SPSR - A

BLOCK 9
ASSEMBLY ROW

375 Harold Cohen Way, Somerville, MA
December 3, 2024

Federal Realty INVESTMENT TRUST

vhb

DIMELLA SHAFFER

WHLA WAGNER HODGSON

RWS

December 3, 2024

Ref: 08518.28

Sarah Lewis, Director of Planning, Preservation, and Zoning
City Hall 3rd Floor
93 Highland Avenue
Somerville, MA 02143

Re: SPSR-A
Assembly Row – Block 9

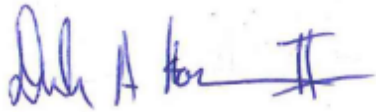
Dear Ms. Lewis,

Please find attached a Special Permit with Site Plan Approval (SPSR-A) application for the Assembly Row Block 9 Final PUD-Approval located at 375 Harold Cohen Way within the Assembly Square Mixed Use overlay district.

Please contact me by phone at (617) 924-1770 or dhorsman@vhb.com if you have any questions or need additional materials.

Sincerely,

Vanasse Hangen Brustlin, Inc.



Dale Horsman, P.E.

Project Manger
dhorsman@vhb.com

SPSR-A

Block 9

375 Harold Cohen Way
Somerville, Massachusetts

PREPARED FOR

Owner/Applicant:
Street Retail, LLC
909 Rose Avenue, Suite 200
North Bethesda, MD 20852
617.440.5635

PREPARED BY

260 Arsenal Place #2
Watertown, MA 02472
617.924.1770

December 3, 2024

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1 - Executive Summary

Executive Summary

Street Retail, LLC (successor in interest to SRI Assembly Row B9, LLC), on behalf of Federal Realty OP LP (formerly known as Federal Realty Investment Trust), (the "Proponent"), in partnership with the City of Somerville (the "City"), is working to transform the area known as Assembly Square into a thriving and integral part of the City.

The Proponent is pleased to now apply to the Planning Board for a Special Permit with Site Plan Approval (SPSR-A) of the proposed residential Block 9 building (the "Project") described within the Planned Unit Development (PUD) Preliminary Master Plan (PMP), Assembly Square, Somerville, MA which was approved by the Planning Board on December 14, 2006 as PB#2006-59, which was subsequently amended (as amended, collectively, the "PUD-PMP"). Pursuant to Section 7.4.3.c of the Zoning Ordinance, adopted in December 2019 for the City (the "Current SZO"), the Project is and will remain governed by the provisions of the previous Somerville Zoning Ordinance as in effect on August 1, 2019 (the "Former SZO") (unless specified herein, all references the Somerville Zoning Ordinance refer to the Former SZO). As the larger Assembly Row development is subject to the approved PUD-PMP, the Project is being developed in accordance with the entirety of the Former SZO, including among other provisions, Section 5.2 (Special Permits with Site Plan Review ("SPSR-A")), Section 6.4 (Assembly Square Mixed-Use District ("ASMD")) and Article 16 (Planned Unit Developments).

Article 16: Planned Unit Development (PUD), Section 16.8.3 of the Former SZO provides applications for Final Level Approval of a phase of a PUD PMP be submitted as an application for SPSR-A. The provisions for the application include requirements from Section 5.2.3 of Article 5: Special Permits, Special Permits with Site Plan Review, Site Plan Approval and Variances and Sections 6.47 and 6.48 of Article 6: Establishment of Zoning Districts.

The Project will be built on a parcel of approximately 62,481 square feet (SF) of land in the Assembly Row area of Somerville, Massachusetts, bordered by Foley Street to the North, Grand Union Boulevard to the East, Auto Workers Way to the South, and Harold Cohen Way to the West (the "Site"). The Project consists of the construction of an approximately 383,247 gross square feet (GSF) building on Block 9 providing 318 residential units, 20% of which will be affordable. The Project also includes ground floor retail and daycare, 149 structured parking spaces, and 150 bicycle parking spaces within the proposed residential building.

The Site is currently being used as a temporary surface parking lot servicing Assembly Row. The Site used to contain a marketing trailer to support the leasing operations of the neighboring Assembly Innovation Park development. The temporary trailer has since been removed from the Site. No structures are currently located on the Site.

The Proponent is now submitting the applicable City of Somerville applications for a new SPSR-A under the Former SZO. This application is focused on the mixed-use development, streetscape elements, and structured parking component of the proposed Project.

The Project marks the next milestone in the development and rebirth of the Assembly Square area into a vibrant transit-oriented waterfront district along the enhanced Mystic River. The Project helps to advance a broadly recognized Long Term Vision for the entire Assembly Square District, which prioritizes commercial office and R&D development; continues a walkable, mixed-use development pattern; improves connections to the surrounding districts and incorporates significant open space.

The key goals of the Long-Term Vision are:

- **Prioritizing commercial office and R&D development to optimize the tax base and job opportunities in Somerville** – the long-term vision anticipates that, overall, the district can accommodate up to 5,000,000 square feet of office space (including the 2,800,000 square feet of office/R&D included in the approved PUD master plan).

- **Creating a transit-oriented, mixed-use development** – in addition to the commercial office component, the future development of the district is envisioned to accommodate up to 1,400,000 square feet of retail (including the 645,000 square feet of retail, restaurant and theater uses in the approved PUD master plan); 3,000,000 square feet of residential and 1,000,000 square feet of flex space, which could accommodate some combination of office, R&D, hospitality and civic uses. All of these uses are served by the Assembly MBTA Orange Line station.

- **A pedestrian-oriented urban design with improved connections to the surrounding districts and incorporating significant open space amenities** – the vision combines an expanded riverfront park on the Mystic River, improved access to Draw 7 Park, smaller pocket parks, green roofs and system-wide trails.

The Project advances the goal of creating revenue-generating uses within the district by creating space for ground floor retail and restaurant uses. Development of Block 9 mixed-use space was previously anticipated and does not preclude commercial office and R&D development from occurring on nearby blocks within the district. The Project continues a synergy of mixed-use development that will help to support the Assembly MBTA Orange Line Station and create a vibrant waterfront urban environment. As illustrated in the PUD-PMP and this application, the urban design

and layout of Block 9 will help to create a lively new streetscape and attract visitors to the Assembly Square District to shop and recreate. The ample space dedicated for pedestrians around the building, the pedestrian-scale building design, multiple entries into the ground floor uses and building elevation treatment further enhance the pedestrian-oriented vision previously anticipated for the district. The Project is another important step to achieving the long-term goals and visions of the City, the state, and the community for this area.

3 – Zoning Compliance Narrative

3

Zoning Compliance Narrative

This section briefly describes how the "Proponent" has fulfilled the various submission requirements as described in Article 5 - Special Permits, Special Permits with Site Plan Review (SPSR), Site Plan Approval and Variances, Article 6.4 – Assembly Square Mixed-Use District (ASMD), and Article 16 - Planned Unit Development of the Somerville Zoning Ordinance adopted March 23, 1990, as amended through August 1, 2019 (the "Former SZO"). Pursuant to Section 7.4.3.c (*Applicability*) of the Somerville Zoning Ordinance effective December 12, 2019 (the "Current SZO") "Real property subject to a previously approved Planned Unit Development (PUD) Preliminary Master Plan (PMP) may be developed in accordance with the provisions of the SZO effective as of August 1, 2019." As such, because the larger Assembly Row development is subject to the approved PUD-PMP, Block 9 is being developed in accordance with the entirety of the Former SZO, including among other provisions, Section 5.2 (Special Permits with Site Plan Review ("SPSR-A"), Section 6.4 (Assembly Square Mixed-Use District ("ASMD") and Article 16 (Planned Unit Developments) unless specified herein, all references the Somerville Zoning Ordinance refer to the Former SZO.

The following also summarizes various applicable Ordinance provisions from which Block 9 at Assembly Development (the "Project") requires zoning relief. The numbering used throughout this chapter follows the section numbering of the Former SZO. Block 9 is located on a 1.4 acre of land bounded by Foley Street, Grand Union Boulevard, Auto Workers Way, and Harold Cohen Way (the "Site").

The Assembly Row PUD PMP Site is located in the ASMD and is subject to the PUD PMP (PB 2006-59-R2 as amended) approved by the Somerville Planning Board, which Assembly Row PUD PMP was fully vested pursuant to Section 16.10.3 of the SZO then in effect.

3.1 ARTICLE 5: SPECIAL PERMITS, SPECIAL PERMITS WITH SITE PLAN REVIEW, SITE PLAN APPROVAL AND VARIANCES

5.2.3.1 Name, addresses, and telephone numbers of the applicant, the owner, if other than the applicant, and other agents for the

applicant, such as the architect, engineer and/or attorney and the name and address of the proposed project:

The name, address, and telephone numbers for the Proponent, Engineer, Architect and Attorney are provided in the Special Permit Application and on the cover sheet of the Special Permit plan set (the "Plans"), found in Appendix A.

5.2.3.2 Plot plan certified by land surveyor indicating total land area, boundaries, angles and dimensions of the site and a north arrow:

Refer to the Existing Conditions Plan of Land and the Layout and Materials Plan, found in Appendix A, which depict boundaries, angles, and dimensions for the Site and a north arrow.

5.2.3.3 Scaled site plan(s) certified by a registered land surveyor, architect, landscape architect or engineer showing:

3.a) present and proposed use of the existing land and existing buildings, if any:

The Project is anticipated to include ground floor retail/restaurant and upper floor structured parking and residential units. The proposed Block 9 building and its associated site improvements are shown on the Overall Site Plan, Layout and Materials Plan, Grading and Drainage Plan, and the Utility Plan, found in Appendix A. Building elevations are also included in Appendix A. The various sheets of the Civil Site Plans in Appendix A have been certified (stamped) by a registered land surveyor, engineer, and/or landscape architect, as appropriate. The Existing Conditions As-Builts show existing building and uses at the Site.

3.b) dimensions of existing and proposed building(s) or other structures including height, setback(s) from property lines and total square footages of all floors:

The proposed Block 9 footprint is shown on the Layout and Materials Plan. The total net square footage is approximately 256,222 net square feet and the gross square footage is approximately 383,247 square feet, including the structured parking area. The proposed Block 9 building height is 85 feet to top of the roof parapet. A Zoning Summary chart listing the required and provided dimensional requirements, including setbacks, is located on the Layout and Materials Plan, found in Appendix A.

Table 3-1 – Building Coverage and Area

Description	Ground Coverage (SF)	Net Floor Area (NSF)
The Project	57,085±*	256,222±*

*Subject to change with revised massing

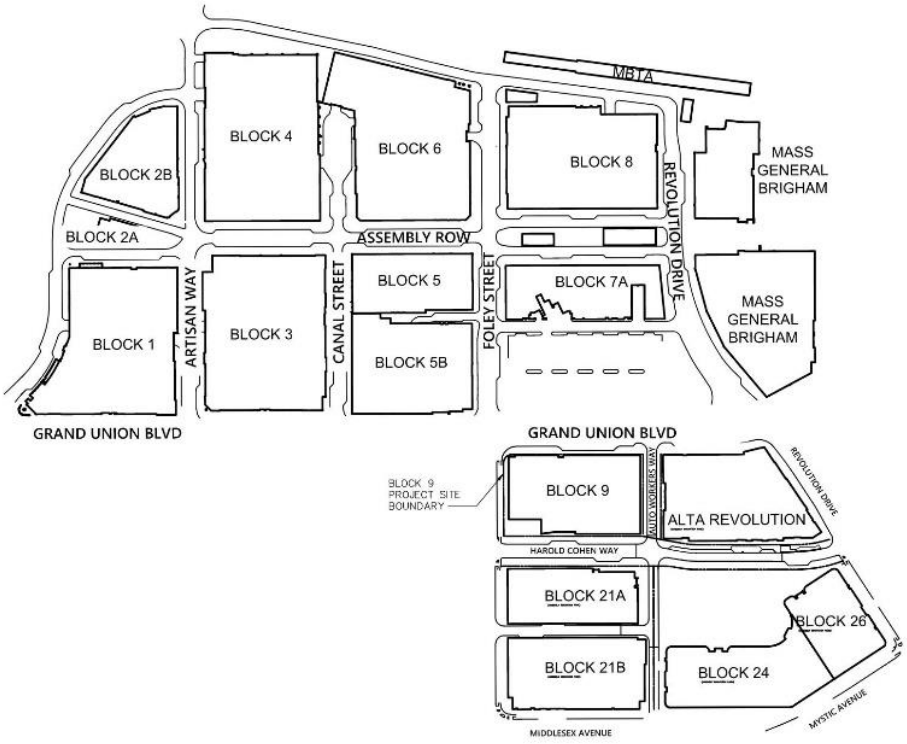
3.c) locations and dimensions of any easements and public or private rights of way, or other burdens, existing and proposed:

The existing easements and rights of way are shown on the Existing Conditions As-Builts included in Appendix A. At the time of the SPSR, there are no proposed easements.

3.d) at-grade parking and loading areas showing number, location, and dimensions of the parking and loading spaces, driveways, access and sidewalks:

The proposed Block 9 building includes the construction of 149 structured garage parking spaces within the building. The Project will include six (6) accessible spaces, which includes two (2) van accessible spaces, and 150 bicycle spaces for bicycle parking. The loading area for the proposed Block 9, accessed via Auto Workers Way, is situated within the building and will contain two (2) loading spaces, with a separate trash/recycling room. Standard parking spaces will be 9-feet by 18-feet, standard accessible parking spaces, including access aisles, will be 14-feet by 18-feet, and van accessible spaces, including access aisles, will be 17-feet by 18-feet. Drive aisles within the garage will be at least 20-feet wide. In the structured garage, one section of a drive aisle will be less than 20-feet wide, for which a waiver is requested. Access to the Site is provided via Foley Street along the north side of the building, Grand Union Boulevard along the east side of the building, Harold Cohen Way on the west side of the building, and Auto Workers Way on the south side of the building. Details regarding sidewalks surrounding the proposed Block 9 building are included in the Civil Site Plans, found in Appendix A. Exhibit A below provides a site key showing the location of the Project in relationship to the rest of the Assembly Row PUD-PMP development.

Exhibit A – Assembly Row PUD-PMP Project Site Key



5.2.3.4 A brief written description of the proposed project, such as proposed construction or demolition, all uses, who the project is intended to serve, expected number of employees and/or occupants and methods and hours of operation, as applicable:

The Project consists of mixed-use development, with residential units over structured parking on the first and second levels. The first floor uses include residential lobby, amenity spaces, and retail/daycare. Construction type is III over I, made up of five floors of wood frame construction over one floor of steel framing and two levels of post-tensioned concrete.

Access to the structured parking garage is off of Auto Workers Way. Access to the residential units through the garage will be provided in a central core elevator/stair.

Pedestrian access to the retail/daycare space is provided along Foley Street, Harold Cohen Way, and Grand Union Boulevard.

Loading and servicing is located in the back of house via the proposed loading docks along Auto Workers Way. Trash is located in the proposed loading dock area.

The proposed building will create approximately 25 jobs.

More details about ground floor uses will be provided in a future submission for city staff review. Hours of operation for the ground floor uses will be determined based on tenant selection which is unknown at this time.

5.2.3.5 The total floor area and ground coverage ratio of each proposed building and structure:

Dimensional requirements and site conditions are summarized in the Zoning Summary Chart on the Layout and Materials Plan. The total net floor area of the proposed Block 9 building is approximately 256,222 square feet. The Site is approximately 62,481 square feet, resulting in a Floor to Area Ratio (FAR) of up to 4.1, well below the maximum allowed FAR of 10.0.

Open Space and Usable Open Space requirements within the Assembly Square Mixed-Use District are 25% and 12.5%, respectively. The PUD-PMP approved by the Planning Board provides that the Open Space and Usable Open Space requirements may be met in the aggregate over the entire PUD area without each individual parcel being required to meet the otherwise applicable standards. In order to arrange the Open Space and Usable Open Space in the most appropriate way, some parcels within the PUD area may exceed the open space requirements, while others may, within their individual property lines, contain less than the otherwise prescribed open space area. The PUD PMP strives to locate the open space in proximity to the water and in aggregated areas that provide connection from the development to the water of the Mystic River. As such, the majority of the open space within the PUD-PMP is located closer to the water.

The total land area within the PUD-PMP is approximately 2.6 million square feet. The proposed configuration of the full-build Block 9 building has changed slightly since the last Assembly Row special permit approval. As a result, the amount of Open Space and Usable Open Space within the Master Plan has increased slightly from the previous approval to27.9%, and the Usable Open Space to 21.9%.

The total area of the Site is approximately 62,481 square feet. The area of Open Space on the full-build Block 9 building site is anticipated to be approximately 5,017 square feet. The area of Usable Open Space on the Site is anticipated to be approximately 4,755 square feet. Therefore, Open Space is 8.0% of the Site and Usable Open Space is 7.6% of the Site.

5.2.3.6 Front, side and rear elevations:

Elevations of the front, side and rear of the Project are shown on the Elevations Plans in Appendix A.

5.2.3.7 Existing and proposed contour elevations in two foot increments:

The existing ground elevations are shown in one-foot contour intervals on the Existing Conditions As-Builts, found in Appendix A. The Site is generally flat with elevations ranging from 9 feet to 14 feet and is at the same relative elevation as the surrounding area.

The proposed grading is shown on the Grading, Drainage and Erosion Control Plan, found in Appendix A, by contours and spot grades. The site elevations range from elevation 9 feet to 14 feet with the average proposed elevations of the Site.

5.2.3.8 Provisions for vehicular and pedestrian circulation:

Pedestrian sidewalks of varying widths will run along the perimeter of the Site connecting points along Auto Workers Way, Harold Cohen Way, Foley Street, and Grand Union Blvd. Details for the proposed sidewalks are found in the Civil Site Plans in Appendix A. Vehicular and pedestrian circulation are shown in Appendix E – Mobility Management Plan and Appendix F – Transportation Access Plan.

5.2.3.9 Color, materials, and exterior features of proposed structures:

The materials for Block 9 consist primarily of cementitious panels and metal panel, with storefront on the ground level at lobby, amenity, and retail spaces. The cementitious and metal panels will exhibit a variety of textures to add richness to the material palette.

Retail storefront systems will be designed to accommodate future tenant enhancements, such as signage and canopies.

5.2.3.10 Landscaping and screening, including trees, stones, walls, fences and other features to be retained and removed as well as color, size and type of landscape surface materials:

Detailed landscape plans can be found in Appendix A.

The Site contained a temporary marketing trailer with a temporary parking lot. In the summer of 2024, the temporary marketing trailer was removed by others.

The existing site contains four (4) Public Street Trees & nineteen (19) Private Trees. The proposed landscape design will remove all trees and will provide a Public Replacement Tree(s) for along Grand Union Boulevard as required by the Somerville Tree Ordinance. The Proponent will work with the City to coordinate necessary permits for removal of the trees. In addition, seventeen (17) new Public Trees will be introduced to the Site along Foley Street, Grand Union Boulevard & Harold Cohen Way.

The Project will include streetscapes on all four (4) sides of the building and will follow the Assembly Innovation Park (AIP, formerly known as XMBLY) Master Plan Design Guidelines, which builds off the original streetscape hierarchy established in the Assembly Row Design Guidelines, to mimic the streetscape of the neighboring AIP development. As specified in the AIP guidelines, Harold Cohen Way, will serve as the main pedestrian-oriented street for the AIP neighborhood, tying the future AIP Central Open Space to Baxter Riverfront Park located along the Mystic River. The Block 9 portion of this streetscape integrates a similar landscape character as installed at the neighboring AIP blocks and once finished will complete the first block section of the Master Plan's Main Streetscape vision.

Similar to AIP, the Project's streetscape includes a wide pedestrian zone which is separated from the street by a raised curbed planting bed adorned with street trees, shrubs, and perennials. This planting bed area falls within the transition zone, which also accommodates street lighting and a vehicular drop-off area directly in front of the main building entrance.

The wide pedestrian zone, will be defined by unit pavers at building entries and frontage zones, scored concrete walks/ areas, linear raised planters, monolithic benches, and other site furnishings. The intersection of Auto Workers Way and Harold Cohen Way is a woonerf/shared street condition so additional bollards will be integrated at the flush curb condition to provide another layer of protection for pedestrians.

The other three streetscapes are defined similarly to Harold Cohen Way with raised planting beds, unit pavers, concrete walks, lighting, site furniture and plantings. On Foley Street, a 5' wide protected bike lane is accommodated along the street edge and is separated from the pedestrian zone with a raised planter where Street trees and perennials lie. On Grand Union Boulevard, a bus stop in located in the transition zone and aligns with the curbed planting bed.

5.2.3.11 Measures taken to preserve and protect natural resources:

There are no unspoiled natural resources located within the Site. Remediation of several current Brownfield areas by virtue of this Project is a clear environmental benefit of the Project. In addition, the Proponent has taken LEED under consideration by completing and submitting a LEED checklist. See attached LEED checklist in Appendix D. The Project is pursuing to be LEED Gold certifiable.

5.2.3.12 Outdoor lighting, including location and intensity of lighting facilities:

Outdoor lighting associated with the Project is proposed as street lighting along the four perimeter streets and lighting the exterior of the building facade. Details of street lighting were approved in a previous submission to the city staff. Lighting along the exterior of the building façade will include wall wash lighting elements strategically placed for a variety of functions such as to accent key monument features, cornices, entries, walkways and loading and service areas.

5.2.3.13 Dimensions and locations of signs, proposed and existing:

Location and approximate dimensions of proposed signage is depicted on the signage elevation plans. Signage is proposed at the entries of the lobbies and the parking garage. Parking garage signage will comply with Section 12.5.1 Parking Garage Signage.

Refer to the Layout and Materials Plan in Appendix A for the site sign dimensions and locations.

5.2.3.14 Location and significance of historic structures:

Based on a Historical Survey conducted by VHB in 2005, no properties included in the State or National Registers of Historic Places are located within the Project limits. Two buildings, one at 99 Foley Street and the other at 34 Sturtevant Street, were included in the Massachusetts Historical Commission's (MHC) "Inventory of Historic and Archaeological assets of the Commonwealth", however, due to extensive prior renovations that compromised each building's integrity, they were deemed by the MHC to be not eligible for inclusion in the National register of Historic Places. Both structures have since been demolished.

5.2.3.15 Method of handling solid waste disposal, and screening of disposal facilities:

Solid waste disposal will be handled by private contractors. The disposal facilities (dumpsters and compactors) will be internal and accordingly will not be visible to public view.

5.2.3.16 Description and location of all proposed mechanical and electrical system components including exhaust and ventilation system, transformers and satellite dishes:

Most of the mechanical and electrical equipment such as air handlers, energy recovery ventilation units, generator, and exhaust fans will be located on the rooftop and not visible from the street. The Project does not propose penthouse screening for the rooftop equipment. Miscellaneous other mechanical and electrical will be located on in the enclosed parking garage.

Current design plans for a single side wall vent for each unit will be incorporated into the façade design with color matching vents. Venting for Level One of the structured parking garage will be through louver bands at the top of the retail storefronts. Venting for Level Two of the structured parking garage will be through sidewall louvers along Auto Workers Way and Foley Street.

The electrical transformers and switch gear will be located in an enclosed vault/alcove within the 1st floor of the building along the southern end of Grand Union Boulevard.

No satellite dishes are expected. Architectural floor plans and building elevations are included in Appendix A.

5.2.3.17 Locations of and adequacy of existing and proposed on-site public utilities, facilities, and conditions (water, sewerage, and drainage), showing size and direction of flows:

The existing utilities are shown on the Existing Conditions As-Builts, found in Appendix A. The proposed utilities and drainage systems for the Project are shown on the Grading, Drainage and Erosion Control Plan and on the Utility Plan, found in Appendix A. The constructed utility infrastructure in the surrounding roadways, previously designed and constructed to accommodate the full building Assembly Row PUD PMP is sufficient to service the proposed Block 9 building. The design information for utilities is contained in Chapter 4, Utility Design & Management.

5.2.3.18 Demolition and construction procedures including impact mitigation measures; an estimate of the time period required for the completion of the development:

The Project does not involve any building demolition. The estimated completion date for the Project is the third quarter of 2028.

5.2.3.19 A traffic study including estimated peak hour traffic volumes generated by the proposed use in relation to existing volumes and projected future conditions or, if the project is 25,000 SF or more, a traffic impact analysis which is prepared by a professional traffic engineer:

This application contains Appendix E - Mobility Management Plan and Appendix F – Transportation Access Plan. These documents provide summaries of the key transportation aspects of the Project. Multiple extensive traffic studies previously prepared by VHB for the Assembly Square Mixed-Use Redevelopment project all were conducted assuming development scenarios for Block 9 that are entirely consistent with that currently proposed. This includes the 2014 Traffic Impact and Access Study for the nearby Block 11A development, previously known as the Partners Healthcare Campus and now known as Mass Brigham General. That evaluation contained analysis of the full build-out of the Assembly Square Mixed-Use Redevelopment, including the current Block 9 proposal, which considered changes planned in conjunction with the Block 11A development at key locations on Grand Union Boulevard. Accordingly, in the absence of any notable changes to the development proposal, trip generation or surrounding transportation network an updated traffic analysis should not be required. With the Block 9 trip generation being consistent with previous proposals, trip distribution

remaining unchanged, and the completion of nearby roadway improvements associated with the overall Assembly Square Mixed-Use Redevelopment project, the Block 9 development should not significantly impact traffic conditions in the area. The MBTA Orange Line Assembly Station project just east of Block 9 opened in September 2014. This will help to further reduce the burden on the roadway network by providing an alternative to visitors wishing to visit Block 9 and the surrounding new development area without having to drive. New bicycle and sidewalk amenities being implemented as part of this Project will enhance the multi-modal environment near the Site further.

5.2.3.20 General summary of existing and proposed easements or other burdens now existing or to be placed on the property:

The existing easements and rights of way are shown on the Existing Conditions As-Builts and the Layout and Materials Plan found in Appendix A.

5.2.3.21 Wetlands, ponds, and surface water bodies, as defined under the Wetlands Protection Act, M.G.L. chapter 131, Section 40, and rules promulgated there under, 310 C.M.R. 10.00:

There are no wetlands on the Site.

5.2.3.22 Photographs of at least eight (8) by ten (10) inches, showing the development site and surrounding parcels:

Please refer to Appendix C for existing conditions photographs of the Site.

5.2.3.23 Names and addresses of all property owners within three hundred (300) feet of the site boundaries:

A copy of the Certified Abutter's list from the City is included with the application.

3.2 ARTICLE 6: ESTABLISHMENT OF ZONING DISTRICTS

6.4.6. Dimensional Requirements. ASMD Table of Dimensional Requirements

The Site is located within a PUD-A district and per Section 6.4.6 –ASMD Table of Dimensional Requirements – the Site is located more than 350 feet from the Mystic River Bank. The nearby MBTA Orange Line Assembly Row stop has an associated maximum building height requirement for all proposed buildings within and beyond 1,000 feet from the MBTA Orange Line entrance. Because the Project is located less than 1,000 feet from the MBTA Orange Line entrance, the maximum building height requirement for Block 9 is 250 feet, subject to relief. Consistent with the approved Amended PUD-PMP Master Plan, a height of less than 250 feet for the Block 9 building is proposed.

Table 3-3 Zoning Compliance Program Table

Requirement	Allowed/Required within a PUD-A	Proposed	Status
Minimum Lot Area	20,000	62,481 SF (1.4± acres)	Complies
Floor Area Ratio	10.0	4.1	Complies
Building Height Block 9 (ft)	250'	85'	Complies
Total Open Space (SF)*	25%	27.9%	Complies
Useable Open Space (SF)*	12.5%	21.9 %	Complies
Min. Yard Setbacks	No Minimums	0.26'	Complies
Vehicle Parking	349	149 **	*Waiver Requested*
Loading Spaces	0	2	Complies

**The approved PUD-PMP provides that the Open Space and Usable Open Space requirements may be met in the aggregate over the entire PUD area without each individual parcel being required to meet the otherwise applicable standards. In order to arrange the Open Space and Usable Open Space in the most appropriate way, some parcels within the PUD area may exceed the open space requirements, while others may, within their individual property lines, contain less than the otherwise prescribed open space area.*

***Pursuant to the approved PUD-PMP, Assembly Row is entitled for 10,066 parking spaces. The Project brings the total parking spaces developed to 5,820. Further, the PUD-PMP does not require compliance with the parking requirements of the Former Zoning on a project-by-project basis. Rather, compliance is demonstrated across the PUD.*

6.4.7. A *Development Standards and Design Guidelines for Developments in the ASMD*

A.1) *Transportation Analysis.* All new developments shall conform to the requirements set forth in any Transportation Study, subject to the approval of the SPGA.

As noted in section 5.2.3.19, Appendix E - Mobility Management Plan and Appendix F – Transportation Access Plan, consider the key transportation elements of the Project. The trip generation, access plan, and overall operation of the Site are consistent with that originally contemplated as part of the Assembly Square master plan permitting. The existing roadway infrastructure throughout Assembly Square will be more than adequate to accommodate the expected traffic impacts associated with the Project without the need for further mitigation. New bicycle and sidewalk amenities being implemented as part of this Project will enhance the multi-modal environment near the Site further.

A.2) *Parking Requirements.* Developments shall meet the parking requirements set forth in Section 9.16.

Section 9.15, Bicycle Access, and Parking requires that 108 bicycle parking spaces be provided on the site. A portion of the bicycle parking will be located near the retail entrances for short term use. 150 bicycle parking will be located in the parking garage easily accessible by tenants for long term use.

Based on the Former SZO, the Project is required to provide 349 total parking spaces. The Project proposes 149 parking spaces located in the structured parking garage, for which a waiver is requested. Pursuant to the approved PUD-PMP, Assembly Row is entitled for 10,066 parking spaces. The Project brings the total parking spaces developed to 5,820. Further, the PUD-PMP does not require compliance with the parking requirements of the Former Zoning on a project-by-project basis. Rather, compliance is demonstrated across the PUD.

A.3) *Landscaping Requirements.* Developments shall conform to the applicable landscaping requirements set forth in Article 10. Open spaces shall be contiguous to the extent practical, in the opinion of the SPGA.

The Block 9 building was laid out along the Harold Cohen Way lot line. The Project will include landscaping in the form of street trees and raised planting beds conforming to the requirements set forth in Article 10. The

landscaping and sidewalk design will be submitted in a future submission for city review.

A.4) *Pedestrian Connections.* Continuous pedestrian connections shall be supported between all major points of pedestrian activity on the Development Site, including, but not limited to, connections to the Mystic River waterfront, connections to all public and private ways abutting the Development Site, and any transit stops. Developments shall support improved access.

The Project includes ground floor retail or restaurant and daycare on the Harold Cohen Way, Grand Union Boulevard, and Foley Street sides of the building and will allow for pedestrian access to retail spaces as well as the structured parking. All four sides of the building will have continuous pedestrian connections originating from Grand Union Boulevard and the Mystic River Reservation into the Assembly Square District area. Streetscape and sidewalk elements along the four streets will be reviewed in a future submission for city review.

B) ***Design Guidelines.*** **In reviewing a Development of more than 10,000 SF, the SPGA/DRC shall consider the following design guidelines. These guidelines are intended to serve as a general basis for the SPGA and Applicant alike to discuss the design merits of a Development, but are not intended to inhibit design creativity when the application otherwise conforms to all other substantive review criteria. These guidelines are not intended to discourage innovative architectural design solutions. Rather, they provide general standards for the massing, siting and articulation of Buildings for developers and architects to work from. They also provide parameters for dialogue between the Applicant and SPGA on design issues for Developments. These Guidelines are intended to supersede the guidelines set forth in Section 5.2.4. It is understood that existing Buildings and Structures will not be able to comply with all of the following Guidelines:**

B.1) *Street and Sidewalk Design*. Street and sidewalk design shall be based on the Assembly Square Public Realm Design Guidelines and applicable engineering standards, provided that any street shown in such Guidelines as running through an existing Building is not required to be constructed until such Building is demolished.

The Project does not include construction of any new streets. It will include sidewalk construction. Details regarding new sidewalks surrounding the proposed Block 9 building are included in the Civil Site Plans in Appendix A. The design of streets and sidewalks will respond appropriately to the Street and Sidewalk Design Criteria of the Assembly Square Public Realm Design Guidelines.

B.2) *Building Design*. Buildings shall be designed to the highest architectural standards and shall be sited appropriately on the Lot. Specifically, all construction shall:

B.2.a) Be located to create a presence on existing street edges or along major internal circulation routes. Maximum building setbacks of five feet shall be encouraged, except in special circumstances, where greater setbacks would enhance the pedestrian-friendly experience of the ASMD, such as dedicated open space. Buildings shall be located to reinforce both existing and future circulation patterns that may serve more than one Site:

The Project consists of a mid-rise residential building along Grand Union Boulevard, and retail/restaurant storefront along Foley Street, Harold Cohen Way, and Grand Union Boulevard. The residential units will be a mix of studios, 1-bedroom, and 2-bedroom units, for a total of 390 bedrooms within the proposed 318 units. Maximum ground floor setbacks ranging from 0.26 feet to 5.75 feet are provided along all major pedestrian walks to hold existing street edges. The proposed building height is 85-feet. Retail storefronts are located in close proximity to other retails and open spaces in the development to support the overall activities of the streetscape. Back of house spaces are located along southern side of the building at Grand Union Boulevard and Auto Workers Way away from the retail storefronts. The structured parking garage is located across Levels One and Two of the building with access via Auto Workers Way. A courtyard is proposed on the third floor as a tenant amenity space.

As shown in the Elevation views found in Appendix A, the six residential floors will be 10′-6″ in height, with Level 8 at 11′-4″. The ground floor retail and garage height will be 11′-2″ and the Level 2 garage height will be 10′

B.2.b) Create interesting entrance areas that are visible and directly accessible from major public access points, streets and circulation patterns. Extensive areas of glass and window, providing visual access to interior uses, shall be part of all street facades and will accompany building entrances. Multiple and frequent entrances oriented to streets are encouraged. Building entrances shall be clearly defined, through the use of elements such as canopies, porticos; overhangs, peaked roof forms, arches. Entries set back from the street shall have outdoor patios, tile work, moldings, integral planters or wing walls with landscaped areas, or places for sitting:

The residential lobby space has one pedestrian entrance on Grand Union Boulevard and another on Harold Cohen Way. The entrances will be highly visible, accentuated by building massing, large canopies,

transparent materials, and entrance signage. These entrances include built-in seating and landscaped planters. Aside from the residential lobby entrances, retail storefront windows will line Foley Street and wrap around a portion of both Grand Union Boulevard and Harold Cohen Way. The remainder of Harold Cohen Way is animated by residential amenity area storefront which wraps around the corner of Auto Workers Way to create a connection to the future Assembly Innovation Park across the way. An artistic graphic will wrap the corner of Auto Workers Way and Grand Union Boulevard.

B.2.c) Clearly define the pattern of bays, rhythms, and dimensions to create continuous visual interest and variety in the design of all faces:

The architecture along the ground floor at Grand Union Boulevard, Foley Street and Harold Cohen Way is emphasized by a regular spacing of piers in materials that highlight verticality – either a profiled metal panel or high-density cementitious panel. These piers frame the level 1 storefront and level 2 parking bays above. Along the utilitarian corridor of Auto Workers Way, the storefront gives way to service entries at the ground level. The resultant double-level podium is consistent with adjacent mixed-use developments.

B.2.d) Break down the overall scale of development to respond to the pedestrian-scale use of Open Space:

The overall massing of the building is broken down by two main façade patterns that wrap alternate corners of the building. These two façade languages are separated by recesses that correspond to building circulation, resulting in highly visible defined corners.

Within these two major façade designs, the residential stories above are further broken down by fenestration – one vertically oriented and the other horizontally-oriented.

A level of horizontal cementitious panel cladding in contrasting color caps the building in a manner recalling traditional Mansard roofs, adding depth and visual interest at the top of the structure.

B.2.e) Use materials and colors consistent with traditional Buildings in the area with historic merit:

The building will employ a neutral color palette that includes warm wood and nature-invoking tones. Metal panel at the podium and interspersed throughout the residential levels above recalls the former industrial nature of the site, while stone veneer and storefront at the base of the

building are consistent with retail facades throughout the Assembly Row neighborhood.

B.2.f) Locate building equipment and service areas away from Public Ways or major interior circulation routes and provide screening. Enclose all storage of inventory unless it is completely screened from public view with architectural elements meeting these guidelines:

All mechanical and service access locations are tucked away from major pedestrian ways, and these areas are masked with garage doors. Mechanical equipment on the roof is placed far away from the edge of the building edges to avoid sightline from streets.

B.2.g) Show preference for vertical integration of uses. Developments shall ensure that development patterns provide active uses on the Ground Floor that take advantage of the waterfront views and open spaces, and that add presence to public ways and sidewalks:

Levels 1 and 2 are integrated into uniform bays consisting of storefront and profiled metal panel. This double-level podium is consistent with adjacent mixed-use developments.

In addition, a double-height dedicated outdoor space is provided at the retail area at the corner of Harold Cohen Way and Foley Street.

B.2.h) Not have any uninterrupted or un-fenestrated length of its façade exceeding thirty-five (35) horizontal feet. Facades greater than one hundred (100) feet in length, measured horizontally, shall incorporate wall plane projections or recesses having a depth of at least three (3) percent of the length of the façade and extending at least twenty (20) percent of the length of the façade; and

There are no expanses of uniform façade exceeding 35’ feet in the horizontal direction. The building uses multiple recesses at regular intervals to enliven each facade.

B.2.i) Have windows providing visual access to the interior space, arcades, display windows, entry areas, awnings, or other such features no less than seventy (70) percent of their horizontal length on all Ground Floor facades that face Public Ways or the Mystic River. Forty percent (40%) of this activated façade area on the Ground Floor of Building walls along primary and secondary streets shall consist of windows or doors meant for public entry and exit.

The ground level of the Project is organized around retail storefront along Foley Street and highly visible residential lobby entries on Harold Cohen Way and Grand Union Boulevard. These entries are framed by

canopies in a warm, wood-patterned siding and accentuated by entrance signage and building recesses above.

The majority of the activated space along the ground floor consists of glazing that allows visual access to the interiors. Both residential lobby entries consist primarily of glass. In addition, retail storefront windows will line Foley St and wrap around a portion of both Grand Union Boulevard and Harold Cohen Way. The remainder of Harold Cohen Way is animated by residential amenity area storefront which wraps around the corner of Auto Workers Way.

B.3) *Parking Lot Design.* Refer to Section 9.16 for parking requirements. Parking Lots shall avoid large expanses that are unbroken by Buildings or substantial landscaped Open Spaces, as set forth in Section 10.4 of this Ordinance.

The Project does not propose any surface parking lots on the Site. All parking spaces located on the site are located within an enclosed parking garage.

4) *Open Space*.

4.a) Landscaping strips required in parking areas (Article 10) shall not apply to Usable Open Space calculations.

The Project does not propose any surface parking, therefore there are no landscaping strips.

4.b) Developments are encouraged to make significant contributions to Open Space along the Mystic River adjacent to the ASMD. These contributions shall be designed and developed with special attention to the provision of wildlife habitat and contiguous migration corridors, and to help reduce the level of stormwater runoff into the Mystic River.

The PUD Preliminary Master Plan approved on December 14, 2006 as amended on August 5, 2010 and again on June 19, 2014 identifies areas within the master plan area that are significant areas of open space adjacent to the Mystic River. Those parks and open space adjacent to the Mystic River have been designed and constructed in coordination with the Massachusetts Department of Conservation and Recreation (DCR) and in conjunction with phases of the development that are adjacent to them so that the design is cohesive with the adjoining uses.

5) *Efficiency of Design*. Every effort shall be made to design Buildings and use materials and construction techniques to optimize daylight in building interiors, natural ventilation, energy efficiency,

and to minimize exposure to and consumption of toxics and non-renewable resources and incorporate appropriate "green" design techniques. In accordance with this principle all Developments within the ASMD in excess of ten thousand (10,000) SF shall be required to complete a Leadership in Energy & Environmental Design (LEED) worksheet and submit the worksheet to the SPGA with permit application materials. This worksheet shall be considered in evaluating whether a proposed Development meets the applicable standards set forth elsewhere in this Ordinance. However, consistency with the LEED standards shall not be a factor in whether or not to permit a Development.

The Proponent has completed a LEED worksheet for the Project and is provided in Appendix D. The LEED worksheet reflects current design assumptions and may be revised slightly as design progresses.

6) *Contributions*. Contributions for Infrastructure and Open Space related to a Development made by an Applicant to the City or its constituent agencies in other agreements or permits shall be credited by the SPGA toward any applicable requirements hereunder for a Special Permit.

As part of the PUD-PMP Approval for the overall project, the Proponent and its development partners have made significant contributions to the City and to the Commonwealth for infrastructure and open space related to the Project and the overall development of the Assembly Square area.

To date, the following contributions have been paid to the City:

- $1 million for design and construction of Trum Field, Hodgkins-Curtin Park, Harris Playground, Grimmons Playground, North Street Playground, Central Hill Playground, or other municipal purposes, upon execution of an Amended and Restated Assembly Square Development Covenant By and Between Federal Realty Investment Trust, IKEA Property, Inc., City of Somerville, and Somerville Redevelopment Authority and a Master Land Disposition Agreement By and Between Somerville Redevelopment Authority and Federal Realty Investment Trust.
- $1 million for municipal purposes, upon receipt of a fully vested Certificate of Occupancy for the Assembly Square Marketplace.
- $250,000 for the study, design, and implementation of circulation improvements within and/or affecting Assembly Square area.
- $250,000 for design and construction of improvements to that portion of the Department of Conservation and Recreation park along the Mystic River abutting the development area.
- $250,000 for the Somerville Affordable Housing Trust Fund.
- $100,000 to study the feasibility of a new MBTA Orange Line station at Assembly Square.
- $100,000 for construction of pedestrian walkways to mitigate traffic in the Assembly Square area.

- $100,000 to study the feasibility of a Rt. 28 pedestrian crossing/undercarriage.
- $75,000 for public art to be installed on the Mystic River park.
- $50,000 for East Somerville neighborhood improvements.
- $50,000 for Ward 4 neighborhood improvements.
- $30,000 for the repair of a traffic signal at the intersection Foley St. and Middlesex Ave.
- IKEA contributed $1 million for municipal purposes upon issuance of a fully vested Special Permit with Site Plan Review – A for the IKEA store.
- IKEA contributed $100,000 for traffic mitigation and improvements on and near lower Broadway upon issuance of a fully vested Special Permit with Site Plan Review – A for the IKEA store.
- The Proponent contributed $1 million for municipal purposes upon securing all necessary approvals, authorizations, and appropriations for funding pursuant to certain public infrastructure financing programs.
- The Proponent contributed $600,000 for municipal purposes upon issuance of a building permit for any building that is part of the PUD Preliminary Master Plan, excluding the IKEA store and the Assembly Square Marketplace. Furthermore, the Proponent has paid $15 million for the design and construction of the new MBTA Orange Line station at Assembly Square.

The Proponent provided $100,000 to the City for the design of a new Mystic River pedestrian/bicycle connection underneath Route 28 connecting Assembly Square and the Ten Hills neighborhood and funded its construction as part of an up to $2 million commitment to pedestrian/bicycle/riverfront park enhancements on DCR land.

7) *Loading Spaces*. To the extent possible, loading spaces shall be located away from major Public Ways, the Mystic River and other highly visible locations. Every effort shall be made to incorporate creative design to reduce the negative visual impacts of the Loading space.

Loading spaces proposed for the Block 9 building are located within the building, accessed via Auto Workers Way, and not visible from major public ways. They are situated opposite the loading spaces of the adjacent building across the street. As such, negative visual impacts from the loading are not anticipated.

6.4.8 Development Standards and Design Guidelines for Large Developments

A Large Development in the ASMD shall be regulated as a Planned Unit Development-A (PUD), and the procedures for such Large Development shall be those set forth in Article 16, as augmented by this Subsection. No Large Development shall be permitted in the

ASMD under any other provision of this Ordinance except those qualifying for the Priority Development Process. Priority Permitted Uses are not subject to this Section 6.4.8.

The development standards and design guidelines for Large Developments shall be as set forth in this Section 6.4.8. In addition to the submission requirements of Article 16, all applicants for Large Developments must also provide the Special Permit Granting Authority (SPGA) or its designee with the additional submissions listed below in order for any application for the PUD-A Master Plan to be considered complete. Large Developments, which do not qualify as Priority Permitted Uses but are submitted as part of a Priority Development Process, shall also conform to the standards and guidelines set forth in this Section 6.4.8 even though they are not required to be regulated as a PUD-A.

A) Traffic Access and Impact Study, including a Transportation Demand Management Plan.

This application contains Appendix E - Mobility Management Plan and Appendix F – Transportation Access Plan. These documents provide summaries of the key transportation aspects of the Project. Multiple extensive traffic studies previously prepared by VHB for the Assembly Square Mixed-Use Redevelopment project all were conducted assuming development scenarios for Block 9 that are entirely consistent with that currently proposed. This includes the 2014 Traffic Impact and Access Study for the nearby Block 11A development, previously known as the Partners Healthcare Campus and now known as Mass Brigham General. That evaluation contained analysis of the full build-out of the Assembly Square Mixed-Use Redevelopment, including the current Block 9 proposal, which considered changes planned in conjunction with the Block 11A development at key locations on Grand Union Boulevard. Accordingly, in the absence of any notable changes to the development proposal, trip generation or surrounding transportation network an updated traffic analysis should not be required. With the Block 9 trip generation being consistent with previous proposals, trip distribution remaining unchanged, and the completion of nearby roadway improvements associated with the overall Assembly Square Mixed-Use Redevelopment project, the Block 9 development should not significantly impact traffic conditions in the area. The MBTA Orange Line Assembly Station project just east of Block 9 opened in September 2014. This will help to further reduce the burden on the roadway network by providing an alternative to visitors wishing to visit Block 9 and the surrounding new

development area without having to drive. New bicycle and sidewalk amenities being implemented as part of this Project will enhance the multi-modal environment near the Site further.

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The Mobility Management Plan (MMP) also presents multiple Transportation Demand Management (TDM) measures that will be implemented to minimize or lessen the impact of vehicular traffic to an area. Most of the typical benefits associated with a TDM should already inherently be provided at Block 9 due to the mixed-use, transit-oriented environment in which the Project will be located. The provision of on-site bicycle parking spaces, pedestrian walkways, and proximity to public transportation all should help minimize the need for vehicular travel. Combined with other existing and planned bike accommodations within Assembly Square, these measures will help to promote bicycle travel to and from the site. The proximity of Block 9 to the MBTA Orange Line Assembly Station and to existing bus routes along will help to promote non-vehicular travel to and from the site. Refer to the Appendix E - Mobility Management Plan and Appendix F – Transportation Access Plan, for additional benefits.

B) Model. A conceptual three-dimensional scale model of the Master Plan at 20 scale or alternative scale acceptable to the SPGA or its designee. If the proposed development in its entirety consists of no more than one building, the SPGA or its designee has the option of waiving this requirement.

The Assembly Square Development has already created a conceptual three-dimensional scale model, which can be found within the development.

C) Urban Block Plan. The PUD Preliminary Master Plan should reflect a future street grid orientation substantially in conformity with the ASD Plan, and outline street blocks substantially consistent with the average street blocks in the City of Somerville (3.5 acres without streets, 4.5 acres to the middle of streets).

The PUD PMP does reflect a street grid orientation substantially in conformity with the ASD Plan. The Site is consistent with other constructed buildings within the street grid. The Site is the minimum size capable of fitting the building footprint given its shape constraints.

D) Development Standards. Except for Priority Permitted Uses, all Large Developments shall meet the development standards set forth above in Section 6.4.7.A for Developments, as well as consider the design guidelines set forth above in Section 6.4.7.B. In addition, Large Developments shall be consistent with the following additional standards.

D.1.a, b, c) Result in a net reduction in level of service of intersections equivalent to one full letter grade; result in an increase of 10 seconds of delay to a signalized or unsignalized intersection to level-of-service C or lower; or result in a net increase in traffic volumes of 10% or more at an intersection that has an accident history of more than 5 accidents in the last three years for which data is available.

Appendix E - Mobility Management Plan, summarizes the trip generation associated with the Project. As noted earlier, the trip generation, access, and overall operation of this parcel are entirely consistent with that envisioned as part of the previously permitting Assembly Square Mixed-Use Redevelopment Maser Plan approval. Accordingly, the existing transportation infrastructure within Assembly Square is able to accommodate the traffic generated by the Project. In the absence of any notable changes to the development proposal, trip generation or surrounding transportation network an updated traffic analysis should not be required beyond that presented in the Transportation section. Planned Transportation Demand Management measures that will be implemented to help reduce reliance of single-occupant automobile travel are documented in Appendix E – Mobility Management Plan.

D.2) Large Retail Projects. Any Large Development in which any single Retail Use is more than 50,000 square feet of gross floor area shall also be deemed a Large Retail Project, except for those Developments qualifying as Priority Permitted Uses, and shall be subject to the following additional standards:

D.2.a) Non retail Component. No Large Retail Project, as defined above, shall be permitted in the ASMD unless permitted as part of a PUDA which includes 1.5 net square feet of non retail uses for every square foot over 50,000 net square feet of Retail Use in the Large Retail Project. For example, a PUD-A with 100,000 square feet of Retail use must also include at least 75,000 square feet of non retail uses.

Details regarding design of ground floor retail are included in the Architectural Floor Plans in Appendix A. Any changes to the ground floor retail spaces will be presented in a future submission for city review. The Project does not contain a Large Retail Project.

D.2.b) Ground Level Retail Size Cap. In a Large Retail Project, not more than 50,000 square feet of Gross Floor Area of any single Retail Use shall be located on the Ground Floor of any Building included in the PUD-A.

The Project does not contain a Large Retail Project.

D.3) Landscaping. A minimum of fifty percent of the Landscaped Area in a new Large Development shall be Usable Open Space. The SPGA shall have final discretion in deciding if land constitutes Open Space for the purposes of determining whether this requirement has been met. The Open Space requirement may be met with land that is part of the Large Development, or with land that is outside of the Large Development area but is located within the ASMD that was not already Usable Open Space, provided that the conditions of paragraph 2 of Section 16.6.1 of the Ordinance relating to public dedication of such usable Open Space are met.

Open Space and Usable Open Space requirements within the Assembly Square Mixed Use District are 25% and 12.5%, respectively. The PMP approved by the Planning Board on December 14, 2006 and amended on August 5, 2010 and again on June 19, 2014, provides that the Open Space and Usable Open Space requirements may be met in the aggregate over the entire PUD area without each individual parcel being required to meet the otherwise applicable standards. In order to arrange the Open Space and Usable Open Space in the most appropriate way, some parcels within the PUD area may exceed the open space requirements, while others may, within their individual property lines, contain less than the otherwise prescribed open space area. The Master Plan strives to locate the open space in proximity to the water and in aggregated areas that provide connection from the development to the water. As such, the majority of the open space within the PUD is located closer to the water.

The total land area within the Master Plan is approximately 2.6 million square feet. The proposed configuration of the full-build Block 9 building was anticipated at the time of the last PUD Amendment. As a result, the amount of Open Space and Usable Open Space within the Master Plan

has changed from the previously reviewed PUD at 27.9% and the Usable Open Space at 21.9%.

The total area of the Site is approximately 62,481 square feet. The area of Open Space on the full-build Block 9 building site is anticipated to be approximately 5,017 square feet. The area of Usable Open Space on the Site is anticipated to be approximately 4,755 square feet. Therefore, Open Space is 8.0% of the Site and Usable Open Space is 7.6% of the Site.

E) Design Guidelines. In addition to the design guidelines set forth in Section 6.4.7 for Developments, the SPGA shall also consider the following additional guidelines in their review of Large Developments as part of a PUD-A or as part of a Priority Development Process to the extent such Large Developments are not Priority Permitted Uses. These guidelines augment Article 16 guidelines. These guidelines are intended to serve as a general basis for the SPGA and Applicant alike to discuss the design merits of a Development, but are not intended to inhibit design creativity when the application otherwise conforms to all other substantive review criteria. These guidelines are not intended to discourage innovative architectural design solutions. Rather, they provide general standards for the massing, sitting and articulation of Buildings for developers and architects to work from. They also provide parameters for dialogue between the Applicant and SPGA on design issues:

E.1) Structured Parking. Due to the size and scope of Large Developments, every effort shall be made to provide as much parking as possible underground and/or in structures. Refer to Section 9.15 for parking requirements.

All vehicular parking at the Site is located within the structured parking garage. Storage for 150 bicycles is located within the ground floor with direct access from the Auto Workers Way side of the proposed building. Additional bicycle racks are distributed at entries around the perimeter of the site. There are approximately four (4) hoop racks on Foley Street, two (2) hoops on Grand Union Boulevard and five (5) hoops on Harold Cohen Way. Each hoop supports two bicycles, which results in 22 short-term bicycle spaces.

6.4.12. ***Powers of the SPGA in the ASMD.*** **In the ASMD the Planning Board shall serve as the Special Permit Granting Authority (SPGA). The SPGA may approve, approve with conditions, or deny any application for a SPSR-A, or a PUD-A after consideration of the criteria set forth above and criteria set forth in any other Sections of this Ordinance referred to herein. The SPGA shall administer Site Plan Approval-A for Priority Permitted Uses as set forth in Subsection 6.4.11 above.**

A) ***Relief from Requirements.*** **Notwithstanding any other provisions of this Ordinance, the SPGA may, as part of an application for a SPSR-A, a PUD-A or Site Plan Approval-A grant relief from Development Standards, and any other requirements of the ASMD outlined in Sections 6.4.6 through 6.4.11. In such cases, in granting such relief, the SPGA must find that:**

A.1) Strict enforcement of such standards or requirements would run counter to achieving the objectives of the Assembly Square District Plan (the "ASD Plan");

A list of requested waivers for the Project are included in this application.

A.2) The application is substantially consistent with the objectives of the ASD Plan and advances the objectives of the ASD Plan;

The Project will achieve the objectives of the ASD Plan by developing a true mixed-use program, incorporating pedestrian and transit-oriented planning, and creating a series of new pedestrian-oriented public spaces, while minimizing environmental impacts by locating development on previously paved and/or otherwise disturbed land.

Thought was given to building program, site orientation and adjacent context when determining the building heights. Appropriately sized floor plates to support residential uses are provided at Block 9. The variety of building heights in the immediate vicinity offers a diversity in the skyline proposed by this development. This is further addressed in the Building Diagrams (see Appendix A).

A.3) In the case of any Alteration of a Nonconforming Structure, a Change of Nonconforming Use, or a Major Amendment to an Approved PUD, such alteration, change or amendment shall conform, to the extent feasible, to the objectives of the ASD Plan; and

This section is not applicable to the Project.

A.4) In the case of waivers from the landscaping requirement, the SPGA must determine that such a level of landscaping is incompatible with the objectives of the ASD Plan.

This section is not applicable to the Project.

B) *Exceptions*. Notwithstanding the foregoing, the SPGA may not grant relief from any of the following standards, guidelines or requirements:

B.1) Section 6.4.8, regarding Large Developments being developed pursuant to the PUD-A provisions of Article 16 unless as part of a Priority Development Process; and

This section is not applicable to the Project.

B.2) Section 6.4.8.D.2 regarding a Large Retail Project providing a non-retail component.

This section is not applicable to the Project.

3.3 ARTICLE 13: INCLUSIONARY HOUSING

13.3.1 Implementation Plan. Those developers seeking special permits with site plan review for projects subject to compliance with this Article shall submit a full, written proposal of the methods to be used in providing affordable dwelling units that conform with all requirements herein.

Pursuant to Section 16.10.2 of the Zoning Ordinance, a developer such as the Applicant subject to an approved Planned Unit Development "may seek waiver of any new zoning regulation through the special permit with site plan review process before the SPGA. In granting any waiver, the SPGA shall … be fully satisfied that the PUD is in full compliance with the intent of the Ordinance and being developed in a manner at or exceeding the level of compliance effective at the time of PUD preliminary master plan approval." The Applicant is not requesting a waiver of the provisions of Article 13 at this time.

The present Application for Block 9 provides for 318 residential units, 20% of which will be affordable pursuant to Article 13 of the Zoning Ordinance. This percentage of affordable units meets the requirement of the Zoning Ordinance in effect at the time of the Approved PMP and is fully consistent with the ongoing planning and development of Assembly Square as proposed in the Approved PMP.

The Applicant will meet with representatives of the City of Somerville Housing Division and will be coordinating review of an Inclusionary Housing Implementation Plan as required by Article 13 Inclusionary Housing of the SZO. Project contributions associated with the ground floor retail uses are provided within the PUD-PMP submissions. The Project will be in compliance with the Inclusionary Housing Implementation Plan requirements.

3.4 ARTICLE 16: PLANNED UNIT DEVELOPMENT (PUD)

16.8.3. PUD Final Level Application

The scope of the proposed Block 9 building application is in conformance with the previously approved PUD-PMP.

16.12 Denial Letter

After submission of the Amended Preliminary Master Plan application, no further denial letter shall be required for modifications to, or phases of, the Master Plan, or for any permit application (including an SPSR-A) related to the PUD.

3.5 PLANNED UNIT DEVELOPMENT PRELIMINARY MASTER PLAN (PMP)

APPROVAL CONDITIONS

The following represents the applicable conditions listed in the Amended PUD-PMP Conditions within the Planning Board Decision for the Amended PUD-PMP from June 2014 for the Assembly Row Master Plan. Applicable conditions shown below are those that reference SPSR-A within the Timeframe for Compliance.

Condition 3.1: Applicant shall submit revised attachments and updated amendments (based upon design changes in this amendment) to the Long Term Maintenance Agreement to be reviewed and approved by City Staff. The Agreement will provide for the Proponent's commitments to the City relative to maintenance of the elements of the public right of ways including sidewalk treatments, street trees, landscaping, finishes, street furniture and other amenities. The City will not maintain anything that is not consistent with City standard, unless otherwise approved by the City Engineer. [*Timeframe for Completion: Prior to BP of Blocks 5,6,7,8,9,11 whichever is first.*]

The Proponent will continue to work with the City to revise and update the Long Term Maintenance Agreement as the next phase of blocks begin construction.

Condition 3.2: Applicant shall submit a revised Easement Agreement, based upon design changes in this amendment (originally entered into as of Nov 29, 2012) to be reviewed by the City. [*Timeframe for* Completion*: Prior to BP of Blocks 5,6,7,8,9,11 whichever is first.*]

The Proponent has worked with the City to revise Easement Agreement and will continue to do so regarding any necessary temporary easements as part of the Project's construction. Existing easements are shown on the Existing Conditions As-Builts and proposed easements are shown on the Layout and Materials Plan, both found in Appendix A.

Condition 4: Pursuant to #3 above, design of sidewalk treatments, street trees, landscaping, finishes, street furniture and other amenities that are to be maintained by the Applicant will not be subject to City approval but shall be submitted to the City Engineer and Planning Director for comment.

The sidewalk treatments, street trees, landscaping, finishes, and street furniture are included in this SPSR-A. Refer to the Civil Site Plans found in Appendix A.

Condition 5: Applicant will work with the City to develop the long term maintenance agreement for the Usable Open Space as required in Article 17 of the SZO. The agreement shall specify the requirements for public access and private maintenance of usable open space in the plan, as required by the SZO. The applicant shall build out and maintain all of the open space and allow public access to all of the usable open space in the plan as required by the SZ0. The applicant will submit 100% construction plans for open space to the City for review and comment. [*Timeframe for Completion: Prior to Approval of first SPSR-A*]

The Proponent will continue to work with the City to revise and update the long term maintenance for the Usable Open Space agreement as the next phase of blocks begin to open.

Condition 5.1: Applicant shall submit revised attachments and updated amendments to the long term maintenance for the Usable Open Space agreement to be reviewed and approved by the City Staff. The new green space on Block 11 shall be included in a new or amended Usable Open Space agreement. [Timeframe *for Completion: Prior to CO of Blocks 5,6,7,8,9,11 whichever is first.*]

The Proponent will continue to work with the City to revise and update the long term maintenance for the Usable Open Space agreement as the next phase of blocks begin to open.

Condition 6: The applicant will submit a plan amendment to subdivide all public roadway right of way from development blocks, to be approved by the Planning Board per the SZO, and filed with the Middlesex South Registry of Deeds. Any minor plan changes to this initial subdivision will be reviewed for approval by the Planning Director and Director of Traffic and Parking as a minor plan change. [*Timeframe for Completion: Prior to 1st SPSR-A for mixed use area*]

All public spaces have been dedicated to the City pursuant to deeds recorded at Bk 72108 pg. 513 (recorded January 9, 2019), Bk 72108 pg. 520 (recorded January 9, 2019), and Bk 69421 pg. 458 (recorded June 13, 2017).

Condition 10.1: Applicant shall review parking supply and demand data with the Traffic and Parking Division and Planning Division staff on an annual basis. Based on the data, the Applicant shall work with the Planning Division staff in circumstances where parking is not being used, to encourage shared parking for uses within the same structures and uses on other blocks in the development site. [*Timeframe for Completion: Addressed with each SPSR-A application*]

The Proponent will work with the Traffic and Parking Division and Planning Division staff to comply with this condition.

Based on the Former SZO, the Project is required to provide 349 total parking spaces. The Project propose 149 parking spaces located in the structured parking garage, for which a waiver is requested. Pursuant to the approved PUD-PMP, Assembly Row is entitled for 10,066 parking spaces. The Project brings the total parking spaces developed to 5,820. Further, the PUD-PMP does not require compliance with the parking requirements of the Former Zoning on a project-by-project basis. Rather, compliance is demonstrated across the PUD.

Condition 14: Applicant shall work with the MBTA and the City of Somerville to identify and provide the necessary roadway/infrastructure for a bus route through the site to provide safe and convenient access to the MBTA Station, the Assembly Row neighborhood including Baxter Park, Partners and the Marketplace. Applicant shall design, construct, and/or reconstruct up to 8 accessible bus stops (4 in each direction) within and surrounding Blocks 1,2,3,4,5,6,7,8,11 per MBTA's Bus Design Guidelines. Up to 1 stop in each direction must provide for a layover location. Plans for the right of way development shall not preclude having a bus stop at Assembly Square 'T' Station. Any change to the roadway plans to provide bus stops, including the removal of on-street parking spaces, shall require approval of the City Engineer and Planning Director. [*Timeframe for Completion: Not Given*]

The Proponent continues to work with the City and the MBTA to identify bus routes and stops.

Condition 15.2: The applicant shall provide short term bicycle parking spots in quantities and locations consistent with the requirements of the SZO. Bicycle parking on the sidewalk shall be provided as follows unless the City Staff waive the requirements based on a technical limitation to a location. Bike parking on the sidewalk should be within 50' of each entrance with a minimum of 1 spot per 40,000 sf; OR 19% of the bicycle parking shall be provided within 50' of the main egress point of the building, whichever is greater. Short term bicycle parking not accommodated directly at the entrance must be easily visible or clearly signed in parking garage. Public covered long term bike parking within the garage or bicycle room must be provided at ground level and signed from public entrance. At least half of racks must conform to standard city design guidelines, while the other half of long term may be hanging type bicycle storage. [*Timeframe for Completion: Continuous*].

The Proponent will provide storage for 150 bicycles located within dedicated secured spaces near the garage. Additional bike racks will be provided in the surrounding sidewalks, including within 100-feet of the main entrance.

Condition 16: SPSR-A applications under the PMP shall include information required to ensure compliance with this PMP decision, including but not limited to information noted as required in the findings (Appendix A, B, C and D) [*Timeframe: Addressed with each SPSR-A application*]

The SPSR-A application report addresses the applicable PUD-PMP findings. See Appendix A for additional information.

Condition 20: Screening of above-ground parking from any thoroughfare, access easement, sidewalk, civic space, or open space by walls, screening, artwork, fences, planting or other means, must be specified in detail and approved by Planning Staff and the DRC *[Timeframe: SPSR-A]*.

All structured parking is located within a structure parking garage. Access to the structured parking is via Auto Workers Way.

Condition 25: All SPSR-A submissions shall include profiles of the proposed sewer system. Applicant must *ensure* that there are no conflicts with other proposed utilities. [*Timeframe for Completion: Addressed with each SPSR-A*]

No proposed sewer mains are proposed. Existing profiles of the sewer system have been reviewed and approved by the City Engineer. The Project only proposes lateral connections into the existing mains to service the Project.

Condition 26: *Applicant* shall submit details of proposed pipe materials for review and approval during each SPSR-A process. [*Timeframe for Completion: Addressed with each SPSR-A*]

Details of the proposed pipe materials have been reviewed and approved by the City Engineer.

Condition 39.2: Design Guidelines for Blocks 5, 7, 8, phase 2 of Block 11 shall be reviewed by the DRC and reviewed and *approved* by the Planning Board prior to the Planning Staff entertaining the SPSR-A applications for these blocks. [*Timeframe for Completion: Prior to SPSR-A submission for Blocks 5, 7, 8, Phase II of Block 11*].

Blocks 5, 7A, 8, and Phase 2 of Block 11 (Partner's Child Care Center) were approved by the Planning Board.

Condition 47: As part of each site plan review submittal, the Applicant shall calculations showing that the percentage of open *space* and usable open space meets the zoning requirement for a PUD-A within the ASMD. [*Timeframe for Completion: Addressed with each SPSR-A* application]

A Revised Amended PMP – Assembly Row PUD open space plan is provided in this application, which can be found in Appendix A.

Condition 62: The applicant shall use reasonable efforts to secure LEED-ND approval for the project. [*Timeframe for Completion: Prior to CO for first development in Mixed Use area*]

The Proponent is pursuing LEED Gold for the Project. A draft LEED checklist is included in Appendix D.

Condition 63: Each individual building or block must provide interior disposal and storage systems for trash and recycling. These systems must be detailed in the SPSR-A applications. [*Timeframe for Completion: Addressed with each SPSR-A application*]

Central trash and recycling spaces are located on the ground floor of the building along Auto Workers Way and screened from public view. Solid waste disposal will be handled by private contractors and pickups will be scheduled accordingly. Retail tenants will have access to the trash and recycling room.

Condition 65: Applicant shall provide street lights that meet City standards on all public streets where lights are to be maintained by the City.

The Project is proposing street lights on all four sides of Block 9 that will be in conformance with City standards. The type and locations are consistent with the rest of Assembly Row. Refer to the Civil Site Plans found in Appendix A for proposed locations and details.

Condition 65.1: The Applicant shall provide the City's Department of Lights and Lines with 24 hour access to the street light control cabinets located in each block. [*Timeframe for Completion: Addressed with each* SPSR-*A application*]

The Proponent will provide Lights and Lines with 24-hour access to the light control cabinet located in Block 9.

Condition 65.2: The applicant shall request addresses for each Block of PMP from the Engineering Department prior to applying for a Special Permit with Site Plan Review. [*Timeframe for Completion: Addressed with* each *SPSR-A application*]

The Proponent has requested street addresses from the Engineering Department for Block 9. The retail components will request and be assigned addresses at a later date.

Condition 66: SPSR-A applications under the PMP shall include information required to ensure compliance with this PMP decision, including but not limited to information noted as required in the findings (Appendix A, S, C and D). [*Timeframe for Completion: Addressed with each SPSR-A application*]

Compliance with conditions and appendices is provided in applicable sections of this Zoning Compliance Narrative.

Condition 67: The applicant has identified in the zoning analysis for Section 6.4.7B the process by which the design guidelines may be used to review SPSR-A applications. The applicant, or successors and assigns, shall submit proposals for SPSR-A that are consistent with these design guidelines. The SPSR-A application shall identify any deviation between the guidelines and the submission and explain the need for these differences. The DRC and Planning Board will determine if the proposed solution is within the spirit of the guidelines. If not, an amendment to the PMP may be required. All SPSR-A submissions shall meet or exceed the minimum acceptable standard of quality identified in the design guidelines. [Timeframe for Completion: Addressed with each SPSR-A application]

See previous sections of this Zoning Compliance Narrative and applicable sections of this application.

Condition 70: The applicant shall meet the obligations required by Article 13 and Article 15 of the SZO, as modified by a certain Amended and Restated Assembly Square Development Covenant dated December 14, 2006 by and between Federal Realty Investment Trust, IKEA Property, Inc., the City of Somerville, and the Somerville Redevelopment Authority, as amended by First, Second and Third Amendments, and as further amended from time to time. [Timeframe for Completion: Addressed with each SPSR-A application]

The Applicant for the proposed Block 9 building will be coordinating review of an Inclusionary Housing Implementation Plan as required by Article 13 Inclusionary Housing of the SZO. Project contributions associated with the ground floor retail uses are provided within the PUD-PMP submissions.

Legend

Project Location

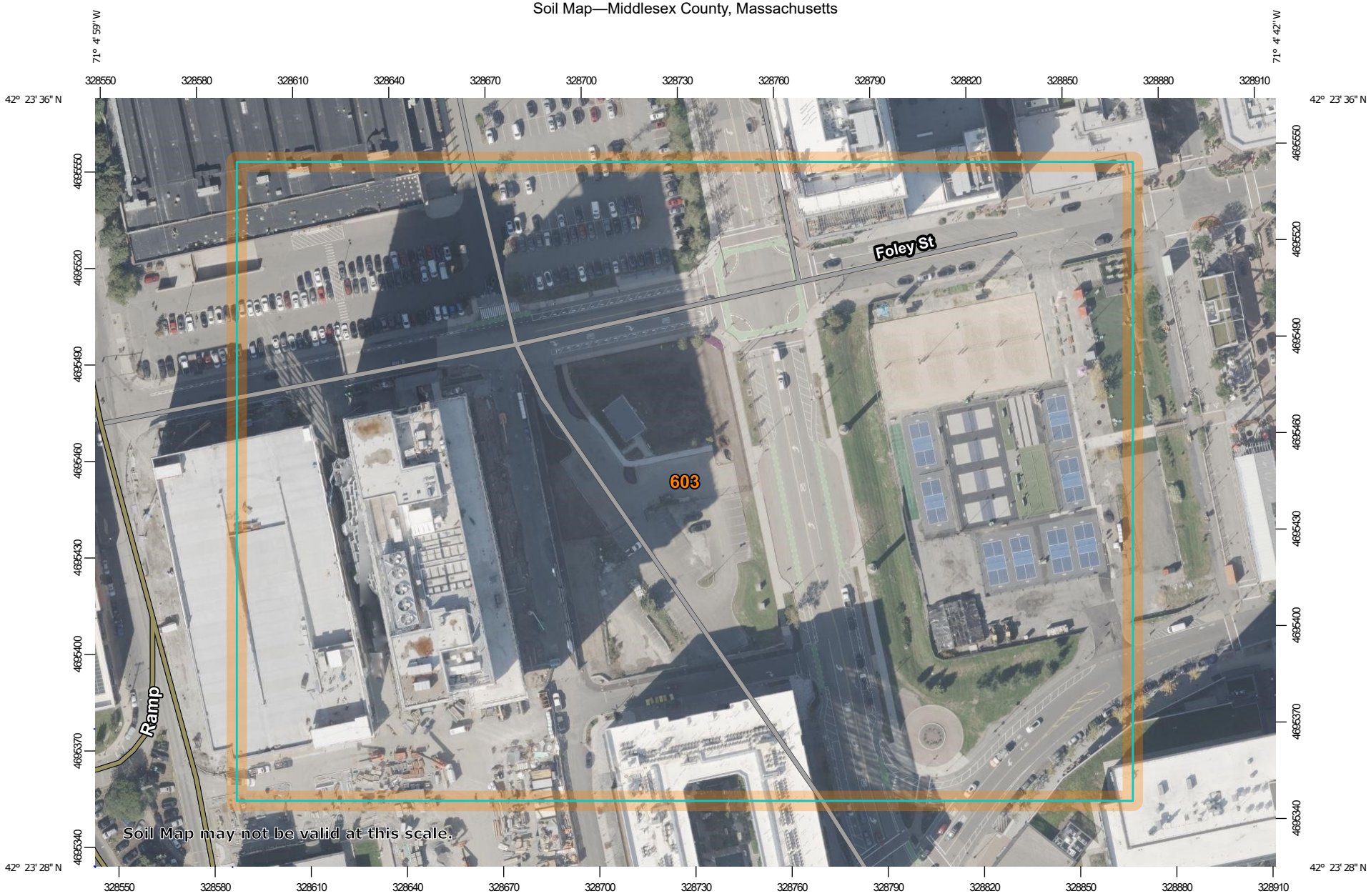
0 1000 2000 4000 Feet

vhb

Site Locus
Block 9
Assembly Row
Somerville, MA

Figure 1

7/17/2024



Map Scale: 1:1,680 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Middlesex County, Massachusetts
Survey Area Data: Version 23, Sep 12, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 1, 2023—Sep 1, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
603	Urban land, wet substratum	13.8	100.0%
Totals for Area of Interest		**13.8**	**100.0%**

Vanasse Hangen Brustlin, Inc.
Consulting Engineers and Planners
260 Arsenal Place, #2
Watertown, MA 02171
(617) 924-1770

Figure 4.1 - Development Program

Project: Assembly Square Planned Unit Development
Full Build Sewer Generation - Block 9 - Assembly Row
Current Build Program As-Built and Leased
Location: Somerville, Massachusetts

Proj. No.: 08518.28
Date: Dec. 2024
Computed by: PTM
Checked by: DAH

Development Program and Projected Sewer Flows

Phase	Block	Comments[1]	Use[2]	Area[1] (SF)	Unit	Quantity	Unit Flow[3] (Gal/Unit)	Average Flow (GPD)	Total Block Flow (GPD)	Total Phase Flow (GPD)
1AA	10	*4,391*	Retail	2,300	1,000 SF	2	50	115	1,960	1,960
			Fast Food	2,091	1 Seat	98	20	1,960		
1A	1	*66,569*	Retail	38,292	1,000 SF	38	50	1,915	67,134	161,350
			Residential	225,615	1 Bedroom	293	110	32,230		
					Dwelling Units	195				
			Restaurant	28,277	1 Seat	943	35	32,990		
	2	*32,281*	Retail	16,605	1,000 SF	17	50	830	25,581	
			Office	93,183	1,000 SF	93	75	6,989		
			Fast Food	4,703	1 Seat	188	20	3,762		
			Restaurant	10,973	1 Seat	400	35	14,000		
	3	*178,309*	Retail	107,715	1,000 SF	108	50	5,386	18,586	
			Cinema	62,557	1 Seat	1,590	5	7,950		
			Lego Land (incl in retail)	0						
			Fast Food	0	1 Seat	0	20	0		
			Restaurant	8,037	1 Seat	150	35	5,250		
	4	*39,048*	Retail	38,462	1,000 SF	38	50	1,923	48,509	
			Residential	249,964	1 Bedroom	389	110	42,790		
					Dwelling Units	253				
			Fast Food	586	1 Seat	23	20	469		
			Restaurant	1,269	1 Seat	150	35	5,250		
	KIOSK	*3,605*	Fast Food	3,605	1 Seat	77	20	1,540	1,540	
2	5A	*26,070*	Retail	14,589	1,000 SF	15	50	729	51,974	256,301
			Condo	182,404	1 Bedroom	186	110	20,460		
					Dwelling Units	122				
			Hotel	100,056	1 Bedroom	158	110	17,380		
			Fast Food	0	1 Seat	0	20	0		
			Restaurant	11,481	1 Seat	383	35	13,405		
	6	*28,369*	Retail	20,149	1,000 SF	20	50	1,007	79,944	
			Residential	603,017	1 Bedroom	624	110	68,640		
					Dwelling Units	447				
			Medical Office	9,414	1,000 SF	9	75	706		
			Fast Food	0	1 Seat	0	20	0		
			Restaurant	8,220	1 Seat	274	35	9,590		
	11A	*70,449*	Retail	15,221	1,000 SF	15	50	761	117,545	
			Office	789,750	1,000 SF	790	75	59,231		
			Day Care	--	per person	171	10	1,710		
			Medical Office	8,000	1,000 SF	8	75	600		
			Fast Food	8,967	1 Seat	359	20	7,174		
			Restaurant	8,149	1 Seat	272	35	9,507		
			Lucky Strike - Restaurant	29,612	1 Seat	987	35	34,547		
			Lucky Strike - Bowling/Arcade	6,500	1 Lane	8	100	800		
			Health Club	16,072	1 Locker	161	20	3,214		
	KIOSK	*2,000*	Fast Food	2,000	1 Seat	80	20	1,600	1,600	
	KIOSK	*4,490*	Restaurant	4,490	1 Seat	150	35	5,238	5,238	
3	5B	*26,614*	Retail	18,665	1,000 SF	19	50	933	29,260	118,345
			Office	292,890	1,000 SF	293	75	21,967		
			Fast Food	7,949	1 Seat	318	20	6,360		
			Restaurant	0	1 Seat	0	35	0		
	8	*26,500*	Retail	13,000	1,000 SF	13	50	650	89,085	
			Residential	496,267	1 Bedroom	684	110	75,240		
					Dwelling Units	500				
			Fast Food	7,000	1 Seat	280	20	5,600		
			Restaurant	6,500	1 Seat	217	35	7,595		
Full Build Remaining Phases	7A	*16,906*	Retail	11,327	1,000 SF	11	50	566	53,142	186,685
			Office	122,842	1,000 SF	123	75	9,213		
			Lab/R&D	184,262	1,000 SF	184	200	36,852		
			Restaurant	5,579	1 Seat	186	35	6,510		
	7B & 7C	*30,600*	Retail	12,100	1,000 SF	12	50	605	63,655	
			Office	570,000	1,000 SF	570	75	42,750		
			Fast Food	3,500	1 Seat	140	20	2,800		
			Restaurant	15,000	1 Seat	500	35	17,500		
	9	*6,265*	Day Care	6,265	per person	171	10	1,710	47,388	
		6,649	Retail	4,455	1,000 SF	4	50	223		
			Restaurant	2,194	1 Seat	73	35	2,555		
			Residential	243,308	1 Bedroom	390	110	42,900		
					Dwelling Units	318				
	11B		Office	300,000	1,000 SF	300	75	22,500	22,500	
				5,055,428				726,679	**FULL BUILD TOTAL**	**724,641**

Notes:

1) *Retail was space allocated at by 20.3% for estimated restaurant areas and by 6.0% for fast food within all future Blocks.*
2) *Restaurant seats are based on 30 square feet per seat within future phases.*
3) *Average flows for Massachusetts are based on 310 CMR 15: Title V.*

5 - Stormwater Management Summary

Memorandum

To: Sarah Lewis
Director
Planning, Preservation, & Zoning
Somerville City Hall
93 Highland Avenue
Somerville, MA 02143

Date: December 3, 2024

Project #: 08518.28

From: Peter Mara, P.E.

Re: Block 9
Assembly Row at Assembly Square
Somerville, Massachusetts
Supplemental Stormwater Memo

This memorandum summarizes the stormwater management system for the proposed Block 9 (the "Project") of the proposed redevelopment of the Assembly Square area in Somerville, Massachusetts, originally presented in the Assembly on the Mystic Proposed 72-inch Storm Drain and Outfall Notice of Intent (NOI) dated November 21, 2008, and issued an Order of Conditions on May 8, 2009. The stormwater management system design remains generally consistent with the stormwater management plan outlined in the previous site plan filings with the City of Somerville Planning Board and Conservation Commission.

As shown on the attached site plans titled "Block 9" dated December 3, 2024, the proposed building, landscape areas, sidewalks and utility associated infrastructure are in the area of the Project and contain less impervious areas than the approved master plan. The Project is located on a 1.4-acre site bordered by Foley Street to the North, Grand Union Boulevard to the East, Auto Workers Way to the South, and Harold Cohen Way to the West (the "Site"). The drainage patterns of Assembly Row are essentially unchanged from the August 11, 2011, Roadway NOI submission. As described in the Roadway NOI, the overall site plan was modified to address design developments since the issuance of the Order of Conditions while maintaining the originally proposed redevelopment program. The modifications included alterations to the site circulation, minor amenity area reconfiguration, and site grading which had direct benefits to the stormwater management system design and function.

The overall stormwater management system for the entire PUD area will continue to maintain peak flows at or below those described in the November 2008 NOI while providing 1-inch water quality treatment in accordance with the Massachusetts Stormwater Handbook as described in the original Outfall NOI Report.

Hydrologic Analysis:

Proposed Conditions

All stormwater runoff from the Project site will ultimately be routed through a closed drainage pipe network on-site and in the right-of-way prior to discharging to the 72-inch outfall (Design Point 6). The stormwater runoff generated by the roof of the proposed building is collected by several roof drains that is conveyed to a sand filter to provide water quality prior to discharging to the closed drainage pipe network in the rights-of-way. Water quality for the surrounding sidewalks will be provided via either filtration methods, such as permeable pavers or biofiltration, or a series of catch basins with deep sumps and oil/debris traps, proprietary separators, and a closed drainage pipe in the

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right-of-way. The final selected filtration methodology for the proposed sidewalks will be presented in the future Streetscape Permit. The stormwater management system is adequately sized to provide the required water quality mitigation for the entire Site. The existing drainage infrastructure in Assembly Row provides the peak flow and volume mitigation. This runoff pattern is generally unchanged from the November 2008 NOI, though the layout of the roadways has been revised slightly and the Mass General Brigham (formerly Partners) Office project has been included instead of the IKEA project on Parcel 11A. An updated version of the previously presented Table 2 provides a summary of the proposed conditions hydrologic data.

Table 2
Proposed Conditions Hydrologic Data

Description (Drainage Area #)	*Discharge Location*	*Design Point*	*Area (acres)*	*Curve Number*	*Time of Concentration (min)*
R-1	*Existing swale/depression*	*4*	*0.5*	*88*	*2.8*
O-1	*New 72-inch Outfall*	*6*	*63.5*	*95*	*16.2*
S-9	*Overland to Mystic River*	*5*	*1.8*	*82*	*11.5*
M-1	*84-inch SMC*	*1*	*9.6*	*95*	*5.3*
M-2	*84-inch SMC*	*1*	*10.7*	*97*	*11.6*
M-3	*84-inch SMC*	*1*	*2.5*	*95*	*4.9*
		Total:	88.6		

A revised hydrologic analysis was conducted for the site based on the input parameters described above. As in the previous submission, the rainfall-runoff response of the Site under existing and proposed conditions was evaluated for storm events with recurrence intervals of 2, 10, 25, and 100-years. Rainfall volumes used for this analysis were based on the Natural Resources Conservation Service (NRCS) Type III, 24-hour storm event for Middlesex County. Runoff coefficients for the existing and proposed conditions were determined using NRCS Technical Release 55 (TR-55) methodology as provided in HydroCAD.

Drainage areas used in the analyses are represented above and are depicted on the attached Figures 1 and 2. Figure 1 is unchanged from the November 2008 report. Table 3 presents a summary of the existing and proposed conditions peak discharge rates.

Table 3
Peak Discharge Rates (cubic feet per second)

Design Point	*2-year*	*10-year*	*25-year*	*100-year*
***Design Point 1**: MWRA 84-inch SMC*				
Existing	*117.8*	*172.1*	*206.9*	*249.2*
Proposed	*58.8*	*86.6*	*104.4*	*126.0*
***Design Point 2**: Mystic River (42-inch culvert)*				
Existing	*2.0*	*2.1*	*2.1*	*2.2*
Proposed	*0.0*	*0.0*	*0.0*	*0.0*
***Design Point 3**: Existing Swale/CBs*				
Existing	*1.3*	*2.1*	*2.7*	*3.3*
Proposed	*0.0*	*0.0*	*0.0*	*0.0*
***Design Point 4**: Existing Swale/CBs*				
Existing	*1.3*	*2.2*	*2.7*	*3.4*
Proposed	*1.3*	*2.2*	*2.7*	*3.4*
***Design Point 5:** Mystic River (Overland)*				
Existing	*29.7*	*50.4*	*63.9*	*80.5*
Proposed	*2.7*	*4.8*	*6.2*	*7.9*
***Design Point 6:** New 72-inch Outfall*				
Existing	*0.0*	*0.0*	*0.0*	*0.0*
Proposed	*138.0*	*205.1*	*247.9*	*300.0*

The revised stormwater management system analyses indicate that there will be a net improvement in terms of the peak rate of discharge and volume of runoff resulting from the site design modifications while maintaining the previous design intent in accordance with the Massachusetts Stormwater Handbook.

Water Quality

The revised stormwater management system provides the required treatment for a 1-inch water quality volume as required. The previously proposed treatment trains for all design points have been maintained.

Water quality treatment for the Project runoff consists of an operation and maintenance program for water quality measures, a construction phase spill prevention plan and water quality units.

Operation and Maintenance (O&M) Program

A detailed Stormwater O&M program has been prepared for Assembly Row. This plan includes detailed inspection criteria and identifies the responsible parties for implementing the program. In summary, the City of Somerville (the "City) will be responsible for the maintenance and operation of the street drainage system, including street sweeping, catch basin and manhole cleaning, and maintenance of the street related structures. Federal Realty (the "Owner") will be responsible for the maintenance and operation of the Project stormwater management systems including inspection, cleaning and maintenance of the drainage structure, and water quality unit on the site. The maintenance and operation of the 72-inch stormwater outfall, associated tide gate and outfall erosion control measures will be the responsibility of the City, in accordance with their EPA NPDES MS4 general permit that covers all stormwater outfalls in the City.

Spill Prevention

A spill prevention and control plan is an important best management practice (BMP) to help minimize potential sources of pollution to ground and surface waters both during construction and as part of the long-term operation and maintenance measures of a development. Spill prevention is achieved with the proper storage and handling of hazardous materials. During construction, this is addressed in the Stormwater Pollution Prevention Plan (SWPPP) for Construction Activities to be prepared and implemented by the Site Contractor. The general response procedures for spills at any time are outlined in Chapter 8 of the Final Environmental Impact Report (FEIR) which includes a spill response procedure form, a sample hazardous waste/oil spill report, an emergency response equipment inventory and an emergency notification phone numbers form.

Water Quality Units

The proposed sand filter serves as treatment for runoff from the Project's roof prior to discharge to the 72-inch outfall. The proposed sand filter and sidewalk filtration provides TSS and TP removal from the Site. Structural water quality units are key features for TSS removal within dense ultra-urban brownfield redevelopment settings where space is a limiting factor for placement of alternative large-scale surface BMPs.

The Contech Vortechs Units throughout the surrounding PUD roadways efficiently remove TSS and free oil from the stormwater runoff prior to discharging to the 72-inch outfall on the Mystic River. The units prevent the re-suspension of settled material and allow for safe and easy removal of collected undesirable material.

The water quality units will be inspected four times per year and cleaned a minimum of once per year, or when the sediment depth reaches within six inches of the dry weather water surface elevation.

Compliance with Massachusetts Department of Environmental Protection (DEP) - Stormwater Management Standards

As demonstrated below, the proposed Project fully complies with the DEP Stormwater Management Standards.

Standard 1: No New Untreated Discharges or Erosion to Wetlands

The stormwater runoff tributary to the existing 72-inch outfall will receive water quality treatment in conformance with the Best Management Practices outlined in the Stormwater Management Performance Standards and Guidelines. The Project will result in improvements to the quality of stormwater discharged from the Site. These improvements will be achieved by a combination of structural and non-structural Best Management Practices (BMPs) implemented at the Site such as regular pavement sweeping and litter control program, installation of deep sump catch basins with oil/debris traps and water quality structures. Outfall erosion protection sizing computations were provided in the November 2008 NOI.

Standard 2: Peak Rate Attenuation

The overall Project results in either no increase or a reduction in the peak discharge rate for the 2, 10, 25, and 100-year storm events for Design Points 1 through 5 (DP-1 – DP-5). Design Point 6 (DP-6) is the design point for the existing 72-inch outfall which is not present under existing conditions. Since there are no existing flows at this design point, the post-development flows are shown as an increase from existing conditions. However, because the stormwater is discharging into the tidal portion of the Mystic River it is not necessary for post-development peak discharge rates to be equal or less than those in pre-development as outlined in Standard 2 of the Massachusetts DEP Stormwater Management Regulations. The revised peak discharge rates to DP-6 included in Table 3 of this report are less than those presented in the November 2008 NOI, as required by Condition 62 of the May 8, 2009 Order of Conditions. The use of bioretention, subsurface detention and an upgraded drainage system contribute to a peak rate reduction. Appropriate measures are incorporated to protect against surcharging the system by use of a tide gate and against erosion and turbidity using riprap protection at the outlet. Although this is a newer outfall, a large majority of the stormwater discharging at this outfall is not newly generated but is rerouted from the Somerville Marginal Conduit which also discharges below the Amelia Earhart Dam in the tidal portion of the Mystic River.

Standard 3: Stormwater Recharge

The pre-development condition of the Site was almost completely impervious and little if any infiltration existed. Also, soil on the Site is contaminated, compacted fill material, or poor quality material which makes it unsuitable for infiltration. Additionally, there are no drinking water supplies on or near the Site that require recharge. Finally, the Project is located at the terminus of the Mystic River and therefore any infiltration on the site is an insignificant portion of the flows that are supplying the river.

Standard 4: Water Quality

The Site is a dense ultra-urban redevelopment on a brownfield site. However, water quality treatment for runoff from the Site was designed to meet or exceed the goal of 80 percent TSS Removal. Due to the urban nature of the Project and the goal for maximizing dense development opportunities, water quality treatment techniques consistent with urban area constraints were selected.

Standard 5: Land Uses with Higher Potential Pollutant Loads (LUHPPLs)

The Site is a brownfield site which is a LUHPPL. Stormwater management BMP's have been selected and designed to comply with this standard. Under existing conditions infiltration is not currently significant at the Site and as described above infiltration is not recommended or proposed. Water quality units, bioretention basins, and extensive operations and maintenance requirements address the concerns for LUHPPLs. Minimal surface parking is included on the Site with the majority of vehicle parking located in covered garages as part of future Project phases, therefore reducing the effect of the LUHPPL's impervious area to a level of typical roadways.

Standard 6: Critical Areas

The existing MWRA 84-inch SMC and 72-inch outfall will discharge to a "Prohibited" shellfish growing area. Stormwater discharging to this area is treated for 1-inch of runoff and will utilize the applicable stormwater management BMPs approved for critical areas.

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the Maximum Extent Practicable

The Project, while a redevelopment project as defined by the regulations, fully complies with all applicable stormwater standards. The proposed stormwater management system improves water quality and reduces flow to the frequently surcharged MWRA 84-inch SMC by reducing peak stormwater runoff from the Site.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Controls

The Project will disturb greater than 1 acre of land and is therefore required to obtain coverage under the Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) Construction General Permit. As required under this permit, a Stormwater Pollution Prevention Plan (SWPPP) will be developed and submitted before land disturbance begins. Recommended construction period pollution prevention and erosion and sedimentation controls to be finalized in the SWPPP are unchanged from the November 2008 NOI.

Standard 9: Operation and Maintenance Plan

Recommended practices for operating and maintaining long term stormwater BMPs are unchanged from the November 2008 NOI.

Standard 10: Prohibition of Illicit Discharges

Sanitary sewer and storm drainage structures remaining from previous development which are part of the Site have been removed or will be incorporated into updated sanitary sewer and separate stormwater sewer systems. The design plans submitted with this report have been designed so that the components included therein are in full compliance with current standards. No statement is made with regard to the drainage and sanitary sewer systems in

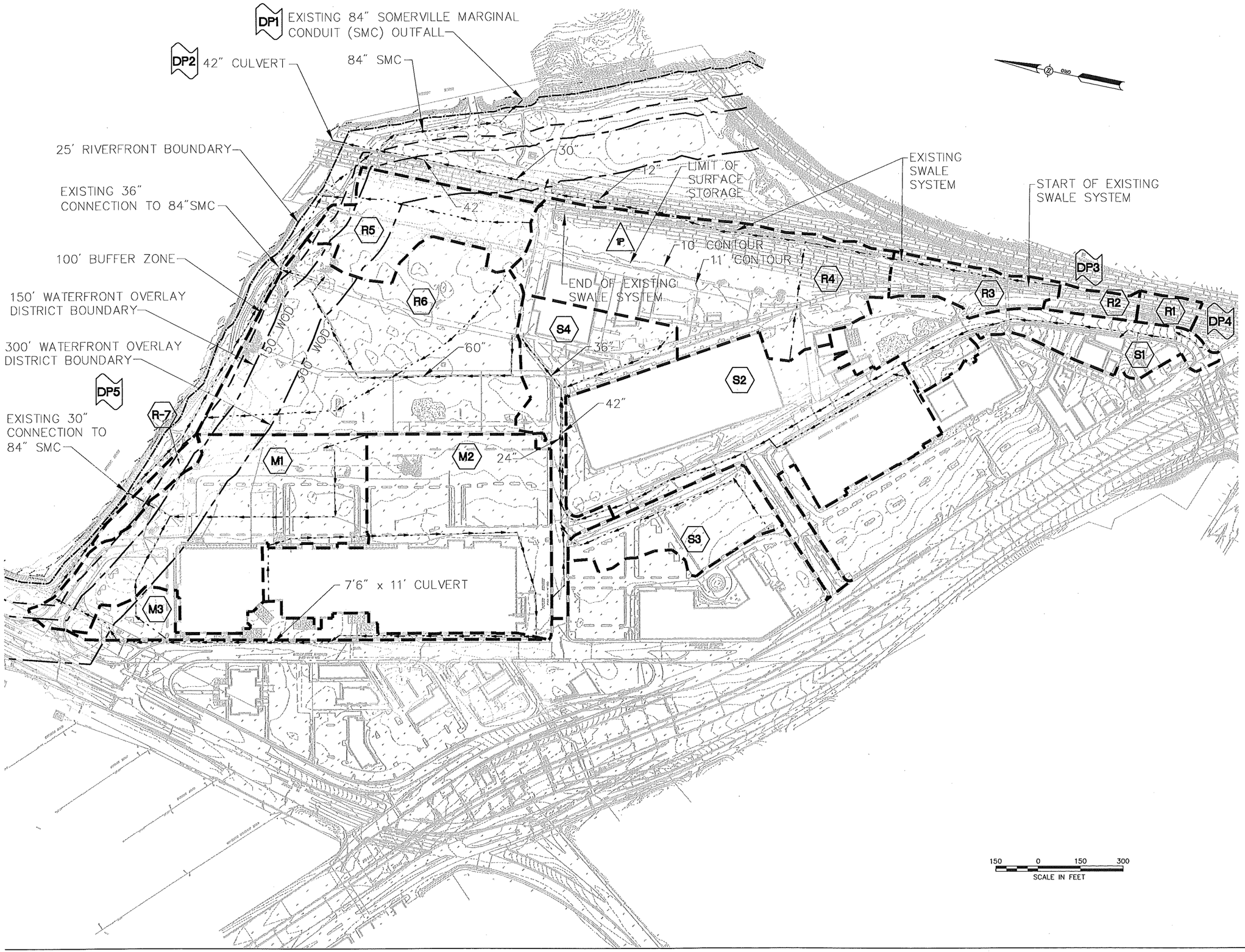
portions of the site not included in the redevelopment project area. The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges.

Conclusion:

The Stormwater Management Plan presented herein and as shown on the plans provides functionality for the Project while maintaining previously submitted design elements and intent. The proposed modifications include BMPs for maintaining stormwater runoff quality both during and after construction and are designed to protect downstream receiving waters from stormwater related impacts.

Attachments
Computations and Supporting Information

- Figure 1 – Existing Conditions Drainage Areas
- Figure 2 – Proposed Conditions Drainage Areas



VHB
Vanasse Hangen Brustlin, Inc.
Transportation
Land Development
Environmental Services
101 Walnut Street, P.O. Box 9151
Watertown, Massachusetts 02471
617.924.1770 • FAX 617.924.2286

LEGEND

- POND
- DESIGN POINT
- REACH
- DRAINAGE AREA DESIGNATION
- DRAINAGE AREA BOUNDARY
- TIME OF CONCENTRATION FLOW LINE
- 100' BUFFER ZONE
- WETLAND BOUNDARY
- 150' W.O.D. BOUNDARY
- 300' W.O.D. BOUNDARY
- 25' RIVERFRONT BOUNDARY

No.	Revision	Date	Apprvd.

Designed by	Drawn by	Checked by
CAD checked by	Approved by	
Scale 1"=150'	Date May 15, 2008	

Project Title
Assembly Square Planned Unit Development (PUD)
Assembly Square Drive
Somerville, Massachusetts

Issued for
Stormwater Management Report

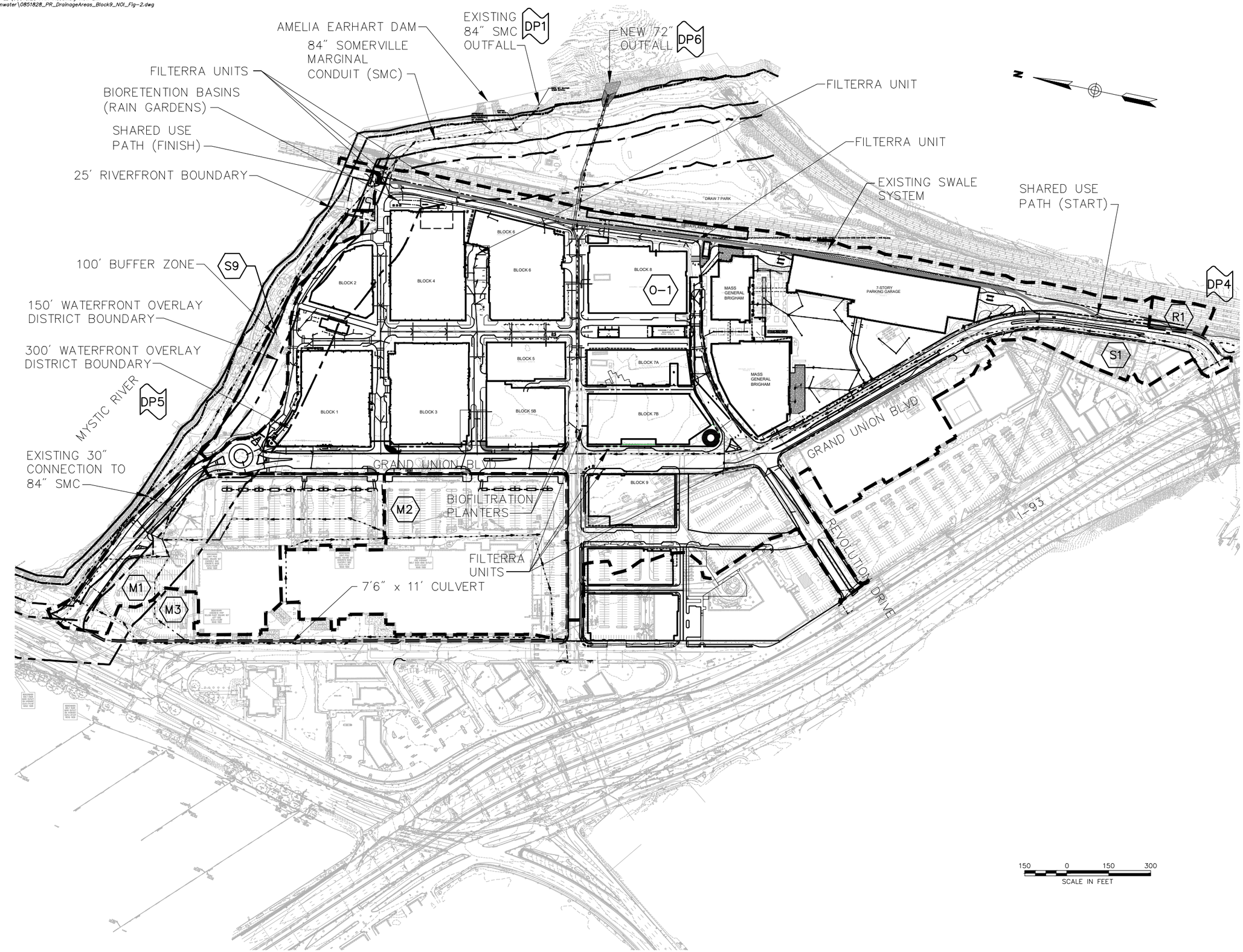
Not Approved for Construction

Drawing Title
Figure 1
Existing Conditions Full Build Project Drainage Areas

Drawing Number
F-1

Sheet 1 of 1

Project Number
08518.05



vhb.com
vhb
260 Arsenal Place #2
PO Box 9151
Watertown, MA 02472-4026
617.924.1770

LEGEND

- POND
- DESIGN POINT
- REACH
- DRAINAGE AREA DESIGNATION
- DRAINAGE AREA BOUNDARY
- TIME OF CONCENTRATION FLOW LINE
- 100' BUFFER ZONE
- WETLAND BOUNDARY
- 150' W.O.D. BOUNDARY
- 300' W.O.D. BOUNDARY
- 25' RIVERFRONT BOUNDARY

Assembly Row Planned Unit Development (PUD)

Assembly Row
Somerville, Massachusetts

No.	Revision	Date	Appvd.

Designed by | Checked by

Issued for | Date

Stormwater Management Report
Not Approved for Construction

December 3, 2024

Drawing Title

Figure 2
Proposed Full Build Project Drainage Areas

Drawing Number

F-2

Sheet 1 of 1

Project Number
08518.28

Appendix B – Corporate Articles of Organization

Maryland
DEPARTMENT OF
ASSESSMENTS AND TAXATION

Larry Hogan, Governor · Boyd K. Rutherford, Lt. Governor · Michael L. Higgs, Jr., Director

Date: 11/22/2021

CSC-LAWYERS INCORPORATING SERVICE
COMPANY
7 ST. PAUL STREET
SUITE 820
BALTIMORE MD 21202

THIS LETTER IS TO CONFIRM ACCEPTANCE OF THE FOLLOWING FILING:

ENTITY NAME	: STREET RETAIL, LLC
DEPARTMENT ID	: W22359194
TYPE OF REQUEST	: ARTICLES OF CONVERSION
DATE FILED	: 11-22-2021
TIME FILED	: 01:46 PM
RECORDING FEE	: $100.00
EXPEDITED FEE	: $445.00
COPY FEE	: $22.00
FILING NUMBER	: 1000362013405933
CUSTOMER ID	: 0003877314
WORK ORDER NUMBER	: 0005093889

PLEASE VERIFY THE INFORMATION CONTAINED IN THIS LETTER. NOTIFY THIS DEPARTMENT IN WRITING IF ANY INFORMATION IS INCORRECT. INCLUDE THE CUSTOMER ID AND THE WORK ORDER NUMBER ON ANY INQUIRIES.

Charter Division
Baltimore Metro Area (410) 767-1350
Outside Metro Area (888) 246-5941

ENTITY TYPE: ENTITIES OTHER THAN CORPORATIONS
EFFECTIVE DATE: 11-22-2021
PRINCIPAL OFFICE: SUITE 200
909 ROSE AVENUE
NORTH BETHESDA MD 20852
RESIDENT AGENT: CSC-LAWYERS INCORPORATING SERVICE COMPANY
7 ST. PAUL STREET
SUITE 820
BALTIMORE MD 21202
COMMENTS:
THIS INDICATES CONVERSION TO:
SURVIVOR:
(W22359194) STREET RETAIL, LLC.

CONVERTED ENTITY:
(D04031688) STREET RETAIL, INC.

ARTICLES OF CONVERSION

converting

Street Retail, Inc.,
a Maryland corporation

to

Street Retail, LLC,
a Maryland limited liability company

THIS IS TO CERTIFY THAT:

Article 1

Street Retail, Inc., a Maryland corporation was formed on December 19, 1994 (the "Converting Corporation") and by virtue of these Articles of Conversion filed for the record herewith is converting (the "Conversion") to Street Retail, LLC, a Maryland limited liability company ("the Converted LLC").

Article 2

Upon the completion of the Conversion in accordance with Md. Corporations and Associations Code Ann. § 3-901 et seq. ("MGCL") and Md. Corporations and Associations Code Ann. § 4A-1101 et seq. ("MLLCA"), the Converted LLC, shall for all purposes under the laws of the State of Maryland, continue as the same entity as the Converting Corporation and the Conversion will have the effects set forth herein and in the MGCL and MLLCA. Upon the completion of the Conversion:

(a) Each outstanding share of common stock of the Converting Corporation, par value of $0.01 per share of common stock (the "Converting Corporation's Common Shares") shall without any action on the part of the stockholders of the Converting Corporation, be converted into and exchanged for a .01% membership interest in the Converted LLC.

(b) There are no other shares of stock of the Converting Corporation of any class or series other than the Converting Corporation's Common Shares issued and outstanding.

Article 3

The terms and conditions of the Conversion were advised, authorized and approved by the Converting Corporation's Board of Directors and Stockholders in the manner and by the vote required by the laws of the State of Maryland.

Article 4

The address of the principal office of the Converted LLC in the State of Maryland is 909 Rose Avenue, Suite 200, North Bethesda, Maryland 20852. The name and address of the resident agent for the Company is CSC Lawyers Incorporating Service Company, 7 St. Paul Street, Suite 820, Baltimore, Maryland 21202.

Article 5

The undersigned acknowledges these Articles of Conversion to be the act and deed of the Converting Corporation and, further, as to all matters or facts required to be verified under oath, the undersigned acknowledge that, to the best of their knowledge, information and belief, these matters and facts relating to the Converting Corporation are true in all material respects and this statement is made under penalties of perjury.

IN WITNESS WHEREOF, the undersigned have duly executed and attested on behalf of the Converting Corporation, as of the 22nd day of November, 2021.

ATTEST:

By: _____
Darlene M. Hough
Assistant Secretary

STREET RETAIL, INC., a Maryland corporation

By: _____
Dawn M. Becker
Vice President-Corporate

RECEIVED

11 22 2021

Maryland Department of
Assessments & Taxation

CUST ID:0003877314
WORK ORDER:0005093889
DATE:11-22-2021 01:45 PM
AMT. PAID:$1,134.00

CSC

I hereby consent to my designation as resident agent for this entity:

Jennifer Strickland

Authorized Representative

For: CSC-Lawyers Incorporating Service Company

CORPORATE CHARTER APPROVAL SHEET

** EXPEDITED SERVICE **

** KEEP WITH DOCUMENT **

DOCUMENT CODE 120 BUSINESS CODE _____

_____

Close _____ Stock _____ Nonstock _____

P.A. _____ Religious _____

~~Merging~~ /Converting STREET RETAIL, INC. (MD) (D04031688)

~~Surviving~~/Resulting STREET RETAIL, LLC (MD) (W22359194)

Affix Barcode Label Here

Affix Text Label Here

New Name _____

FEES REMITTED

	Base Fee:	100
	Org. & Cap. Fee:	
	Expedite Fee:	445
	Penalty:	
	State Recordation Tax:	
1	State Transfer Tax:	
	Certified Copies	
	Copy Fee:	22
	Certificates	
	Certificate of Status Fee:	
	Personal Property Filings:	
	NP Fund:	
	Other:	
	TOTAL FEES:	567

_____ Change of Name
_____ Change of Principal Office
_____ Change of Resident Agent
_____ Change of Resident Agent Address
_____ Resignation of Resident Agent
_____ Designation of Resident Agent and Resident Agent's Address
_____ Change of Business Code
_____ Adoption of Assumed Name
_____ Other Change(s)

Credit Card _____ Check 1 Cash _____ Code _____

1 Documents on 1 Checks Attention: _____

Approved By: 19

Keyed By: _____

Mail: Names and Address

COMMENT(S):

file 2nd Copy

CUST ID:0003877314
WORK ORDER:0005093889
DATE:11-22-2021 01:45 PM
AMT. PAID:$1,134.00

Appendix C – Site Photos

Site Photos – Assembly Row at Assembly Square

At Block 9 looking Southeast at Mass General Brigham

At Block 9 Looking Southwest at Assembly Innovation Park

Site Photos – Assembly Row at Assembly Square

At Block 9 Looking East at Assembly Innovation Park

Site Photos – Assembly Row at Assembly Square

On Harold Cohen Way Looking South at Foley Street, Assembly Innovation Park, and Assembly Marketplace

Site Photos – Assembly Row at Assembly Square

On Harold Cohen Way Looking South at Foley Street and Assembly Marketplace

Appendix D – LEED Narrative and Somerville Sustainability Questionnaire

LEED BD+C: Multifamily Midrise v4 - LEED v4

Scorecard (ID:)

Project Address , , ,

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

Total		Certification Level:	Not Certified		Verified	0
Integrative Process		**Preliminary** Y	2 of 2	M *0*	**Verified**	0
IPc	**Integrative Process**		2 of 2	*0*		
Location and Transportation		**Preliminary** Y	15 of 15	M *0*	**Verified**	0
LTp	Floodplain Avoidance		Required			Not Verified
LTc	LEED for Neighborhood Development		0 of 15	*0*		
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	4 of 7	M *3*	**Verified**	0
SSp	Construction Activity Pollution Prevention		Required			Not Verified
SSp	No Invasive Plants		Required			Not Verified
SSc	Heat Island Reduction		2 of 2	*0*		
SSc	Rainwater Management		0 of 3	*3*		
SSc	Nontoxic Pest Control		2 of 2	*0*		
Water Efficiency		**Preliminary** Y	8 of 12	M *2*	**Verified**	0
WEp	Water Metering		Required			Not Verified
WEc	Total Water Use		0 of 12	*0*		
WEc	Indoor Water Use		4 of 6	*2*		
WEc	Outdoor Water Use		4 of 4	*0*		
Energy and Atmosphere		**Preliminary** Y	30 of 37	M *6*	**Verified**	0
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		25 of 30	*5*		
EAc	Efficient Hot Water Distribution System		4 of 5	*0*		
EAc	Advanced Utility Tracking		1 of 2	*1*		

Materials and Resources	Preliminary	Y	1 of 9	M	8	Verified	0
MRp	Certified Tropical Wood		Required				Not Verified
MRp	Durability Management		Required				Not Verified
MRc	Durability Management Verification		0 of 1		1		
MRc	Environmentally Preferable Products		0 of 5		5		
MRc	Construction Waste Management		1 of 3		2		

Indoor Environmental Quality	Preliminary	Y	9.5 of 18	M	8.5	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		3 of 3		0		
EQc	Contaminant Control		0.5 of 2		1.5		
EQc	Balancing of Heating and Cooling Distribution Systems		3 of 3		0		
EQc	Enhanced Compartmentalization		0 of 3		3		
EQc	Combustion Venting		2 of 2		0		
EQc	Enhanced Garage Pollutant Protection		0 of 1		1		
EQc	Low-Emitting Products		0 of 3		3		
EQc	No Environmental Tobacco Smoke		1 of 1		0		

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

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

Point Floors	
The project earned at least 8 points total in Location and Transportation and Energy and Atmosphere	No
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	32.5	Verified	0

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

LINNEAN SOLUTIONS

City of Somerville Massachusetts
Office of Sustainability and Environment
93 Highland Ave
Somerville, MA 02143

November 11, 2024

Re: LEED "Certifiability" AFFIDAVIT for Assembly Row- Block 9, Somerville, MA

Dear Office of Sustainability,

I have been working with the development and design team of Block 9 and can verify that the project intends to meet the City of Somerville's LEED Certifiable requirements. Block 9, in Somerville, Massachusetts is a multifamily residential building containing 318 dwelling units. The project has been designed to be Gold level certified under the LEED for Homes v4 program. The project is currently targeting 74.5 Points based on the attached checklist. The attached LEED Narrative outlines the list of strategies used to meet these requirements.

I am a LEED Operations and Management AP and have certified many residential projects. I have put together the attached LEED Scorecard, which aligns with the building design and shows a target of LEED Gold Certification.

Sincerely,

Jim Newman
LEED AP O+M, LFA, Eco District AP, LENSES Faculty Member
Principal
Linnean Solutions

LEED v4 Narrative for Building Design and Construction: Multifamily Midrise
Block 9 Assembly Row
6/5/24
Last updated: 11/15/2024
Prepared for Dimella Shaffer by Linnean Solutions

The project is fulfilling all prerequisites for all categories, in addition to the listed optional LEED credits.

General

Integrative Process (2/2pts)

Integrative project team (1 pt)- range of skillsets, all involved from beginning of LEED planning, design, and envelope analysis. Trades training (1pt)- included in verifier scope.

Location and Transportation

Floodplain Avoidance (required)

Project to comply with local flood provisions of building code.

Site Selection (8/8pts)

Previously developed (4pts) -75% of buildable land is previously developed, infill development (2pts)- 75% of land within ½ mile is previously developed, Open space (1 pt)- within ½ mile of open space that is at least ¾ acre, Street network (1 pt)-at least 90 intersections per square mile within the surrounding ¼ mile.

Compact Development (3/3pts)

Greater than or equal to 80 Dwelling Units per acre

Community resources (2/2pts)

Greater than 12 different uses, plus 1 exemplary performance credit for 20 uses.

Access to transit (2/2pts)

Greater than 360 weekday trips and 216 weekend trips

Sustainable sites

Construction activity pollution prevention (required)

Erosion measures during construction

No invasive plants (required)

No invasive plants

Heat island reduction (2/2 pts)

Greater than 75% hardscape with shading or nonabsorptive material

Non-toxic pest control (2/2 pts)

Integrated pest management strategy and 2 points from the following: steel mesh termite barrier (1 pt), physical termite barrier approved by code (1 pt), for below-grade walls, use solid concrete, masonry with a course of solid block bond beam, or concrete-filled block for below-grade walls (.5 pt), post-tension slabs (.5 pt), preconstruction borate pesticide treatment of all cellulosic structural material (.5 pt), ports or openings for all plumbing elements that penetrate the slab (.5 pt), *registered termite bait system (.5 pt), 6-inch inspection*

space between surface of landscape grade and non-masonry siding (.5 pt), seal external cracks, joints, penetrations, edges, and entry points with caulking and install rodent and corrosion proof screens on all openings greater than ¼ inch (except where prevented by code) (.5 pt), discharge points for gutters, condensation lines, steam vent lines, and other moisture sources at least 24 inches from foundation (.5 pt), 18 inch space between exterior wall and any plantings (.5 pt).

Water efficiency

Water metering (required)

Whole building or individual unit metering

Indoor water use (4/6 pts)

Showers must have a flow rate less than 2.5 gpm. All Lavatory faucets, showerheads, and toilets must be WaterSense labeled and clothes washer must be energy star qualified (both also required for PHIUS). Points assigned by flow rate for different fixtures: Lavatory Faucets- <1.5gpm (1 pt), <1gpm (2pts), Shower- <1.75 gpm (1pt), 1.5gpm (2pts), toilets- <1.1 gpf (1 pt). Energy star washer (1 pt).

Outdoor water use (4/4 pts)

Reduce turf grass area and plant native or adaptive plants instead. Points by percentage of total landscape area: <60% turf and >25% native/adaptive (1 pt), <40% turf > 50% native/adaptive (2 pts), <20% turf and >75% native/adaptive (3pts), <5% turf and >75% native/adaptive (4 pts).

Energy and Atmosphere

Minimum Energy Performance (required)

PH will easily meet, commissioning needed

Energy metering (required)

Each unit needs an electric meter or submeter. If gas is used, whole building gas meter or unit submeters needed.

Education of the homeowner, tenant or building manager (required)

provide education materials and walkthrough

Annual Energy Use (25/30 pts)

all 30 points likely with PH

Efficient hot water distribution (4/5 pts)

max pipe lengths likely met with PH time to tap requirements (2 pts), pipe insulation (2 pts).

Advanced utility tracking (1/2 pts)

hourly energy monitoring system in each unit and irrigation system component submeters (if irrigated landscape is larger than 1,000 sf and utility data sharing with third party and USGBC

Materials and Resources

Certified Tropical wood (required)

all wood nontropical, reused or reclaimed, or FSC certified

Durability Management (required)

Exhaust conventional clothes dryers directly to outdoors, install drain for clothes washers or condensing dryers in or over living space, install drain for tank water heather in or over living space, water-resistant flooring within 3 feet of exterior entryways, water-resistant flooring in kitchen, bathroom, and laundry room, nonpaper-faced backer board above bathtub, shower, exposed wall

Durability management verification (0/1 pt)

Environmentally preferable products (0/5 pts)

Construction waste management (1/3 pts)

Reduce construction waste below a baseline calculated based on conditioned floor area. Points range from 10% reduction (.5 pt) to 60% reduction (3 pts)

Indoor environmental quality

Ventilation (required)

Passive House will meet requirements

Combustion venting (required)

Passive House will meet requirements

Garage pollutant protection (required)

Passive House will meet requirements

Radon-resistant construction (required)

Passive House will meet requirements

Air filtering (required)

Passive House will meet requirements

Environmental tobacco smoke (required)

no smoking in common areas, within 25 ft of entries, air intakes, and common space operable windows

Compartmentalization (required)

Passive House will meet requirements

Enhanced ventilation (3/3pts)

Ph requires balanced ventilation within 10% (2pts), exhaust fan must be continuously operating, on a delay timer that operates for 20 min, automatic humidistat controller, or have an occupancy sensor (1 pt)

Contaminant control (.5/2pts)

permanent 10 ft walkoff mats at entryways, no to shoe removal and storage, maybe to preoccupancy flush and air testing (big endeavors)

Balancing of heating and cooling distribution systems (3/3 pts)

1 automatic point for multifamily with average unit size under 1200 sf, supply air flow testing and pressure balancing would likely require more in-depth testing than currently needed for anything else

Enhanced compartmentalization (0/3pts)

Enhanced combustion venting (2/2pts)

no fireplaces or wood stoves

Enhanced garage pollutant protection (0/1pt)

Low emitting products (0/3 pts)

No environmental tobacco smoke (1/1 pt)

Prohibit smoking

Innovation

Preliminary rating (required)
Innovation (0/5 pts)
LEED AP Homes (1/1 pt)
LEED AP Homes credential

Regional priority (4/4)

Annual Energy Use (1 pt)
Access to Transit (1 pt)
Heat Island Reduction (1 pt)
Nontoxic Pest Control (1 pt)

Total Points: 74.5

Passive House Feasibility Study

for

Block 9 – Assembly Row, Somerville, MA

Prepared for:

DiMella Shaffer
24 Fansworth Street
Boston, MA 02210

August 23, 2024

Table of Contents

Passive House Feasibility Study

Block 9 – Assembly Row, Somerville, MA

Overview:

Linnean Solutions examined the feasibility of Block 9 – Assembly Row in Somerville, MA for earning Passive House certification through the PHIUS+ 2021 CORE program. This report documents the findings of the feasibility study.

An initial baseline energy model was created to estimate the building energy performance with the original design provided by DiMella Shaffer and a few code compliance assumptions. Additional energy models were then run, testing a variety of envelope and MEP systems to assess which combinations would meet the PHIUS+ 2021 requirements. These adjustments are the basis of the recommendations outlined in this report.

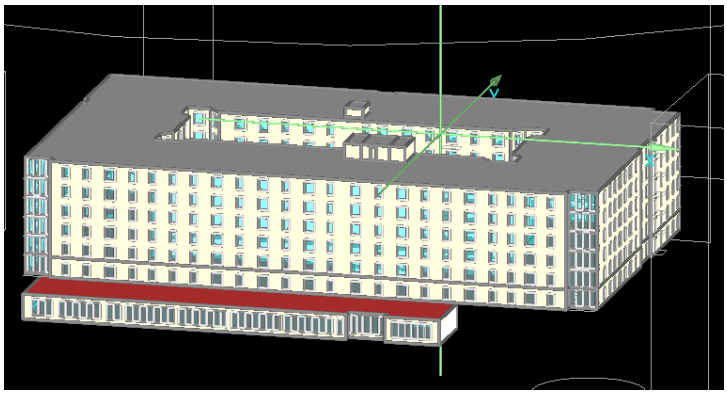
Project Scope:

The Block 9 mixed use development contains one building, including a courtyard space, ground floor retail, second floor parking garage, and six floors of residential space with a total of 312 units and approximately 268,402sf of indoor conditioned floor area (iCFA). The energy model includes all residential floors, corridors and residential amenity spaces as part of the thermal and airtight Passive House boundary as well as the stair and elevator shafts which extend from the building foundation to the rooftop.
The parking garage, retail spaces and corridors, trash rooms, and most of the utility rooms were excluded from the passive house boundary.

Current Design:

Block 9 – Assembly Row:

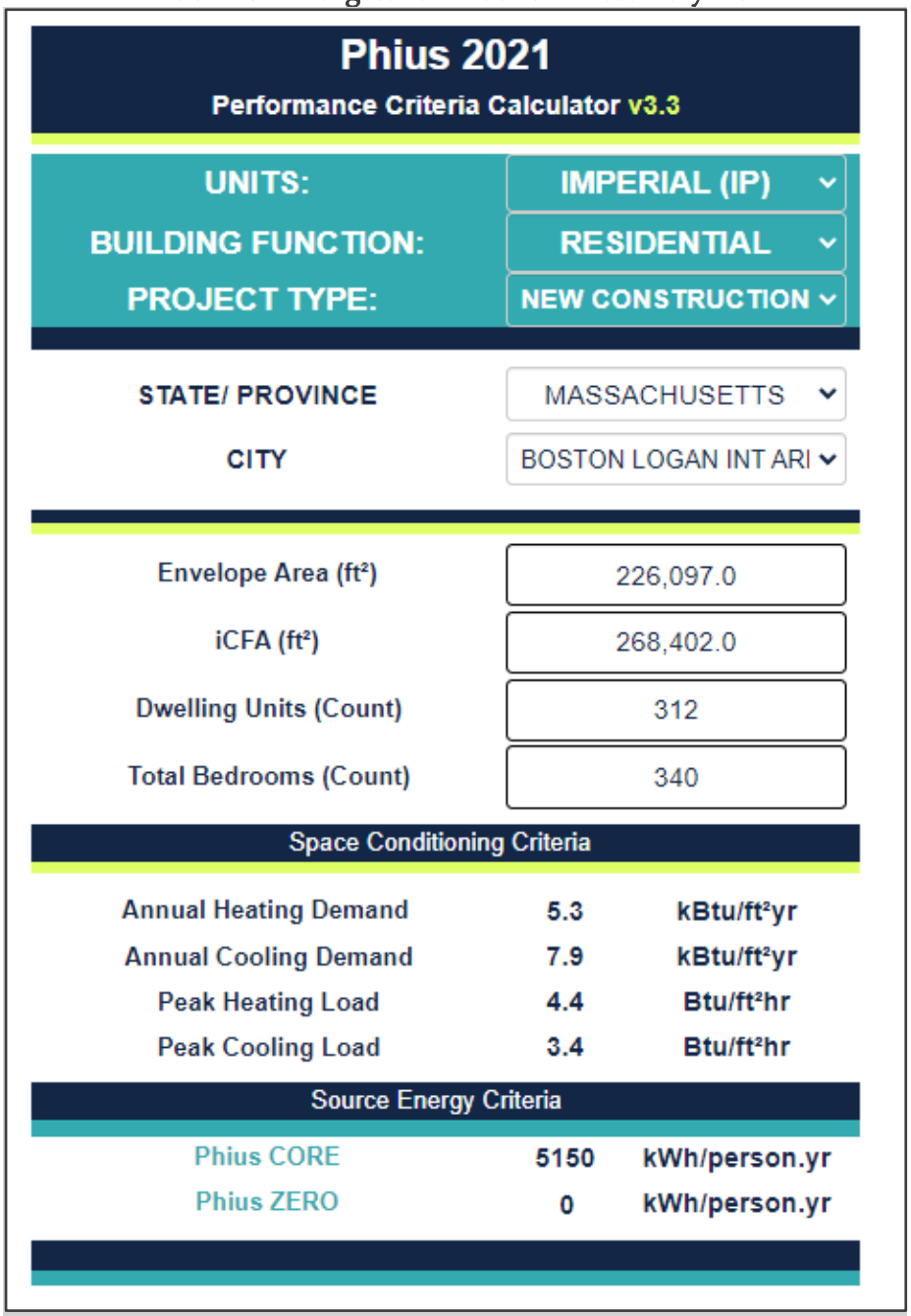
Modeled iCFA: 268,402sf
Envelope Area of PH Envelope: 262,097sf
Number of Units: 312
Number of Bedrooms: 340
Number of Occupants: 652



PHIUS+ 2021 Targets:

The image below shows the PHIUS+ 2021 Performance Criteria Calculators for Block 9 – Assembly Row. The PHIUS Performance Criteria Calculator calculates the building's maximum thresholds for annual heating and cooling demands, peak heating and cooling loads and source energy. This calculation is based on project location as well as envelope-to-conditioned floor area ratio and occupant density. The climate data collected at the Boston Logan International Airport was used for this project.

PHIUS+ 2021 Targets for Block 9 – Assembly Row



Phius 2021
Performance Criteria Calculator v3.3

UNITS:	IMPERIAL (IP)
BUILDING FUNCTION:	RESIDENTIAL
PROJECT TYPE:	NEW CONSTRUCTION
STATE/ PROVINCE	MASSACHUSETTS
CITY	BOSTON LOGAN INT ARI
Envelope Area (ft²)	226,097.0
iCFA (ft²)	268,402.0
Dwelling Units (Count)	312
Total Bedrooms (Count)	340

Space Conditioning Criteria

Annual Heating Demand	5.3	kBtu/ft²yr
Annual Cooling Demand	7.9	kBtu/ft²yr
Peak Heating Load	4.4	Btu/ft²hr
Peak Cooling Load	3.4	Btu/ft²hr

Source Energy Criteria

Phius CORE	5150	kWh/person.yr
Phius ZERO	0	kWh/person.yr

WUFI Energy Model Results:

Initial modeling of the baseline design provided by DiMella Shaffer determined that Block 9 would meet all four main PHIUS space conditioning criteria categories without any changes beyond the assumed envelope and MEP systems. The big buffer between the baseline results and the PHIUS targets however determines that it is possible to slightly reduce the insulation levels and/or mechanical equipment efficiency of the overall building and still achieve Passive House certification.

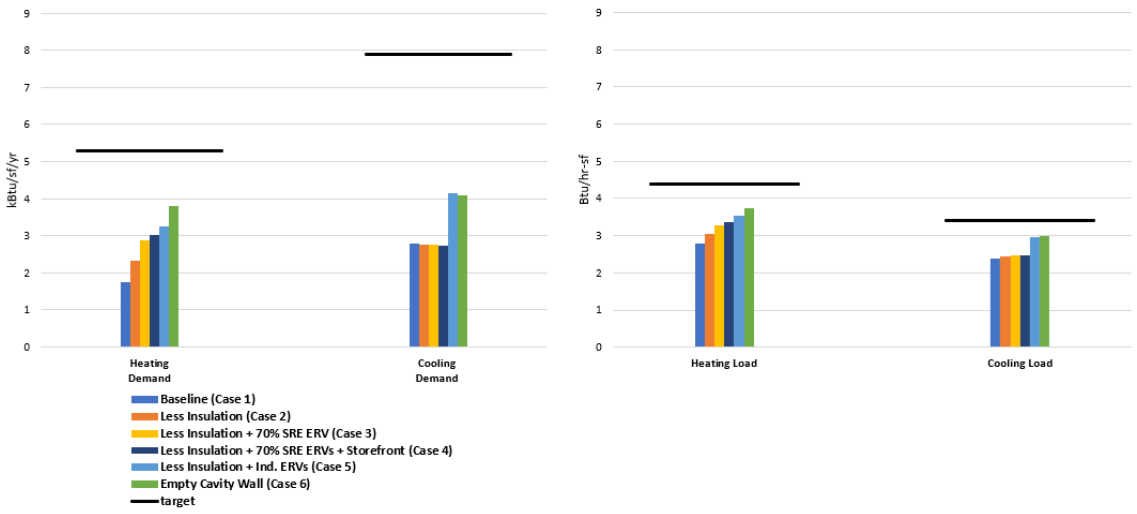
Based on early, collaborative discussions with the design team and ownership, Linnean assessed a few different scenarios with varying envelope and MEP systems to determine which would be viable options for this project. Considerations included not only the impacts of energy efficiency and if the project could meet the PHIUS space conditioning criteria, but also, cost, carbon, and material health.

With all that in mind, this feasibility study ended with 5 different scenarios:

1. Baseline building as proposed (with PHIUS airtightness of 0.06cfm/sf of envelope area)
2. Baseline building with less exterior insulation (2" of continuous insulation at exterior walls and R-35 roof)
3. Baseline building with less exterior insulation and lower efficiency central ERV (down to 70% SRE)
4. Baseline building with less exterior insulation, lower efficiency central ERV, and different storefront (Kawneer 451UT)
5. Baseline building with less exterior insulation and individual indoor ERVs (1 per unit)
6. Baseline building with proposed exterior insulation but no cavity insulation.

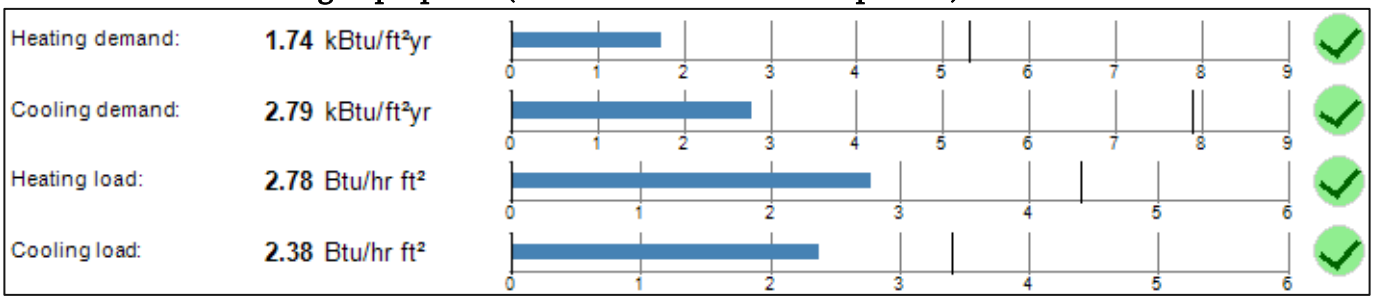
The below graph shows the comparison between all tested scenarios. The PHIUS targets (black lines) are based on the information from the Space Conditioning Criteria Calculator shown above. In order to earn certification, all criteria must fall below the PHIUS target levels.

PHIUS+ 2021 WUFI Energy Modeling Results



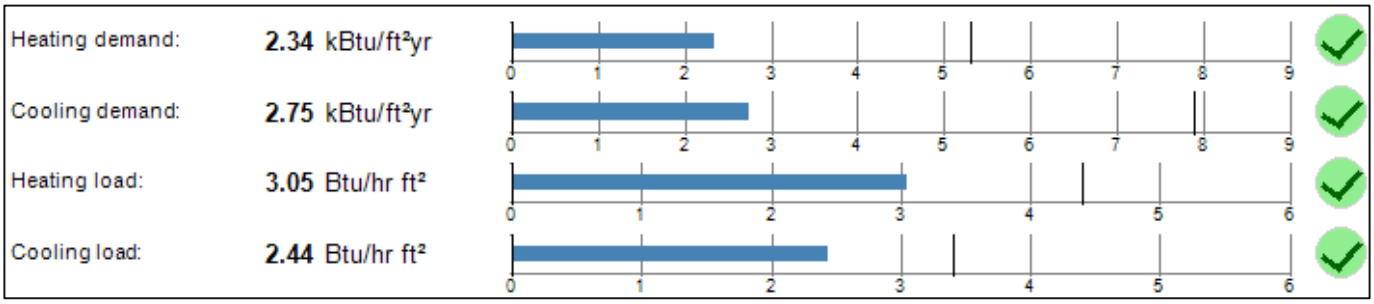
The images below show the buildings' WUFI Passive energy model results for each scenario.

Case 1: Baseline building as proposed (with 0.06cfm/sf of envelope area)



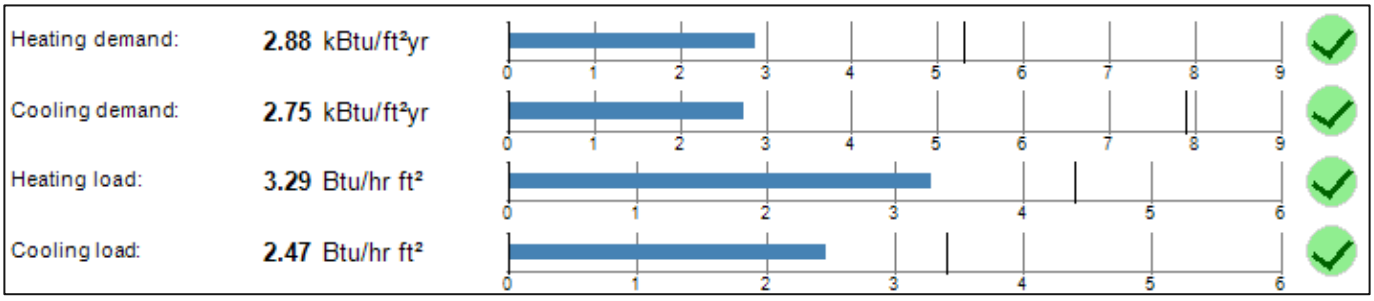
WUFI modeling indicates that the PHIUS space conditioning criteria will be easily met with the initial systems selected by the design team.

Case 2: Baseline building with less exterior insulation (2" of continuous insulation at exterior walls and R-35 Roof)



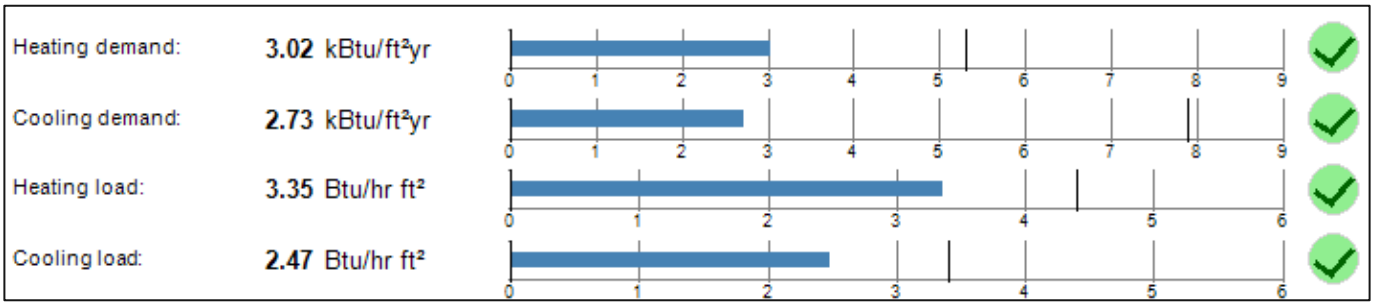
This result shows a slightly worse performing building due to the decrease of insulation levels. Even then, there is still a rather large buffer between the building performance and the PHIUS heating and cooling threshold.

Case 3: Baseline building with less exterior insulation and lower efficiency central ERV (down to 70% SRE)



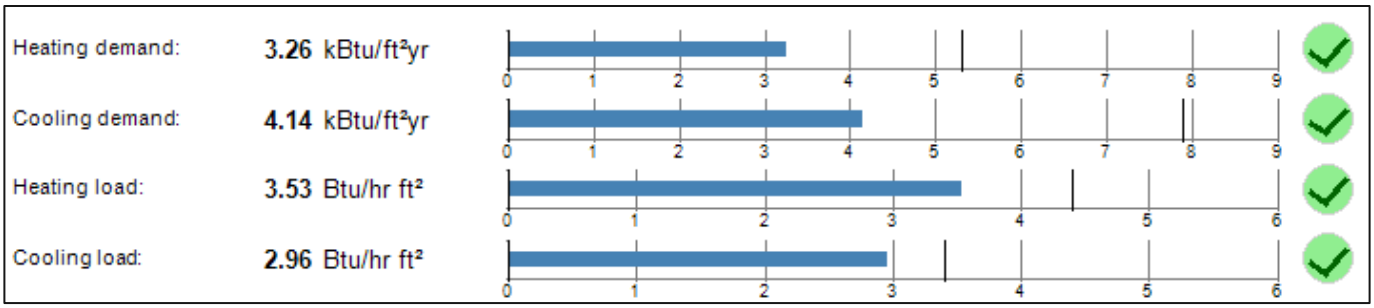
Downgrading the ERV from 75% sensible recovery efficiency (SRE) to 70% again slightly decreases overall building energy efficiency but still keeps the project in good shape for PHIUS certification. The buffer achieved by this level of building performance would provide flexibility for future changes in design and/or additional thermal bridging that may happen during future rounds of review.

Case 4: Baseline building with less exterior insulation, lower efficiency central ERV, and different storefront (Kawneer 451UT)



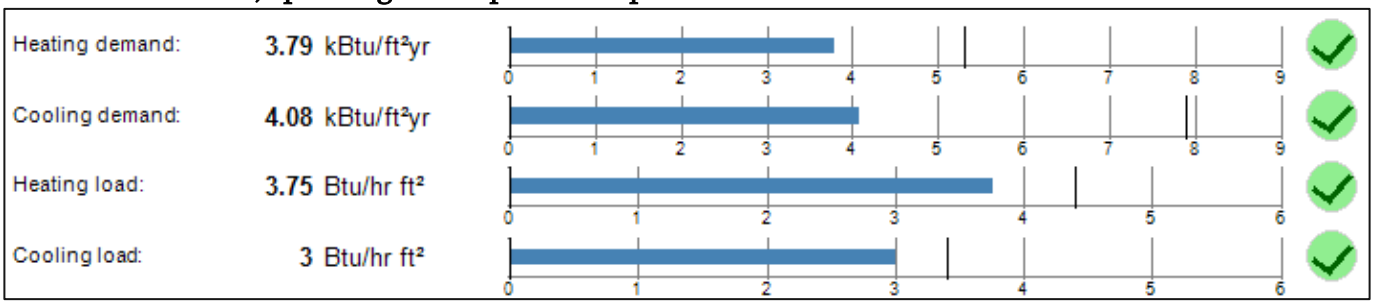
The only change in case 4 was switching the first-floor storefront system from the Cascadia to the Kawneer Trifab 451UT. While this glazing system performs significantly worse than the Cascadia, due to its limited glazing area it does not greatly impact the overall performance of the energy model. Provided that this glazing system meet both the condensation and comfort criteria (pg. 16 of this report), this will also be an acceptable system for certification.

Case 5: Baseline building with less exterior insulation and individual indoor ERVs (75% SRE & 1 per unit)



This is the first case where there is a considerable change in performance. Moving from central outdoor ERV to individual indoor ERVs significantly impacts the performance as the ERVs are ventilation systems that bring unconditioned air within the conditioned space and also operate continuously (24/7), generating significant internal heat gains. Even then, if this is the desired approach by the design team, Linnean can test slight adjustments to the envelope (i.e., re-adding the insulation from the baseline model or selecting fenestrations with lower SHGC) to obtain the optimal buffer to the PHIUS thresholds.

Case 6: Baseline building with proposed exterior insulation and no cavity insulation (4" continuous insulation for R-16) *pending envelope backstop calculations

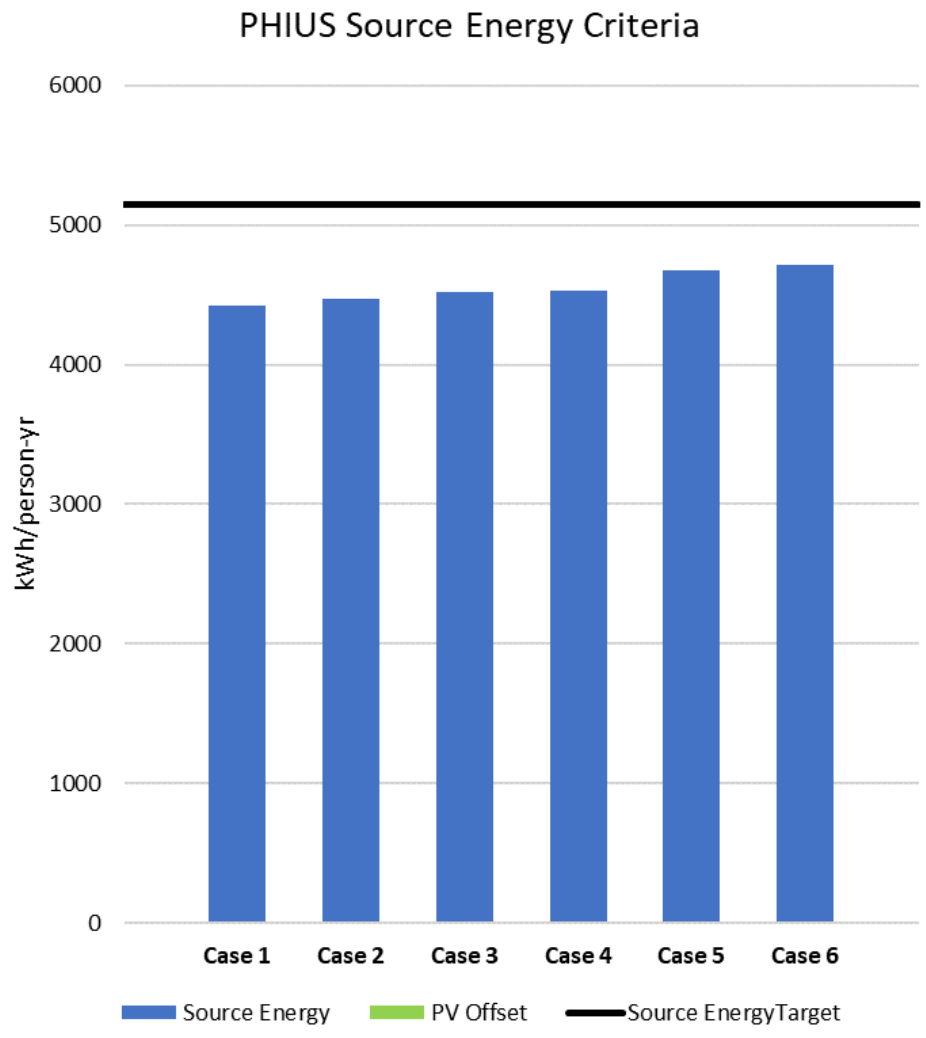


By removing the cavity insulation from all exterior walls, the building effectively relies completely on the continuous insulation to meet both code and Passive House requirements. The resulting R-16 walls contribute to a lower heating/cooling performance, but the project still passes all PHIUS requirements with an acceptable buffer. Switching back to the more efficient central ERV system also helped to balance the lower performing envelope.

Source Energy Criteria:

Another criterion for achieving PHIUS certification is low source energy. This is the cumulation of the energy or fuel used directly on-site and the energy used to transport that energy or fuel to the site. The building's efficiency as well as fuel source will impact the source energy.

The graph below shows the building source energy for each case respectively. The Case 1 bar shows the source energy estimated per person per year for the baseline model and each additional bar shows the higher source energy output caused by the adjustments to both insulation and ventilation strategy corresponding to each of the case scenarios. As indicated, all cases pass the source energy requirement of **5150 kWh/person.yr** without needing additional renewable energy to achieve PHIUS certification. However, both the thermal envelope and the choice of mechanical systems can significantly impact the source energy results. A change in heating/cooling, ventilation, or DHW strategy can result in the need for renewable energy to achieve certification.



Passive House Design Recommendations:

Building Envelope:

Walls:

The baseline building envelope was based on information provided by DiMella Shaffer as well as assumptions based on common standard designs in similar types of buildings. Exterior walls at floors 1-3 were modeled with 6" metal framed cavity filled with insulation (effective R-7) and 4" of exterior continuous insulation (R-16) for a total R-value of R-23. Floors 4-8 were modeled with 5.5" wood framed cavity filled with batt insulation and 4" of continuous insulation for a total R-value of R-33.5. Please note that when using a split wall approach, at least 30-50% of the R-value or more should be installed to the exterior to ensure the dew point is kept outside of the wall cavity.

Linnean also tested cases utilizing a split wall system with only 2" of continuous insulation (total assembly R-value of R-16 for steel framed and R-25 for wood framed), and utilizing 4" of continuous insulation with no cavity insulation (R-16). Under all scenarios, the PHIUS targets were also met.

One advantage to an exterior assembly using only continuous insulation is that the additional thermal bridging calculations to account for framing are not required to be modeled. Mechanical fasteners will still need to be accounted for, but this is typically minimal when using thermally broken fasteners.

Roof:

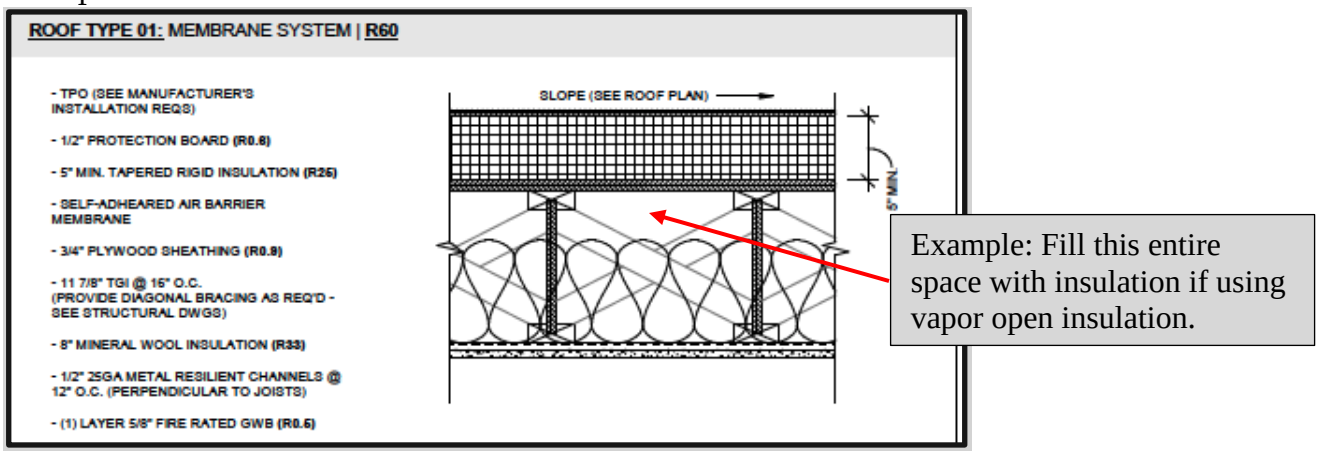
A baseline roof of R-60 was based on information provided by DiMella Shaffer. Typically, the roof assembly should be designed with a minimum total R-value of R-60 to R-80 to meet Passive House standards. However, as a building's density and size increases, that requirement may be lowered.

Linnean also tested cases with less roof insulation and found that it is possible to reduce the R-value to approximately R-36 (6" of polyiso) without significant losses in performance. As the project progresses, if additional R-value on the roof is needed, insulation can be added either above or below the roof deck.

If the project team decides to pursue a strategy with additional insulation below the roof deck, Linnean's recommendation for reducing condensation potential is one of the following options:

1. Fill the entire space below the roof deck with blown-in insulation.
   OR
2. 2. Use closed cell spray foam to fill the space below the roof deck, equivalent to R-40 or better (dependent on thickness of exterior foam).

Example:



Garage Floor & Ceiling Assemblies

For the first-floor ceiling (below the unheated garage) and the third floor slab (above the unheated garage), R-30 closed cell spray foam insulation were assumed for all cases. This may be achieved by various assemblies and insulation types and may be further defined with input from the structural team.

The connection between the garage exterior wall and the floor above the garage has the potential to create a thermal bridge and should be carefully detailed to avoid thermal losses. Another potential area of thermal bridging is at the columns in the garage where they may move from unconditioned space to interior residential space. For PHIUS certification, these issues will need to be addressed using thermal breaks such as structural thermal break-pads or other design elements.

Slab on Grade

Similarly, all cases assumed R-20 insulation (12" of insulated Glavel) for the footings and slab on grade. The R-value can be increased by further insulating below the concrete if a higher R-value is desired/necessary. Those are common assemblies where the continuous insulation will help decrease both heat transfer and minimize the number of thermal bridges passing through the concrete/footings.

Airtightness:

In order to meet Passive House requirements, the building's airtightness is critical. Reducing the building airtightness from code minimum to the PHIUS requirement (0.06 cfm/ft^2) has a significant impact on the building's overall performance and is directly indicated as such in the model outputs shown previously. As part of PHIUS documentation, it is required that building air layer drawings are provided showing the air barrier throughout the building and connection points. In addition to

exterior airtightness, each unit must be compartmentalized and sealed off from the hallway and adjacent units, improving air quality for occupants. It should be assumed that contractor training will be necessary to ensure the building's assembly can meet PHIUS airtightness and compartmentalization requirements.

Thermal Bridging Potential:

Reducing thermal bridging is key to building a durable and energy efficient building. Thermal bridges transfer thermal energy from interior to exterior and exterior to interior, reducing building durability and energy efficiency while increasing potential for condensation points. Thermal bridges are often found in structural elements which pass from interior to exterior, without proper insulation or thermal break points.

There are several locations on the building which were identified as potential thermal bridges:

1. **Roof connections:** Where mechanical systems are secured to the roof should be designed to eliminate thermal bridging.

2. **Columns at parking level:** The connection of the columns to the first floor and third floor of the building will need to be thermally broken. For example, the column should terminate and include structural thermal break-pads between the exterior and interior portion of the column. Another alternative is to completely insulate the columns.

3. **Balcony connections:** Unit balconies that are secured to the exterior façade, along with any additional shading elements, will need to be designed to eliminate thermal bridging.

To account for possible thermal bridging, both 'at grade' and 'above grade' thermal bridges were added to all modeled cases within this feasibility study. The intensity of these thermal bridges was assumed per the most common scenarios where they tend to happen (e.g., below footings at grade and at break of continuous insulation during the wall to slab transitions). There was no THERM modeling done for this study.

Mechanical Systems:

Heating & Cooling:

All cases assumed a central VRF located at the rooftop, which is an appropriate choice for efficient heating and cooling of a Passive House building.

Heating:

All cases assumed a rated COP (Coefficient of Performance) of 2.9, given by the MEP team. This COP is standard for many systems but selecting units with a higher COP (3-3.5) can reduce the source energy of the project even further.

Cooling:

The estimated cooling COP for all cases were calculated from the IEER given by the MEP team. A COP of 4.02 was used in the energy model.

Ventilation:

The building was assumed to be 100% balanced to 24,000cfm outside air supply exhaust. The baseline case included a centralized ventilation system with 8 ERVs at the roof with the sensible recovery efficiency of 75%. Case 3 decreased the efficiency of the ERVs down to 70%. All centralized cases also assumed typical exterior duct runs of 20ft with R-12 insulation, but the duct length can be adjusted as design progresses.

Individual ERVs at each unit with 75% sensible recovery efficiency were also tested in case 4 and resulted in a significant increase in both heating and cooling demand & loads. Even then, this case is still passing all PHIUS targets and can work for certification if some small adjustments are made to ensure a good buffer between building performance and PHIUS thresholds.

All cases include kitchen recirculation hoods and in-unit condensing dryers. Using recirculating vent hoods is a good approach for Passive House design as the ERVs would handle the majority of exhaust. Note that PHIUS requires that all exhaust vents are located at least 6 feet from the kitchen range as part of Passive House requirements. Kitchen exhaust vents must be fitted with a removable grease filter. Condensation dryers are also recommended over exhaust dryers.

Separate bathroom fans are not required, and bathroom exhaust should also be run through the HRV/ERV.

To note, the shorter the duct length from the ERVs to the wall/roof penetration, the better the system will perform. By reducing duct lengths to exterior walls, the ERV systems will more easily maintain their rated efficiency and thus improve the building's performance.

Domestic Hot Water:
All cases assumed an individual hybrid heat pump/electric DHW system. This approach is in line with other Passive House projects that have opted to go with in-unit DHW tanks as an alternative to a centralized system. DHW is one of the main contributors to the overall source energy usage of the project and choosing an energy efficient DHW system is one of our best methods of meeting the PHIUSs source energy target without the need of PVs.

Special attention should be given to ensure the EPA Watersense time-to-tap hot water requirements are met. Specifics of the requirements can be found here: https://basc.pnnl.gov/information/watersense-hot-water-delivery-requirements . Please ensure the mechanical engineer is given this information.

Note for Energy Star, LEED, and Passive House, all hot water piping should be insulated with a minimum R-4 insulation. It is recommended that all piping (hot and cold) is insulated to reduce potential for condensation. All pipes in the exterior walls must be insulated.

Lighting:
High efficiency lighting and controls should be located throughout the building. Additional occupancy sensors are suggested for the entryway, corridors and stairwells (and any other appropriate common spaces) to reduce overall lighting loads.

Fenestrations:

In order to meet Passive House window requirements, there are many combinations of adjustments that can be made. These can include reducing U-values & increasing/decreasing SHGC, reducing the window/wall area ratio and/or reducing the size of windows.

In reviewing the drawings and working with the energy model, the following inputs were made to all cases per the window performance specifications:

Windows:
The window specs modeled were based on the Alpen Aspekt+ SolarControl-6 PH+:

1. Operable: SHGC: 0.27, overall U-value: 0.165
2. Fixed: SHGC: 0.27, overall U-value: 0.155

The energy model results indicate that lower U-value and SHGC helps to control both heating and cooling loads. While it is possible to go with a higher SHGC for cases 1-3, if the project team opts to

go with individual ERVs, Linnean highly recommends targeting lower SHGC windows to control the cooling demand/load.

Glazed Doors:

All balcony doors were modeled based on the Cascadia Universal Inswing Doors, while the entry doors were based on the Kawneer 250/350/500T series:

1. Balcony Inswing Door: SHGC: 0.24, overall U-value: 0.15
2. Entry Door: SHGC: 0.14, overall U-value 0.47

Storefront/Curtain Wall:

The storefront windows were modeled based on the Cascadia Universal Window-Wall configuration for all cases except case 4 that assumed the Kawneer 451UT storefront instead:

1. Cascadia Window-Wall: SHGC: 0.51, overall U-value: 0.18
2. Kawneer 451UT (Aluminum): SHGC: 0.5, overall U-value: 0.3

These window values and manufacturers noted above are not necessarily the required window performance specifications needed for Passive House. However, the energy model results do indicate that a lower U-value will improve overall building performance and comfort.

The depth of the window reveal was modeled at 5.5" and was based on Passive House projects with a similar exterior wall assembly. This value contributes a shading effect to each window and in this case plays a role in reducing cooling demand and load due to the large number of windows on each façade. The reveal depth should be confirmed whenever possible, as it is important to keep the exterior insulation aligned with the insulated window to maintain a continuous line of insulation around the envelope.

Although unlikely, reducing window size/quantity may still be required to meet the Passive House standard as the project design is further refined. It is understood that windows are essential to creating spaces that feel comfortable, open, and bright, however, fewer windows will reduce both heating and cooling demand. We recommend finding a balance that works best for this building. Reducing window sizes is also an effective alternative to eliminating windows, if necessary.

Opaque Doors:

It is fundamental that all exterior opaque doors meet the insulation and airtightness level to maintain the integrity of the thermal envelope. For this project we assumed all exterior doors to be from the CECO Mercury line (R-3.0 insulated core, thermally broken thresholds, airtight). Although this manufacturer is not required, it is recommended to utilize a manufacturer with a product that has already been tested in the field.

PHIUS Window Comfort and Condensation Risk Assessment:

The PHIUS Window Condensation risk assessment (below) calculates a user defined U-Value for the window or door frame to determine if the assembly will be at low risk for condensation accumulation. The required U-Value further down identifies that maximum U-value allowed to meet the Comfort Requirements set forth by PHIUS. These targets are an additional mandatory requirement for all PHIUS+2021 projects. The comfort requirements ensure that occupants will be comfortable when they are near the windows throughout the year and that condensation will not collect on windows. Based on the window & door height, the comfort requirement adjusts the required U-Values. As the glazing height increases, the lower is the required U-Value.

Phius Window Comfort & Condensation Risk Assessment Tool v3.6

phius

Required input cells.	Requirement met.
Required dropdown menu inputs.	Requirement not met.
Calculated from another sheet.	Threshold

Project Name	Block 9
Project #	4-digit Phius Project Number
Window Label	Manufacturer_Product Type
State	MASSACHUSETTS
Climate Location	BOSTON LOGAN INT ARPT

CONDENSATION RISK

ISO 13788: Low Thermal Inertia Elements

Input Data:	Fenestration Type	Any other type of fenestrati	
Class 2 typical	Input humidity class here	2. Dwellings / Office	
	Frame U-Value	0.6	BTU/hr.ft^2.F
	Safety Factor	10%	
Result:	Risk acceptably low?	NO (Does not pass)	

Fenestration Condensation Risk is too high according to ISO 13788. Alternate compliance method may be used. Review Section 3.3.2 of the Phius Certification Guidebook.

Additional Instruction:	*The critical (lowest) allowed fRSI & CRF are noted below.*	
	Critical fRsi	0.56
	Critical CRF Rating	56

Phius Window Comfort & Condensation Risk Assessment Tool v3.6

phius

Required input cells.	Requirement met.
Required dropdown menu inputs.	Requirement not met.
Calculated from another sheet.	Threshold

Project Name	Block 9
Project #	4-digit Phius Project Number
Window Label	Manufacturer_Product Type
State	MASSACHUSETTS
Climate Location	BOSTON LOGAN INT ARPT

CONDENSATION RISK

ISO 13788: Low Thermal Inertia Elements

Input Data:	Fenestration Type	Any other type of fenestrati	
Class 2 typical	Input humidity class here	2. Dwellings / Office	
	Frame U-Value	0.59	BTU/hr.ft^2.F
	Safety Factor	10%	
Result:	Risk acceptably low?	YES (Pass)	

Exceptions:

1. Pet doors are not required to pass the condensation resistance test.

2. Exterior doors with ADA, egress, fire rating requirements may use the uninstalled whole door U-value.

COMFORT REQUIREMENTS

Applies to vertical fenestration in all project types.

For stacked windows, include the full height of all mulled windows.

Windows >16' in height have the same U-value requirement as 16' tall windows.

Window Vertical Height	8.5	ft
Required Whole Window U-value*	0.21	BTU/hr.ft^2.F

** Uninstalled whole window U-Value used. Do not include frame-to-wall psi-value for compliance.*

Exceptions:

1. Windows in non 'regularly occupied' areas have no comfort requirement.
(ie. Entry lobby with no seating or corridors with only transient occupants.)

2. ADA doors have no comfort requirement.

3. Review Appendix N-4 of the Phius Certification Guidebook for additional exceptions.

https://ssccust1.spreadsheethosting.com/1/bc/830791e0e82174/Window%20Comfort%20and%20Condensation%20v3.6/Window%20Comfort%20and%20Condensation%20v3.6.htm

Renewable Energy:

Although preliminary energy modeling indicated that renewable energy is not needed to meet the source energy requirements of PHIUS, it is still a welcome addition to the model to further reduce source energy. There are several options for offsetting building source energy through both on-site and off-site energy systems. Rooftop solar is the most common way to incorporate renewable energy. Alternatives for off-site options are shown below:

Type	kWh/yr	Onsite Utilization
Directly owned off-site renewable	Varies	1
Community renewable energy	Varies	1
Virtual power purchase agreement	Varies	1
Renewable energy certificates (RECs)	Varies	0.2

On-site and Off-site Renewable energy systems can be combined to reduce source energy.

Summary:

Overall, the project is poised to be a high-performance building and will be able to meet the level of Passive House. As noted in this report, there are some additional design decisions that will be necessary for the project to successfully move forward and become a PHIUS+2021 certified building. In summary, the following design approaches are recommended:

1. Roof: Confirm roof assembly details and total R-value (R-36 or better).

2. Walls: Confirm wall assembly details and total R-value (R-16 or better).

3. Floor above garage: confirm insulation and air sealing details. (R-30 or better).

4. Detail exterior structural elements (roof connections, garage columns and foundation, balcony connections etc.) to eliminate potential for thermal bridges.

5. Minimize ventilation duct lengths for supply and exhaust from unit to outdoors for higher performance operation.

6. Select high efficiency heat pumps or VRV systems for heating cooling.

7. DHW: Ensure piping is insulated with R-4 insulation or better and verify the project will meet EPA WaterSense Requirements. Ensure the selection of a high-performance indoor heat pump water heater.

8. Lighting: Ensure all lighting systems are high performance, and all appropriate spaces utilize occupancy sensors, especially in common spaces.

9. Windows and Glass Doors:
    a. Select windows with high performance specifications. **It is highly recommended to use Passive House Certified glazing systems.** This will save your team time in selecting a window that will meet the required performance targets. The Alpen Aspekt+ line is Passive House Certified.
    b. Ensure fenestration systems that are selected meet both the comfort and condensation risk reduction U-Values. Request NFRC reports or PHIUS Window Data from potential window manufacturers as this is required for Passive House Certification. Please forward Linnean NFRC or Passive House window/door certifications ASAP.
    c. Storefront/Curtain Wall glass also must meet all PHIUS requirements for certification.

Assumptions & Limitations:

1. Default assumptions were used for entries where specific information was not provided.
2. The study results provide various combinations of performance upgrades that allow the building to meet PHIUS+ performance targets. As the PHIUS standard is performance based, there are countless combinations of upgrades that can be utilized to meet the performance targets.
3. Drawings and additional narratives provided by DiMella Shaffer and RW Sullivan, and the SketchUp file created by Linnean were used to generate the WUFI energy model.
4. Surrounding buildings and shading obstructions were modeled around the building to allow the WUFI Software to calculate shading assumptions created by these objects.
5. No THERM models were done for this study.
6. Ventilation Rates were assumed and set to the level commonly seen on other Passive House projects of similar size.
7. Note that certification is required through the following programs as part of PHIUS+ 2021 Certification:
    a. ENERGY STAR Multifamily
    b. ZERH – Zero Energy Ready Home:
    c. EPA Indoor Air Plus:
    d. EPA WaterSense Homes
8. This report is not all inclusive of all requirements of the PHIUS+ certification program. For additional details on PHIUS+2021 Certification please review the Certification Guidebook v3.2: https://www.phius.org/phius-certification-guidebook

9. Current WUFI model is only an estimate, actual systems and design specifications will need to be input into the model Pre-Certification and Final Certification through PHIUS+.

Sustainable & Resilient Development Questionnaire

The purpose of this Questionnaire is to minimize the adverse environmental impacts in the design, construction, and occupancy of development in Somerville and to ensure that the impacts of future climate conditions are carefully evaluated. Please refer to the Development Review Sustainability Submittal Requirements on the OSE website (https://www.somervillema.gov/departments/office-sustainability-and-environment) to determine whether your project requires a Sustainable and Resilient Development Questionnaire. It is strongly recommended that applicants meet with staff from the Office of Sustainability and Environment (OSE) prior to submitting a Development Review Application. Please contact OSE at ose@somervillema.gov to schedule a meeting.

Section 1: General Information

1.1 Project Name *

Block 9

1.2 Permit # *

N/A

1.3 Project Address *

375 Harold Cohen Way

Street Address

Street Address Line 2

Somerville

City

MA

State / Province

02145

Postal / Zip Code

1.4 Project Applicant *

Sarah

First Name

Rogers

Last Name

1.5 Applicant Email *

srogers@federalrealty.com

example@example.com

1.6 Applicant Phone Number *

617-440-5635

Please enter a valid phone number.

1.7 Applicant Business Address *

455 Grand Union Blvd Suite 600

Street Address

Street Address Line 2

Somerville

City

MA

State / Province

02145

Postal / Zip Code

1.8 Filing Type *

Site Plan Approval

1.9 Is this a revised questionnaire? *

- [ ] Yes
- [x] No

1.10 Is Massachusetts Environmental Policy Act (MEPA) approval required? *

- [x] Yes
- [ ] No

1.11 If MEPA approval is required, why? This project triggers (per section 11.03 of MEPA): *

Assembly Row Mixed Use Development EEA # 13989 received certification on the Notice of Project Change on June 27, 2014.

- [x] Land Thresholds
- [ ] State-listed Species Thresholds
- [x] Wetlands, Waterways, and Tidelands Thresholds
- [ ] Water Thresholds
- [ ] Wastewater Thresholds
- [x] Transportation Thresholds
- [ ] Energy Thresholds
- [ ] Air Thresholds
- [ ] Solid and Hazardous Waste Thresholds
- [ ] Historical and Archaeological Resources Thresholds
- [ ] Areas of Critical Environmental Concern Thresholds
- [ ] Not Applicable

Section 2: Building and Site Details

2.1 Building Type *

Site Plan Approval

2.2 If you selected General Use, is the building mixed-use? *

- [x] Yes
- [ ] No
- [ ] Did not select General Use

2.3 Gross Floor Area *

383,255sf

Including square footage of parking areas

2.4 Expected Building Life *

100 years

2.5 How many housing units are included in this project? *

318

2.6 How many housing units will be designated affordable in this project? *

20%

2.7 Please describe the building heating plant and distribution system. *

One to one VRF heat pump systems with interconnecting refrigerant piping.

2.8 Please describe the building cooling plant and distribution system. *

One to one VRF heat pump systems with interconnecting refrigerant piping.

2.9 Please describe the building ventilation system. *

Individual, high-efficiency, in-unit ERVs.

2.10 Please describe the building domestic hot water system. *

Electric heat pump hot water (HPHW) in each unit.

2.11 Green Building Professional Name *

Rebecca

First Name

Howard

Last Name

2.12 Phone Number *

617-699-7323

Please enter a valid phone number.

2.13 Email *

rebeccahoward@linneansolutions.com

example@example.com

2.14 Certifications of Green Building Professional *

CHPC, LEED AP

2.15 Please select all green building certifications being pursued for this project. *

- [x] LEED Gold
- [ ] LEED Platinum
- [x] Passive House
- [ ] Enterprise Green Communities
- [ ] Not applicable
- [ ] Other

2.16 Does your project have a Mobility Management Plan? *

- [x] Yes
- [ ] No

2.17 Total number of parking spaces *

149

2.8 Electric Vehicle (EV) Charging Station Ports (number of charging ports) *

15% Day 1

2.19 EV Charging Station Level *

- [x] Level 2
- [ ] Level 3
- [ ] Other

2.20 Number of EV Ready Spaces *

35% EV Ready

EV Ready means that there are no EV charging stations installed, but pre-wiring has been completed for installation of future stations.

Section 3: Net Zero Building Compliance

The City of Somerville encourages projects to eliminate fossil fuels in their building operations. A net-zero carbon building is a highly energy efficient building that does not burn fossil fuels and either produces or procures enough carbon-free electricity to meet the building's total energy demand.

3.1 Will the building be a net zero carbon building? *

- ( ) Yes
- (✓) No

3.2 If the building will not be a net-zero carbon building, provide a technical description of how the building's systems will be transitioned over time to achieve net-zero carbon emissions, including how and when systems can be transitioned in the future to carbon-free alternatives (provide timeline including 2030, 2040, and 2050 targets). Description must include whether any remaining emissions will be offset with on-site or off-site renewables and at what quantity. *

The building is designed to be all electric and, as such, will not include fossil fuel equipment. Photovoltaic panels may be added to the roof top for future generation of enough carbon-free electricity to meet a majority of the building's total energy demand. Future greening of the local electricity grid will also contribute to carbon-free electricity, leading to a net zero carbon building.

Changes could include, but are not limited to, the addition of on-site renewable energy generation, energy storage, additional energy efficiency measures, building electrification, or other measures that would further reduce greenhouse gas emissions.

3.3 Please explain the proposed building's electric heating/cooling system capacity and efficiency. Will these systems be electric? Provide reasoning for selection of heating and cooling systems to reduce energy usage. *

In accordance with Passive House principals, the building will be all electric, including the heating and cooling systems which are currently designed as VRF heat pumps. ERVs will target a minimum of 80% efficiency.

If the project intends to incorporate fossil fuels or mixed fuels, please provide a rationale below and explain provisions that your project is taking to electrify base building systems in the future.

3.4 Please describe how the design team has integrated energy performance into the building design, site design, and engineering (including roof, foundations, walls and window assemblies, envelope performance, orientation, massing, mechanical systems, envelope, etc.) to reduce energy usage. *

A) The building envelope is designed with triple glazing and thermally-broken girts.
B) The massing of the building has been designed with minimal recesses in order to limit the surface area of perimeter walls which transfer energy to the exterior.
C) In accordance with Passive House principals, the building will be all electric, including the heating and cooling systems which are currently designed as VRFs. ERVs will target a minimum of 80% efficiency

3.5 Will any renewable energy generation be incorporated into the project? *

- ( ) Yes
- (✓) No

3.6 If yes, please describe system type and capacity. If no, could/will it be added in the future? *

Photovoltaic panels are not currently included in the design for the project, but may be added to the roof top in the future. Approximately 25,000sf of roof are available for PV panel installation, which could result in up to a 192 kW system for 350,400kWh per year (figuring an average of 5 hours of sunlight for 365 days/year).

3.7 Will any off-site renewable energy be purchased? *

- [ ] Yes
- [x] No

3.8 Describe any and all incentives, rebates, and grants provided by utilities, government organizations, and other organizations being pursued to maximize building efficiency and to reduce emissions. *

The project is pursuing Mass Save incentives for Passive House and air-source hot water heat pumps.
The federal IRA Section 48 Tax Credit provides up to 30-40% for renewable energy for Multifamily developments and may be considered.

Description must include any incentives that were considered but are not being pursued, including reasoning for each decision.

Section 4: Climate Change Risk and Vulnerability

4.1 Climate Vulnerability Exposure (check all that apply). Please refer to Somerville's Climate Change Vulnerability Assessment and the Urban Flood Atlas for information and reference maps. *

- [x] Sea Level Rise & Storm Surge
- [x] Precipitation Induced Flooding
- [x] Extreme Heat
- [ ] Other

Section 4.1: Managing Heat Risk

Heat Exposure risk maps can be found on pages 105 and 106 of Somerville's Climate Change Vulnerability Assessment.

4.1.1 Describe all building features that will keep building occupants safe and comfortable during extreme heat, including mechanical systems and non-mechanical design elements to cool building (orientation, envelope, operable windows, etc.). *

All resident units have operable windows and are equipped with VRF cooling.

4.1.2 How has increased demand for indoor cooling been factored into the building design and energy management strategy? *

design and energy management strategy? *

Window shading such as interior blinds will be utilized along with VRF cooling and a balanced ventilation system. Energy modeling was utilized to select the optimal Solar Heat Gain Coefficient (SHGC) windows and to reduce the peak cooling loads due to the glazing. VRF sizing for the building takes into consideration the future need for increase cooling & heating.

4.1.3 List any indoor spaces without cooling and their uses. *

The parking garage, transformer alcove, trash room, and loading dock will not be cooled, as they are often open to the exterior and used only transiently.

4.1.4 What design features will be implemented on site to minimize the site's contribution to the urban heat island effect? Please describe any and all design elements. *

High albedo roof materials
Heat-resistant trees and plants
Additional landscaped areas

Strategies could include, but are not limited to, the following: High albedo pavement or roof materials, Passive cooling or increased ventilation capacity, green roofs or walls, heat resistant trees and plants, and additional landscaped areas.

Section 4.2: Managing Flood Risk

High resolution GIS maps are available through the Urban Flood Atlas at

High resolution GIS maps are available through the Urban Flood Atlas at www.somervillezoning.com/developmentreview

6.1 4.2.1 Is the site susceptible to flooding from sea level rise and storm surge and/or rain events now or during the building's expected lifetime? Please refer to the Somerville Climate Change Vulnerability Assessment and Urban Flood Atlas. *

- ( ) Yes, sea level rise/storm surge
- ( ) Yes, precipitation induced flooding
- (✓) Yes, sea level rise, storm surge, and precipitation induced flooding
- ( ) No

6.2 4.2.2 Proposed Site Elevation - Low (in feet) *

10.60

4.2.3 Proposed Site Elevation - High (in feet) *

17.10

4.2.4 Lowest Elevation of Life-Safety Systems (in feet) *

14.12

4.2.5 Proposed First Floor Elevation (in feet) *

13.50

4.2.6 Nearest flood depth for the 2070 10-year storm *

11.80

4.2.7 Nearest flood depth for the 2070 100-year storm *

12.80

e.g., 23

6.3 4.2.8 What are the first-floor uses of the building? *

First floor uses comprise residential lobby and amenities, retail, and parking. There are no below-grade uses.

4.2.9 Are there any below ground stories of the building? *

- [ ] Yes
- [x] No

4.2.10 If yes, what uses are located below ground? *

6.4 4.2.11 Are there any flood-sensitive assets, utilities, mechanical equipment, or life-safety systems located in areas of the building that are at risk of flooding? *

- [x] Yes
- [ ] No

4.2.12 If yes, what measures will protect building systems during a flood or severe storm? *

All life safety equipment will be above elevation 13.8 feet. Transformers will be raised to at least 1' above the projected 2070 flood elevation.
Utilities, equipment, or critical site infrastructure will be located above the 2070 DFE unless they are (1) specifically allowed below the 2070 DFE, and (2) designed, constructed, and installed to prevent floodwaters, including any backflow through the system, from entering or accumulating within the components.

Any utilities, equipment, or critical site infrastructure located below the 2070 DFE will be permitted in areas that are dry floodproofed in accordance with ASCE 24-14 Section 6.2

These might include, but may not be limited to, the following: elevation of utilities and mechanical systems, watertight utility conduits, wastewater back flow prevention, stormwater back flow prevention, systems located above the ground floor, securing objects at risk of becoming dislodged, etc.

6.5 4.2.13 Residential and commercial buildings should be designed to maintain regular operations during a 10-year storm in 2070. Describe how the site and building have been designed to maintain regular operations - meaning all systems will remain operational and all occupied spaces are protected from flooding - during the 2070 100-year storm. Please refer to both the 2070 coastal flood probability map and the 2070 100-year storm and 1-year sea level rise scenario. *

3'+ of flood depth for 2070 10-year storm with 1-year sea level rise.

The building will be provided with life safety generator located on the roof and protected from flooding. The building will be provided with optional standby generator located on the roof and protected from flooding. Life safety equipment located on the first floor are elevated to elevation 15.12 feet.

Portions of site was designed to have been raised to an average elevation above 13 feet and will be dry floodproofed to 13.8 feet. Based on the 2070 100-year storm scenarios this will reach elevations of 12.8 feet which will not inhibit regular operations. At the appropriate time in the future the project will consider implementing temporary flood barriers, and dry floodproofed in accordance with ASCE 24-14 Section 6.2 as necessary.

Resilience measures might include, but may not be limited to, the following: elevation of the site, structural elevation of the building, non-structural elevation of the ground floor, energy storage and backup generation, wet flood-proofing (allowing water to flow through building envelope), dry flood-proofing (preventing water from entering building).

6.6 4.2.14 How will your site and building be designed to protect against the impacts of the 2070 100-year, 24-hour storm? Please evaluate impact based on both the 2070 coastal flood depth model for the 100-year storm and the 2070 100-year, 100-year sea level rise model. Summarize anticipated pre- and post-event policies, strategies, and actions necessary to facilitate post-flood recovery. *

Per Figure 16 of CCVA, there is a 20% annual risk of flooding and sea level rise in 2070.

The Site will be filled 1 to 4 feet to achieve average ground-floor elevations to be above 13 feet (NGVD29). This design elevation was established based on a flood analysis of the local area to which identifies the most significant risk to be the inundation of local stormwater infrastructure by future precipitation and sea level rise. The design mitigated the risk by setting the average elevation above 13 feet at which point the stormwater from the localized street flooding is expected to find relief overland through the roadways to the Mystic River as the highest crest elevations within the roadway is at elevation 12.6 feet. Furthermore, water levels above the Amelia Earhart are controlled by DCR which pumps prior to anticipated storms to provide greater flood storage upstream the dam.

Parking is to be provided at ground level and level 2. Parking area will not be subject to flooding until later in the century, at that time, vehicles can be moved to the upper parking level in advance or a predicted flooding event. All dwelling units are located on level 3 or higher.

Portions of site was designed to have been raised to an average elevation above 13 feet and will be dry floodproofed to 13.8 feet. Based on the 2070 100-year storm scenarios this will reach elevations of 12.8 feet which will not inhibit regular operations. At the appropriate time in the future the project will consider implementing temporary flood barriers, and dry floodproofed in accordance with ASCE 24-14 Section 6.2 as necessary.

Residential buildings should be designed to allow occupants to shelter in place during a catastrophic storm (100-year event) today and in the future. This means all life-safety systems should be above the 2070 100-year flood elevation.

4.2.15 Will hazardous or toxic material be stored on site? *

- [ ] Yes
- [x] No

4.2.16 If yes, how will you protect hazardous or toxic material from flooding? *

4.2.17 Will the site be accessible by a typical vehicle during a 10-year event (up to 6 inches of water) and by emergency vehicles (up to 12 inches of water) during a 100-year event?

- [x] Yes
- [ ] No

Section 5: Eversource Confirmation

This is the final section of this questionnaire. Questionnaire's will not be reviewed or accepted without the below confirmation. Electric plans from Eversource are not accepted for this item.

5.1 For buildings with more than four units or a gross floor area greater than 7,000 square feet, including parking: Per Eversource Information and Requirements for Electric Service, single phase services greater than 400amps or any 3-phase service requires private property transformation. Additionally, any building with more than four units requires Eversource review to determine the need for private property transformation. If your building is within these thresholds: Reach out to Eversource at 888-633-3797 to discuss your electrical service needs. Request, via email from Eversource, confirmation if private property transformation will be required. Attach a PDF of the email chain to this submission. *

Work order # is 18826941. Eversource email chain attached.

Drag and drop files here

Electrical plans from Eversource will not be accepted.

FORM: OSE CRM (June 2024)
Discontinue Prior Editions

CITY OF SOMERVILLE

Inspectional Services Planning Board Zoning Board of Appeals

CERTIFICATION OF RECEIVED MATERIALS
BY CITY OF SOMERVILLE OFFICE OF SUSTAINABILITY & ENVIRONMENT

Development Site Address:	Block 9 - 375 Harold Cohen Way
Applicant Name:	Sarah Rogers
Project Stage:	Stage 1: Site Plan Approval

As outlined in the City of Somerville's Development Review Submittal Requirements, I certify that I have received and approved the following development review materials for the development proposal identified above:

- ☑ Sustainable & Resilient Development Questionnaire
- ☑ Net-Zero Ready Building: PHIUS+
- ☐ Net-Zero Ready Building: ILFI Zero Carbon
- ☑ Net-Zero Ready Building: LEED Certifiability

Signature: _____ SustainaVille Josh Eckart-Lee 2024.12.02 16:07:57 -05'00' _____ Date: 12/2/2024

Office of Sustainability & Environment Representative

FORM: OSE CRM (June 2024)
Discontinue Prior Editions

CITY OF SOMERVILLE

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Office of Sustainability & Environment Representative

CITY OF SOMERVILLE

Office of Strategic Planning & Community Development

AFFORDABLE HOUSING ACKNOWLEDGEMENT

Property Address: 375 Harold Cohen Way, Somerville, MA 02145	
Zoning District: Assembly Square Mixed Use District	
Applicant: Street Retail, LLC	
Address: 909 Rose Avenue, Suite 200 North Bethesda, MD 20852	
Phone: 617-440-5635	Email: srogers@federalrealty.com
Property Owner (if not applicant):	
Address:	
Phone:	Email:

This MEMORANDUM OF UNDERSTANDING ("MOU") is made on this 27 day of January, 2025 by and between the Housing Director of the City of Somerville ("Housing Director"), with an address of OSPCD Housing Division, 50 Evergreen Avenue, City Hall Annex, Somerville, Massachusetts 02145 and Street Retail, LLC including its successors and assigns and affiliated entities, (the "Developer") with an address of 909 Rose Avenue, Suite 200 North Bethesda, MD 20852 for the residential development at 375 Harold Cohen Way, Somerville, MA 02145 ("the Property").

BACKGROUND

The Developer is submitting a Development Review Application to the Inspectional Services Division of the City of Somerville to develop a High-Rise (HR) building type with a total of 318 dwelling units in the Assembly Square Mixed Use District ("ASMD") zoning district and is required to provide affordable dwelling units (ADUs) pursuant to Art. 13 of the SZO as of 8/1/2019 (12.1 Affordable housing, 8.1 Affordable Housing Overlay District or Section 13) of the Somerville Zoning Ordinance. The Developer is currently planning a rental (rental/homeownership) project.

AGREEMENT

NOW, THEREFORE, with good and valuable consideration, the receipt and sufficiency of which is acknowledged, the Developer, for itself, and the Housing Division covenant agree as follows:

1. The Developer shall provide 63 total deed restricted ADU(s) and shall pay a fractional buyout equivalent to .6 ADUs, pursuant to Somerville Zoning Ordinance as of August 1, 2019 (date). Of the total deed restricted ADUs required, 24 will be priced at Tier R1, 24 wil be priced at Tier R2, and 15 will be priced at Tier R3.
2. The Developer shall agree to and sign an Affordable Housing Implementation Plan ("AHIP"), approved at the discretion of the Housing Director, prior to the issuance of any Building Permit for the Property, in accordance with Art. 13 - Inclusionary Housing of the Somerville Zoning Ordinance as of August 1, 2019 (date).
3. The Developer shall pay any authorized fractional buyout to the Somerville Affordable Housing Trust Fund prior to the issuance of any Certificate of Occupancy for the Property, in accordance with the Somerville Zoning Ordinance as of August 1, 2019 (date).

PM

Developer initial here: _____

4. The Developer shall execute and record a deed restriction known as an Affordable Housing Restriction limiting the sale, rent, or lease of all ADUs to eligible households in perpetuity with the Middlesex South Registry of Deeds, or filed with the Land Registration Office, in a form approved by the City Solicitor prior to the issuance of any Certificate of Occupancy for the Property.
5. If permitted by the Housing Director's standards for ADUs, the Developer shall either engage, at their own expense, a 3rd party to certify the income eligibility of any household selected for occupancy of an ADU in accordance with 24 CFR 5.609 or provide a fee to the Housing Division for certification services in the event a 3rd party cannot be engaged.
6. The Developer shall agree to and sign a Memorandum of Understanding for the monitoring of compliance to the provisions of the Somerville Zoning Ordinance, all legal agreements, and other standards established by the Director of Housing for rental ADUs prior to the issuance of any Certificate of Occupancy for the Property.
7. The Developer shall agree to and sign an new Affordable Housing Acknowledgement in the following circumstances:
    a. Following the issuance of any Special Permit subsequent to the date of this MOU authorizing an in-lieu payment instead of providing one (1) or more ADUs.
    b. Following any action by the review boards that changes the total dwelling unit count for the Property.
    c. Prior to submitting a revision to a previously approved development review application that includes a change in the total dwelling unit count for the Property.

IN WITNESS WHEREOF, the Developer and the Housing Division Representative have executed this Acknowledgement under seal as of as of the date first written above.

Developer/Property Owner

Patrick McMahon Patrick McMahon

Authorized Representative (Print and Sign)

Date: January 29, 2025

City of Somerville

Alanna L. Gaffney

Authorized Representative (Print and Sign)

Date: January 29, 2025

Developer initial here: PM