

ADDRESS: 4045-61 MAIN ST

Proposal: Demolish mill complex, construct residential building

Review Requested: Final Approval

Owner: GJ Littlewood & Sons Inc.

Applicant: Adam Laver, Esq., Blank Rome

History: 1869; Littlewood & Co., Dyers and Bleachers

Individual Designation: None

District Designation: Main Street Manayunk Historic District, Significant, 12/14/1983

Staff Contact: Jon Farnham, jon.farnham@phila.gov

OVERVIEW: This application proposes demolishing all but sections of the front facades of the buildings at a mill complex and constructing a seven-story residential building at 4045-61 Main Street at the corner of Main Street and Shurs Lane in the Main Street Manayunk Historic District. The application claims that, owing to the configurations and conditions of the mill buildings as well as their location within the floodplain, the structures cannot be feasibly adaptively reused for any purpose. Several generations of the Littlewood family operated a dye house at the site from 1869 to 2021, when flooding from Hurricane Ida inundated the property and forced the closure of the business.

The mill complex is located in the Main Street Manayunk Historic District, which was designated by City Council by ordinance in 1983, before the Historical Commission itself had the authority to create historic districts. The properties in the Main Street Manayunk Historic District are subject to the provisions set forth in Section PM-804 of the Property Maintenance Code, which provides a concise set of design review criteria for permit applications but does not directly address demolition. Supplementing the limited nature of the provisions in the Property Maintenance Code for the Main Street Manayunk Historic District, Section 18 of the Historical Commission's Rules and Regulations authorizes the Historical Commission to apply the provisions of the historic preservation ordinance, Section 14-1000 of the Philadelphia Code, to properties in the Main Street Manayunk Historic District, provided those provisions do not conflict with the Property Maintenance Code. In this instance, the Historical Commission should apply the demolition provisions and the review criteria for new construction in the historic preservation ordinance.

Philadelphia's historic preservation ordinance expressly prohibits the Historical Commission from approving demolitions of historic buildings unless it determines that:

- the demolition is necessary in the public interest; and/or,
- the building cannot be used for any purpose for which it is or may be reasonably adapted.

In the first instance, the ordinance authorizes the Historical Commission to approve demolitions for public policy reasons, when the public interest advanced by the demolition greatly outweighs the public interest in the preservation of the building. In the second instance, the ordinance authorizes the Commission to approve demolitions when regulation of the property for preservation purposes would deny all economically viable use of it and thereby inflict a financial hardship on the owner. This application asks the Historical Commission to approve the demolition because the complex of buildings cannot be used for any purpose for which it is or may be reasonably adapted.

The Main Street Manayunk Historic District was designated without a nomination and inventory. The nomination and inventory for the Main Street Manayunk National Register Historic District

have been traditionally used in place of the missing nomination and inventory. The National Register inventory classifies this site as significant to the district.

The application materials identify 10 interconnected structures at the site. The oldest structures date to about 1869, when the business was founded. Structures were added, modified, and interconnected throughout the lifetime of the business as it grew during the late nineteenth and twentieth centuries. About 1899, the former Fountain Hotel, which was adjacent to the mill, was added to the complex as an office building. It is labeled Structure 1 in the application materials. The Fountain Hotel was noted as early as 1843 on a map of the County of Philadelphia. By 1885, the hotel had fallen from grace, when the *Inquirer* reported that the "Fountain Hotel, a sort of cheap lodging house at the foot of Shur's lane, near Main street, where about 18 families live, is the scene of great destitution. The poorest of all the poor live in this house." Located at the lowest point in Manayunk along the Schuylkill River, the hotel and mill flooded repeatedly in the nineteenth century, including in 1850, 1869, 1875, and 1889, as local newspapers reported. That pattern of flooding has continued to this day and is accelerating, owing to climate change.

The application includes an affidavit providing the information required by the preservation ordinance for hardship applications, an assessment of the existing conditions at the site, a report on flooding and its impact on redevelopment of the site, a planning analysis of the site and surroundings, an economic analysis of potential reuses of the property, a set of photographs and historic maps documenting the site, and architectural plans and renderings of the proposed building. The application was amended and supplemented after the advisory committee meetings. The changes are described below.

The application argues that there is no feasible way to adapt the mill complex to overcome the chronic flooding at the site. The application reports that the site is located in a Special Flood Hazard Area with a Base Flood Elevation of 41.40 feet and a Design Flood Elevation of 42.90 feet. The Base Flood Elevation (BFE) is the elevation that floodwaters have a 1% chance of reaching at the site in any given year. The Design Flood Elevation (DFE) is 18 inches above BFE and is the code-mandated elevation that is considered safely above expected flooding levels. The lowest elevation at the site is 29.11 feet, or 13.79 feet below the DFE. There are two methods for constructing or retrofitting buildings to survive in the floodplain. Dry floodproofing is a method used to render the building's structural envelope substantially impermeable to floodwaters. To dry floodproof a historic building, one would add an impermeable barrier around the building to the DFE to prevent floodwaters from entering the building. Wet floodproofing is a method that allows floodwaters to circulate through the lower sections of a building without substantial damage because occupied space and utilities have been elevated above the DFE. To wet floodproof a historic building, one would either raise the entire building up on piers above the DFE or leave the building in place and raise the occupied space and utilities like electrical and HVAC equipment within the building up above the DFE. This application claims that it is not feasible to dry or wet floodproof the mill complex. It claims that dry floodproofing, which would entail constructing a barrier or dam of sorts around the building that would be almost 14 feet tall at the highest point, is not feasible and the resulting dam would be several times taller than floodproofing standards allow. It claims that wet floodproofing is also not feasible. The entire complex of historic interconnected masonry structures could not possibly be raised up on piers above the DFE. And the occupied space and utilities could not feasibly be elevated within the structures above the DFE by raising the floor levels and moving equipment; the buildings are primarily one story in height, limiting the amount of elevated floor space that could be achieved. The application concludes that the mill complex cannot be feasibly retrofitted for any possible new use, including industrial, commercial, or residential. The application asserts that the only

way to profitably reuse the site is to demolish the mill structures and construct a new building that is designed to withstand occasional flooding.

The proposed building that would replace the mill complex would be seven stories tall and include 167 residential units, 160 parking spaces, residential amenities, and a loading dock. The seventh story would be set back from the planes of the street facades. Occupied space and mechanical equipment would be located on and above the second floor, above the DFE. Walls from the mill complex along Main Street would be retained and incorporated into the new building. Windows and doors in the old walls would be restored. The new building would be clad in brick and corrugated metal.

The Committee on Financial Hardship reviewed the hardship portion of the application at its public meeting on 3 April 2024 and recommended that the Historical Commission find that the mill complex at 4045-61 Main Street cannot be used for any purpose for which it is or may be reasonably adapted, and approve the demolition, provided the site is recorded to HABS standards, pursuant to Section 14-1005(6)(d) of the City's historic preservation ordinance. The Architectural Committee reviewed the application on 23 April 2024 and voted to recommend denial of the demolition as well as the new construction, pursuant to Standard 9.

The applicant revised and supplemented the application following the Architectural Committee meeting. The flood resiliency design review memorandum was updated and now includes information about a Flood Protection Scoping Meeting with the Department of Licenses and Inspections on 2 January 2024. A report by Peter Angelides regarding the financial forces influencing the scale of the proposed building was added to the application. The architectural package was updated with information about a development proposed for an adjacent site that could impact this project, additional renderings, and other information.

SCOPE OF WORK:

- Demolish all structures except portions of the facades along Main Street.
- Construct a seven-story building, incorporating the retained facades.

STANDARDS FOR REVIEW:

- *Standard 2: The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces and spatial relationships that characterize a property will be avoided.*
- *Standard 5: Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.*
- *Standard 9: New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.*
 - The complete demolition of the structures fails to satisfy Standards 2, 5, and 9.
 - The proposed new building will be differentiated from the old. The size, scale, and massing of the proposed building will not be compatible with the historic district; it is much larger than the existing mill buildings as well as the nearby buildings in the historic district.
- *Section 14-1005(6)(d) of the City's historic preservation ordinance: No building permit shall be issued for the demolition of a historic building, structure, site, or object, or of a building, structure, site, or object located within a historic district that contributes, in the*

Historical Commission's opinion, to the character of the district, unless the Historical Commission finds that issuance of the building permit is necessary in the public interest, or unless the Historical Commission finds that the building, structure, site, or object cannot be used for any purpose for which it is or may be reasonably adapted. In order to show that building, structure, site, or object cannot be used for any purpose for which it is or may be reasonably adapted, the owner must demonstrate that the sale of the property is impracticable, that commercial rental cannot provide a reasonable rate of return, and that other potential uses of the property are foreclosed.

- The Committee on Financial Hardship recommended that the buildings at 4041-65 Main Street cannot be used for any purpose for which they are or may be reasonably adapted.

STAFF RECOMMENDATION ON THE REVISED AND SUPPLEMENTED APPLICATION: The staff recommends that the Historical Commission find that the mill complex at 4045-61 Main Street cannot be used for any purpose for which it is or may be reasonably adapted, and approve the demolition, provided the site is recorded to HABS standards, pursuant to Section 14-1005(6)(d) of the City's historic preservation ordinance, as recommended by the Committee on Financial Hardship. The application provides cogent evidence that the mill complex cannot be used for any purpose for which it is or may be reasonably adapted. The application clearly shows that the upper portions of Structures 1, 6, and 7, which are above the Design Flood Elevation, cannot be reused in ways that would produce a reasonable rate of return on the investment to rehabilitate them. The Historical Commission must allow for relief and redevelopment when a property owner demonstrates that the strict preservation regulation of a property would remove most or all value from the property. This application demonstrates that the existing mill complex cannot be financially feasibly reused, even if a small percentage of the interior space is above the Design Flood Elevation.

The staff recommends that the proposed building fails to satisfy Standard 9 because its size, scale, and massing would not be compatible with the historic district. Since the Architectural Committee meeting, the applicant submitted a memorandum from an expert on the financial analyses of real estate projects contending that the building must be sized as proposed to generate sufficient income to offset the inherent costs of redeveloping the site. The Historical Commission could potentially approve the new building, even if does not satisfy the Standards, if it finds that a building of the proposed size and configuration is the only way to viably redevelop the site and thereby restore some value to the property.

IMAGES

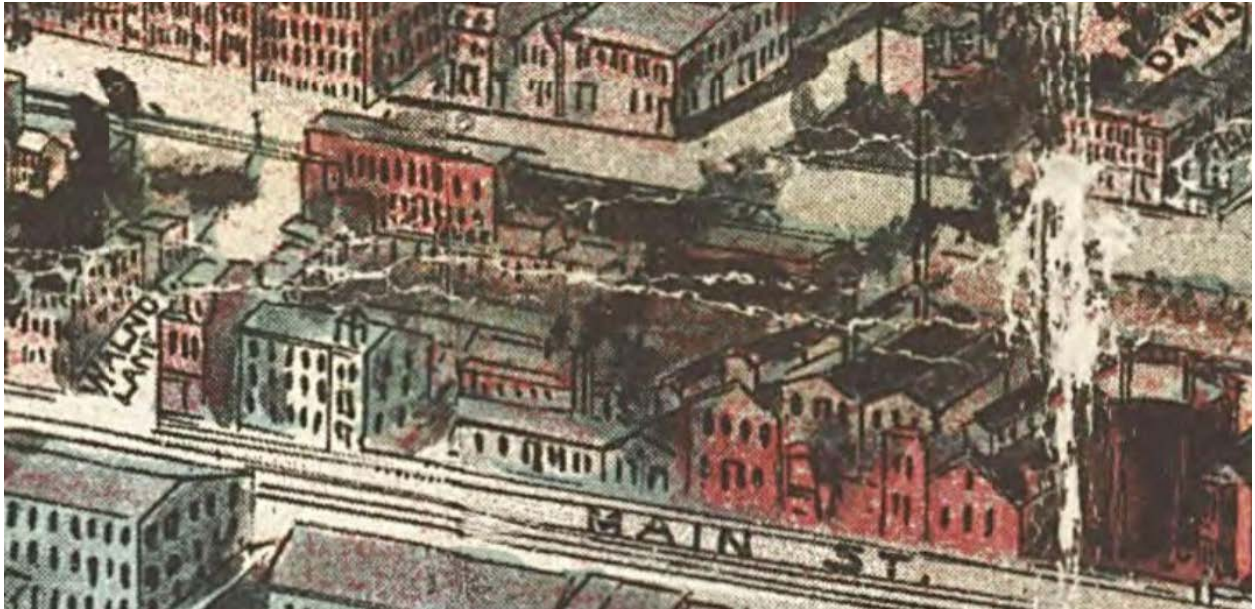


Figure 1. Thaddeus Mortimer Fowler, Detail showing the mill at 4045-61 Main Street from Birds Eye View of Manayunk, Wissahickon-Roxborough from West Laurel Hill Cemetery, Philadelphia, Pennsylvania, 1907.



Figure 2. Photograph of the mill and surrounding area, from Dallin Aerial Surveys, October 28, 1929.



Figure 3. Photograph of the mill and surrounding area, from Dallin Aerial Surveys, June 5, 1934.

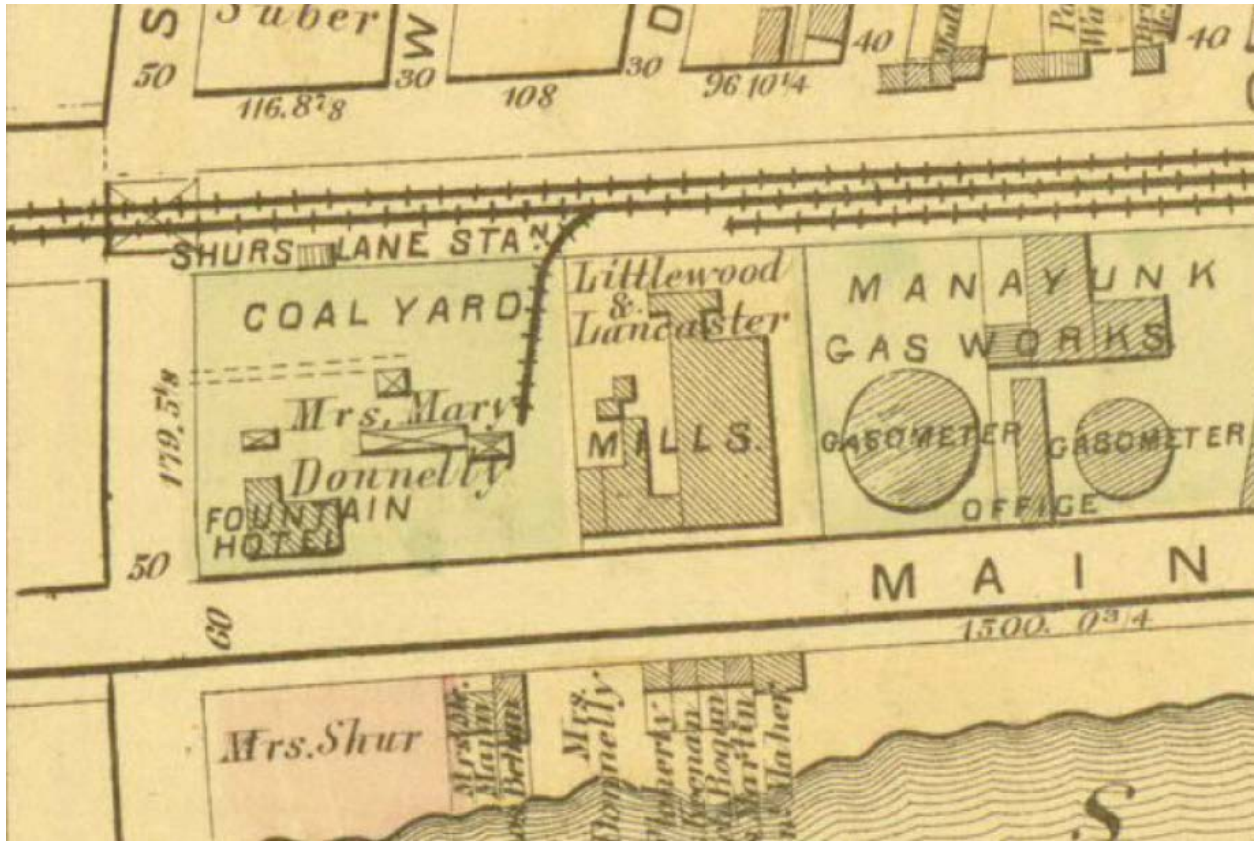


Figure 4. Hopkins Atlas of Philadelphia, 1875.

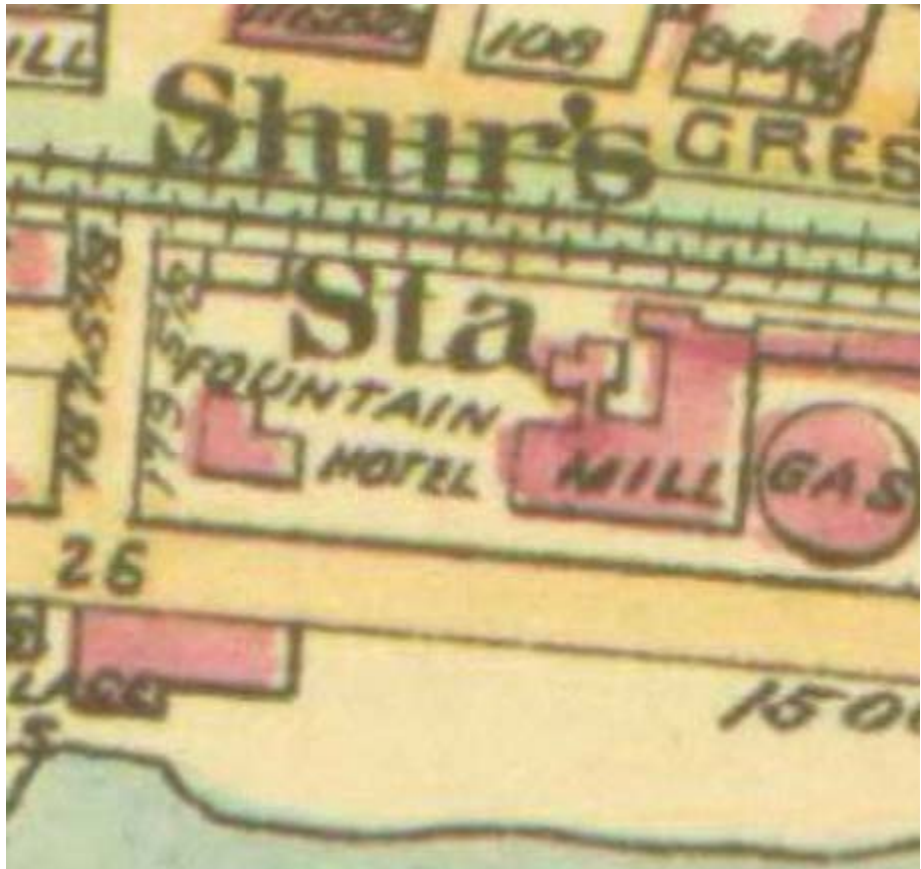


Figure 5. Baist Atlas of Northwest Philadelphia, 1893.

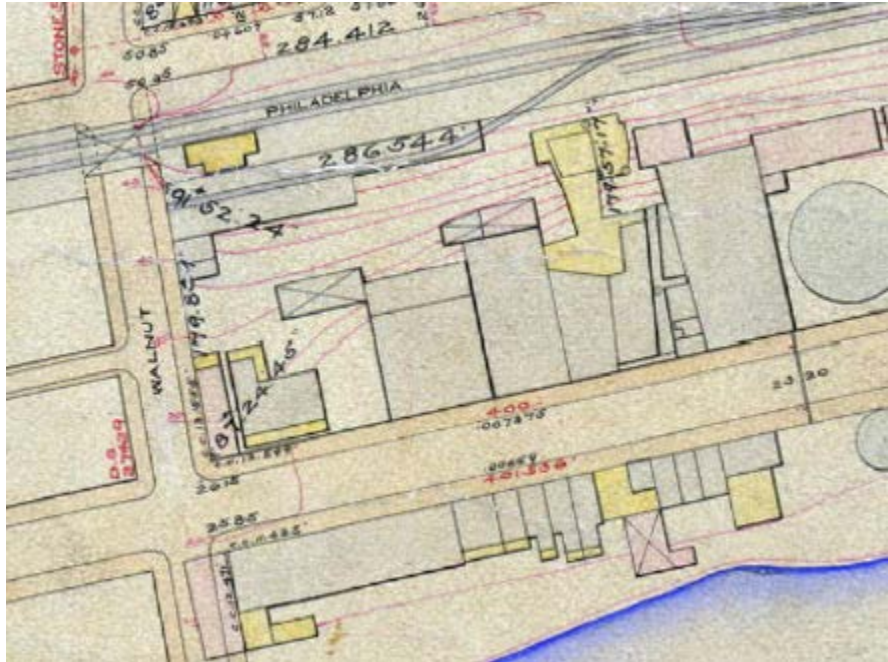


Figure 6. Plan of the 21st Ward, 1898.



Figure 7. Bromley Atlas of the City of Philadelphia, 1901.

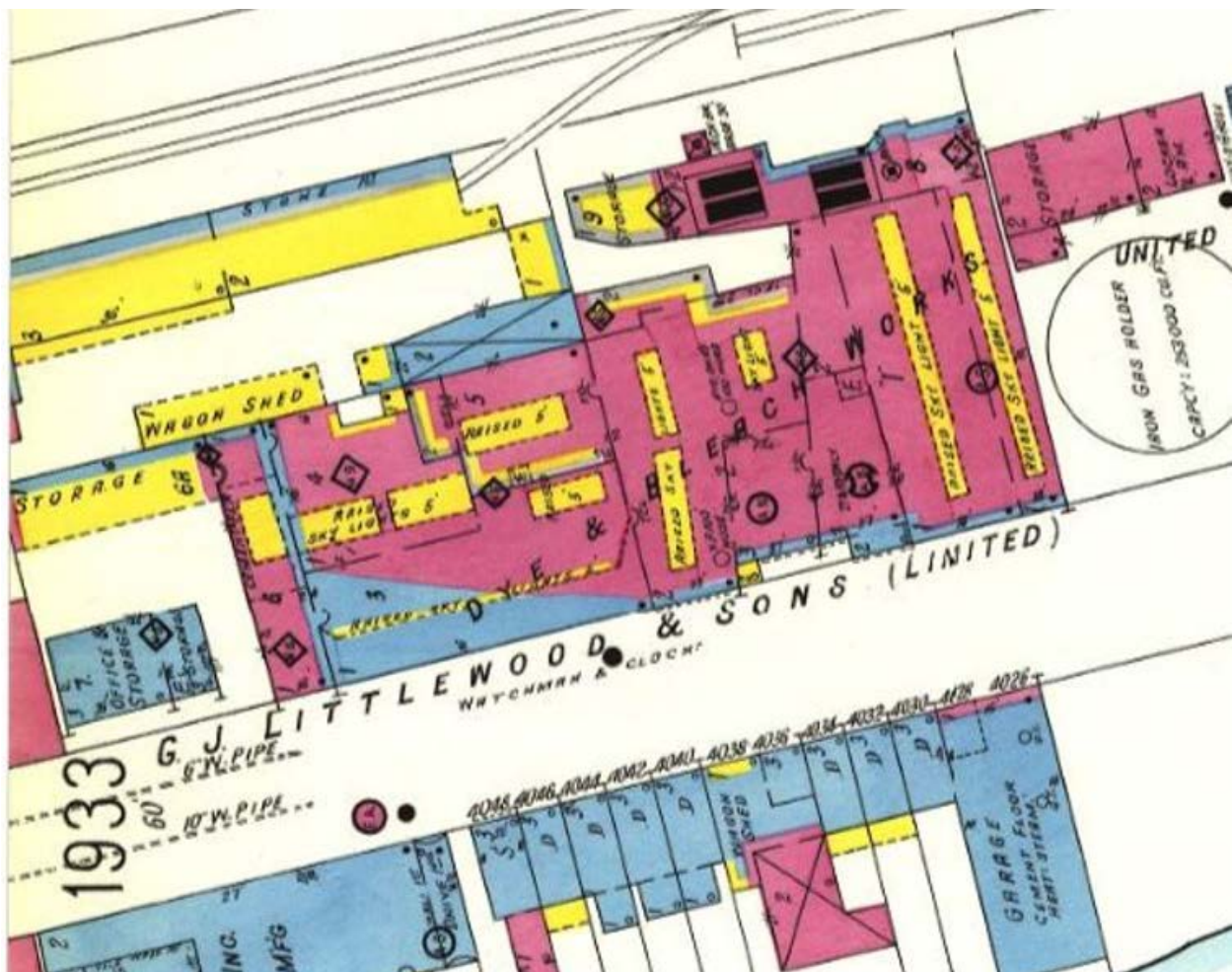


Figure 8. Sanborn Map, 1929.

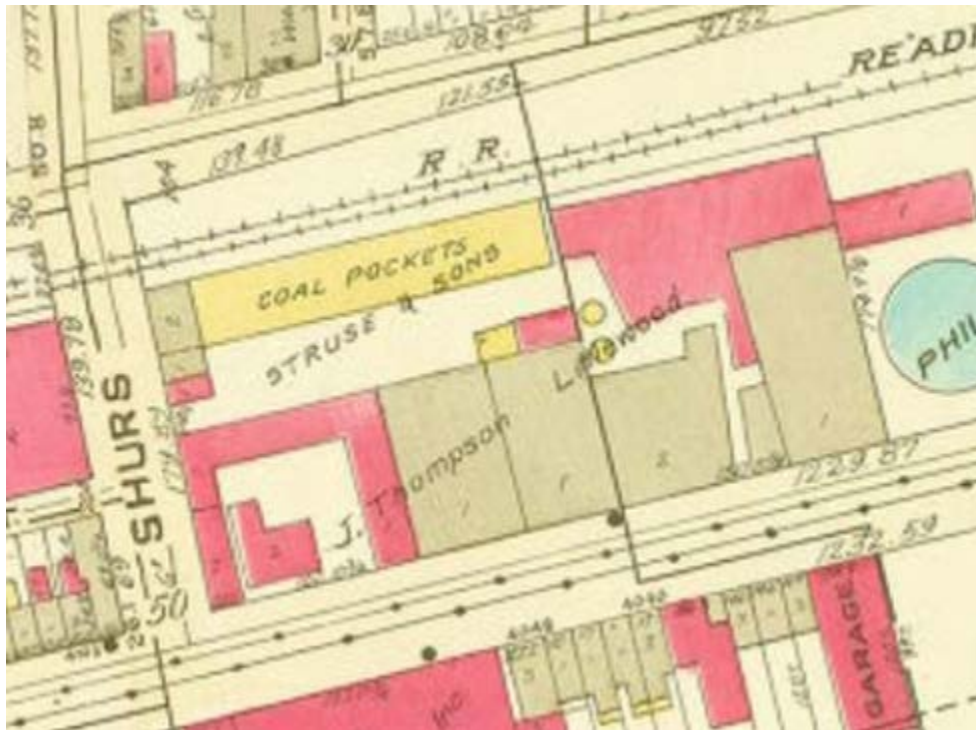


Figure 9. Klingle Atlas of the 21st Ward, 1929, updated 1945.



Figure 10. Hurricane Ida flooding in 2021. The photograph shows the water level at the first-floor porch roofline at the office building and mid-way up the large windows in the one-story industrial structure, roughly 10 feet above grade.



Construction Permit Application

Use this application to obtain permits for a residential or commercial construction proposal and/or excavation projects.
Mechanical / Fuel Gas, Electrical, Plumbing, and Fire Suppression trade details are found on page 2.

Property Information

Identify the location of work for the permit(s).

1

Parcel Address: _____

Specific Location: _____

Check box if this application is part of a project and provide the project number: **PR-20** - _____

Applicant Information

Identify how you are associated with the property.

2

I am the: Property Owner Tenant Equitable Owner Licensed Professional or Tradesperson

Name: _____ Company: _____

Address: _____

Email: _____ Phone No.: _____

Property owner Information

Identify the deeded property owner.

If there was a recent change of ownership, documentation such as a deed or settlement sheet is required.

*If the property owner is a 'company', identify the contact information for any natural person with more than 49% equity interest in the property. If no individual has such an interest, provide contact information of at least two (2) natural persons with the largest equity interest in the property.

3

The property owner is a/an: Individual Company*

Owner (1)

Name: _____ Check box if new owner is being listed

Address: _____

Owner (2)

Name: _____

Address: _____

Design Professional in Responsible Charge

Identify the PA-licensed design professional who is legally responsible.

4

Name: _____ Firm: _____

PA License No.: _____ Phila. Commercial Activity License No.: _____

Email: _____ Phone No.: _____

Project Scope

Use this section to provide project details; all fields are mandatory.

5

(a) Choose the proposed occupancy of the entire building. If not one-or-two-family, provide a description of group(s) per code.

(b) Identify if the project will be new construction, an addition, interior/exterior alterations, excavation or shell.

(c) List the site area that will be disturbed by construction, if any. Enter 'zero' if no disturbance.

(d) Note the new floor area created, including basements, cellars, and occupiable roofs. Where existing areas will be altered, list those areas separately.

(e) State the number of new or affected stories.

(f) Provide a detailed description of the work proposed (use separate sheet if needed).

(g) Select all conditions that apply to this project (if any).

* Provide the associated Streets Review number if "Project Impacts Streets / Right-of-Way" is selected.

** If 'Yes' is selected, an Owners' Acknowledgement of Receipt form must be provided for each affected property.

(a) **Occupancy** Single-Family Two-Family Other, please describe: _____

(b) **Scope of Work** New Construction Excavation Addition / Alteration Shell (No Fit Out) - *Option for Commercial Permits Only*

(c) **Earth Disturbance** Area of Earth Disturbance: _____ (Sq. Ft.)

(d) **Building Floor Areas** New Floor Area: _____ (Sq. Ft.) Existing Altered Area: _____ (Sq. Ft.)

(e) **Number of Stories** _____

(f) **Description of Work** _____

(g) Project Conditions

- New High Rise Green Roof Included Initial Fit-out of Newly Constructed Space
 Modular Construction Façade Work Project Impacts Streets/Right-of-Way*
 Project Impacts Adjacent Property**

* Provide the associated **Streets Review** number for this project, if applicable: **SR-20** _____

** This project includes work described below: Yes No

- Excavation work more than 5 feet below adjacent grade and within 10 feet of an adjacent building or structure.
- Excavation or construction work where historic structure is within 90 feet on the same or adjacent parcel.
- Structural alterations of a historic structure (excluding one-or-two family dwelling).
- Modifications to a party wall, including joist replacement, and additions.
- Severing of structural roof or wall covering spanning properties.



Department of
Licenses and Inspections
CITY OF PHILADELPHIA

DO NOT MAIL THIS APPLICATION

Job Number: (for office use only)

Project Details, Other Permits & Contractor Information

Use this section to provide project details, pre-requisite approvals and applicable contractor information.

(a) Choose all disciplines of work for which permits are being requested.

- If 'Building' is not requested, provide the number of the associated permit that was previously issued (where applicable).
- If a Zoning Permit was issued for this work, provide the related Zoning Permit number.

(b) Identify the general contractor and estimated cost of building construction.

(c) Identify the licensed excavation contractor and estimated cost of excavation work.

(d) Identify the mechanical contractor, estimated cost of mechanical work, equipment type, and quantity as:

- Number of registers/diffusers (separate new / relocated)
- Number of appliances
- Number of Type I / Type II kitchen hoods

Where fuel gas work is included, note the estimated cost of fuel gas work.

(e) Identify the licensed electrical contractor, estimated cost of electrical work, and a registered third-party electrical inspection agency.

(f) Identify the registered master plumber, estimated cost of plumbing work, number of fixtures, and check location of work as:

- Interior
- Exterior Drainage and/or Water Distribution

(g) Identify the licensed fire suppression contractor, estimated cost of fire suppression work, and number of devices:

- Sprinkler Heads (separate new / relocated quantities)
- Standpipes
- Fire Pumps
- Stand-alone Backflow Prevention Devices
- Kitchen Extinguishing Systems
- Hydrants

***ROUGH-IN NOTICE:** If you are seeking a rough-in permit, an application for plan review must be submitted already.

(h) Provide the total improvement cost for residential (including multi-family alterations and additions).

Check the box if your project is excluded from real estate tax exemption and exempt from Development Impact Tax.

(a) Check all that apply:

- Building Excavation Mechanical & Fuel Gas Electrical Plumbing Fire Suppression

Provide the associated Construction Permit number, if applicable: **RP or CP – 20** _____ - _____

Provide the associated Zoning Permit number for this construction, if applicable: **ZP – 20** _____ - _____

Note: Trades listed below (d, e, f, and g) are mandatory for all residential new construction jobs.

(b) General Building Construction Contractor Information

Name: _____ Cost of Building Work: \$ _____

License Number: _____ Phone: _____

(c) Excavation Work & Contractor Information

Name: _____ Cost of Excavation Work: \$ _____

License Number: _____ Phone: _____

(d) Mechanical / Fuel Gas Work & Contractor Information

Name: _____ Cost of Mechanical Work: \$ _____

License Number: _____ Cost of Fuel Gas Work: \$ _____

Equipment Types: Registers / Diffusers Appliances Hoods Phone: _____

Equipment Details & Quantities: _____

(e) Electrical Work & Contractor Information New Installation Alteration *Rough-In

Name: _____ Cost of Electrical Work: \$ _____

License Number: _____ Phone: _____

Third Party Inspection Agency Name: _____

(f) Plumbing Work & Contractor Information New Installation Alteration *Rough-In

Name: _____ Cost of Plumbing Work: \$ _____

License Number: _____ Phone: _____

Number of Fixtures: _____

Check one: Interior Work Exterior Building Drainage Exterior Water Distribution:
line size: _____ (in.)

(g) Fire Suppression Work & Contractor Information New Installation Alteration *Rough-In

Name: _____ Cost of Fire Supp. Work: \$ _____

License Number: _____ Phone: _____

Sprinkler Heads: _____ Standpipes: _____ Fire Pumps: _____

Commercial Kitchen Systems: _____ Backflow Devices: _____ Hydrants: _____

(h) Total Improvement Cost: \$ _____ (The total improvement cost must also include the cost of all electrical, plumbing, mechanical, fire suppression systems work, and interior finishes)

- Check box if your project is excluded from real estate tax exemption and exempt from Development Impact Tax** (Review OPA's website for tax abatement information at: <https://www.phila.gov/services/property-lots-housing/property-taxes/get-real-estate-tax-relief/get-a-property-tax-abatement/>)

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Declaration & Signature

All provisions of the Philadelphia Code and other City ordinances will be complied with, whether specified herein or not. Plans approved by the Department form a part of this application. I hereby certify that the statements contained herein are true and correct to the best of my knowledge and belief. I further certify that I am authorized by the owner to make the foregoing application, and that, before I accept my permit for which this application is made, the owner shall be made aware of all conditions of the permit. I understand that if I knowingly make any false statements herein, I am subject to such penalties as may be prescribed by law or ordinance, inclusive of the penalties contained in 18 Pa. C.S. § 4904.

Applicant Signature: Adam E. Laver Date: _____/_____/_____

Before the Philadelphia Historical Commission


RE: 4045-61 Main Street

AFFIDAVIT OF ADAM E. LAVER

Adam E. Laver, hereby deposes and states as follows:

1. I am an adult residing in the City and County of Philadelphia.
2. I am an attorney licensed to practice law in Pennsylvania and New Jersey.
3. The statements repeated here are those I would give if I were called to testify.
4. I am counsel for 4045 Main Street, LLC, the equitable owner of 4045-61 Main Street (the "Subject Property").
5. The Subject Property is owned by G.J. Littlewood & Son, Inc. See attached Deed.
6. The Tax Year 2024 Office of Property Assessment (OPA) certified market value for the Subject Property is \$1,588,000, comprising \$317,600 in taxable land value and \$1,270,400 in taxable improvement value. See attached OPA Property Record Card.
7. Business production ceased at the Subject Property on September 2, 2021 due to catastrophic flooding from Hurricane Ida.
8. I swear the foregoing is true and correct.

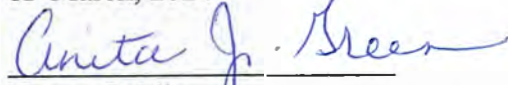
Dated: March 12, 2024

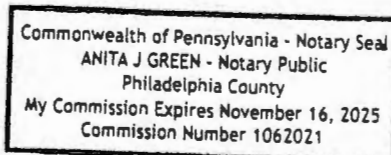

Adam E. Laver

Sworn to and subscribed

Before me this 12th day

of March, 2024


Notary Public



these presents therereceipt whereof is hereby acknowledged and granted bargained
sold aliened enfeoffed released and confirmed and by these presents does grant
bargain sell alien enfeoff release and confirm unto the said grantee its successors
and assigns

ALL THAT CERTAIN lot or piece of ground with the messuage or tenement
thereon erected Situate in Manayunk in the twenty first ward of the city
of Philadelphia aforesaid and described as follows to wit
Beginning at a point of intersection of the Northeastly side of Main Street sixty
feet wide with the southeasterly side of Skurs formerly Walnut Lane fifty
feet wide thence extending southeasterly along the said Northeastly side of
Main Street twenty feet five inches to a point thence extending on a line at
right angles to said Main Street northeastwardly one hundred feet to a point
on the southwestwardly side of a fourteen feet wide alley in the rear of said lot
thence extending northwestwardly along the southwestly side of said fourteen
feet wide alley fifteen feetten and seven eighths inches to the south eastwardly
side of Skurs Lane and thence extending southwestwardly along said side of Skurs
Lane one hundred feet and one fourth inch to the place of beginning and being
described according to a survey and plan thereof made by July 1879 by Jehang
Levering late surveyor and regulator of the eighth survey district of the city of
Philadelphia Being the same premises which Elmer D. CUMBERBURN and Anna
J. B. his wife by indenture bearing date the eleventh day of August 1919 granted
and conveyed unto the said J. Thompson Littlewood in fee which deed was recorded
in Philadelphia County in Deed Book J.M.H. No. 537 page 222 &c AND

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ALL THAT CERTAIN lot or piece of ground with the buildings and improvements
thereon erected Situate on the northeasterly side of Main Street at the distance
of twenty feet five inches southeasterly from the southeasterly side of Skurs
Lane in Manayunk in the city of Philadelphia Containing in front or breadth
on said Main Street one hundred feet ten and one eighth inches more or less
and extending in length or depth northeastwardly of that width between parallel
lines at right angles with said Main Street one hundred feet to a certain
fourteen feet wide alley extending northwestwardly into said Skurs Lane Bounded
Northwestwardly by ground now or late of William Devereaux Northwardly by said
alley southeasterly by ground now or late of Graham J. Littlewood and
southwestwardly by Main Street aforesaid Being the same premises which GEORGE
George G. Littlewood et al by indenture bearing date the thirty first day of July
1916 and recorded at Philadelphia County in Deed Book J.M.H. No. 44 page 487 &c
granted and conveyed unto the said J. Thompson Littlewood in fee Together with
the free and common use right liberty and privilege of the said alley as and
for a passage way and water course at all times hereafter forever

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ALL THAT CERTAIN lot or piece of ground with the buildings and improvements



thereon erected Situate on the northeasterly side of Main Street at the distance of one hundred and twenty one foot three and one eighth inches southeastwardly from the southeasterly side of SMIRS Lane in Manayunk in the twenty first ward of the city of PHILADELPHIA

aforesaid Containing in front said Main Street twenty feet and extending of that width in depth north eastwardly between parallel lines at right angles to said Main Street one hundred feet to a certain fourteen feet wide alley extending northwestwardly into SMIRS Lane bounded Northwardly by said fourteen feet wide alley Northwestwardly by ground conveyed by Patrick KESSENER to Liebert & Chert southeastwardly by the next described premises and southwestwardly by Main Street aforesaid ALSO ALL THAT CERTAIN lot or piece of ground composed of five lots or pieces of ground with the stable buildings and improvements thereon erected Situate on the northeasterly side of Main Street at the distance of one hundred and forty one foot three and one eighth inches southeastwardly from the southeasterly side of SMIRS Lane in Manayunk in the twenty first ward of the city of PHILADELPHIA aforesaid Containing in front or breadth on the said Main Street ninety seven feet eleven inches (each of small lots being nineteen feet and seven inches) and extending in length or depth Northeastwardly of that width between parallel lines at right angles to the ^{said} Main Street one hundred feet to ground late of Daniel Donnelly deceased ALSO ALL THAT CERTAIN lot or piece of ground with the Byehouse buildings and improvements thereon erected Situate in Manayunk in the twenty first ward of the city of PHILADELPHIA aforesaid described according to a survey and plan ^{made} by John H. Levesing Surveyor of the eighth District as follows Beginning at a point on the northeastwardly side of said Main Street sixty feet wide at the distance of two hundred and thirty nine feet two and one eighth inches southeastwardly from the southeasterly side of SMIRS Lane Lane fifty feet wide) being a corner of ground now or late ~~late~~ the Estate of Daniel Donely thence extending north forty nine degrees eight minutes east along the line of said Daniel Donelys ground one hundred and eighty one feet eleven inches to a point in the PHILADELPHIA & Norristown Railroad thence south thirty nine degrees twenty two minutes east twenty three feet four inches to a point in the same thence north thirty degrees forty eight minutes east ten ^{feet six} inches to another point in the same thence along said Railroad south forty degrees fifty two minutes east one hundred and twenty six feet to a

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point a corner of Land conveyed by Littlewood & Lancaster to the city of Philadelphia thence by the same south forty nine degrees eight minutes west one hundred and ninety five feet to the northeasterly side of said Main Street and thence along the same north forty degrees fifty two minutes west one hundred and fifty feet and five eighths of an inch to the first mentioned point and place of beginning ALSO ALL THAT CERTAIN lot or piece of ground with the buildings and improvements thereon erected on the southwesterly side of said Main Street in Manayunk in the twenty first ward of the city of Philadelphia aforesaid Beginning at the distance of two hundred and forty six feet one and three quarter inches southeastwardly from the southeasterly side of said Skurs Lane thence extending southeastwardly along said Main Street twenty feet four and one quarter inches to a point thence south fifty five degrees forty six minutes west seventy five feet five and one quarter inches to a point in the line of the Schuylkill River thence by the same Northwestwardly parallel with said Main Street twelve feet two and one half inches to a point thence northeastwardly at right angles with said Main Street seventy feet to the place of Beginning ALSO ALL THAT CERTAIN lot or piece of ground with the messuage or tenement thereon erected in the twenty first ward of the city of Philadelphia aforesaid described according to a survey and plan thereof made October 25, 1992 by C.A. Sundstrom Surveyor and regulator of the eighth survey District of said City as follows to wit Beginning at a point on the southwesterly side of Main Street sixty feet wide) at the distance of two hundred and sixty six feet six inches southeastwardly from the southeasterly side of said Skurs Lane (fifty feet wide thence extending along the said Main Street south thirty nine degrees thirty minutes east seventeen feet eleven and three quarter inches to a point thence extending south fifty two degrees fifty three minutes west seventy feet more or less to low water mark of the Schuylkill River thence extending along the same Northwestwardly to a point and thence extending north fifty seven degrees eight minutes east seventy feet more or less to the first mentioned point and place of beginning Being the same premises which George S. Littlewood and Jessie C. his wife and Arthur R. Littlewood and Adele J. his wife by signature bearing date the 31st day of July 1916 and recorded in Philadelphia County in Deed Book J.M.H. No. 44 Page 392 do granted and conveyed unto J. Thompson Littlewood in fee Excepting and Reserving as recited in a certain indenture by John Hanson Sr. and wife to Graham J. Littlewood dated December 30, 1887 recorded at Philadelphia in Deed Book J.A.H. No. 222 page 396) Together as respects the premises situate on the northeasterly side of Main Street at the distance of hundred and forty one feet three and one eighth inches southeastwardly from the southeasterly side of said Skurs Lane with the free and common use right liberty and privilege of a certain fourteen feet wide alley extending northwestwardly into Skurs Lane as and for a passage way and watercourse at all times hereafter forever and together with all and singular the boilers engines cylinders troughs vats

including drains, pipes, gutters, and other appurtenances thereto in full

and fixtures in the said Premises and of right belonging to the same known as the Albion Dye Works and necessary to the said business
AND

ALL THAT CERTAIN MESSUAGE OR TENEMENT and lot or piece of ground Situate Lying and Being on the Margin of the River Schuylkill in Manayunk in the 21st ward of the city of Philadelphia Limited Bounded and described as follows VIZ Beginning at the middle of a partition dividing this from property now or late of William Mesigan on the southwardly side of Manayunk and Flat Rock Turnpike Road thence extending through said partition and along the line of Land of said William Mesigan fifty five feet more or less to low water mark of the River Schuylkill thence extending up and along said River fourteen feet six inches to ground of Patrick Kennedy thence extending by said ground and passing thru a partition dividing this from the said Patrick Kennedy's ground fifty five feet to the aforesaid side of the said Turnpike Road thence extending by said Road Fourteen feet six inches to the first mentioned point or place of beginning Being the same premises which George G. Littlewood and Jessie C. his wife and Arthur R. Littlewood and Adele J. his wife by indenture bearing date the 31st day of JULY 1916 and recorded in Philadelphia County in Deed Book J.M.H. No. 44 page 392 do granted and conveyed unto J. Thompson Littlewood in fee TOGETHER with the free and uninterrupted use and privilege of a passageway across the rear end of the said Patrick Kennedy's and along the northerly side of the present messuage and lot of the said Patrick Kennedy into the aforesaid Turnpike Road Together with the free ingress egress and regress to and for the said J. Thompson Littlewood his heirs and assigns at all times and forever hereafter and Together with all and singular the buildings improvements ways Streets alleys passages water courses rights liberties privileges hereditaments and appurtenances whatsoever thereunto belonging or in any wise appertaining and the reversions and remainders rents issues and profits thereof and all the estate right title interest property claim and demand whatsoever of the said grantor in law equity or other wise howsoever of in and to the same and every part thereof

TOGETHER with all and singular the buildings improvements Streets alleys passages ways waters water courses rights liberties

privileges hereditaments and appurtenances whatsoever thereunto belonging or in any wise appertaining the reversions and remainders rents issues and profits thereof and all the Estate right title interest property claim and demand whatsoever of the said grantor in law equity or otherwise howsoever of in and to the same and every part thereof

TOGETHER with all and singular the buildings improvements Streets alleys passages ways waters water courses rights liberties hereditaments and appurtenances whatsoever thereunto belonging or in any wise appertaining and the reversions and remainders rents issues and profits thereof and all the Estate right title interest property

claim and demand whatsoever of him the said grantor as well in law equity or otherwise hereafter of in and to the same and every part thereof

TO HAVE AND TO HOLD the said messuages hereditaments and premises hereby granted or mentioned and intended to be with the appurtenances unto the said grantee its successors and assigns and for the only proper use and behoof of the said grantee its successors and assigns forever

AND the said grantor for himself his heirs executors administrators and assigns Does by these presents covenant grant and agree to and with the said grantee its successors and assigns that he the said grantor all and singular the hereditaments and premises herein above described and granted or mentioned and intended so to be with the appurtenances unto the said grantee its successors and assigns against him the said grantor his heirs and assigns and against all and every person or persons whomsoever lawfully claiming or to claim the same or any part thereof by from or under them or any of them shall and will warrant and forever defend

IN WITNESS WHEREOF the party of the first part has hereunto set his hand and seal the day and year first above written

SEALED AND DELIVERED

IN THE PRESENCE OF US

MARION M. POLLOCK J. THOMPSON LITTLEWOOD (SEAL)
PHILENA E. LEININGER

RECEIVED the day of the date of the above indenture of the above named grantee the full consideration money therein mentioned

MARION M. POLLOCK J. THOMPSON LITTLEWOOD
PHILENA E. LEININGER

ON THE twenty ninth day of December Anno Domini 1931 before me the subscriber a notary public in and for the Commonwealth of Pennsylvania residing in Philadelphia personally appeared the above named J. Thompson Littlewood and in due form of law acknowledged the above indenture to be his act and deed and desired the same might be recorded as such

WITNESS my hand and Notarial seal the day and year aforesaid
MARION M. POLLOCK (SEAL)

NOTARY PUBLIC

MY COMMISSION EXPIRES FEB , 25th 1933

Settlement completed and delivery made before June 21, 1932
J. Horace Churchman ON behalf of Grantee

The Residence of the within named grantee 8 Main St Below Walnut Lane
Philadelphia Penna J. Horace Churchman on behalf of said grantee

RECORDED JUNE THIRTIETH NINETEEN HUNDRED THIRTY THREE AT NINE THIRTY A . M.

TRANSCRIBED BY DOMENICK MARCINIAK COMPARED BY

Handwritten signature and notary seal area with a long string of numbers at the bottom: #1#424243434743474347434743474347

4045 MAIN ST

PHILADELPHIA, PA 19127-2128

Owner

**G J LITTLEWOOD & SONS
INC**

OPA Account Number

884632511

Mailing Address

4045-61 Main St
Philadelphia PA 19127-2111

Property assessment and sale information

Assessed Value	\$1,588,000
Sale Date	12/31/1942
Sale Price	\$4

Office of Property Assessment (OPA) was formerly part of the Board of Revision of Taxes (BRT) and some City records may still use that name. Source: [Office of Property Assessment \(OPA\). \(https://www.phila.gov/opa/pages/default.aspx\)](https://www.phila.gov/opa/pages/default.aspx)

Valuation History (10)

Taxable and exempt land values can represent the contributory value of land in relation to the total market value, or were no structure is present, the value of vacant land. (Consistent with International Association of Assessing Officers (IAAO) standards, the value of an improved parcel is separated into the portion of value attributed to the improvement and the portion of value attributed to the land.)

Year	Market Value	Taxable Land	Taxable Improvement	Exempt Land	Exempt Improvement
2024	\$1,588,000	\$317,600	\$1,270,400	\$0	\$0
2023	\$1,588,000	\$317,600	\$1,270,400	\$0	\$0
2022	\$1,207,800	\$241,560	\$966,240	\$0	\$0
2021	\$1,207,800	\$241,560	\$966,240	\$0	\$0
2020	\$1,207,800	\$241,560	\$966,240	\$0	\$0
2019	\$1,200,000	\$240,000	\$960,000	\$0	\$0
2018	\$1,200,000	\$240,000	\$960,000	\$0	\$0
2017	\$561,800	\$151,600	\$410,200	\$0	\$0
2016	\$561,800	\$151,600	\$410,200	\$0	\$0

Year	Market Value	Taxable Land	Taxable Improvement	Exempt Land	Exempt Improvement
2015	\$561,800	\$151,600	\$410,200	\$0	\$0

Sales History (0)

Date	Adjusted Total	Grantees	Grantors	Doc Id
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Property Details

Property characteristics described below are included for convenience, but may not reflect the most recent conditions at the property. For all property questions, [submit an official inquiry](#)

(https://opainquiry.phila.gov/opa.apps/help/PropInq.aspx?acct_num=884632511) or call OPA at (215) 686-9200 (tel:+12156869200).

Year Built	1900
Building Description	LOFT (INDUSTRIAL)
Building Condition	Average
Number of Stories	Not Available
Number of Rooms	Not Available
Features	No basement No fireplace No garage
Heating and Utilities	Heater type n/a No central air Sewer type n/a
Lot Size	54,129 sq ft
Improvement Area	54,760 sq ft
Frontage	389 ft
Beginning Point	SEC SHURS LA
Zoning	I2-Medium Industrial (https://atlas.phila.gov/4045%20MAIN%20ST/zoning)
OPA Account Number	884632511
OPA Address	4045 Main St
Homestead Exemption	No

Local Details

Political Divisions	Ward: 21st Council District: 4th
School Catchment	Elementary: Cook-Wissahickon Middle: Cook-Wissahickon HS: Roxborough High School
Police District	5th District
Trash Day	Monday
L&I District	NORTH
Census Tract	021000

You can download the property assessment dataset in bulk, and get more information about this data at metadata.phila.gov

Note: Taxable and exempt land values can represent the contributory value of land in relation to the total market value, or were no structure is present, the value of vacant land. (Consistent with International Association of Assessing Officers (IAAO) standards, the value of an improved parcel is separated into the portion of value attributed to the improvement and the portion of value attributed to the land.)



February 12, 2024

Andrew Zakroff
Urban Conversions
andrew@urbanconversions.com

RE: 4045 Main Street
Philadelphia, PA
Existing Conditions Assessment

Dear Andrew:

I write to express observed high-level deficiencies in the existing assemblage of buildings at 4045-4061 Main Street that would, from an architectural perspective, present extraordinary challenges for their viable future use. These may or may not pose Building Code compliance issues and further evaluation would be necessary to make absolute determinations in such matters. Notwithstanding that, the first floors of these buildings are entirely in the flood plain of the Schuylkill River, rendering them unsuitable for any use, and there are many other detracting considerations as described below. Note that the majority of the site is covered by existing buildings with the exception of a small portion between buildings along Main Street and an open area at the northeast corner of the site. This open area is situated well above the first-floor elevation and is steeply sloped up to the railroad viaduct to the north.

Issues of concern include:

- Lack of sufficient egress. The possibility for viable egress to the public right-of-way in the event of an emergency is limited to the Main Street edge of the existing buildings. The east, west and rear sides of the property provide no access to a public right-of-way as they are against the adjacent building, the grade of Shurs La., the retaining wall at the 11 Shurs La. property line and the railroad viaduct. Egress paths in any direction other than towards Main Street would be dead ends. The Main Street edge, being in the flood plain is also not viable.
- Moisture emanating from the existing rock outcroppings present interior environmental concerns for air quality and potential humidity issues. Mechanical air filtration and conditioning would be necessary for human occupation and potentially for sensitive process equipment.
- Given the ages of the various portions of the facility, environmental hazards, such as lead paint, and asbestos may be present and would need to be abated. Mold, resulting from the aforementioned moisture, may be an ongoing concern. Radon may be present due to the existing rock outcroppings, which are exposed in the facility and may require mitigation.
- Existing off-street loading areas are limited in dimension such that the size of vehicles that can enter/exit the site are also limited. These vehicles must use reverse movements either to enter or exit the site, presenting hazards to pedestrians and impacting traffic on Main Street. In addition, for certain uses, the most efficient shipping may be via the largest possible trucks, which cannot enter the site. This has resulted in curbside loading and unloading, also presenting hazards to pedestrian passage on the sidewalk, and challenges from the Parking Authority and Streets Department. In addition to product and material deliveries, these concerns also pertain to refuse and recycling removal.

- Due to the existing facility being developed over time, with infill construction between existing buildings to create more interior space, there are various floor levels. While the majority of the facility may be considered a single level for discussion purposes, the reality is that the first floor presents more like topography, with variations that include everything from steps of several feet, ramped areas that vary in steepness, to troughs and pits from the former use. In areas where there are upper levels (second and third floors) the limited existing stairs are steep and narrow. Chutes/slides exist from the former use to move product from upper levels to the first floor. In one case the slide is hinged to fold down over the stairs. Mitigating these levels for accessibility would require multiple elevators.
- There are no toilet rooms.
- Modern heating, air conditioning and water heating do not exist. The existing boilers, previously converted from coal burning to natural gas, are antiquated, inefficient and at the end of their useful lives.
- Existing Masonry walls are a liability. Existing load-bearing masonry walls divide much of the overall space into smaller, uniquely shaped and proportioned spaces that would be difficult to modify into larger open spaces that may be desirable in a modern facility. The existing masonry wall along Main Street appears to have deteriorated within the first few feet above the sidewalk. Stucco was previously applied to the first five-to-six feet above the sidewalk along all of the stone walls facing Main Street and was recently removed in two test areas to investigate the condition of the stone behind. In one case, the stone at the bottom of the wall is deteriorated, perhaps due to moisture, and potentially compromised structurally. The original reason for applying the stucco is unknown. Perhaps there was water infiltration, repointing was needed, or deterioration of the stone was recognized. Whether the decision is made to keep the stucco, or expose and repoint the stone, it seems that some stone replacement will be necessary.
- The possibility of natural light is limited to the existing masonry openings in the Main Street wall (many of which are currently infilled) and clerestories that are currently covered. While the latter would provide light into some of the space, they would not provide quality views like windows, which can be considered key to occupant comfort. Much of the spaces without existing clerestories are of considerable depth from the Main Street wall and restored window openings would provide minimal natural light at best. Where older windows exist, they are at the end of their useful lives and replacements will need to be approved by the Philadelphia Historical Commission.
- Existing artificial light sources provide a minimal amount of illumination and modern fixtures would be required throughout.
- Exterior walls and the roof are not adequately insulated and should be in order for energy efficient operation of new HVAC systems. In addition, there are areas of roof with deteriorated decking that require replacement and areas of exterior wall that will require repointing, and possibly stone replacement where deterioration is more significant. Locations where stucco was removed and photos of stone before stucco was applied indicate stonework that is in deteriorated condition. In addition to aesthetics, this is a structural concern considering these walls are load bearing.
- Existing smoke stacks are a structural and maintenance liability and likely not useful for a modern heating plant or processing facility.

More specifically, the portion of the facility commonly referred to as the “offices” presents additional unique challenges to reuse. This is a three-story, five-bay structure with an additional two-bay section to the east that is of a different character than the industrial portions of the existing building which wrap around three sides of it; it has served as the offices and storage.

- The basement is entirely below the flood plain, thus not suitable for any use.

- The first floor is entirely below the floor plain, thus not suitable for any use.
- The front door is one floor above the sidewalk, accessed by a steep exterior stairway and is not ADA compliant. An elevator, likely in an addition would be required. The two-bay eastern portion of the building has floor levels that are several steps up from those in the larger portion of the building, presenting further accessibility challenges. Existing stairs within the building are steep.
- The second floor is compromised by ceilings at the underside of the existing roof that are lower than required by code for occupiable space.
- This portion of the facility lacks modern mechanical, electrical and plumbing systems. This would need to be installed above the flood plain, consuming some of the limited valuable floor area that is not in the flood plain.
- The layout of the existing building does not contain a common corridor, but rather is a series of rooms that lead to one another, making it difficult for reuse with a program requiring spatial privacy or access.

CBP Architects has significant experience in the adaptive reuse of historic structures, especially former industrial buildings into various uses such as senior housing, a fire station, condominiums, rental apartments, live-work lofts, artist studios and galleries. These include stand-alone examples as well as multi-building complexes that required selective demolition to make portions habitable. We have an awareness of what makes adaptive reuse viable and do not see these characteristics in this property.

Respectfully yours,



Eric Leighton, AIA
Partner



Environmental, Planning, and Engineering Consultants

530 Walnut Street
Suite 998
Philadelphia, PA 19106
tel: 267 585-4839
fax: 929 284-1085
www.akrf.com

Memorandum

To: Andrew Zakroff, Urban Conversions
From: AKRF, Inc.
Date: March 11, 2024
Re: 4045-61 Main Street, Philadelphia, PA
Redevelopment Scenario Analysis

EXECUTIVE SUMMARY

AKRF was contracted to provide an analysis of redevelopment scenarios and the associated measures required to meet and/or exceed applicable flood hazard regulations for the site located at 4045-61 Main Street (the "Site"). The Site is located in the Special Flood Hazard Area (SFHA) with a base flood elevation (BFE) of 41.40 feet NGVD29 and a design flood elevation (DFE) of 42.90 feet NGVD29 (BFE + 18-inches, per City of Philadelphia Code). AKRF conducted an analysis of the existing structures, previous use, and historic flood events. This analysis, combined with property owner interviews and site visits, has shown that flood events in the past thirty years have exceeded finished floor elevations, compromised egress from the building, and prohibited the continuation of business associated with the past industrial use at the Site.

Three redevelopment scenarios for the property were evaluated to understand how flood regulations may impact the potential future building design and use of the property. Key takeaways from the analysis of each scenario are summarized below.

Scenario 1: Industrial Redevelopment

Redeveloping the Site for industrial use will create operational hardship and require extreme and impractical floodproofing measures.

- An industrial use will require frequent vehicular access to the building that makes raising the lowest floor elevation to the DFE impractical for operations.
- Required elevation of storage areas and associated movement of goods and equipment between the ground level and DFE is likely impractical.

- The height of dry floodproofing required to meet flood regulations is 10.69 feet greater than the maximum recommended by the Federal Emergency Management Agency (FEMA).

Scenario 2: Renovate Existing Office Building for Commercial Use

Renovating the office building for commercial use would require significant modification of the structure and compromise future redevelopment of the remaining Site.

- Providing emergency egress above the DFE would compromise redevelopment of the surrounding parcels.
- Dry floodproofing elevations would exceed the maximum height recommended by FEMA.
- Raising the finished floor elevation would reduce the structure to a single floor and limit potential use.

Scenario 3: Current Proposed Residential Development

The proposed residential use would exceed flood elevation requirements and provide multiple egress routes for flood evacuations.

- The finished floor of the lowest residential units is 2.70 feet higher than required by City of Philadelphia Code. Power, building systems, and mechanical equipment will be elevated at or above the DFE.
- Wet floodproofing measures are provided in parking, storage, and building access areas below the DFE.
- Four pedestrian and two vehicular egress routes are provided from the building. A pedestrian exit is provided at the highest elevation along the property.
- The building will have a concrete podium to allow for a gathering place for safety and potential rescue during a flooding event.

Based upon historic flooding experienced in this area and FEMA mapping for the Site, any proposed use of the property should meet or exceed flood regulations. This report provides a detailed analysis of compliance requirements for three use scenarios and the hardships associated with full regulatory compliance.

SITE BACKGROUND AND FLOODING CONTEXT

A. Existing Conditions

Existing Structures

The property contains structures supporting the former textile dyeing mill operated by G.J. Littlewood and Son, Inc. The Industrial Mill complex consists of two structures. The larger rubble structure occupies approximately 40,900 square feet of the property and is one to two stories high. This structure includes stone, brick, and plaster façade. The interior of the building is equipped with dyeing basins, mechanical equipment, and other supporting infrastructure for the former industrial operations.

A two-story stucco structure was later constructed on the western side of the property, fronting Main Street. The stucco structure includes a 40' x 35' structure with an attached 35' x 20' structure. This structure is referred to as "the office" in this memorandum.

Elevations

A survey prepared by Ruggiero Plante Land Design in 2023 was used to identify key elevations along and within the existing structures. These elevations and their relationship to the DFE are shown in Figure 1 and Table 1. The grade along the property line rises from 29.11 feet NVGD29 at the southern building corner to 42.80 feet NVGD29 at the northeastern corner along Shurs Lane.

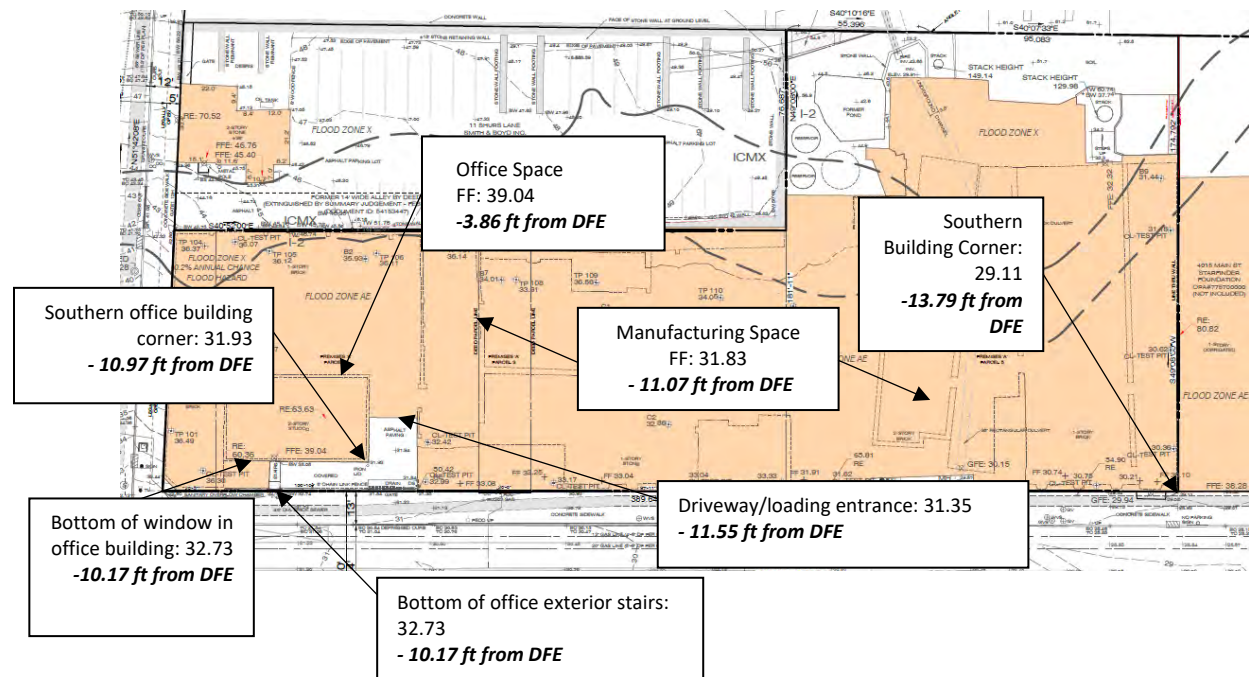


Figure 1: Existing building elevations and relation to the DFE.

Existing Building Elevations (ft)	Elevation (feet NGVD 29)	Depth Below DFE (BFE + 1.5')
Southern building corner	29.11	13.79
Driveway	31.35	11.55
Manufacturing space finished floor	31.83	11.07
Southern office building corner	31.93	10.97
Bottom of office exterior stairs	32.73	10.17
Office finished floor	39.04	3.86
Bottom of window in office building	40.50	2.40

Access

The larger rubble structure is primarily accessed via a vehicular driveway opening on Main Street. A pedestrian entrance is located along the driveway. No other formal exterior building access points are located along the property line. Pedestrians can access the stucco structure via a staircase located along Main Street. The staircase is approximately 6 feet high and enters the structure on the first finished floor.

Historic Use

The existing structures are identified as “significant buildings” in Manayunk’s Main Street National Historic District (United States Department of the Interior Heritage Conservation and Recreation Service). The two-story stucco structure was used for office and yarn storage with an attached machine shop separated by several stairs. The two-story rubble building includes spaces formerly used for drying, bleaching, and dyeing processes. G.J. Little and Sons established the textile mill at this location in 1869. Operations continued until September 2021, when Hurricane Ida caused significant damage to the building. Given the magnitude of damage, G.J. Little and Sons discontinued operations and closed the facility. The buildings have been vacant for the past three years.

B. Historic Flooding Events

Historic flooding events at 4045-61 Main Street were reviewed to better understand flood risks for future development. Historic river crest and discharge data was collected from the United States Geological Survey (USGS) 01474500 Schuylkill River gage, located approximately five miles downstream of the Site. The gage data was used to identify significant flood events from 1993 to 2023.



Figure 2: Highwater mark within the building for Hurricane Floyd (1999).



Figure 3: Highwater mark within the building for Hurricane Ida (2021).

A relationship between the river crest elevations and flood elevations at the Site was developed utilizing on-site high-water marks for Hurricanes Floyd and Ida (Figures 2 and 3) and owner records of drainage system surcharge observations. High water mark elevations were surveyed relative to survey elevations documented by Ruggiero Plante Land Design in 2023. Figure 4 plots the relationship between river crest elevation and Site flood elevations. A linear fit was applied to the plot.

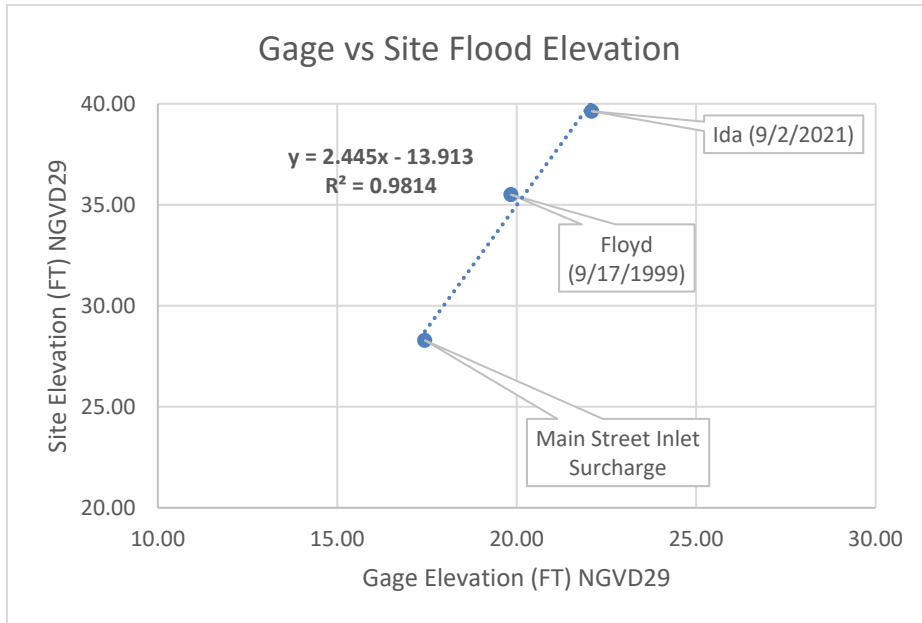


Figure 4: Flood elevation relationship between Site flood elevations and river crests measured at USGS 01474500 Schuylkill River gage.

The linear fit line was then used to estimate Site flooding elevations for the significant flood events identified between 1993 and 2023. The flood elevations are shown in Figure 5.

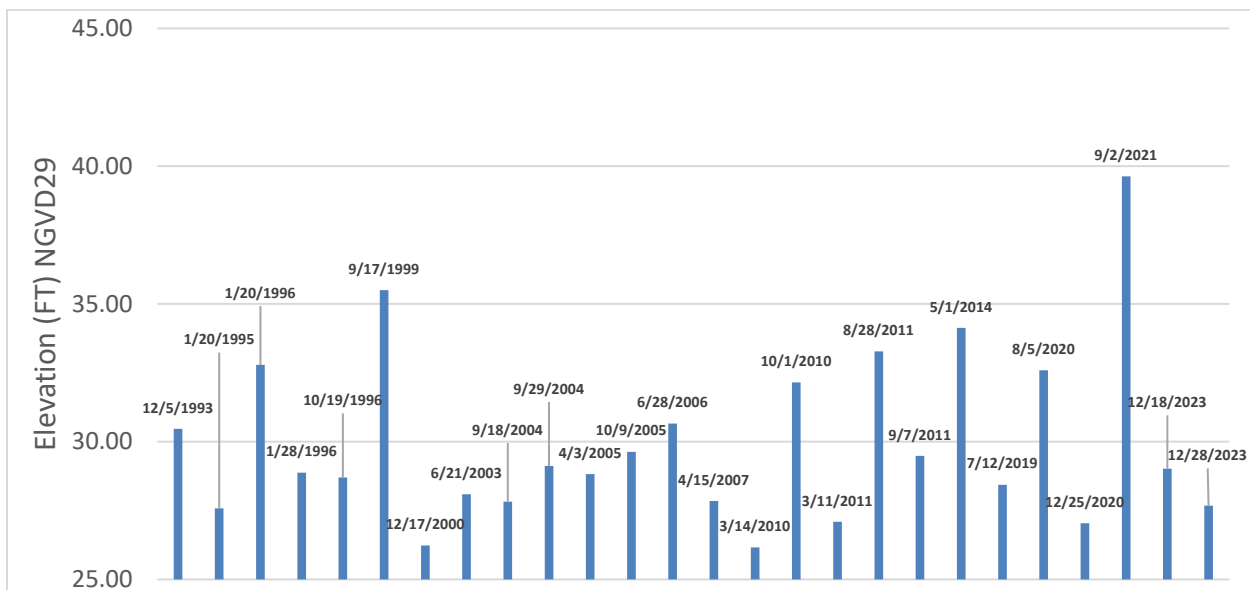


Figure 5: Estimated Site flood elevations for flood events from 1993-2023.

Hurricane Ida (2021) was the highest flood event on record in this period, with an on-site flood elevation of 39.63 feet NGVD29. Hurricane Floyd (1999) was the second highest, with an on-site flood elevation of 35.5 feet NGVD29. All recorded historic flood events are below the DFE for

the Site; however, Ida was devastating for the property owner given the design and use of the building. Photographs of flooding at the property were provided by the property owner of the dyeing operation. Hurricane Ida flooding prevented egress from the office. Occupants were forced to evacuate onto the adjacent building roof.



Figure 6: Flood waters entering existing office stairwell.

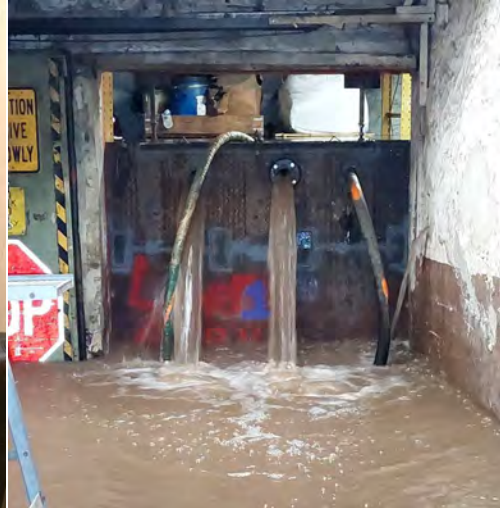


Figure 7: Flood waters rising above interior flood barriers.

In addition to the catastrophic flooding from Ida, there are observed and estimated flood elevations at the Site that indicate frequent inundation, with seven flooding events estimated to have exceeded the finished floor of the manufacturing space in the past 30 years.

C. Special Flood Hazard Area (SFHA) Regulations and Requirements:

Design Flood Elevation

Flood regulations are based on the 100-year storm event elevation at a location, as identified by the Federal Emergency Management Agency (FEMA). The 100-year storm event elevation, or base flood elevation, is determined by the Flood Insurance Study (FIS) for a waterway. In the case of the 4045-61 Main Street property, the FIS for the Schuylkill River was used to determine the base flood elevation (FEMA 2015). The northwest building corner, or upstream-most building corner, is approximately 445 feet downstream from Cross Section T along the Schuylkill River (shown in Figure 8 below). Given this distance, the elevation for the base flood is 41.40 ft NGVD29. The design flood elevation (DFE) requirement for the City of Philadelphia is 18 inches above the base flood elevation, or 42.90 ft NGVD29. This elevation is more conservative than ASCE 24-14 requirements for Class 2 Structures, which requires the DFE to be one foot above the base flood elevation.

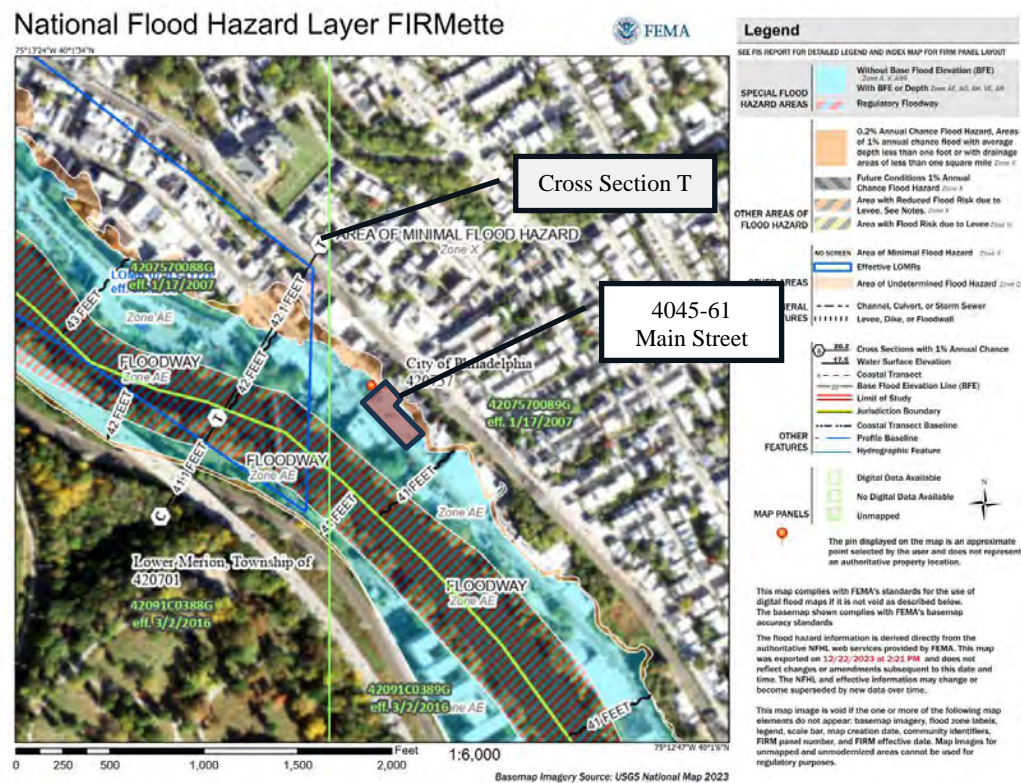


Figure 8: FEMA FIRMette Map of project Site.

Substantial Improvement Requirements

A project is subject to flood regulations if it is considered a “substantial improvement”. Substantial improvement is defined by ASCE 24-14 as “any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement.” Flood regulations for these projects are outlined in the following section.

Historical Structure Considerations

4045-61 Main Street is on the Philadelphia Register of Historic Places. A project that includes the alteration of a historic structure may be exempt from the substantial improvement requirements, per ASCE 24-14. In Philadelphia, a variance may be sought for flood regulation exemption only if meeting flood regulations would cause the building to lose its historic designation. If a variance is obtained, Philadelphia still recommends that all mechanical equipment be raised above the base flood elevation and that flood damage-resistant materials be used up to the flood regulation elevation.

It is AKRF's opinion that any development at this location should meet or exceed flood regulation requirements for floodproofing and elevation. Flood damages at the property have led to the closure of the former industrial facility. The use of a historic structure flood exemption would leave the property susceptible to continued flood damage and potentially create a safety risk for the future occupants and surrounding community.

Permissible Uses Below DFE

A "Substantial Improvement" project must meet flood regulations outlined in the Philadelphia Zoning Code unless a variance is received. The Code requires that the finished floor of any residential structure be set at or above the DFE.

For non-residential structures, areas below the DFE can be *dry floodproofed* (made substantially impermeable and designed to resist hydrostatic and hydrodynamic loads and effects of buoyancy) (ASCE, 2015). Spaces that are not dry floodproofed below the DFE may only be used for parking, incidental storage, or building entrances. Building entrances do not include mailrooms, furnished areas, or other supporting residential facilities. These areas must be *wet floodproofed* (constructed with flood damage-resistant materials and designed to intentionally allow entry and exit of floodwaters) (ASCE, 2015).

In addition to the above regulations, all mechanical equipment including air ducts, air conditioning systems, utilities, large pipes, storage tanks, and other similar objects or components must be located above or dry floodproofed above the DFE for non-residential structures. Per ASCE 24-14, mechanical equipment used to support residential structures must be set at or above the DFE as well.

Furthermore, the following list of chemicals cannot be produced or stored below the DFE: "acetone; ammonia; benzene; calcium carbide; carbon disulfide; celluloid; chlorine; hydrochloric acid; hydrocyanic acid; magnesium; nitric acid and oxides of nitrogen; petroleum products (gasoline, fuel oil, and the like); phosphorus; potassium; sodium; sulphur and sulphur products; pesticides (including insecticides, fungicides, and rodenticides)".

REDEVELOPMENT SCENARIO EVALUATION

Potential alternatives to the proposed residential use of the Site were reviewed with respect to the Philadelphia Zoning Code's Flood Regulations. The flood regulations and zoning requirements were reviewed based on assumed operational and access needs for each scenario. The scenarios include:

Scenario 1: Industrial Redevelopment

Given the significant flood damage to the existing industrial building and the anticipated change in type of industrial activity, the construction of a new facility, rather than a reuse of the existing building was reviewed. (Retrofitting the existing building to meet flood regulations and accommodate potential new industrial use needs was assumed to be cost prohibitive.)

Scenario 2: Renovate Existing Office Building for Commercial Use

The reuse of the existing office building was reviewed as a renovation project meeting the definition of "substantial improvements".

Scenario 3: Current Proposed Residential Development

The proposed residential development (as currently designed) is reviewed as the third scenario.

A. Scenario 1: Industrial Redevelopment

Scenario 1 - Description

The first scenario considers a new industrial use for the property in line with the “General Industrial Use” category allowed under Zoning regulations for I-2. General Industrial Use allows for operations that “process, fabricate, assemble, or treat materials for the production of large equipment and machines” (City of Philadelphia, 2024). The property is also located in the NCA Neighborhood Commercial Area Overlay District – Main Street/Manayunk and Venice Island Subarea B. This district overlay limits the maximum building height to 38 feet. For this analysis, the following aspects vital to an industrial operation were considered – storage of materials, accessibility, and loading.

Storage of materials and equipment would be necessary for an industrial operation. Materials would need to be stored in a location where they could be accessible to manufacturing operations and truck loading bays. Heavy machinery for manufacturing processes would be located on the first floor of the facility.



Figure 9: Existing boiler compromised by Hurricane Ida.

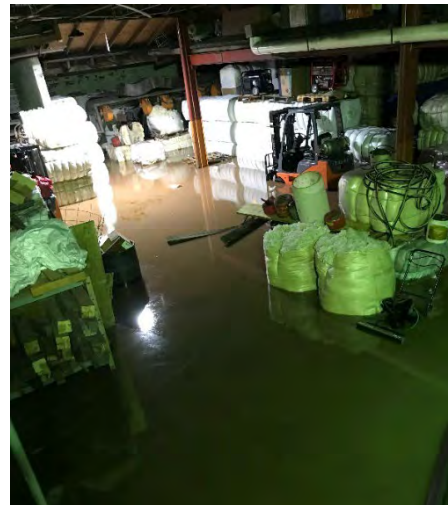


Figure 10: Material storage area after Hurricane Ida.

Regular truck traffic is assumed for industrial uses and loading and unloading activities would require reception of goods at the street level. The Philadelphia Zoning Code requires two loading spaces per 20,001 – 40,000 square feet of gross floor area and three off-street loading spaces for 40,001-60,000 square feet of gross floor area. An ADA accessible pedestrian building entry would be required from street level.

Zoning requirements for the I-2 zone specify a parking ratio of one parking space per 800 square feet of industrial gross floor area. Two alternatives within Scenario 1 were considered to address parking alternatives:

- **Scenario 1A:** Maintain existing building footprint of approximately 44,000 square feet and building height of 1-2 stories, which would require a parking variance.
- **Scenario 1B:** Reduce building footprint to approximately 28,000 square feet and building height to one story. A parking lot with the required parking spaces would be located along Main Street to support the facility. No parking variance would be required.

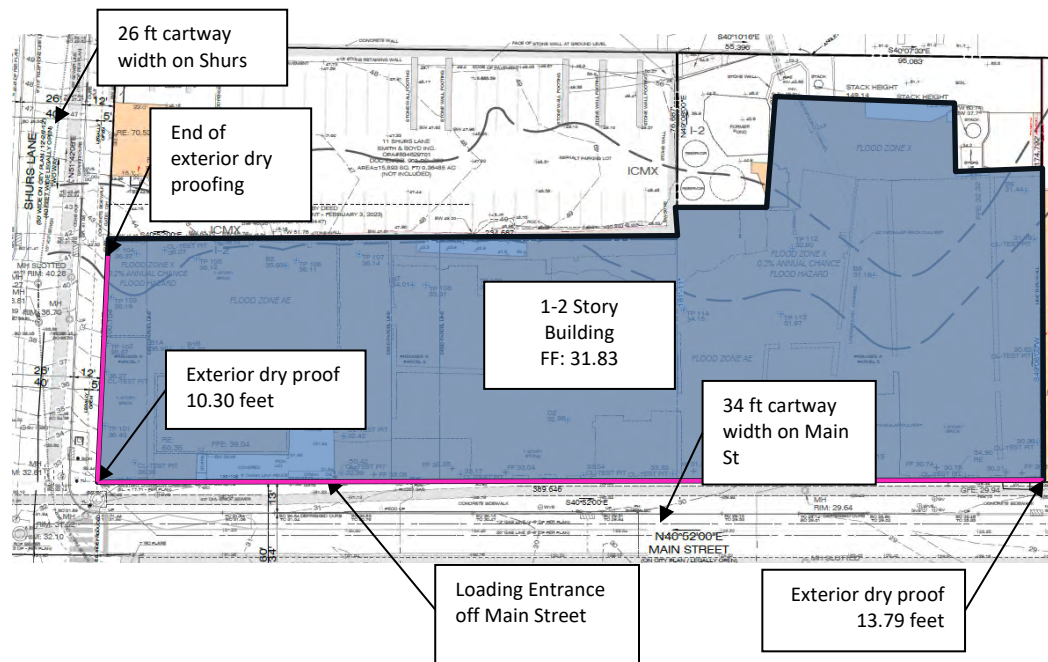


Figure 11: Scenario 1A: Maintain existing building footprint of approximately 44,000 square feet and building height of 1-2 stories. Alternative 1A would require a parking variance.

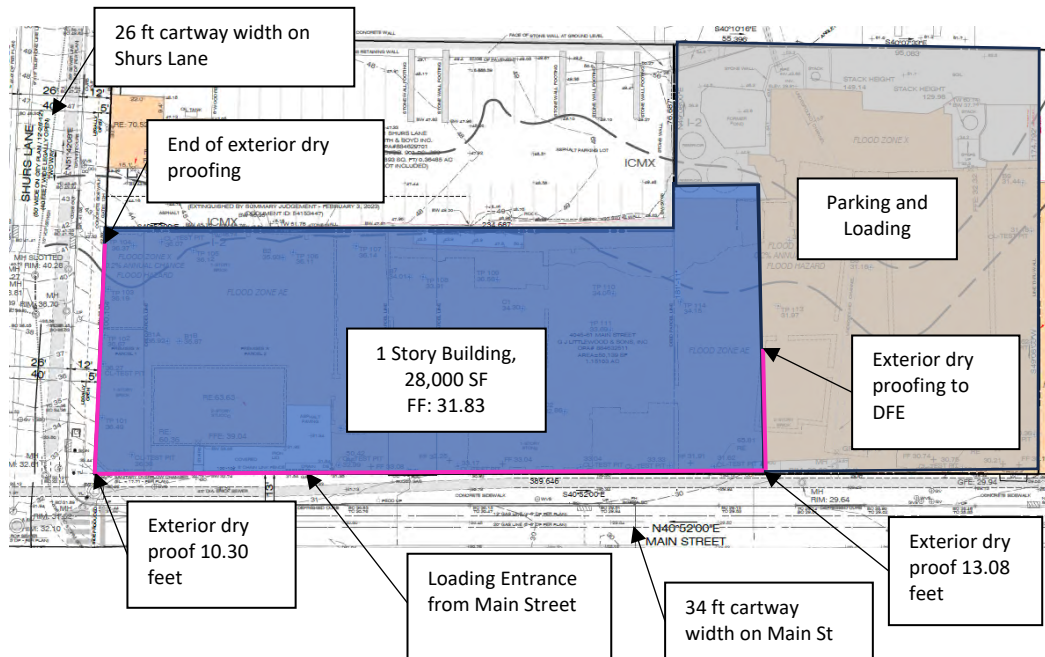


Figure 12: Scenario 1B: Reduce building footprint to approximately 28,000 square feet and building height to 1 story. Accommodate required parking and loading.

Scenario 1 - Flood Regulations:

An industrial redevelopment would be considered a non-residential structure, per ASCE 24-14. Non-residential structures can meet flood regulations by:

- a) Raising the finished floor above the DFE and wet floodproofing below the finished floor, or
- b) Dry floodproofing to the DFE.

Scenario 1 - Wet Floodproofing Feasibility:

The feasibility of wet floodproofing the industrial building was reviewed. Wet floodproofing is permissible below the DFE for incidental storage, parking, and building access. Given that the building finished floor must be near the adjacent street grade for vehicular access, wet floodproofing would not be feasible above the 31.83 finished floor elevation. Wet floodproofing would only be viable at elevations along the street up to the finished floor (approximately 320 linear feet of building). Wet floodproofing below a dry floodproofed area can create buoyant forces on the dry proofed areas when floodwaters reached the finished floor. Buoyancy forces would need to be structurally accounted for and may require more extensive foundations (FEMA, 2021).

The materials in this crawl space would need to consist of flood damage-resistant materials and be accessible for cleaning after flood events. This effort, along with buoyancy considerations would likely be impractical from a design and operational perspective.

Scenario 1 - Dry Floodproofing Feasibility:

Given a finished floor elevation of 31.83, dry floodproofing to the DFE (42.90) would be required to meet flood regulations. It is assumed that the facility would be dry floodproofed along the exterior of the building until it reached the DFE at the northeastern property corner on Shurs Lane (see Figures 11 and 12). For Scenario 1A, the height of dry floodproofing would range from 0 to 13.79 feet along the building face and 0 to 11.07 feet within the building. For Scenario 1B, dry floodproofing would range from 0 to 13.08 feet on the exterior and 0 to 11.07 feet on the interior.

Per FEMA technical guidance, dry floodproofing is typically only certified to a height of three feet and may not be feasible for greater depths (FEMA, 2013). In FEMA Technical Bulletin 3, it states that “FEMA does not recommend use of dry floodproofing systems in areas where: The depth of water under base flood conditions is greater than 3 feet” (2021). The Southeast Region Research Initiative (SERRI) report referenced by FEMA recommends a combination of dry floodproofing and elevation modifications when more than three feet of flood proofing is required (2011).

While it may be feasible to increase the height of dry floodproofing with additional structural modifications, the depth required would be more than four times the recommended maximum height. Such extreme flood measures would not be appropriate for the proposed use. The scenario falls within a Flood Design Class 2 Structure, as defined by ASCE 24-14. The risks associated with exposing a structure to over 13 feet of hydrostatic pressure would not be justified for this type of facility but may be considered for an essential Flood Design Class 4 facility such as an emergency response center.

Dry floodproofing strategies allow up to four inches of seepage over 24 hours (FEMA, 2021). Seepage would be managed by sump pumps but could damage any first-floor equipment and goods. Equipment and goods would need to be moved manually or by hydraulic lifts to storage spaces above the DFE.

In addition to the height of dry floodproofing necessary, the industrial scenario would include multiple loading doors below the DFE. As indicated in FEMA Technical Bulletin 3, permanent brackets for flood shields near vehicle openings and delivery doors are at risk for damage from accidental vehicle impacts (2021). The owner would also need to assess whether extended interruptions due to clean up from seepage is an acceptable operational risk (FEMA, 2021).

Additionally, given the extent of dry floodproofing needed for this facility, the feasibility of deploying all flood measures would need to be reviewed. Necessary flood warning times should be estimated based on the time it takes to identify the threat, notify the party responsible for deploying flood measures, travel to the Site, locate and successfully deploy all measures, and evacuate from the Site before access routes are closed (FEMA, 2021). The deployment of flood barriers around the entire building, particularly for large opening such as loading bays, could require use of heavy equipment such as forklifts and cranes. Due to these considerations, the emergency flood response for this scenario would be more challenging than alternative developments where less dry floodproofing and less openings below the DFE are required.

Scenario 1 - Mechanical Equipment Considerations

The Philadelphia Zoning Code requires that all mechanical equipment be located at or above the DFE. For this facility, mechanical equipment would need to be located a minimum of 11.07 feet above the finished floor elevation. Storage and production of chemicals listed in Section 2 of this report must also be above the DFE. This regulation may limit the types of industrial processes feasible within the facility, as vehicles transporting these substances or heavy equipment dependent on these substances would operate below the DFE.

Scenario 1 - Site Access:

It is assumed that truck traffic would need to enter the facility via Main Street rather than Shurs Lane. Shurs Lane has a cartway width of 26 feet and a slope of 9.2% adjacent to the property. Main Street has a cartway width of 34 feet and a slope of less than 1% adjacent to the property. The former industrial use of the building operated with a driveway entrance and loading bay off Main Street. Given the street elevation of 31.35 at the driveway, this scenario assumes that the existing finished floor of the manufacturing facility would be maintained at 31.83 in a redevelopment scenario. Raising the finished floor of the building would require hydraulic lifts or similar mechanical accommodations and other operational challenges that could adversely impact operations.

The primary pedestrian access would be located on Main Street. A secondary emergency access would be located off Shurs Lane at the highest point along the property.

Scenario 1 - Emergency Flood Response

In the event of a flood, the owners would be responsible for executing an emergency operations plan for flooding (FEMA, 2021). The plan would include deployment of dry floodproofing measures. For an industrial facility, this would require adding flood shields to all windows and doors along the face of the building. Should the building maintain its existing footprint, this would include windows along 490 feet of street frontage.

Scenario 1 - Key Takeaways

The following points summarize the hardships associated with proposing a new industrial facility at this property:

- The nature of the industrial use makes any significant change to the existing finished floor impractical. Industrial facilities require frequent vehicular access for loading and unloading. Movement of supplies, inventory, and equipment between street grade and DFE are likely impractical for typical industrial operations.
- Dry floodproofing is not recommended above three feet. An additional 10.79 feet are needed to dry floodproof the facility.
- The loading activities are not functionally compatible with dry floodproofing due to the risk of accidental vehicle collisions with loading doors and damage to dry floodproofing systems.
- Mechanical equipment would need to be located on a second story, approximately 11.07 feet above finished floor. Heavy industrial equipment may not be movable from the first floor to the DFE elevation.

- Restrictions on chemical storage below the DFE can limit industrial operations.
- Extensive human intervention is likely required to deploy flood barriers at all opening across the property.

In addition to these technical and logistical challenges, the closure of the established dyeing operation at this facility due to frequent and extensive flood damage provides evidence of hardship for continued industrial use.

B. Scenario 2: Renovate Existing Office Building for Commercial Use:

Scenario 2 - Description:

In Scenario 2, the operational and flood protection requirements were reviewed for a commercial-use renovation of the existing office building. It is assumed that substantial improvement is required to retrofit the building for the proposed uses. The building would maintain its existing footprint of approximately 1,850 square feet and height. The remainder of the property would be redeveloped at a later date. Two alternatives within this scenario were considered:

Scenario 2A: Renovation of the space for an office and retail use

Scenario 2B: Renovation of the space for temporary lodging (such as an Airbnb)

The proposed retail and temporary lodging uses are not permitted within the I-2 zone and would require use variances. The temporary lodging, described by Philadelphia Zoning Code as “Visitor accommodations”, is also not permitted in surrounding zones CMX-2.5, RM-1, and ICMX. The proposed uses do not have associated parking or loading requirements for the proposed footprint.

The existing office building contains two stories. An annex to the original building is included within the 1,850 square footprint and has a different finished floor elevation than the original structure. The elevations associated with the existing office structure to be renovated and depth below the DFE are shown in the figure below.

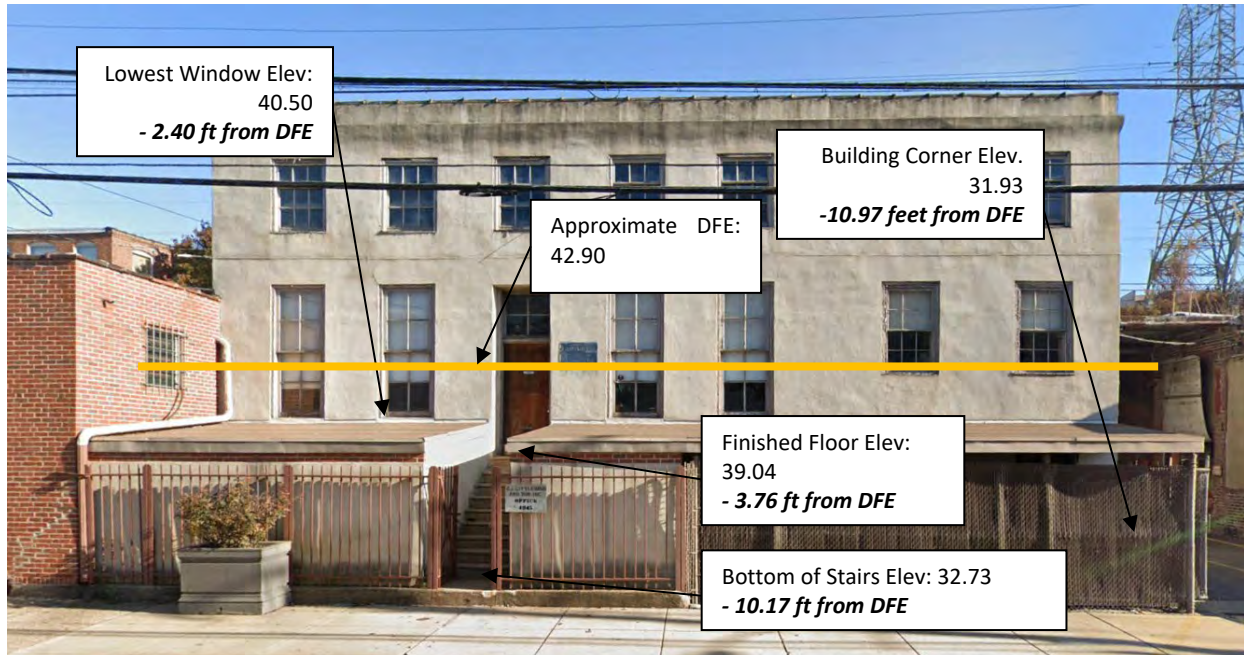


Figure 13: View from Main Street of existing office building.

Scenario 2 - Flood Regulations

The two proposed commercial uses are subject to different flood regulation requirements. The commercial/retail use (2A) is considered non-residential and may therefore utilize dry floodproofing up to the DFE. Raising the finished floor to the DFE and wet floodproofing below would also be allowable. The temporary lodging scenario (2B) is considered residential, per ASCE 24-14 definitions, and is therefore prohibited from using dry floodproofing measures. The finished floor would need to be raised to the DFE and the space below wet floodproofed. In both scenarios, mechanical equipment would need to be raised above the DFE.

Because the office building is considered a contributing historic building to Manayunk's Main Street Historic District, a historic exemption to flood regulations is feasible. In our professional opinion, based on historic flood damage to the office building and projected climate risks, occupying a building at this location without adequate structural design and floodproofing measures is an unacceptable safety risk.

Scenario 2 - Site Access

The current office building access is via a staircase on Main Street. The staircase is approximately six feet high. The door to the first floor is 3.86 feet below the DFE. No accessible entrance is provided. In a retrofit of this building, an ADA accessible route would be necessary. An ADA accessible ramp to the existing finished floor would need to be 75 feet long with additional length for landings. The construction of this ramp would require demolition of the existing structure to the northwest or obstruction of the vehicular entrance to the southeast to meet slope and length requirements of ADA regulations, given the elevations of the Site.

The potential for an annex to provide emergency egress and ADA access was reviewed. An annex that exits perpendicular from the building to Shurs Lane would meet the public sidewalk at a grade approximately 5.65 feet below the DFE. The annex would compromise redevelopment

potential for the adjacent lot. A more extensive annex could be considered that runs northeast, perpendicular from Main Street, and turns 90 degrees towards Shurs Lane at the property line was also reviewed. This annex would provide egress at street level within 0.2 feet of the DFE (42.90). However, the annex would compromise the redevelopment potential of the adjacent lot and the area northeast of the building. A development southeast of the office building on the remainder of the property would also need emergency egress above the DFE. The annex for the office building would compromise this route. The future adjacent redevelopment would be unable to provide vehicular access at the DFE from Shurs Lane due to this annex.

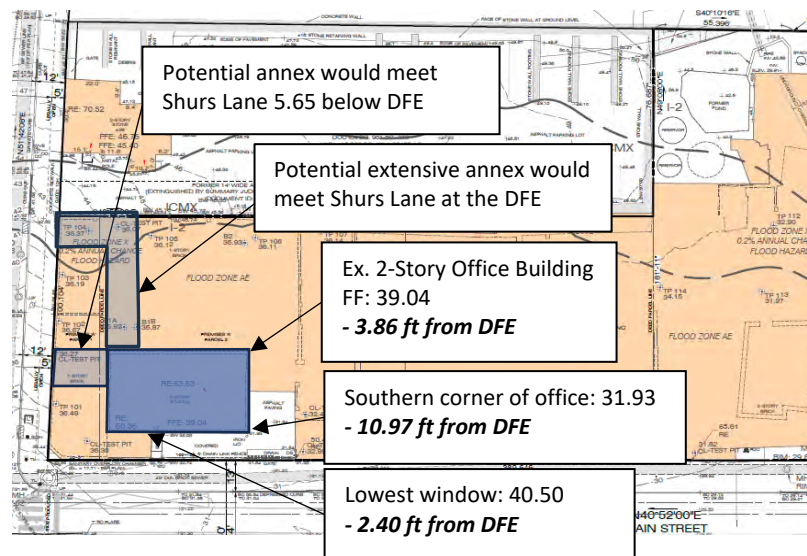


Figure 14: Scenario 2: Renovation of existing office building for commercial use.

Scenario 2 - Dry Floodproofing Feasibility

The feasibility of dry floodproofing the entire structure to the DFE was reviewed. This alternative would maintain two usable stories but would only be allowable for the commercial/retail use and not the temporary lodging, due to restrictions on dry floodproofing residential structures. The dry floodproofing elevation would be a maximum of 10.97 feet. Per guidance reviewed in Scenario 1, dry floodproofing above three feet is not recommended by FEMA.

There are further considerations for dry floodproofing an existing historic structure. Per testing reported by the United States Army Corps of Engineers, retrofitted impermeable wall systems “can withstand only approximately three feet of static waterhead without damage. If a building or home is loaded to excessive depths, it can fail instantaneously and possibly result in injury or death of occupants” (1988). Dry floodproofing must consider hydrostatic, hydrodynamic, and impact loads from floodwaters (FEMA, 2021). Significant structural stabilization is likely required to reinforce the existing building walls and foundations. A structural analysis would need to be performed to assess the extent of stabilization.

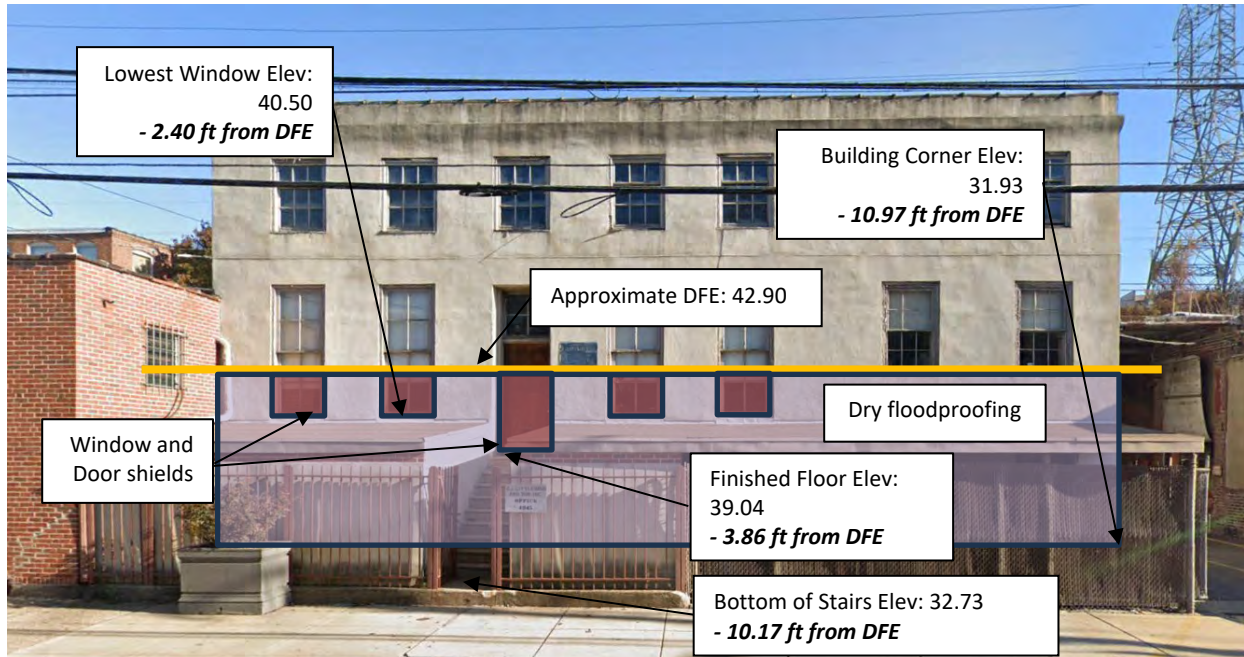


Figure 15: View from Main Street of existing office building with dry floodproofing.

Scenario 2 - Wet Floodproofing Feasibility

The feasibility of wet floodproofing the structure was also reviewed. The finished floor would be raised to the DFE and the area beneath the finished floor would be wet floodproofed. Per regulations for residential and non-residential structures, this approach would be allowed for either the commercial/retail or temporary lodging scenario. The new finished floor elevation would be 2.40 feet above the base of the historic windows. Raising the floor elevation 3.86 feet would reduce the first-floor ceiling height to less than the 7'-6" minimum allowed for habitable spaces, per the International Building Code; therefore, in order to use the space for the proposed uses, the second floor would need to be eliminated. This would reduce the building to a single story with less than 1,850 square feet in gross floor area. Raising the floor would also increase the length needed for an ADA accessible ramp by approximately 45 feet. An accessible egress route to the Shurs Lane annex within the building would also need to be considered given the elimination of the second story. Any mechanical equipment would need to be stored within the building footprint, further reducing usable floor area. The remaining usable floor area would need to be sufficient to support the commercial/retail or temporary lodging operations.

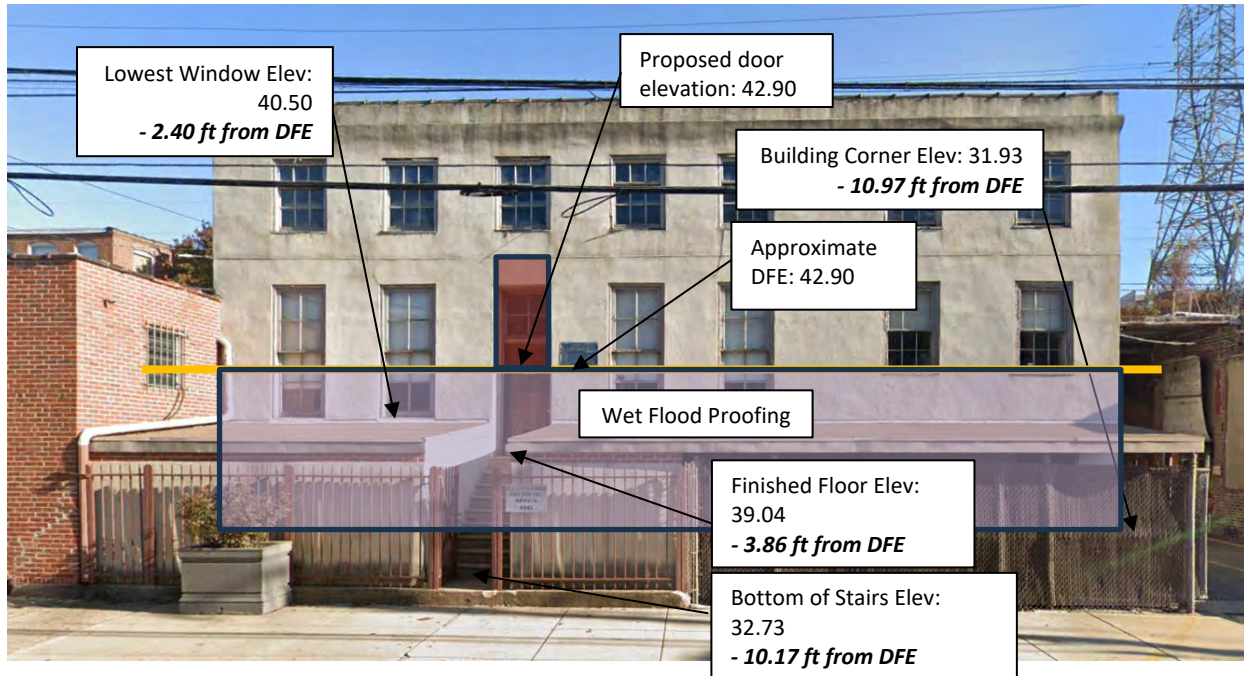


Figure 16: View from Main Street of existing office building with wet floodproofing

Scenario 2 - Emergency Flood Response:

Emergency flood procedures for this building would vary based on the floodproofing strategy selected. In a dry floodproofing alternative, the dry floodproofing measures would need to be deployed including sump pumps, windows shields, and door shields.

The use of the building as a temporary lodging facility, particularly with the issue of emergency access to an elevation at or above the DFE, is challenging for flood response. Transient residents and visitors to this area may not be familiar with flood response procedures and evacuation routes.

Scenario 2 - Key Takeaways

The following points summarize the hardships associated with proposing a new commercial use in the existing office building:

- Dry floodproofing the structure up to the DFE is 7.97 feet higher than the three feet recommended in FEMA Technical guidance. Due to the historic nature of the wall and loading requirements for dry floodproofing, substantial structural reinforcement is likely required.
- Raising the finished floor to the DFE reduces the structure to one floor, limiting floor space available for mechanical equipment, egress ramps and stairs, and usable area. The finished floor would be above the historic window elevations by 2.40 feet.
- In order to provide an emergency egress at the DFE, per ASCE 24-14 guidelines, an annex would need to be built at the northeastern most point of the property on Shurs Lane. This annex would compromise the redevelopment potential of the lot adjacent to the office. The

annex would also obstruct an emergency access route for future development on the remainder of the property.

- Flood rescue procedures for a temporary lodging facility would need to provide communication strategies for visitors unfamiliar with local flood risk and response procedures.

C. Scenario 3: Proposed New Residential Development

Scenario 3 - Description

The proposed development is a 7-story residential structure. The proposed building footprint is approximately 44,000 square feet. While the residential structure would be new construction, the historic façade of the existing textile facility would be preserved in place. The residential building would contain apartments, a coworking space, a fitness center, and supporting maintenance facility. Conceptual approval for stormwater management has been received from the Philadelphia Water Department for the incorporation of a green roof and stormwater planter to mitigate runoff. Parking is proposed on the first floor and part of the second floor.

Scenario 3 - Design Approach to Meet Flood Regulations

The building is designed in accordance with Philadelphia Zoning Code, ASCE 24-14 requirements, and FEMA technical guidance. The following measures have been incorporated:

Finished Floor Elevation and Wet Floodproofing

- The lowest residential units are located on the second floor at elevation 45.50 ft NGVD29, 2.60 feet above the Philadelphia requirement of 42.90 ft NGVD29.
- The first floor includes parking, incidental storage, and building access. This floor would be wet floodproofed using flood vents and flood damage-resistant materials.

Mechanical Equipment

- The mechanical equipment is located at elevation 45.50 or higher where feasible. Most of the HVAC condensers are roof-mounted and the remaining HVAC condensers are suspended from the parking garage ceiling, above 45.50.
- The electric car charging stations are located on the second floor at elevation 48.50.

Building Access

- Multiple egress points are provided from the building. The 13.24-foot change in grade along the property line from the southern building corner on Main Street to the northeastern corner on Shurs Lane allows for egress from the second story of the building.
- Two lobbies are located along Main Street at elevations 30.25 ft (Main Lobby) and 33.00 (West Lobby). The lobbies will be wet floodproofed.
- An emergency egress route is located along Shurs Lane, at the highest elevation along the property line. The egress route will include a flood vent and flood damage-resistant materials to allow for egress in the event that a flood exceeds the door sill elevation.

-
- An ADA accessible emergency egress route is located south of the loading entrance on Shurs Lane. This route connects to the elevator and enables egress for residents unable to use the stairway exit.
 - The primary vehicle entrance is located on Main Street to facilitate regular entry and exit from the first-floor garage. In the event of a flood, vehicles can exit through the second story loading entry.
 - The elevator will remain at rest on the second story, above the DFE.

Emergency Flood Procedure

- An emergency flood procedure plan will be developed aligning with the City of Philadelphia Emergency Flood Response Plan.
- A concrete podium has been proposed to allow for a gathering place and potential rescue location.

Scenario 3 - Historic Flood Elevations and the Proposed Development

The historic flood analysis discussed in the “Site Background and Flood Context” section of this report was compared to proposed elevations for building access and finished floors. Figure 17 compares these elevations to flood events between 1993 and 2023.

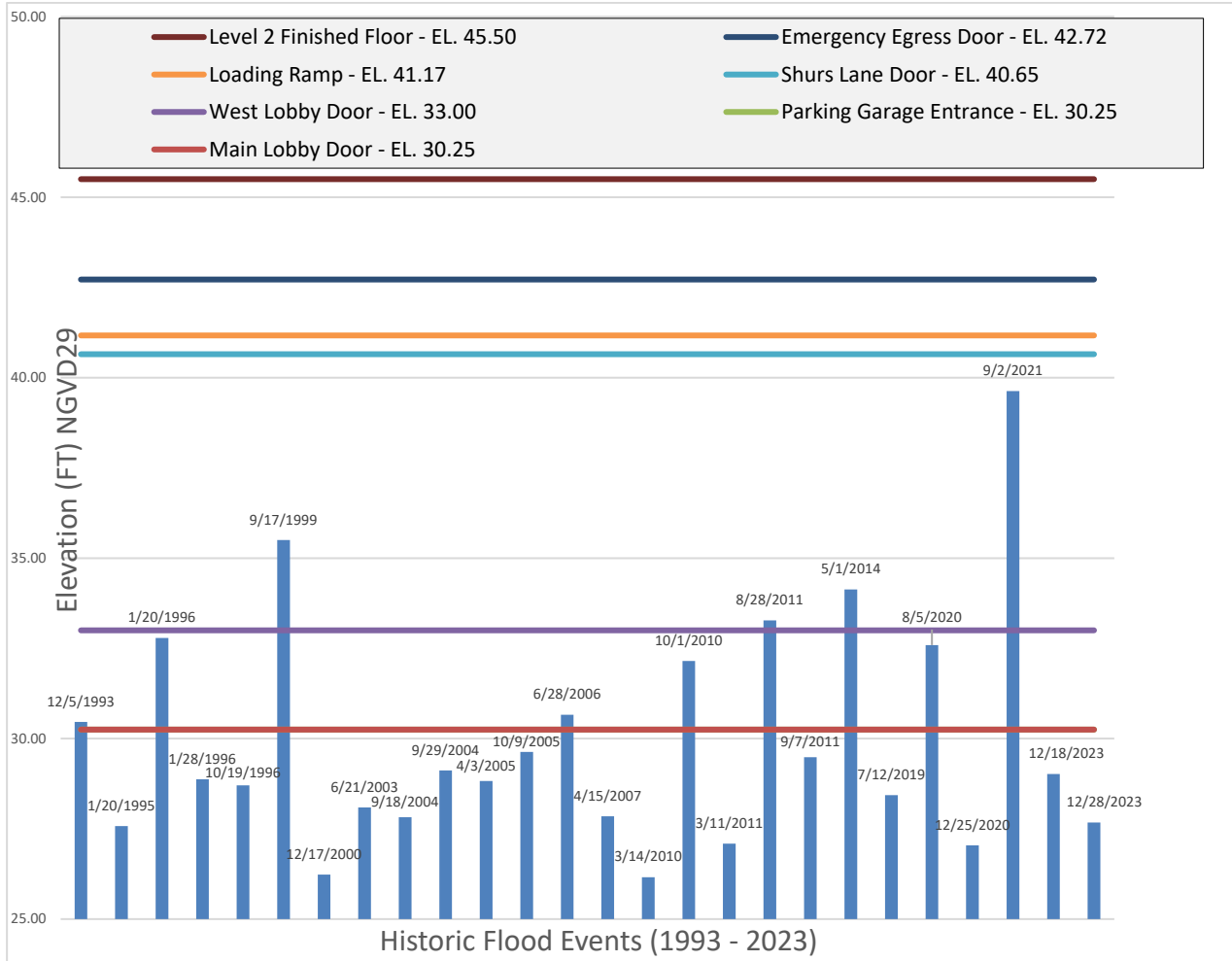


Figure 17: Approximate historic flood event elevations compared to the proposed residential building elevations (Scenario 3).

The frequency of flood events exceeding the proposed building elevations was analyzed in Table 2. The number of years in which historic flood events over the period of analysis (1993 – 2023) would have exceeded a building elevation was used to determine the probability of annual exceedance. The Annual Chance of Exceedance indicates the probability that a building location will be flooded in any given year. The maximum flood depth above the elevation was also determined using the largest recorded event (Hurricane Ida).

Table 2: Historic Flood Elevations Compared to Proposed Building Elevations				
Location	Proposed Elevation (FT) NGVD29	Historic Flood Events (1993 - 2023)		
		Number of Flood Events Exceeding EL.	Max Flood Depth Above EL. (ft) 9/2/2021	Annual Chance of Exceedance*
Parking Garage Entrance	30.25	9	9.38	30%
Main Lobby Inner Door	30.25	9	9.38	30%
West Lobby Door	33.00	4	6.63	13%
Shurs Lane Door	40.65	0	0.00	<1%
Loading Ramp	41.17	0	0.00	<1%
Emergency Egress Door	42.72	0	0.00	<1%
Level 2 Finished Floor	45.50	0	0.00	<1%

*Annual chance of exceedance is calculated based on the 1993 – 2023 historic period of analysis only. The FEMA 1% flood event (100-year event) elevation is 41.40 feet NGVD29.

Based on the historic period of analysis, there is a 30% chance that the parking garage and main lobby inner door may flood in a given year. If this occurs, residents may exit through the West Lobby, Shurs Lane door, or emergency egress door. The Shurs Lane door, loading ramp used for emergency vehicle egress, and emergency egress stairwell would not have been impacted by flood events experienced in the past 30 years. The lowest residential units would also have remained dry.

Scenario 3 – Key Takeaways

The new residential development includes design measures to reduce flood risks:

- The proposed finished floor elevation for residential units is 2.60 feet higher than the elevation required by the City of Philadelphia.
- The first floor will be wet floodproofed and complies with allowable uses below DFE.
- The building provides four pedestrian access points including an emergency egress route located at the highest possible elevation along the property line.
- Based upon estimated historic flood elevations at the Site, emergency egress routes and residential units would not have experienced flooding in the past 30 years.
- Mechanical equipment is to be located above the DFE.

CONCLUSIONS

This memorandum details the flood design and operational considerations for three use scenarios. The industrial use scenario would require extensive floodproofing measures that exceed the maximum height recommended by FEMA and poses significant operational challenges. The commercial use scenario would require substantial and impractical modifications to the existing office building and would compromise the redevelopment of the surrounding parcels. The residential use scenario would provide flood design considerations that exceed the minimum requirements for the City of Philadelphia. The residential use scenario would provide egress from the building above all estimated elevations for significant floods in the past 30 years. Any continued use of the property should meet or exceed flood regulations for the City of Philadelphia to mitigate future flood damage and provide safe egress in the event of a flood.

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March 11, 2024

City of Philadelphia Historical Commission
1515 Arch Street
Suite 13
Philadelphia, PA 19102

From: Nancy L. Templeton, AICP, PP

cc: Andrew Zakroff, Urban Conversions; Adam Laver, Blank Rome LLP

RE: Professional Planning Report – 4045 Main St, Philadelphia, PA

INTRODUCTION

CHPlanning was asked to provide professional planning services to support Urban Conversions' (Owner) Financial Hardship Application to the City of Philadelphia Historical Commission regarding the property located at 4045 Main Street. The site is located within the Main Street Manayunk Historic District. It is bounded by Main Street to the south, Shurs Lane to the west, the Manayunk/Norristown regional rail line to the north, and an indoor soccer facility to the east. The Owner is requesting approval to demolish most of the existing structures, preserve a portion of the front façade, and construct a seven-story multi-family building with accessory parking. CHPlanning is providing expert planning and testimony services to support the Owner's position that construction of an alternative design and use for the site would provide a more positive impact for the community than the existing functionally obsolete vacant structure.

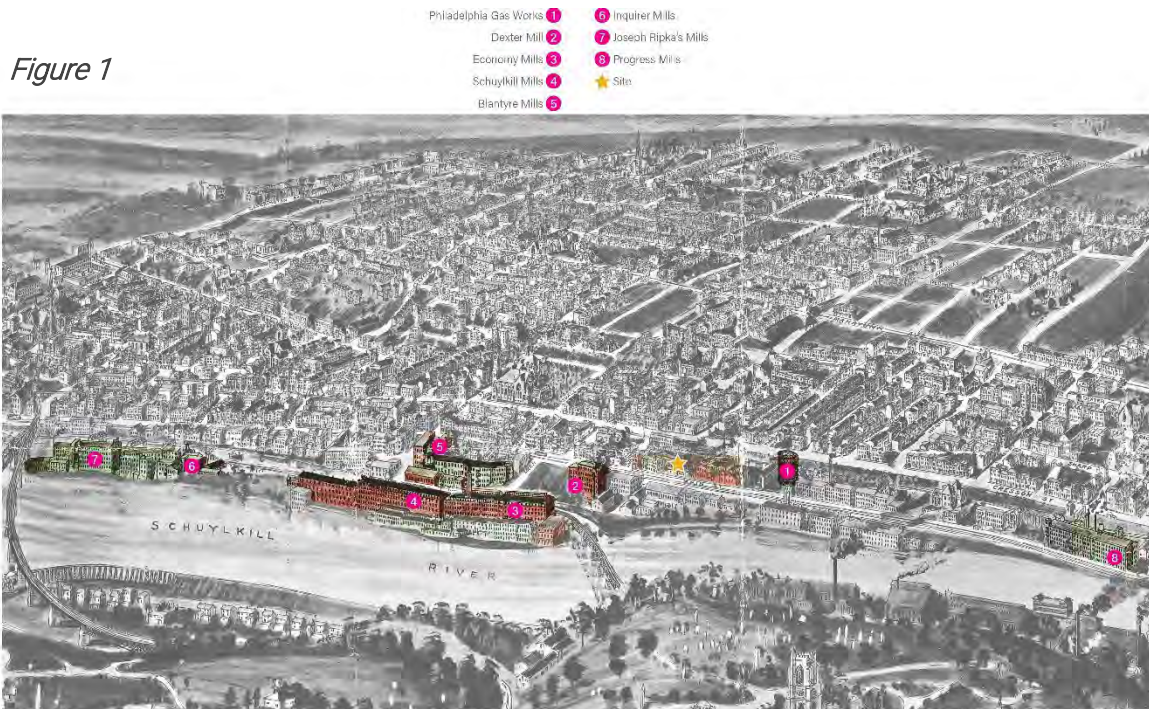
This analysis addresses Section 9.2(b) of the Philadelphia Historical Commission Rules & Regulations, specifically Subsection 1. "identification of reasonable uses or reuses for the property within the context of the property and its location." The current structure and site configuration limits the full development and community impact potential of the site. In particular, the presence of similar contextual residential developments, the location within walking distance to several transit routes, the location within walking distance to the Manayunk commercial district, and preservation of the façade and historic features of the structure makes redevelopment of this site appropriate and beneficial to the community.

In evaluating the planning implications for the Financial Hardship application, I conducted a site visit of the property and surrounding neighborhood. I also reviewed the following documents: the zoning requirements in the Philadelphia Zoning Code, the Philadelphia 2035: Lower Northwest District Plan, the 4045 Main Street Conditions Assessment prepared by CBP architects, and historic maps of the site and surroundings. The following report expresses the land use and planning implications of redeveloping the property as a multi-family residential use and supports approval of the Financial Hardship application.

HISTORIC CONTEXT

In the late 1800s, the properties at 4045 Main Street operated as the Albion Dye Works. The property was surrounded by mills and worker housing that drove industry and development along the Manayunk Canal. Over time, the existing structure was expanded with infill development to open more use of the structure. Figure 1 shows a historic map of the property surrounded by mills operating in 1907. The map indicates that many of these mills were as tall as or taller than the proposed seven-story residential building.

In 1984, the neighborhood applied for and received historic designation for the area along the Manayunk Canal and Schuylkill River. The site is located within this district and any proposed development has to first obtain approval from the Philadelphia Historical Commission.



Source: CPG Architects

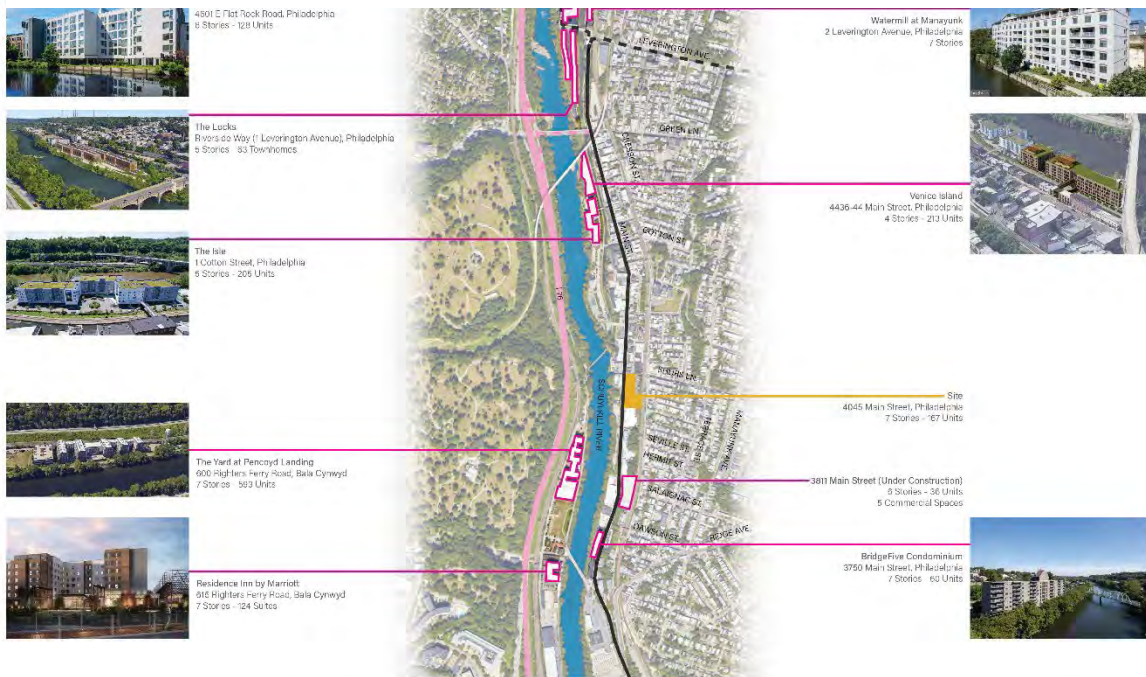
EXISTING NEIGHBORHOOD CONTEXT

Manayunk is a unique blend of historic residential rowhouses, a historic “Main Street” central business district, and new and recent multi-family, multi-story development. The site is immediately surrounded by residences, commercial buildings, offices, surface parking lots, an indoor soccer facility, and some vacant buildings and lots. There are residential streets with a mix of historic and new housing behind the site, across the rail line.

There are several recent and new multi-family developments in the immediate area that are comparable in height and scale to the proposed seven-story development. Figure 2 shows where these developments are in proximity to the site.

As indicated on the map, there are eight multi-family buildings and one hotel surrounding the site that range from four to seven stories.

Figure 2



march 12, 2024 | philadelphia historical commission | 4045 main st

context - existing

Urban Conversions | CBP Architects | 43
Source: CPG Architects

EXISTING ZONING

The site is currently zoned I-2 Medium Industrial, which does not include residential as a permitted use. Primary permitted uses include service facilities, professional offices, building supplies and equipment, animal services, maintenance and repair facilities, and gas stations. The proposed development will require relief for use and height, as the Main Street/Manayunk and Venice Island Commercial Overlay District has a maximum building height of 38 feet. The proposed building height as measured from average grade (1'-0" above the regulatory flood plain) is 68 feet, 1 1/4 inches. The property is also located in the Open Space and Natural Resources - Flood Protection and the Open Space and Natural Resources - Steep Slope Protection overlay districts.

Much of the site is located within the 100-year floodplain and residential uses on the first floor are prohibited. The developer has proposed only parking and the lobby on the first floor. Residential units and entrances are proposed above the flood elevation.

4045 Main Street is an I-2 island immediately surrounded by CMX-2.5 and ICMX. In addition, CMX-2 and RM-1 are both very close to the site.

PLANNING CONTEXT

The Philadelphia 2035: Lower Northwest District Plan recommends industrial as the future land use and zoning for this property. The plan also promotes sustainable development and adaptive reuse throughout the City. The adaptive reuse of the existing structure and redevelopment of the site to multi-family housing will help to implement sustainability and historic preservation goals for the City. Industrial uses are not suitable for this site: truck access to the site would be difficult given the narrowness of Main Street. Loading and unloading would disrupt the pedestrian and traffic flow. Redevelopment for office use is unlikely since office development has been scarce since the pandemic.

TRANSPORTATION AND CIRCULATION CONTEXT

The site currently fronts on Main Street and has access via Shurs Lane. Main Street has heavy traffic and on-street parking on both sides of the street. Transit access is abundant in this location. There is a bus stop immediately in front of the site at Main Street and Shurs Lane and is a 15-minute walk to either the Manayunk or Wissahickon regional rail station. The under construction Wissahickon Transit Center will make connections much easier and encourage residents to use the bus. There is an Indego bike share station on the sidewalk at Shurs Lane at the site and the residents will also have easy access to the Schuylkill River Trail. The proposed development is also conveniently located within one mile of the I-76 interchange with quick access to the City and suburbs.

Covered off-street parking with access to Main Street will be provided at the proposed development. Currently, there is no on-street parking directly in front of the existing building. The developer is proposing to add a new on-street parking lane where it is currently prohibited by the City.

PROFESSIONAL PLANNING OPINION


As a professional planner, I support the developer's application for Financial Hardship for the proposed development at 4045 Main Street by the Philadelphia Historical Commission. My support is based on the following conditions:

- The height and scale of the proposed redevelopment plan is consistent with numerous other high density multi-family developments in the near neighborhood. To ensure compatibility with the character of the surrounding historic district properties, the design incorporates a significant setback, making it difficult to see the 7th floor when looking at the building from the commercial heart of Main Street.
- The site is not appropriate for the industrial and office uses permitted in the I-2 district. Main Street is narrow for this type of heavily trafficked road that runs through the pedestrian-oriented business district. Industrial uses typically require extensive truck access for loading and unloading, which will significantly disrupt vehicular and pedestrian traffic on Main Street.
- New office development has been minimal nationwide since the pandemic and there are several existing office buildings in the area that would compete with this property.

- The development is within walking distance of two regional rail stations and several bus routes. High density residential development is a central component of transit-oriented development.
- The new development will bring in residents who can frequent local businesses, providing an economic boost for the neighborhood.
- The development will improve the visual quality along the Main Street corridor by activating the street with its varied facades, pedestrians, new street trees, lighting, and landscaping.
- Sustainable growth is a cornerstone of the City's planning goals. This development will provide sustainable growth through its adaptive use of an existing vacant structure, infill and redevelopment of a vacant property, and transit oriented development.

This opinion is based on my understanding of the site conditions, historic maps, site plans, renderings and review of the zoning ordinance and comprehensive plan. I reiterate my support for the Financial Hardship application as this development will be beneficial to the neighborhood and the sustainable development goals of the city.

CHPlanning, Ltd.
Nancy Templeton, AICP, PP

A handwritten signature in black ink that reads "Nancy L. Templeton". The signature is written in a cursive style with a large, sweeping initial "N" and a long horizontal stroke across the top.

Senior Managing Associate

March 12, 2024

Jonathan E. Farnham, Ph.D.
Executive Director
Philadelphia Historical Commission
Room 576, City Hall
Philadelphia, PA 19107

Re: Financial Hardship Analysis for 4045-61 Main Street

Dear Dr. Farnham:

Econsult Solutions, Inc. (ESI) has prepared this report summarizing the findings of our analysis as part of a financial hardship application submitted to the Philadelphia Historical Commission (the "Commission"). The application, by Urban Conversions ("Urban"), proposes the demolition of the building located at 4045-61 Main Street, Philadelphia, PA "the "Subject Property").

The remainder of this report discusses the background for our work, the types of analyses we conducted, and a summary of our findings and conclusions. This report reflects information available to us at the time of our work, plus information on changes in general market conditions to the current date. Should additional information come to light, we reserve the right to revise our analysis.

SUMMARY AND CONCLUSIONS

We have investigated several potential reuse scenarios for the Subject Property, including industrial, restaurant/retail, multi-family residential, and commercial office.

The buildings that comprise the Subject Property are poorly suited to any use, including the industrial use for which they were built over time. Most of the building area is on the first floor, which sits in a floodplain, rendering it unsuitable for almost any use. The immediate neighborhood has a strong real estate market, yet the location, configuration and condition of the buildings mean that the analyzed reuse scenarios do not create enough value to justify the development expenditures.

Based on our analysis, we conclude that there is no use to which this building may be reasonably adapted given the cost of renovations and the revenues that can be expected by those uses.

HARDSHIP REQUIREMENTS

The hardship application must demonstrate that the existing buildings cannot be renovated or repurposed in a way that is economically viable for this owner or another owner. Further, according to the Commission's guidelines, the financial hardship application for a property must analyze "all purposes for which it is or may be reasonably adapted."¹ These guidelines mean that the hardship analysis must identify all reasonable reuses of the property and analyze the economic viability of each reuse scenario. Not all potential reuses are reasonable, due to physical or regulatory constraints.

METHOD

To conduct our assessment, ESI performed the following tasks:

- Inspected the exterior and interior of the Subject Property, including these building, the property, and the surrounding area;
- Reviewed City of Philadelphia property records for the property;
- Reviewed the January 12, 2024, letter from Adam Gillespie of Avison Young real estate advisors;
- Reviewed the January 19, 2024, letter from Ryan Ade of Jones Lang LaSalle real estate advisors;
- Reviewed the February 12, 2024, letter from Eric Leighton, AIA, of SBP Architects
- Reviewed the March 11, 2024 memorandum from AKRF, Inc.
- Reviewed the March 11, 2024 memorandum from Nancy Templeton of CHPlanning, Inc.
- Reviewed all other documents referenced in this report;
- Developed conclusions regarding the financial hardship application and whether the information submitted meets the requirements specified in the Commission's Rules and Regulations.

In all cases, our analysis is conducted to a reasonable degree of professional certainty. We have relied on all the documents specifically cited in the report, but also looked to other documents, interviews, and other sources of information.

BACKGROUND

Zoning

The Subject Property is zoned I-2.² Category I-2 is a "Medium Industrial" zone intended to permit "Light/moderate impact industrial uses including manufacturing, processing, and distribution."³ This zoning category permits industrial uses, business and professional offices, some retail and some commercial services uses. Though loading docks are normally

¹ Philadelphia Historical Commission's Rules and Regulations, Section 6.3, p. 30

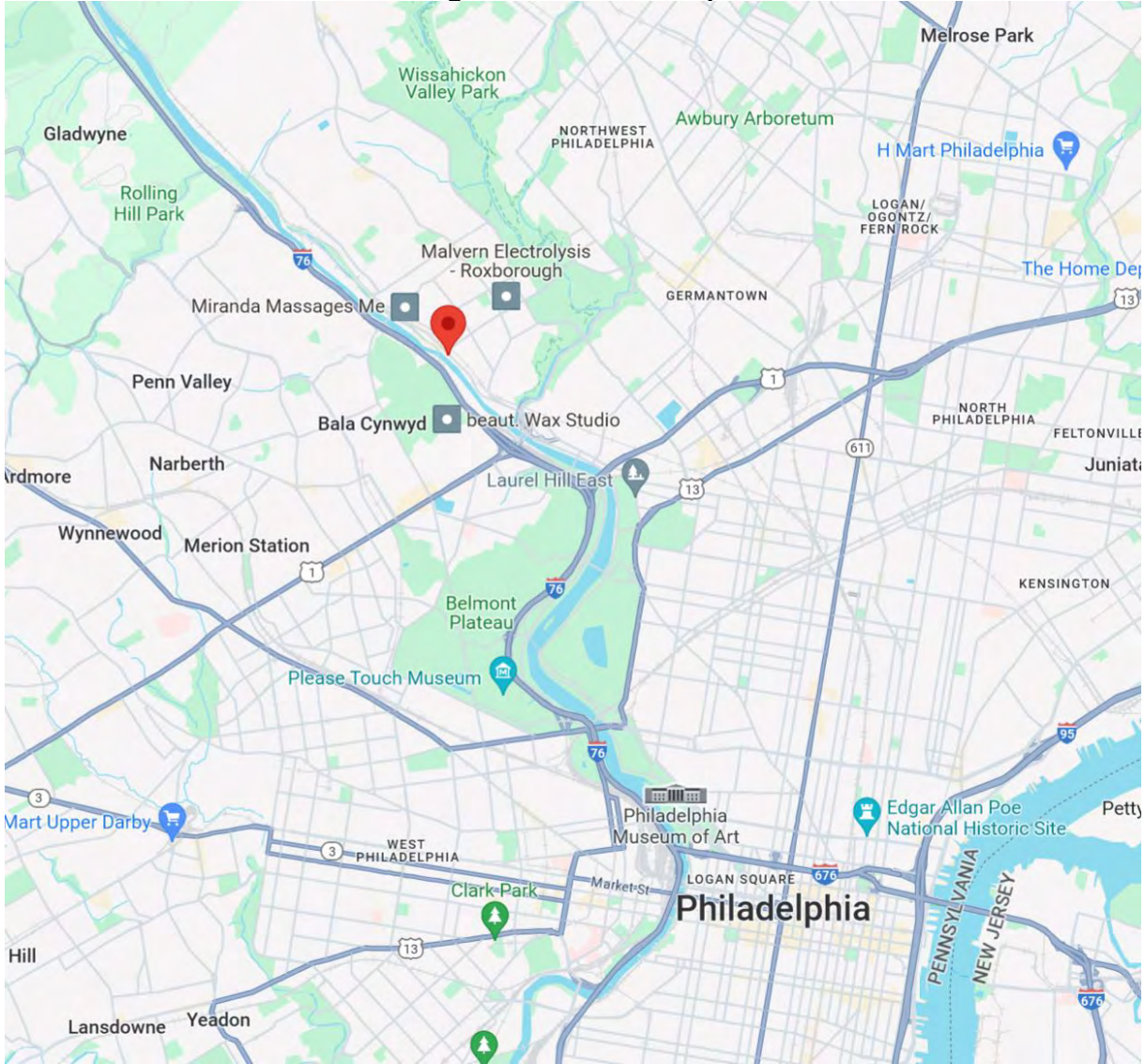
² <https://atlas.phila.gov/4045%20MAIN%20ST/zoning>

³ https://www.phila.gov/media/20220909084529/ZONING-QUICK-GUIDE_PCPC_9_9_22.pdf

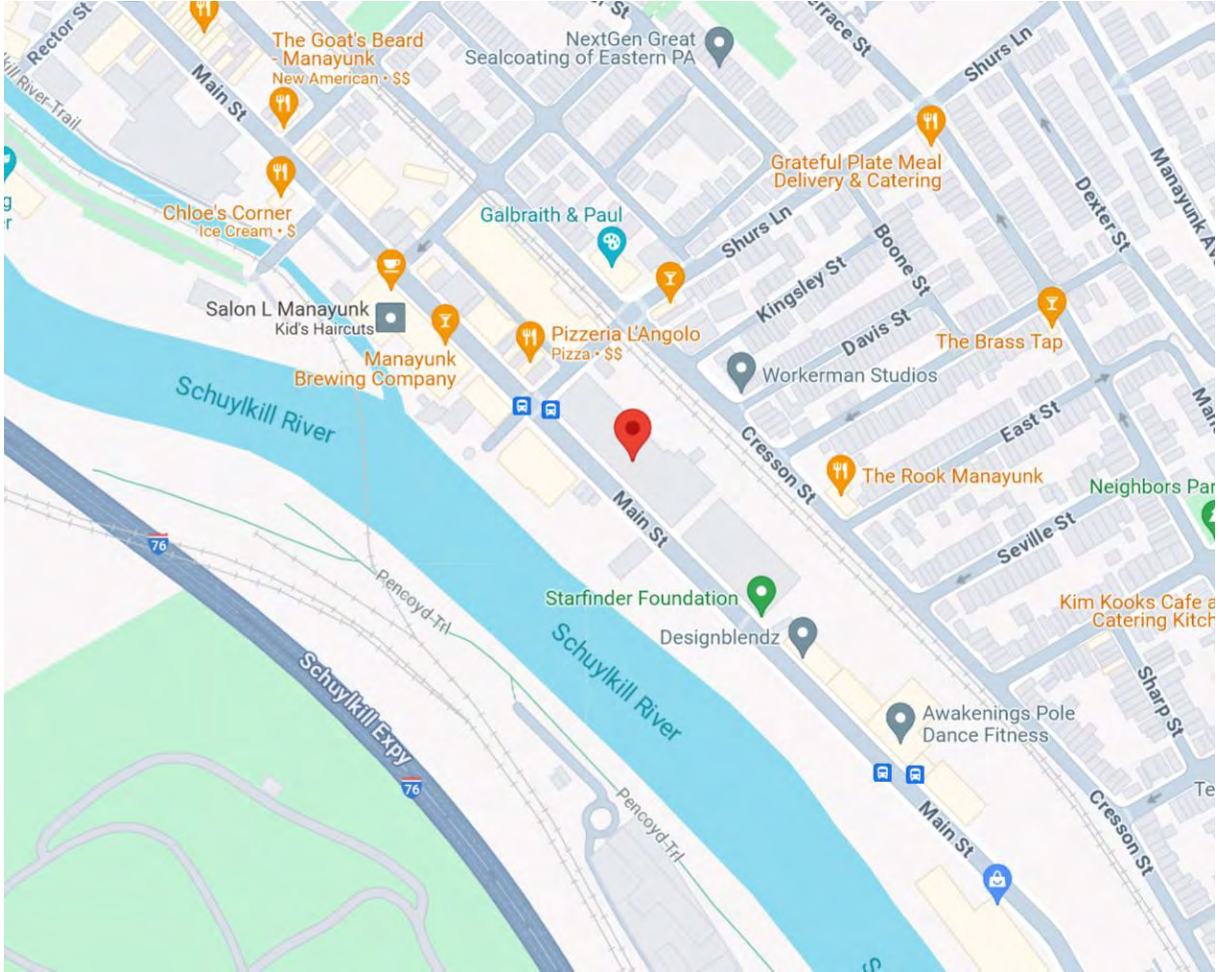


required as part of industrial structures, the Subject Property would likely be largely or fully exempt from these provisions because it is historically designated.⁴

Figure 1: Location Map



⁴ Philadelphia Code, Section 14-801(2)(d) - https://codelibrary.amlegal.com/codes/philadelphia/latest/philadelphia_pa/0-0-0-293706,



EXISTING CONDITIONS

Physical Description

4045-61 Main Street is an amalgamation of several one and two-story buildings with approximately 54,760 gross square feet of improvement area on a 54,129 square foot lot.⁵ The combined buildings cover most of the parcel. The buildings are mostly single story, though there is a second story in several areas.



Street frontage

Use

The buildings are currently vacant. The Subject Property was most recently used as the G. J. Littlewood mill, which was an industrial facility that dyed wool and other fabrics.

Interior

The property is comprised of a series of interconnected structures. The vast majority of the space was used for industrial purposes, and a small portion used for ancillary office space.

Industrial portion – The industrial portion contained dyeing equipment, storage for raw and completed materials, and other machinery needed for the industrial process. The floor level often changes from building to building. The walls between the buildings divide the property into several functionally separated spaces. The finish level is quite low.

⁵ City of Philadelphia records, <https://property.phila.gov/?p=884632511>



Most of the mill space is empty.

Office Space – A small portion of the property is configured as ancillary office space. The office space buildings front on Main Street and are a collection of rowhouse-like structures that have been merged over the years. The office space has three above grade levels and is entered from the street at the second level. The first level is basement-like space entirely in the floodplain and the third level has very low ceilings.



Office floor



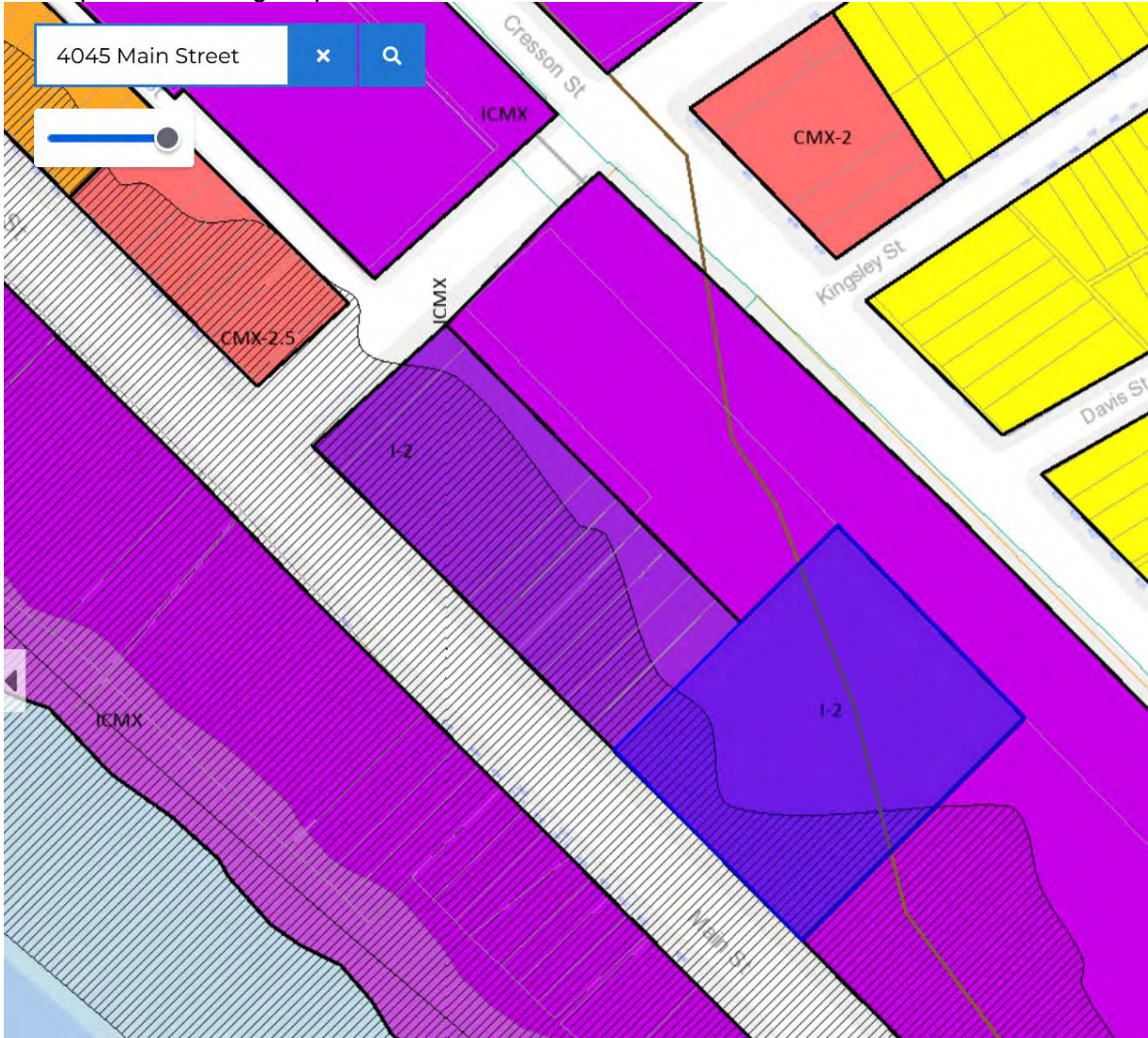
Third floor of office space – low ceilings

Systems

Both plumbing and HVAC are limited or absent. The condition and robustness of the electrical infrastructure is not clear. Any reuse of the facility would need to install or significantly upgrade the building systems.⁶

Floodplain

All the first-floor frontage, and most of the first floor itself sits in the floodplain. The building is vacant now because it flooded during Hurricane Ida, and the interior machinery was ruined. A February 20 study from AKRF, Inc. provides extensive detail on the history of flooding and the impact of flooding on possible uses on this site.



⁶ See, for example, the February 12 letter from Eric Leighton

REUSE SCENARIOS ANALYZED

We analyzed the following uses:

1. Industrial
2. Restaurant / retail space
3. Office
4. Multi-family Residential
5. Hospitality – Office building only

We considered additional uses, but these uses were not considered to be reasonable.

- Parking

Scenario 1 – Industrial

The Subject Property was built as an industrial facility, and it served that purpose until 2021. The business that had been using the property ceased operation because of catastrophic flooding. All the interior equipment has been removed.

Floodplain

Modern industrial space is not built in a floodplain. It is not practical to install equipment in the floodplain, nor is it practical to store supplies in the floodplain. All or almost all the first floor is in the floodplain, which makes it impractical to use nearly the entire first floor for industrial use. Increasing the elevation of the first floor so that it is above the floodplain is impractical because it would be prohibitively expensive, and because it would render loading, which should be at grade, impractical. In conclusion, the property's location in a floodplain makes it inappropriate and uneconomic for industrial use.

The floodplain issue alone makes industrial use infeasible. Even if the space were available at no cost to a potential user, it is not likely to be useful to an industrial tenant. In addition to floodplain issues, there are other impediments to employing the space for industrial use.

Non-floodplain issues:

Modern industrial space, whether for logistics or manufacturing, imposes several practical requirements. Industrial users need access for industrial-sized loads, loading, storage, and adequate space for machinery. Newly-constructed space is typically single story, with a large floorplate, minimal interior obstructions, a level floor, and adequate loading.

Access

Industrial space typically requires road or rail access to ship goods. Main Street at one time was a significant industrial corridor, but most of the other industrial facilities along this corridor have closed and standards for access have changed beyond what works on Main Street. There is access from the property to the Schuylkill Expressway at the Green Lane and City Avenue exits, but accessing the interstate requires driving down Main Street, which is often plagued by congestion. There is not enough space on Main Street for a large truck to turn around cleanly, so a truck must back up several times to turn around. The only other street with frontage, Shurs Lane, is narrow and steeply sloped, and provides no access for



large vehicles. The site was historically served by rail, but the rail siding has been removed and cannot be reinstalled. In conclusion, access to the site is wholly inadequate for modern needs.

Loading

Industrial space requires loading, typically for long trucks. The property currently has no effective loading bays. I understand that Littlewood used to load to and from trucks parked on the Main Street sidewalk. If 4045 Main Street were not historically designated, it would require six loading bays, which would have to front Main Street since there is no other access point. In conclusion, the current structure lacks functional loading or the potential for loading, and thus has inadequate loading for modern needs.

Interior space

Modern industrial space is typically single level, with level floors and minimal interior obstructions. The buildings at the Subject Property have varying floor elevations and significant, load-bearing interior walls. In conclusion, the interior space is not well suited for industrial use.

In addition to these factors, real estate brokers specializing in industrial properties believe that the facility is inappropriate for industrial use.^{7,8}

Finally, a potential industrial user of the Subject Property would almost certainly be unable to obtain financing to install machinery or otherwise employ it for industrial use.

The buildings at 4045 Main Street cannot be reasonably adapted for industrial use.

Scenario 2 – Retail/Restaurant

Much of Main Street has been repurposed for retail/restaurant uses over the last several decades, so it is appropriate to analyze whether Subject Property could be repurposed for retail space. Modern urban retail space requires access, loading and an appropriate configuration.

Floodplain

Retail uses thrive on the ground floor and are not successful except in extraordinary circumstances on a level above or below grade. Extraordinary circumstances apply when there are extremely high levels of foot traffic for many hours during the day, and many days per week. These circumstances simply do not apply here. Accordingly, the floodplain renders the ground floor inappropriate for retail uses.

The floodplain issue alone makes retail/restaurant use infeasible. Even if the space were available at no cost, it is not useful to a retail/restaurant tenant. In addition to floodplain issues, there are other impediments to employing the space for this use.

⁷ Adam Gillespie, Avison Young, letter to Andrew Zakoff, January 12, 2024

⁸ Ryan Ade, JLL, letter to Andrew Zakoff, January 19, 2024



Non-floodplain issues:

Access

The property's location on Main Street is appropriate for retail use. There is parking along Main Street, and some parking in the rear of the property. Access is sufficient for customers' access to retail space. However, trucks that deliver to the property suffer the same challenges as potential industrial users.

Loading

The same issues that hinder good loading for industrial uses apply to retail/restaurant uses. Trucks would have to load from the street through the front, which is not acceptable to many retailers due to interference with public-facing business operations. In other words, the Subject Property lacks appropriate loading for retail use.

Configuration – Exterior

Retail space, especially in urban commercial corridors like Main Street, benefits from transparency. Retail stores typically have large windows facing the street and a clearly defined entrance so that shoppers can view the inside of the store, be drawn in, and easily enter. The Subject Property lacks pedestrian-level windows and has few doors. The buildings do not feel like retail space and would need to be significantly modified to appeal to retailers.

Configuration – Interior

Brick and mortar retail continues to evolve in response to the rise in online shopping. Retail footprints have been shrinking and in most cases are less than 4,000 square feet. Modern retail spaces have high ceilings and clear sight lines. The property has more than 50,000 square feet of rentable space, which is much too large for most retailers. Further, the disjointed interior configuration means that the Subject Property would be suitable for several smaller retailers, rather than one large retailer. The rooms closest to Main Street would be the most suitable for retail and would require doors and windows on Main Street.

Finally, a potential retail/restaurant user of the Subject Property would almost certainly be unable to obtain financing to renovate and fit out the space for retail/restaurant use.

In conclusion, the buildings that comprise the Subject Property are impractical for retail/restaurant use.

Scenario 3 – Office

The Main Street corridor contains a variety of older commercial office spaces, so it is appropriate to analyze whether Subject Property could be converted to commercial office space.

Floodplain

Office space is not permitted in the floodplain. The floodplain issue alone makes office use infeasible. Even if the space were available at no cost, it is not useful to an office tenant. In addition to floodplain issues, there are other impediments to employing the space for this use.



*Non-floodplain issues:***Light/Air**

Office space needs light and air to be successful. There are few windows available for office users. As indicated in the February 12, 2024, letter from Eric Leighton, what space there is on the second floor is generally far from windows and would receive minimal natural light.

Configuration

As with other uses, the configuration of the space is awkward for commercial office space. Even on the ground floor, the space is broken up, and on the second floor the disjointedness of the space is even more pronounced.

Office Market

Demand for office space, especially low-quality office space, has declined substantially since the acceleration of remote work in recent years. It is not realistic to expect there are tenants willing to pay substantial rent for this space.

Finally, a potential commercial office user of the Subject Property would almost certainly be unable to obtain financing to renovate and fit out the space for office use.

In conclusion, the buildings that comprise the Subject Property are impractical for office use.

Scenario 4 – Multi-Family Residential – Existing Buildings

Much of Main Street has been repurposed for residential use over the last several decades, so it is appropriate to analyze whether the Subject Property could be converted to residential space. Residential space requires installing appropriate systems, and the configuration requires windows and entrances.

Floodplain

As with other uses, the floodplain renders the ground floor inappropriate for residential use. It would not be possible to have habitable living space on the ground floor. There is limited upper floor space that is not in the floodplain, both in the industrial section and the old corporate offices. The floodplain consumes so much of the existing space that it renders the existing buildings impractical for residential use.

*Non-floodplain issues:***Windows**

Residential units need natural light, and hence windows, for living space and bedroom space. An aerial photograph of the property shows that second floor windows exist along Main Street on the southern/eastern end of the property and at the old corporate offices on the northern/western side of the property and set back from Main Street in the middle of the property. Thus, only a limited part of the Subject Property would be suitable for residential use.





Windows (source – Apple Maps)

Systems

The Subject Property would need to have appropriate systems – HVAC, life-safety, electrical, plumbing suitable for residential space. These requirements present challenges. For example, though only a fraction of the space would be rentable, nearly the entire space would need to be heated and cooled. Similarly, each unit would need two means of egress, and would likely require several elevators for ADA compliance.

The buildings that were part of the production facility, which are all the buildings except for the corporate office are impractical for residential use. However, the previous corporate offices appear to have been residential in the past, so they merit specific discussion.

Residential in the Previous Corporate Offices

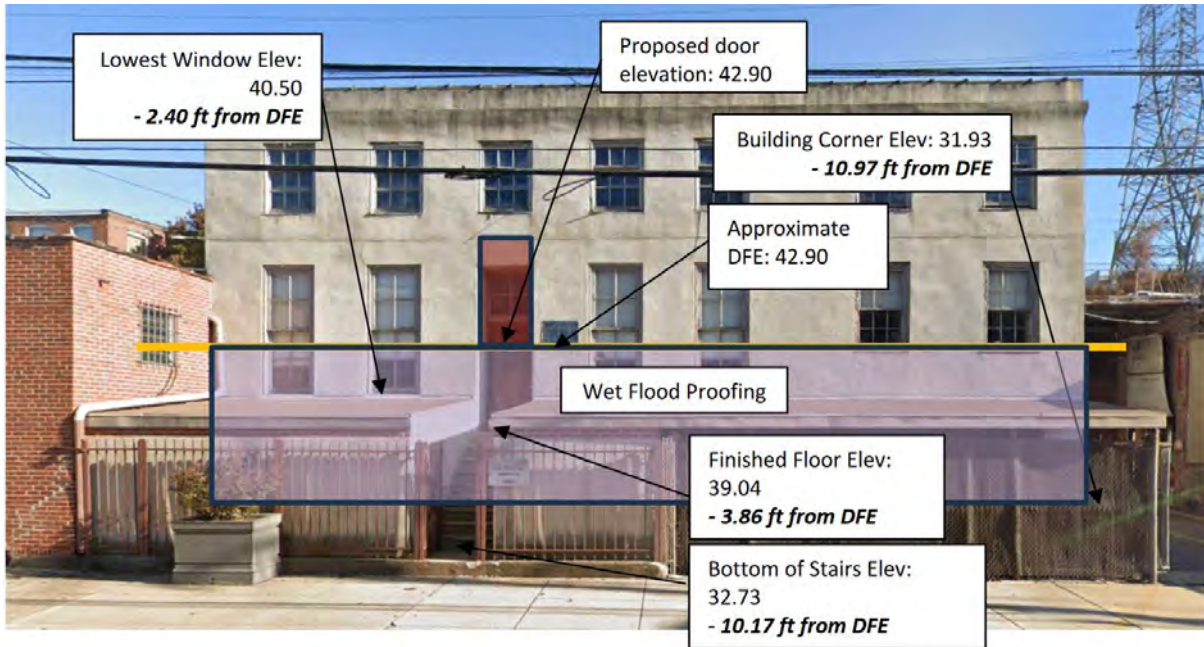
The part of the property that used to be the corporate offices appears to comprise two independent structures conjoined at some point in the past. The ground floor is in the floodplain.⁹ The ceiling on the third floor is too low to qualify as habitable space.¹⁰ Thus, only the second story is potentially usable as residential space.

However, the second floor is also impacted by flood regulations. According to the analysis by AKRF, the floor on the second level would have to be raised above the Design Flood Elevation (DFE). Raising the floor on the second level would shrink the ceiling height, so the third floor would have to be raised or eliminated. Flood regulations require that the part of the building below the DFE be 'wet floodproofed' so that flood water can flow through the structure during a flood event.¹¹

⁹ Eric Leighton, CBP, Existing Conditions Assessment - Letter to Andrew Zakoff, February 12, 2024

¹⁰ *ibid*

¹¹ AKRF Report, page 9, 17



The Design Floodplain Elevation (DFE) and existing building elevations (Source: AKRF Report, page 20)

In addition to raising the floor, the interior would require complete rehabilitation. The renovation would require the installation of all new systems, such as electrical, plumbing, HVAC, and telecom, as well as an elevator or ADA ramp. The systems would have to be placed at the DFE or greater elevation, and it is not clear if they could be placed on the third floor or whether they would consume otherwise occupiable space.

Constructing the apartments would require substantial investment, far in excess of what is typically required for a rehabilitation.

It must be noted that the revenue potential from this space is not substantial. The footprint of the building is approximately 1,850 square feet.¹² After accounting for walls, circulation, and systems, the rentable space would be significantly smaller, likely enough for two apartments, or three micro-sized apartments. These would be compromised apartments. For example:

- The apartments would be isolated from other residences;
- There is a significant amount of unusable space that nonetheless must be maintained; and
- The stairs in the front of the building are steep and difficult to climb.

Accordingly, these apartments would not command significant rents compared to other units available nearby. Table 1 identifies asking rents at nearby rental units, which indicates average asking rent is approximately \$2.01 per square for per month. The contract rent is unknown, but is typically less than the asking rent, so this value is greater than could be expected by an owner.

¹² AKRF Report, page 16

Table 1 – Asking Rents at Nearby Apartments

Address	Notes	Rent	Square Feet	Rent / SF
3773 Cresson St	Entire house	\$2,600	1,470	\$1.77
105 Seville St	Entire house	\$1,400	2,322	\$0.60
4312 Main St	Canal House	\$1,500	463	\$3.24
4313 Main St	Canal House	\$1,950	924	\$2.11
4314 Main St	Canal House	\$2,200	910	\$2.42
4315 Main St	Canal House	\$2,200	1,122	\$1.96
4329 Main St Unit 4		\$1,600	600	\$2.67
4173 Apple St		\$2,700	2,030	\$1.33
Average				\$2.01

The extremely challenging layout problems discussed above mean that a substantial part of the floor would be non-revenue generating. An efficient building achieves 80-85 percent efficiency. This building would be substantially less efficient, so a reasonable assumption is that there would be 1,200 square feet of rentable space. Table 2 calculates the value of a completed renovation based on 1,200 square feet of rentable space, a five percent vacancy rate, a 25 percent operating expense ratio and an eight percent capitalization rate. This analysis indicates that the value for the completed project would be slightly greater than \$250,000.

Table 2 – Residential Valuation

Element	Value
Net Square Feet	1,200
Rent / SF / month	\$2.00
Gross Rent	\$28,800
Vacancy	5%
Net Rent	\$27,360
Operating Expenses	25%
Net Operating Income	\$20,520
Capitalization Rate	8%
Value	\$256,500

The renovations required to create this value will cost several times the ultimate value of the product that is created. Thus, it is not financially feasible to convert the previous ancillary office building to apartments.

In conclusion, the buildings that comprise the Subject Property are impractical for residential use.

Scenario 5 - Hospitality at the Old Corporate Office.

The final scenario examines the potential for a hospitality (or visitor accommodation) use in the old corporate office building. The only nearby hotels are the Residence Inn across the Schuylkill River and the Manayunk Chambers Guest House on 168 Gay Street in Manayunk.



From a regulatory perspective, the hospitality use is a residential use, so the same floodproofing requirements that apply to residential uses and analyzed in Scenario 4 also apply here.

Investment needs

The analysis for residential space informs the analysis here. The building would need complete renovation, including changing the floor elevation and the installation of all new systems, including an elevator or ADA ramp. The elevator/ramp is particularly important for a hospitality use because of accessibility, as well as movement of guests' luggage.

Parking

There is no on-site parking.

Rooms

The building naturally lays out as two or three small rooms (or keys). Two rooms would be in the wider, western structure and the third room would be in the eastern structure. There is no room for a front desk or common area.

There are not enough rooms to make this space a viable hotel with on-site staff. The other type of hospitality use is unstaffed short-term rental, such as an AirBNB or Sonder. In this model, guests let themselves into the unit using codes provided at the time of reservations. Essential services, such as housekeeping, are minimal and occur between stays. The units at the Subject Property would likely contain a bed and bathroom only, without a kitchen or in-room laundry. From a practical perspective, there would be significant investment for a minimal number of rooms.

Revenue

AirBNB room rates for units near the site that are superior to what is possible at the Subject Property rent for \$100-\$120 per night. Room rates for Sonder units, which are all in or near Center City, are approximately \$100 for comparable units. These factors imply that achievable rates at a hospitality unit in the Subject Property would be less than \$100 per night. Operating expenses, such as service contracts, utilities, maintenance, property taxes, use and occupancy taxes, and other charges would diminish that amount so that operating income would be significantly less than the gross number.

Table 3 calculates the value of a completed hospitality renovation based on three rooms, \$90 per night, 60 percent occupancy, and 1,200 square feet of rentable space, a five percent vacancy rate, and 40 percent operating expenses for such as service contracts, utilities, maintenance, property taxes, use and occupancy taxes, and other charges. This analysis indicates that the value for the completed project would be slightly less than \$325,000.

Table 3 – Hospitality Valuation

Element	Value
Rooms	3
Room rate	\$90
Occupancy	60%
Annual revenue	\$59,130
Operating Expenses	40%
Net Operating Income	\$35,478
Capitalization Rate	11%
Value	\$322,527

The renovations required to create this value will cost several times the ultimate value of the product that is created. Thus, it is not financially feasible to convert the previous ancillary office building to a hospitality use.

In conclusion, the buildings that comprise the Subject Property are impractical for hospitality use.

CONCLUSION

This analysis has examined a variety of uses. We have not identified any reasonable use for the Subject Property. So much of the Subject Property is rendered unusable by the floodplain that there is no practical use for the existing buildings.

In conclusion, there is no use to which 4045-61 Main Street may be reasonably adapted.

SUMMARY

We have analyzed potential reuse scenarios for the Subject Property and found that all potential reuses are not economically feasible. Therefore, we conclude that there is no use to which 4045-61 Main Street may be reasonably adapted given the exorbitant costs of renovations and the low revenues that might reasonably be expected by those uses.

Please feel free to contact us with any questions regarding our analysis.

Regards,



Peter Angelides, Ph.D., AICP
March 12, 2024



1700 Market Street Suite 3232, Philadelphia, PA, 19103

1/19/2024

Andrew Zakroff
Urban Conversions
1900 Market Street, 8th Floor
Philadelphia, PA 19103

Dear Andrew:

We have evaluated the potential sale and lease of the site at 4045 Main Street which is currently subject to I-2 zoning. As it stands we would not accept the assignment to market the site as there are numerous constraints that would cause potential users and investors to demure. We see the site's highest and best use as multifamily/residential.

Below is a list of challenges to the site with its current zoning.

- Due to the site's location, site challenges, flood zone, and adjacent retail corridor, the highest and best use for the site is multifamily.
- The site is predominately located within flood zone AE. Along the front of the building along Main Street, the flood elevation ranges from approximately 8' above the sidewalk at Shurs Lane to approximately 11' above the sidewalk at the east side of the site. Flooding occurs relatively frequently in this location.
- The flood zone does not make modern industrial use practical in this location. Industrial strives for efficiency, and the first floor would not be utilizable, which isn't practical or realistic.
- FEMA flood coverage is limited to \$500,000, and is very expensive. Additional coverage is extremely expensive. It is not practical to believe that an industrial user will keep their goods, equipment, tooling, vehicles, etc within a flood zone without adequate insurance coverage, which due to cost and availability, is not imaginable at this location.
- There are multiple grade changes within the interior of the site. Due to shist being close to the surface or above the surface, grading the site is extremely challenging, expensive, or not practical.
- Industrial uses will require raised loading docks for operations. These would be within the flood plain, resulting in goods, materials, etc being offloaded to an area within a flood plain, then having to be sent via elevator to a higher level. This is not practical.
- The site is located within the Manayunk/Main Street historic district. The existing structures are not practical for reuse for modern industrial use. It is our understanding that zoning will require 6 loading bays for a site of this size. To adhere to that zoning requirement, that would require the demolition of much of the structures.
- A potential industrial user would prefer a flat site with better access that is outside of a flood zone.

I am happy to meet with you when convenient to discuss further with you our conclusions state above.

Very truly yours,

Jones Lang LaSalle Americas, Inc., a Maryland corporation

By:


Ryan Ade
Senior Managing Director



Adam Gillespie
Principal
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January 12, 2024

Andrew Zakroff
Urban Conversions
1010 N. Hancock Street
Philadelphia, PA 19123
Via Email: andrew@urbanconversions.com



Re: 4045-61 Main Street, Philadelphia

Dear Andrew:

Thank you for the invitation to lease or sell 4045-61 Main Street in Philadelphia. While I value our on-going business relationship, I think the probability of success in leasing or selling the structure in adherence with I-2 uses is a very low likelihood for the following reasons:

1. Building Characteristics

4045-61 Main Street is a multi-story industrial structure built in 1900 totaling 54,129 sf on 54,760 sf of land. Its lack of loading bays for receipt and shipment of materials and multiple interior grade changes within the interior of the site will severely limit interest from approved users within the I-2 zoning district.

2. Access

The site is located within the Manayunk / Main Street historic district and surrounding by a walkable retail, office and residential district. Industrial users seeking space need quick access to highways for the dissemination of goods, truck parking and employee parking – all of which are not available in this location. Anecdotally, after our meeting at 4051-61 Main Street on January 5th, I spent five minutes behind a “Pitt Ohio” delivery box truck as it made an eight-point turn trying to back into an interior loading dock on the same side of the street as the subject property. Users with delivery needs will not be able to utilize standard 53’ trailers because of the lack of access.

3. Flooding

The site is predominately located within flood zone AE. Along the front of the building along Main Street, the flood elevation ranges from approximately 8’ above the sidewalk at Shurs Lane to approximately 11’ above the sidewalk at the east side of the site. Flooding occurs frequently in this location. The flood zone does not make modern industrial use practical in this location. Industrial strives for efficiency, and the first floor would not be utilizable, which isn’t practical or realistic.

Additionally, FEMA flood coverage is limited to \$500,000, and is very expensive. Additional coverage is extremely expensive. It is not practical to believe that an industrial user will keep their goods, equipment, tooling, vehicles, etc. within a flood zone without adequate insurance coverage, which due to cost and availability, is not imaginable at this location.

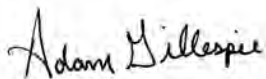
4. Economic Justification and Competition

Avison Young represents a 220,000 sf industrial building for lease or sale within Philadelphia at 3900 N. 10th Street which can accommodate users ranging from 25,000 sf to 220,000 sf. The building has over 100 dock doors, 21' ceiling height and ample outdoor storage. The building has been offered for rent for nearly a year at only \$3.50 psf NNN in rent. The subject property is unleaseable in its current state (aside from the frequent flooding). The space will need new lighting, loading, HVAC and some office fit out to adhere to the needs of users in I-2 Zoning. The costs to make it leaseable will not justify the rent when compared to buildings that are available with far better access and physical characteristics.

Thank you for contacting us about this potential opportunity but we politely pass. The site's location, obsolete layout and frequent flooding will severely limit (if not make it impossible) to lease or sell to users while adhering to I-2 Zoning. Please keep us in mind for future opportunities.

I've attached pictures from our site visit that give color to our points above. Please call me if you need further clarification.

Sincerely,



Adam Gillespie

Principal, Avison Young – Philadelphia, LLC

Pictures from site visit of 4045-61 Main Street on 1/5/24



Exterior View Along Main Street



Limited Loading



Multiple Grade Changes In Building



Small Box Truck Holding Up Traffic Along Main Street Making Seven Point Turn



Interior Pits within the Building Limiting Leasable SF



Site is built into a shist wall making regrading challenging



Non-functional HVAC Equipment



Environmental, Planning, and Engineering Consultants

530 Walnut Street
Suite 998
Philadelphia, PA 19106
tel: 267 585-4839
fax: 929 284-1085
www.akrf.com

To: Andrew Zakroff, Urban Conversions
From: AKRF, Inc.
Date: May 2, 2024
Re: 4045-61 Main Street, Philadelphia, PA
Flood Resiliency Design Review

EXECUTIVE SUMMARY

AKRF was contracted to provide a flood resiliency review of the development proposed at 4045-61 Main Street (the "Site"). The Site is located in a Special Flood Hazard Area (SFHA) with a base flood elevation (BFE) of 41.40 feet NGVD29 (National Geodetic Vertical Datum of 1929) and a design flood elevation (DFE) of 42.90 feet NGVD29 (BFE + 18-inches, per City of Philadelphia Code). AKRF conducted an analysis of the proposed architectural plans based on Philadelphia Zoning Code, American Society of Civil Engineers (ASCE) Flood Resistant Design and Construction standards, and Federal Emergency Management Agency (FEMA) technical guidance. Finished floor elevations, wet floodproofing measures, mechanical equipment locations, and building access were reviewed. The following flood resiliency measures have been incorporated:

- Finished floor elevations for residential units are 2.60 feet higher than the DFE requirement, further reducing risk of flooding in these areas.
- Finished floor elevations exceed stringent regional regulations, including the 2022 New York City Building Code, Flood-Resistant Construction and 2023 New Jersey Inland Flooding Rules.
- Openings for wet floodproofing will meet and/or exceed ASCE 24-14 standards for engineered openings and applicable Philadelphia Zoning Code requirements.
- Flood damage-resistant materials will be used in wet floodproofed spaces.
- Mechanical equipment will be located at or above the DFE wherever feasible.
- Elevators will remain at rest on the second floor, above the DFE.
- Building egress provides multiple routes, including designated emergency egress at the highest elevation feasible. Emergency exits provide direct access to higher ground.
- A green roof and stormwater planter will mitigate stormwater runoff.

- A flood evacuation plan will be developed for building operations.

A review of historic floods at this location was also performed. Based on this assessment, the proposed emergency egress routes and residential units would not have experienced flooding in the past 30 years. The proposed flood resiliency measures will mitigate risks to future tenants. As the design progresses, applicable FEMA technical guidance will be consulted.

INTRODUCTION

AKRF was contracted to provide a review of the proposed flood resiliency measures incorporated into the proposed building design for 4045-61 Main Street in Philadelphia. The development includes the construction of a 7-story residential building with two levels of parking, a coworking space, a fitness center, rooftop amenities, and supporting maintenance facilities. Portions of the existing structure's historic façade will be seamlessly incorporated into the new development.

The following review was conducted using existing conditions shown in Ruggiero Plante Land Design's "ATLA/NSPS Land Title Survey for 4045-61 Main Street and 4030-38 Main Street", dated November 17, 2023, and proposed conditions shown in CBP Architects' 4045 Main Street Zoning Plans, dated March 11, 2024. All elevations herein are on the NGVD29 vertical datum. AKRF acknowledges that materials, mechanical, electrical and plumbing plans, and other details are not represented in the March 2024 architectural plans. Review of related elements is therefore based on provided plans and discussions with CBP Architects and the project developer, Urban Conversions.

Regulations and technical documents referenced for this review include various FEMA technical guidance manuals, Philadelphia Zoning Code, and ASCE 24-14: Flood Resistant Design and Construction.

REGULATORY FLOOD ELEVATIONS

A. Design Flood Elevations:

Flood regulations are based on the 100-year storm event (1-percent annual probability) elevation at a location, as identified by FEMA. The 100-year storm event elevation, or base flood elevation, is determined by the Flood Insurance Study (FIS) for a waterway. In the case of the 4045-61 Main Street property, the FIS for the Schuylkill River was used to determine the base flood elevation (FEMA 2015). The northwest building corner, or upstream-most building corner, is approximately 445 feet downstream from Cross Section T along the Schuylkill River (shown in Figure 1 below). Given this distance, the elevation for the base flood is 41.40 ft NGVD29. The design flood elevation (DFE) requirement for the City of Philadelphia is 18 inches above the base flood elevation, or 42.90 ft NGVD29. This elevation is more conservative than ASCE 24-14 requirements for Class 2 Structures, which requires the DFE to be one foot above the base flood elevation.

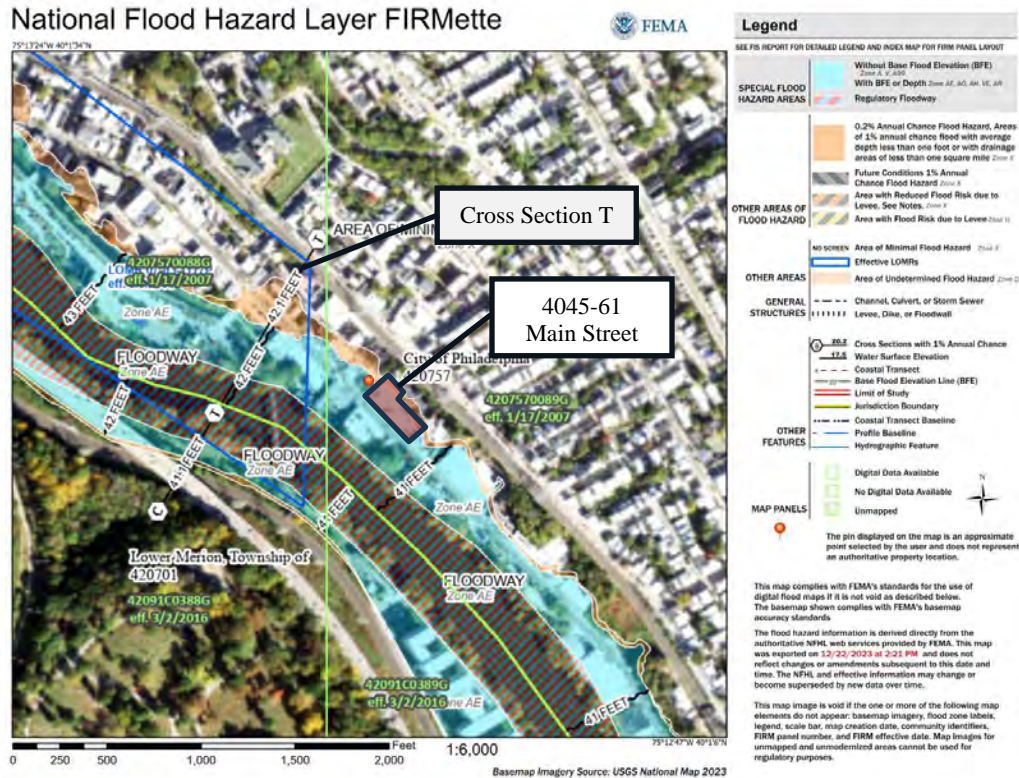


Figure 1: FEMA FIRMette Map of project Site.

B. Philadelphia Development Regulations within a Special Flood Hazard Area

The proposed project is required to meet flood development regulations outlined in the Philadelphia Zoning Code unless a variance is received. The Code requires that the finished floor of any residential structure be set at or above the DFE. Fully enclosed spaces below the DFE must be *wet floodproofed* (constructed with FLOODWAY damage-resistant materials and designed to intentionally allow entry and exit of floodwaters) (ASCE, 2015). The Philadelphia Zoning Code requires a minimum of two openings which must be a maximum of one foot above surrounding grade.

In addition to the above regulations, all mechanical equipment including air ducts, air conditioning systems, utilities, large pipes, storage tanks, and other similar objects or components must be located above the DFE.

As part of the zoning and building permit processes, Philadelphia's Department of Licenses and Inspection (L&I) requires applicants with projects in a Special Flood Hazard Area with estimated costs above \$50,000 to attend a scoping meeting. The scoping meeting reviews applicable regulations and assigns a L&I plans examiner for the project. The scoping meeting for this project was held on January 2, 2024. A copy of the Flood Protection Form – Project Summary (FP-PS) from this meeting is included as Attachment A.

REVIEW OF PROPOSED RESILIENCY MEASURES

Flood resiliency measures incorporated into the building design include:

- A. Elevated finished floor
- B. Wet floodproofing
- C. Elevated mechanical equipment
- D. Building access / Emergency egress

Additional measures including stormwater management and evacuation planning were also considered. The following sections describe these measures and compare the design elements to applicable flood regulations and technical guidance.

A. Elevated Finished Floor

The elevation of the lowest residential units must be at or above the DFE. The design proposes a finished floor elevation of 45.50 for these spaces, 2.60 feet above the DFE.



Figure 2: Elevation view of west building (per CBP Architects 3/11/24 plans) with key flood and building elevations

The lowest residential unit finished floor elevation was also compared to finished floor elevation requirements for New Jersey and New York, which have implemented flood regulations above and beyond ASCE 24-14 and FEMA technical guidance. The proposed finished floor elevation exceeds these more conservative regulations, as shown in Table 1:

Table 1: Finished Floor Elevations and Flood Regulatory Elevations				
<i>Proposed Finished Floor Elevation</i>		<i>First Floor</i>		<i>Second Floor</i>
		30.00		45.50
		Height Above/Below (FT)		
FEMA BFE	41.40	-11.40	4.10	
Philadelphia DFE (BFE + 18")	42.90	-12.90	2.60	
2022 NYC Building Code, Flood-Resistant Construction DFE (BFE + 2')	43.40	-13.40	2.10	
2023 NJ Inland Flooding DFE (BFE + 2' + 1' Freeboard)	44.40	-14.40	1.10	

The proposed design provides additional distance between these regulatory flood elevations, which will reduce the risk of flooding in residential units.

B. Wet Floodproofing

The proposed residential building provides wet floodproofing for all enclosed spaces below the DFE. This includes the entirety of the first floor and within the loading ramp and emergency egress stairwell on the second floor. Wet floodproofing measures include vents and flood damage resistant materials.

Flood Vents (Engineered Openings)

The building design includes flood vents along Main Street and within the building's interior walls to relieve hydrostatic pressure. The proposed flood vents, as manufactured by Smart Vent Products, Inc., are engineered openings and are certified by the International Code Council's Evaluation Service for 200 square feet of enclosed space coverage per vent unit. Per the flood vents' ICC-ES Evaluation Report, the product meets standards outlined in ASCE 24-14 Sections 2.7.2 and 2.7.3 for engineered openings (ICC-ES 2023).

A minimum of two openings are used for each enclosed space and vents will be positioned a maximum of 1-foot above finished grade, meeting Philadelphia Zoning Code requirements for minimum number of openings and vent position. The proposed vent quantity will be sufficient to meet ASCE 24-14 minimum net area standards for engineered openings. As the design advances, FEMA Technical Bulletin 1, Openings in Foundation Walls and Walls of Enclosures, should be consulted.

Flood Damage Resistant Materials

ASCE 24-14 requires that the flood damage-resistant materials be used below the DFE, including ramps, stairwells, and doors. Materials that should be designed for exposure to floodwaters include but are not limited to metal connectors and fasteners, concrete, structural steel, masonry, wood, and both interior and exterior finishes. Specifications for these materials can be found in FEMA Technical Bulletin 2 (2008).

While the Zoning Plans reviewed for this report do not specify materials, AKRF understands that CBP Architects intends to specify compliant materials for the first floor of the building and within

the emergency egress stairwell and vehicular loading ramp on the second floor. AKRF also advises the use of corrosion resistant materials due to the potential for corrosive materials in transported by riverine floodwaters.

Key Takeaways

The proposed vents will meet ASCE 24-14 requirements for engineered flood openings and meet Philadelphia Zoning Code requirements for minimum openings and maximum height above finished grade. Flood damage-resistant materials will meet applicable specifications in ASCE 24-14 and FEMA Technical Bulletin 2.

C. Elevated Mechanical Equipment

Per ASCE 24-14, utilities for Class 2 structures should be located at or above the DFE. Mechanical equipment is located above the DFE wherever feasible:

- Most HVAC condensers will be roof-mounted, and the remainder will be suspended from the parking garage ceiling, above 45.50.
- Electric car charging stations are located in the second-floor parking garage at elevation 48.50.
- Mechanical equipment rooms are located on the second floor.

Should equipment servicing the building entrances be necessary at a lower elevation than the DFE to provide air circulation and other necessary services, equipment will be designed to resist flood loads and prevent water from entering components (FEMA 2019).

Per ASCE 24-14, elevators shall be located above the DFE. If an elevator can descend to elevations below the DFE, the elevator will need to be equipped with controls that do not allow it to move below the DFE. The proposed elevator will remain at rest at the second story of the building or higher, above the DFE. AKRF recommends the elevator be equipped with the controls outlined in ASCE 24-14 to prevent descent to the first floor during a flood. As the design moves forward, elevators should meet standards outlined in FEMA Technical Bulletin 4, Elevator Installation.

Key Takeaways

Mechanical equipment will be elevated in accordance with Philadelphia Zoning Code wherever feasible. Mechanical rooms will be located 2.60 feet higher than the DFE. All equipment will comply with FEMA technical guidance and ASCE 24-14 Standards for areas below the DFE.

D. Building Access and Emergency Egress

Safe egress from the building during a flood event is a key element to resilient design. The building has the advantage of a sloped frontage, with 13.24 feet of grade change from the southern building corner on Main Street to the northeastern corner on Shurs Lane. Along this building face, the design proposes four pedestrian and two vehicular access points. This elevation difference allows for egress from the first and second story of the building.

Dry Conditions Buildings Access

Two pedestrian entrances and one vehicular entrance are located along Main Street and access the first floor of the building. The slope along the building's frontage results in a higher elevation for the west lobby (Elev 33.00) than the main lobby (Elev. 30.25). The vehicular entrance provides entrance and exit from the first-floor garage onto Main Street. In dry conditions, these will be the primary access points. In smaller flood events, the west lobby may remain operational while the main lobby is inundated.

Residents entering the building from the first level can access the building's second floor via elevator and staircase located in the main lobby, the elevator in the west lobby, or the vehicular ramp to the second-floor parking garage.

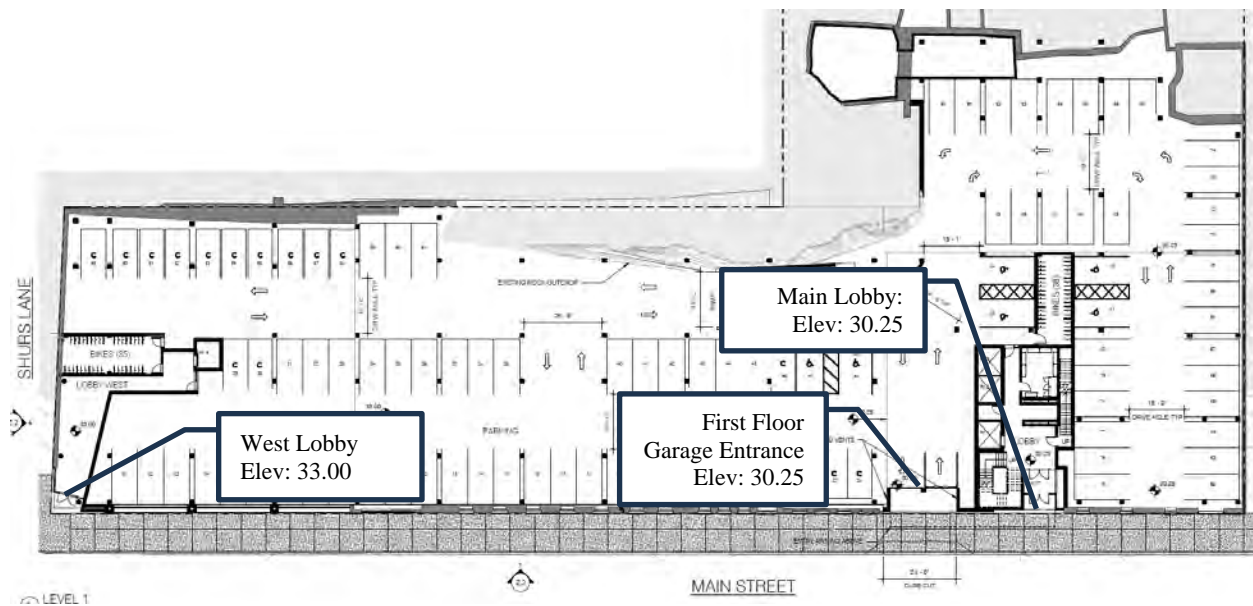


Figure 3: First floor building access points (per CBP Architect 3/11/24 plans)

Emergency Access

Emergency egress routes from the building connect residential spaces to Shurs Lane. Shurs Lane abuts the northern face of the building and has an elevation of 42.80 at the building's northeastern corner. Residents exiting from the third floor or higher may use the stairwell which meets Shurs Lane at 42.72. Second floor residents can exit the building via a second access point along Shurs Lane at 40.95. This route is an Americans with Disabilities Act (ADA) accessible route and may also be used by residents exiting the second-floor elevators.

The second-floor vehicular access is dedicated to loading during dry conditions. However, in the event of a flood, this loading entrance will become the designated vehicular emergency exit, meeting Shurs Lane at 42.30.

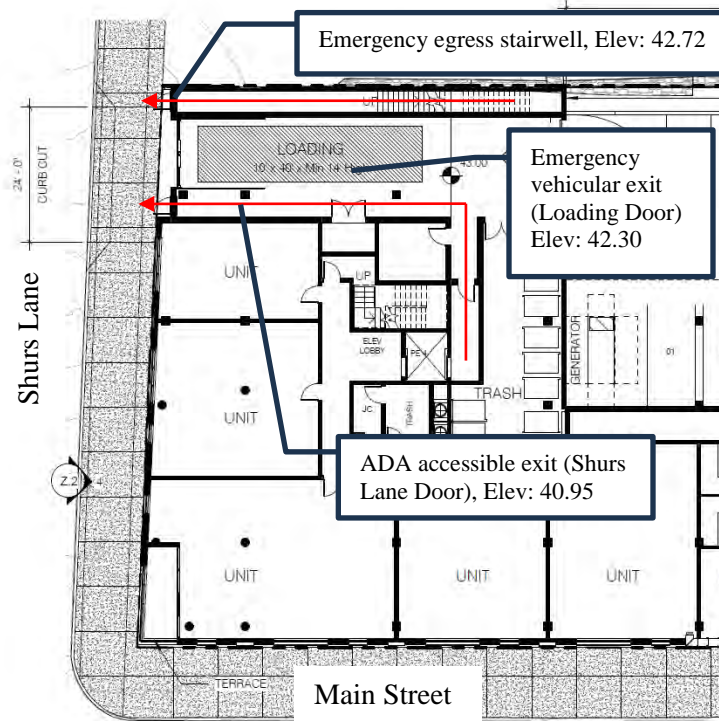


Figure 4: Second floor building access points (per CBP Architect 3/11/24 plans)

The plan for emergency egress provides exit routes at the highest feasible elevations. The emergency stairwell will include a vent and flood damage resistant materials to reduce hydrostatic pressure and reduce damages in an extreme flood event, meeting ASCE 24-14 standards for building access below the DFE. Residents using the emergency exit can travel directly uphill on Shurs Lane to higher ground.

Key Takeaways

The building provides multiple egress routes including an emergency exit at the highest feasible elevation, an alternative vehicular exit, and an ADA accessible emergency exit. Access points below the DFE will be wet floodproofed in accordance with ASCE 24-14.

D. Additional Measures

The proposed development will incorporate additional flood resilient measures including stormwater management and a flood evacuation procedure.

The project will include a green roof and stormwater planter to reduce runoff contributing to flooding. These elements have received Conceptual Approval by the Philadelphia Water Department on December 5, 2023.

Through discussions with the Design Team, AKRF understands that a flood evacuation plan will be developed for site operations. The Team is in the process of identifying alternative parking facilities for vehicle relocation and plans to develop procedures that the operator and residents

can consult. AKRF recommends that the plan reflect guidance in FEMA P-2037, Flood Mitigation Measures for Multi-Family Buildings, including designating responsible personnel, communicating vehicle and resident evacuation times, and pre-event contracts for relocation and recovery assistance. Planning should utilize resources provided by the Philadelphia Office of Emergency Management.

HISTORIC FLOODING

Historic flooding events at 4045-61 Main Street were reviewed to better understand flood risks for the development. Historic river crest and discharge data was collected from the United States Geological Survey (USGS) 01474500 Schuylkill River gage, located approximately five miles downstream of the Site. The gage data was used to identify significant flood events from 1993 to 2023.



Figure 5: Highwater mark within the building for Hurricane Floyd (1999).



Figure 6: Highwater mark within the building for Hurricane Ida (2021).

A relationship between the river crest elevations and flood elevations at the Site was developed utilizing on-site high water marks for Hurricanes Floyd and Ida (Figures 5 and 6) and the previous owner's records of drainage system surcharge observations. High water mark elevations were surveyed relative to survey elevations documented by Ruggiero Plante Land Design in 2023. Figure 7 plots the relationship between river crest elevation and Site flood elevations. A linear fit was applied to the plot.

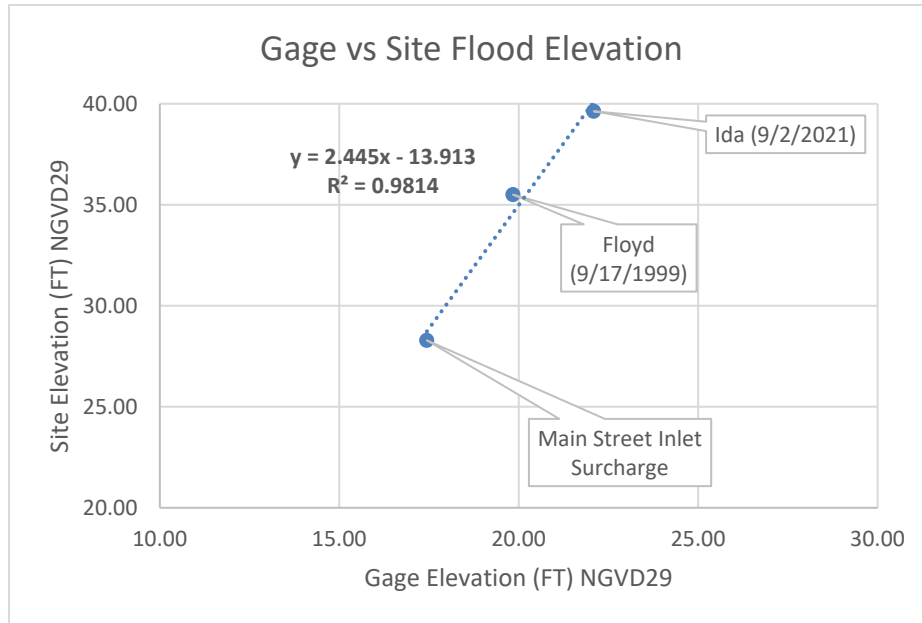


Figure 7: Flood elevation relationship between Site flood elevations and river crests measured at USGS 01474500 Schuylkill River gage.

The linear fit line was then used to estimate Site flooding elevations for the significant flood events identified between 1993 and 2023. Hurricane Ida (2021) was the highest flood event on record in this period, with an on-site flood elevation of 39.63 feet NGVD29. Hurricane Floyd (1999) was the second highest, with an on-site flood elevation of 35.50 feet NGVD29. All recorded historic flood events are below the DFE for the Site. These historic flood elevations were compared to proposed elevations for building access and finished floors (See Figure 8).

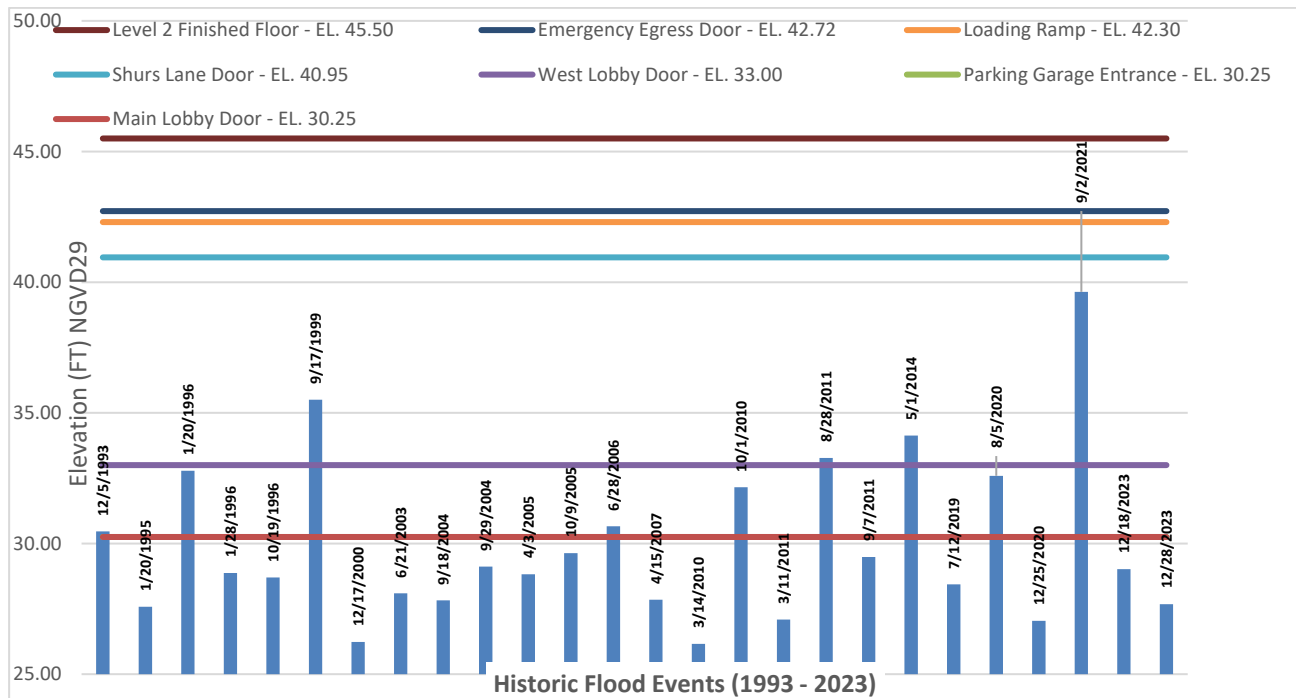


Figure 8: Approximate historic flood event elevations compared to the proposed residential building elevations.

The frequency of flood events exceeding the proposed building elevations was analyzed in Table 2. The number of years in which historic flood events over the period of analysis (1993 – 2023) would have exceeded a building elevation was used to determine the probability of annual exceedance. The Annual Chance of Exceedance indicates the probability that a building location will be flooded in any given year. The maximum flood depth above the elevation was also determined using the largest recorded event (Hurricane Ida).

Table 2: Historic Flood Elevations Compared to Proposed Building Elevations				
Location	Proposed Elevation (FT) NGVD29	Historic Flood Events (1993 - 2023)		
		Number of Flood Events Exceeding EL.	Max Flood Depth Above EL. (ft) 9/2/2021	Annual Chance of Exceedance*
Parking Garage Entrance	30.25	9	9.38	30%
Main Lobby Inner Door	30.25	9	9.38	30%
West Lobby Door	33.00	4	6.63	13%
Shurs Lane Door	40.95	0	0.00	<1%
Loading Ramp	42.30	0	0.00	<1%
Emergency Egress Door	42.72	0	0.00	<1%
Level 2 Finished Floor	45.50	0	0.00	<1%

*Annual chance of exceedance is calculated based on the 1993 – 2023 historic period of analysis only. The FEMA 1% flood event (100-year event) elevation is 41.40 feet NGVD29.

Based on the historic period of analysis, there is a 30% chance that the parking garage and main lobby inner door may flood in a given year. If this occurs, residents may exit through the West Lobby, Shurs Lane door, or emergency egress door. The Shurs Lane door (ADA-accessible emergency egress), loading ramp (emergency vehicular egress), and emergency egress stairwell would not have been impacted by flood events experienced in the past 30 years. The lowest residential units would also have remained dry.

SUMMARY

The proposed residential development, as shown in the CBP Architects Zoning Plans dated March 11, 2024, provide flood resilient design measures to mitigate flood risk in a Special Flood Hazard Area. Key takeaways from this review include:

- Finished floor elevations for residential units are 2.60 feet higher than the DFE, further reducing risk of flooding in these areas.
- Finished floor elevations exceed stringent regional regulations, including the 2022 New York City Building Code, Flood-Resistant Construction and 2023 New Jersey Inland Flooding Rules.
- Openings for wet floodproofing will meet and/or exceed ASCE 24-14 standards for engineered openings and applicable Philadelphia Zoning Code requirements.
- Flood damage-resistant materials will be used in wet floodproofed spaces.
- Mechanical equipment will be located at or above the DFE wherever feasible.
- Elevators will remain at rest on the second floor, above the DFE.
- Building egress provides multiple routes including designated emergency egress at the highest elevation feasible. Emergency exits provide direct access to higher ground.
- A green roof and stormwater planter will mitigate stormwater runoff.
- A flood evacuation plan will be developed for building operations.
- Based upon estimated historic flood elevations at the Site, emergency egress routes and residential units would not have experienced flooding in the past 30 years.

Given the regulatory and historic flood elevations at this property, the probability of exceeding the residential finished floor is low. The proposed develop will minimize risk to residents through elevated residential spaces, emergency egress, and protection of mechanical facilities. AKRF recommends that the detailed design continue to meet Philadelphia Zoning Code, FEMA technical guidance, and ASCE 24-14 standards.

REFERENCES:

1. (ASCE) American Society of Civil Engineers. (2015). "ASCE 24-14 Flood Resistant Design and Construction". Published by American Society of Civil Engineers, ISBN 978-0-7844-1379-1.
2. (FEMA) Federal Emergency Management Agency. (2015). "Flood Insurance Study: City of Philadelphia, Pennsylvania, Philadelphia County." Flood Insurance Study Number 420757V000B.
3. (FEMA) Federal Emergency Management Agency. (2019). "FEMA P-2037 Flood Mitigation Measures for Multi-Family Buildings".
4. Philadelphia Charter Commission. (2024). "The Philadelphia Code." Published by American Legal Publishing.
5. Ruggiero Plante Land Design. (2023). "ATLA/NSPS Land Tittle Survey for 4045-61 Main Street and 4030-38 Main Street."
6. (FEMA) Federal Emergency Management Agency. (2020). "Technical Bulletin 1, Openings in Foundation Walls and Walls of Enclosures."
7. (FEMA) Federal Emergency Management Agency. (2008). "Technical Bulletin 2, Flood Damage-Resistant Materials Requirements."
8. (FEMA) Federal Emergency Management Agency. (2019). "Technical Bulletin 4, Elevator Installation."
9. (FEMA) Federal Emergency Management Agency. (2022). "Technical Bulletin 7, Wet Floodproofing Requirements and Limitations."
10. (ICC-ES) International Code Council's Evaluation Service. (2023). "Smart Vent Automatic Flood Vents: Models #1540-520; #1540-521; #1540-570; #1540-574; #1540-524; #1540-414; Flood Vent Sealing Kit #1540-526." *ICC-ES Evaluation Report, ESR-2074.*

ATTACHMENT A: Flood Protection Form- Project Summary (FP-PS)

Flood Protection Scoping Meeting

Flood Protection Form- Project Summary (FP-PS)

A scoping meeting is required for all qualifying projects that are located in a Special Flood Hazard Area (SFHA). This form will serve as a record of a successful completion of the scoping meeting process.

The applicant must submit a copy of this form with the Building Permit application.

Property Information

Address 4045 Main Street

Applicant Information

Name Dennis Kurek

Email dennis@ruggiero.plante.com

Phone (267) 253-4693

Meeting Attendees

Name	Email Address
Dennis Kurek	dennis@ruggiero.plante.com
Kevin M. Flynn	kflynn@akrf.com
Aaron Miller	amiller@cbparchitects.com
Andrew Zakroff	Andrew@urbanconversions.com

Project Scope

Demo of existing structures (some facades to remain), 7 story multifamily building proposed, 167 residential units, 160 parking spaces.

General Floodplain Information

Flood Risk Zone (proposed development that touches any of these Zones) – select all that apply	
<input type="checkbox"/> A Zone	<input type="checkbox"/> AE/Floodway
<input checked="" type="checkbox"/> AE Zone	<input type="checkbox"/> FEMA Mapped 0.2% or X

Type of Work

<input checked="" type="checkbox"/> New building <input type="checkbox"/> Addition <input type="checkbox"/> Renovation/alteration <input checked="" type="checkbox"/> Earth Work <input checked="" type="checkbox"/> Retaining Wall <input checked="" type="checkbox"/> Demolition <input type="checkbox"/> Accessory Structure <input type="checkbox"/> Below grade parking <input type="checkbox"/> Seasonal/temporary <input type="checkbox"/> Floodway <input type="checkbox"/> Other:	<input type="checkbox"/> Storage of materials <input type="checkbox"/> Storage of equipment/machinery <input checked="" type="checkbox"/> Electrical <input checked="" type="checkbox"/> HVAC <input type="checkbox"/> Fuel Systems <input checked="" type="checkbox"/> Water supply <input checked="" type="checkbox"/> Elevator/escalator <input checked="" type="checkbox"/> Plumbing <input type="checkbox"/> Construction Office/Staging/Storage <input type="checkbox"/> Watercourse Alteration
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Requirements for Building Permits

*documents required during construction

<input type="checkbox"/> Flood Protection Form – Existing Buildings (FP-EX)
<input type="checkbox"/> Detailed cost estimate – see instructions on FP-EX <input type="checkbox"/> Value of structure only – see instructions on FP-EX <input type="checkbox"/> Year of initial construction
<input checked="" type="checkbox"/> Flood Protection Form – General (FP-G)
<input checked="" type="checkbox"/> E1 Residential <input type="checkbox"/> E2 Non-Residential <input type="checkbox"/> E3 Below-Grade Parking <input checked="" type="checkbox"/> E4 Historic <input type="checkbox"/> E5 Accessory Structure <input type="checkbox"/> E6 Fill <input type="checkbox"/> E7 Machinery/Equipment <input type="checkbox"/> E8 Storage <input type="checkbox"/> E9 Seasonal/Temporary <input checked="" type="checkbox"/> E10 Demolition <input type="checkbox"/> E11 Floodway <input type="checkbox"/> E12 Coastal Flood Hazard Zones <input type="checkbox"/> E13 Other Building Work <input type="checkbox"/> G Other Permits (state, federal, etc.)
<input type="checkbox"/> Flood Protection Form – No Rise (FP-NR)
<input type="checkbox"/> Flood Protection Form – LOMC (FP-LOMC)
<input checked="" type="checkbox"/> Elevation Certificate (EC)
<input type="checkbox"/> If EC is not current (completed within the past 6 months), PA Design Professional must confirm that all proposed work maintains flood protection compliance from date of construction – Provide as attachment to EC on the PA Design Professional Letterhead (signed and sealed)
<input checked="" type="checkbox"/> Elevation Certificate* – for lowest floor installation (during construction)
<input checked="" type="checkbox"/> Elevation Certificate* – for final construction (prior to Certificate of Occupancy)
<input type="checkbox"/> FEMA Floodproofing Certificate* (FC) – for final construction (prior to Certificate of Occupancy)
<input type="checkbox"/> Flood Emergency Operations Plan
<input checked="" type="checkbox"/> Structural Design Criteria Form (SDCF) – flood loading calculations
<input type="checkbox"/> Other

Meeting Notes

*The new residential building is within the AE zone and the entire ground level will be below the DFE (BFE +18"). Wet flood proofing strategy is proposed with the engineered openings called "smart vent" along both sides of new building along Main street and Shurs Lane. Note part of the front facade will remained for historic preservation. Confirm no dry floodproofing is permitted and enclosed areas below BFE + 18": Use only for parking, building access, and incidental storage. (No lobbies with seating, mailboxes, security desks, etc.) (ASCE 24: Ch. 6)

*For any elevator where shaft is below BFE+18", then float switch must be installed, designed to resist flood load (ASCE 7), and are not required to have flood openings.

*Engineer/Architect of record shall provide final certification statement prior to issuing a C/O to certify the engineered openings are installed per design specs and manufacturer's manual to allow for automatic entry and exit of floodwaters and automatically equalizing hydrostatic pressure. A hold permit annotation will be added on by the Department of Licenses and Inspections (for office use only)

Examiner Signature for completion of FP-Scoping Meeting

Name of Examiner **Richard Chen**

Digitally signed by Richard Chen
Date: 2024.01.02 15:42:42 -05'00'

Date **01/02/2024**

FP- Scoping Meeting Administrator Signature for when FP-Scoping Meeting is not required.

Name of FP-Scoping Meeting Administrator

Date

Memorandum

To: Adam Laver, BlankRome

From: Peter Angelides, Econsult Solutions, Inc.

Date: May 2, 2024

RE: Economic / Financial forces influencing scale at 4505 Main Street

1 Introduction

As part of ongoing discussions about the proposed redevelopment of 4045-61 Main Street, commenters have raised several questions regarding the scale of the building, including questions about height, setback, and location on the parcel. There are economic and financial viability issues that can contribute to the discussions on scale. These issues are separate from the historic resource issues surrounding the historic mill structure currently occupying the parcel. These scale issues are future looking, and address the economics of any project on the site.

Any project at 4045 Main Street must contend with significant upfront costs, many of which arise because of the unique nature of the site, including its historic nature. Because there are significant upfront costs, this project will cost more to construct than projects on similar sized lots. The project therefore needs a large enough unit count to earn enough operating profit to cover the large fixed costs.

This memo gives a brief overview of development economics and then analyzes how the peculiarities of the site influence the economics.

The summary answer is that the proposed building must overcome several constraints and challenges, and that these challenges add complexity and cost to the development. To compensate for these challenges, the building needs more units than a typical project.

2 The Economics of Development

For all for-profit residential development projects the revenue from renting the units must be sufficiently large to cover the operating costs of the building (Net Operating Income, or NOI) and have enough left over to pay for the costs incurred to develop the building. A developer will not build if the rental rates are not large enough to justify the development.

At the scale proposed for 4045 Main Street, additional units will increase NOI, which means more ability to service debt and hence borrow more to cover upfront costs.

RE: Economic / Financial forces influencing scale at 4505 Main Street
 Date: May 2, 2024

3 4045 Main Street Considerations

The site presents several unique elements that increase the cost of construction relative to a project without these problems.

Concrete Podium

In order to achieve close to one parking space for every unit, the building has two levels of parking. The first level is at grade, in the floodplain. The second level is a concrete platform connected by a ramp to the first floor and directly to Shurs Lane. The second level would not be necessary for market or zoning reasons but is included to meet neighborhood concerns. Inclusion of the second parking level has two impacts. First, it is expensive to build and adds to the development cost that must be covered by rent. Second, it eliminates residential units that would otherwise occupy the space. These units are then placed in an additional level at the top of the building.

Second floor parking podium



Most mid-rise multifamily buildings constructed in recent years use a combination of steel or concrete on the lower floor(s) and wood frame construction on the upper floors. Wood framing is significantly less expensive than concrete or steel construction. In the case of the proposed project, the ground floor and the parking on the second floor must be built with concrete, which is significantly more expensive than if the second floor were all residential and could be built with wood framing.

Structured residential parking typically does not pay for itself. In other words, the revenue received from providing a structured parking space to an apartment, either as part of the rent or as a separate charge, is not large enough to cover the cost of building the structured parking space. A structured above-ground space can cost \$40,000 per space, especially in an inefficient garage. Parking spaces are available from

RE: Economic / Financial forces influencing scale at 4505 Main Street
 Date: May 2, 2024

the Manayunk Development corporation for residents for \$120 per month. Table 1 shows that constructing a space adds more construction cost than it adds value.

Table 1 – Value of a Parking Space

Item		Value
Monthly Rent		\$150
Annual Rent		\$1,800
Vacancy	5%	-\$90
Operating Expenses		-\$400
Net revenue		\$1,310
Capitalization Rate		10%
Value of Space		\$13,100
Cost to Create Space		\$40,000
Gain / Loss		-\$26,900

Storm Sewer

A historic stormwater sewer currently runs through the site. This storm sewer must be relocated so that it does not interfere with the operation of site and be rebuilt to PWD standards. The sewer has not been designed, but expectations are that the sewer will cost approximately \$150,000.

Preservation of the Historic Facades

The proposed new building preserves and incorporates elements of the existing building into the façade. Preservation of the historic facades requires significant work to the façade, including masonry repairs, repointing, new windows with brick molding, and new historic doors. In addition, maintaining the façade during construction requires careful planning and preparation. The façade must be braced and supported throughout construction, and its presence makes construction of the rest of the new building more challenging because of the need to work around it. A recent example of retaining a façade is the Royal Theater on South Street. I understand that bracing the façade added approximately \$1,000,000 to the construction budget for that project.

A very rough estimate for the Main Street site, based on developer experience and quotes from contractors, indicates that these costs will be approximately \$900,000. The high-level cost elements are:

- Historic windows, including installation: \$200,000.
- Demolish existing openings and prepare the existing openings for Installation: \$25,000.
- Stucco base coat demolish and reinstall: \$50,000.
- New historic Main Street double door: \$25,000.
- Masonry repairs and pointing: \$100,000.
- Shoring and bracing of the facade: \$500,000.

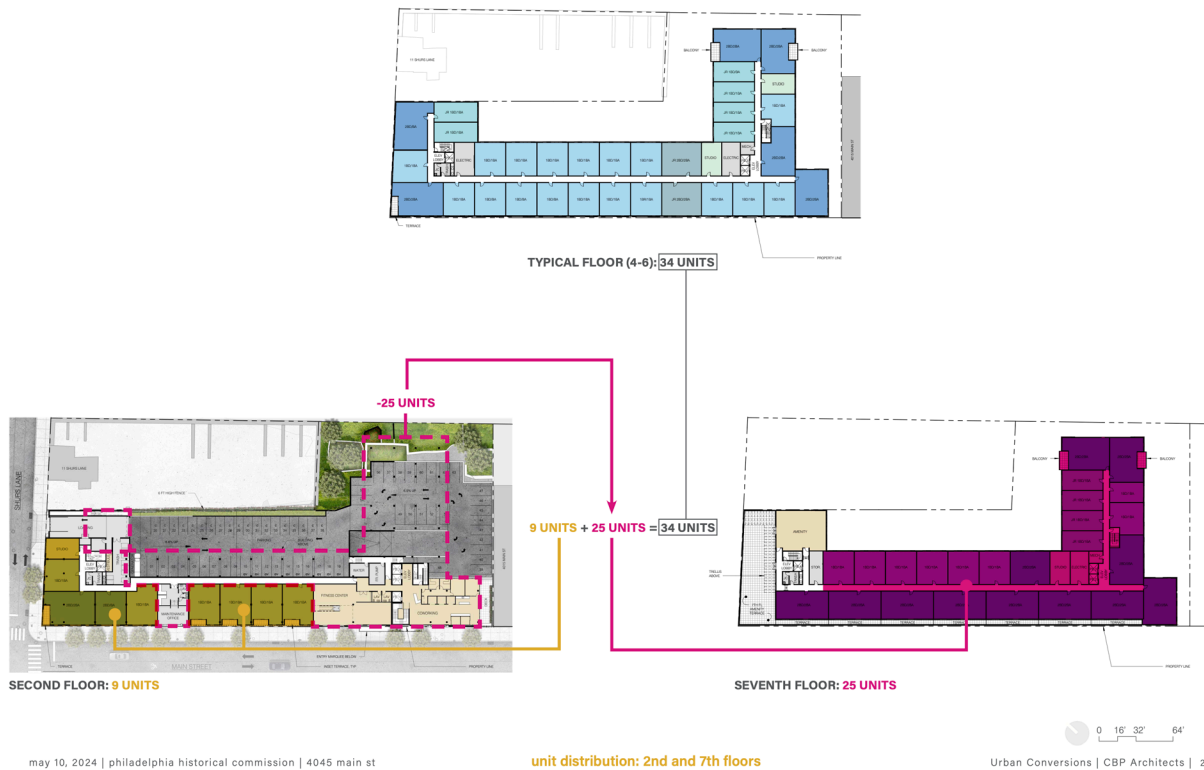
RE: Economic / Financial forces influencing scale at 4505 Main Street
Date: May 2, 2024

Design Inefficiencies

Preserving the façade adds several design inefficiencies to the project, in addition to the difficulty and cost in maintaining the façade.

- The second floor of the building is elevated several feet higher than it otherwise would be because of the need to line up the windows of the new building with the window openings in the existing building.
- The need to provide parking on the second floor forces the relocation of multiple units to the 7th floor.

Units relocated from the second floor to the seventh floor.



RE: Economic / Financial forces influencing scale at 4505 Main Street

Date: May 2, 2024

- The main lobby and driveway are offset from where they would naturally be placed in order to preserve the existing façade and place the entrance to the new building on the part of Main Street without a historic façade. This offset drives the need for an additional lobby and an additional elevator on the west side of the building.

Driveway and lobby offset from center



Other Considerations

There are other site-specific considerations that add to the cost of this project. These include:

- Extensive demolition, including multiple interior structural walls.
- Removal of Schist/bedrock.
- Temporary shoring and bracing during construction and permanent shoring and bracing.
- Additional elevator due to the flood plain.
- Increased operating expenses from private flood insurance.

4045 MAIN STREET

PHILADELPHIA HISTORICAL COMMISSION

MAY 10, 2024



DEVELOPMENT TEAM

URBAN CONVERSIONS

Owner
1900 Market Street, 8th Floor
Philadelphia, PA 19103



Architect
234 Market Street, 4th Floor
Philadelphia, PA 19106



Civil Engineer
5900 Ridge Avenue
Philadelphia, PA 19128

CONSULTANTS



Real Estate Consultants
1435 Walnut Street, 4th Floor
Philadelphia, PA 19102



Flood Plain Resiliency Consultants
530 Walnut Street, Suite 998
Philadelphia, PA 19106



Land Use Planning
1520 Locust Street
Philadelphia, PA 19102



Transportation Engineering
1515 Market Street, Suite 1360
Philadelphia, PA 19102

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60	select CBP Architects projects

March 12, 2024

Dr. Jonathan E. Farnham, Ph.D.
 Executive Director
 City of Philadelphia Historical Commission
 1515 Arch St, 13th Floor, Philadelphia, PA 19102

RE: Proposed Mixed-Use Development at 4045 Main Street

Dear Dr. Farnham:

This letter, along with the accompanying presentation package, which includes a building permit application and descriptive graphics, are submitted for final review and to secure a place on the agenda of the March 26, 2024, meeting of the Architectural Committee and the subsequent April 12, 2024, meeting of the Philadelphia Historical Commission (the "Commission"). Preceding this submission, a separate submission was made to the Commission's Committee on Financial Hardship (the "Hardship Committee") in which a case is made for the demolition of all existing features on the site, except limited portions of the existing masonry walls fronting Main Street. The submission materials provided herewith assume a favorable outcome of the Hardship Committee process and demonstrate the portions of the existing walls that will remain and how they will be incorporated into the proposed project.

In addition to being located in the Main Street Manayunk Historic District, this challenging site of 50,139 square feet, is zoned I-2, Medium Industrial, which is consistent with its historic use as a silk dyeing factory, which ceased operation in 2021, when the owners were unable to recover following yet another flood, which destroyed the business. Also, a substantial portion of the site is in flood zone AE, meaning that any occupied space on the site must be located at an elevation not less than 1'-6" above the base flood elevation, which along Main Street ranges from approximately 10' to 13' above the sidewalk. The proposed elevation of the second floor, the first level of occupied space, is 4'-1 1/4" above the base flood elevation due to the flood requirements, to avoid conflict with the existing window openings and the second-floor structure, and provides future flood resiliency. The project design team includes AKRF, which has been engaged for flood resiliency consulting and has been integral in the project's design decisions regarding floor mitigation and long-term resiliency.

4045 Main Street is a proposed, seven story multi-family development that includes market-rate rental apartments with accessory automobile parking, bicycle parking, and entry lobbies on the ground floor. The second floor (above the flood elevation) will include amenities, apartments, additional accessory parking, loading and trash collection. There will be five floors of apartments above, with amenities and a common terrace on the 7th floor. Extending along Main Street from the existing adjacent Starfinder Foundation (4015 Main Street) to Shurs Lane, the proposed seven story building will include:

- 167 Dwelling Units: Located on floors 2 through 7, in a mix of studios, one-bedroom, and two-bedroom apartments.

- Residential Amenities: Lobby related seating, a fitness center, a co-working suite with adjacent outdoor terrace, and back-of-house spaces are located on the second floor and an amenity suite and roof terrace with overhead trellis are located on the 7th floor.
- Parking: Private accessory parking for 160 automobiles is located on the first and second floor, within the building on the first floor, and to the rear of the site, primarily beneath the building at the second floor. Parking is accessed through overhead doors on Main Street with an interior ramp to the second floor, and an emergency exit above the flood plain onto Shurs Lane accessed through the loading area.
- Loading: An enclosed loading space, located in the northwest corner of the second floor, is accessed through an overhead door on Shurs Lane.

Due to the I-2 zoning, a variance will be needed for the proposed Multi-Family Use. A variance will also be needed for the overall height of the building. While the I-2 zoning has no height limit unless abutting a residential district (which this site does not), the Main Street/Manayunk and Venice Island Neighborhood Commercial Area Overlay District imposes a height limit of 38 feet. Average grade, for height measurements, is considered by the code to be 1'-0" above the regulatory flood plain. Thus, the proposed building height is 68'-1 1/4". The height above the sidewalk along Main Street ranges from approximately 79'-0" to 82'-0". This height should be considered within the context of the many existing nearby examples of similar height as well as more significantly and similarly scaled historic context that existed throughout the industrial development of Manayunk. Graphic demonstration of where these examples are, or were located, are provided in this submission.

In addition to these contextual examples, the site is not immediately adjacent to any smaller scaled residential districts. The immediately adjacent parcels are zoned CMX-2.5, ICMX and CMX-2. The closest parcels that are zoned residential are the blocks to the north; however, this area, while close in dimensional proximity, is substantially visually separated from 4045 Main Street by the existing railroad viaduct that has long been among the largest scale structures in the vicinity. This proposal rises only 29'-0" above the rail bed and only the top 3 floors should be visible from the roof decks of dwelling units on Cresson Street.

While the proposal keeps occupied space above the code required elevation (1'-6" above the base flood elevation), for the dwelling units, more resiliency for the future is incorporated through minimizing the number of dwelling units at the second floor and by increasing from 1'-6" to 4'-1 1/4" the elevation of the second floor above the base flood elevation. The proposed typical floor will have 34 dwelling units, while the count on the second floor is limited to nine. To achieve the necessary dwelling unit yield the seventh floor is needed, and is set back five feet from Main Street and 28'-0" to 31'-9" from Shurs Lane, which nearly obscures it from many key Main Street vantage points. Mechanical and Utility spaces such as transformers, the generator, electrical panels, pumps, etc., are also required to be above the flood elevation, thus also occupying space at the second floor.

The site is bounded by the Starfinder Foundation (4015 Main Street) to the east, Main Street to the South, and Shurs Lane to the West. The topography surrounding the existing buildings on the site rises approximately 10 feet from Main Street to 11 Shurs Lane. The north side of the site abutting 11 Shurs Lane is formed by existing retaining walls and a rock outcrop, which in several locations, projects above the surface of the existing parking lot of 11 Shurs Lane. The rock outcrop also projects into the site (and existing buildings) and will remain as part of the north edge of the first-floor parking. To the east of 11 Shurs Lane, the extents of the proposed building at the first floor will be bounded by existing retaining walls. Grade between the existing retaining walls and the Germantown/ Norristown (SEPTA) railroad viaduct slopes up steeply to meet the abutment. The railroad creates a significant barrier between

buildings to its north and south. It rises about 35 feet above 11 Shurs Lane, and is between 10 feet and 28 feet above Cresson Street to the north of the viaduct.

The proposed 225,136 SF building is arranged in three wings, one fronting on Main Street, one on Shurs Lane, and the third extending from the Main Street wing toward the railroad viaduct, parallel to 4015 Main Street. The 7th floor is set-back five feet along Main Street and approximately 30 feet along Shurs Lane at the amenity terrace. The primary residential entry for pedestrians and vehicles is on Main Street, located at a natural break between two sections of preserved historic façades, where existing buildings that will be removed, are set back from the sidewalk. A cantilevered entry awning demarcates the primary entry and bisects a double height glass enclosed volume. A grand stair and elevator will transition residents up to the main lobby, reception, and amenity area at the second floor, above the flood elevation. Amenities on the second floor include a co-working space, a fitness center and leasing offices. At the ground floor between the historic façade and the corner at Shurs Lane, three bays of translucent divided-lite panels separated by red brick pilasters, reference the adjacent large rectangular industrial window in the historic façade and the red brick into which it is set. A secondary entrance, is recessed into the corner at Main Street and Shurs Lane. This secondary entrance is provided for convenience to the residents living in the western end of the building and provides an access point towards the more active portion of Main Street to the west. The primary elevator and stair core is located near the main lobby at the intersection of the main wing and eastern most wing. The secondary core is located at the intersection of the main wing and the wing along Shurs Lane, near the secondary entry.

New, historically accurate, windows and doors will be installed in restored original openings in the existing walls to remain. The bulk of these are currently infilled with a variety of materials that include glass block, stucco, corrugated metal, mechanical louvers, or a combination thereof. Located behind these windows at the first floor is the parking which should not be visible due to the sill heights above the sidewalk. At the second floor, the historic window replacements to the west of the entry will open to the two-story volume of the fitness center, avoiding a visual conflict with the third floor structure. The second-floor window in the gable to the east of the entry will be spandrel glass due to the elevation of the window relative to the second-floor structure.

The historic facades are separated from the building above by a band of dark corrugated metal siding and recessed dwelling unit terraces. The new walls are set at the rear of the approximately 12" thick existing brick walls for further distinction of the latter. The façade is composed of a series of regular brick modules separated by narrow slots of recessed corrugated metal siding and punctuated by large trios of windows at living spaces and single rectangular punched windows at bedrooms. This pattern begins to transition from primarily masonry to metal as it approaches the gable of the historic façade, where the dark corrugated metal provides a backdrop. A projecting plane of the metal façade follows the angle of the gable. The east corner of the building hovers above another section of the historic façade, separated by storefront windows of the co-working space. The vehicular entry to the parking garage is integrated into the architectural language of the main entry lobby. It is recessed from the building façade below the same awning that provides cover and demarcates the lobby entry. The fenestration and materials of the pair of aluminum and glass overhead doors matches the adjacent storefront of the lobby.

Materials include a light buff variegated brick, a red variegated brick to match the existing preserved facades, dark brown colored vertical corrugated metal siding, aluminum and glass storefront, metal clad windows, and a red-orange accent color believed to be the original color for the historic window replacements. The light buff brick references the color and texture of the stone in the preserved

facades, while the corrugated metal references the industrial nature and past of the area such as the nearby Hare and Cute Coal Pocket.

To maintain durability at street level, the building base is comprised of the existing historic stone and brick façade, new brick base and piers, and storefront at the lobbies. Brick is also used extensively above to reference mills of the past. The scale of the single punched opening windows relates to windows in the historic facades below, while the larger grouped windows reference a more contemporary industrial loft feel, like the contemporary take on an industrial aesthetic seen at the nearby Locks Townhomes on Venice Island. A rhythm is created in the façade by alternating vertical sections of masonry and metal, or simply by recessing the brick at the spandrels between windows. The balconies at Main Street and Shurs Lane open the corner of the building, make a transition around the corner, and will become a beacon of light from within at night. This language continues up Shurs Lane until the façade wraps around to the north side, where cladding becomes entirely metal on the facades that do not face the streets. The color of the historic windows will be repeated in limited areas of the metal siding on these facades.

The developer of the project is Urban Conversions, which specializes in historic preservation/adaptive reuse within Philadelphia. When it became evident that it would not be possible to reuse the existing structures, the firm challenged us to design a scheme that preserves most of the existing facades and integrates them into the project. This will be the third Urban Conversions project in Manayunk, with the other two preserved in concert with the National Park Service as part of the Federal Historic Preservation Tax Incentives program.

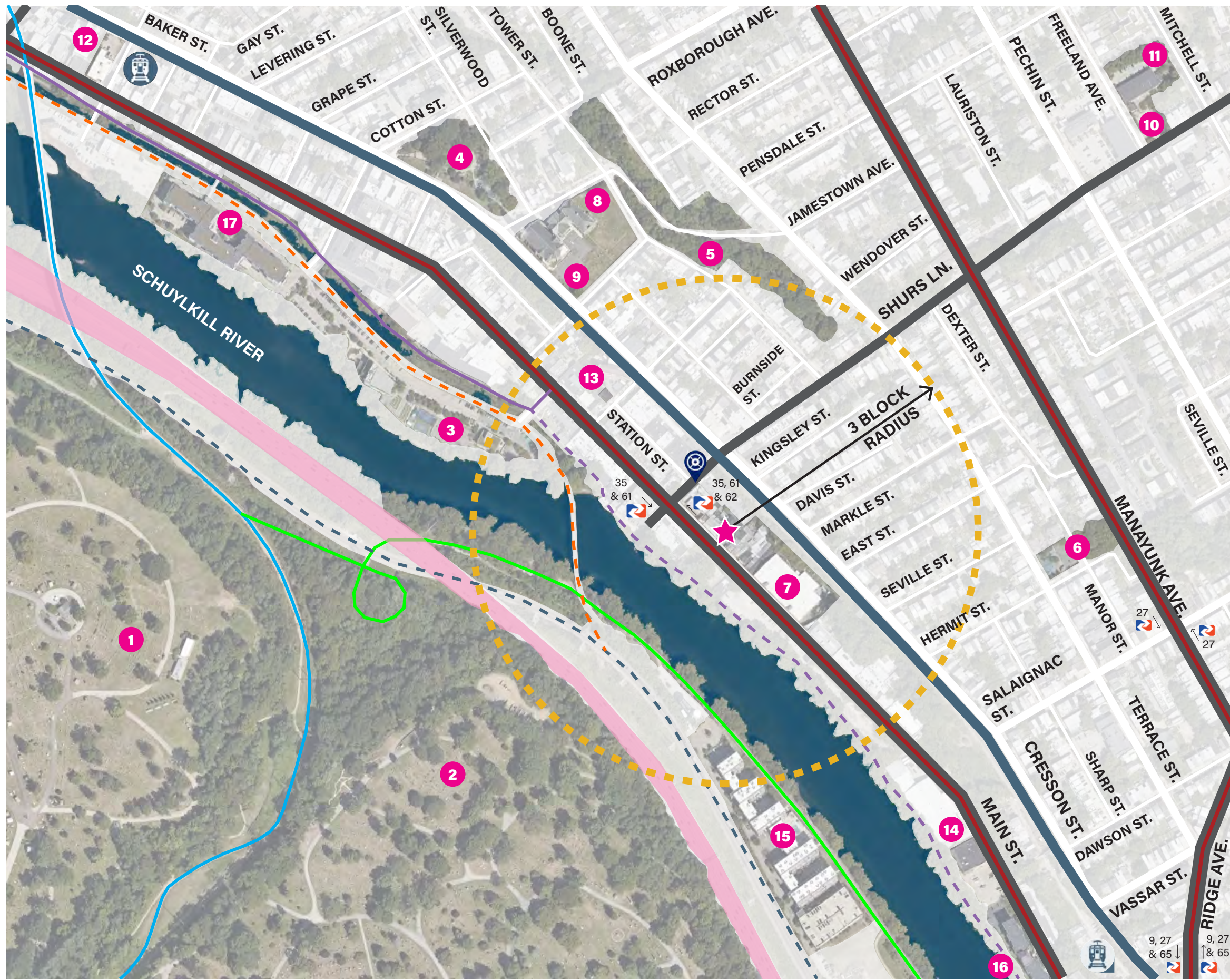
After reviewing our submission, please do not hesitate to contact us with any questions or should you require additional information, which we will make every attempt to promptly provide.

Sincerely,

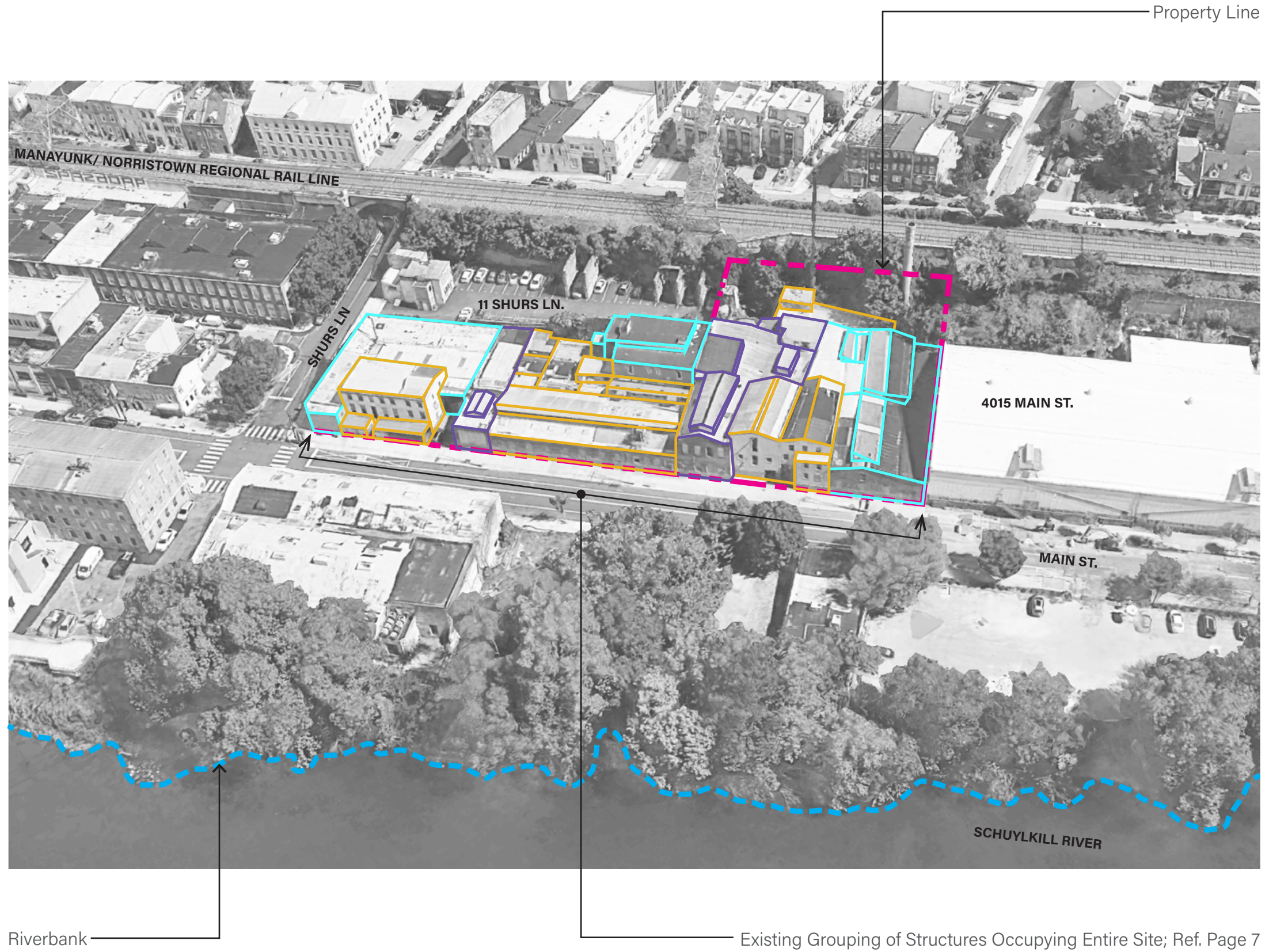


Eric Leighton, AIA

Cc: Andrew Zakroff; Adam Laver; file



- ★ SITE
- 1 Westminster Cemetery
- 2 Laurel Hill Cemetery
- 3 Venice Island Performing Arts and Rec Center
- 4 Pretzel Park
- 5 Boone Park
- 6 Neighbors Park
- 7 Starfinder Foundation
- 8 YALE School Philadelphia
- 9 St. John the Baptist Roman Catholic Church
- 10 Citylight Church
- 11 Mishkan Shalom Reconstructionist Synagogue
- 12 U.S. Postal Service
- 13 The Animedic Veterinary Hospital
- 14 CVS Pharmacy
- 15 The Yard at Pencoyd Landing (7-stories)
- 16 Bridgefive Condominium (7-stories)
- 17 The Isle (5-stories)
- Major Commercial Streets
- Major Local Streets
- Bike Lanes
- Schuylkill River Trail
- Proposed Schuylkill River Trail Extension
- Pencoyd Trail
- Barmouth Trailhead at the Cynwyd Heritage Trail
- Highway I-76
- Manayunk / Norristown Regional Rail Line
- Freight Lines
- Potential Future Rail to Trail Conversion
- Manayunk RR Station - 0.5 mi from Site
- Wissahickon RR Station - 0.6 mi from Site (0.7 mi driving)
- Indego Bike Share Station
- Buses (Route Number and Travel Direction)

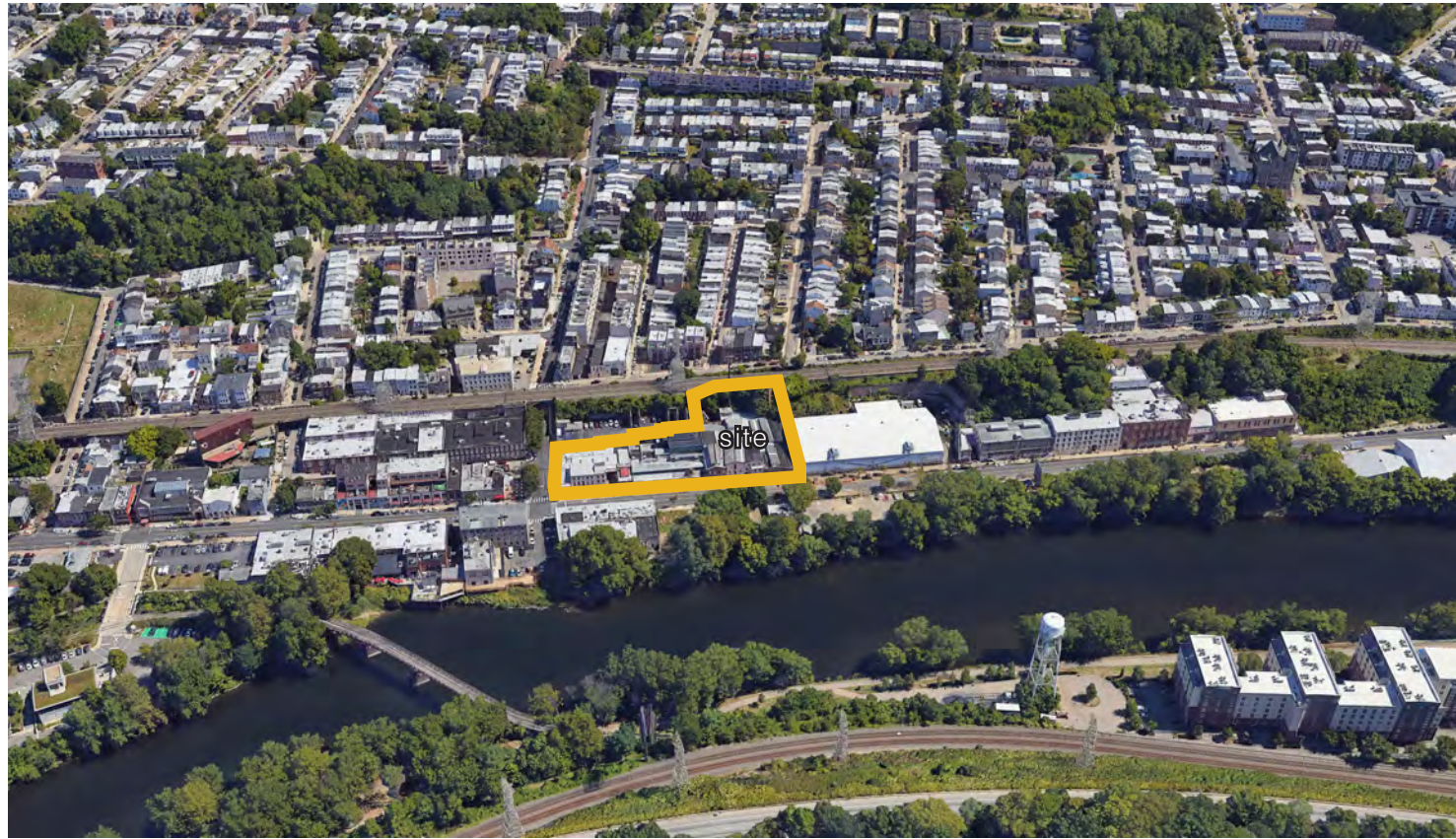




PLAN VIEW

AERIAL VIEW





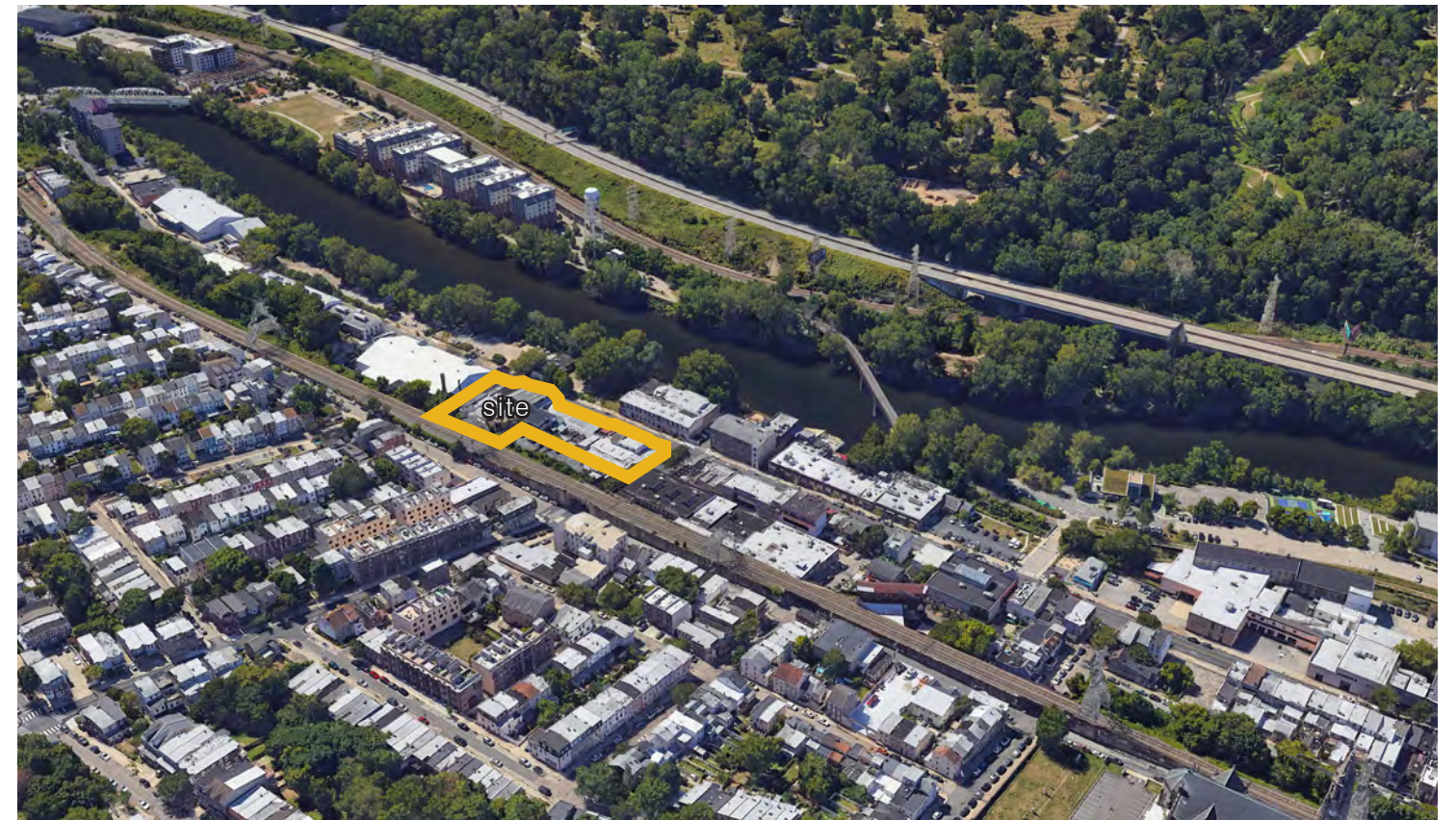
1 Northwest Aerial Perspective



2 Northeast Aerial Perspective



3 Southwest Aerial Perspective



4 Southeast Aerial Perspective



1 View of Site from Shurs Lane looking North



2 View of Site from Shurs Lane looking South



3 View of Site from Shurs Lane & Station Street looking North



4 View of Site from Main Street looking East



5 View of Site from Main Street looking East



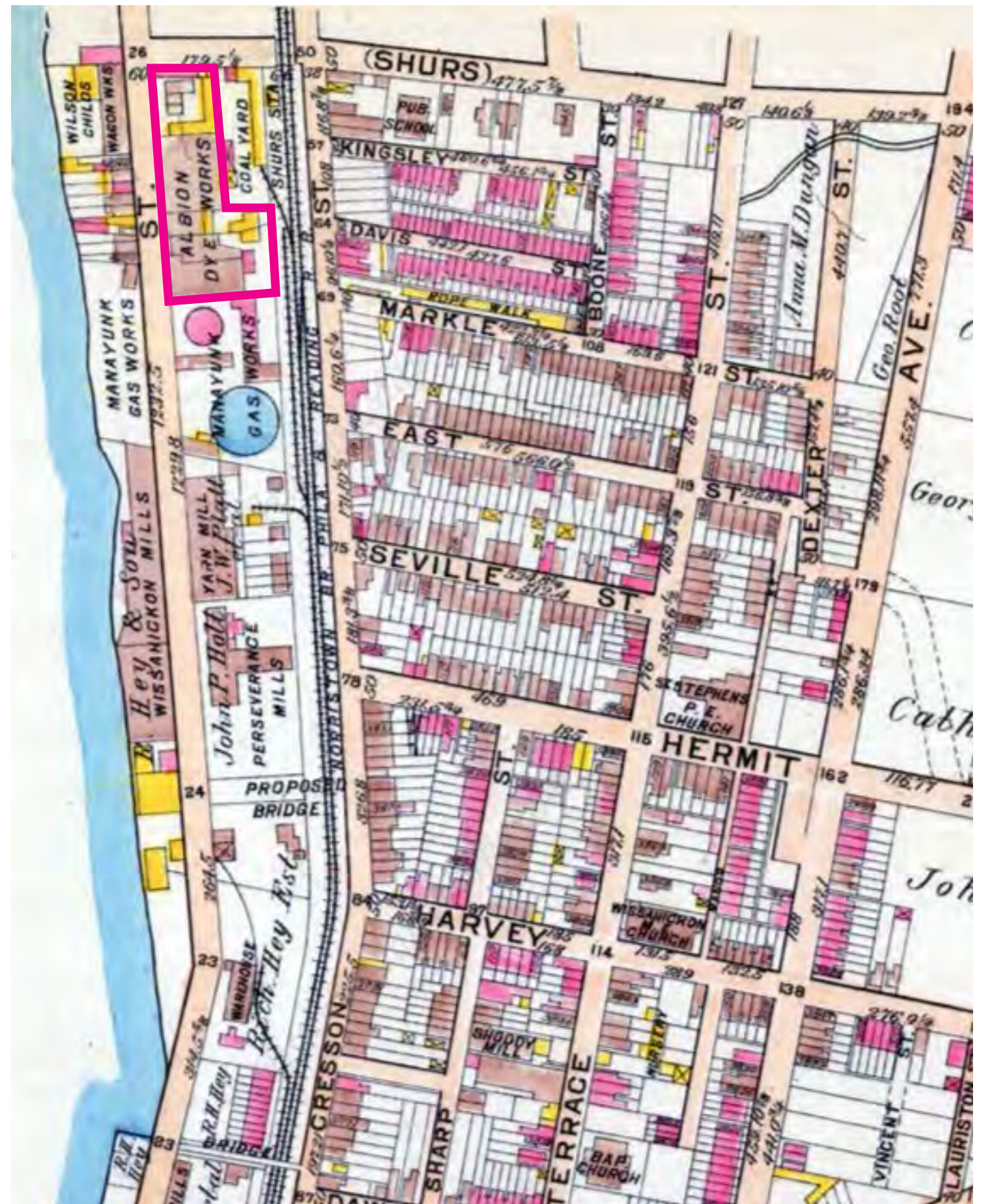
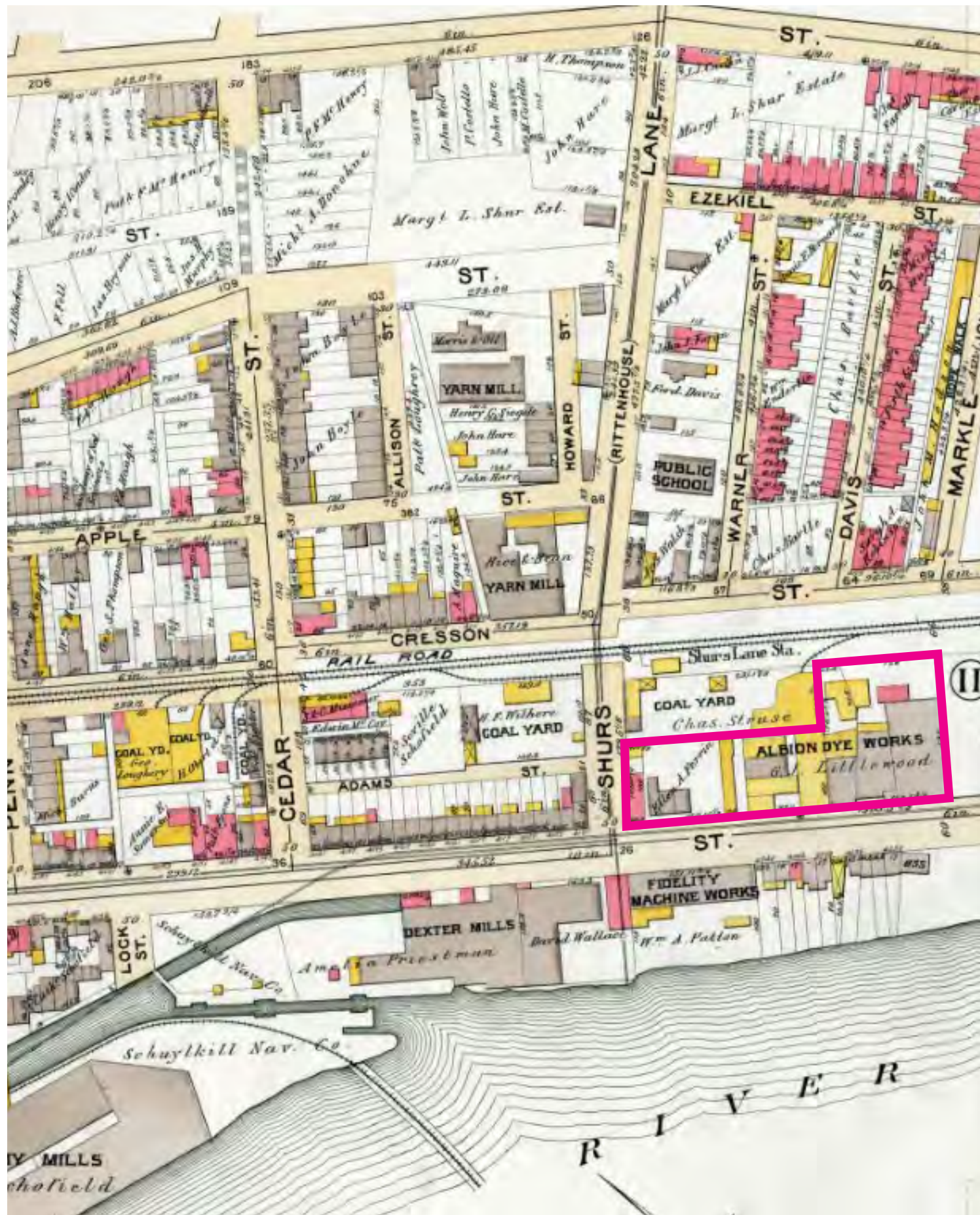
6 View of Site from Main Street looking East



7 View of Site from Main street looking West

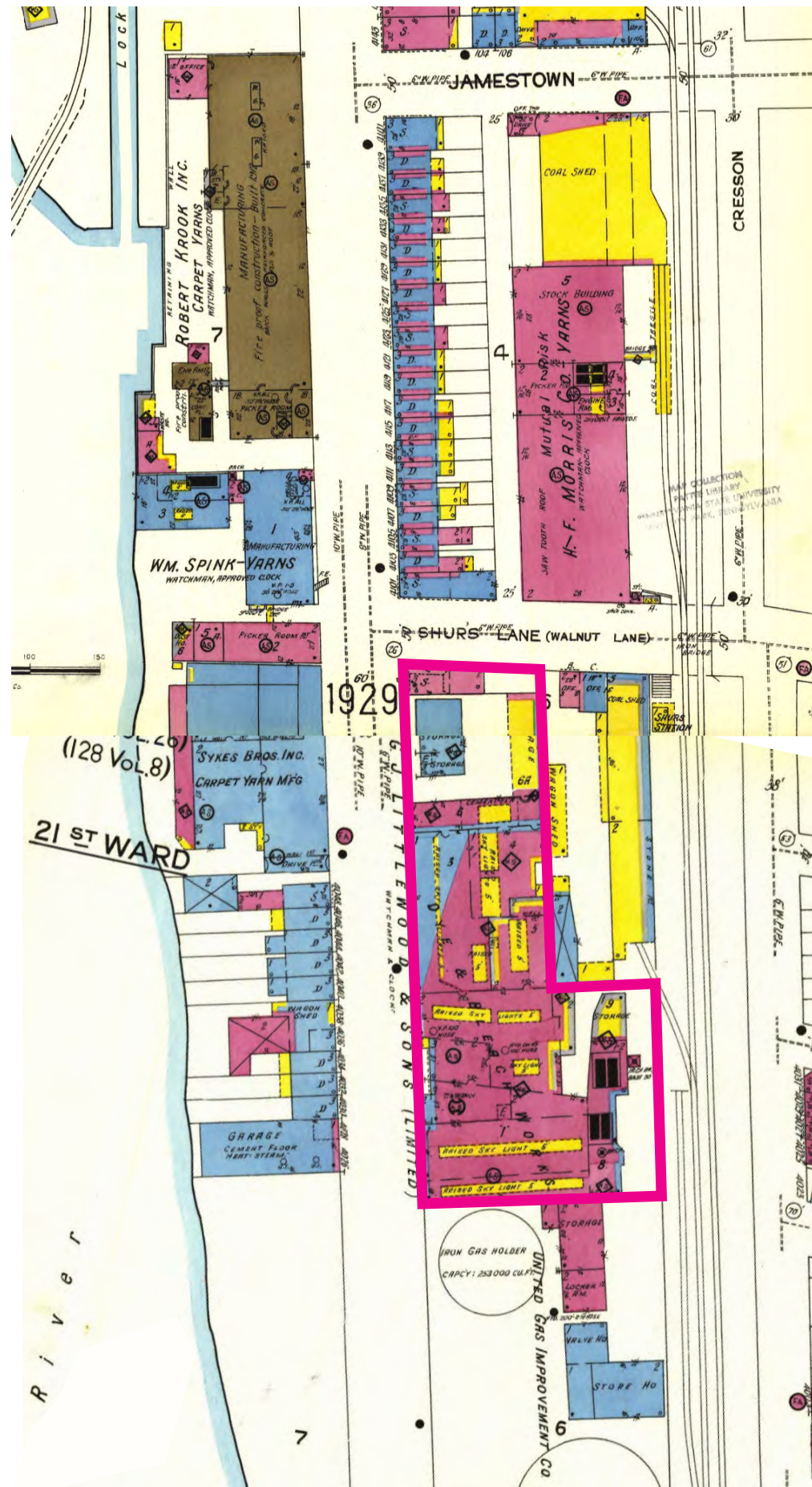


8 View of Site from Main street looking West



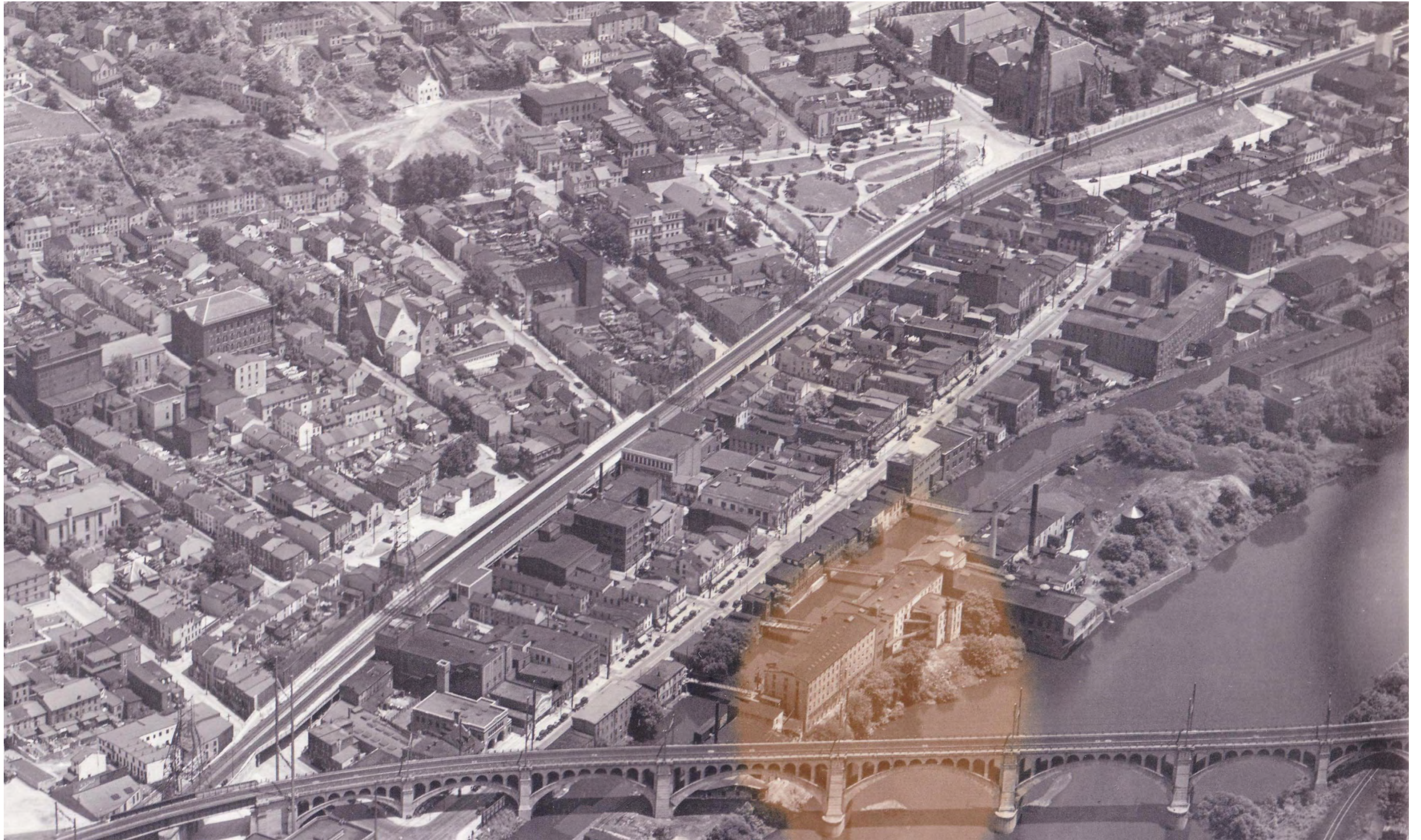
1892

1910



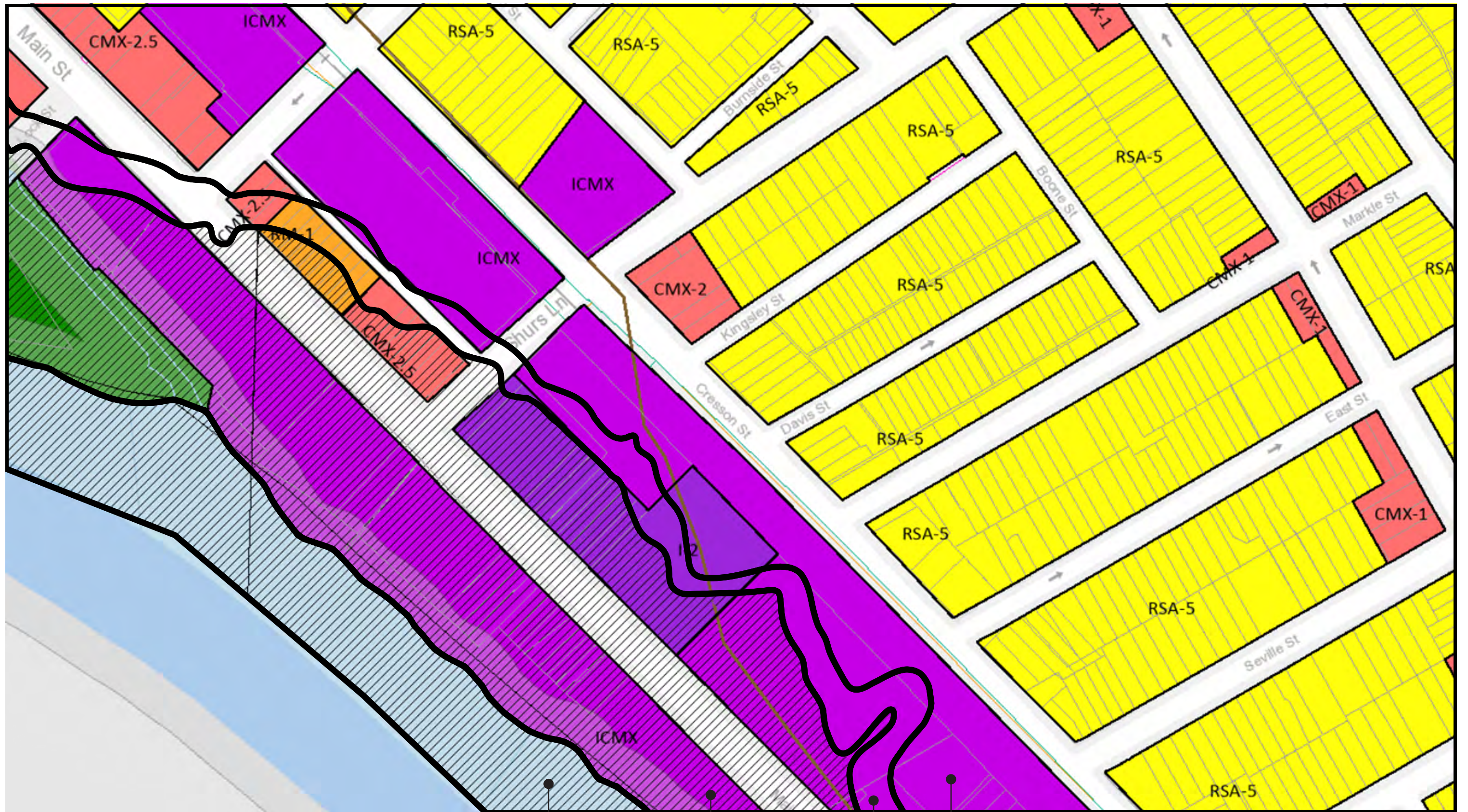
1923

atlas - historic

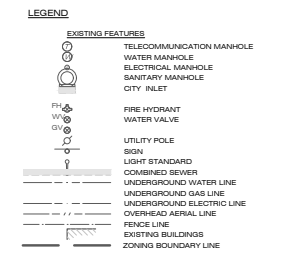
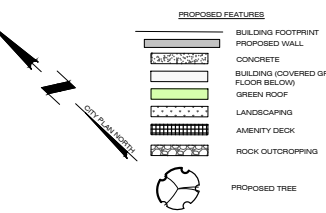








- Flood Zone X
- Flood Zone X (0.2% Annual chance flood hazard)
- Flood Zone AE
- Open Water



UTILITY OWNERS

DATE CONTACTED: 04/11/23
SERIAL NUMBER: 2023101974

COMPANY: COMCAST CABLEVISION
ADDRESS: 4400 WAINTE AVE
PHILADELPHIA, PA 19140
CONTACT: DAN HANAY
EMAIL: dan_hanay@comcast.com

COMPANY: USFC
ADDRESS: 400 S WENDELL RD, SUITE B
KING OF PRUSSIA, PA 19406
CONTACT: GAVIN HEWITT
EMAIL: gahewitt@usfc.com

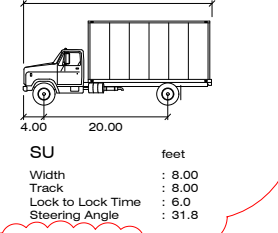
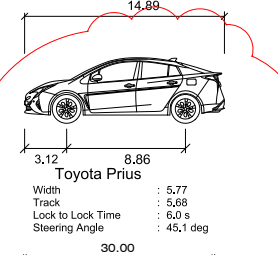
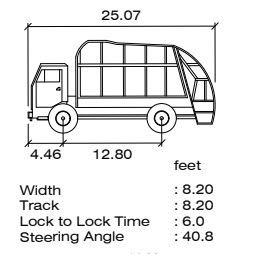
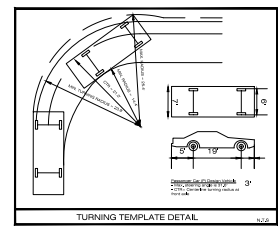
COMPANY: PHILADELPHIA CITY WATER DEPARTMENT
ADDRESS: 1101 MARKET STREET, 2ND FLOOR, APA TOWER
PHILADELPHIA, PA 19107
CONTACT: JOSEPH HIBEL
EMAIL: joseph.hibel@pcwa.gov

COMPANY: PHILADELPHIA CITY DEPARTMENT OF STREETS
ADDRESS: 1401 JPS BLDG, ROOM 940 MBB
PHILADELPHIA, PA 19102
CONTACT: JOSEPH HIBEL
EMAIL: joseph.hibel@pcwa.gov

COMPANY: PHILADELPHIA GAS WORKS
ADDRESS: 800 W MONTGOMERY AVE
PHILADELPHIA, PA 19122
CONTACT: JAMES BOCHANDON
EMAIL: jbochandon@pcgw.org

COMPANY: SOUTHEASTERN PA TRANSPORTATION AUTHORITY
ADDRESS: 1234 MARKET ST, 12TH FL
PHILADELPHIA, PA 19107
CONTACT: DAVID MONTYVIGAS
EMAIL: dmontyvigas@septa.org

COMPANY: VERIZON PENNSYLVANIA, LLC
ADDRESS: 180 SHEPHERD BLVD, STE 2100 ROOM N/A
PHILADELPHIA, PA 19103
CONTACT: KELLY BLOUNT
EMAIL: kelly.b.blount@verizon.com



BUILDING GFA CHART

BUILDING: 7 STORY BUILDING
167 TOTAL UNITS

LEVEL 1: 0 SF*
LEVEL 2: 20,981 SF
LEVEL 3: 33,177 SF
LEVEL 4: 33,215 SF
LEVEL 5: 33,215 SF
LEVEL 6: 33,215 SF
LEVEL 7: 28,697 SF
TOTAL GFA= 182,400 GSF

EX. INDIGO BIKE STATION NOTE:
EX. INDIGO BIKE STATION TO BE REMOVED DURING CONSTRUCTION. INDIGO HAS AGREED TO REMOVE THE BIKE SHARE STATION PRIOR TO CONSTRUCTION, OWNER TO PROVIDE 30 DAYS NOTICE.

EX. COMPLAINT ADA NOTE:
PROTECT AND MAINTAIN NEWLY CONSTRUCTED EX. ADA CURB RAMPS THROUGHOUT CONSTRUCTION. IF THE NEWLY CONSTRUCTED EX. ADA CURB RAMPS ARE DAMAGED IN ANY WAY DURING CONSTRUCTION, THEN THE DEVELOPER/CONTRACTOR/OWNER MUST RECONSTRUCT ALL DAMAGED COMPONENTS ACCORDING TO THE ORIGINAL DESIGN OR ADA STANDARDS AND SUBMIT COMPLETED AS-BUILT PENNDOT CS-4401 FORMS TO THE PSD ADA UNIT WITHIN 30 CALENDAR DAYS OF FINISHING CONSTRUCTION. FOR ALL DAMAGED/RECONSTRUCTED RAMPS.

EX. TRAFFIC TRANSFORMER NOTE:
EX. TRAFFIC TRANSFORMER ALONG SHURS WILL BE PROTECTED DURING CONSTRUCTION. IF TRANSFORMER IS DAMAGED IT WILL BE REPLACED AT OWNERS EXPENSE

I-2 Medium Industrial District Requirements

Open Space and Natural Resources - Flood Protection - Within the Special Flood Hazard Area
INCA Neighborhood Commercial Area Overlay District - Main Street/Maryland and Venice Island Subarea B
NIS Narcotics Injection Sites Overlay District
FDC Fourth District Overlay District - Fourth District Area

PROPOSED DEVELOPMENT	ALLOWED/REQUIRED	PROPOSED
MAX % COVERED AREA (50/139 SF)	100%	95%
BUILDING DIMENSIONS		
SIDE YARD SETBACK	# IF USED	0
REAR YARD SETBACK	# IF USED	0
BUILDING HT (IN CITY OVERLAY*)	35'	35.1'
FLOOR AREA RATIO (FAR)	500%	364%
PARKING		
1/2 UNITS*	#	160
ELECTRIC SPACES (5%)	#	8
COMPACT SPACES (25% MAX)	#	40 (25%)
ADA SPACES	#	5 (1 VAS)
LOADING SPACE (10x40x14)	#	1
BIicycle PARKING		
1 SPACE PER 3 DWELLING UNITS	56	73#

NOTES:
#14-8003961 Provision for Bike Parking (16 additional bike spaces create a reduction of 3 car spaces)
*14-202-7105: When a lot is located within a 100-foot floodplain, any point located one foot above the regulatory flood level shall be considered to be at the average ground level of the lot.

BASE FLOOD ELEVATION OF 41.40' (NGVD29)

REGULATORY FLOOD ELEVATION/DESIGN FLOOD ELEVATION 42.90' (18" BFE)

AVERAGE GRADE 43.90' (12" RFE)

AREA REGULATIONS
LOT ADDRESS:
4045-61 Main Street
#884632511

LOT AREAS:
CONSOLIDATED AREA: 50,139 SF

LIMIT OF DISTURBANCE
STEEP SLOPES
DISTURBANCE NOTE:
NO STEEP SLOPE
DISTURBANCE IS PROPOSED
PER ALTA SURVEY

NO.	REVISIONS
1	ISSUED
2	ISSUED
3	ISSUED
4	ISSUED
5	ISSUED
6	ISSUED
7	ISSUED
8	ISSUED
9	ISSUED
10	ISSUED



LOCATION MAP SCALE 1"=500'

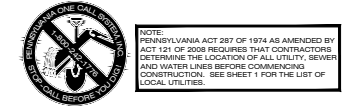
The property lies within the SCHUYLKILL WATERSHED

- NOTES**
- Boundary and Location information is based on a field survey performed by Ruggiero Plante Land Design on March 17, 2022 and updated on April 18, 2023.
 - Boundary dimensions are identified in Philadelphia District Standard feet. Other stated dimensions are in U.S. standard feet.
 - The change from inches to the more precise decimal equivalent may result in minor changes in the second and third decimal places. These are not mistakes or overights but more precise values.
 - Vertical datum is NGVD 1929, the benchmark is "C-329" a standard brass disk set in a concrete retaining wall, having an elevation of 81.29'. Located 0.25 miles southeast along the Reading Railroad from the Station at Maryland, 50' southeast of the southeast tail of the southeast set of tracks, set in the top and at the east corner of an offset in the concrete retaining wall around the two southeast legs of a metal pylon, 8' east to the more southeasterly of the two southeast legs of the pylon, 1.7' north of a metal fence post and about level with the track. To Achieve City datum, Subtract 4.81'
 - The bearings shown herein are referenced from a PLAN OF PROPERTY, made for Aaron Hart by Israel Sorota, Surveyor and Registrar of the North Survey District of Philadelphia, dated August 1, 1968.
 - FEMA FIRM map #420757089G effective January 17, 2007 designates the site as Zone X-A Zone AE. Base Flood Elevation ranges from 41' (NGVD29) at East end of property to 41.2' (NGVD29) at West end of property.
 - Some of site improvements such as buildings, curbing, and parking have been taken from aerial photographs, other plans and from public GIS sources.
 - Only above ground visible improvements have been located. The location of the underground utilities must be field verified by contractor before commencement of any construction.
 - The property is identified as within the Industrial Zoning District I-2 and Industrial Commercial Mixed-Use (ICMU) Zoning District and Neighborhood Commercial Area Overlay District - Main Street and Open Space and Natural Resources - Flood Protection - Within the Special Flood Hazard Area and Fourth District Overlay.
 - The property has access to Main Street and Shurs Lane which are Public Streets.
 - The property described on this survey is the same as the property described in the Title Commitment.
 - At the time of the survey, there was not any evidence of earth moving or any other engineering construction on the site.
 - At the time of the survey, the surveyor was not aware of any proposed changes in street rights-of-way lines and no other street or sidewalk construction or repairs were observed.
 - At the time of the survey, there was not any evidence of wetlands delineation, observed in the process of conducting the survey.

PLAN REFERENCES

- PLAN OF PROPERTY made by John Leving Surveyor & Registrar of the 8th Survey District of Philadelphia, dated August 30, 1874.
- PLAN OF PROPERTY made by K.W. Grantlund, Surveyor & Registrar of the 8th Survey District of Philadelphia, dated March 5, 1926.
- C.P. #72.
- PROPOSED LOT CONSOLIDATION PLAN, made by Ruggiero Plante Land Design, dated January 13, 2023, Revised and Approved by 9th Survey District on February 8, 2023.

OWNER OF RECORD
4045-61 MAIN STREET
G LITTLEWOOD & SONS INC
4045-61 Main St
Philadelphia, PA 19127



NO.	REVISIONS
1	ISSUED
2	ISSUED
3	ISSUED
4	ISSUED
5	ISSUED
6	ISSUED
7	ISSUED
8	ISSUED
9	ISSUED
10	ISSUED

4045-61 MAIN STREET
Philadelphia, PA 19127
21ST WARD - OPA #88463251

prepared for:
Urban Conversions, LLC
1900 MARKET STREET
8TH FLOOR
Philadelphia, PA 19103

DAVID J. PLANTE, Professional Engineer, No. PE-048820-E

Ruggiero Plante Land Design
5900 Ridge Avenue Philadelphia, PA 19128
phone 215.508.3900 fax 215.508.3900 www.ruggieroplante.com

Plan Date: Scale: 1" = 20'-0"
MARCH 22, 2024

ZONING SUBMISSION
Sheet Title:
ZONING PLAN
Sheet 1 of 3



④ ZONING - OVERALL WEST ELEVATION - ALONG SHURS LANE
1/16" = 1'-0"



③ ZONING - OVERALL - EAST ELEVATION
1/16" = 1'-0"



② ZONING OVERALL NORTH ELEVATION - ALONG 11 SHURS LANE
1/16" = 1'-0"



① ZONING - OVERALL SOUTH ELEVATION - ALONG MAIN STREET
1/16" = 1'-0"

REVISIONS		
No.	Date	Description

Project Phase:
ZONING

Project Name:
4045 MAIN STREET

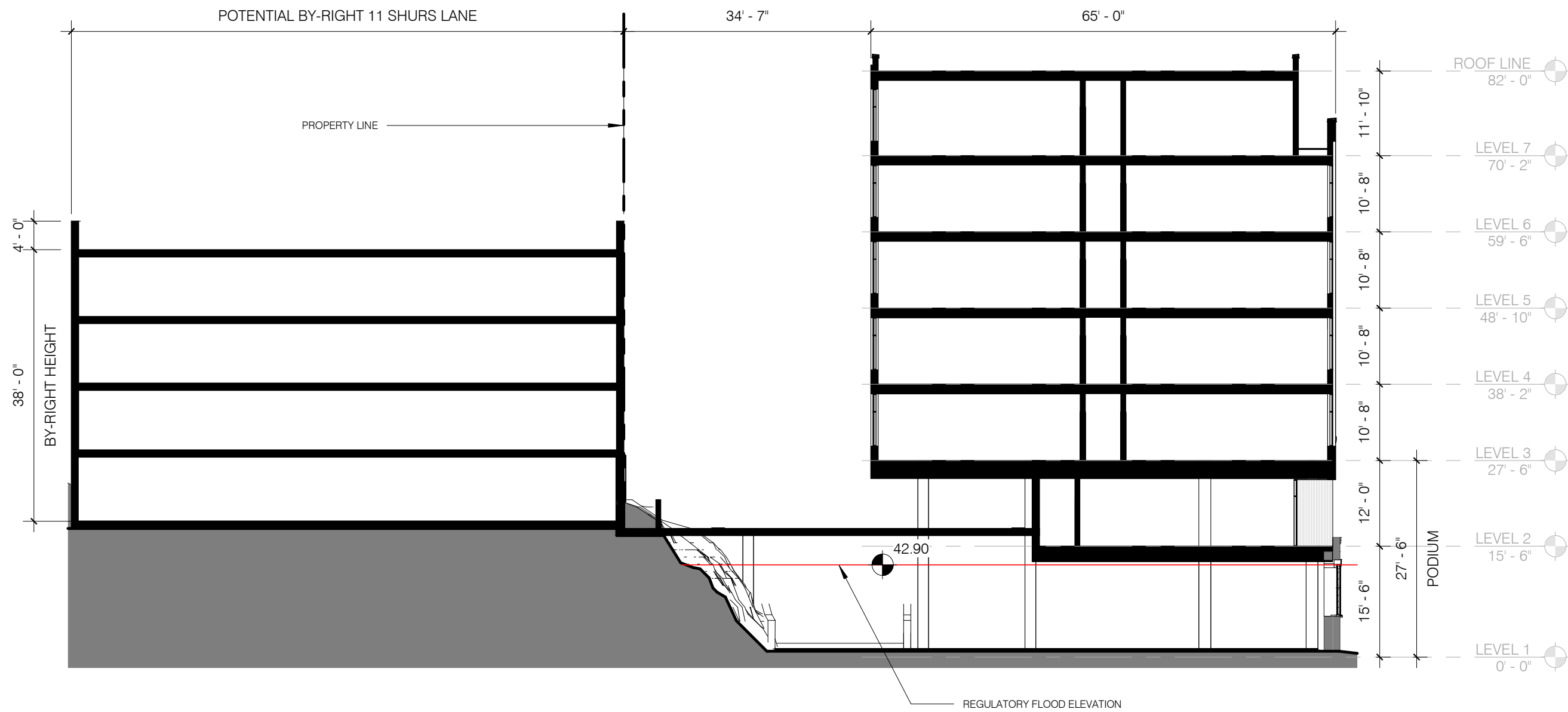
4045 MAIN STREET
PHILADELPHIA, PA 19127

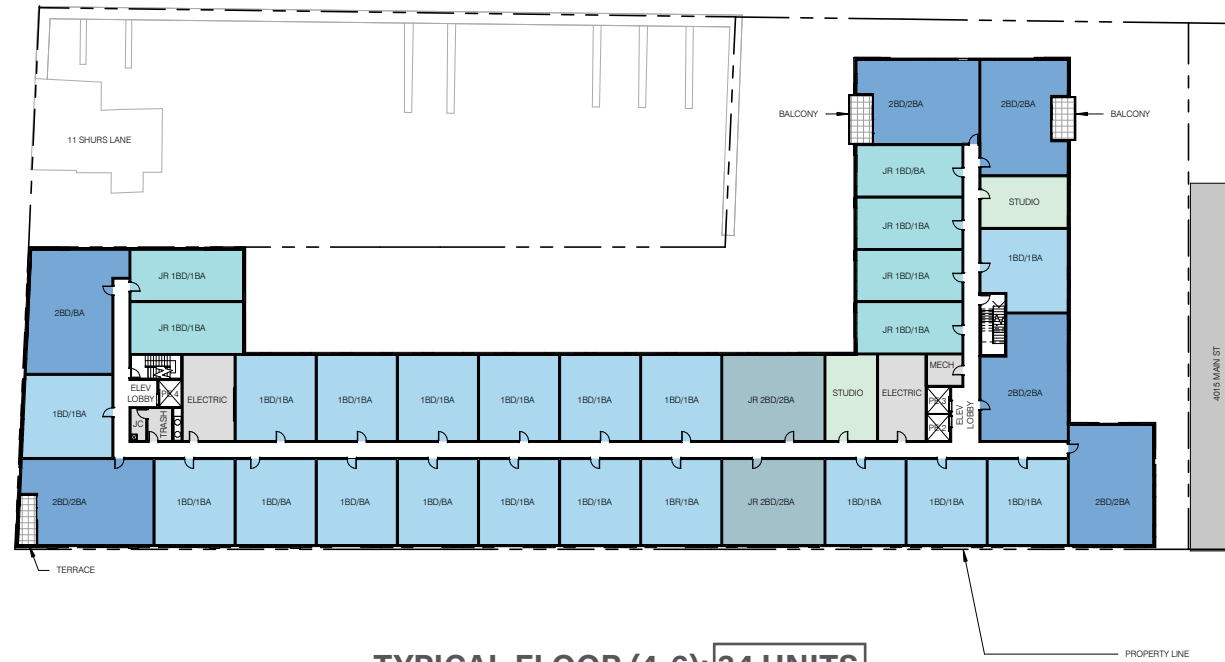
Drawing Title:
ELEVATIONS

Project Number: 22302.00
Date: 03.11.2024
Drawn By: AJM
Checked By: AJM

Z.2

Scale: 1/16" = 1'-0"

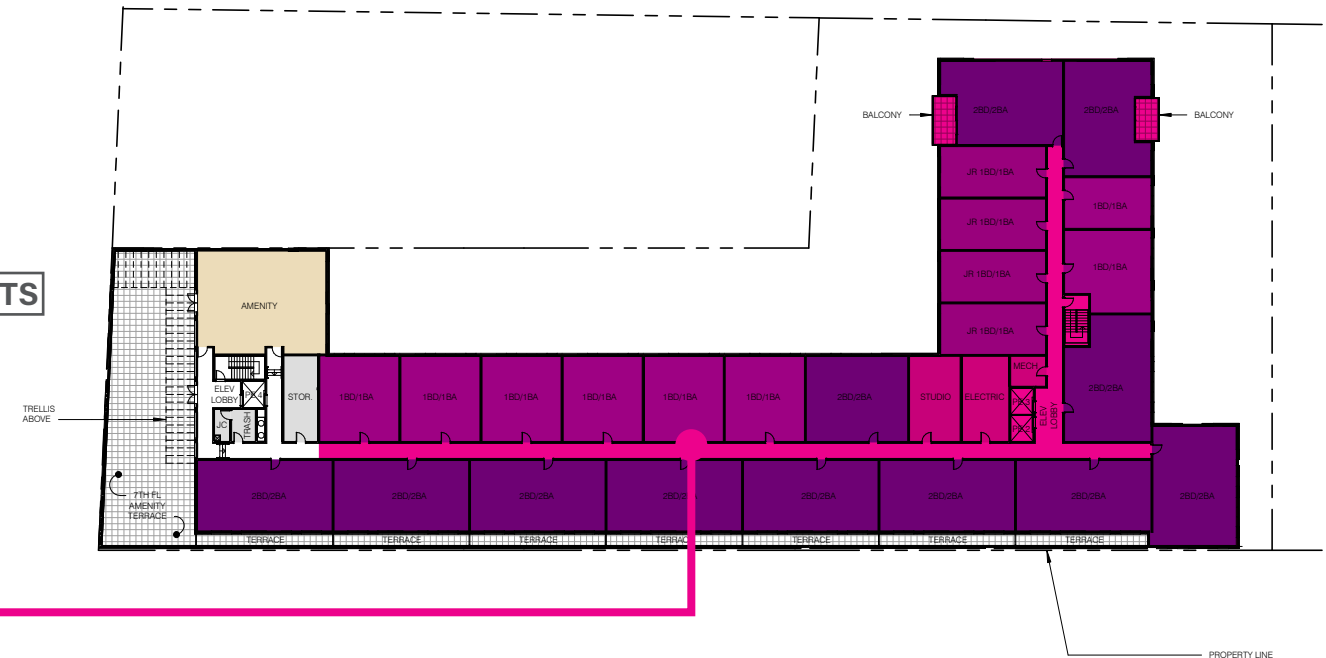




TYPICAL FLOOR (4-6): 34 UNITS



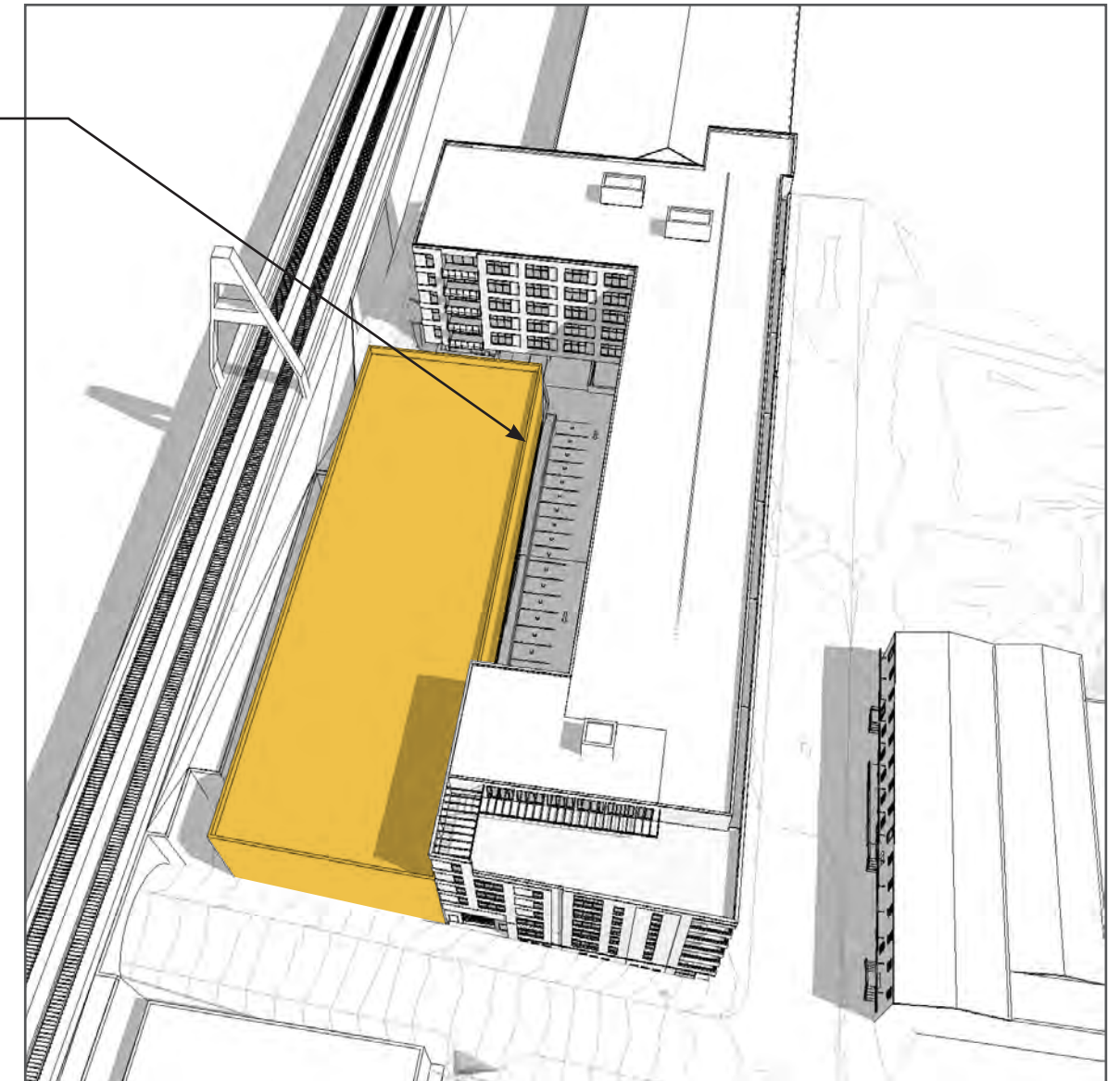
SECOND FLOOR: 9 UNITS



SEVENTH FLOOR: 25 UNITS

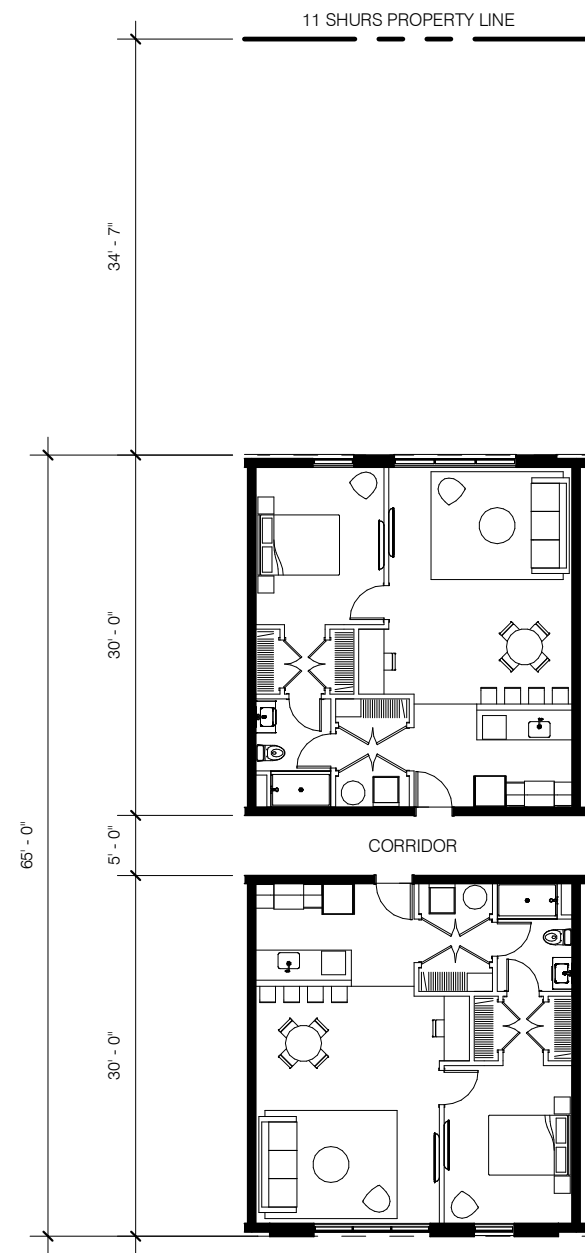
-25 UNITS

9 UNITS + 25 UNITS = 34 UNITS

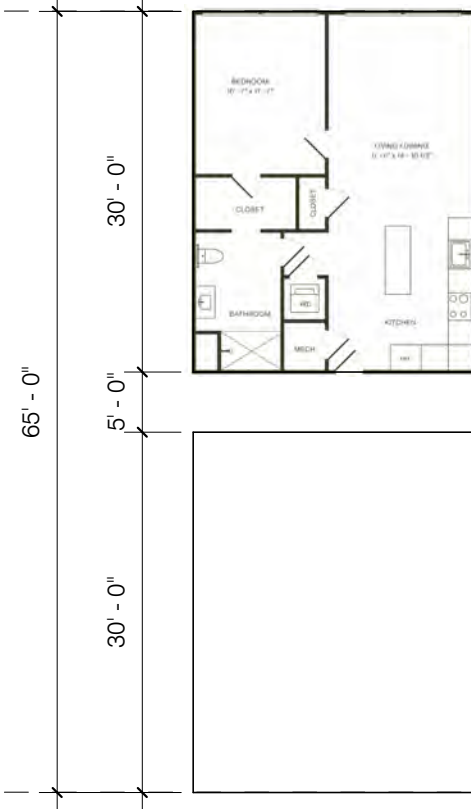


11 SHURS LANE

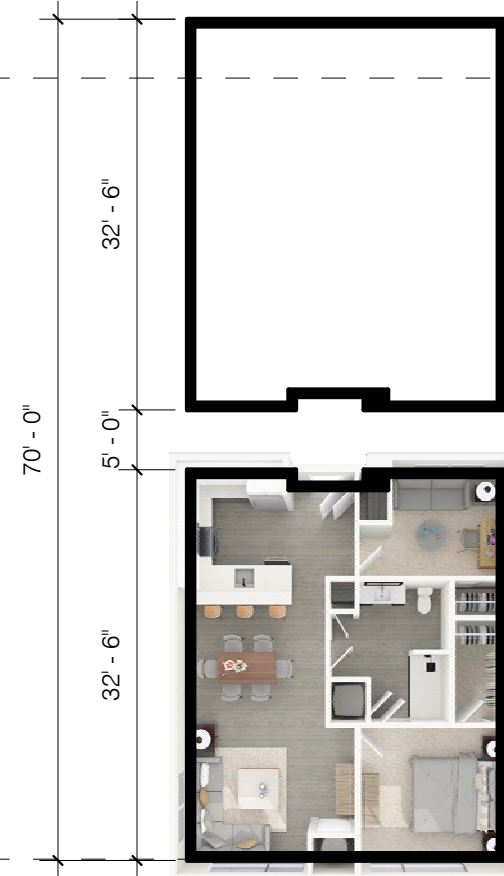
- ICMX
- Max occupied area (% of lot) - 100%
- Max FAR - 500% (4 stories/ 400% shown)
- Max Height - 38ft above average ground level
- No front, side or rear yards required



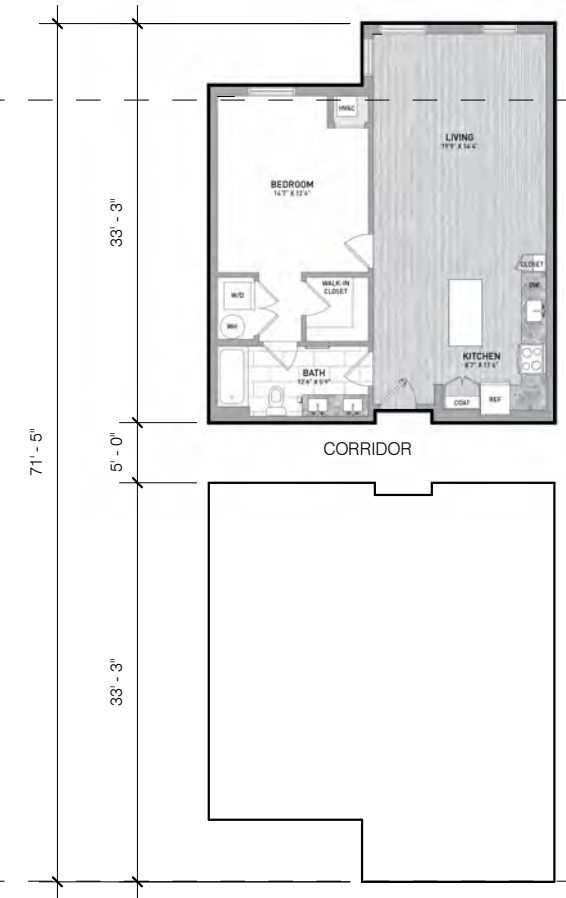
4045 Main Street - Manayunk



The Driftway - East Falls



Luxor - Bala Cynwyd



The Isle - Manayunk



View looking East on Main Street & South on Shurs Lane



View looking Northwest on Main Street



Main Street Elevation Perspective



Main Street Elevation Perspective



Aerial View Looking Northwest



Residential Entry Perspective



Aerial View looking Southeast



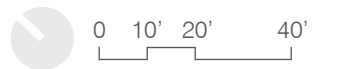
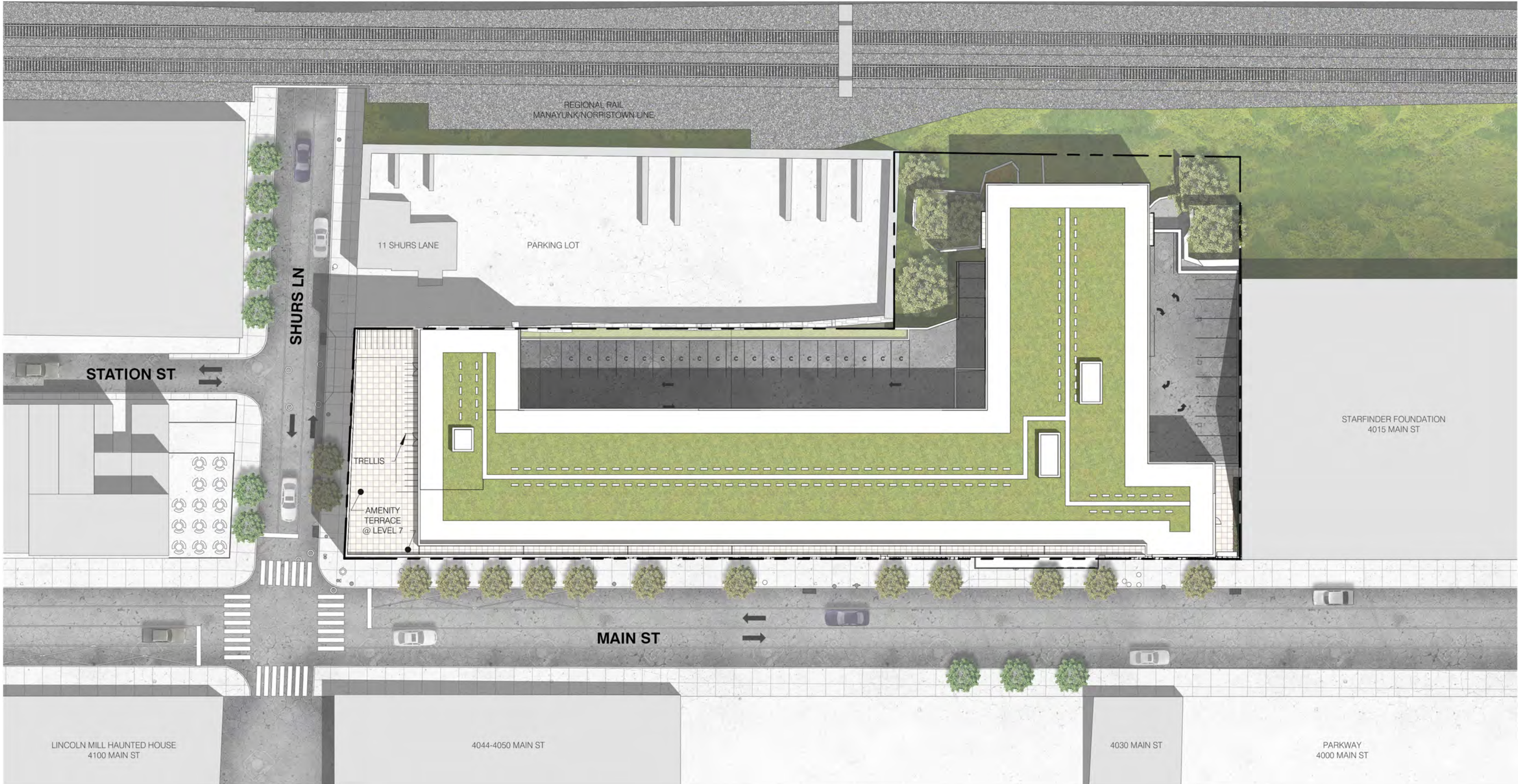
Aerial View looking South

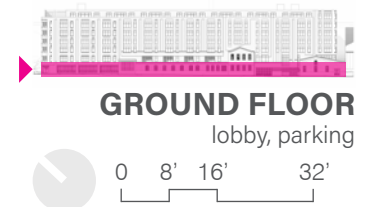
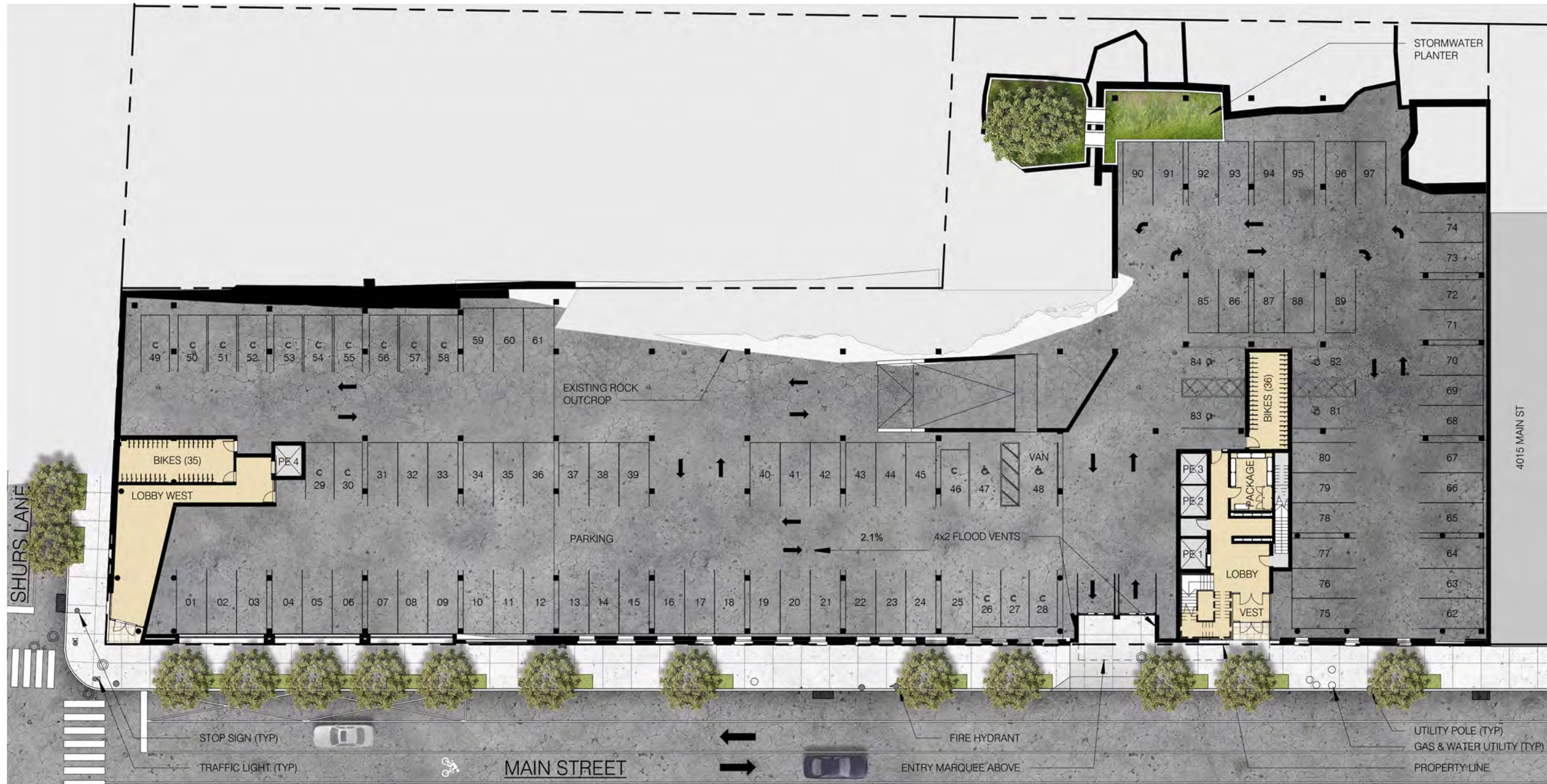


Shurs Lane Elevation Perspective



View looking East on Main Street



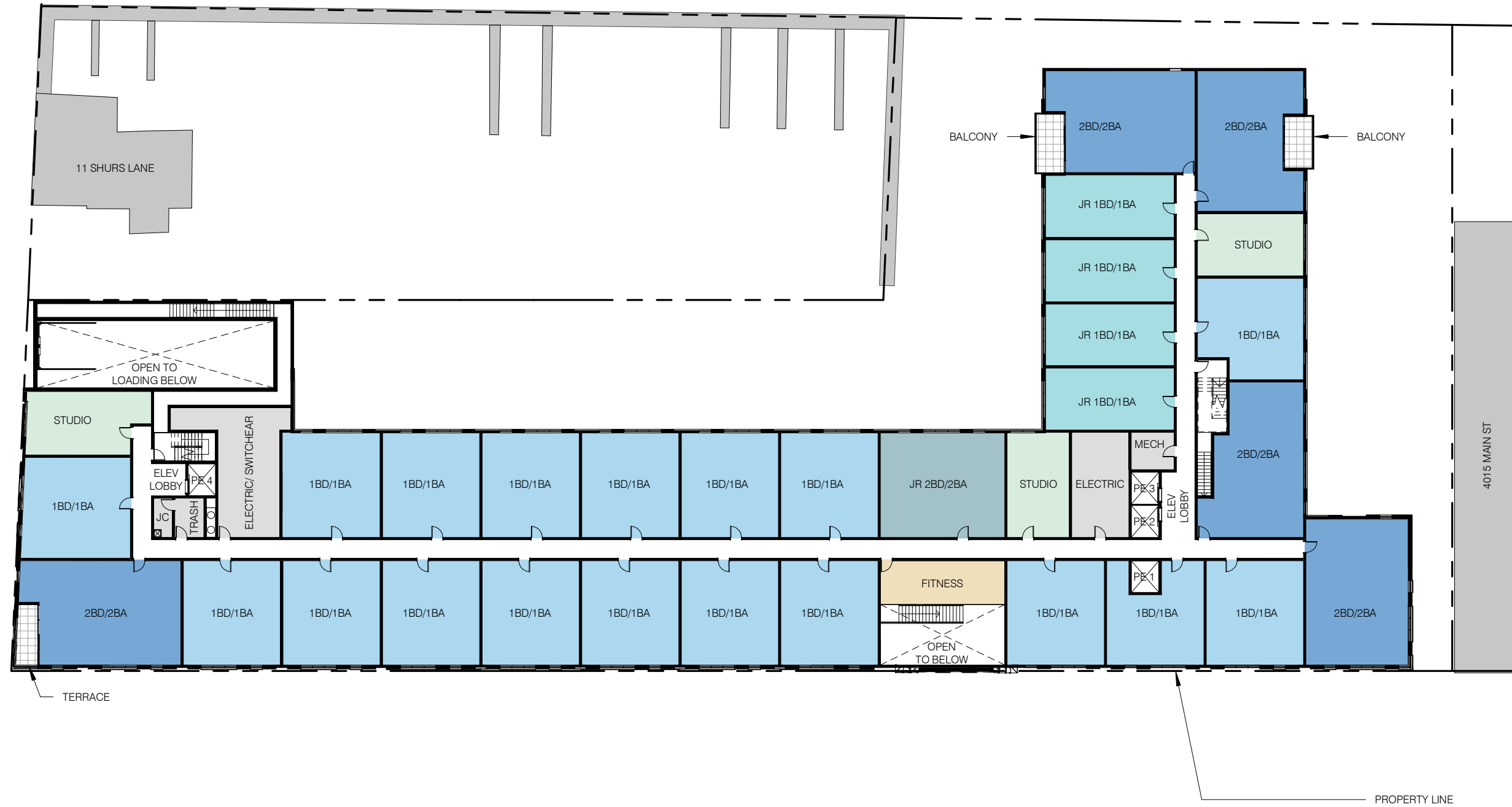




FLOOR 2

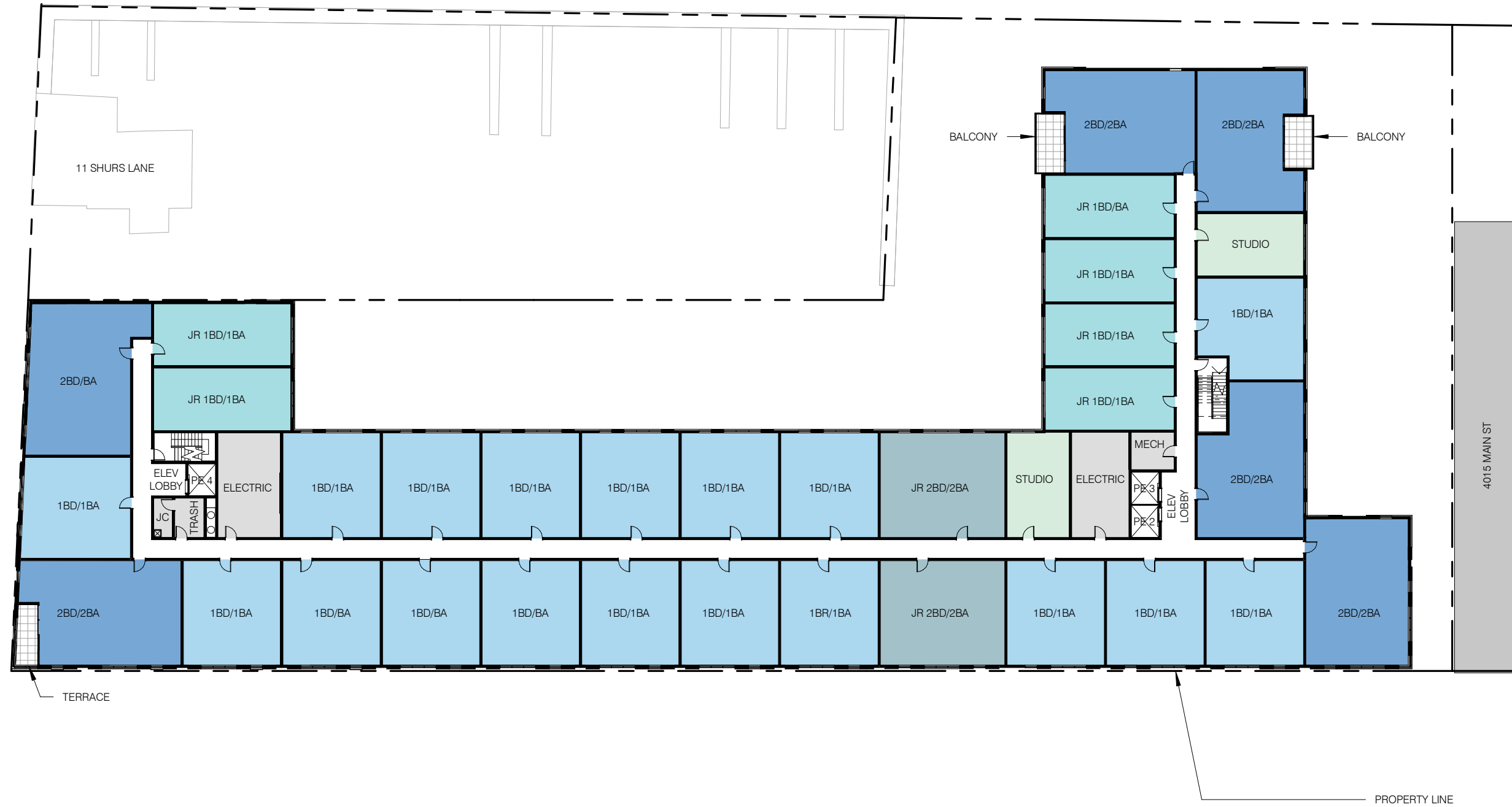
parking, loading, amenity, residential





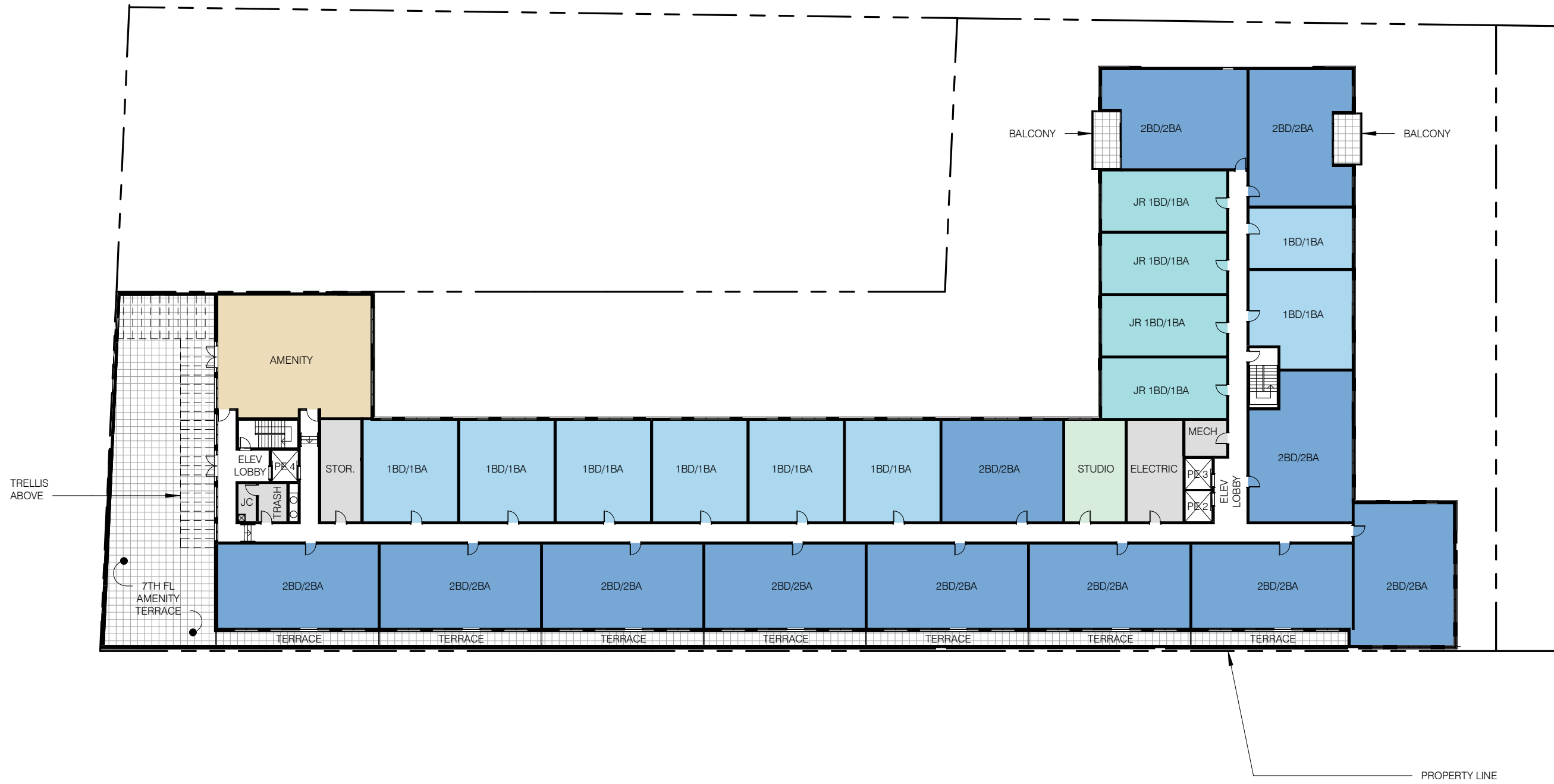
FLOOR 3
amenity, residential





FLOOR 4-6
residential

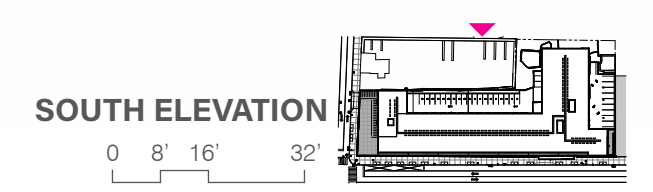




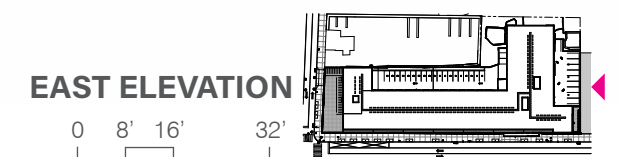
FLOOR 7
amenity, residential



- Modular Brick 1
- Vertical Corrugated Metal Siding 2
- Metal Clad Windows 4
- Existing Windows to be Replaced 5
- Metal Storefront 6
- Translucent Panels 7
- Glass Guardrail 8
- Overhead Doors 9
- Entry Awning 11
- Painted Metal C-Channel 12
- Existing Brick 13
- New Brick to match Existing 14
- Existing Stone 15
- Existing Terracotta Coping 16



- Modular Brick **1**
- Vertical Corrugated Metal Siding **2**
- Accent Color Metal Surround **3**
- Metal Clad Windows **4**
- Metal Storefront **6**
- Glass Guardrail **8**



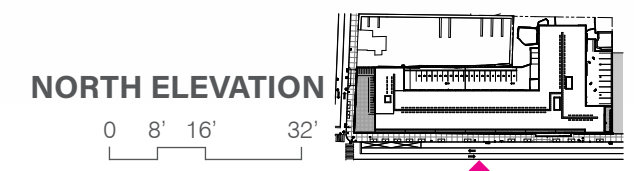
Vertical Corrugated Metal Siding **2**

10 Trellis Fence

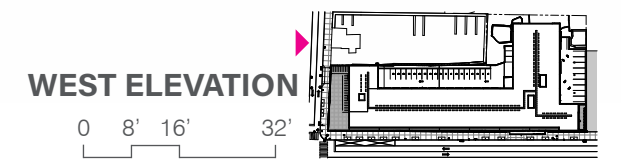
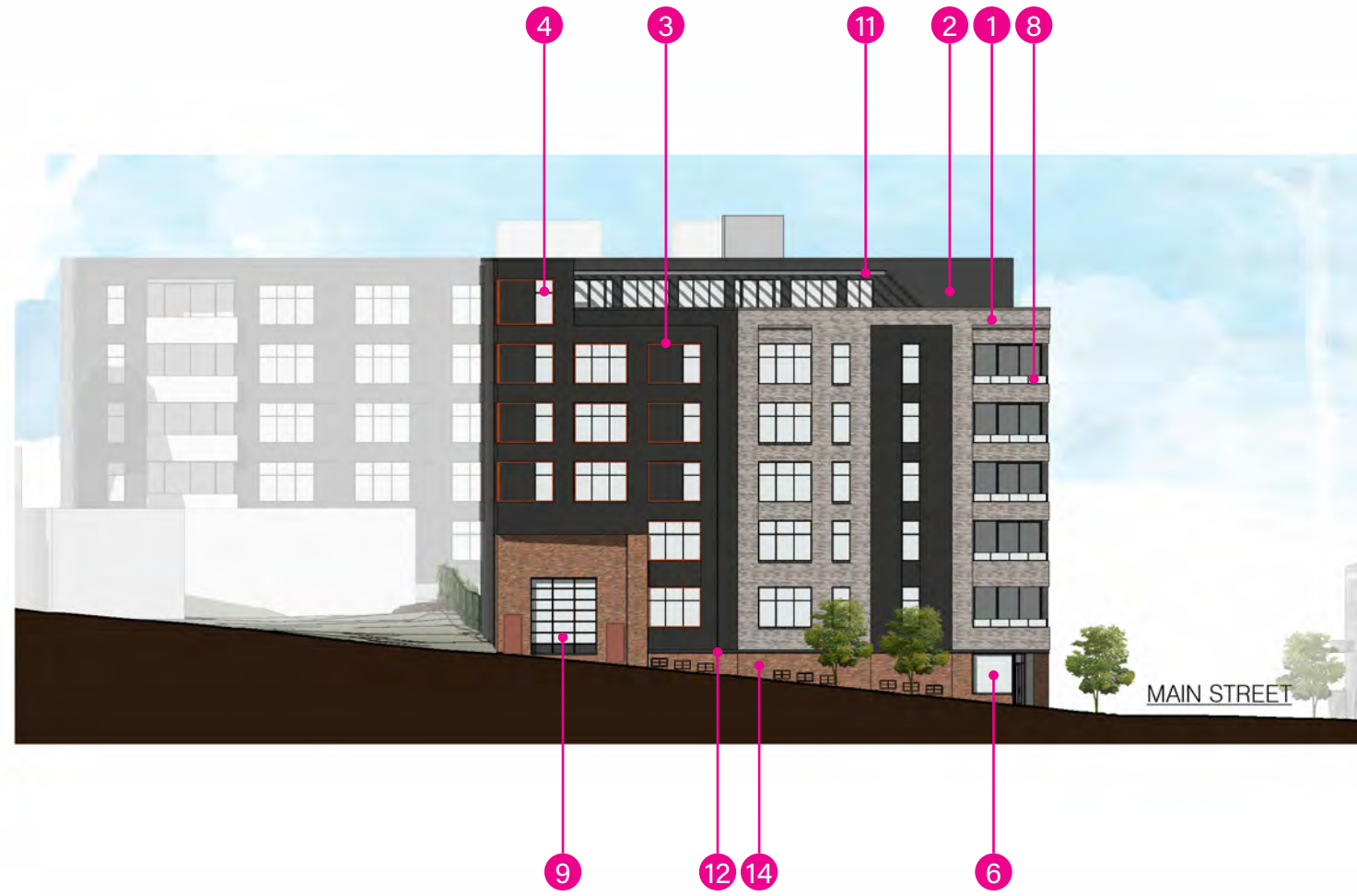
Accent Color Metal Surround **3**

14 New Brick to match Existing

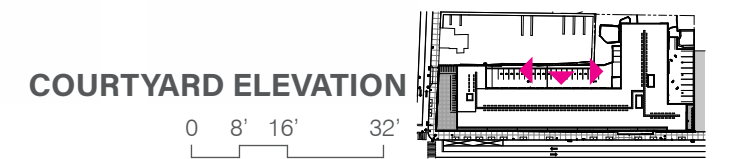
Metal Clad Windows **4**



- Modular Brick **1**
- Vertical Corrugated Metal Siding **2**
- Accent Color Metal Surround **3**
- Metal Clad Windows **4**
- Metal Storefront **6**
- Glass Guardrails **8**
- Overhead Doors **9**
- Entry Awning **11**
- Painted Metal C-Channel **12**
- New Brick to match Existing **14**



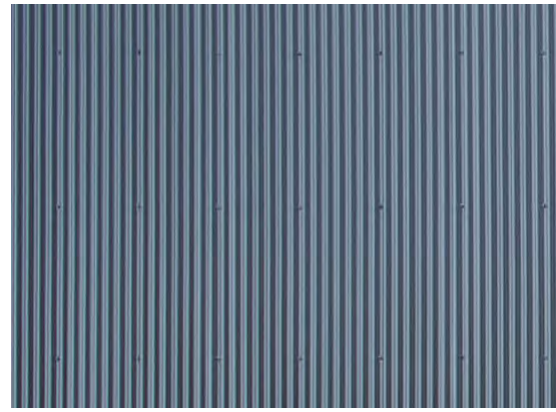
- Vertical Corrugated Metal Siding **2**
- Accent Color Metal Surround **3**
- Metal Clad Windows **4**
- Glass Guardrail **8**



MATERIALS PALETTE



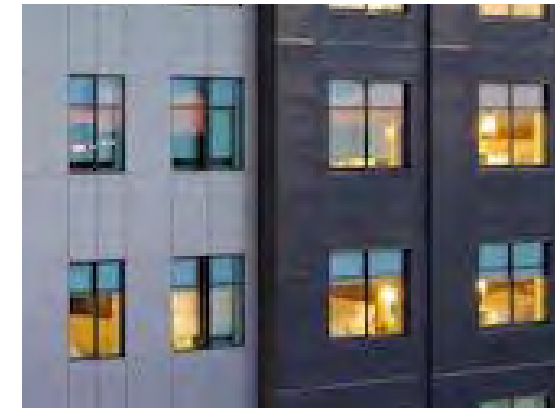
1 Modular Brick



2 Vertical Corrugated Metal Siding



3 Accent Color Metal Surround



4 Metal Clad Windows



5 Exst Window to be replaced. Paint color similar to existing.



6 Metal Storefront



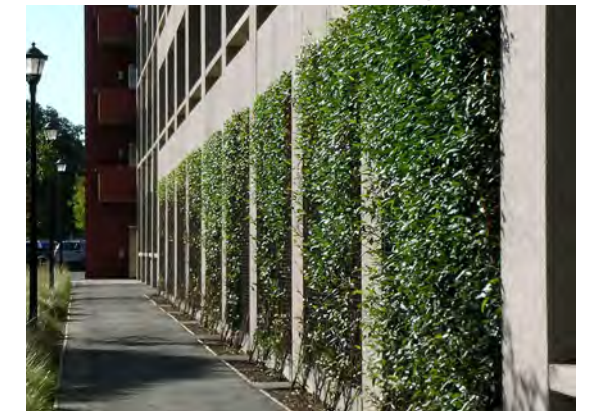
7 Translucent Panels



8 Glass Guardrail



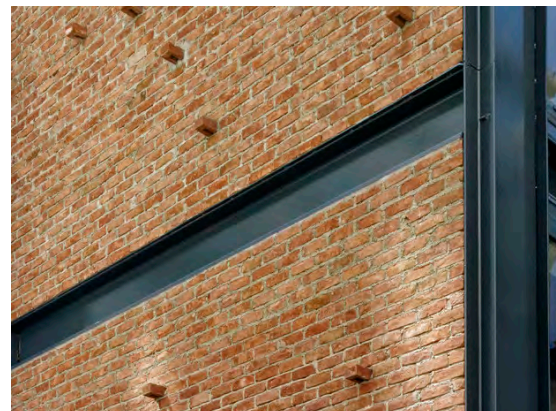
9 Overhead Doors



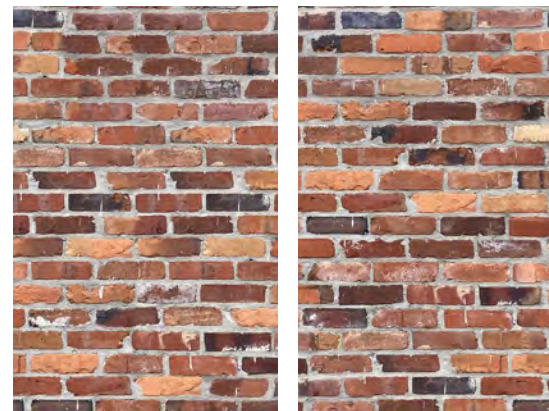
10 Trellis Fence



11 Entry Awning



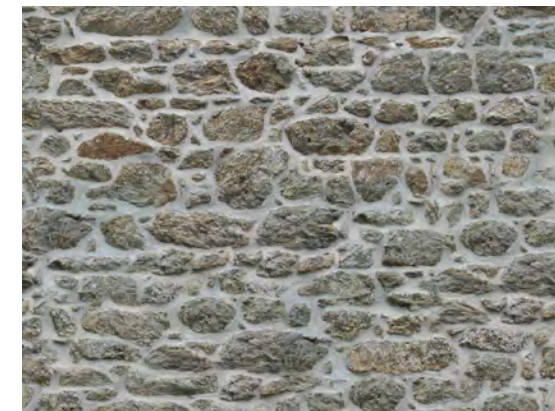
12 Painted Metal C-Channel



13 Existing Brick

New Brick to match Existing

14



15 Existing Stone



16 Existing Terracota Coping




TO BE DEMOLISHED 
TO REMAIN 



TO BE DEMOLISHED — — —
 TO REMAIN — — —



TO BE DEMOLISHED 
TO REMAIN 



TO BE DEMOLISHED 
TO REMAIN 



Apex Manayunk
4601 E Flat Rock Road, Philadelphia
6 Stories - 128 Units



The Locks
Riverside Way (1 Leverington Avenue), Philadelphia
5 Stories - 63 Townhomes



The Isle
1 Cotton Street, Philadelphia
5 Stories - 205 Units



The Yard at Pencoyd Landing
600 Righters Ferry Road, Bala Cynwyd
7 Stories - 593 Units



Residence Inn by Marriott
615 Righters Ferry Road, Bala Cynwyd
7 Stories - 124 Suites



Watermill at Manayunk
2 Leverington Avenue, Philadelphia
7 Stories



Venice Island
4436-44 Main Street, Philadelphia
5 Stories - 213 Units



Site
4045 Main Street, Philadelphia
7 Stories - 167 Units

3811 Main Street (Under Construction)
6 Stories - 36 Units
5 Commercial Spaces

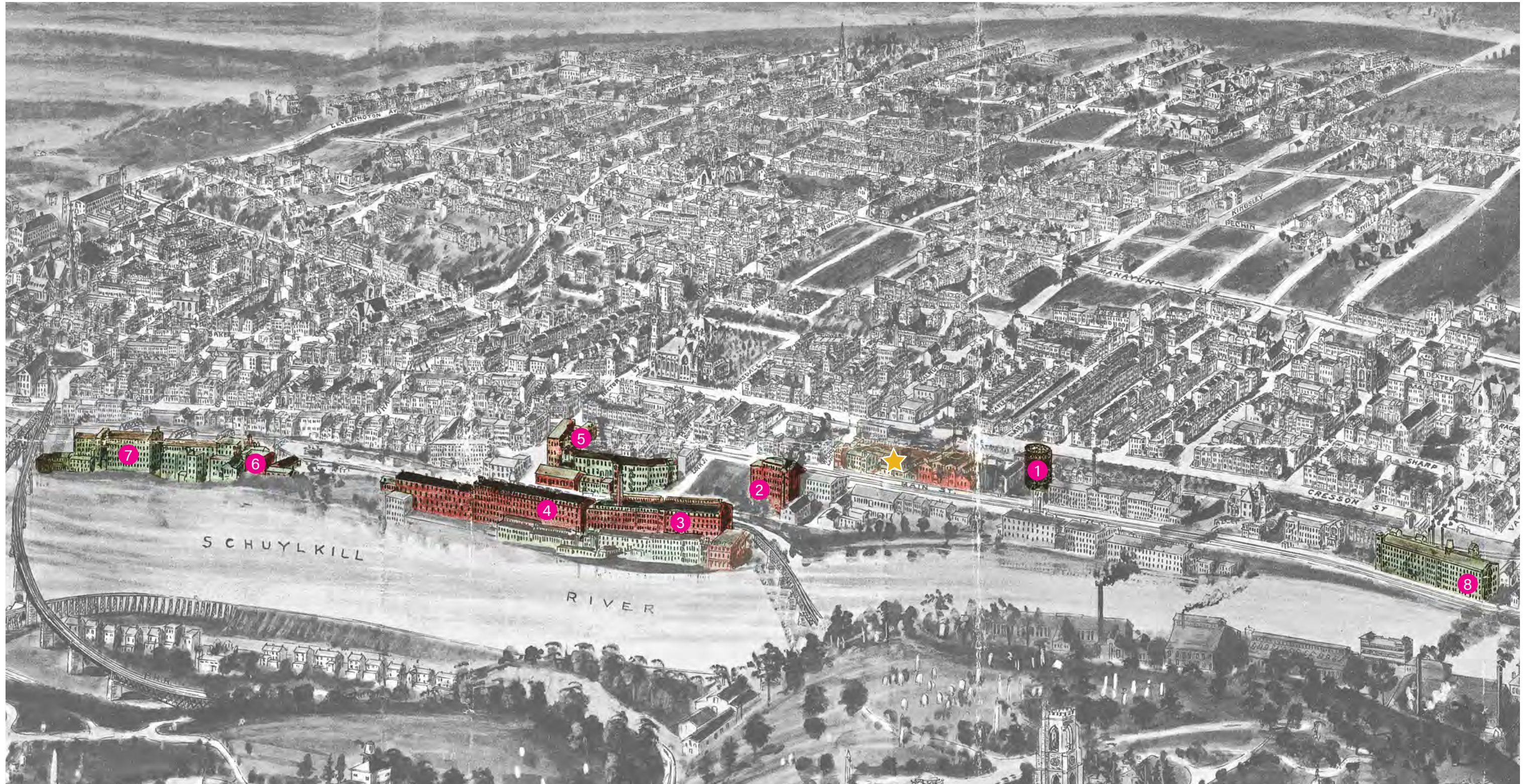
BridgeFive Condominium
3750 Main Street, Philadelphia
7 Stories - 60 Units





Aerial View looking Southeast

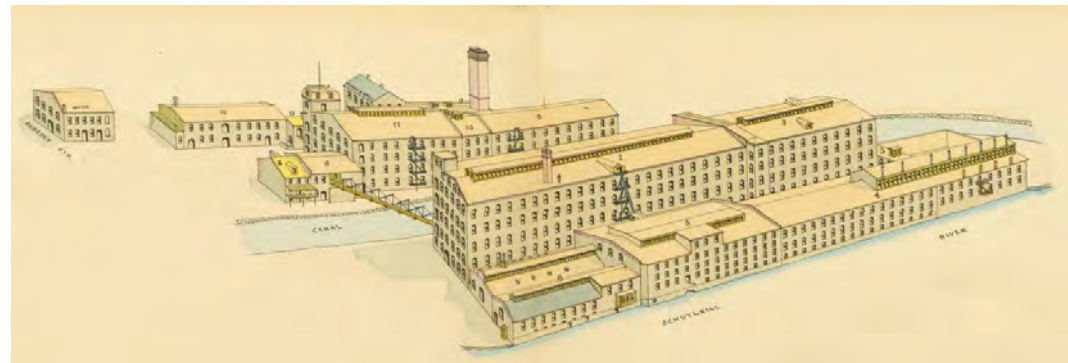
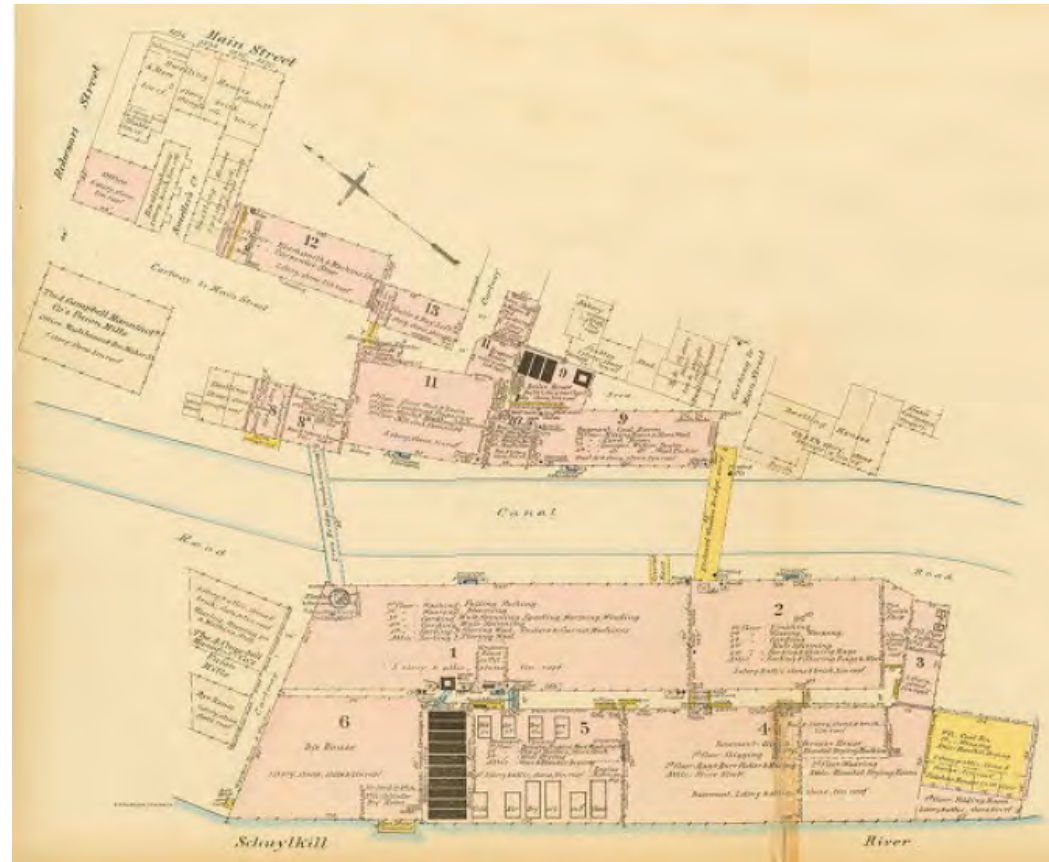
- Philadelphia Gas Works 1
- Dexter Mill 2
- Economy Mills 3
- Schuykill Mills 4
- Blantyre Mills 5
- Inquirer Mills 6
- Joseph Ripka's Mills 7
- Progress Mills 8
- ★ Site



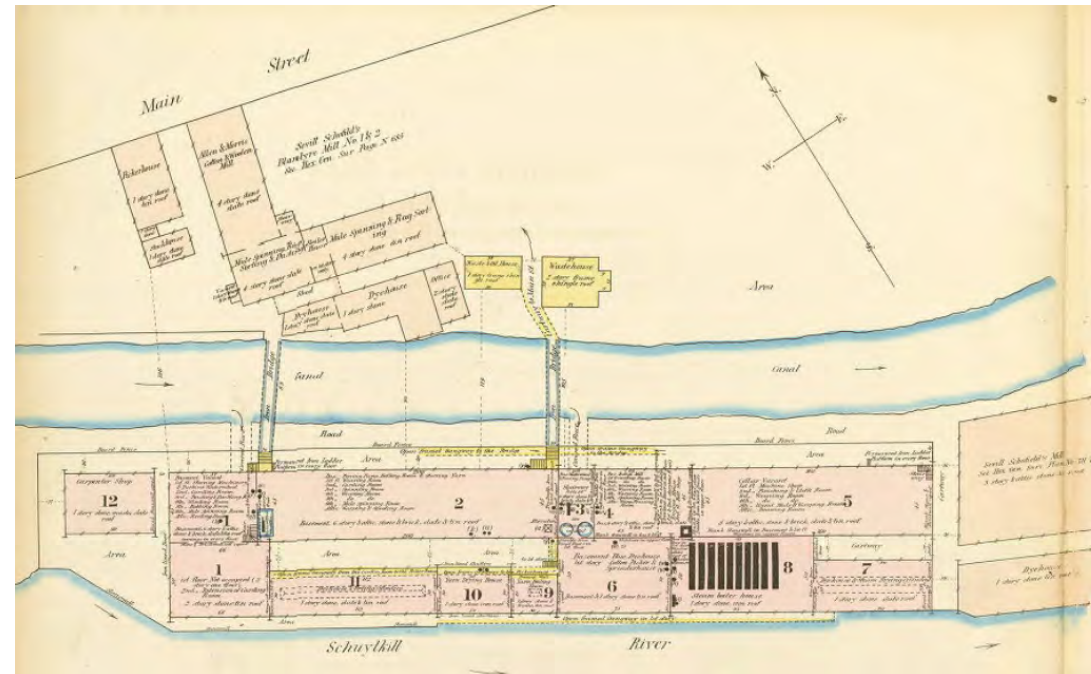




1883



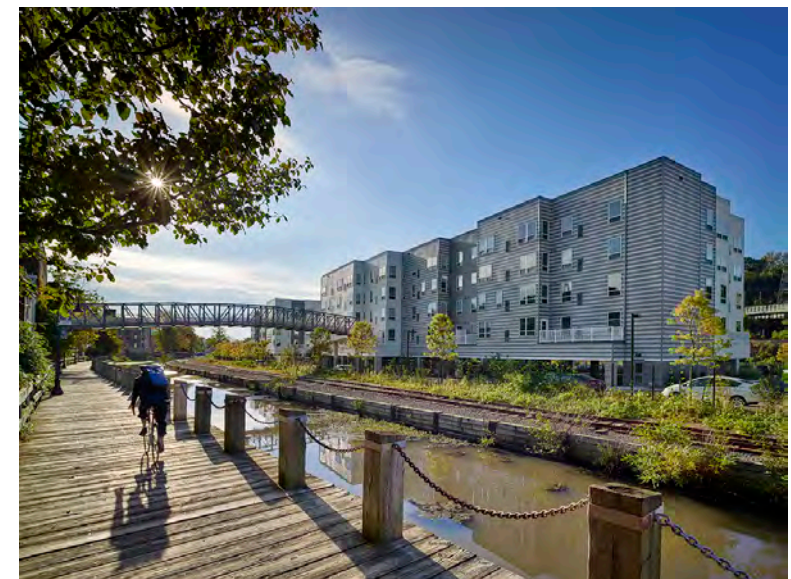
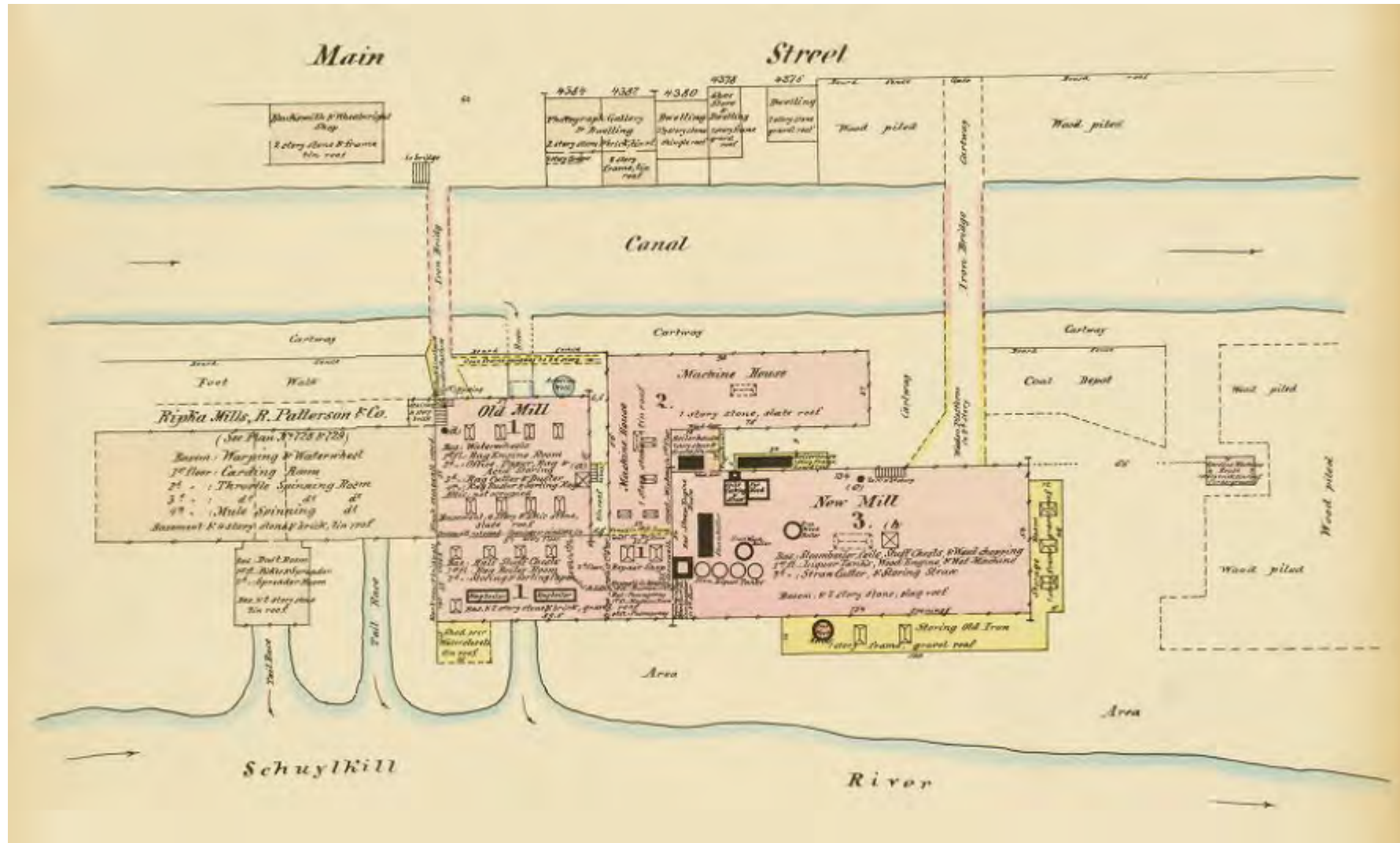
1873



2024

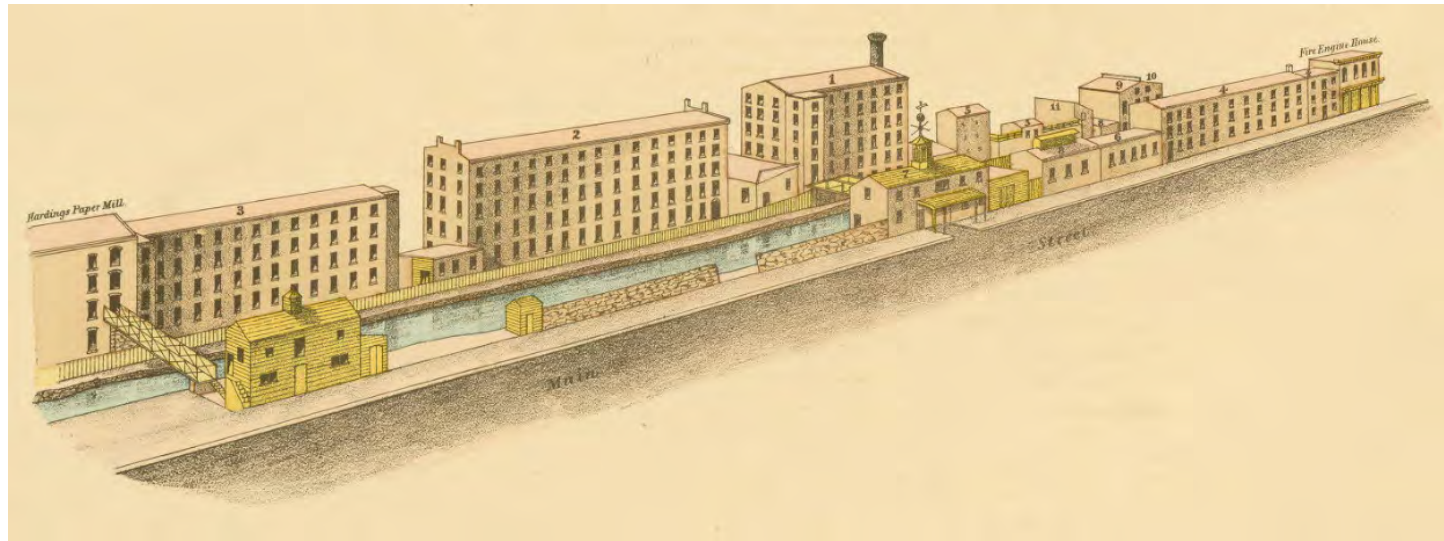
ECONOMY MILLS & SCHUYLKILL MILLS (VENICE ISLAND)

1875

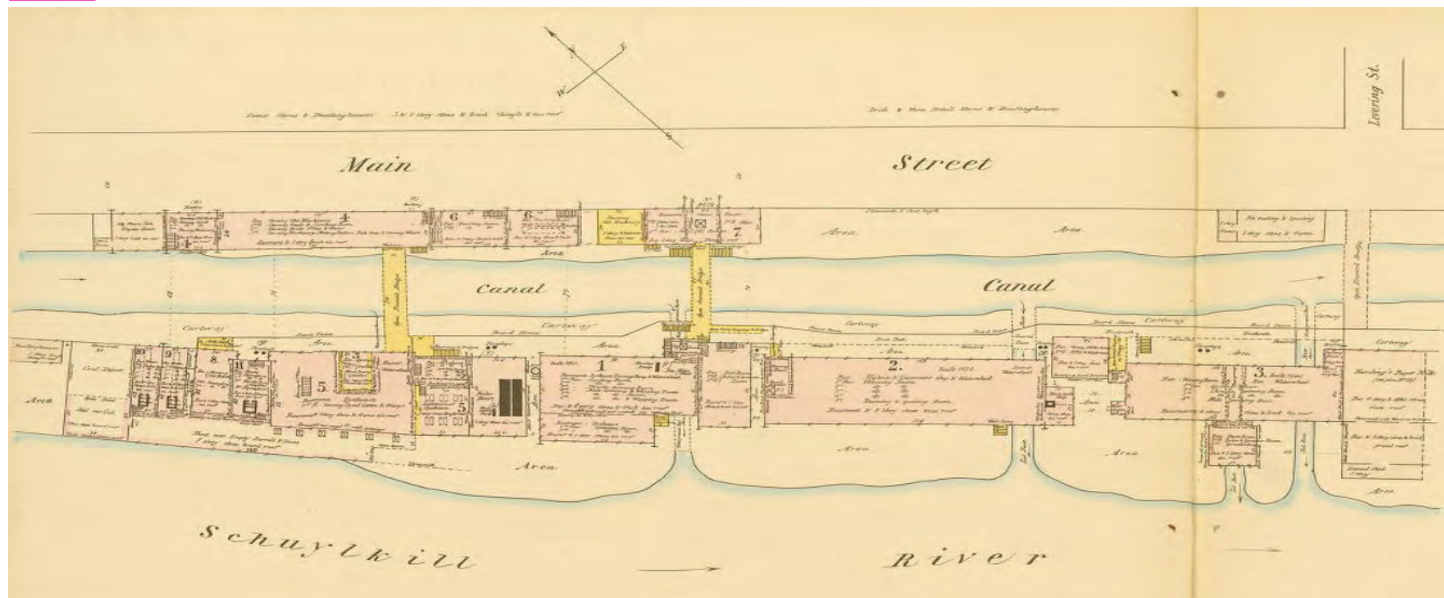


2024

INQUIRER PAPER MILLS (COTTON ST)



1873



2024

JOSEPH RIPKA'S MILLS

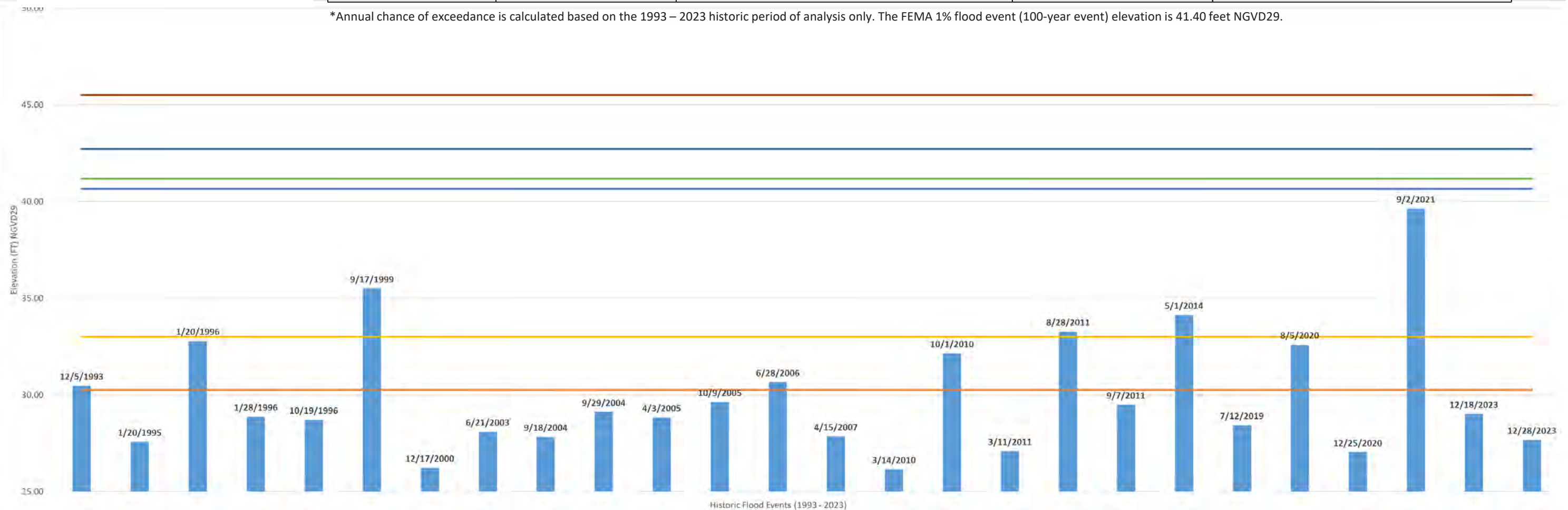
evolution of manayunk

Historic Flood Probabilities

- Level 2 Finished Floor - EL. 45.50
- Emergency Egress Door - EL. 42.72
- Loading Ramp - EL. 41.17
- Shurs Lane Door - EL. 40.65
- West Lobby Door - EL. 33.00
- Parking Garage Entrance - EL. 30.25
- Main Lobby Door - EL. 30.25

Location	Proposed Elevation (FT) NGVD29	Historic Flood Events (1993 - 2023)		
		Number of Flood Events Exceeding EL.	Max Flood Depth Above EL. (ft) 9/2/2021	Annual Chance of Exceedance*
Parking Garage Entrance	30.25	9	9.38	30%
Main Lobby Inner Door	30.25	9	9.38	30%
West Lobby Door	33.00	4	6.63	13%
Shurs Lane Door	40.65	0	0.00	<1%
Loading Ramp	41.17	0	0.00	<1%
Emergency Egress Door	42.72	0	0.00	<1%
Level 2 Finished Floor	45.50	0	0.00	<1%

*Annual chance of exceedance is calculated based on the 1993 – 2023 historic period of analysis only. The FEMA 1% flood event (100-year event) elevation is 41.40 feet NGVD29.



Building Elevations

<i>Proposed Finished Floor Elevation</i>		<i>First Floor</i> 30.00	<i>Second Floor</i> 45.50
		Height Above/Below (FT)	
FEMA BFE (Northwestern corner of building)	41.40	-11.40	4.10
Philadelphia DFE (BFE + 18")	42.90	-12.90	2.60
2022 NYC Building Code, Flood-Resistant Construction DFE (BFE + 2')	43.40	-13.40	2.10
2023 NJ Inland Flooding DFE (BFE + 2' + 1' Freeboard)	44.40	-14.40	1.10



URBAN CONVERSIONS



Yarn Factory Lofts - Manayunk



Water Works - Manayunk



The Glassworks - Olde Kensington



The Paper Factory - Olde Kensington



Sanctuary Lofts - Graduate Hospital



709 N 2nd Street - Northern Liberties

CBP ARCHITECTS



Lippincott - Society Hill



York Square - Old City



Reach Lofts - Fishtown



Berger Building - Old City



2110 Walnut - Rittenhouse Square



Western Union - Washington Square West



Neumann - Fishtown



