57 JFK STREET PROJECT

SPECIAL PERMIT APPLICATION: VOLUME 3

57 JFK STREET, CAMBRIDGE, MA

BUSINESS B ZONING DISTRICT AND
THE HARVARD SQUARE OVERLAY DISTRICT

MARCH 29, 2022

CLIENT:
CRIMSON GALERIA LIMITED PARTNERSHIP
166 HARVARD STREET, BROOKLINE, MA 02446

PREPARED BY:
NELSON WORLDWIDE
198 TREMONT STREET, SUITE 439, BOSTON, MA 02116

STRUCTURAL CONSULTANT:
SILMAN
111 DEVONSHIRE STREET, BOSTON, MA 02109

MEP CONSULTANT
ZADE ENGINEERING LLC
1 BILLINGS RD, SUITE 306, QUINCY, MA 02171

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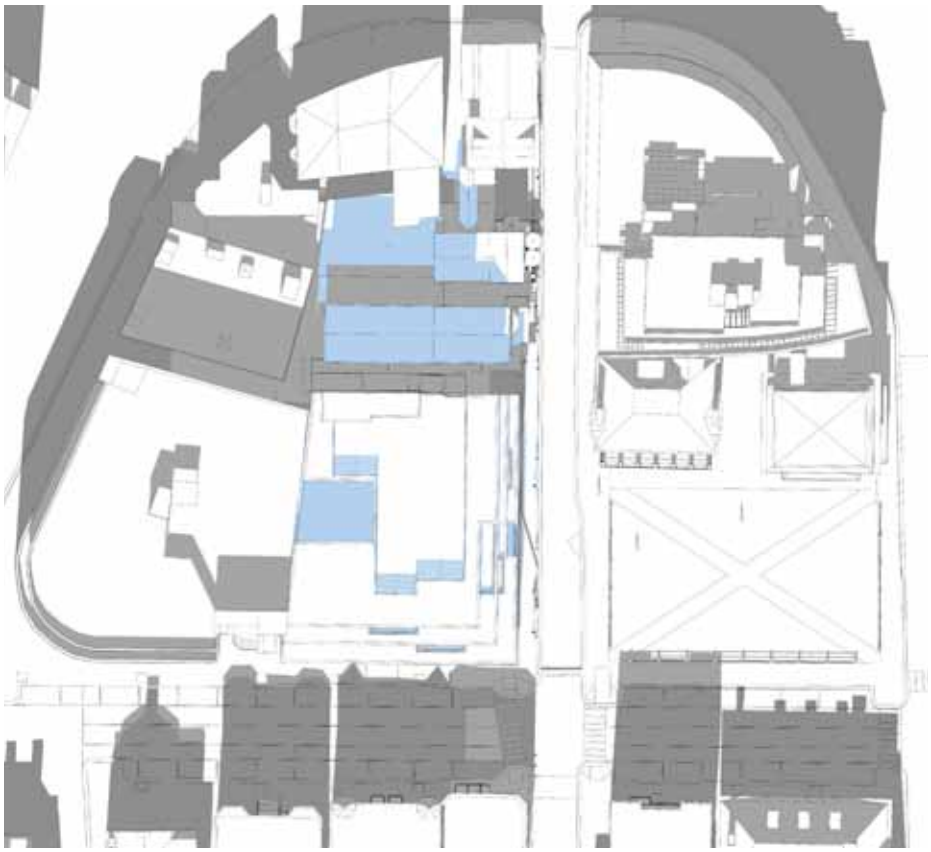
SOLAR STUDIES

SPRING EQUINOX - MARCH 20

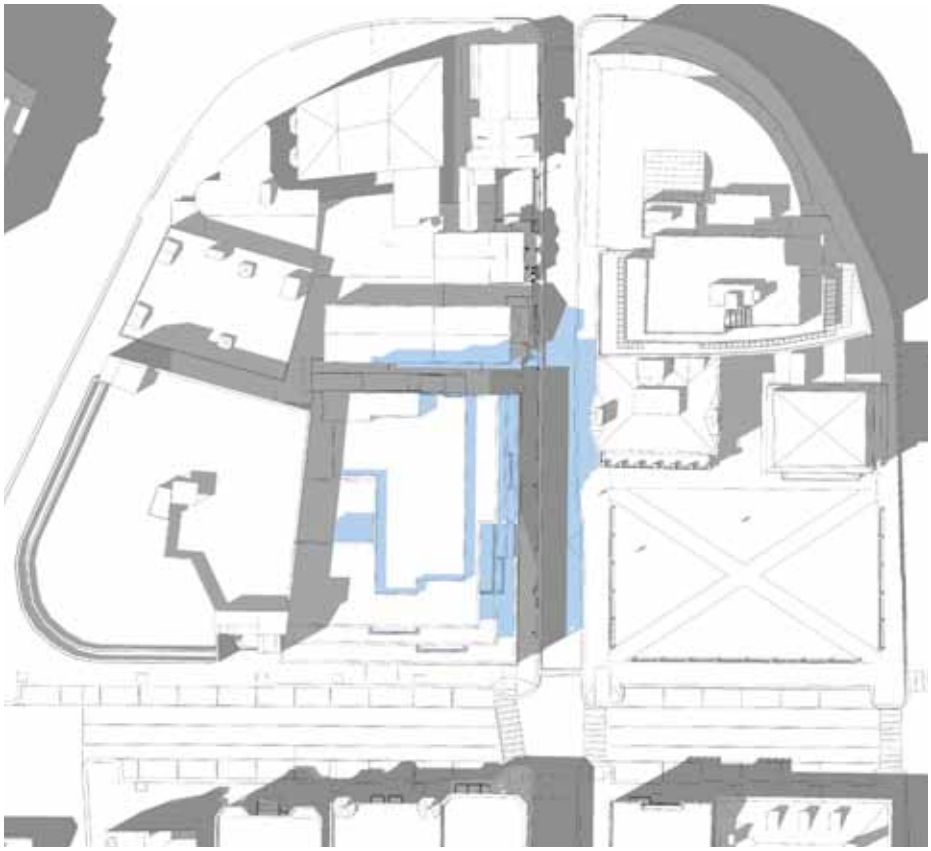
KEY LEGEND

EXISTING SHADOW

SHADOW IMPACT FROM ADDITION



9:00 AM SHADOW



12:00 PM SHADOW

FIGURE 1

SOLAR STUDIES

SPRING EQUINOX - MARCH 20

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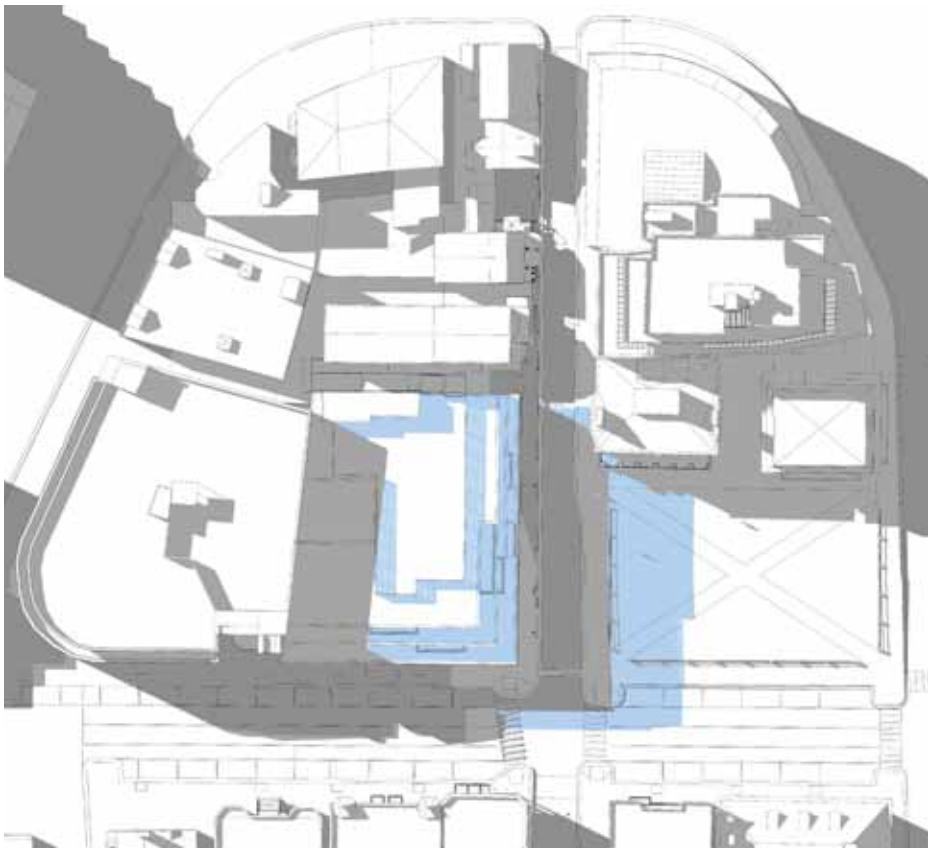
EXISTING SHADOW

SHADOW IMPACT FROM ADDITION



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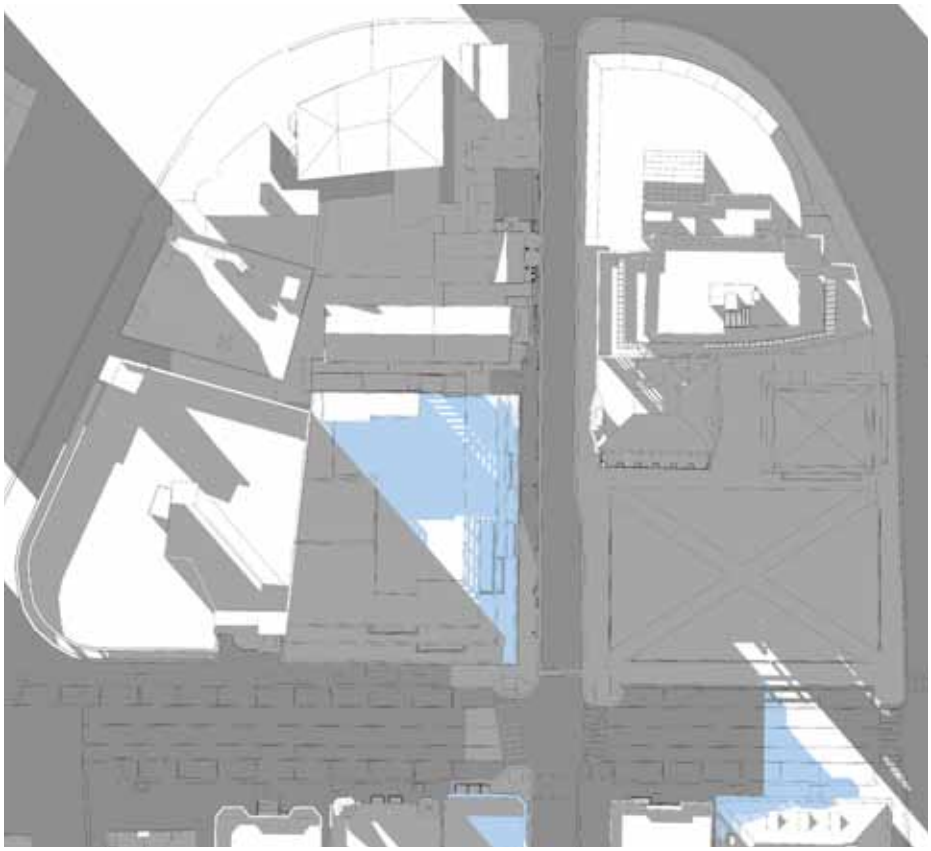


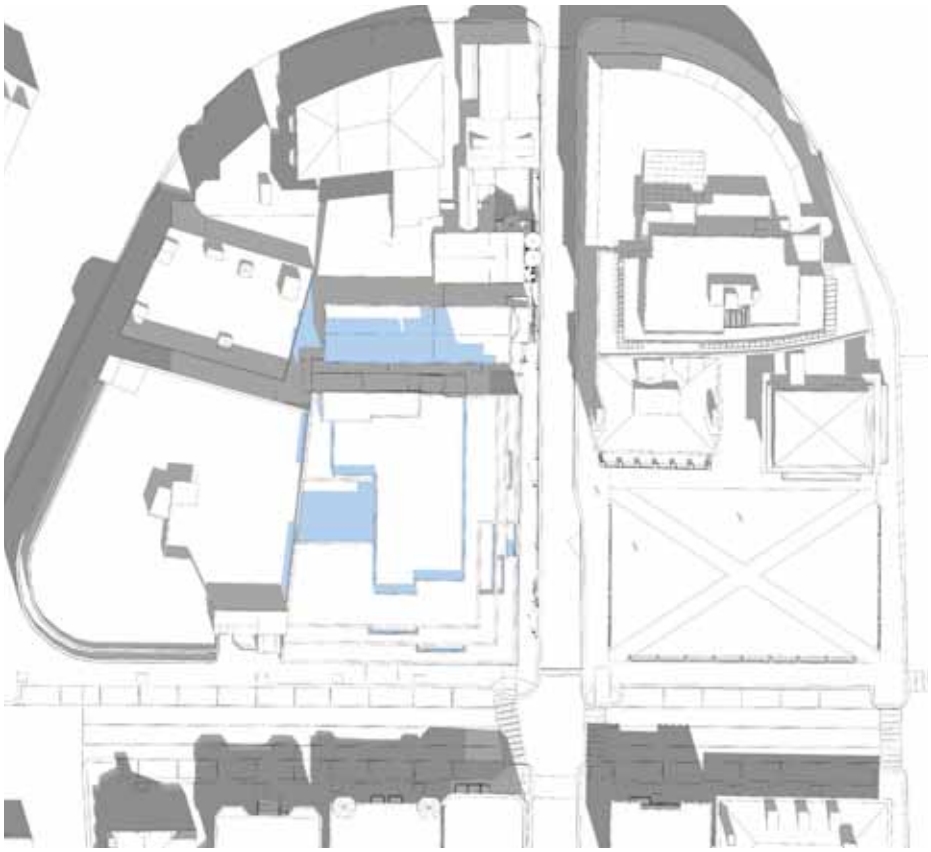
5:00 PM SHADOW

FIGURE 1

SOLAR STUDIES

SUMMER SOLSTICE - JUNE 20

KEY LEGEND
EXISTING SHADOW
SHADOW IMPACT FROM ADDITION



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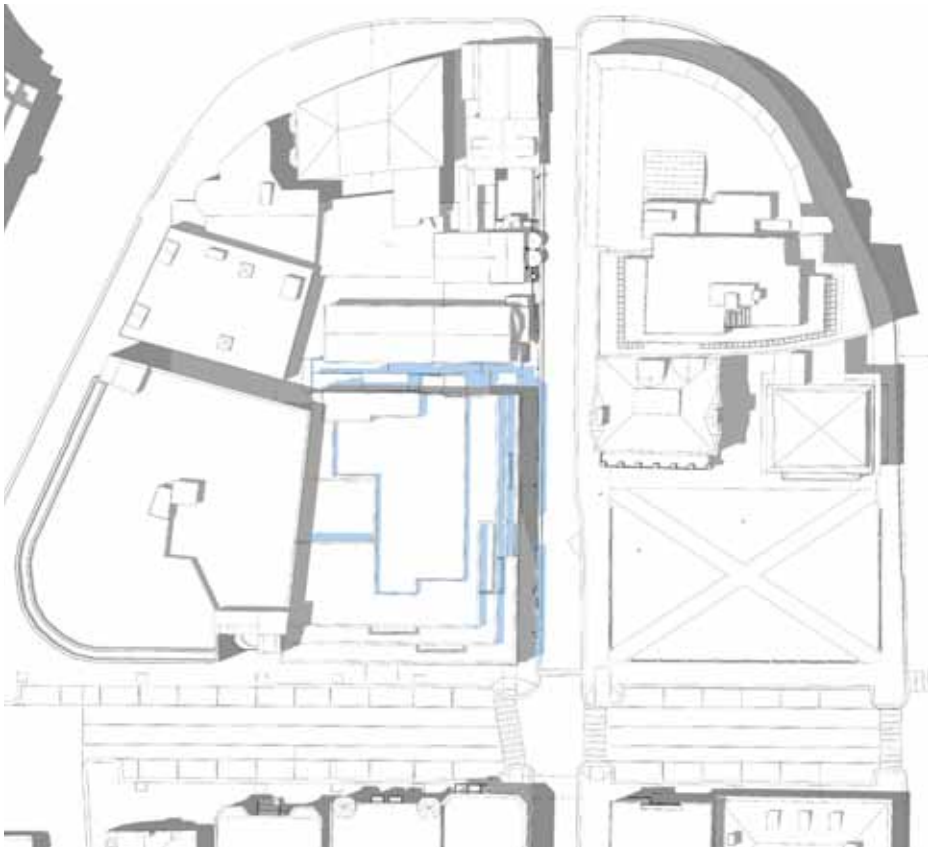

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FIGURE 2

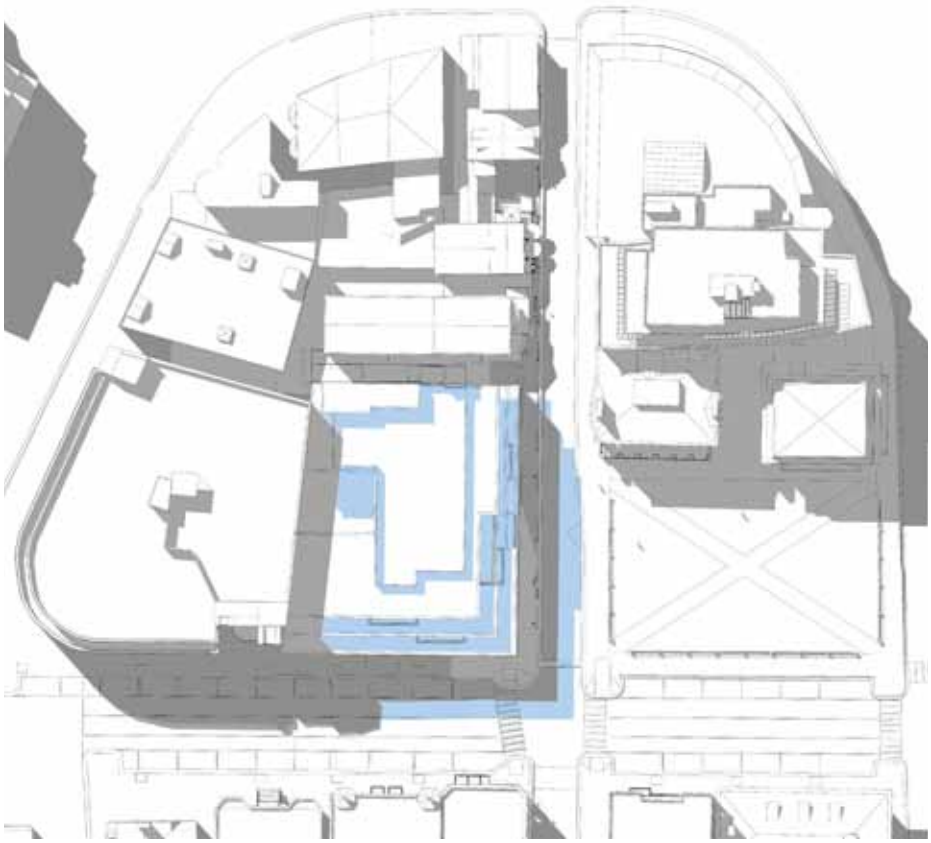
SOLAR STUDIES

SUMMER SOLSTICE - JUNE 20

KEY LEGEND

EXISTING SHADOW

SHADOW IMPACT FROM ADDITION



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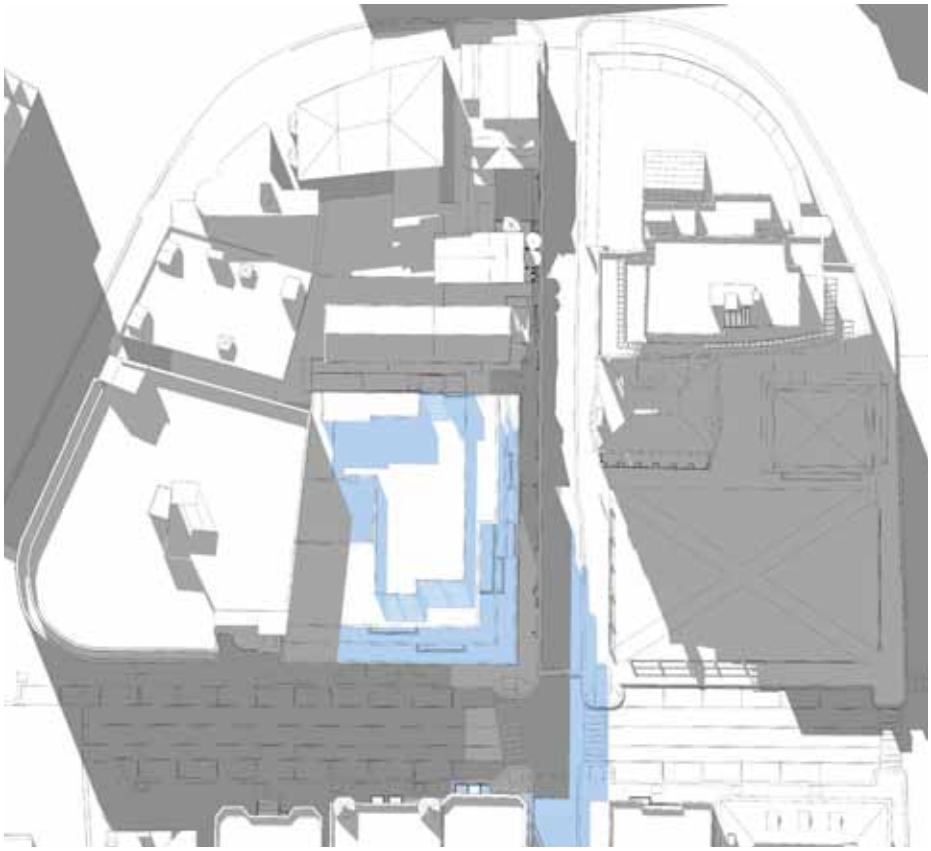

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FIGURE 2

SOLAR STUDIES

AUTUMN EQUINOX - SEPTMEBER 22

KEY LEGEND
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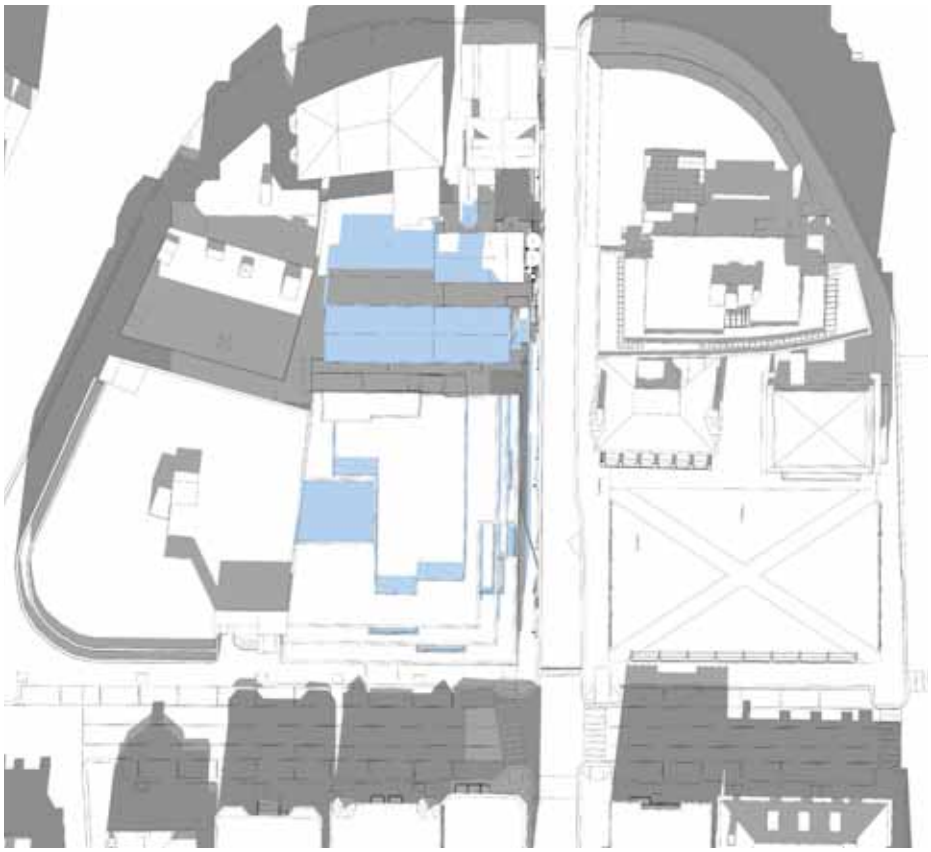
SHADOW IMPACT FROM ADDITION



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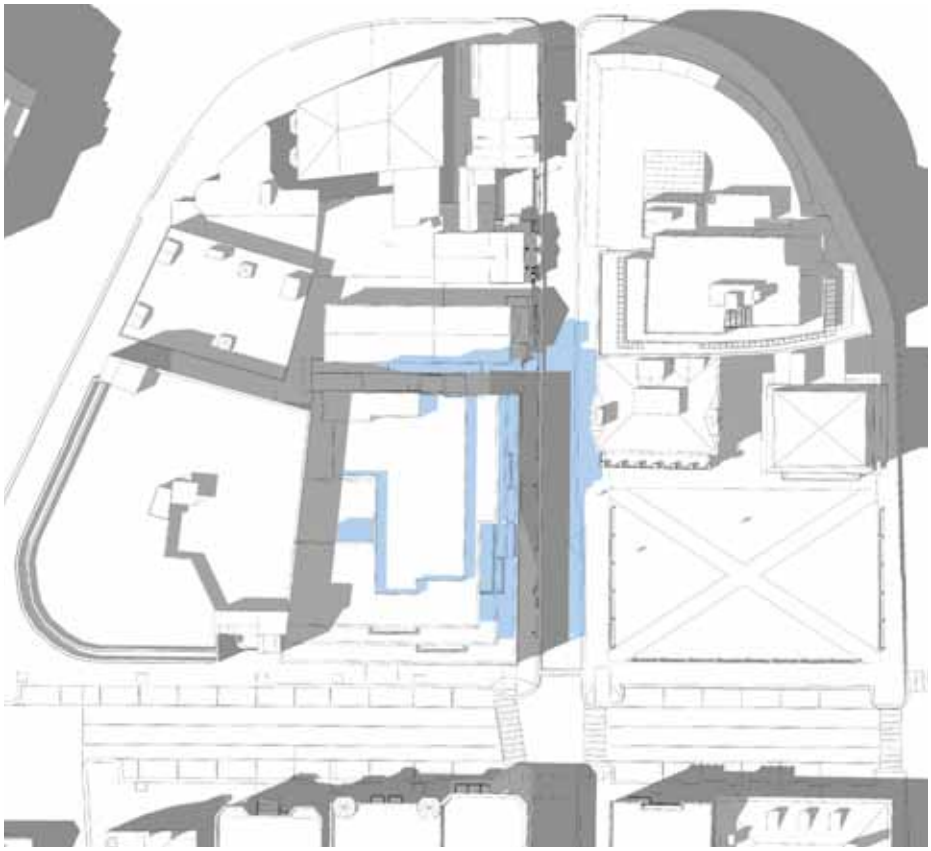

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FIGURE 3

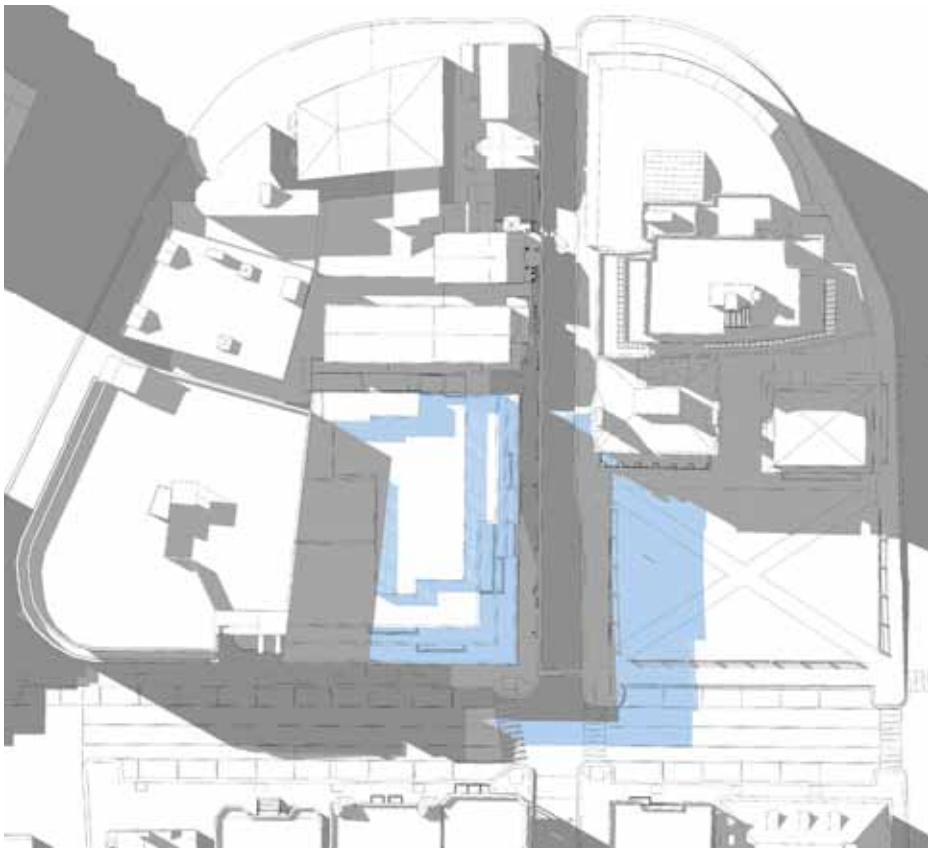
SOLAR STUDIES

AUTUMN EQUINOX - SEPTMEBER 22

KEY LEGEND

EXISTING SHADOW

SHADOW IMPACT FROM ADDITION



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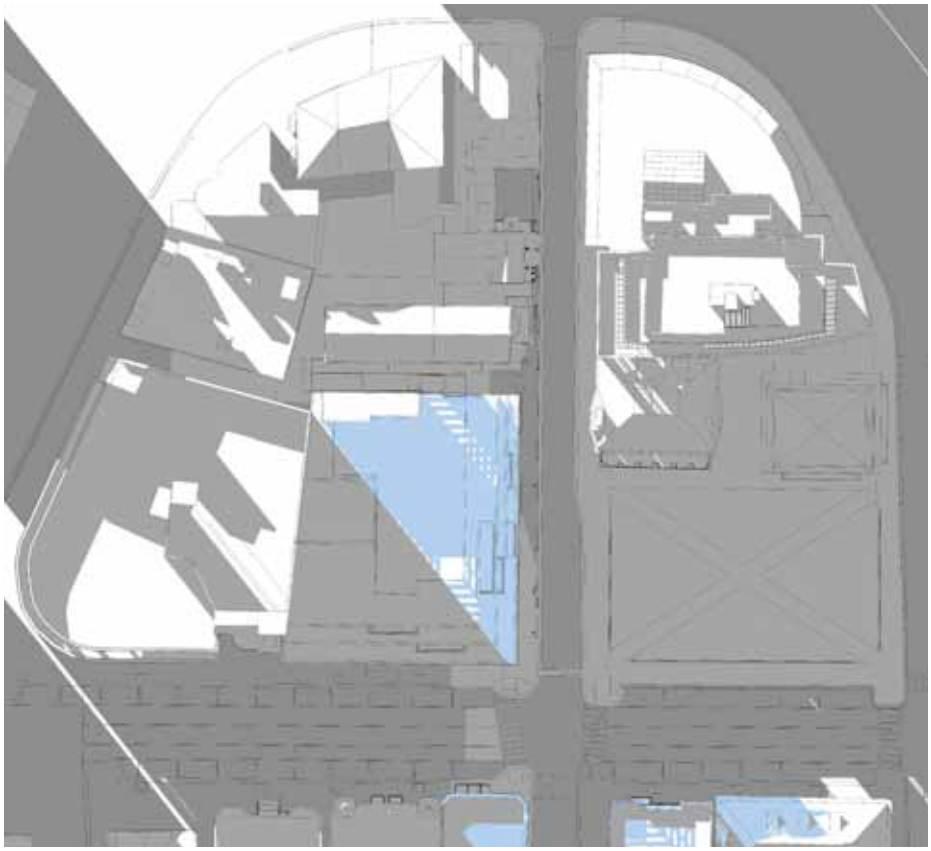

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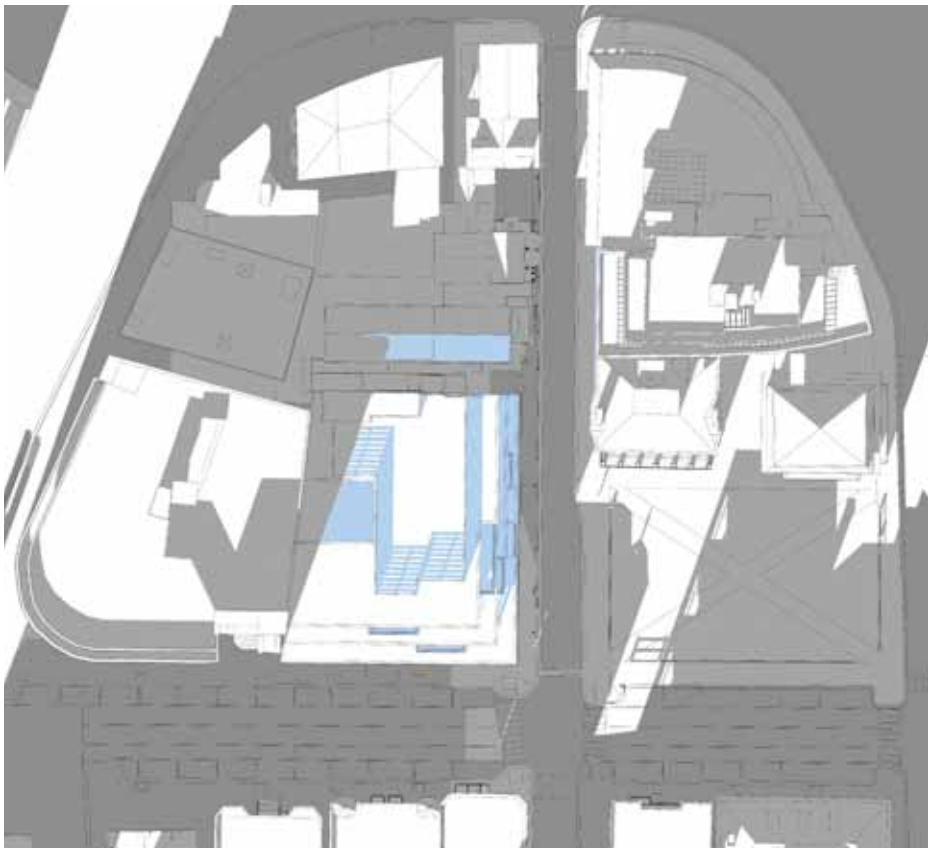
FIGURE 3

SOLAR STUDIES

WINTER SOLSTICE - DECEMBER 21

KEY LEGEND
EXISTING SHADOW
SHADOW IMPACT FROM ADDITION



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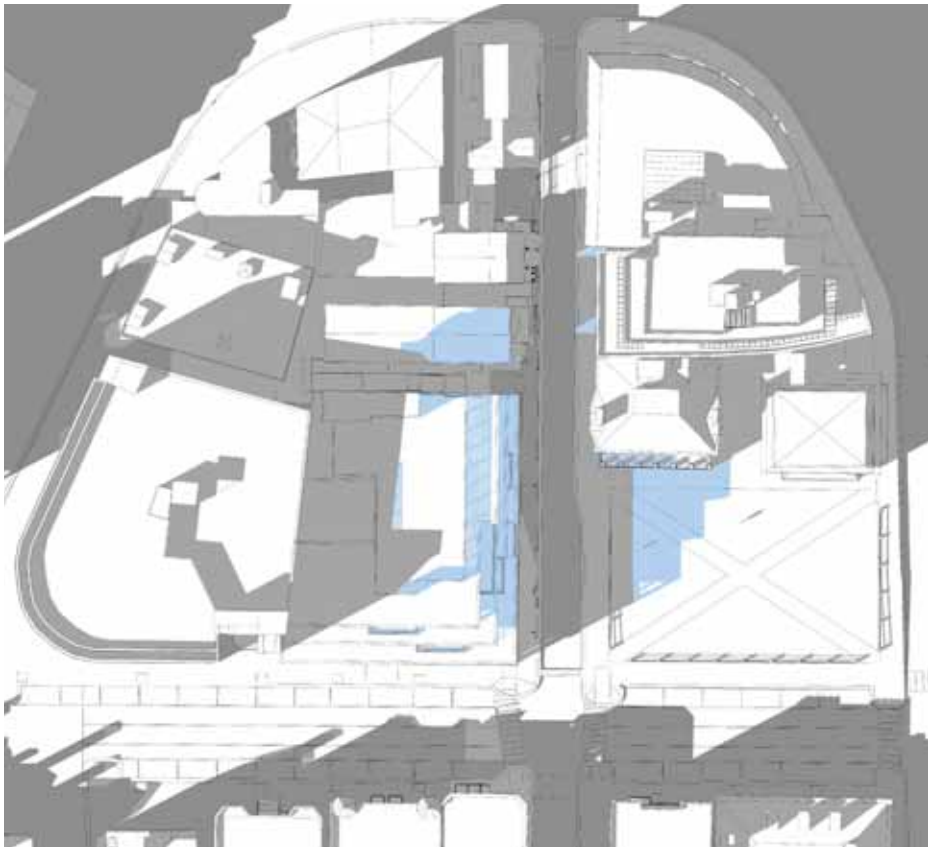

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FIGURE 4

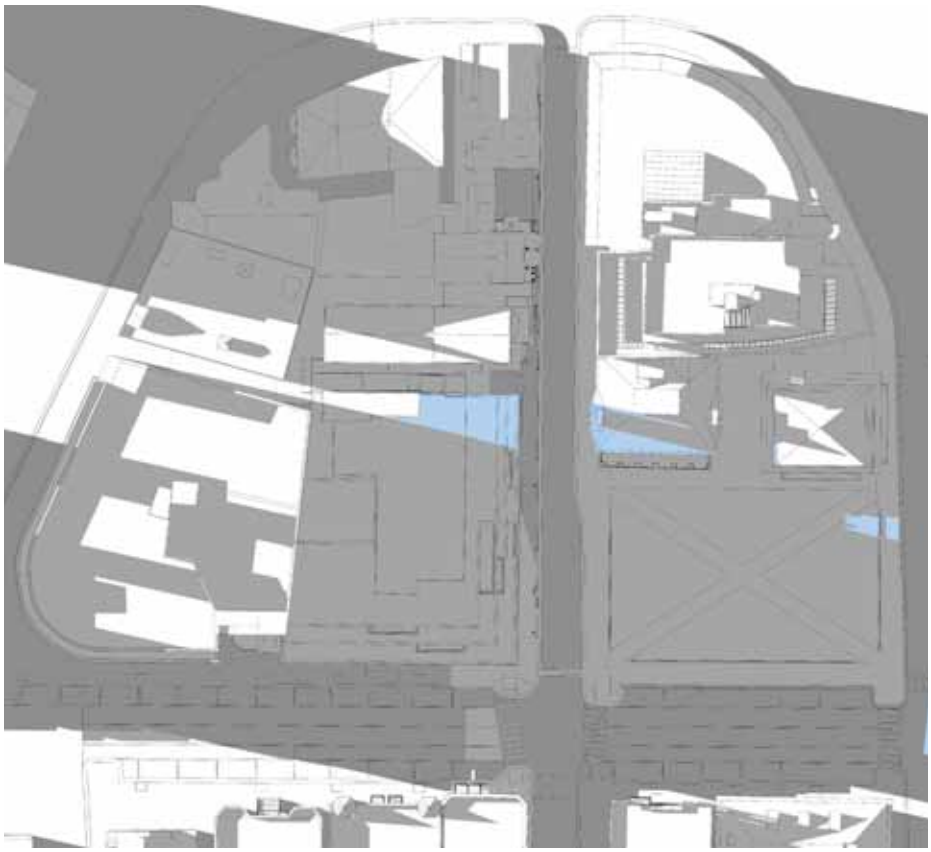
SOLAR STUDIES

WINTER SOLSTICE - DECEMBER 21

KEY LEGEND

EXISTING SHADOW

SHADOW IMPACT FROM ADDITION



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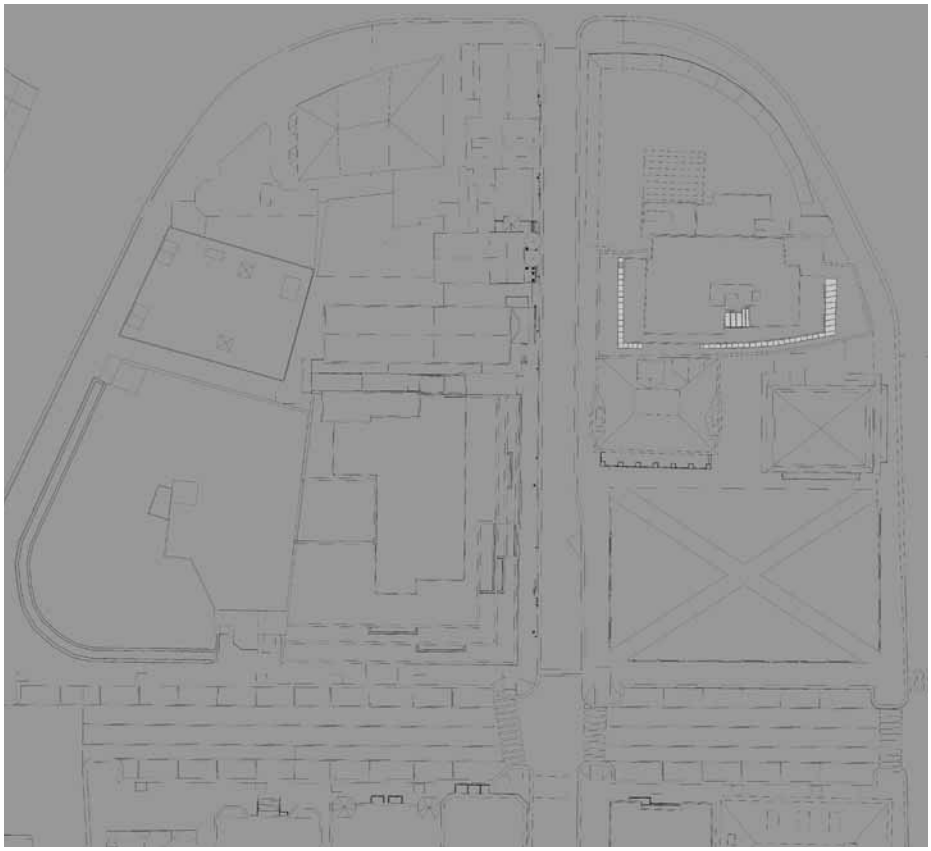

5:00 PM SHADOW

FIGURE 4

November 23, 2021

Rachna Balakrishna, ESQ.
VP/General Counsel
Mason & Murphy Inc.
166 Harvard Street
Brookline, MA 02446

57 JFK St, Cambridge

Dear Rachna,

You contacted John Murphy about a letter stating that there are no trees on the 57 JFK St Cambridge, MA site.

This letter is to confirm that the only trees in proximity to the site are the three young honeylocusts in tree pits in the sidewalk.

These trees will not be significantly impacted by the construction provided that no excavation occurs within the critical root zone, no materials are stored near the trees, and that no products are drained in the tree pits.

If you have any questions about this letter, please contact me.

Image of two of the three young honeylocusts in front of 57 JFK St

Timothy Armstrong
Board Certified Master Arborist
NE-71132B
ISA Tree Risk Assessment Qualified
tim.armstrong@bartlett.com

Green Building Project Checklist

Green Building Project Location: 57 John F. Kennedy Blvd, Cambridge MA

Applicant

Name: Crimson Galeria, LP

Address: 166 Harvard Street, Brookline, MA 02446

Contact Information

Email Address: Rachna@masonmurphyinc.com

Telephone #: 617-838-6535

Project Information (select all that apply):

- ☐ New Construction – GFA: _____
- x Addition – GFA of Addition: 29,477 square feet
- ☐ Rehabilitation of Existing Building – GFA of Rehabilitated Area: _____
  - ☐ Existing Use(s) of Rehabilitated Area: _____
  - ☐ Proposed Use(s) of Rehabilitated Area: _____
- x Requires Planning Board Special Permit approval
- x Subject to Section 19.50 Building and Site Plan Requirements
- ☐ Site was previously subject to Green Building Requirements

Green Building Rating Program/System:

- x Leadership in Energy and Environmental Design (LEED) – Version: _____
  - ☐ Building Design + Construction (BD+C) – Subcategory: _____
  - x | Residential BD+C – Subcategory: Multifamily Midrise
  - ☐ Interior Design + Construction (ID+C) – Subcategory: _____
  - ☐ Other: _____
- ☐ Passive House – Version: _____
  - ☐ PHIUS+
  - ☐ Passivhaus Institut (PHI)
  - ☐ Other: _____
- ☐ Enterprise Green Communities – Version: _____

Project Phase

x **SPECIAL PERMIT**

Before applying for a building permit, submit this documentation to CDD for review and approval.

Required Submissions

All rating programs:

- x Rating system checklist
- x Rating system narrative
- x Net zero narrative (see example template for guidance)
- x Affidavit signed by Green Building Professional with attached credentials – use City form provided (Special Permit)

Affidavit Form for Green Building Professional
Special Permit

Green Building
Project Location: 57 JFK Street, Cambridge MA

Green Building Professional

Name: Stefan David Vogelmann

☑ Architect

☐ Engineer

License Number: MA #AR 50118

Company: Nelson Architecture & Interiors

Address: 198 Tremont Street, Suite 439, Boston, MA 02116

Contact Information

Email Address: SVogelmann@nelsonww.com

Telephone Number: 617 751 5888

I, Stefan Vogelmann LEED AP , as the Green Building Professional for this Green Building Project, have reviewed all relevant documents for this project and confirm to the best of my knowledge that those documents indicate that the project is being designed to achieve the requirements of Section 22.24 under Article 22.20 of the Cambridge Zoning Ordinance.

(Signature) 12/15/2021 *(Date)*

Attach either:

☑ Credential from the applicable Green Building Rating Program indicating advanced knowledge and experience in environmentally sustainable development in general as well as the applicable Green Building Rating System for this Green Building Project.

☐ If the Green Building Rating Program does not offer such a credential, evidence of experience as a project architect or engineer, or as a consultant providing third-party review, on at least three (3) projects that have been certified using the applicable Green Building Rating Program.

usgbc.org

USGBC.org will be down for planned maintenance, Dec. 24-28. Membership, exams, credential renewals and your account will be unavailable during this time.

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People

Stefan Vogelmann

Regional Design Leader

Hingham, Massachusetts

LEED AP

Bio Courses Articles

No bio found.

our community of green building professionals.

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LEED AP BD+C

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MaGrann ASSOCIATES

Making Buildings Better

57 John F. Kennedy Street

Cambridge, MA

Draft Application Submission

Article 22.20 – Green Building

Submitted 12/20/2021

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Contents

Project Overview

The site is located at 57 John F. Kennedy Street on a parcel consisting of approximately 14,506 total square feet of land (0.33 acres) ("Site"). The Site is currently a two-story retail building known as "Crimson Galeria" and is bounded by Winthrop Street to the North and Harvard Square Parking Garage to the South.

The proposed development consists of one (1) building addition totaling approximately 29,477 gross square feet. It will contain forty (40) residential units build atop the existing two-story retail structure. The retail spaces will not be renovated and is not part of the proposed construction project other than to add structural support for the new addition above. The proposed residential units will contain a mix of studio and one-bedroom units.

This report provides an overview of the sustainable design elements proposed as part of the Project at this time of schematic design to demonstrate that the Project will meet the requirements of Article 22.20 of the Cambridge Zoning Ordinance relative to the City's Sustainable Design and Development Green Building Requirements. The building will pursue a minimum of Silver level qualification under the United States Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) Building Design and Construction (BD+C) Multifamily Midrise rating system (LEED MR v4).

Project Data

Units: 40
By type:
Studio: 28
1 Bedroom: 12
Parking:
Vehicles: Zero
Bicycles: 41 spaces in lower level

LEED Overview

57 JFK Street addition intends to incorporate sustainable design and construction principles and practices into the Project, in compliance with the requirements of Article 22.20 of the Cambridge Zoning Ordinance relative to the City's Sustainable Design and Development Green Building Requirements. The development intends to take the appropriate measures to achieve a LEED Silver building. The design phase LEED Scorecard is tracking 74.5 'yes' points and 11.5 'maybe' credits for a preliminary Gold rating. The current 'maybe' points represent credits that will pursued during construction but will not absolutely required. This approach continues to signal to the market that some green practices, while not absolute mandatory features, are still preferred. This project will capture those additional increases in green performance based on availability and schedule. This total represents a noteworthy increase in LEED points compared to 50 points needed for a Silver rating, as required by Article 22.24.1 (a) for projects below 50,000 gross square feet. 57 JFK Street project will adhere to the LEED Multifamily Midrise rating system. The latest scorecard is included at the end of this document. A summary of LEED compliance pathway for the proposed 57 JFK Street development follows here.

Integrative Process

The Integrative Process (IP) category ensures the integration of sustainable principles throughout the design and construction phase, while also addressing growing concerns of building durability and longevity. The credit's intent is to maximize opportunities for cost effective adoption of green design and construction strategies by uncovering opportunities that would have remained hidden with a lower level of collaboration. The Project already includes team members from all related occupations including architectural, mechanical engineering, building science analysis, civil engineering, and energy efficiency expertise. At least two LEED Accredited Professionals are on the team. Furthermore, the team will ensure that the selected contractor is knowledgeable and capable of implementing green features by completing an orientation meeting that may grow into the full trades training session as outlined by the LEED system.

IP c Integrated Project Team

Project team members have met at least monthly during entitlements and through Conceptual Design to present. Team members will be added during SD and DD phases with meetings moving to weekly. Project team meetings are expected to be ongoing, and the consultants will be engaged for construction administration, ensuring that the benefits of their design intent will be carried into construction.

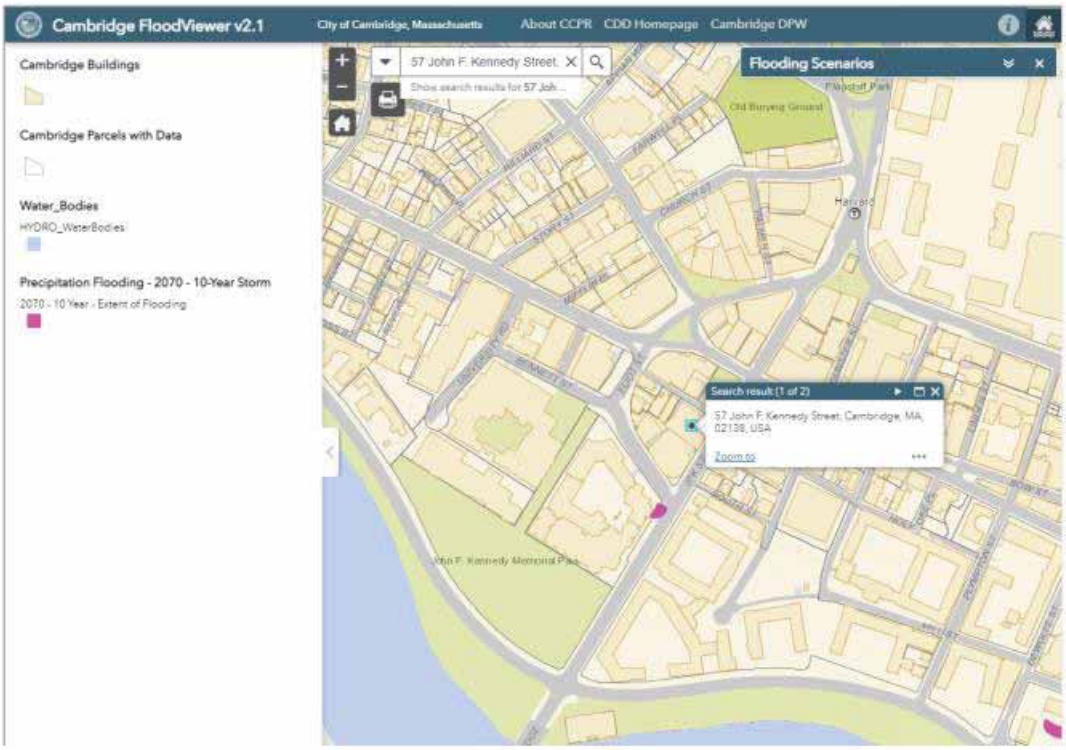
Current team members include members of the following organizations:
Crimson Galeria, LP, Nelson Architecture & Interiores, Silman (Structural Engineering) and MaGrann Associates.

Location and Transportation

The Location and Transportation (LT) category addresses reduction of urban sprawl and rewards development on and near existing infrastructure, public transportation, and previously developed land. The Project is a redevelopment of an existing, urban infill parcel, requiring no undeveloped land for its construction, providing access to existing utility lines and public transportation, as well as accessible open space for occupant recreation. The project location is outside of the 100 and 500 year floods as demonstrated by current FEMA maps. The 57 JFK Street location also provides its residents with walkable (within ½ mile) access to numerous neighborhood amenities, including restaurants, grocery stores, pharmacies, religious institutions, laundry services, and recreation facilities. For more distant trips, on-site bicycle storage with direct access from outdoors will promote resident biking by offering secure, covered storage spaces.

LT p Floodplain Avoidance

Both FEMA and Cambridge FloodViewer v2.1 with 2070 10-year storm show minimal flood hazard for the site.

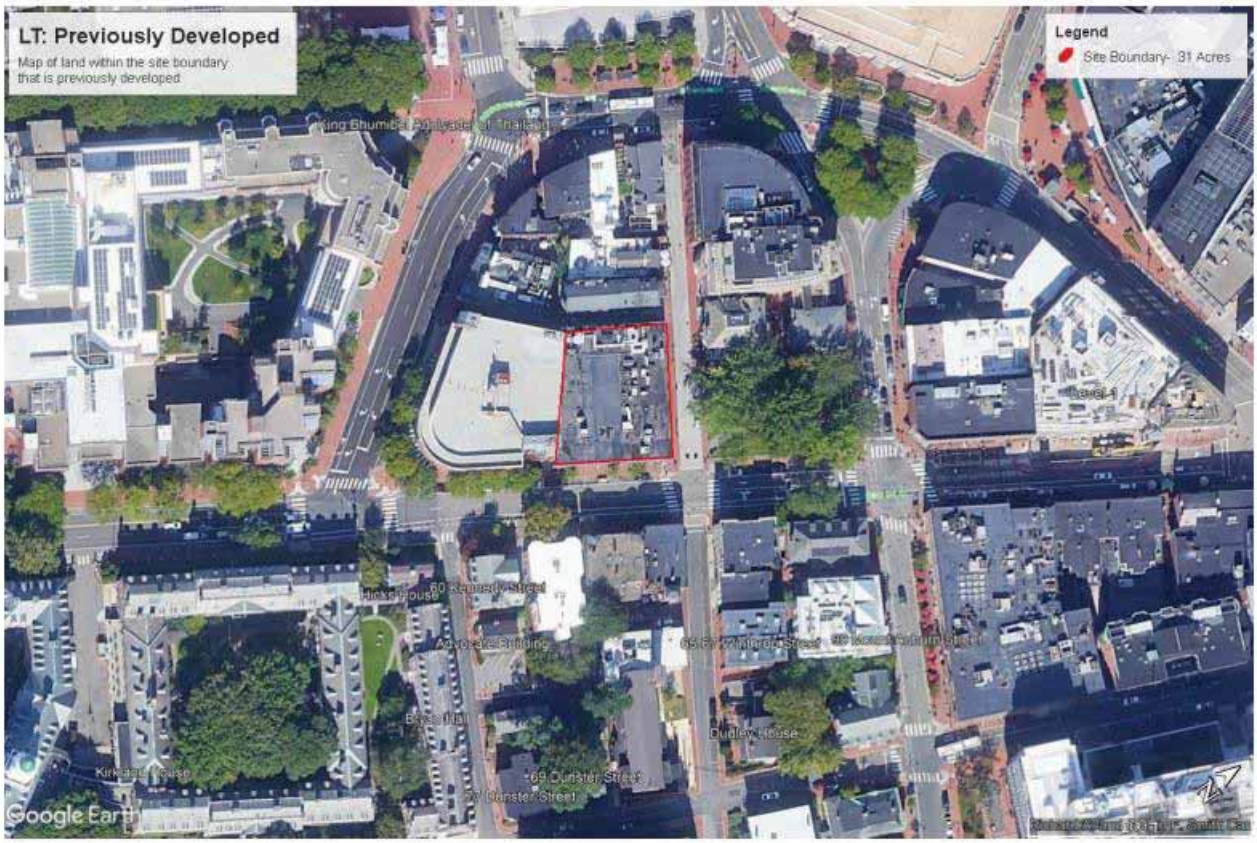


LT c Site Selection

Option 1 Sensitive Land Protection

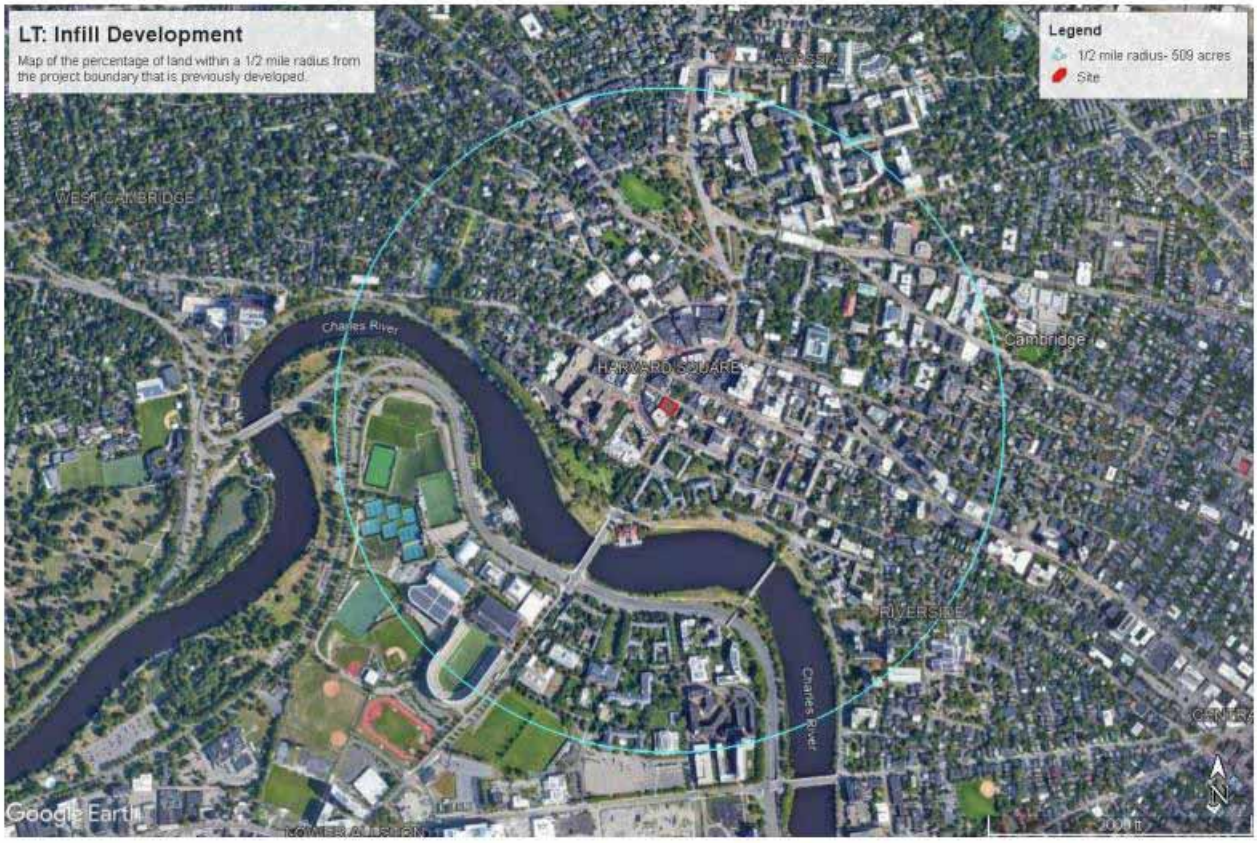
Path 1 Previously Developed

As is evident from the aerial photo below, the lot is currently an existing building qualifying as previously developed for the point under the synonymous path.



Option 2 Infill Development

Infill development awards one point to projects where 75% of the land within a half mile radius is previously developed. Water, public parks, and areas legally prohibited for development are excluded from both numerator and denominator. Removing those areas within the circle below (Charles River, John F. Kennedy Memorial Park, Riverbend Park, Cambridge Common) the remaining area is 100% previously developed.

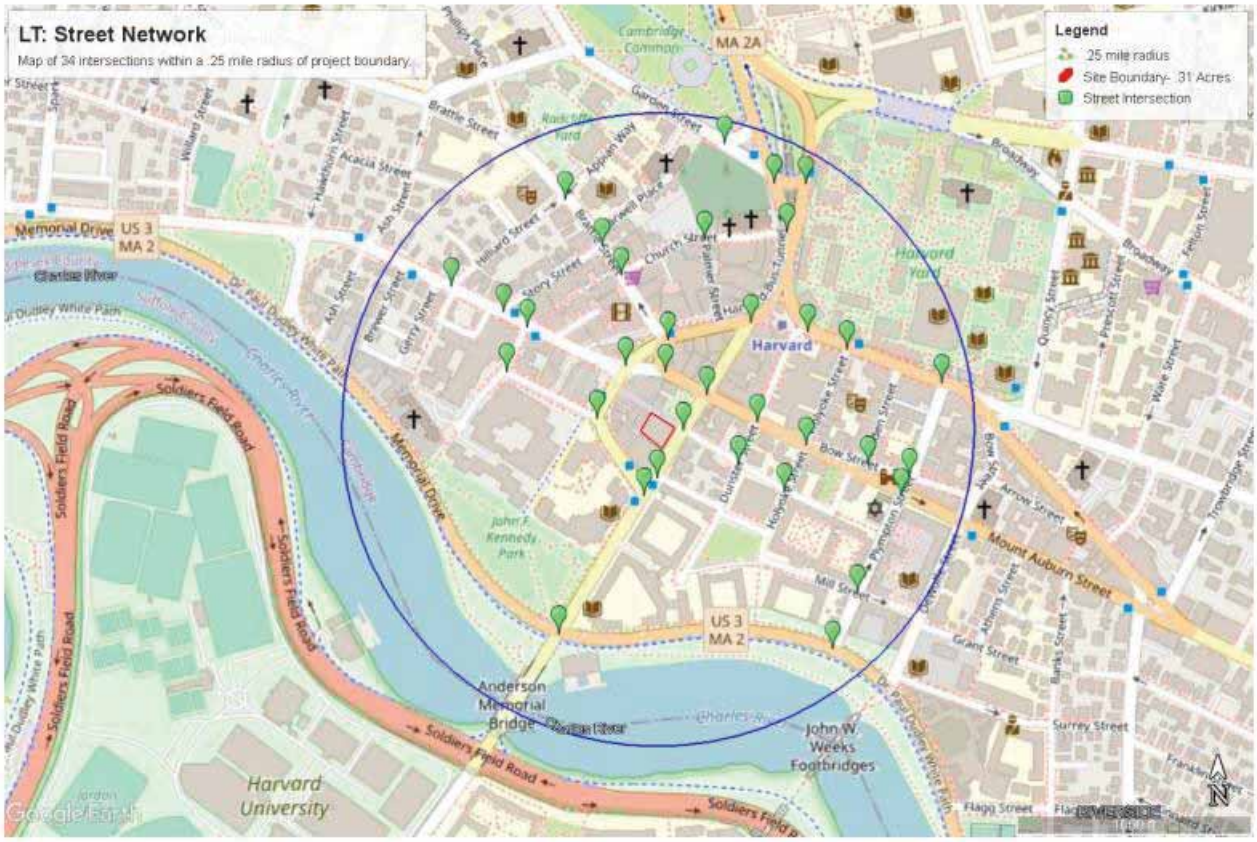


Option 3 Open Space

John F. Kennedy Memorial Park is publicly accessible and within a 0.5 mile walking distance.

Option 4 Street Network
The point for Street Network will be awarded because the land within the ¼ mile radius circle in blue below has an intersection density greater than 90 intersections per square mile.
The blue circle has a baseline area of 0.196 square miles. 90 intersections / square mile * 0.196 square miles > 17.6intersections needed for credit at this site.

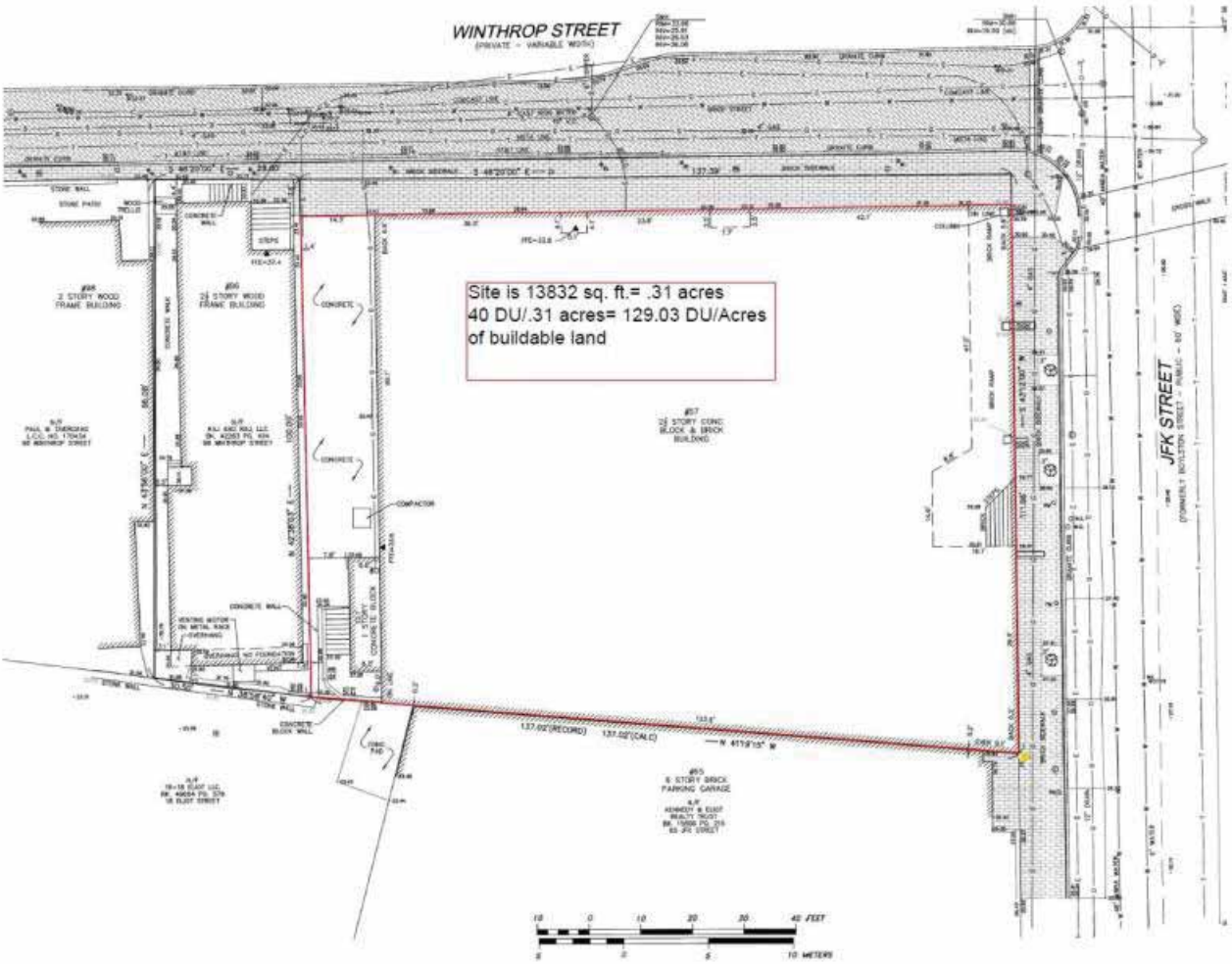
The total of 34 intersections (identified by the green pins below) yields a qualifying intersection density of 170 intersections / square mile. This is well beyond the requirement for credit and would be higher still if the area of water bodies and public parks were removed from the denominator.



LT c Compact Development

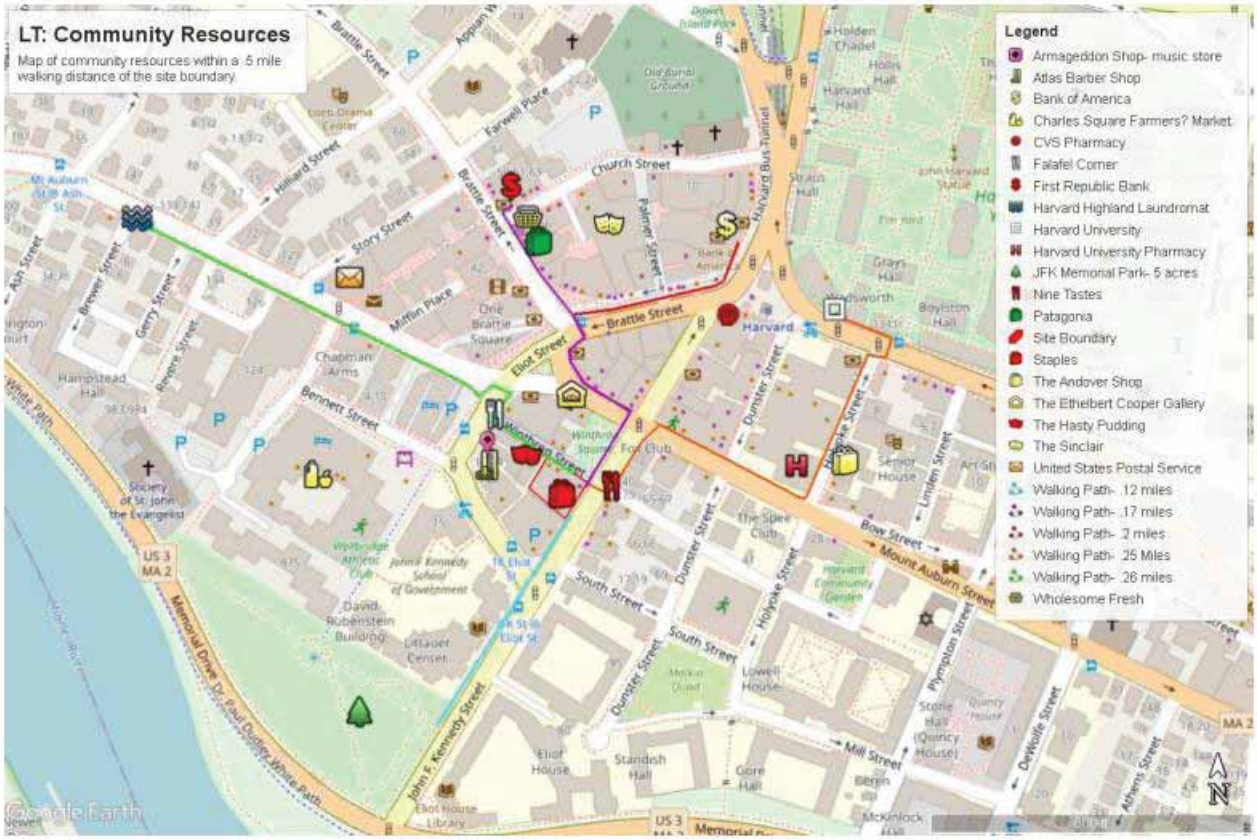
The take off from the site plan below shows an area of 78,795 square feet (1.80 acres).Dividing the proposed 219 units over the 1.8 acres, the project will have a residential density of 121.67 units per acre for 3 points.

0.31	Total project boundary area (acre)
0.31	Buildable land area (acre)
40	Number of dwelling units
129.03	DU/acre of buildable land



LT c Community Resources

At least twenty (20) Community Resources with no more than two per category have been identified within a 0.5 mile walking distance. Walking paths to the furthest community resources are called out on the map below, assuming the reader will infer that community resources passed on a walking path that is 0.5 miles or lower will also be reachable in under 0.5 miles. This qualifies for two points here in LT and one additional in IN Innovation for Exemplary Performance.



Sustainable Sites

The Sustainable Sites (SS) category addresses environmental issues related to landscape and site design, promoting a seamless co-existence between the built environment and the natural environment. Any landscaping provided will include only drought-tolerant, non-invasive plantings, maximizing survival and vitality while and minimizing the need for irrigation and the possibility of spreading troublesome ecological invaders. As a fully developed site that will remain so – opportunities to improve the sustainability of the site are limited. Erosion will be prevented during construction. The site design will maintain the same level of permeability as is currently present at 57 JFK Street.

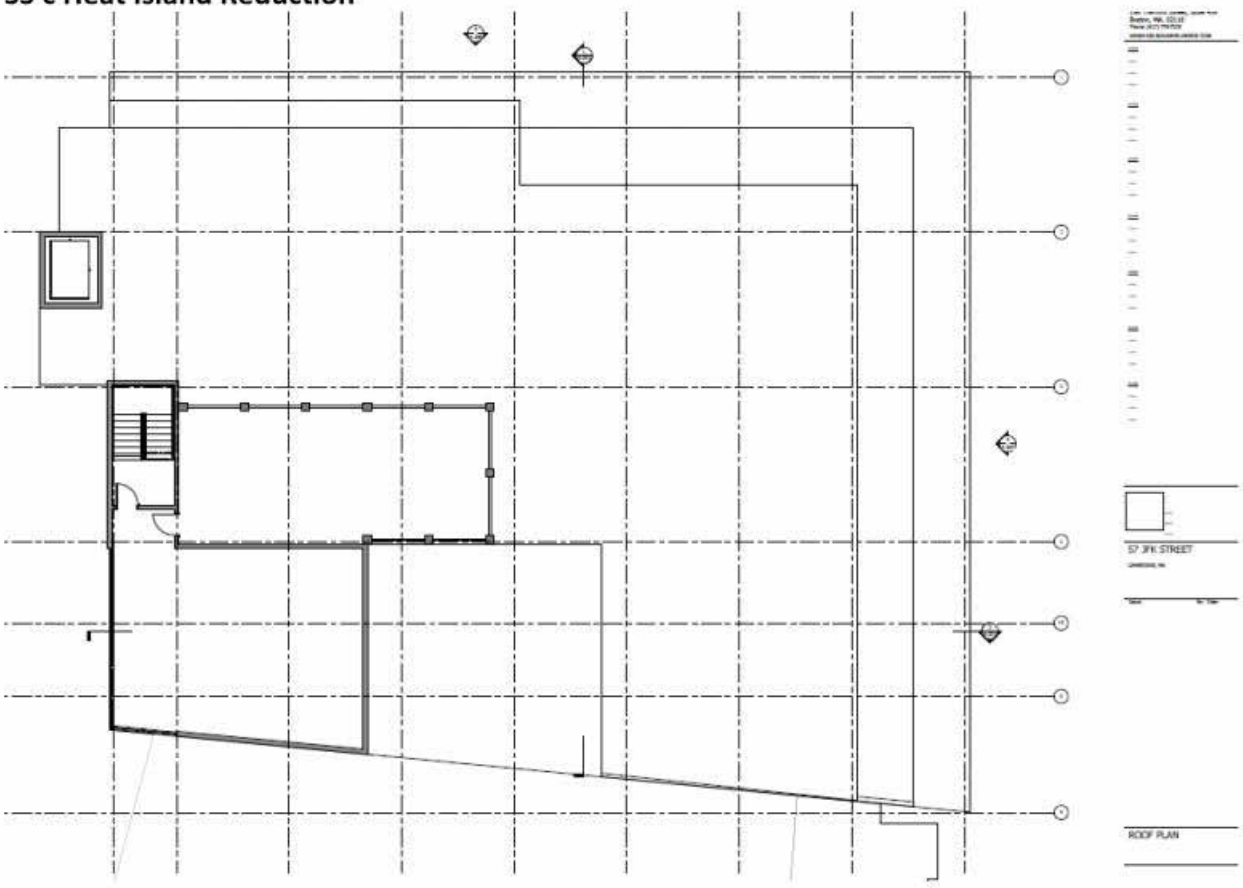
SS p Construction Activity Pollution Prevention

Erosion control measures will be documented on the civil plans prior to application for a site permit. The installation and upkeep of these measures will be verified during each of the Green Rater's site visits, meeting the Verification and Submittal requirement: Conduct on-site verification that all applicable erosion and pollution control measures are installed.

SS p No Invasive Plants

No new landscaping is intended, automatically meeting the prerequisite to introduce no invasive species. If that changes, and some landscaping will be provided in tenant roof deck or patio areas, all plantings will be required to be native, offering reassurance that they are both well adapted to the region and non-invasive.

SS c Heat Island Reduction



Most of the site hardscape area is flat roof, allowing the project team to specify roofing strategies either with an SRI greater than 78, green or biosolar to meet Heat Island Reduction credit with at least 50% of the roof area as non-absorptive. A regional priority credit is available to projects that reach 75%. Therefore, the team will seek to make at least 75% of the lot non-absorptive since that will add 2 points to the overall LEED score, having been identified as a regionally important strategy.

SS c Nontoxic Pest Control

These measures are documented on plans but for LEED purposes will be verified during construction by the Green Rater on-site. The Integrated Pest Management plan will be incorporated into the Operations and Maintenance manual.

The reference guide states that the Verification and Submittals for this credit are:

- Conduct on-site verification that credit requirements are met.

Indicating that no documentation is required for the achievement of this credit.

Water Efficiency

The Water Efficiency (WE) category addresses environmental degradation related to overuse of potable water within residential buildings and irrigation systems. Native or well adapted but non-invasive plants will be specified and zoned according to watering needs. If it becomes clear that irrigation is intended the design will be required to use high efficiency strategies such as: spray heads will be efficient and only installed as needed, no hardscapes or building foundations will be watered, and drip irrigation will be used in most planting beds. Given the scale of the building relative to its landscaped area, the Total Water Use credit will eventually be analyzed to confirm the team's preliminary understanding that the unit level fixture specifications represent the greatest opportunity for conservation of potable water at 57 JFK Street. In response to this opportunity, residential units in the Project will utilize high-efficiency, low-flow fixtures for water closets, lavatory faucets, showers, and kitchen faucets, all of which will bear the WaterSense label if available for the given product type.

WE p Water Metering

The water metering prerequisite will be met by a whole building water meter which will be shown on plumbing drawings.

The reference guide states that the Verification and Submittals for this credit are:

- Conduct on-site verification that credit requirements are met.

Indicating that no documentation is required for the achievement of this credit.

WE c Indoor Water Use

Lavatory Faucet (1-2 points)

(Select one)	All installed lavatory faucets and/or faucet aerators are WaterSense labeled.
1.00	Average rated flow volume across all lavatory faucets (gpm)

Showerheads (1-2 points)

(Select one)	All installed showerhead fixtures and fittings are WaterSense labeled.
1.75	Average rated flow volume per shower compartment (gpm)

Toilets (1 point)

(Select one)	All installed toilet fixtures and fittings are WaterSense labeled.
1.28	Average rated flush volume across all toilets (gpf)

Clothes Washers (1 point)

True	All clothes washers are ENERGY STAR qualified or performance equivalent

WE c Outdoor Water Use

Project will install no landscaping and thus no turfgrass. This will drive the outdoor water demand to zero gallons, earning all four points.

Energy and Atmosphere

The Energy and Atmosphere (EA) category addresses ongoing energy usage and continued building performance. Commissioning requirements are embedded in Minimum Energy Performance.

EA p Minimum Energy Performance & EA c Annual Energy Use

Updated energy models show a 26.6% cost-based between proposed and baseline building at ASHRAE 90.1-2010 standard. Furthermore, the models show a 37% consumption-based savings between proposed and baseline building at ASHRAE 90.1-2013 standard. This significantly exceeds the Massachusetts's Stretch Energy Code, which calls for at least a 10% reduction without savings from the three selected additional energy efficiency options. The Project will also utilize high-efficiency ventilation systems limiting both the conditioning and fan power energy used to provide fresh air to the units. 57 JFK Street will include effective thermal and air barriers at the exterior envelope, reducing thermal losses to the exterior via conduction and convection, respectively. Heat pump heating and cooling equipment will address the conditioning load that the envelope cannot. All installed systems will be commissioned prior to building occupancy, according to LEED Multifamily Midrise requirements, using Option 1: Energy Star Testing & Verification Protocols.

The project team is currently engaging with MaGrann Associates to conduct a feasibility analysis for PHIUS certification, a separate pathway within Article 22.20 of the Cambridge Zoning Ordinance related to Green Building. If this option is selected, subsequent Green Building reports will indicate the pivot to this deeper dive on energy efficiency represented by the pursuit of Passive House. One initial scenario was modeled to offer an idea of what kind of savings this pursuit would offer. If heat pump water heating systems replace standard electric tank systems, consumption savings jump up from 37% to 44%.

Points are awarded for both the % reduction from ASHRAE 90.1-2010 and the average home size point adjustment (from the Multifamily HSA sheet in the LEED Midrise workbook).

Comparison to ASHRAE 90.1 - 2010:

Performance Rating Calculation

	Baseline			Proposed			Savings, %	$ Savings, %
	Fossil Fuel, Btu	Electricity, Btu	Cost, $	Fossil Fuel, Btu	Electricity, Btu	Cost, $		
Annual Heating	0	370,462,165	$24,158.22	0	305,012,328	$19,890.17	17.67%	17.67%
Annual Cooling	0	157,510,715	$10,271.43	0	90,888,856	$5,926.96	42.30%	42.30%
Annual Lighting	0	136,234,336	$8,883.98	0	136,234,336	$8,883.98	0.00%	0.00%
Annual Hot Water	0	216,414,630	$14,112.62	0	74,746,684	$4,874.31	65.46%	65.46%
Annual Appliance	0	372,180,960	$24,270.30	0	349,620,816	$22,799.13	6.06%	6.06%
Annual Other	0	189,238,050	$12,340.41	0	101,923,264	$6,646.52	46.14%	46.14%
Total without Renewable	0	1,442,040,856	$94,036.96	-	1,058,426,284	$69,021.06	26.60%	**26.60%**
Annual Renewable	0	0	$0.00			$0.00	0.00%	0.00%
Total with Renewable	0	1,442,040,856	$94,036.96	-	1,058,426,284	$69,021.06	26.60%	**26.60%**

Average home size point adjustment (Multifamily HSA sheet of LEED Workbook):

Building ID	0 Bedrooms		1 Bedroom		2 Bedrooms		3 Bedrooms		4 Bedrooms		5 Bedrooms		6 Bedrooms	
	Number of Units	Average Floor Area (sq ft)	Number of Units	Average Floor Area (sq ft)	Number of Units	Average Floor Area (sq ft)	Number of Units	Average Floor Area (sq ft)	Number of Units	Average Floor Area (sq ft)	Number of Units	Average Floor Area (sq ft)	Number of Units	Average Floor Area (sq ft)
	28	518.50	12	774.00										
Home size adjustment	48%		23%		0%		0%		0%		0%		0%	
Point adjustment	12.0		5.7		0.0		0.0		0.0		0.0		0.0	
Total number of units														40
Average home size point adjustment														10.0

Total Points from EA c Annual Energy Use:

25.0%	Percent reduction from ASHRAE 90.1-2010
17	Points earned
10.0	Average home size point adjustment (from the Multifamily HSA tab)
27.0	Final points earned

EA p Energy Metering

Each unit will be metered separately offering feedback to occupants on their consumption. Individual unit electricity meters will be shown on the Electrical Power Riser Diagram, and verified on-site by the Green Rater

EA p Education of Owner, Tenant or Building Manager

Occupants and the Building Manager will be provided with a 'green guide' (unit or building manual) to assure that they are aware of basic green living strategies and why they will benefit from implementing them in their homes.

Materials and Resources

The Materials and Resources (MR) category addresses all installed materials, including framing and interior finishes, as well as diversion of waste from landfills.

MR p Certified Tropical Wood

The Project will utilize exclusively non-tropical wood products or for necessary wood from tropical countries, Forestry Stewardship Council certification will be specified.

MR p Durability Management & MR c Durability Management Verification

The project will meet the requirements of the Energy Star for Homes version 3, water management system builder checklist as appropriate including implementation of all Durability Management measures listed in the LEED rating system. The Green Rater will also verify the measures called out on the Energy Star Checklist adding an additional layer of quality assurance and accountability to the construction team regarding basic strategies to avoid water damage during construction and operation.

MR c Environmentally Preferrable Materials

Certain impactful materials will be specified for their environmental benefits such as regionally sourced and environmentally preferable to minimize the embodied carbon profile of the building. Concrete aggregate materials will be sourced within 100-miles of the project site, and the team intends to specify that local material is preferred for drywall, reducing the transportation-related impact of two of the heaviest components of the building. Insulation and drywall will be specified as having meaningful quantities of recycled content, reducing the pressure on virgin resources to manufacture those products.

Although the LEED credit does not directly address it, the team is aware that the embodied carbon associated with different building materials varies widely. IT was in-part due to this concern that the scope of the project was designated as one that would be permitted as a wood structure. Wood buildings have a much lower embodied carbon footprint, and offer some carbon sequestration benefits. This is a good example of the inadequacy of simply prioritizing products with recycled content. Steel studs have a relatively high recycled content as a standard practice, and though this reduces the embodied carbon compared to steel studs made of 100% newly mined material, either option is far higher than a standard wood structure.

These measures will be documented as part of the submittal process. All referenced products will be required to be submitted with both recycled content and point of extraction information

disclosed, allowing the team to make informed decisions in favor of these low and no cost environmentally preferrable materials.

MR c Construction Waste Management
During demolition and construction on-site, all waste produced will be tracked to maximize diversion from landfills. The project will seek to achieve a minimum diversion rate of 75% during construction, with an overall target of less than 10 pounds per square foot of finished floor area. The waste hauler will be required to provide information on at least 4 separate streams of recycled content generated by the site. This will be documented via Construction Waste Management plan provided after the Notice to Proceed is sent from the developer to the General Contractor, as well as the post construction reporting provided by the GC with support from the waste handling company.

Indoor Environmental Quality

The Indoor Environmental Quality (EQ) category addresses the exhaust and ventilation of all interior spaces within the building, ensuring a consistent healthy environment for building residents.

EQ p Ventilation & EQ c Enhanced Ventilation
The Project will design all residential areas to meet the ASHRAE 62.2-2013 whole house and local exhaust ventilation standard. The fan will operate continuously, which will qualify the project for Option 1: Enhanced Local Exhaust as well.

All common spaces areas will be designed to meet the ASHRAE 62.1-2010 ventilation standard based on space type, square footage and expected occupancy. Delivered ventilation

In accordance with Energy Star and crucial for the comfort of occupants, residential heat pumps and ductwork are designed in accordance with the ACCA Manual J Heating and Cooling Loads, and Manual D Duct Sizing standards.

EQ p Combustion Venting & EQ c Combustion Venting
All installed combustion equipment will be directly vented to the exterior; and, each floor of each unit, as well as all common spaces, will be equipped with combination smoke and carbon dioxide detectors. Also, no fireplace or woodstove will be installed, avoiding the associated potential indoor contamination, satisfying Option 1 for 2 points.

EQ p Garage Pollutant Prevention & EQ c Enhanced Garage Pollutant Prevention
The project will not include a garage, avoiding the potential for indoor pollution that originates in garages.

EQ p Radon Resistant Construction
The project is in EPA Radon Zone 1. As an existing building, the project will test the final built project and remediate if the levels of radon are found to be above the action level recommended by the EPA of 4 pc/L.

EQ p Air Filtering
MERV 8 filters will be installed on all recirculating air handling units with more than 10 feet of supply ductwork. Mechanically supplied outside air will pass through a MERV 6 or higher filter before encountering a conditioning coil. Filter make and model number will be verified on-site.

Attempting to learn some of the lessons of the COVID-19 pandemic, many have called for ever increasingly higher levels of MERV ratings on filtration. While there are some benefits from increasing filtration levels and outside air ventilation in school, retail and office buildings, we do not see the same potential to make our buildings safer in residential settings. The primary driver of this difference is that residential units are primarily shared by individuals of the same household, while households intermingle in school, retail and office buildings. The longer duration exposure associated with sharing a household cannot be overcome by a MERV 13 filter, and reduced airflow and increased fan power consumption will undoubtedly make the building less sustainable with no detectable decrease in risk of COVID transmission. A more impactful, passive strategy is to focus on compartmentalization to prevent the transmission of air between units and households. Higher levels of filtration applied to incoming outside air will not help mitigate transmission unless infectious individuals have a reason to be congregating adjacent to the building outdoor air intake.

EQ p Environmental Tobacco Smoke & EQ c Environmental Tobacco Smoke
The building and lot will be completely smoke free, further improving the indoor air quality and overall health of the residents. This will be verified at final via signage on-site and inclusion of smoke free requirements in tenant leases and the tenant and building manager manuals.

EQ p Compartmentalization
Each residential unit will be sealed for compartmentalization, per the Energy Star Multifamily High Rise Program Testing and Verification Protocols with an allowable maximum leakage rate of 0.3 cfm50 per square foot of enclosure. Details to help achieve this will be included in the construction documents, showing the compartmentalization air barrier running continuously around the units in plan and section. Verification of this measure will be completed by the Green Rater as part of their final testing protocol.

EQ c Balancing of Heating and Cooling Systems
Case 1 Forced-Air Systems, Option 1
All units are below 800 square feet, automatically qualifying for this credit.

EQ c Low emitting Materials
Paints, primers, adhesives, sealants will comply with the South Coast Air Quality Management District Rules #1113 and #1168, as permitted by v4.1 Low-Emitting Products credit substitution. All flooring materials will include Green Label Plus certification (carpet) or FloorScore certification (resilient flooring), as applicable. These requirements will be called out in specifications.

Innovation

The Innovation (IN) category ensures that as sustainable design strategies and measures are evolving and improving and as new technologies are introduced to the marketplace, LEED provides a way for the project to take advantage of opportunities that may not be codified in the LEED system.

IN c Innovation

Under Option 1, 57 JFK Street will earn Innovation credit Housing Types and Affordability for including 5 units that are set aside for individuals earning no more than 60% of the Area Median Income, to be rented to them at a rate within the affordability guidelines of HUD. Under Option 3, Exemplary performance will be earned for doubling the highest thresholds in both Community Resources and Access to Transit. The team will consider HVAC Startup Credentialling credit, which is available in LEED Homes, but not Midrise.

IN c LEED Accredited Professional

This credit will be earned by including Jon Jensen, LEED AP Homes on the project team. Jon has held a this credential since it was introduced in March of 2009.

These credits are well established pathways for projects under MaGrann Associates LEED Providership. If confusing or unfamiliar to the reviewer in a way that might result in a rejection of this narrative, please consider them automatically dropped, given the significant buffer the 57 JFK Street project currently holds over the current LEED Midrise Gold rating.

Regional Priority

Every location has its own unique environmental challenges. While there are common themes of what can be done to mitigate environmental impact, the issue of how much emphasis to place on each is strongly impacted by the project's location on the Earth. To acknowledge this reality, USGBC created Regional Priority Credits. They then tapped their network of volunteers to identify the zones that define where priorities differ, and which 6 credits are available at which threshold in each zone. If a selected credit is earned at the appropriate level, the project may claim an additional point, up to 4 in Regional Priority.

RP c Regional Priority

57 JFK Street will earn 3 points in RP. A regional priority credit will be earned for achieving Access to Transit at 1 point, Non-toxic pest control at 2 points, and Annual Energy Use at 15 points. Heat Island reduction at 2 points is a possible fourth RP credit that may be earned by the project as the design develops.

Appendix A

LEED Multifamily Midrise Scorecard

LEED BD+C: Multifamily Midrise v4 - LEED v4

57 JFK Scorecard

Location: **57 JFK Street, Cambridge, MA 02138, USA**

Note: The information on this tab is READ-ONLY. To edit this information, see the Credit Category tabs.

Integrative Process		**Preliminary**	Y	1 of 2	N	2	**Verified** 0
IPc	**Integrative Process**			1 of 2		2	
Location and Transportation		**Preliminary**	Y	15 of 15	N	0	**Verified** 0
LTp	Floodplain Avoidance			Required			Not Verified
Performance Path							
LTc	LEED for Neighborhood Development			0 of 15		0	
Prescriptive Path							
LTc	Site Selection			8 of 8		0	
LTc	Compact Development			3 of 3		0	
LTc	Community Resources			2 of 2		0	
LTc	Access to Transit			2 of 2		0	
Sustainable Sites		**Preliminary**	Y	3 of 7	N	4	**Verified** 0
SSp	Construction Activity Pollution Prevention			Required			Not Verified
SSp	No Invasive Plants			Required			Not Verified
SSc	Heat Island Reduction			1 of 2		2	
SSc	Rainwater Management			0 of 3		2	
SSc	Nontoxic Pest Control			2 of 2		0	
Water Efficiency		**Preliminary**	Y	8 of 12	N	0	**Verified** 0
WEp	Water Metering			Required			Not Verified
Performance Path							
WEc	Total Water Use			0 of 12		0	
Prescriptive Path							
WEc	Indoor Water Use			4 of 6		0	
WEc	Outdoor Water Use			4 of 4		0	
Energy and Atmosphere		**Preliminary**	Y	27 of 37	N	0	**Verified** 27
EAp	Minimum Energy Performance			Required			Not Verified
EAp	Energy Metering			Required			Not Verified
EAp	Education of the Homeowner, Tenant or Building Manager			Required			Not Verified
EAc	Annual Energy Use			27 of 30		0	27
EAc	Efficient Hot Water Distribution System			0 of 5		0	
EAc	Advanced Utility Tracking			0 of 2		0	

Materials and Resources		Preliminary	Y	3.5 of 9	M	7.5	Verified	0
MRp	Certified Tropical Wood			Required				Not Verified
MRp	Durability Management			Required				Not Verified
MRc	Durability Management Verification			1 of 1		0		
MRc	Environmentally Preferable Products			1.5 of 5		2.5		
MRc	Construction Waste Management			1 of 3		1		

Indoor Environmental Quality		Preliminary	Y	10 of 18	M	0	Verified	0
EQp	Ventilation			Required				Not Verified
EQp	Combustion Venting			Required				Not Verified
EQp	Garage Pollutant Protection			Required				Not Verified
EQp	Radon-Resistant Construction			Required				Not Verified
EQp	Air Filtering			Required				Not Verified
EQp	Environmental Tobacco Smoke			Required				Not Verified
EQp	Compartmentalization			Required				Not Verified
EQc	Enhanced Ventilation			1 of 3		0		
EQc	Contaminant Control			0 of 2		0		
EQc	Balancing of Heating and Cooling Distribution Systems			2 of 3		0		
EQc	Enhanced Compartmentalization			0 of 3		0		
EQc	Combustion Venting			2 of 2		0		
EQc	Enhanced Garage Pollutant Protection			1 of 1		0		
EQc	Low-Emitting Products			3 of 3		0		
EQc	No Environmental Tobacco Smoke			1 of 1		0		

Innovation		Preliminary	Y	4 of 6	M	1	Verified	0
INp	Preliminary Rating			Required				Not Verified
INc	Innovation			3 of 5		1		
INc	LEED Accredited Professional			1 of 1		0		

Regional Priority		Preliminary	Y	3 of 4	M	1	Verified	0
RPc	Regional Priority			3 of 4		1		

Point Floors	
The project earned at least 8 points total in Location and Transportation and Energy and Atmosphere	Yes
The project earned at least 3 points in Water Efficiency	No
The project earned at least 3 points in Indoor Environmental Quality	No

Total	Preliminary	Y	74.5 of 110	M	11.5	Verified	27

Certification Thresholds Certified: 40-49, Silver: 50-59, Gold: 60-79, Platinum: 80-110

MaGrann ASSOCIATES

Making Buildings Better

57 John F. Kennedy Street

Cambridge, MA

Net Zero Narrative

Article 22.20 – Green Building

Submitted 12/20/2021

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Project Overview

The site is located at 57 John F. Kennedy Street on a parcel consisting of approximately 14,506 total square feet of land (0.33 acres) ("Site"). The Site is currently a two-story retail building known as "Crimson Galeria" and is bounded by Winthrop Street to the North and Harvard Square Parking Garage to the South.

The proposed development consists of one (1) building addition totaling approximately 29,477 gross square feet. It will contain forty (40) residential units build atop the existing two-story retail structure. The retail spaces will not be renovated and is not part of the proposed construction project other than to add structural support for the new addition above. The proposed residential units will contain a mix of studio and one-bedroom units.

This report provides an overview of the sustainable design elements proposed as part of the Project at this time of schematic design to demonstrate that the Project will meet the requirements of Article 22.20 of the Cambridge Zoning Ordinance relative to the City's Sustainable Design and Development Green Building Requirements. In response to the requirements of 22.25.1 (6) the following description outlines how the design of 57 JFK Street is being designed in response to the City's Net Zero Action Plan. The building will not use any carbon-based fuels on-site, enabling a reasonably straightforward transition to fully renewable energy supplied by the grid.

Project Profile

Lot Area (sq.ft.):	14,506
Existing Land Use(s) and Gross Floor Area (sq.ft.), by Use:	35,250 Commercial Retail
Proposed Land Use(s) and Gross Floor Area (sq.ft.), by Use:	29,477 square foot Residential addition
Proposed Building Height(s) (ft. and stories):	65' Five Stories
Proposed Dwelling Units:	40
Proposed Open Space (sq.ft.):	1,123
Proposed Parking Spaces:	0
Proposed Bicycle Parking Spaces (Long-Term and Short-Term):	41 Long Term; 4 Short Term

Green Building Rating System

LEED-Leadership in Energy & Environmental Design (U.S. Green Building Council)			
Rating System & Version:	*Multifamily Midrise*	*Seeking Certification?*	**TBD**
Rating Level:	*GOLD*	*# of Points: 74.5*	

Proposed Project Design Characteristics

Building Envelope

Roof:	R-30 c.i.
Floor over Commercial space:	R-20 c.i.
Exterior Walls:	1" c.i. + R-21 between 2x6 wood studs
Windows:	U = 0.28 SHGC = 0.35
Window to Wall Ratio:	35.6%
Other Components	

Envelope Performance

	Proposed		Baseline	
	Area – sf	U-value	Area – sf	U-value
Roof:	9954	0.032	9954	0.032
Wall:	23015	0.055	23015	0.055
Window:	8190	0.35	8190	0.35

No savings are assumed between proposed and baseline envelope values because the team has selected this as one of their Additional Efficiency Package Options from the stretch code. The overall U value for the proposed envelope that will be built will be more than 10% better than the baseline. As a selected AEPO, this improvement may not be used to generate any of the savings for stretch code compliance.

Envelope Commissioning Process

The envelope will be commissioned using a third-party verification team, also responsible for verification of installed LEED related measures, known as a Green Rater. The Green Rater will visit the site to verify air sealing at rough stage prior to insulation installation, then after insulation and before drywall to confirm the thoroughness of the insulation installation quality and last at final to perform compartmentalization and other performance testing on each unit. Also known as a blower door test, these will verify that the units leak no more than 0.30 CFM50/square foot of enclosure area. At these leakage rates, the team can be assured that major leaks have not been overlooked and that the building will perform as designed with regard to minimizing uncontrolled leakage through the envelope and between units.

Building Mechanical Systems

Space Heating:	VRF system
Space Cooling:	VRF system
Heat Rejection:	Roof-top condenser component of VRF system
Pumps & Auxiliary:	NEMA Premium pumps as needed
Ventilation:	RenewAire ERV – one per floor provides OA to units and common area, bathroom exhaust fan
Service Hot Water:	Electric resistance tank
Interior Lighting:	LPD 0.9 times the IECC allowance
Exterior Lighting:	LPD 0.9 times the IECC allowance
Other Equipment:	ESTAR Appliances, common laundry

Systems Commissioning Process:

The systems at 57 JFK Street will be commissioned according to the Energy Star Multifamily New Construction process from EPA. This includes a mixture of contractor documentation and testing completed by the third-party Green Rater. Beyond the aforementioned blower door testing, all ventilation air flow rates will be verified to comply with the design and ASHRAE 62.1, In unit HVAC and central ventilation systems will have duct leakage testing. Central mechanical systems will have functional testing according to the standards set forth by EPA in the design of the Multifamily New Construction program from Energy Star.

Integrative Design

Project team members have met at least monthly during entitlements and through Conceptual Design to present. Team members will be added during SD and DD phases with meetings moving to weekly. Project team meetings are expected to be ongoing, and the consultants will be engaged for construction administration, ensuring that the benefits of their design intent will be carried into construction.

Current team members include members of the following organizations:
Crimson Galeria, LP, Nelson Architecture & Interiors, Silman (Structural Engineering), Zade Associates (MEP) and MaGrann Associates.

Green Building Incentive Program Assistance

This project plans to pursue incentives from MassSave under the residential new construction pathway for multifamily or through their Passive House program. PHIUS+Core feasibility is currently being assessed by CPHCs at MaGrann.

Net Zero Scenario Transition

	Net Zero Condition	Transition Process
Building Envelope:	Thermally broken windows, c.i. included walls	No changes needed
Heating & Cooling:	VRF system with no refrigerant leaks	No changes needed, however when the VRF system reaches the end of useful life, Condensers and/or air handling units could be replaced with new models which may be more efficient.
Ventilation:	Individual or central ERVs	Pending design decision on initial ventilation systems
Service Hot Water:	Heat Pump Water Heaters (HPWH)	If the team decides not to include HPWH in the initial build, retrofit style HPWH would be needed to replace the high efficiency electric resistance tanks specified at the end of their lifespan.
Lighting:	LED with motion sensor controls in common areas	LEDs are intended. Motion sensor controls, if not included in the initial build would be retrofitted into corridors, stairwells and any other common spaces.
Renewable Energy Systems:	Rooftop PV installed to maximum capacity	Project intends to include all applicable solar-ready features according to EPA's Renewable Energy Ready Specifications
Other Strategies:	Demand response	As utilities clarify the scope of their demand response offerings, the owner would seek to incorporate those grid stabilizing features into the controls for the central VRF system.

Energy Systems Comparison

This report provides an overview of the project's future pathway to net zero carbon emissions. A crucial first step is to design the building with electricity as the only energy source. All ongoing demands for cooking, heating, ventilation, and domestic hot water will be met by electrical appliances. Electricity will also meet demands for the traditional uses of cooling, lighting and plug loads.

We know from the movement to "electrify everything" that accelerating the transition of existing fossil fuel-based systems to electricity-based alternatives advances our transition to a carbon neutral economy. Logically, we must avoid the installation of fossil fuel appliances in new buildings wherever possible. To complete this necessary shift, electricity generation must also hasten the ongoing transition from centralized, fossil fuel-based sources to renewable and low carbon alternatives. Recognizing the task before us in this moment, new construction projects in high density areas that people want to live in and that meet their needs with electricity, are the most responsible form of real estate development from a carbon perspective.

Electricity is the only fuel source that is already becoming cleaner over time. It is also the only one that is currently being produced by clean, renewable on-site generation at scale by buildings today.
To mitigate the intensity of the transformation to our electricity generation infrastructure, demand reduction is required. The energy efficiency measures selected by the 57 JFK Street design team target overall reduction, pairing envelope design with efficient mechanical systems to meet the occupant needs. Individual systems are under consideration, but the configuration of roof space and the lack of room to situate condensers at grade may make a central VRF a more realistic solution. Central VRF heat pumps also provide the opportunity to introduce heat-recovery as part of the heat pump system. Individual water heating systems also allow for less capital-intensive upgrades, for example replacing each of these water heaters with a heat-pump type when they reach the end of their lifespan.

As an all-electric building, the 57 JFK Street proposed design is prepared to meet the building demands with zero carbon energy when fed by a renewable electricity grid.

Assumptions

	Included in Analysis?		Why?
	Yes	No	
Solar PV	Yes		Limited roof area may mean that a future solar canopy would be needed to achieve a cost-effective solar array. Nonetheless, PV remains the most universally deployable renewable energy source, so the building will be made PV ready.
Solar Thermal		No	Limited roof space and complexity integrating with individual service hot water systems
Ground Source Heat Pumps		No	Lack of scale means GSHP cannot compete in a financial or efficiency analysis.
Water Source Heat Pumps		No	Lack of scale means central boiler/chiller systems cannot compete in a financial or efficiency analysis. These are far more tempted to continue use of fossil fuels for heating loop temperature maintenance.
Air Source Heat Pumps	Yes		Are included in the proposed design
District Energy		No	Lack of scale, infill project with almost no land area or newly constructed neighbors with shared ownership agreements in place.

Non-Carbon Fuel Scenario

No on-site fossil fuel combustion is planned.

Solar Ready Roof Assessment

For a plan of the roof, see Appendix A

Total Roof Area	7,581 sq. ft.
Unshaded Roof Area	4,872 sq. ft.
Structural Support	Will be designed to accommodate a ballast mounted PV array, or biosolar system, using green roof to ballast PV panel racking.
Electrical Infrastructure	Conduit from main electrical room to part of the unshaded roof area. Adequate space in electrical room for service disconnects and an inverter if needed.
Other Roof Appurtenances	Roof access stair tower and elevator overrun will limit the available area for panels
Solar Ready Roof Area	4,872 sq. ft.
Capacity of Potential Solar Array	42 kW
Financial Incentives	Mass SMART Program & Mass Net Metering policies. Others as tracked by DSIRE.org as project approaches the decision to include in addition scope or a future installation
Cost Feasibility	TBD as project team proceeds with a Solar ready assumption and researches financial and technical impacts of using a biosolar or traditionally ballasted array.

Scenarios

The baseline design of the proposed building, the proposed design as well as two other scenarios were modeled using eQUEST software, a DOE2 compliant energy modeling tool. The additional scenarios were 1) the proposed building with a heat pump water heater of UEF 2.4 central heat pump water heating systems and 2) the proposed building with both on-site photovoltaics and off-site (grid-supplied) renewable energy supplied to reach net zero carbon emissions from the building's modeled consumption.

Heat pump water heaters yielded approximately 11% savings overall, which is a good option, and will continue to be considered. This strategy is highly likely if the project decides to go forward with PHIUS certification. This lowered the site EUI by 2 kBtu/sf*yr and source EUI by 5.8 kBtu/sf*yr.

The solar ready roof area shown in Appendix A, currently 4,872 sf, has the potential to generate 51,381 kWh/year according to analysis using PVWatts, a tool from the US DOE's National Renewable Energy Labs. Adding this amount of PV would decrease site EUI from 18.4 kBtu/sf*yr to 16.4 kBtu/sf*yr. With 14.7% of the building load off set by on-site production, the remaining 85.3% of the load, or 298,249 kWh/year, would need to be produced and secured from grid supplied renewable sources for the building to reach carbon neutral status.

Stretch Code Modeling Results

Standard electric water heating - Site EUI = 18.4 kBtu/sf*yr - Source EUI = 51.6 kBtu/sf*yr

	Baseline			Proposed			Site BTU Savings, %
	Fossil Fuel, Btu	Electricity, Btu	Cost, $	Fossil Fuel, Btu	Electricity, Btu	Cost, $	
Annual Heating	788,900,000	0	$14,444.76	0	255,828,348	$16,682.83	67.57%
Annual Cooling	0	157,510,715	$10,271.43	0	76,490,216	$4,988.01	51.44%
Annual Lighting	0	136,234,336	$8,883.98	0	136,234,336	$8,883.98	0.00%
Annual Hot Water	248,150,000	0	$4,543.63	0	145,828,880	$9,509.65	41.23%
Annual Appliance	0	372,180,960	$24,270.30	0	349,620,816	$22,799.13	6.06%
Annual Other	0	198,197,962	$12,924.69	0	228,934,964	$14,929.08	-15.51%
Total without Renewable	1,037,050,000	864,123,973	$75,338.79	-	1,192,937,560	$77,792.68	37.25%
Annual Renewable	0	0	$0.00			$0.00	0.00%
Total with Renewable	1,037,050,000	864,123,973	$75,338.79	-	1,192,937,560	$77,792.68	37.25%

Centralized Heat Pump Water Heaters - Site EUI = 16.4 kBtu/sf*yr - Source EUI = 45.8 kBtu/sf*yr

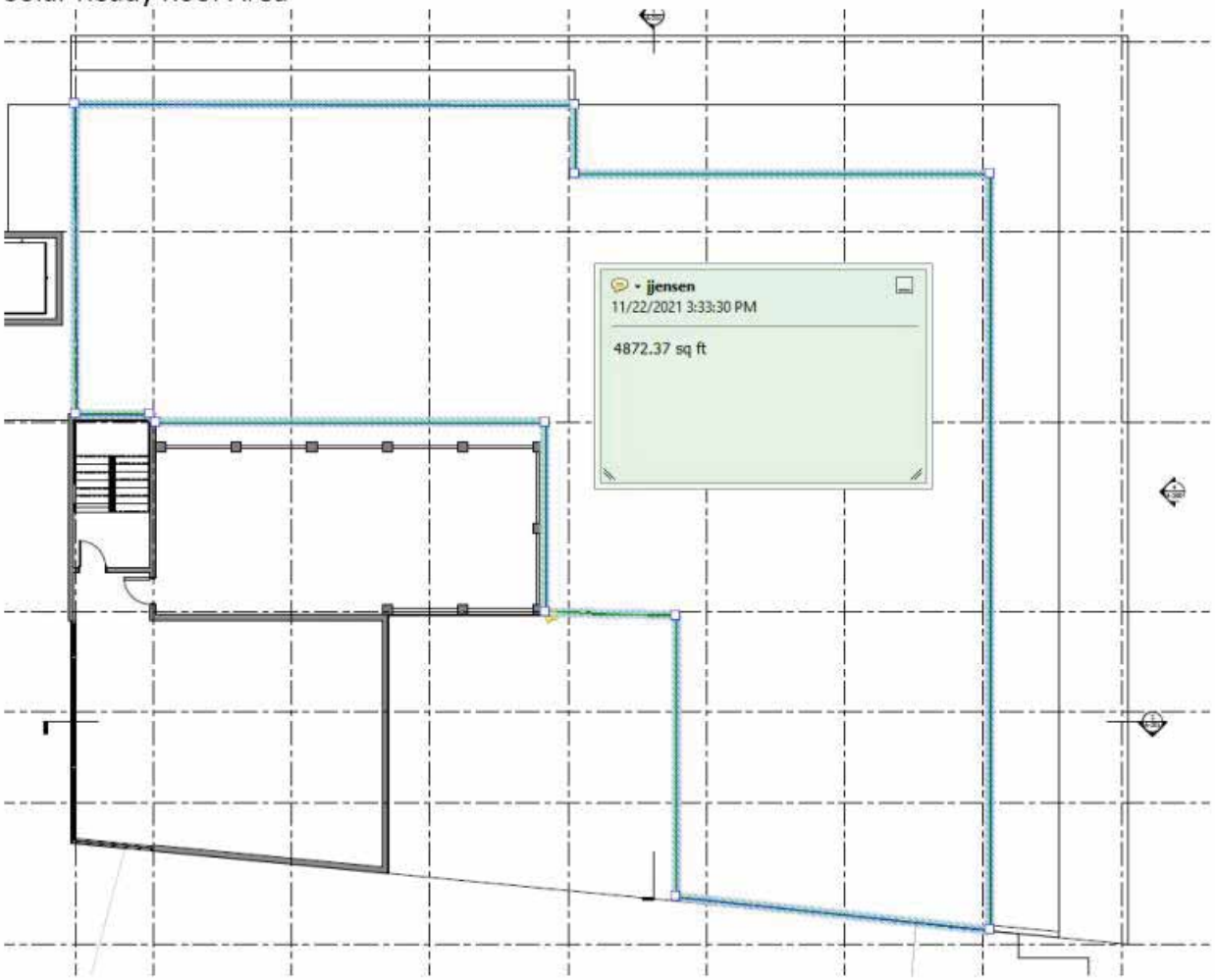
	Baseline			Proposed			Site BTU Savings, %
	Fossil Fuel, Btu	Electricity, Btu	Cost, $	Fossil Fuel, Btu	Electricity, Btu	Cost, $	
Annual Heating	788,900,000	0	$14,444.76	0	305,012,328	$19,890.17	61.34%
Annual Cooling	0	157,510,715	$10,271.43	0	90,888,856	$5,926.96	42.30%
Annual Lighting	0	136,234,336	$8,883.98	0	136,234,336	$8,883.98	0.00%
Annual Hot Water	248,150,000	0	$4,543.63	0	74,746,684	$4,874.31	69.88%
Annual Appliance	0	372,180,960	$24,270.30	0	349,620,816	$22,799.13	6.06%
Annual Other	0	198,197,962	$12,924.69	0	101,923,264	$6,646.52	48.58%
Total without Renewable	1,037,050,000	864,123,973	$75,338.79	-	1,058,426,284	$69,021.06	44.33%
Annual Renewable	0	0	$0.00			$0.00	0.00%
Total with Renewable	1,037,050,000	864,123,973	$75,338.79	-	1,058,426,284	$69,021.06	44.33%

Conclusion

The 57 JFK Street project team is pushing for a highly efficient building that is affordable to construct under current constraints. The Net Zero Analysis confirms that certain features may improve the building's performance and will be considered. Lighting savings are expected but are not currently modeled in order to use highly efficient lighting as one of the selected stretch code "Additional Energy Efficiency Options" from C406.1. The ownership team is excited to proceed on the pathway to a carbon neutral building when that becomes feasible for them. By virtue of engaging in this assessment, they understand several potential pathways that process could take, and are making the most important initial step now – no new fossil fuel infrastructure will be included in this project.

Appendix B

Solar Ready Roof Area



Appendix C

PV Watts Evaluation

PV Potential	roof evaluation	
upper roof	4872	sf
TOTAL	4872	sf
assume 50% coverage	2436	sf
kW/sf	0.018	moderate
kW potential:	43.8	kW
PV Watts		
DC size	42.0	kW
module type	standard	
array type	fixed	
system losses:	14.08	default
Tilt	10	degrees
azimuth	180	degrees
Annual PV production:	51,381	kWh/year
	175,311,972	Btu/year
Annual modeled demand	349,630	kWh/year
	1,192,937,560	Btu/year
Off-site purchase to achieve carbon neutral	298,249	kWh/year
	1,017,625,588	Btu/year

Rooftop Mechanical Narrative

Mechanical Equipment:

There is no ground level mechanical equipment. At 6 stories above grade, the proposed projects residential rooftop mechanical equipment is contained within an architectural screened area and mechanical penthouse which is setback from 23' from the facade along Winthrop Park and setback 28' from JFK Street façade.

Sound attenuation measures such as equipment selection criteria and sound barriers may be employed to minimize noise impacts on the Harvard Square community and to comply with all applicable noise regulations. At this time, the mechanical system design and equipment specifications are not sufficiently developed to include specifics on any necessary sound control measures. Updates will be presented as this project proceeds.

Long Term Bicycle Parking Narrative

The Residences at 57 JFK provides 46 non-motorized Long-Term Bicycle Parking Spaces across multiple locations within weather protected enclosed spaces. Two of these spaces are extended spaces (10' long) meeting the 5% requirement for tandems and trailers.

The Long-Term Bicycle Parking system provides 57 JFK residential tenants with a Bicycle Parking solution of even greater accessibility and convenience than most Cambridge multi-family developments.

Convenience – tenants bicycle parking guaranteed. Tenants will have peace of mind knowing their bicycle will be free from damage by others. Tenants will only need to pass one security entry point, ride one elevator, comfortably remain indoors for the entire parking experience, and never need retrace their path to return to their apartment. As a benefit, the residential visitors bicycle parking will be accommodated within their unit if the tenant desires increasing the opportunity for bicycle use.

Safety – clean, well-lighted, interior travel paths monitored under building surveillance and being in the presence of other tenants ensure the tenant a safe transport and parking experience.

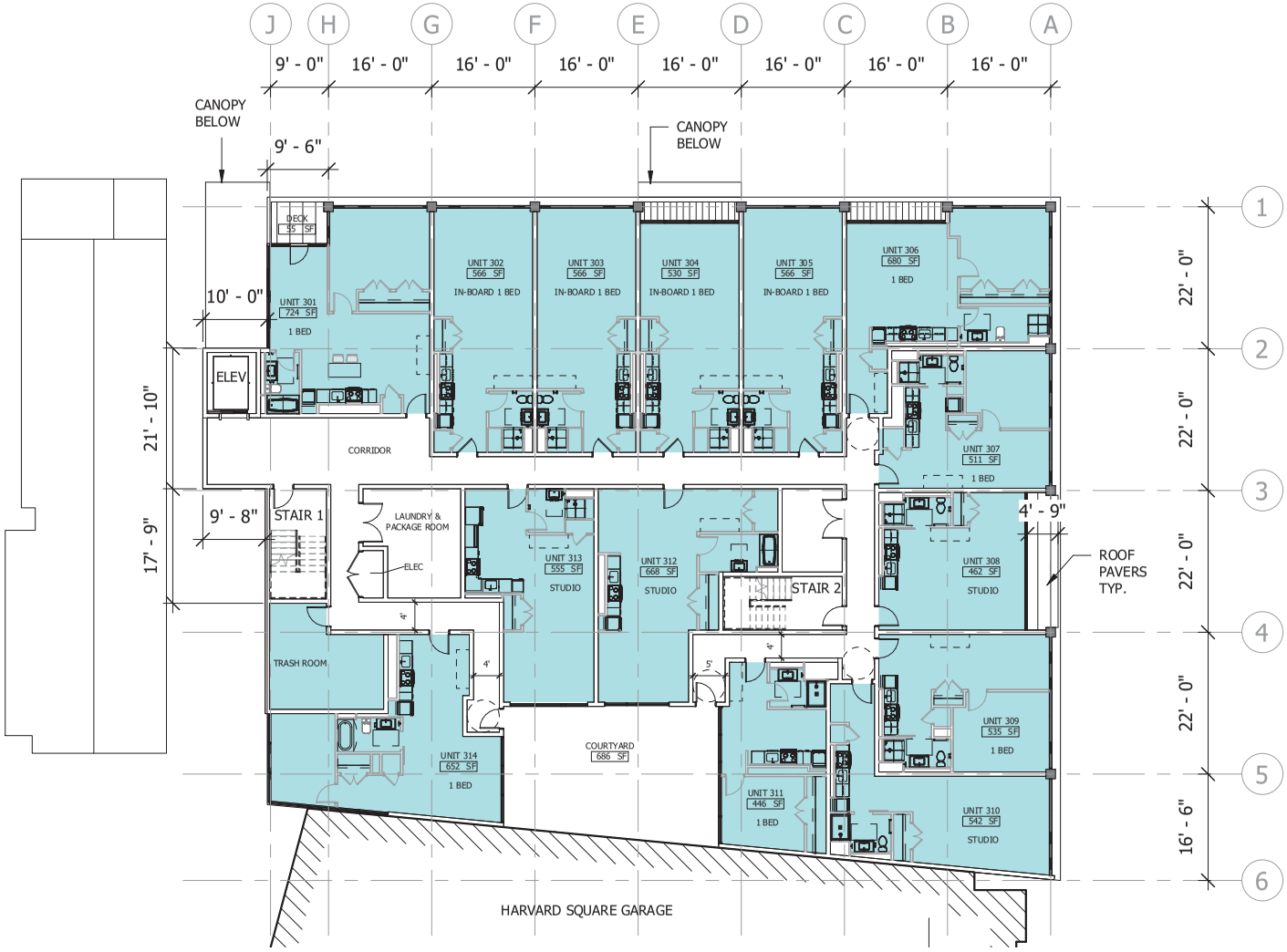
Security – Cambridge approved Loop and Post stand securely anchored provides for 2-point locking of bicycle within a tenant's secure apartment and in the buildings common bicycle room.

Experience – user familiarity with the parking environment lessens unexpected occurrences. Wide hallways and oversized elevator make maneuverability easy. Time of "Bicycle to Road" minimized. This "in-home" experience is quick and convenient and will further the overall goal of encouraging bicycle use. The tenant controls the cleanliness and temperature of the storage environment. Building Management and its Operations maintain attractive bicycle circulation to the tenant's unit.

Refer to Volume 2, figures 14 and 15

Net Floor Area Calculations

FLOOR AREA NET.		
Name	**Type**	**Area**
UNIT 301	1 BED	724
UNIT 302	IN-BOARD 1 BED	566
UNIT 303	IN-BOARD 1 BED	566
UNIT 304	IN-BOARD 1 BED	530
UNIT 305	IN-BOARD 1 BED	566
UNIT 306	1 BED	680
UNIT 307	1 BED	511
UNIT 308	STUDIO	462
UNIT 309	1 BED	535
UNIT 310	STUDIO	542
UNIT 311	1 BED	446
UNIT 312	STUDIO	668
UNIT 313	STUDIO	555
UNIT 314	1 BED	652
UNIT 401	1 BED	855
UNIT 402	IN-BOARD 1 BED	547
UNIT 403	IN-BOARD 1 BED	581
UNIT 404	IN-BOARD 1 BED	520
UNIT 405	STUDIO	486
UNIT 406	1 BED	708
UNIT 407	STUDIO	413
UNIT 408	STUDIO	345
UNIT 409	STUDIO	458
UNIT 410	1 BED	431
UNIT 411	1 BED	629
UNIT 412	STUDIO	526
UNIT 413	1 BED	500
UNIT 414	1 BED	465
UNIT 501	1 BED	730
UNIT 502	STUDIO	520
UNIT 503	STUDIO	485
UNIT 504	STUDIO	398
UNIT 505	1 BED	712
UNIT 506	STUDIO	470
UNIT 507	1 BED	580
UNIT 508	1 BED	505
UNIT 509	1 BED	629
UNIT 510	STUDIO	520
UNIT 511	1 BED	506
UNIT 512	1 BED	467
Grand total: 40		21,992



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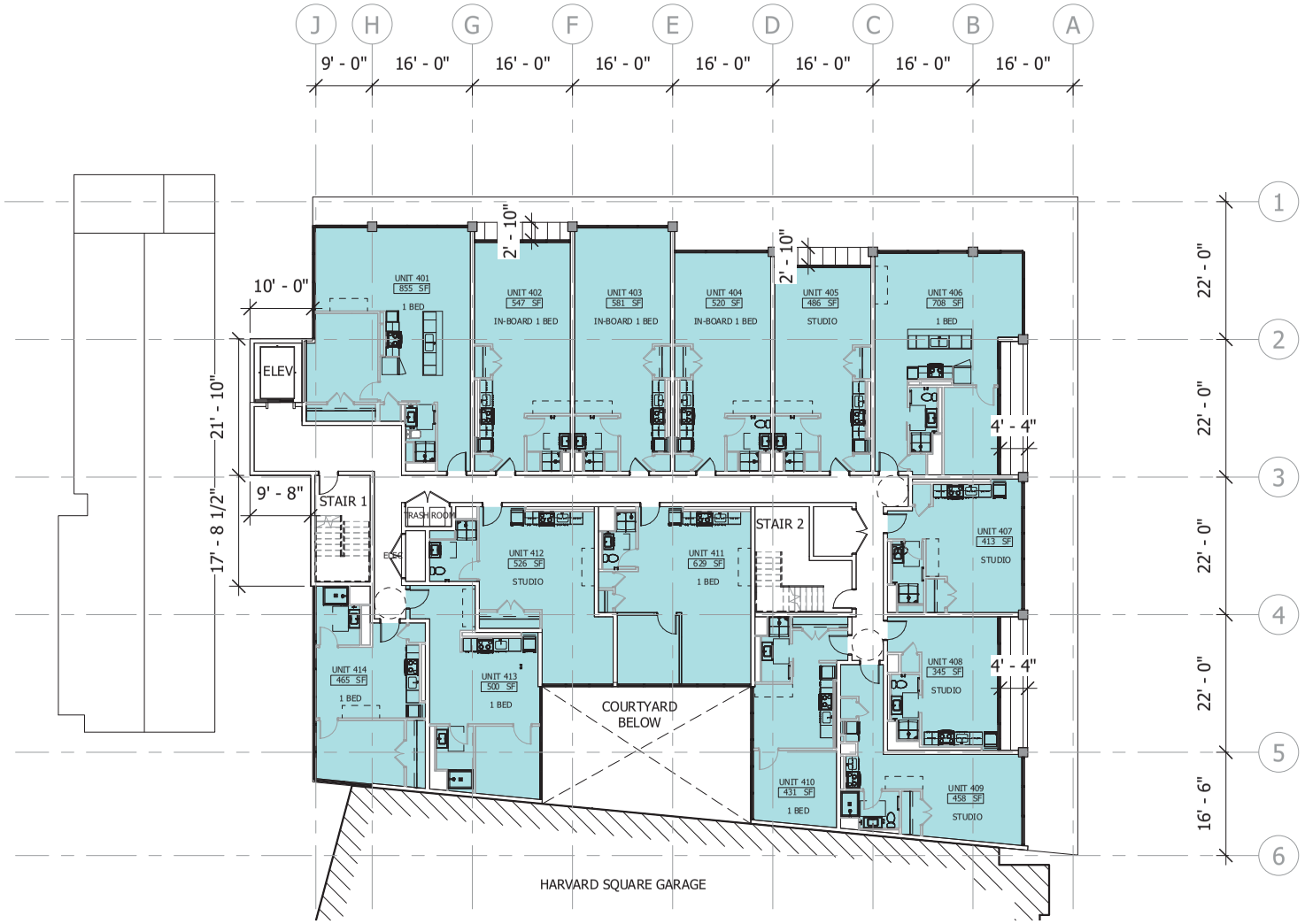
Project:	57 JFK	Date:	03/18/22		
Proj. No.:	20.0003391	Drawn By:	Author		

0 0' 0' 0'

Net Floor Area Calculations



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Project:	57 JFK	Date:	03/22/22		
Proj. No.:	20.0003391	Drawn By:	Author		

0 0' 0' 0'

Net Floor Area Calculations

Client:	CRIMSON GALERIA LIMITED PARTNERSHIP	Scale:	1/16" = 1'-0"	**FIFTH FLOOR PLAN**	Sheet No.: A-110
Project:	57 JFK	Date:	03/22/22		
Proj. No.:	20.0003391	Drawn By:	Author		

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