation program.

water; (vi) installation of five automatic product recovery pumps; (vii) backfill of excavated areas with recycled concrete; and (viii) installation of a site cover system.

Design Features

Along with the reduction in premium remediation costs, the Proposed Project incorporates certain design features to minimize the degree of requested relief, as discussed below.

Retention of the Paragon Building

As set forth above, the Paragon Paint factory building required remediation under RCRA regardless of whether it remains or is demolished. However, demolition of the Paragon Building would require additional remediation because the soil underneath the existing concrete slab on grade would be investigated, sampled and excavated for off-site disposal as hazardous waste. With the Paragon building to remain, the soil below the building remains in place, protected by an Environmental Easement, with only limited excavation and remediation around the perimeter.

Reduction of the South Building

Prior schemes depicted the southernmost building (now the South Annex) as an eight story, mixed use building containing 40,861 sq. ft. of floor area. To reduce project costs, the South Annex has been reduced to one-story for retail use. This has eliminated the need for an additional elevator core, reduced the amount of foundation work, and reduced the vertical infrastructure needed for MEP systems.

XVI. Conforming Uses with Bulk Waivers

The Applicant has studied the possibility of conforming manufacturing, community facility and commercial uses with bulk variances to determine if the premium remediation costs could be overcome. As discussed below, there are no conforming manufacturing, community facility and commercial use that, with bulk waivers, can overcome the premium remediation costs without a substantial increase in floor area.

Manufacturing and Community Facility Use

Additional bulk waivers to permit a manufacturing development above 2.0 FAR, a community facility development above 6.5 FAR, or a mix of manufacturing and community facility development above 6.5 FAR would be impractical because the resulting low occupancy rates and rents would not generate enough value to overcome the premium remediation costs. Therefore, a conforming manufacturing building, community facility building, or a mixed use building, with bulk waivers to permit a larger development, are not viable options.

Commercial Use

A hypothetical scheme for a hotel with a total of 183,617 sq. ft. of floor area (4.76 FAR) was considered (the "4.76 Hotel"). The 4.76 Hotel would have 26 stories, approximately 355 keys, a ground floor retail component, and two loading berths. Although parking is not required in Long Island City, accessory parking would be needed for a hotel of this scale in this location.

The Wyndham Garden Long Island City, located a few blocks north of the Site, has 120 keys and provides parking for 16 percent of the keys; it is located approximately one-third of a

mile from the E/M subway station at Court-Square/23rd Street and two-thirds of a mile feet from Queensboro Plaza. The Ravel Hotel, approximately six blocks north of the Site, has a total of 75 keys and provides parking for 39% of the keys; it is approximately 0.6 miles from E/M Station, less than 0.9 miles from Queensboro Plaza, and one-half mile from the F train at 21st Street/Queensbridge Station. The Development Site is approximately 0.4 miles from E/M Station, less than one-half mile from Queensboro Plaza, and less than 0.4 miles from the G train at 21st Street Station. Based on these comparables, it is assumed that at least 25% of hotel keys (89 parking spaces) would be required for the 4.76 Hotel to be competitive.

Furthermore, such a hotel would have a large impact on neighborhood character and traffic. A hotel of this size would be unprecedented in the area and would bring a volume of traffic and other impacts that would greatly tax the existing neighborhood infrastructure and services. It is also worth nothing that the City is currently investigating City-wide policy to limit hotels in M1 zoning districts.