

DIMENSIONAL FORM

Project Address: 249 Third Street

Application Date: June 17, 2015

	Existing	Allowed or Required (max/min)	Proposed	Permitted
Lot Area (sq ft)	26,918 sf	5,000 sf (min)	26,918 sf (ex)	
Lot Width (ft)	217.65 ft	50 ft (min)	217.65 ft (ex)	
Total Gross Floor Area (sq ft)	n/a	87,484 sf [i]	71,897 sf	
Residential Base	n/a	67,295 sf (max)	54,121 sf	
Non-Residential Base	n/a	33,657 sf (max)	1,540 sf (retail)	
Inclusionary Housing Bonus	n/a	20,189 sf (max)	16,256 sf	
Total Floor Area Ratio	n/a	3.25 (max) [i]	2.67	
Residential Base	n/a	2.50 (max) [ii]	2.01	
Non-Residential Base	n/a	1.25 (max)	0.06	
Inclusionary Housing Bonus	n/a	0.30 (max)	0.60	
Total Dwelling Units	n/a	115 (max)	84	
Base Units	n/a	89	84	
Inclusionary Bonus Units	n/a	26	0 [iii]	
Base Lot Area / Unit (sq ft)	n/a	300 (max) [ii]	320.45 sf/u	
Total Lot Area / Unit (sq ft)	n/a	300 (max) [ii]	320.45 sf/u	
Building Height(s) (ft)	n/a	45 ft & 55 ft [iv]	45 ft & 55 ft	
Front Yard Setback (ft)	n/a	0 ft / 4 ft [v]	0 ft / 6 ft [vi]	
Side Yard Setback (ft)	n/a	10 ft [vii]	10.2 ft	
Side Yard Setback (ft)	n/a	10 ft [vii]	10.2 ft	
Rear Yard Setback (ft)	n/a	n/a [viii]	n/a [viii]	
Open Space (% of Lot Area)	20.7%	NONE [ix]	20.3%	
Private Open Space	0 sf	--	750 sf [x]	
Permeable Open Space	5,571 sf	--	4,708 sf	
Other Open Space (Specify)	0 sf	--	0 sf	
Off-Street Parking Spaces	78	84 [xi]	2 [xii]	
Long-Term Bicycle Parking	0	89 [xiii]	89	
Short-Term Bicycle Parking	0	10 [xiv]	11	
Loading Bays	0	n/a	n/a	

Use space below and/or attached pages for additional notes:

See footnotes on next page

FOOTNOTES:

- [i] Per Section 11.203.2.b.i of City of Cambridge Zoning Ordinance
- [ii] Per Section 20.43 of City of Cambridge Zoning Ordinance
- [iii] Inclusionary requirements to be determined during Building Permit stage
- [iv] Per Section 13.54 (4) of City of Cambridge Zoning Ordinance
- [v] Per Section 13.53.4 (1) of City of Cambridge Zoning Ordinance
- [vi] 6-foot setback from northerly right-of-way line of Rogers Street proposed
No setback from westerly right-of-way line of Third Street proposed
1-foot setback from southerly right-of-way line of Bent Street proposed
- [vii] Minimum side yard setback per section 5.34, Table 5-4 of City of Cambridge Zoning Ordinance.
Reduction of side yard setback to 10 feet is being sought by Special Permit
- [viii] Lot has frontage to streets on three of four sides with fourth side designated as a side lot line per Section 5.24.3 of City of Cambridge Zoning Ordinance and therefore has no rear yard nor rear yard setback
- [ix] No open space requirement for IA-1 District or ECHO Overlay District
- [x] Denotes area of private patio at roof level
- [xi] 84 residential; retail spaces waived under Small Business provision in Section 6.32.1 of City of Cambridge Zoning Ordinance (required retail spaces = $3 < 4$)
- [xii] 2 spaces proposed on site; remainder of parking to be provided in off-site parking facility
- [xiii] Per Section 6.107.2 of City of Cambridge Zoning Ordinance:
 - Long-term bicycle parking (residential) = 1 per unit for first 20 units + 1.05 per unit thereafter
= $20 + (1.05 \times 64) = 87.2 = 88$ spaces
 - Long-term bicycle parking (retail) = 0.1 per 1,000 s.f.
= $0.1 \times (1,540 / 1,000) = 0.1540 = 1$ space
 - Total long-term parking required = $88 + 1$
= 89 spaces
- [xiv] Per Section 6.107.3 of City of Cambridge Zoning Ordinance:
 - Short-term bicycle parking (residential) = 0.1 per dwelling unit
= $0.1 \times 84 = 8.4 = 9$ spaces
 - Short-term bicycle parking (retail) = 0.6 per 1,000 s.f.
= $0.6 \times (1,540 / 1,000) = 0.92 = 1$ space
 - Total short-term parking required = $9 + 1$
= 10 spaces

OWNERSHIP CERTIFICATE

Project Address: 249 Third Street **Application Date:** 6/25/15

This form is to be completed by the property owner, signed, and submitted with the Special Permit Application:

I hereby authorize the following Applicant: Equity Residential
at the following address: _____

to apply for a special permit for: see cover page
on premises located at: 249 Third Street, Cambridge, MA

for which the record title stands in the name of: ASN Kendall Square LLC
whose address is: c/o Equity Residential, Two North Riverside Plaza, Suite 400, Chicago, IL 60606

by a deed duly recorded in the: 200500264129 46575 268
Registry of Deeds of County: 200900207705 Book: 53735 Page: 180
OR Registry District of the Land Court, _____
Certificate No.: Book: Page:

~~Signature of Land Owner~~ Paul Barrett
Signature of Land Owner (If authorized Trustee, Officer or Agent, so identify)

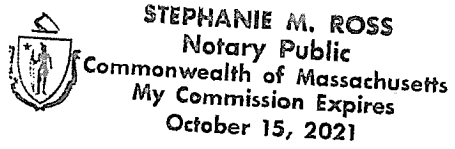
To be completed by Notary Public:

Commonwealth of Massachusetts, County of Suffolk

The above named Paul Barrett personally appeared before me,
on the month, day and year June 18, 2015 and made oath that the above statement is true.

Notary: Stephanie M. Ross

My Commission expires: October 15, 2021



FEE SCHEDULE

Project Address: 249 Third Street

Application Date: June 25, 2015

The Applicant must provide the full fee (by check or money order) with the Special Permit Application. Depending on the nature of the proposed project and the types of Special Permit being sought, the required fee is the larger of the following amounts:

- If the proposed project includes the creation of new or substantially rehabilitated floor area, or a change of use subject to Section 19.20, the fee is ten cents (\$0.10) per square foot of total proposed Gross Floor Area.
- If a Flood Plain Special Permit is being sought as part of the Application, the fee is one thousand dollars (\$1,000.00), unless the amount determined above is greater.
- In any case, the minimum fee is one hundred fifty dollars (\$150.00).

Fee Calculation

New or Substantially Rehabilitated Gross Floor Area (SF): 71,897 × \$0.10 = 7189.70

Flood Plain Special Permit Enter \$1,000.00 if applicable: n/a

Other Special Permit Enter \$150.00 if no other fee is applicable:

TOTAL SPECIAL PERMIT FEE **Enter Larger of the Above Amounts: 7189.70**

249 Third Street Project Narrative

I. Project Overview

Equity Residential (the “Applicant” or “Equity”) is proposing to construct an 84-unit residential development (the “Project”) on a 26,918 square foot lot at 249 Third Street (the “Property”). The Property, which is bounded by Third, Rogers, and Bent Streets, is currently developed with an approximately 77-space open air, paved parking lot, which will be replaced in its entirety by the project. There will be approximately 1,500 square feet of retail on the corner of Third and Rogers Streets.

The footprint of the building will be approximately 19,000 square feet. The portion of the building closest to Rogers Street will be five stories (55 feet), stepping down to four stories (45 feet) along Bent Street, as the Property lies within two different height zones under the East Cambridge Housing Overlay (ECHO) District. The Project will feature a roof deck for use by residents, as well as landscaped resident amenity space to the rear of the building. The design objectives of the Project are to create a strong edge for the new Rogers Street Park, to reclaim the neighborhood residential scale, particularly along Bent Street, and to connect the Foundry Works to the Rogers Street Park and the rest of the community.

Parking for the Project will be provided at a ratio of 0.7 spaces per unit (59 spaces), consistent with the demand at the garages serving Equity’s other residential developments in Kendall Square. The Project will contain no on-site parking; rather, resident parking will be provided in the existing below-grade garage at 195 Binney Street (located directly across Rogers Street from the Project), which is owned and managed by Equity. Equity also owns Third Square Apartments, located at 285/303 Third Street -- less than 300 feet from 195 Binney Street -- whose garage has sufficient capacity to easily accommodate any excess demand from 195 Binney Street that may arise after the Project is occupied. A memorandum summarizing the relationship between the three properties and the zoning relief being sought for each is attached at Tab A.

The Applicant is requesting the following special permits from the Planning Board in connection with the Project:

- Project Review Special Permit pursuant to Ordinance Section 19.20
- Provision of required parking off-site pursuant to Ordinance Section 6.22.2
- Reduction in required number of parking spaces pursuant to Ordinance Section 6.35.1
- Permission for side yard setback of 10’ pursuant to Ordinance Section 5.34.2(b)

II. Compliance with Zoning

The Project is located within the IA-1 District and within the East Cambridge Housing Overlay (ECHO) District. As set forth on the Dimensional Form, the Project will comply with all use and dimensional requirements of the underlying zoning (where applicable) and the ECHO District, with the exception of the right side yard setback, for which relief will be sought from the Planning Board as permitted under Ordinance Section 5.34.2(b).

The Project will comply with the intent of the ECHO zoning as articulated in Section 20.41 of the Ordinance, in that it will extend the existing residential neighborhood by creating 84 units of new housing on what is currently a surface parking lot. Moreover, the Project is generally consistent with the policy objectives set forth in the Eastern Cambridge Plan and the guidance provided in the Eastern Cambridge Design Guidelines.¹

No variances from the Board of Zoning Appeal are required.

III. Compliance with General Special Permit Criteria (Section 10.43)

Pursuant to Ordinance Section 10.43, special permits will normally be granted where specific provisions of the Ordinance are met, except when particulars of the location or use, not generally true of the district or of the uses permitted in it, would cause granting of such permit to be to the detriment of the public interest because:

(a) It appears that requirements of this Ordinance cannot or will not be met.

With the requested special permits, the Project will meet all requirements of the Ordinance.

(b) Traffic generated or patterns of access or egress would cause congestion, hazard, or substantial change in established neighborhood character.

As set forth in the Traffic Impact Statement ("TIS"), the Executive Summary of which is submitted with this application (*see Appendix, Tab C*)², the Project is expected to have little impact on traffic in the area that would cause congestion, hazard, or substantial change in neighborhood character. In particular, according to the TIS:

- The Project is expected to generate only approximately 14 vehicle trips during the morning peak hour and 21 vehicle trips during the evening peak hour. This corresponds to an increase of approximately one vehicle trip every 4 minutes on the adjacent roadway network during peak periods as a result of the Project.

¹ A discussion of the Project's compliance with the East Cambridge Design Guidelines is attached hereto at Tab B.

² The full TIS was certified by the Traffic, Parking and Transportation Department on January 22, 2015.

- The intersection capacity analyses conducted at each study intersection indicated that Project-generated traffic is not expected to have any significant impacts on intersection and roadway operations.
- The Project will have little impact on nearby residential streets, with volumes changing less than 1%.
- The existing crash rate at the intersections studied is below the MassDOT District 6 average.

(c) *The continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would be adversely affected by the nature of the proposed use.*

The Project site is surrounded by several residential uses and immediately adjacent to the newly created Rogers Street Park. It is also adjacent to the Foundry Works, the future use of which is currently under discussion by the City. The addition of a new multifamily residential building is wholly consistent with the character of the neighborhood and anticipated by the ECHO District zoning. Moreover, the Project's frontage on Third Street will create a strong edge for the Rogers Street Park and create a needed link between the Foundry Works and the park. The Project is also consistent with the goals of the ECHO District zoning which include the creation of additional housing and the conversion of lots devoted to non-residential uses to residential use.

(d) *Nuisance or hazard would be created to the detriment of the health, safety and/or welfare of the occupant of the proposed use or the citizens of the City.*

There will be no general nuisance or hazard created by the Project. The Project will replace a surface parking lot with high quality housing that will contribute to the vibrancy of the neighborhood and will activate the Third Street edge of the Rogers Street Park. Moreover, as part of the ECHO District, the Project site has been identified as a location suitable for additional residential development.

(e) *For other reasons, the proposed use would impair the integrity of the district or adjoining district, or otherwise derogate from the intent and purpose of this Ordinance.*

The Project is consistent with the both intent and the requirements of the ECHO District and base zoning, in that it adds housing to a site where new residential use is not only permitted, but specifically encouraged and incentivized. Moreover, only side yard dimensional relief is required. When completed, the Project will add high quality housing to the neighborhood consistent with smart growth principles. It will capitalize

on excess capacity in other existing garages owned by the Applicant, so that no new parking will be created as a result of the Project. It will provide open space amenities, including a private roof deck and a private landscaped courtyard.

(f) The new use or building construction is inconsistent with the Urban Design Objectives set forth in Section 19.30.

As set forth below, the Project is consistent with the Urban Design Objectives of Section 19.30.

IV. Compliance with Criteria Specific to Special Permits Being Sought

A. Section 19.20 - Project Review Special Permit

In granting a Project Review Special Permit under Section 19.20 of the Ordinance, the Planning Board is required to make the following findings:

(1) The project is consistent with the urban design objectives of the City.

As described below, the Project confirms with the CityWide Urban Design Objectives set forth in Section 19.30 of the Ordinance.

(2) The project does not impose substantial adverse impacts on city traffic.

The TIS concludes that the Project will have minimal impacts on the surrounding roadways and intersections. The crash rate at each of the study intersections is below the MassDOT District 6 average and the Project is not anticipated to exacerbate any existing safety conditions.

The Project site is within a short walking distance to both the Kendall Square and Lechmere MBTA stations. It is also within walking and biking distance to a number of employers.

The intersection capacity analysis indicates that the Project will generate a modest number of new vehicle trips, and that such trips can easily be accommodated by the existing transportation infrastructure, with minimal impacts to no impacts on traffic operations.

A comprehensive Transportation Demand Management (TDM) plan is being proposed to limit the number of vehicle trips that will be generated by the Project. These measures are expected to reduce the already minimal impacts on traffic impacts at all study intersections.

B. Conformance with Citywide Urban Design Objectives (Section 19.30)

Section 19.31: New projects should be responsive to the existing or anticipated pattern of development. Indicators include:

(1) Heights and setbacks provide suitable transition to abutting or nearby residential zoning districts that are generally developed to low scale residential uses.

The Project site is bisected by two different height zones under the ECHO District zoning. Thus, the portion of the Project closest to Rogers Street is 55 feet, stepping down to 45 feet toward the Bent Street side of the Project. Buildings in proximity to the Project site range from 75' to 138'; thus, at a maximum height of 55 feet, the Project will provide a suitable transition toward Rogers Street Park and the residential neighborhood north of Bent Street.

The Project corners engage the Property line, and the middle sections of the building provide a setback for stoops and gardens along both Third Street and Rogers Street. A 10-foot wide side yard is designed along the property line with The Foundry Works building. However, the L-shape of the Project allows a wide landscaped courtyard to the rear of the building, increasing the open space and buffer between the Project and The Foundry Works, while creating open space amenity areas for Project residents.

(2) New buildings are designed and oriented on the lot so as to be consistent with the established streetscape on those streets on which the project lot abuts. Streetscape is meant to refer to the pattern of building setbacks and heights in relationship to public streets.

Within the ECHO and IA-1 Districts, no front yard is required. The Project's corner elements will be built to the front property line, consistent with these requirements, enabling the creation of a strong edge for Rogers Street Park. Along Third Street and Bent Streets, the Project façade sits back from the sidewalk, providing individual stoop entries to residential units, which will restore the neighborhood residential scale of that street.

(3) In mixed-use projects, uses are to be located carefully to respect the context, e.g. retail should front onto a street, new housing should relate to any adjacent existing residential use, etc.

The Project will provide approximately 1,500 square feet of retail space on the corner of Third and Rogers Streets.

(4) Where relevant, historical context are respected, e.g. special consideration should be given to buildings on the site or neighboring buildings that are preferably preserved.

There are no historic structures on or abutting the Project site.

19.32 Development should be pedestrian and bicycle-friendly, with a positive relationship to its surroundings. Indicators include:

(1) Ground floors, particularly where they face public streets, public parks, and publicly accessible pathways, consist of spaces that are actively inhabited by people, such as retail stores, consumer service businesses and restaurants where they are allowed, or general office, educational or residential uses and building lobbies. Windows and doors that normally serve such inhabited spaces are encouraged to be a prominent aspect of the relevant building facades. Where a mix of activities is accommodated in a building, the more active uses are encouraged facing public streets, parks and pathways.

In commercial districts, such active space consists of retail and consumer service stores and building lobbies that are oriented toward the street and encourage pedestrian activity on the sidewalk. However, in all cases such ground floor spaces should be occupied by uses (a) permitted in the zoning district within which the building is located, (b) consistent with the general character of the environment within which the structure is located, and (c) compatible with the principal use for which the building is designed.

The Project will enhance pedestrian activity in the immediate area. The main building entry will be on Third Street, facing Rogers Street Park. In addition, several ground floor units along Third Street and Bent Street are designed as townhouse style apartments and will have individual stoop entries from the back of the sidewalk. Approximately 1,500 square feet of retail will be provided on the corner of Third and Rogers Streets. The Applicant expects that the retail use will serve residents of the Project and other nearby residential developments, as well as visitors to the Park.

(2) Covered parking on the lower floors of a building and on-grade open parking, particularly where located in front of a building, is discouraged where a building faces a public street or public park, and publicly accessible pathways.

The Project will replace an open air parking lot with an attractive residential building. There will be no on-site parking associated with the Project.

(3) Ground floors should be generally 25-50% transparent. The greatest amounts of glass would be expected for retail uses with lesser amounts for office, institutional or residential use.

The retail and lobby spaces on the ground floor will be largely transparent. Ground floor residential units will have windows, as appropriate.

(4) Entries to buildings are located so as to ensure safe pedestrian movement across streets, encourage walking as a preferred mode of travel within the city and to encourage the use of public transit for employment and other trips. Relating building entries as directly as possible to crosswalks and to pathways that lead to bus stops and transit stations is encouraged; siting buildings on a lot and developing site plans that reinforce expected pedestrian pathways over the lot and through the district is also encouraged.

The main entrance to the building will be located on Third Street, almost directly across from the entrance to Rogers Street Park. The retail space will be located on the corner of Rogers Street and Third Street, with the entrance to such space proximate to the existing crosswalk across Rogers Street.

(5) Pedestrians and bicyclists are able to access the site safely and conveniently; bicyclists should have secure storage facilities conveniently located on-site and out of the weather. If bicycle parking is provided in a garage, special attention must be paid to providing safe access to the facilities from the outside.

As set forth in the TIS, pedestrian conditions in the study area are generally good, with sidewalks provided along all roadways and crosswalks at all intersections. The Project is proposing to construct a new sidewalk on the north side of Rogers Street, where there currently is no sidewalk.

The Project will provide an approximately 1,800 square foot room dedicated to resident bicycle storage with direct access via the rear courtyard. The resident bike lounge will include tools and work stations for resident convenience. Bicycle racks will be also provided outside of the retail space to accommodate the short-term bike storage needs of visiting customers and in the rear courtyard to accommodate residents' visitors.

(6) Alternate means of serving this policy objective 19.32 through special building design, siting, or site design can be anticipated where the building form or use is distinctive such as freestanding parking structures, large institutional buildings such as churches and auditoriums, freestanding service buildings, power plants, athletic facilities, manufacturing plants, etc.

The Project complies with policy objective 19.32.

19.33 The building and site design should mitigate adverse environmental impacts of a development upon its neighbors. Indicators include:

(1) Mechanical equipment that is carefully designed, well organized or visually screened from its surroundings and is acoustically buffered from neighbors. Consideration is given to the size,

complexity and appearance of the equipment, its proximity to residential areas, and its impact on the existing streetscape and skyline. The extent to which screening can bring order, lessen negative visual impacts, and enhance the overall appearance of the equipment should be taken into account. More specifically:

(a) Reasonable attempts have been made to avoid exposing rooftop mechanical equipment to public view from city streets. Among the techniques that might be considered are the inclusion of screens or a parapet around the roof of the building to shield low ducts and other equipment on the roof from view.

(b) Treatment of the mechanical equipment (including design and massing of screening devices as well as exposed mechanical elements) that relates well to the overall design, massing, scale and character of the building.

(c) Placement of mechanical equipment at locations on the site other than on the rooftop (such as in the basement), which reduces the bulk of elements located on the roof; however, at-grade locations external to the building should not be viewed as desirable alternatives.

(d) Tall elements, such as chimneys and air exhaust stacks, which are typically carried above screening devices for functioning reasons, are carefully designed as features of the building, thus creating interest on the skyline.

(e) All aspects of the mechanical equipment have been designed with attention to their visual impact on adjacent areas, particularly with regard to residential neighborhoods and views and vistas.

The Project has been designed so that rooftop mechanicals are screened and buffered by rooftop design elements, including the rooftop deck, rendering them nearly invisible, particularly from Rogers Street Park.

2) Trash that is handled to avoid impacts (noise, odor, and visual quality) on neighbors, e.g. the use of trash compactors or containment of all trash storage and handling within a building is encouraged.

The Project will include an approximately 473 square foot trash storage room located immediately adjacent to the rear service area so that building trash can be securely contained and easily accessed for trash collection. Accordingly, there will be few noise, odor or visual impacts to neighbors from Project trash.

(3) Loading docks that are located and designed to minimize impacts (visual and operational) on neighbors.

All Project loading will occur in dedicated loading space at the rear of the building, well within the site. Extensive planting and landscaping will create a visual buffer between the loading area and the neighboring Foundry Works building to the rear of the Project site. The loading area will be accessed through a new driveway off Rogers Street. The loading design will ensure that there are minimal, if any, impacts on neighbors.

(4) Stormwater Best Management Practices and other measures to minimize runoff and improve water quality are implemented.

The proposed stormwater management system will be designed to comply with the most recent City of Cambridge Wastewater and Stormwater Drainage Use Regulations and the MassDEP Stormwater Management Policy for a redevelopment project. Roof runoff from the Project will be captured in an internal roof drainage collection system, and ground surface runoff will be collected in a series of catch basins and landscape area drains. Surface runoff from paved parking and driveway surfaces will be treated on site through the implementation of stormwater pre-treatment Best Management Practices (BMPs) such as deep-sump hooded catch basins and proprietary hydrodynamic separation units. The treated surface runoff and the roof runoff will then be combined to discharge to the municipal stormwater conveyance system located in Rogers Street. The on-site soil properties will be analyzed for suitability of underground infiltration. The project will incorporate an on-site stormwater management system designed to retain the volumetric difference of the 25-year post-development peak rate of runoff relative to the 2-year pre-development peak rate of runoff per the City of Cambridge Wastewater and Stormwater Management Guidance.

(5) Landscaped areas and required Green Area Open Space, in addition to serving as visual amenities, are employed to reduce the rate and volume of stormwater runoff compared to pre-development conditions.

The Property, which is currently developed with a paved surface parking lot, is approximately 80% impervious. The Project will include a new at-grade landscaped rear yard and plantings along the property line between the Project and The Foundry Works. The exterior common area at the rear of the building will consist of both Green Area and Permeable Open Space, consisting of a permeable patio system, a private roof-level deck, and landscape areas. While the Project results in an approximate 750 square foot reduction in Green Area Open Space, it will provide approximately 45 square feet more overall open space than the existing condition. Combined with the stormwater management design, sufficient measures are implemented for peak stormwater runoff volumes.

(6) The structure is designed and sited to minimize shadow impacts on neighboring lots, especially shadows that would have a significant impact on the use and enjoyment of

adjacent open space and shadows that might impact the operation of a Registered Solar Energy System as defined in Section 22.60 of this Zoning Ordinance.

With a maximum height of 55 feet, the Project is not expected to cast significant shadow. Morning shadows will cast on the rear courtyard; afternoon shadows will fall on Third Street, and mid-day shadowing will fall on the rear courtyard and Bent Street. A shadow study is attached at Tab D.

(7) Changes in grade across the lot are designed in ways that minimize the need for structural retaining walls close to property lines.

The existing site is relatively flat, therefore the Project has no retaining walls and minimal changes in grade. The ground-floor residential units will be raised 21 inches above the adjacent existing sidewalk grade, and concrete stairways and entry stoops will be constructed at each unit's entrance from Third and Bent Streets.

(8) Building scale and wall treatment, including the provision of windows, are sensitive to existing residential uses on adjacent lots.

The scale and façade of the Project are consistent with the residential scale of the neighborhood, residences on Bent Street, and the Lofts at Kendall Square (195 Binney Street) located across Rogers Street from the Project. The Project site is a corner lot, directly abutted by streets on three sides; accordingly, a majority of the windows look out directly on the street, rather than onto other residential properties. To the rear, the Project abuts The Foundry Works, which is not a residential property. The narrowest side yard dimension is 10 feet, and this area will be landscaped to afford privacy for the residents of those units whose windows look into the side yard.

(9) Outdoor lighting is designed to provide minimum lighting and necessary to ensure adequate safety, night vision, and comfort, while minimizing light pollution.

Project lighting will be designed to minimize glare or spill-over to adjacent properties, while providing adequate light levels for security. Pedestrian lighting along the front and sides of the building will increase safety, while enhancing the visual landscape in the evenings. Individual unit entry stoops along the street will have lights.

(10) The creation of a Tree Protection Plan that identifies important trees on the site, encourages their protection, or provides for adequate replacement of trees lost to development on the site.

A tree survey plan was submitted to the City of Cambridge Arborist on January 13, 2015. There are currently eight (8) trees totaling approximately 16 inches of DBH in the parking lot that is

currently on the Project site, none of which are defined as significant. The Project will remove these trees, and six new trees, totaling 21 inches DBH, will be planted on the Property. The Tree Study and Certification of Receipt of Plans by the City Arborist are included in the Appendix at Tab E.

19.34 Projects should not overburden the City infrastructure services, including neighborhood roads, city water supply system, and sewer system. Indicators include:

(1) The building and site design are designed to make use of water-conserving plumbing and minimize the amount of stormwater run-off through the use of best management practices for stormwater management.

The Project's stormwater management system will be designed to incorporate best management practices and is subject to review and approval by the Department of Public Works. Water-conserving plumbing fixtures will be used in keeping with industry standards, and as required to meet LEED standards. All necessary permits will be sought from the City.

(2) The capacity and condition of drinking water and wastewater infrastructure systems are shown to be adequate, or the steps necessary to bring them up to an acceptable level are identified.

The sanitary sewage from the Project will be collected and discharged into the existing sewer main on Rogers Street. The Applicant and its design team are working with the Cambridge Department of Public Works to coordinate the new sanitary connections and locations. Detailed information regarding the Project's water infrastructure is set forth in the Water Service Infrastructure Narrative, below.

(3) Buildings are designed to use natural resources and energy resources efficiently in construction, maintenance, and long-term operation of the building, including supporting mechanical systems that reduce the need for mechanical equipment generally and its location on the roof of a building specifically. The buildings are sited on the lot to allow construction on adjacent lots to do the same. Compliance with Leadership in Energy and Environmental Design (LEED) certification standards and other evolving environmental efficiency standards is encouraged.

The Project will be designed to minimize any negative impact on the environment and its performance will be measured using the Leadership in Energy and Environmental Design (LEED) standards. A description of the sustainable design approach for the project is contained in the LEED Narrative and LEED Checklist submitted with this Application (see Appendix, Tab F). Mechanical systems will be individualized for the residential units, encouraging bill-paying

residents to conserve resources. High-efficiency systems will be used throughout, minimizing impact on the water, electrical, and gas service.

19.35 New construction should reinforce and enhance the complex urban aspects of Cambridge as it has developed historically. Indicators include:

The Project will provide new residential activity along public streetscapes and will activate the edge of the new Rogers Street Park. The Project will complement the nearby existing and planned commercial and retail uses. By introducing an additional residential use, employees of buildings in Kendall Square will have a convenient option of a walking commute, while also giving surrounding retailers and services in the neighborhood additional foot traffic. The Project will also create additional residential opportunities in close proximity to public transportation.

19.36 Expansion of the inventory of housing in the city is encouraged.

When completed, the Project will provide 84 new residential units, including 10 affordable housing units in an area of Cambridge that the City has targeted for residential development. A variety of unit types are provided, including studios, one-, two-, and three-bedroom units.

19.37 Enhancement and expansion of open space amenities in the city should be incorporated into new development in the city.

The Project enhances and expands open space amenities in the neighborhood. By replacing the existing surface parking lot with a residential building, the Project creates a strong edge to the new Rogers Street Park and better connects The Foundry Works site to the park. The addition of 84 new residences and approximately 1,500 square feet of retail space will activate Third Street along Rogers Street Park, thereby enhancing the experience of visitors to the park. The Project also will provide approximately 4,900 square feet of landscaped open space on all sides of the building and adjacent to Third, Bent, and Rogers Streets.

B. Section 6.22.2 – Provision of Required Parking Offsite

Pursuant to Section 10.45 of the Ordinance, the Planning Board may grant a special permit for off site accessory parking not allowed in Subsection 6.22.1(a) provided that convenient and safe access from the parking facility to the use being served is provided in accordance with the following conditions: (a) No off site accessory parking facility may be located on a lot which has a more restrictive zoning classification than the lot on which the use being served is located; (b) Off site accessory parking facilities shall be located within four hundred (400) feet of the lot being served for residential uses and within one thousand (1000) feet of the lot for other uses.

The Applicant is proposing that all parking for the Project will be provided in the existing below grade garage at 195 Binney Street (the Lofts at Kendall Square), which is located 30 feet from the Project site and is also owned by Equity Residential. The 195 Binney Street building has 186 units and 194 parking spaces, for a parking supply ratio of 1.04 spaces per unit. As set forth in the TIS, utilization at the 195 Binney garage is currently at only 0.58, leaving ample capacity for Project parking. Due to the proximity of the two properties, residents of the Project will have safe and convenient access to the 195 Binney garage. Residents of 249 Third Street will be provided a key fob that will provide access to the underground parking at 195 Binney Street. Both properties are located within the IA-1 zoning district.

C. Section 6.35.1 - Reduction in required number of parking spaces

The Applicant is proposing to provide Project parking at a ratio of 0.7 spaces per unit, rather than the 1.0 ratio required in the IA-1 district. Parking demand at the garages at 195 Binney Street and 285/303 Third Street, which are also owned by the Applicant, indicates that this is an appropriate parking ratio for the Project.

As set forth in the TIS, the built parking ratio at 195 Binney Street is 1.04 spaces per unit; the ratio at 285/303 Third Street is 1.09 spaces per unit. Analysis of leasing data indicates that residents of 195 Binney are leasing parking spaces at rate of 0.56 spaces per unit, while 285/303 Third Street residents are leasing spaces at a ratio of .52 spaces per unit. As noted in the TIS, both garages are generally underutilized: the 195 Binney Street garage averages 30-40% occupancy, while the 285/303 Third Street garage has an average occupancy of only 49%. This translates to approximately 313 empty parking spaces within the garages in the Applicant's Kendall Square apartment communities.

In order to more accurately reflect parking demand at its three properties in the Kendall Square neighborhood, the Applicant is seeking special permits to reduce the required parking ratio for all three properties to 0.7 spaces per unit. (Separate permit applications are being filed for 195 Binney Street and 285/303 Third Street.) All parking for the Project (56 spaces) will be provided in the 195 Binney Street garage, located approximately 30 feet from the Project site. To the extent there is demand, the Applicant will reassign a portion of the 195 Binney Street residents (including those who currently park in the surface parking lot on the Project site) to park in the 285/303 Third Street garage, which is approximately 282 feet from 195 Binney Street. Following the realignment of parking spaces and the adjustment of the ratio across the portfolio, there will still be approximately 120 unused spaces in the 285/303 Third Street garage. *See also Tab A.*

The 195 Binney and 285/303 Third Street garages were permitted, designed, and built to accommodate a total of 710 spaces. As demonstrated in the TIS, this is more than sufficient

capacity for the parking demand for all three Equity Residential projects on the Third Street corridor. Reallocation of resident parking spaces among the properties and reduction of the ratio to reflect actual parking demand will not cause excessive congestion or endanger public safety. Given that the parking in the 195 Binney and 285/303 Third garages is dedicated to use by Equity residents,³ the reduction in required spaces will not substantially reduce parking available for other uses or otherwise adversely impact the neighborhood. Because the Project is well-served by public transportation and within walking distance to Kendall Square, the reduction in cars associated with the Project will lessen traffic impacts and provide positive environmental benefits to the neighborhood.

V. Noise Mitigation (Chapter 8.16 Noise Control)

The mechanical rooftop units are designed as individual condenser units located on structured frame enclosed with a low vertical barrier to assist in reducing the noise levels from the units. The current design for all rooftop equipment will meet or exceed the noise standards stated in Ordinance Section 8.16, Table 8.16.060E.

VI. Summary of Community Outreach

The Proponent presented the Project to the East Cambridge Planning Team (“ECPT”) on February 25, 2015. At that meeting, the ECPT suggested certain design modifications to the Project and requested additional information regarding the proposal. The Proponent returned to the ECPT on April 22, 2015 and received a favorable response to the Project as revised.

In November 2014, the Proponent contacted the Neighborhood Association of East Cambridge to schedule a time to meet and present the Project. On December 19, 2014 the Proponent provided a copy of Project materials to Abigail Lewis-Bowen. Throughout the winter and early spring of 2015, the Proponent made multiple requests for a meeting date with the Neighborhood Association of East Cambridge, but did not receive a response.

VII. LEED Narrative

The Project will achieve compliance with Cambridge Stretch Code by being “LEED Silver” under the LEED for Mid-Rise building rating system.

Major sustainable design elements of the overall project include:

³ In 2014 Equity Residential entered into a short-term agreement with Alexandria Development to lease 200 parking spaces in the 285/303 Third Street garage while Alexandria completes its development at 50-60 Binney Street. The lease expires in 2017, after which time there will be no further third-party parking in the garage. This short-term arrangement is reflected in Minor Amendment #7 to PB#189, approved by the Planning Board on August 5, 2014.

- Redevelopment of a currently Parking Lot. The Project is in an urban area, close to regional and local public transportation. The new residential building will be located within .1 miles to public transportation on the MBTA's Red Line at Kendall Square, and .7 miles from the Green Line. Numerous bus lines are nearby, encouraging minimal vehicle use.
- The Project will embody urban principles encouraging public transportation and pedestrian activity. The use of cars at this site is expected to be minimal in comparison to the public transportation and pedestrian trips. Other transportation related characteristics include:
 - Only 2 on-site parking spaces for the entire project.
 - Covered bicycle parking will be included for residents. Visitor bicycle parking will be adjacent to the primary building entrance.
 - Mechanical Systems:
 - No CFCs or HCFCs will be used in cooling equipment.
 - The Project will seek to save energy across systems with energy efficient equipment and appropriate insulation.
 - High efficiency lighting with occupancy sensors will be incorporated where suitable.
 - ◆ Residential Units:
 - Energy Star appliances, lighting and low-flow fixtures will be integrated into residential units.
 - Operable and high-quality insulated glass will allow residents to control air movement within the units.

The Project's LEED Checklist, further analysis of LEED credits, and accompanying affidavit are included at Tab F of the Appendix.

VIII. Sewer Service Infrastructure Narrative

The sanitary sewage from the Project will be collected and discharged into the existing sewer main on Rogers Street. The Applicant and its design team are working with the Cambridge Department of Public Works to coordinate the new sanitary connections and locations. The Project Property is currently occupied by a paved parking lot and is the former site of an

industrial building constructed in 1965 which was demolished to construct the current parking lot.

Based on City of Cambridge Wastewater and Stormwater Drainage Use Regulations, 314 CMR 7.00 – The Commonwealth’s Sewer System Extension and Connection Permit Program, and 310 CMR 15.000 – State Environmental Code (Title 5), the proposed building and uses will generate approximately 10,760 gallons per day (GPD) as demonstrated in Table 1. The threshold for a MassDEP Sewer Connection Permit is 50,000 GPD and therefore is not required.

Table 1. – Proposed Sanitary Sewer Design Flows

USE	FLR AREA (RETAIL)	UNITS (RES)	RATE – RESID. (GPD/BEDR)*	RATE - RETAIL (GPD/SF)*	GPD PER USE
RETAIL	1,540 SF	N/A	--	50 GPD/KSF	200 (MIN)
STUDIO	--	28	110	--	3,080
1 BEDROOM	--	42	110	--	4,620
1 BEDROOM LOFT	--	4	110	--	440
2 BEDROOM	--	8	110	--	1,760
3 BEDROOM LOFT	--	2	110	--	660
				TOTAL	10,760 GPD
*314 CMR 7.00: SEWER SYSTEM EXTENSION AND CONNECTION PERMIT PROGRAM					

The City’s inflow/infiltration (I/I) mitigation requirements do not apply to this Project because it does not require a Sewer Connection Permit and it is not located within a City area where mitigation is required.

The proposed stormwater management system will be designed to comply with the most recent City of Cambridge Wastewater and Stormwater Drainage Use Regulations and the MassDEP Stormwater Management Policy for a redevelopment project. Roof runoff from the Project will be captured in a roof drainage collection system, and ground surface runoff will be collected in a series of catch basins and landscape area drains. Surface runoff from paved parking and driveway surfaces will be treated on site through the implementation of stormwater pre-treatment Best Management Practices (BMPs) such as deep-sump hooded catch basins and proprietary hydrodynamic separation units. The treated surface runoff and the roof runoff will then be combined to discharge to the municipal stormwater conveyance system located in the adjacent roadways. The on-site soil properties will be analyzed for suitability of underground infiltration. The project will incorporate an on-site stormwater management system designed to retain the volumetric difference of the 25-year post-

development peak rate of runoff relative to the 2-year pre-development peak rate of runoff per the City of Cambridge Wastewater and Stormwater Management Guidance.

A Stormwater and Wastewater Infrastructure Permit (SWIP) for stormwater and wastewater discharges is required under Article 1, Section 8 (a) of the City of Cambridge Wastewater and Stormwater Drainage Use Regulations and shall be issued by the City of Cambridge Department of Public Works.

IX. Water Service Infrastructure Narrative

The domestic water estimate for the Project is based on the projected approximate daily wastewater flow. Per 314 CMR 7.00, wastewater flow for multi-family residential and retail is based on bedroom count and floor area, respectively. Assuming a 1.1 usage and loss factor on the design flows summarized in Table 1 to account for consumption not resulting in direct wastewater discharge, the approximate water demand is 1.1 x 10,760 gallons per day (GPD) or 11,836 GPD.

Table 1. – Proposed Sanitary Sewer Design Flows

USE	FLR AREA (RETAIL)	UNITS (RES)	RATE – RESID. (GPD/BEDR)*	RATE - RETAIL (GPD/SF)*	GPD PER USE
RETAIL	1,540 SF	N/A	--	50 GPD/KSF	200 (MIN)
STUDIO	--	28	110	--	3,080
1 BEDROOM	--	42	110	--	4,620
1 BEDROOM LOFT	--	4	110	--	440
2 BEDROOM	--	8	110	--	1,760
3 BEDROOM LOFT	--	2	110	--	660
				TOTAL	10,760 GPD
*314 CMR 7.00: SEWER SYSTEM EXTENSION AND CONNECTION PERMIT PROGRAM					

Per the request of the City of Cambridge Water Department and prior to the installation of any water connections in Rogers Street, the Applicant has agreed to replace said existing main in parallel, from its junction with the existing 12-inch water main in Third Street to a point just beyond the projected west property boundary of the project site, with appropriate valves to establish all water connections to said main as necessary for the Project. Additionally, the Applicant has agreed that the existing abandoned water services extending to the Project site will be discontinued at the respective water mains in Bent, Third, and Rogers Streets. Existing services 2 inches or smaller in diameter will be clipped at the location of corporation to such services into each main. Existing services 4 inches or larger in diameter will be “discontinued,” such that in each case the existing anchor tees with attached valves will be cut out and replaced

with a section of pipe matching the size of the main and coupled at each end of new section with solid sleeve couplings. All required discontinuances of service will require a shutdown of the corresponding water main and all logistical measures associated with the shutdown, including but not limited to notification of affected water users and coordination with the Cambridge Water Department. Expenses associated with water main improvements, “clipping” and “discontinuation” of abandoned water services, and testing and field observation shall be borne by the Applicant.

Based on record survey plans and utility infrastructure information from the City’s online GIS database, and per Article 3 Section 3 of the Cambridge Water Department Construction Standards for buildings of fifty or more units, domestic water service to the site is to be provided by a new primary domestic service line from the above referenced new 8-inch water main in Rogers Street and a new redundant domestic service line will be tapped from a newly installed section of 12-inch water main in Third Street. A new primary fire service line will also be connected to the new section of 12-inch water main in Third Street. The new domestic service laterals will be equipped with separate meters with an internal cross connection. Hydrant flow tests will be completed, with expenses borne by the Applicant, prior to completion of final design to verify adequate flow and pressure for the proposed building’s sprinkler system. Additionally, the need of a redundant fire supply service and the requirement for a fire service pump to boost pressure in the fire suppression system will also be analyzed. In the event that a redundant fire service is required for the project based on sprinkler system analysis, said service shall extend from the new 8-inch main in Rogers Street.

The foregoing narrative and associated plans have been provided to the City of Cambridge Water Department. A copy of the Certification of Receipt is attached at Tab H.

APPENDIX

- Tab A: Memorandum regarding Proposed Parking Reallocation
- Tab B: Narrative regarding Compliance with Eastern Cambridge Design Guidelines
- Tab C: Executive Summary of Traffic Impact Study and Certification by Traffic, Parking, and Transportation Department
- Tab D: Shadow Study
- Tab E: Tree Study and Certification of Receipt of Plans by City Arborist
- Tab F: Expanded LEED Narrative, Checklist, and Affidavit and Certification for Receipt of Plans by LEED Specialist
- Tab G: Flood Plain Documentation
- Tab H: Certification of Receipt of Plans by Cambridge Water Department

TAB A

MEMORANDUM

TO: City of Cambridge Planning Board

FROM: Equity Residential

DATE: June 17, 2015

RE: Overview of Zoning Relief Requested for 249 Third Street, 195 Binney Street and 303 Third Street

Equity Residential (“Equity”) proposes to construct an 84-unit multifamily residential development at 249 Third Street (the “Proposed Project”). The Proposed Project will contain no on-site parking; rather, all resident parking – provided at a ratio of 0.7 – is proposed to be located in the existing below-grade garage at 195 Binney Street, another Equity-owned property located directly across Rogers Street from the Proposed Project site. Equity also owns Third Square Apartments, located at 285/303 Third Street – less than 300 feet from 195 Binney Street – whose garage has sufficient capacity to easily accommodate any excess parking demand from 195 Binney Street that may arise after the Proposed Project is occupied. In essence, what is contemplated is a “waterfall” scenario, whereby vehicles from 249 Third Street are parked at 195 Binney Street and, to the extent necessary, vehicles from 195 Binney Street are parked at 285/303 Third Street.

To enable this arrangement, Equity is seeking a series of special permits and/or modifications to existing permits for each of the three properties which it requests that the Planning Board evaluate as an integrated undertaking. A list of the requested relief is set forth below.

249 Third Street	
<u>Relief Sought</u>	<u>Purpose of Relief</u>
Project Review Special Permit pursuant to Ordinance Section 19.20	Required for construction of Proposed Project, which exceeds 50,000 square feet.
Provision of required parking off-site pursuant to Ordinance Section 6.22.2	This relief will permit all Proposed Project parking spaces to be located within existing parking facilities at 195 Binney Street.
Reduction in required number of parking spaces pursuant to Ordinance Section 6.35.1	This relief will reduce the required parking ratio from 1.0 spaces per unit to 0.7 space per unit.
Permission for side yard setback of 10’ pursuant to Ordinance Section 5.34.2(b)	

195 Binney Street	
<u>Relief Sought</u>	<u>Purpose of Relief</u>
Reduction in required number of parking spaces pursuant to Ordinance Section 6.35.1	This relief will reduce the required parking ratio for the existing residential development at 195 Binney from 1.04 to 0.7 in order to reflect the actual current usage of the garage and to create parking capacity for vehicles associated with the Proposed Project.
Provision of required parking off-site pursuant to Ordinance Section 6.22.2	This relief will allow any excess demand at 195 Binney Street resulting from the addition of vehicles from the Proposed Project to be accommodated at the below-grade garage at 285/303 Third Street, which is located approximately 290 feet away.
303 Third Street	
<u>Relief Sought</u>	<u>Purpose of Relief</u>
Reduction in required number of parking spaces pursuant to Ordinance Section 6.35.1	This relief will reduce the required parking ratio for the existing residential development at 303 Third Street from 1.09 to 0.7 in order to reflect the actual current usage of the garage and to create additional parking capacity for vehicles from 195 Binney Street once spaces associated with the Proposed Project are added to that garage.
Modification to PB#189	A modification to the existing PUD-KS Special Permit is needed to permanently reduce the parking ratio for the below-grade garage to 0.7 and to allow residents of 195 Binney Street to park in the 285/303 Third Street garage.

TAB B

249 Third Street - Eastern Cambridge Design Guidelines Narrative

A. INTRODUCTION

Per the Eastern Cambridge Planning Study (October 2001), the Project is located within a “Transition Area”. The design therefore reflects the goals set forth in the Eastern Cambridge Design Guidelines for Transition Areas. Most significantly, the Project repurposes an existing surface parking lot into multifamily residential use. Consistent with Eastern Cambridge Housing Overlay (ECHO) zoning, it creates a transition in scale by stepping down in height from 55 feet to 45 feet toward the residential zone. The Project also will include the construction of a new sidewalk to improve the safety of pedestrian access to the adjacent Foundry Works building from Third Street. Moreover, in recognition of its location at a the transition point between the existing residential neighborhood and the more industrial area of Eastern Cambridge, the Project will create entry stoops along Third Street and Bent Street to underscore its residential character and to reinforce its connection to the neighborhood.

B. BUILT FORM

1. Street-Level Uses and Design

a. *Residential Blocks*

The Project consists of new development on a residential block. It will create a consistent residential edge on all sides, with small setbacks for stoops and front gardens. A number of the first floor units will have individual front doors facing the street on Bent and Third Streets. There are no blank walls facing any streets or pedestrian walkways. There will be approximately 1,500 square feet of retail located on the corner of Rogers and Third Street.

2. Building Height and Orientation

a. *Neighborhood Streets*

The Project is located on so-called “Neighborhood Streets”, as defined in the Guidelines. Consistent with ECHO zoning, the portion of the building closest to Rogers Street will be five stories (55 feet), stepping down to four stories (45 feet) along Bent Street. The Project will include a roof deck for residents, and several units will have metal French balcony railings. At grade, the building will provide a consistent residential edge, with projecting bays, small, five-foot setbacks for stoops, and front gardens. A number of the

first floor units will have individual front doors facing the street on Bent and Third Streets. The new open space located to the west of the building provides south and west facing daylight to maximize sun exposure.

b. *Park Edges*

The Project is across Third Street from the new Rogers Street Park. According to the Guidelines, the height of the principal façade of buildings surrounding the park should not exceed one-third (1/3) the width of the park. The park frontage is 212 feet; one third of which is 69 feet. The maximum height of the principal façade of the building is 55 feet, stepping down to 45 feet. This step-down minimizes shadows on the park in the late afternoon. The façade along the park includes townhome style residential units with stoops and entrances, the main entrance for the Project, and a retail corner at Rogers and Third Streets.

c. *Other Streets*

The closest buildings to the Project are the Kendall Lofts (40 feet tall) and the Foundry Works Building (34 feet tall). The façade along Rogers Street provides a material change from brick veneer to metal shingle at an elevation to align with Kendall Lofts roof line. The building cornice along Bent Street approximately aligns with the peak of the Foundry Building. The Project creates a consistent residential edge, with small five (5) foot setbacks for stoops and front gardens. A number of the first floor units will have individual front doors facing Bent Street. The loading area and service access is accessed from Rogers Street.

3. Scale and Massing

- a. The project is developing an existing block parcel; no alterations will be made to the current block size. The Proponent is proposing a new pedestrian crossing at Third and Rogers Street to improve pedestrian access in and around the Project.
- b. To avoid continuous massing, the building is defined by projecting corner elements with a continuous setback that includes projecting bays and stoops. The materials vary between brick veneer and metal shingle to provide a residential feel. The bays are a two-story element clad in metal shingle. Many of the windows are treated with metal French balcony railings.
- c. To reflect the rhythm and residential character of the neighborhood north of Bent Street, the Project features townhouse bay elements along Third and Bent Streets. These bays are 11 feet wide and 23 feet high.

- d. The building's architectural components will be clearly expressed, with a precast concrete base, a brick veneer middle, and a metal shingle top with solid and trellis forms as a cornice.
- e. The building varies in height along the Third Street elevation. The fifth story steps back from the Third Street façade eight feet. The cornice detailing is varied from a trellis design at the recessed façade portion to a solid design to distinguish the corners.
- f. The corners of the building are emphasized through use of a metal shingle to create a vertical element to book end the massing.
- g. With a height of 55 feet at its highest point, the building is not a tall building or tower.

4. Architectural Character

- a. *Residential*
 - i. To avoid creation of a flat façade, the building provides a number of ground floor bays and stoops, stepped projections, balconies and a projecting cornice.
 - ii. To increase safety as well as enhance the resident living experience, the building maximizes the windows facing public streets. In addition, the retail corner at Third and Rogers Street will be predominantly glass.

5. Environmental Guidelines

- a. The building has been designed to be LEED Silver Certifiable. Additionally, it will feature high efficiency systems for both the overall building and the individual units.
- b. The rooftop equipment will meet or exceed all requirements of applicable City of Cambridge ordinances. It will be screened and buffered by rooftop design elements which will help reduce its noise impacts on the neighborhood.

6. Parking

- a. The Project will provide only two parking spaces on site, for handicapped use and for short term visitors or service calls. Parking accessory to the residential use will be provided below grade at the Applicant's property at 195 Binney Street, located directly across Rogers Street from the Project site. The two onsite spaces will be located at the rear of the property; a continuous fence will

- be located along the property line such that the parking will not be visible from the Foundry Building.
- b. The small parking area to the rear of the building will be accessed off of Rogers Street. In connection with the Project, the Applicant will construct a new sidewalk along Rogers Street from Third Street to the Foundry Building.
 - c. Not applicable.
 - d. Not applicable.
 - e. The lighting design for the parking and loading area will enhance safety while minimizing light spillover onto adjacent properties.

C. PUBLIC REALM

1. Open Space

a. *Public Open Space*

Although the Project does not provide any public open space, it has been designed to be mindful to existing nearby public open spaces. The Project creates a strong edge for the new Rogers Street Park and will provide a new sidewalk to improve the connection from the Park to the Foundry Building. Additionally, the Project will create a landscaped courtyard adjacent to the side yard of the Foundry Building which will create an experience of continuous open space along Rogers and Bent Streets. These features are consistent with the Guidelines' goals for Transition Areas and Neighborhoods.

b. *Semi-private open space*

The Project will create new semi-private open spaces, with small five (5) foot setbacks for stoops and front gardens. A number of the first floor units will have individual front doors facing the street on Bent and Third Streets. The open space located to the west of the building provides south and west facing daylight.

2. Streets and Sidewalks

- a. The Project will support active pedestrian uses and reinforce the character of the neighborhood by providing pedestrian friendly lighting and attractive front entry areas on the ground floor of both the residential and retail components. The existing street trees along Bent and Third Streets will be retained. A new pedestrian crossing at Third and Rogers Street will connect the Rogers Street Park to the Project and the Foundry Building.
- b. Not applicable.

- c. New streets are not being proposed.
- d. Although no new streets are proposed in connection with the Project, pedestrian friendly lighting will be added to the existing sidewalk at Rogers Street. Sidewalk light bollards are being proposed at the back side of the sidewalk along Rogers Street.
- e. Consistent with the goal of the Cambridge Pedestrian Plan to make walking safer, easier, and more attractive, the Project will provide a new crosswalk between Third and Rogers Street. Two bicycle racks will be provided on the site, as shown on the Site Plan.

3. Connections

- a. Not applicable.
- b. The Project will construct a new sidewalk along Rogers Street to provide better access to the Foundry Building from Third Street and Rogers Park.
- c. Not applicable.

4. Transportation

- a. Not applicable.
- b. The Project will provide a new pedestrian crossing at Third and Rogers Street.
- c. Bicycle/other non-motorized vehicles
 - i. Not applicable.
 - ii. The Project will include 89 sheltered bicycle racks as indicated on the First Floor Plan.
 - iii. Two bicycle racks to support the Project's retail space are being provided along Third Street as indicated on the Site Plan.

TAB C



CITY OF CAMBRIDGE
Traffic, Parking and Transportation
344 Broadway
Cambridge, Massachusetts 02139

www.cambridgema.gov/traffic

Monica R. Lamboy, Interim Director
Brad Gerratt, Deputy Director

Phone: (617) 349-4700
Fax: (617) 349-4747

January 22, 2015

Joe SanClemente
Howard Stein-Hudson Associates, Inc.
11 Beacon Street, 10th Floor
Boston MA 02108

RE: 249 Third Street Project

Dear Mr. SanClemente,

The Cambridge Traffic, Parking and Transportation Department (TP&T) received the Transportation Impact Study (TIS) prepared by your office on November 13, 2014 for the 249 Third Street Project. TP&T reviewed the TIS and submitted a comment letter to you on December 3, 2014 with corrections needed to the TIS.

On January 8, 2015 TP&T received a revised TIS dated December 22, 2014. Based on TP&T review, the TIS is certified as complete and reliable.

Please call Adam Shulman at 617-349-4745 if you have any questions.

Sincerely,

A handwritten signature in cursive script, appearing to read "Monica R. Lamboy".

Monica R. Lamboy
Interim Director

cc: Adam Shulman, TPT



Traffic Impact Study

249 Third Street *Cambridge, Massachusetts*

Prepared for
City of Cambridge
Traffic, Parking, and Transportation Department

Prepared by
Howard/Stein-Hudson Associates, Inc.

In association with
Equity Residential

Under the direction of

Joe SanClemente, P.E., AICP
Massachusetts Registration No. 47358

November 13, 2014
Revised: December 22, 2014



Howard/Stein-Hudson Associates, Inc.
CREATIVE SOLUTIONS • EFFECTIVE PARTNERING®

CITY OF CAMBRIDGE
Special Permit Transportation Impact Study (TIS)

Summary Sheet

Planning Board Permit Number: _____

PROJECT NAME: 249 Third Street

Address: 249 Third Street, Cambridge, Massachusetts

Owner/Developer Name: Equity Residential

Contact Person: Mr. Richard Boales, Senior Vice President

Contact Address: 1500 Massachusetts Avenue, NW, Suite 25 Washington, DC 20005

Contact Phone: 202-971-7063

SIZE:

Building: 84 residential units

1,500 sf retail

75,971 Square feet

Land Use Type: 220 – Apartment, 820 – Shopping Center

PARKING:

Existing Parking Spaces: 721 Use: Residential

New Parking Spaces: (74) Use: Residential

Total Parking Spaces: 647

Date of Parking Registration Approval: _____

Parking spaces to be shared between the proposed 249 Third Street Project and existing 482 units at 195 Binney Street.

TRIP GENERATION:

	Daily	AM Peak Hour	PM Peak Hour
Total Trips	782	51	79
Vehicle	212	14	21
Transit	260	17	27
Pedestrian	252	16	26
Bicycle	58	4	5

MODE SPLIT (PERSON TRIPS): Residential/Retail

Vehicles (SOV): 26.3%

Bicycle: 7.2%

Rideshare (HOV): 2.6%

Pedestrian: 30.7%

Transit: 31.7%

Work from Home: 1.5%

TRANSPORTATION CONSULTANT:

Company Name: Howard/Stein-Hudson Associates

Contact Name: Joe SanClemente, P.E., AICP

Phone: 617-348-3334

Date of Building Permit Approval: _____

CITY OF CAMBRIDGE **Planning Board Criteria Performance Summary**
Special Permit Transportation Impact Study (TIS)

Planning Board Permit Number: _____

Project Name: 249 Third Street

Total Data Entries = 84 Total Number of Criteria Exceedance = 1

1. Project Vehicle Trip Generation

Weekday = 212 AM Peak Hour = 14 PM Peak Hour = 21 Meets Criteria? *No* __

2. Level of Service (LOS)

Intersection	A.M. Peak Hour			P.M. Peak Hour		
	Existing	With Project	Meets Criteria?	Existing	With Project	Meets Criteria?
Signalized Intersection						
Third Street at Binney Street	C	C	N	D	D	N
Binney EB left	D	D	N	D	E	Y
Binney EB thru/thru/right	C	C	N	B	B	N
Binney WB left	D	D	N	F	F	N
Binney WB thru/right	C	C	N	D	D	N
Third NB left/thru	B	B	N	C	C	N
Third NB right	B	B	N	C	C	N
Third SB left/thru/right	D	D	N	D	D	N
Unsignalized Intersection						
Third Street at Bent Street	-	-	-	-	-	-
Bent EB left/thru/right	C	C	N	C	C	N
Parking Lot WB left/thru right	C	C	N	D	D	N
Third NB left/thru/right	A	A	N	A	A	N
Third SB left/thru/right	A	A	N	A	A	N

3. Traffic on Residential Streets

Street Segment	A.M. Peak Hour			P.M. Peak Hour		
	Existing Volume	With Project	Meets Criteria?	Existing Volume	With Project	Meets Criteria?
Third Street (north of Charles St)	555	554	N	798	800	N
Binney Street (west of Third St)	835	837	N	975	982	N

CITY OF CAMBRIDGE **Planning Board Criteria Performance Summary**
Special Permit Transportation Impact Study (TIS)

4. Lane Queue (for signalized intersections critical lane)

Intersection	No. of Lanes Analyzed	A.M. Peak Hour			P.M. Peak Hour		
		Existing	With Project	Meets Criteria?	Existing	With Project	Meets Criteria?
Third Street at Binney Street	-	-	-	-	-	-	-
Binney EB left	1	2.08	2.08	<i>N</i>	7.28	7.36	<i>N</i>
Binney EB thru/thru/right	2	1.96	2.00	<i>N</i>	2.56	2.60	<i>N</i>
Binney WB left	1	3.92	3.96	<i>N</i>	2.60	2.68	<i>N</i>
Binney WB thru/right	1	8.16	8.24	<i>N</i>	5.32	5.40	<i>N</i>
Third NB left/thru	1	1.72	1.72	<i>N</i>	5.48	5.56	<i>N</i>
Third NB right	1	0.68	0.72	<i>N</i>	1.80	1.84	<i>N</i>
Third SB left/thru/right	1	8.12	8.24	<i>N</i>	6.04	6.24	<i>N</i>

5. Pedestrian and Bicycle Facilities

Intersection	A.M. Peak Hour			P.M. Peak Hour		
	Existing PLOS	With Project	Meets Criteria?	Existing PLOS	With Project	Meets Criteria?
Third Street/Binney Street	-	-	-	-	-	-
Binney East	<i>D</i>	<i>D</i>	<i>N</i>	<i>D</i>	<i>D</i>	<i>N</i>
Binney West	<i>D</i>	<i>D</i>	<i>N</i>	<i>D</i>	<i>D</i>	<i>N</i>
Third North	<i>C</i>	<i>C</i>	<i>N</i>	<i>C</i>	<i>C</i>	<i>N</i>
Third South	<i>C</i>	<i>C</i>	<i>N</i>	<i>C</i>	<i>C</i>	<i>N</i>
Third Street/Bent Street	-	-	-	-	-	-
Bent East	<i>A</i>	<i>A</i>	<i>N</i>	<i>A</i>	<i>A</i>	<i>N</i>
Bent West	<i>A</i>	<i>A</i>	<i>N</i>	<i>A</i>	<i>A</i>	<i>N</i>
Third North	<i>D</i>	<i>D</i>	<i>N</i>	<i>E</i>	<i>F</i>	<i>Y</i>
Third South	<i>C</i>	<i>C</i>	<i>N</i>	<i>F</i>	<i>F</i>	<i>N</i>

Adjacent Street Public Right-of-	Sidewalks or Walkways Present?	Meets Criteria?	Bicycle Facilities or Right-of-Ways Present?	Meets Criteria?
Third Street	Yes	<i>N</i>	Yes	<i>N</i>
Binney Street	Yes	<i>N</i>	Yes	<i>N</i>
Rogers Street	Yes	<i>N</i>	Yes	<i>N</i>
Bent Street	Yes	<i>N</i>	Yes	<i>N</i>

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Inventory of Existing Conditions

The Project site is located on the 249 Third Street Parking Lot with access and egress via a site driveway on Third Street. The surface lot currently serves the residents of the neighboring 195 Binney Street (Lofts at Kendall Square) apartment building, which also has a 106-space parking garage and 14 surface parking spaces on-site. The Site is bound by The Foundry Building, Bent Street, Third Street, and Rogers Street (see **Figure 1.A**). The Project site is located within walking distance of the Kendall Square MBTA station and Lechmere MBTA Station.

Upon completion, the proposed Project will include 84 residential units and approximately 1,500 sf of ground-floor retail space with no on-site parking. Parking for the proposed Project would be provided within the 195 Binney Street Garage, which is currently underutilized, averaging 30-40% occupancy. The Proponent is proposing to reassign a portion of the 195 Binney Street residents, including those parking at the 249 Third Street Lot, to park in the 285/303 Third Street residential garage off of Potter Street. The 285/303 Third Street residential building has a 527-space parking garage on-site, which is also underutilized, with peak residential occupancy of only 49%. As part of this plan, the Proponent is proposing to reduce the overall parking requirement for each of 249 Third Street, 195 Binney Street, and 285/303 Third Street to 0.70 spaces per residential unit, consistent with the current parking demand.

Loading, move-in/out, trash, and delivery services for the proposed Project will occur on-site and be accessed via a proposed curb cut on Rogers Street. The main pedestrian entrance to the building will be accessed off of Third Street and a courtyard will be located at the back of the site (west side of the building).

Roadways

The Project site is located on Third Street between Bent Street to the north and Rogers Street to the south. The major study area roadways are described below. The descriptions reflect functional classification by the Massachusetts Department of Transportation (MassDOT) Highway Division's Office of Transportation Planning.

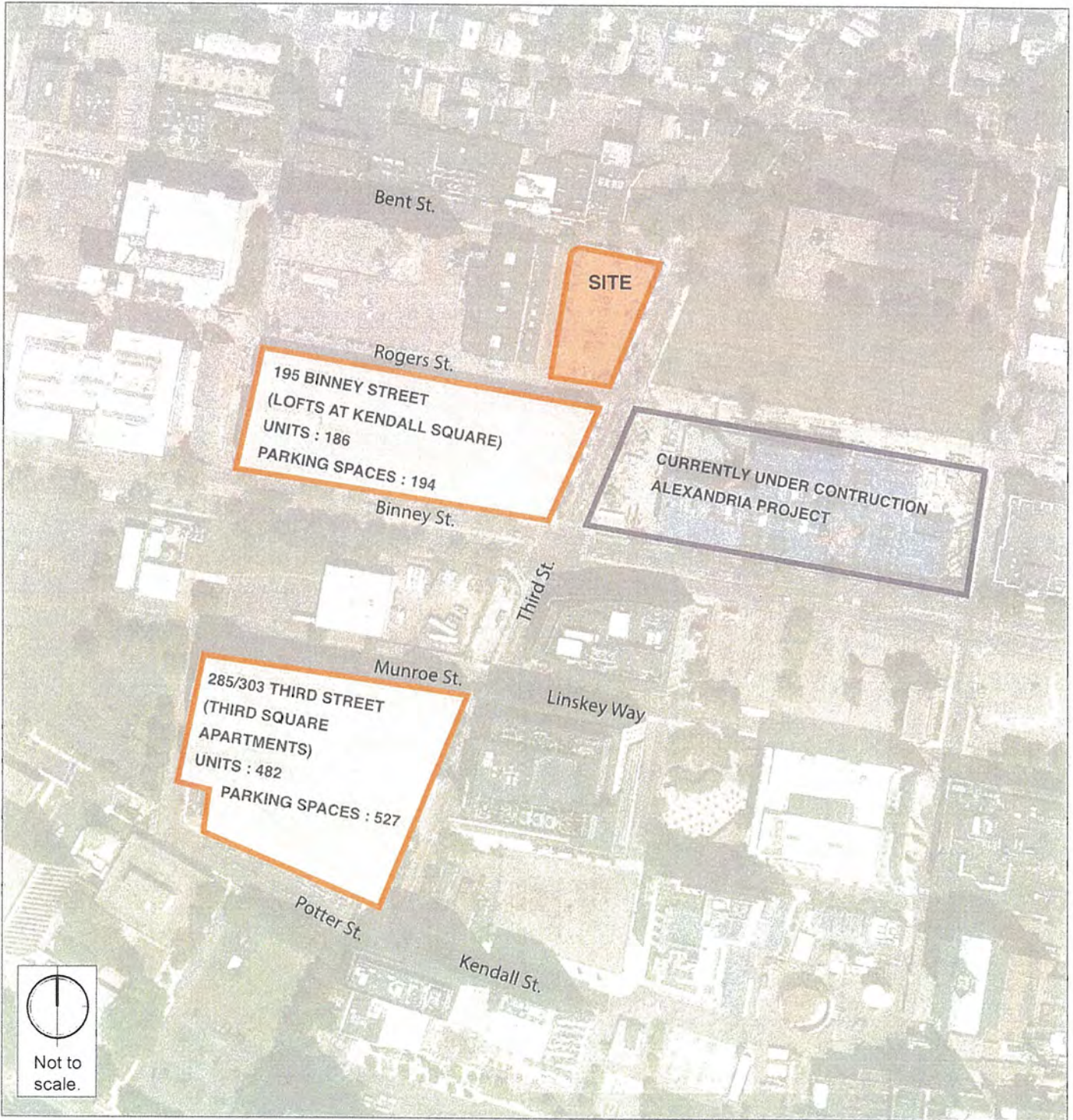
Bent Street borders the Project site to the north, and runs in an east-west direction from Fulkerson Street to Third Street. Adjacent to the Site, Bent Street consists of one travel lane in either direction, with parking on both sides of the road. Sidewalks are provided along both sides of the road.

Third Street borders the Project site to the east, and is classified by the MassDOT as a major collector between Monsignor O'Brien Highway and Broadway. Adjacent to the Site, Third Street consists of one travel lane in either direction, with parking on the west side of the road. Sidewalks are provided along both sides of the road.

Rogers Street borders the Project site to the south, and runs east-west between Fulkerson Street and Land Boulevard. In the vicinity of the Site, Rogers Street consists of an unmarked roadway with two-way traffic. Parking occupies the south side of the roadway. To the east of the Site, Rogers Street is temporarily closed for construction of the Alexandria's Binney Street Project. Once the Alexandria project is complete in 2014, Rogers Street will reopen to one-way westbound between Third Street and Second Street with parking on both sides of the road. Sidewalks are provided along the south side of the road.

Binney Street is classified by the MassDOT as a major collector and runs east-west between Cardinal Medeiros Avenue and Land Boulevard. In the vicinity of the study area, Binney Street generally consists of two travel lanes in either direction, separated by a landscaped median. Bike lanes are provided on both sides of the road between Third Street and Second Street. Sidewalks run along both sides of the road. At the time of the study,

Figure 1.A Locus Map



Binney Street between First Street and Third Street was temporarily reduced to one lane in each direction as a result of the on-going construction at Alexandria.

Intersections

The study area includes the following five intersections (see **Figure 1.B**):

- Third Street at Bent Street (unsignalized);
- Third Street at 249 Third Street Lot driveway (unsignalized);
- Rogers Street at 195 Binney Street driveways (unsignalized);
- Third Street at Binney Street (signalized); and
- Potter Street at 285/303 Third Street driveway (unsignalized).

Intersection characteristics such as traffic control, lane usage, pedestrian facilities, pavement markings, and crosswalks are described.

Third Street/Bent Street is an unsignalized intersection with four approaches. The Bent Street eastbound approach is stop-controlled and consists of one unmarked 9-foot shared left-turn/through/right-turn lane. The Officepark Parking Lot Driveway westbound approach consists of one unmarked 13-foot shared left-turn/through/right-turn lane. The Third Street northbound and southbound approaches consist of one 12-foot shared left-turn/through/right-turn lane. An 8-foot parking lane is provided along the Bent Street eastbound approach and the Third Street southbound approach. Sidewalks are provided along all roadways and vary in width from 8 to 10 feet. Crosswalks are provided at the Bent Street and Third Street approach, with a raised crossing at the Third Street southbound approach.

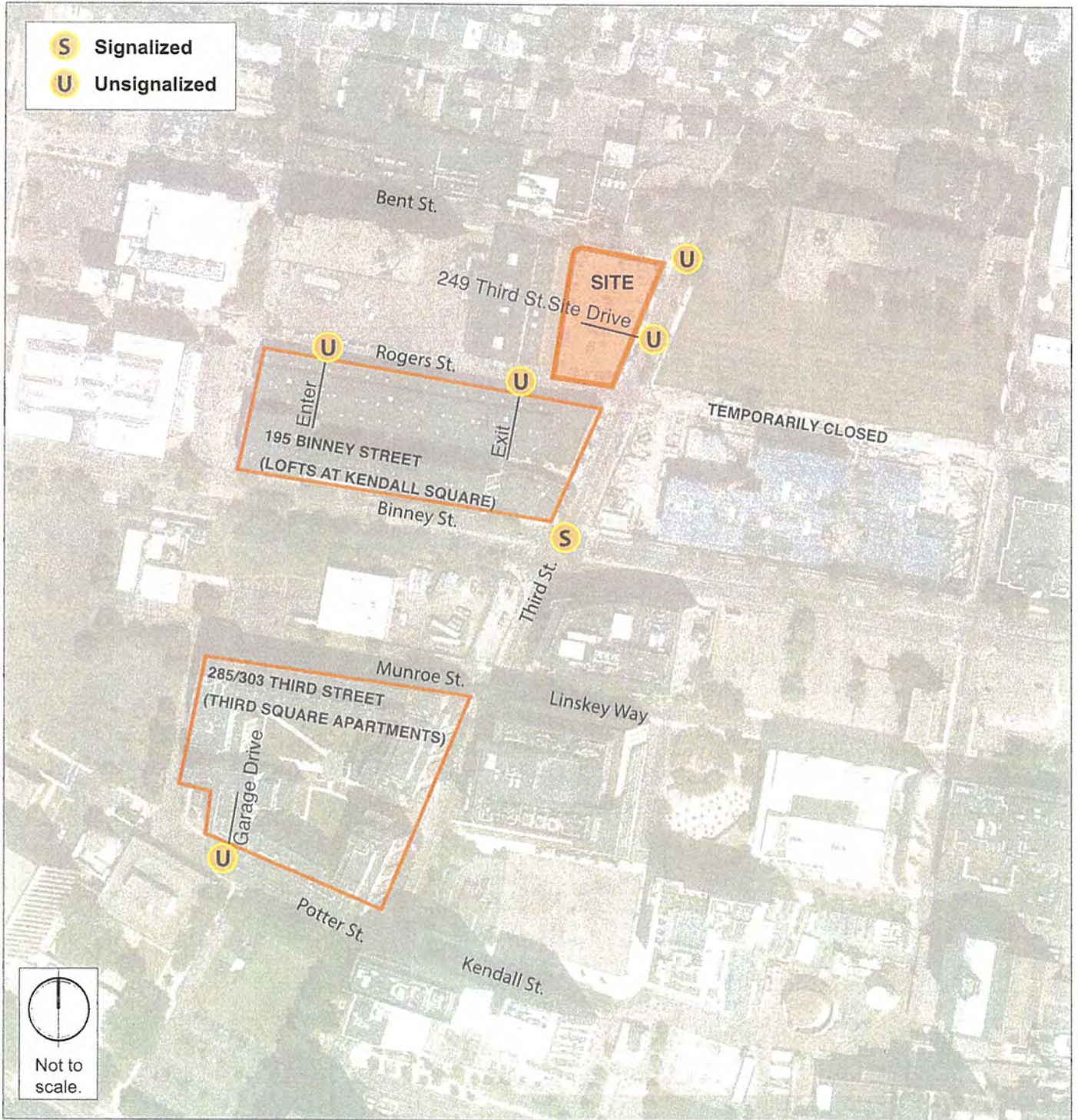
Third Street/249 Third Street Lot Driveway is an unsignalized intersection with three approaches. The Driveway eastbound approach consists of one unmarked 11-foot shared left-turn/right-turn lane. The Third Street northbound approach is one 13-foot shared left-turn/through lane. The Third Street southbound approach is one 12-foot shared through/right-turn lane with an adjacent 9-foot parking lane. Sidewalks are provided along both sides of Third Street and range from 9 to 9.5 feet. No crosswalks are provided at the intersection.

Rogers Street/Lofts at Kendall Square Exit is an unsignalized intersection with three approaches. Rogers Street is an unmarked 20-foot wide roadway allowing travel in either direction. The 195 Binney Street Exit driveway is a 15-foot shared left-turn/right-turn lane. A 9-foot parking lane and 4.5-foot sidewalk runs along the south side of the roadway.

Rogers Street/Lofts at Kendall Square Entrance is an unsignalized intersection with two approaches. Rogers Street is an unmarked 15-foot wide roadway with travel in either direction. The 195 Binney Street entrance driveway is 14-feet wide and only allows for garage entry. An 8-foot parking lane runs along both sides of the roadway. A 4.5-foot sidewalk is provided on the south side of Rogers Street.

Rogers Street/285/303 Third Street Garage Driveway is an unsignalized intersection with four approaches. Potter Street is a 34-foot wide unmarked roadway with travel in either direction. The Private Parking Lot Driveway northbound approach is a 12-foot shared left-turn/right-turn approach. The 285/303 Third Street Garage Driveway southbound approach is a 30-foot wide driveway allowing entry and exit to the below-ground garage. A 4-foot wide sidewalk is provided along the south side of Potter Street, and an 8-foot wide sidewalk is provided along the north side of the road.

Figure 1.B Study Area Intersections



Third Street/Binney Street is a signalized intersection with four approaches. The Binney Street eastbound and westbound approaches consists of one 10-foot exclusive left-turn lane, one 10-foot exclusive through lane, one 10-foot shared through/right-turn lane, and one 5-foot bike lane. During field work, HSH noted that construction was occurring for the Alexandria Development project which is expected to last through the end of 2014. Due to the construction and streetscape improvements, Binney Street is temporarily reduced to one lane in either direction between First and Third Street. Binney Street is two lanes in either direction west of Third Street. As a result of the construction, the Binney Street westbound approach consists of one 11-foot exclusive left-turn lane, one 11-foot shared through/right-turn lane, and no bike lane. The Existing 2014 and Build 2014 conditions were model based on this lane configuration. The Third Street northbound approach consists of one 11-foot shared left-turn/through lane, one 5-foot bike lane, and one 11-foot exclusive right-turn lane. The Third Street southbound approach consists of one 11-foot shared left-turn/through/right-turn lane. Sidewalks are provided along all roadways and range from 7 to 10 feet wide. As a result of the construction, a 6-foot wide protected pedestrian walkway is provided on the east side of the Third Street southbound approach, and the sidewalk is closed along the north side of the Binney Street westbound approach. Crosswalks and handicap ramps are provided at all approaches.

Parking

On-Site Parking

Parking Supply

The existing site currently contains 74 surface parking spaces (see **Figure 1.C.1**) for use by residents at the 195 Binney Street (Lofts at Kendall Square), which is also owned and operated by Equity Residential (EQR).

The 186-unit 195 Binney Street building has a total of 194 parking spaces, including the 74 spaces at 249 Third Street, 14 spaces along the south side of Rogers Street, and 106 spaces within the 195 Binney Street garage with access via Rogers Street. The resulting parking ratio is 1.04 spaces per unit.

EQR also owns and operates the 285/303 Third Street, which is located two blocks south of 195 Binney Street. The 482-unit 285/303 Third Street residential building has on-site parking for 527 vehicles within a below-grade parking, which corresponds to a parking ratio of 1.09 spaces per unit.

Since parking at 285/303 Third Street is currently underutilized, the Alexandria (ARE) has entered into a short-term agreement with EQR for 200 parking permits at the 285/303 Third Street Garage until early 2017 to meet its current parking needs. Upon expiration of the EQR/ARE short-term parking agreement in early 2017, vehicles associated with Alexandria's uses in Kendall Square will no longer be permitted to park in 285/303 Third Square parking garage.

Figure 1.C.1 Existing Site



Residential Auto-Ownership

According to parking lease data provided by EQR, residents at 195 Binney Street and 285/303 Third Street are only leasing parking at a rate of 0.58 and 0.68 EQR parking passes per residential unit, respectively – well below the approximately one plus space per unit constructed. Both residential developments currently have ZipCar on-site. The residential parking supply is summarized in **Table 1.C.1**.

Table 1.C.1 Residential Parking Supply

Location	Units	Parking Supply	Parking Spaces/Unit	EQR Parking Pass	EQR Parking Pass/Unit
195 Binney Street	186	194	1.04	108	0.58
285/303 Third Street	482	527	1.09	329	0.68

In connection with this study, the City of Cambridge provided Cambridge Parking Permit (CPP) data that details the number of residents in the 195 Binney Street and 285/303 Third Street who have parking permits. The Project team then compared this information with those that currently have an EQR pass for on-site parking to identify residents that have both CPP and EQR on-site parking, as well as those who rely solely on on-street parking (i.e., do not pay a monthly fee for parking in an EQR garage). Review of this information indicates that there are currently 25 outstanding CPP's at the 195 Binney Street; however, 12 of those vehicles also have an EQR parking permit, leaving just 13 vehicles (or 7% of the overall units) relying exclusively on on-street parking. Meanwhile, there are currently 65 CPP's for 285/303 Third Street, with 47 vehicles having both CPP and EQR parking passes and just 18 (or only 3.8%) with CPP's only.

The 195 Binney Street residents likely have a higher percentage of CPP's due to the proximity of permit parking in the area (as illustrated in Figure 1.C.2). The proposed Project is just north of the 195 Binney Street with similar proximity to on-street resident parking. Assuming that the proposed Project has a similar level of therefore CPP holders as 195 Binney Street (7%), this would correspond to just 6 vehicles parking on-street, which is expected to be easily accommodated within the existing on-street parking supply as summarized in **Table 1.C.3** and described below.

When taking into account the CPP data, the resulting residential parking demand for 195 Binney Street and 285/303 Third Street is approximately 0.65 and 0.74 spaces per unit respectively. This parking ratio is consistent with vehicle ownership data from the 2010-2012 US Census Data for Tract 3523. The Census data for *Household Count by Number of Vehicles Available* is summarized in **Table 1.C.2**.

Table 1.C.2 Vehicle-to-Household Ratio, Census Tract 3523

Year	2010	2011	2012	Average
Vehicle-to-Household Ratio	0.79	0.82	0.72	0.78

Source: Household Count by Number of Vehicles Available, Census Tract 3523, US Census Data.

The 195 Binney Street building has a parking supply ratio of 1.04 spaces per unit (see **Table 1.C.1**). The building has 108 active EQR parking passes for a parking demand ratio of 0.58 EQR passes per unit, much lower than the parking supply ratio.

Similarly, the garage at 285/303 Third Street currently has a parking supply ratio of 1.09 spaces per unit (see Table 1.C.1). The building has 329 active EQR parking passes for a parking demand ratio of 0.68 EQR passes per unit, also significantly lower than the parking supply ratio.

Parking Demand

HSH conducted a parking demand inventory at the existing 195 Binney Street and 285/303 Third Street parking lots and garages. Observations were made on fair weather days in September 2014 during eight time periods: weekday/Saturday morning (6:00-7:00 a.m.), weekday/Saturday midday (12:00-1:00 p.m.), weekday/Saturday afternoon (5:00-6:00 p.m.), and weekday/Saturday evening (10:00-11:00 p.m.). Since 285/303 Third Street is currently shared by Alexandria and 285/303 Third Street residents (pursuant to PB# 189, as amended through August 15, 2014), demand observations required manual inspection of parking permit ID numbers to determine user type.

Table 1.C.3 and Table 1.C.4 summarize the total number of occupied spaces at each parking facility by time of day.

Table 1.C.3 On-Site Parking Supply and Demand - Weekday

Location/User	Total Spaces	Demand (spaces)			
		Morning (6-7 a.m.)	Midday (12-1 p.m.)	Afternoon (5-6 p.m.)	Evening (10-11 p.m.)
249 Third Street Lot					
195 Binney Residents	74	52	29	40	51
Rogers Street					
195 Binney Residents	14	6	9	6	2
195 Binney Parking Garage					
195 Binney Residents	106	43	37	33	40
285/303 Third Street Garage	527	-	-	-	-
285/303 Third Street Residents	-	258	186	219	254
Alexandria	-	3	134	53	4
Total	721	362	395	351	351
% Occupancy		50%	55%	49%	49%

Table 1.C.4 On-Site Parking Supply and Demand - Saturday

Location/User	Total Spaces	Demand (spaces)			
		Morning (6-7 a.m.)	Midday (12-1 p.m.)	Afternoon (5-6 p.m.)	Evening (10-11 p.m.)
249 Third Street Lot					
LKS Residents	74	46	46	43	47
Rogers Street					
195 Binney Residents	14	9	8	6	8
195 Binney Parking Garage					
195 Binney Residents	106	36	33	33	36
285/303 Third Street Garage	527	-	-	-	-
285/303 Third Street Residents	-	242	205	209	250
Alexandria	-	6	7	6	8
Total	721	339	299	297	349
% Occupancy		47%	41%	41%	48%

Combined, there are approximately 721 parking spaces provided for the 195 Binney Street and 285/303 Third Street residents. As shown in Table 1.C.3 and Table 1.C.4, the parking garages are generally underutilized with approximately 50-55% (approximately 351 to 395 combined spaces) occupancy during the week and approximately 41-48% (approximately 297 to 349 combined spaces) occupancy during the Saturday study period, including demand for Alexandria.

It is notable that not all vehicles that have parking permits are parked within the garages/lots at the same time, which is expected as some residents may work nights or may leave during the week or weekend, and office workers associated with Alexandria may have off-site meetings, etc. As a result, the peak residential parking demand occurs overnight and is only 0.54 spaces per residential unit (or just 50% of overall supply), while Alexandria peaks mid-day at just 134 spaces out of the 200 leased.

Off-Site Parking

HSH conducted an inventory of the existing on-street curb regulations within a one-quarter mile radius of the Project site (see Figure 1.C.2). To demonstrate a comprehensive understanding of parking demand in the area, HSH conducted detailed observations of parking demand within a one-block radius on fair weather days in September 2014 during three time periods: weekday midday (12:00-1:00 p.m.), weekday evening (10:00-11:00 p.m.), and Saturday midday (12:00-1:00 p.m.). HSH inventoried the total number of public on-street parking spaces within the one-block study area, and the number of vacant spaces during the three observations time periods.

Within a one-block radius of the site, there are approximately 243 on-street parking spaces including 45 two-hour Monday through Saturday 8:00 a.m. to 6:00 p.m. spaces, 97 permit only except Sunday spaces, and 101 unrestricted spaces. As shown in **Table 1.C.5**, public on-street parking in the area is generally underutilized with approximately 30% (approximately 74 to 93 spaces) vacant in the weekday evening and Saturday midday study periods. Peak on-street parking demand within the vicinity of the site generally occurs during the weekday midday period, with 15 spaces available – residential demand is typically at its lowest during this time period. The existing parking supply will more than adequately serve the projected on-street parking demand associated with the Project (6 spaces).

Table 1.C.5 On-Street Parking Supply and Demand

Parking Restrictions	Total Spaces	Vacant Spaces		
		Weekday (Midday)	Weekday (Evening)	Saturday (Midday)
2 Hour - 8am-6pm (except Sunday)	45	0	30	20
Permit Only (except Sunday)	97	9	34	34
Unrestricted	101	6	29	20
Total	243	15	93	74
% Vacant	-	6%	38%	30%

Land Use

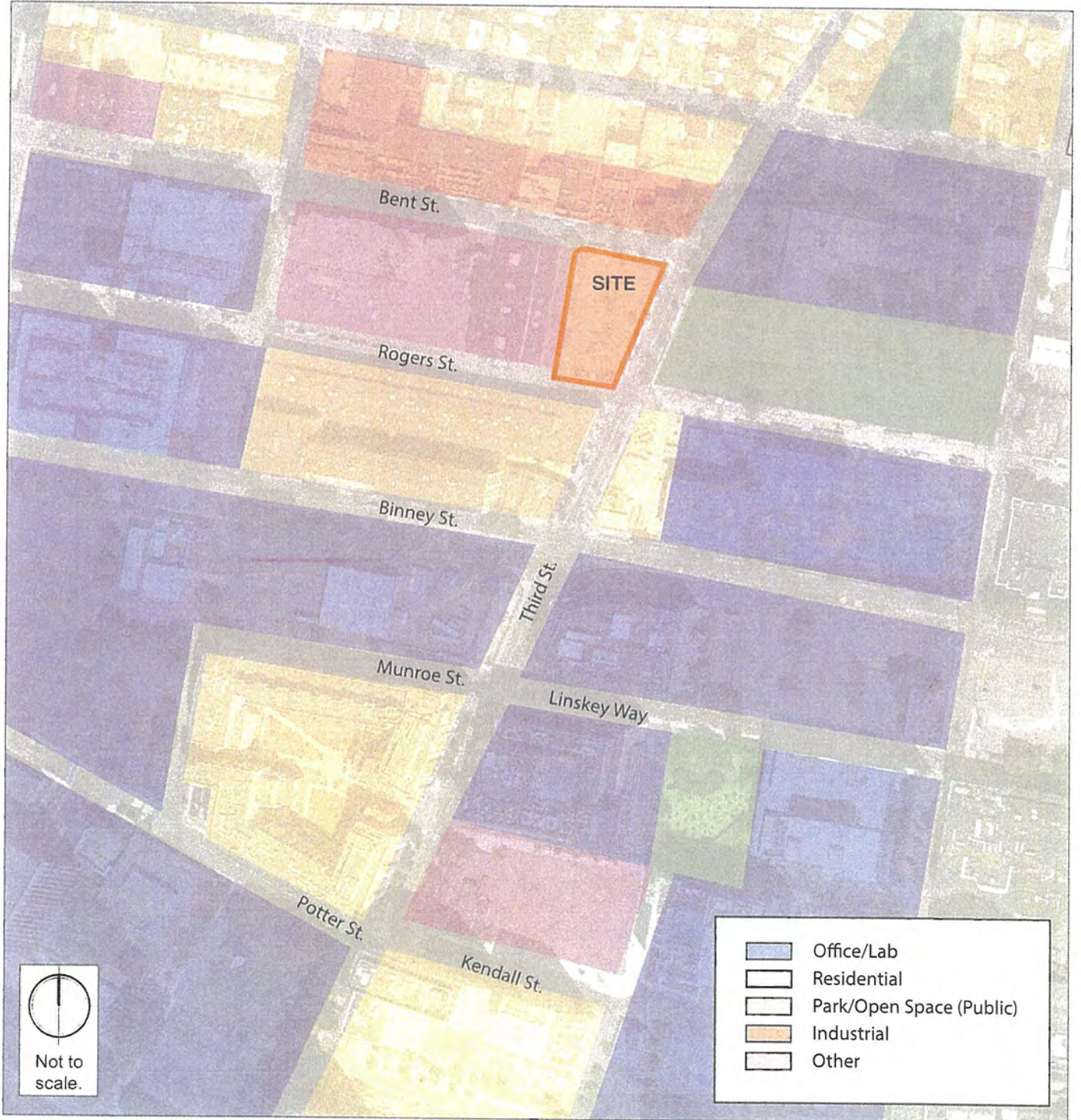
The site is primarily surrounded by office buildings and research laboratories, with a residential area to the north of the site (see **Figure 1.D**).

In addition, there are a number of nearby developments currently under construction. Adjacent to the Project site, 75/125 Binney Street is expected to be complete in early 2015. The project will consist of a combined 237,000 SF of research and development/office space as well 2,000 SF of retail. South of the Project site, 450 Kendall Street is scheduled for completion in late 2014 and will consist of 53,000 sf of research and development/office space. East of the Project site, 159 First Street will contain 115 residential units with ground-floor retail space.

Figure 1.C.2 On-Street Parking in the Study Area



Figure 1.D Land Use

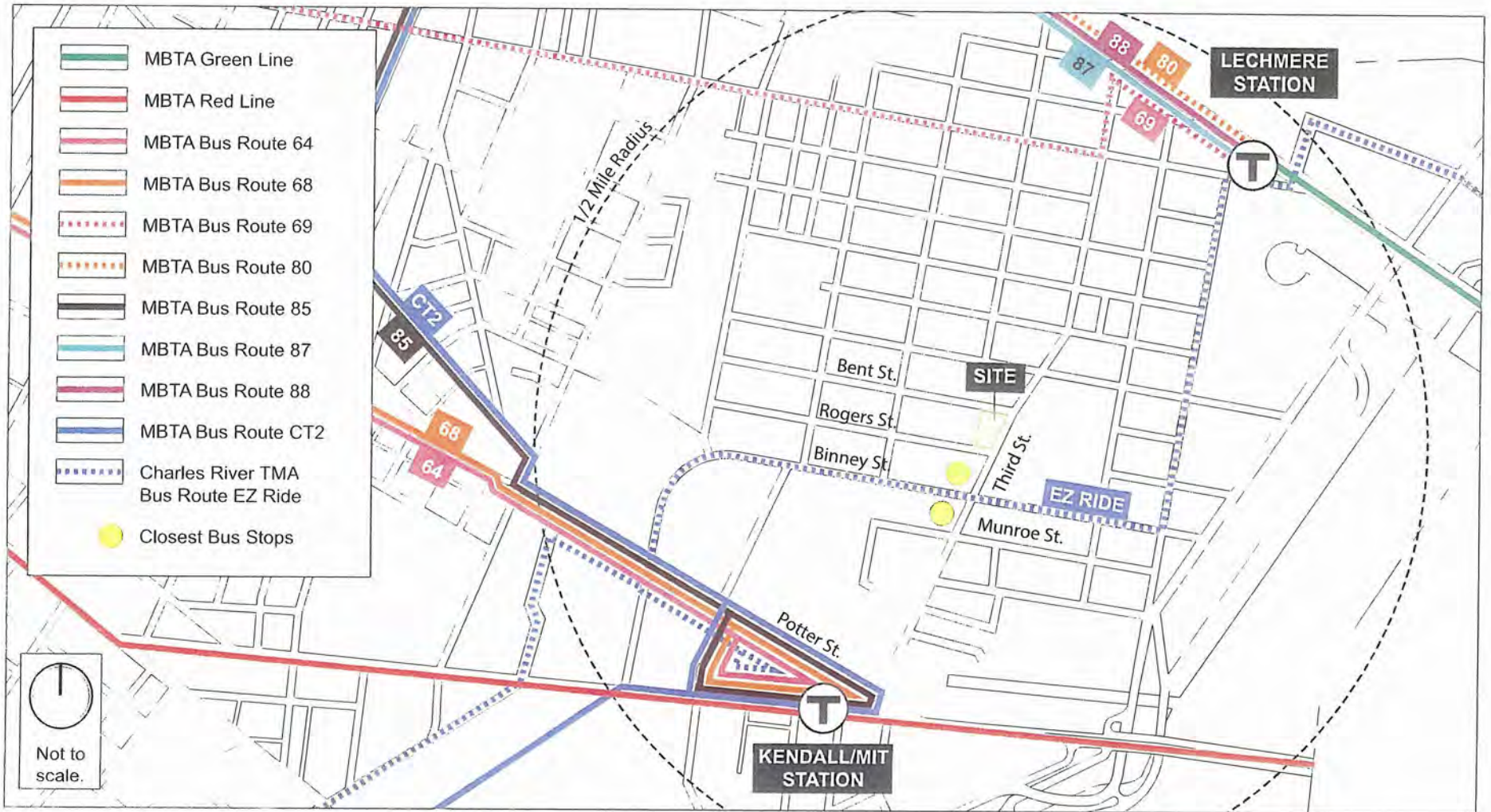


Transit Services

The Project site is located within a one-half mile radius of Lechmere Station, which provides access to the MBTA Green E Line, and to Kendall Square Station which provides access to the MBTA Red Line. The area has a number of MBTA bus routes and shuttle services in the area. A map of the nearby public transportation services is shown in **Figure 1.E**.

- **EZRide** – This bus service is run by the Charles River Transportation Management Association. The route runs between Cambridgeport and North Station via Kendall Square and Lechmere Station on weekdays only. Peak-hour headways are approximately 7 minutes. This is the closest regular bus route to the Project site with a stop at Third Street and Binney Street. The shuttle is available for all users and is free for children and Massachusetts Institute of Technology (MIT) students.
- **MBTA Green Line** – The Green Line “E” branch of the MBTA subway system terminates at Lechmere Station and provides service to Heath Street with access to downtown Boston, the Back Bay, and Mission Hill. Connections to the other branches of the Green Line are all available at Park Street Station in downtown Boston. The Green Line “E” branch operates with peak-hour headways of approximately 6 minutes.
- **MBTA Red Line** – The Red Line of the MBTA subway system stops at Kendall/MIT Station. The rapid transit line provides service between Alewife Station and either Ashmont Station or Braintree Station with access to Somerville, downtown Boston, South Boston, Dorchester, and Quincy. The Red Line operates with peak-hour headways of approximately 5 minutes.
- **MBTA Bus Route CT2** – This route provides limited-stop service on weekdays only, between Sullivan Station and Ruggles Station via Kendall/MIT Station. Peak-hour headways are approximately 20 minutes.
- **MBTA Bus Route 64** – This route provides service between Kendall/MIT Station and Oak Square in Brighton during weekday rush hours only (at other times, the line terminates at Central Square). Peak-hour headways are approximately 15 minutes.
- **MBTA Bus Route 68** – This route provides service between Kendall/MIT Station and Harvard Square via Broadway during weekdays only. Peak-hour headways are approximately 30 minutes.
- **MBTA Bus Route 69** – This route provides service between Lechmere Station and Harvard Square. Peak-hour headways are approximately 10 minutes.
- **MBTA Bus Route 80** – This route provides service between Lechmere Station and Arlington Center. Peak-hour headways are approximately 20 minutes.
- **MBTA Bus Route 85** – This route provides weekday-only service between Kendall/MIT Station and Spring Hill via Union Square in Somerville. Peak-hour headways are approximately 40 minutes.
- **MBTA Bus Route 87** – This route provides service between Lechmere Station and Arlington Center or Clarendon Hill via Somerville Avenue. Peak-hour headways are approximately 20 minutes.
- **MBTA Bus Route 88** – This route provides service between Lechmere Station and Clarendon Hill via Highland Avenue. Peak-hour headways are approximately 10 to 20 minutes.

Figure 1.E Public Transportation



Data Collection

ATR Counts

To estimate daily traffic and hourly variations, Automatic Traffic Recorder (ATR) counts were recorded for two consecutive days from September 9, 2014 to September 10, 2014 on Binney Street, west of Third Street and Third Street, north of Charles Street. However, the ATR tube across the Binney Street westbound travel lanes was damaged by a street sweeper and recounted on September 17, 2014 and September 18, 2014.

Traffic volume summaries for a typical weekday are summarized in **Table 2.A.1** and **Table 2.A.2**. Full 15-minute increment ATR data is provided in **Appendix A**.

Table 2.A.1 Average Weekday Traffic Volumes

Location	ADT	K	T	Peak Direction
Binney Street west of Third Street	11,821	8%	12%	EB
Third Street north of Charles Street	7,915	10%	2%	SB

ADT= Average Daily Traffic; K= Peak Hour Percentage; T= Percent Heavy Vehicles

Table 2.A.2 Average Weekday Traffic Summary by Hour

Start Time	Binney Street			Third Street		
	EB ¹	WB ²	TOTAL	NB ¹	SB ¹	TOTAL
12:00 a.m.	48	29	77	33	22	55
1:00 a.m.	14	25	39	12	8	20
2:00 a.m.	18	13	31	11	7	18
3:00 a.m.	13	21	34	9	8	17
4:00 a.m.	11	50	61	4	23	27
5:00 a.m.	52	229	281	10	183	193
6:00 a.m.	144	427	571	49	407	456
7:00 a.m.	275	410	685	119	440	559
8:00 a.m.	339	496	835	114	441	555
9:00 a.m.	297	427	724	43	485	528
10:00 a.m.	267	353	620	44	314	358
11:00 a.m.	289	318	607	37	182	219
12:00 p.m.	290	313	603	80	204	284
1:00 p.m.	341	327	668	76	183	259
2:00 p.m.	466	320	786	129	164	293
3:00 p.m.	594	248	842	482	173	655
4:00 p.m.	707	273	980	589	199	788
5:00 p.m.	691	284	975	580	218	798
6:00 p.m.	555	268	823	506	175	681
7:00 p.m.	352	209	561	272	130	402
8:00 p.m.	203	148	351	149	82	231
9:00 p.m.	155	127	282	122	99	221
10:00 p.m.	122	113	235	129	63	192
11:00 p.m.	88	62	150	60	46	106
Total	6,331	5,490	11,821	3,659	4,256	7,915

1. Counted on September 10, 2014
 2. Counted on September 17, 2014

Intersection Turning Movement Counts

Turning movement data was collected at the Third Street/249 Third Street Lot, Rogers Street/195 Binney Driveways, and Potter Street/285/303 Third Street Driveway on June 11, 2014 and June 17, 2014 during weekday morning and evening peak periods (7:30 to 9:30 a.m. and 4:30 to 6:30 p.m., respectively). These counts were conducted prior to the Alexandria parking in the 285/303 Third Street Garage. Turning movement data was collected at Third Street/Bent Street and Third Street/Binney Street on September 4, 2014 during the weekday morning and evening peak periods. Based on the TMCs, the peak hours of the vehicular traffic throughout the study area is 8:00 to 9:00 a.m. and 5:00 to 6:00 p.m. Existing weekday morning and evening peak hour traffic volumes are shown in **Figure 2.B.1** and **Figure 2.B.2**, respectively. The detailed counts broken down in 15-minute increments are provided in **Appendix B**.

At the time of data collection in June and September, the Alexandria Development Project was ongoing at the intersection of Third Street/Binney Street. The primary site access for the project occurred opposite of Rogers Street via Third Street. During various periods of the day, Third Street would close down to allow a construction truck to back into the site via the gate on Third Street. The Alexandria project is expected to be complete at the end of 2015.

Pedestrian and Bicycle Counts

Sidewalks are provided along all streets within the study area, with the exception of the north side of Rogers Street, and are generally in good condition. Adjacent to the Project site, sidewalks are approximately 8 feet in width along Bent Street, and range between approximately 9 and 10 feet in width along Third Street.

Twelve-hour pedestrian and bicycle counts were performed on June 11 and June 17, 2014 between 7:00 a.m. and 7:00 p.m. at the following locations:

- Third Street at 249 Third Street Lot Driveway;
- Rogers Street at 195 Binney Street Driveway; and
- Potter Street at 285/303 Third Street Driveway.

On September 4, 2014, morning (7:30-9:30 a.m.) and evening (4:30-6:30 p.m.) pedestrian and bicycle counts were performed at Third Street/Bent Street and at Third Street/Binney Street. The existing pedestrian activity during the weekday morning and evening peak hours is shown in **Figure 2.C.1**.

Binney Street and Third Street (south of Binney Street) have protected bicycle lanes on both sides of the roadway, although the westbound bike lane had been temporarily eliminated at the intersection of Binney Street and Third Street because of construction at 75/125 Binney Street. The existing bicycle activity during the weekday morning and evening peak hours is shown in **Figure 2.C.2**.

Figure 2.B.1 Existing Conditions (2014) Turning Movement Volumes, a.m. Peak Hours (8:00 a.m. - 9:00 a.m.)

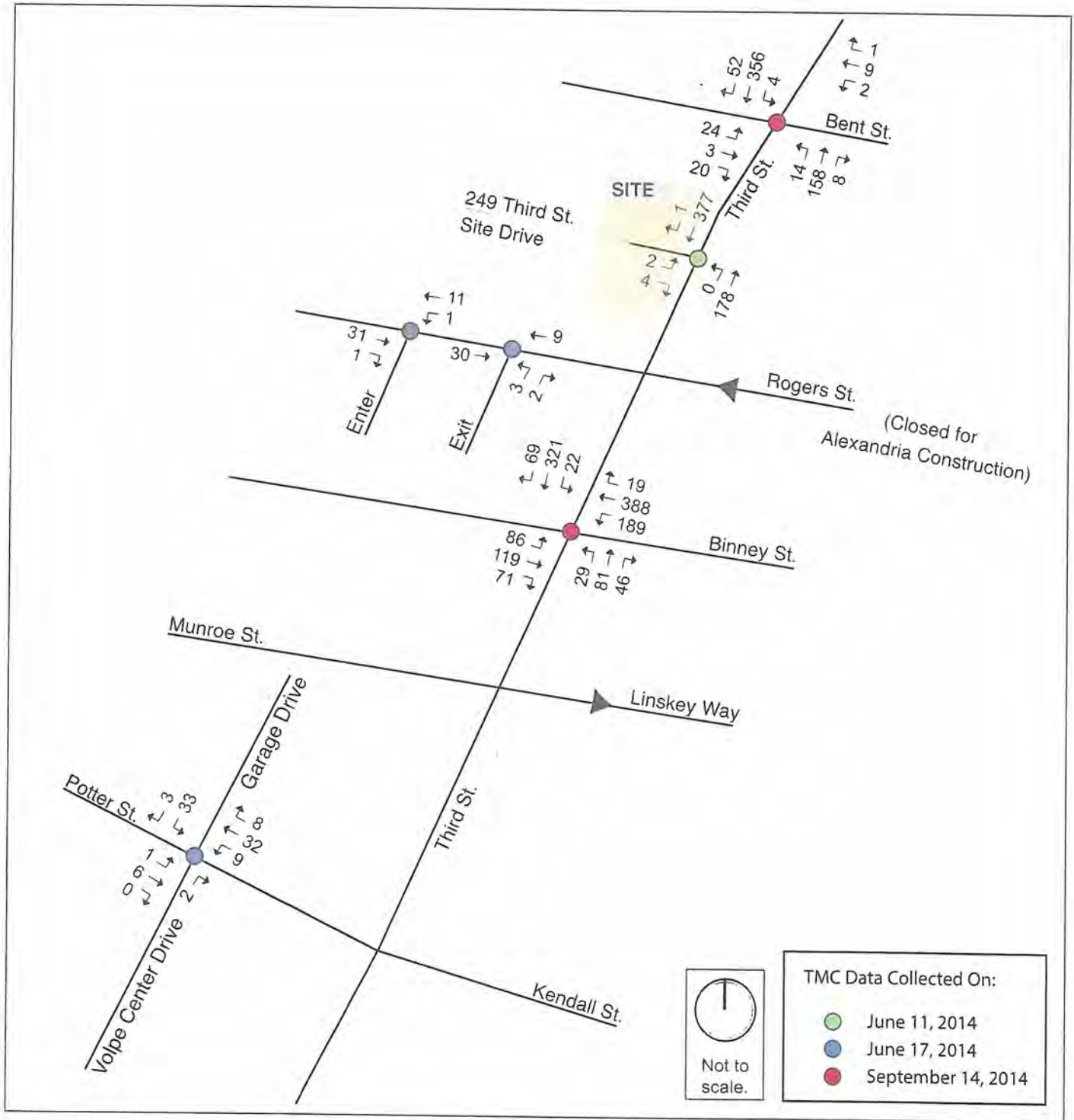


Figure 2.B.2 Existing Conditions (2014) Turning Movement Volumes, p.m. Peak Hours (5:00 p.m. - 6:00 p.m.)

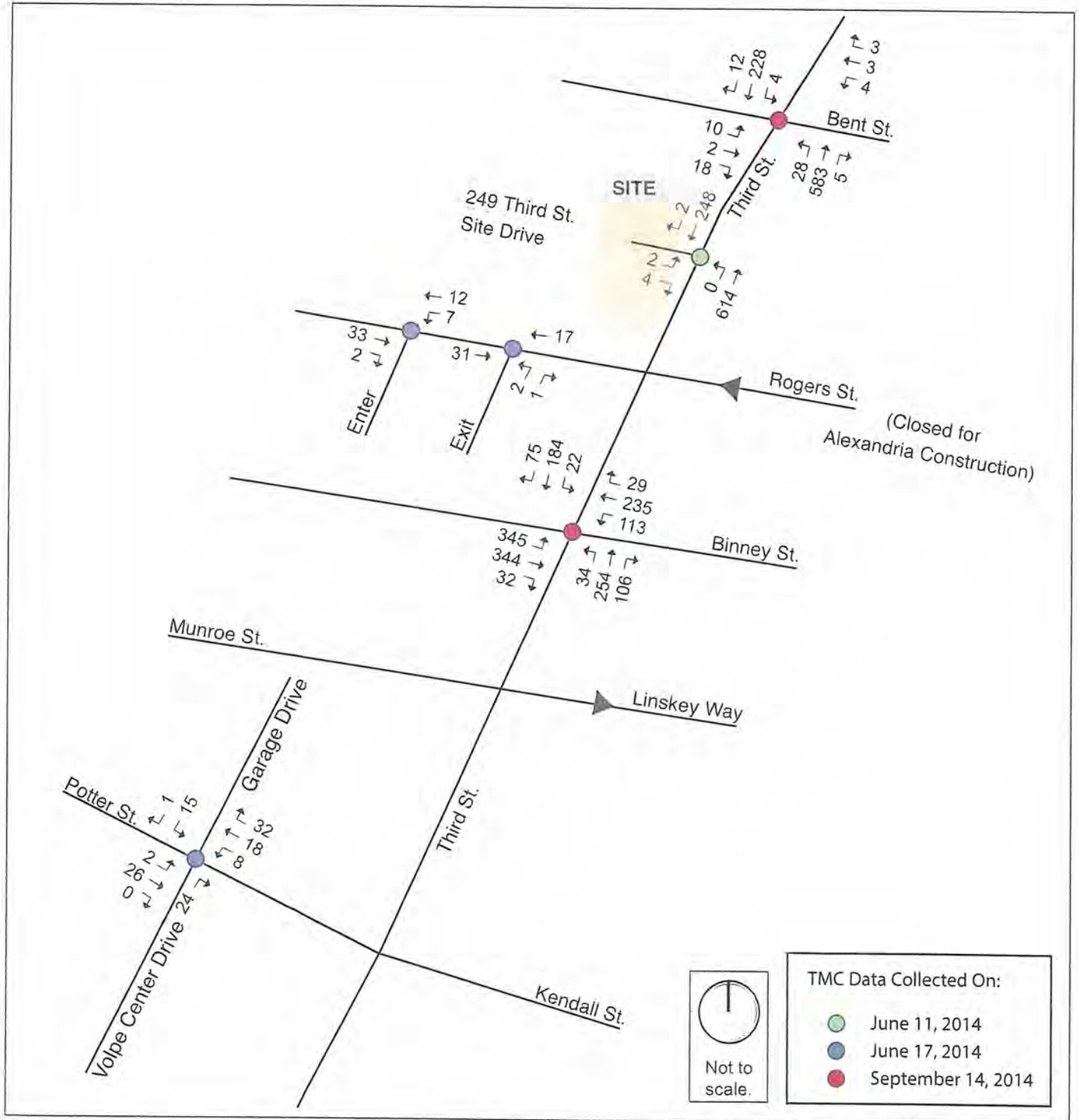


Figure 2.C.1 Existing Conditions (2014) Pedestrian Volumes, a.m. and p.m. Peak Hours

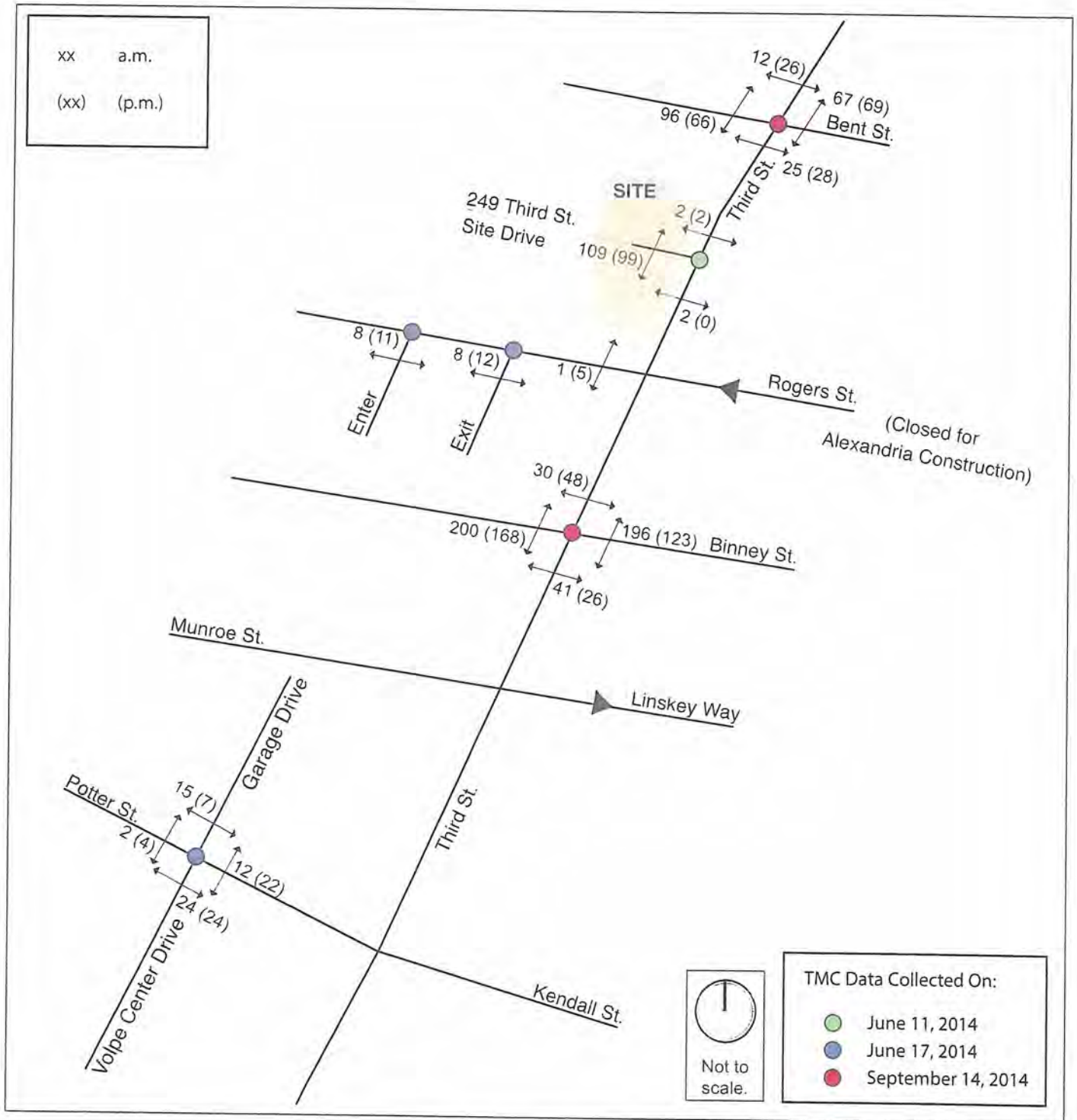
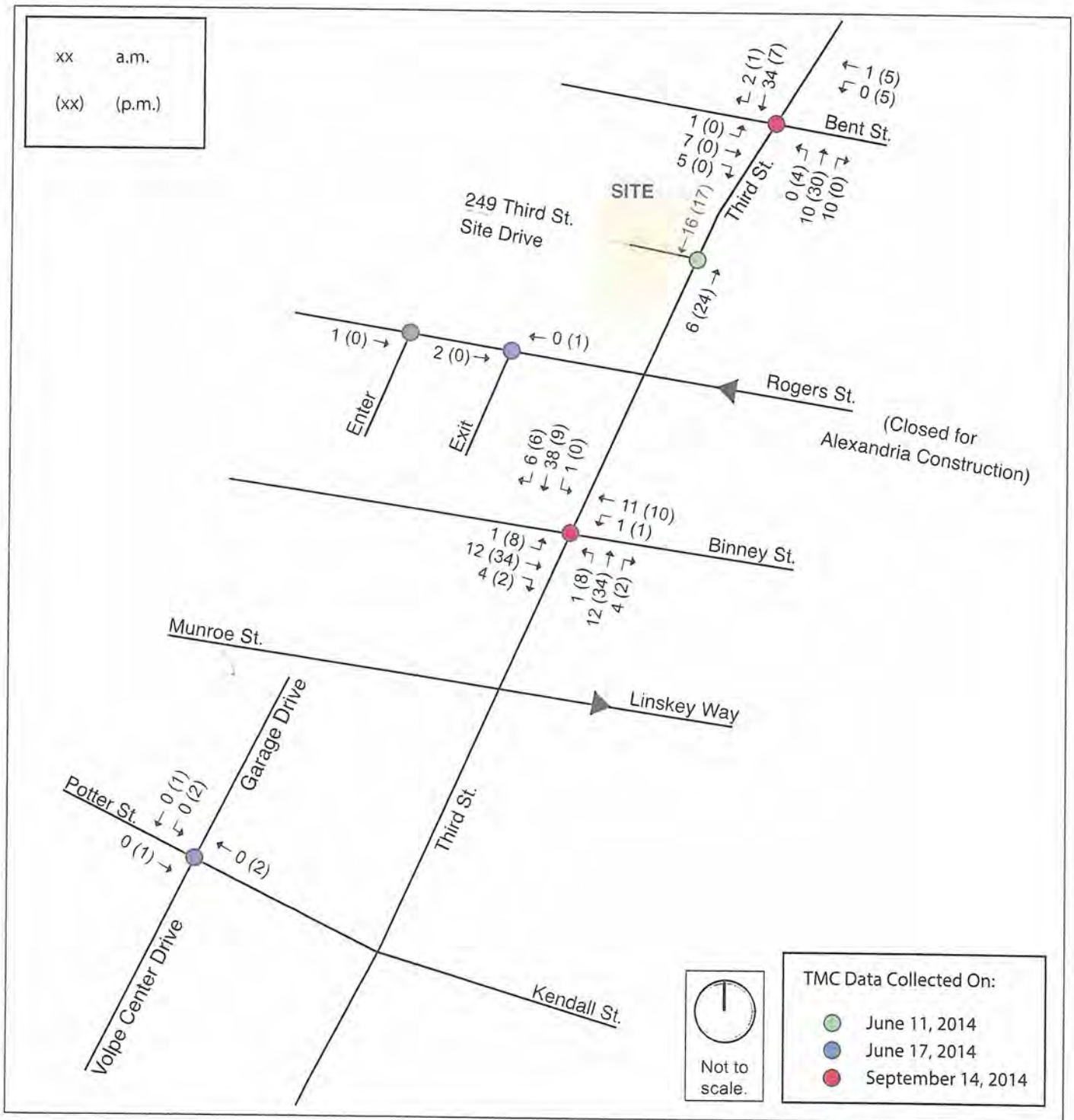


Figure 2.C.2 Existing Conditions (2014) Bicycle Volumes, a.m. and p.m. Peak Hours



Traffic Crashes

HSH compiled motor vehicle crash data from the MassDOT Highway Department Crash Records System for the most recent three-year period for which they are available (2009–2011). Crash rates were then calculated for each study area intersection based on the number of crashes per million vehicles entering and compared to the MassDOT district average (see **Table 2.D.1**). Detailed crash data and crash rate worksheets are included in **Appendix C**.

As shown in **Table 2.D.1**, 12 crashes occurred at the study area intersections over the three-year period, with no reported fatalities. 11 crashes occurred at the Third Street / Binney Street intersection, and one crash was reported at the Third Street/Bent Street intersection.

In addition to the 12 crashes listed in **Table 2.D.1**, one crash occurred involving a bicyclist in 2010 at Third Street/Binney Street. The crash occurred on a Friday morning in dry conditionals. The manner of collision was not reported and resulted in personal injury.

The crash rates at the analyzed intersections are below the district average for signalized and unsignalized intersections (0.76 and 0.58 crashes per million vehicles entering the intersection, respectively).

Table 2.D.1 MassDOT Crash Summary, 2009-2011

Scenario	Intersection/Number of Crashes	
	Third Street/ Binney Street (Signalized)	Third Street/ Bent Street (Unsignalized)
	Year	
2009	3	0
2010	5	0
2011	3	1
	Crash Type	
Single vehicle	1	0
Angle	3	1
Rear-end	3	0
Head-on	0	0
Sideswipe	3	0
Unknown/other	1	0
	Injury	
Property Damage Only	8	0
Personal Injury	2	0
Fatality	0	0
Hit-and-run	0	0
Unknown	1	1
	Light Conditions	
Day	10	0
Dusk/Dawn	0	0
Dark (road lit)	1	0
Unknown	0	1
Dark (road unlit)	0	0
	Surface Conditions	
Dry	7	0
Wet	3	1
Snow	1	0
Ice	0	0
Unknown/other	0	0
	Hour of Day	
6:00–9:00 a.m.	1	0
9:00 a.m.–3:00 p.m.	4	0
3:00–6:00 p.m.	3	0
6:00 p.m.–6:00 a.m.	3	1
	Day of Week	
Monday	2	0
Tuesday	0	0
Wednesday	0	0
Thursday	2	0
Friday	4	0
Saturday	1	1
Sunday	2	0
Total	11	1
Crash Rate	0.61	0.11
District Average ¹	0.76	0.58
Source: MassHighway's District 6 2010 Average Crash Rates, per Million Entering vehicles		

Public Transit

The Project site is located within ½ mile (10-minute walk) from public transportation services. Weekday and Saturday boarding/alighting information, and peak headway times are provided in **Table 2.E.1**. Transit stops are shown in Figure 1.D.

Table 2.E.1 Public Transportation

Route	Description	Peak-hour Headway (minutes) ¹	Weekday Average Daily Boarding ² (people)	Saturday Average Daily Boarding ² (people)
<i>Local Rapid Transit</i>				
Green Line E Branch	Lechmere – Heath Street	6	25,629 – 81,783	Unavailable
Red Line	Alewife – Ashmont or Braintree	5	217,329	Unavailable
<i>Local Bus Routes</i>				
CT2	Sullivan Station - Ruggles Station	20	2,815	Unavailable
64	Oak Square - University Park, Cambridge or Kendall/MIT	15	1,977	770
68	Harvard - Kendall/MIT	30	468	Unavailable
69	Harvard - Lechmere	10	3,185	2,092
80	Arlington Center - Lechmere	20	2,058	1,415
85	Spring Hill - Kendall/MIT	40	589	Unavailable
87	Arlington Center or Clarendon Hill - Lechmere	20	3,796	2,858
88	Clarendon Hill - Lechmere	10	4,075	2,794
<i>Other Bus Routes</i>				
EZRIDE	North Station - Cambridgeport	10	Unavailable	Unavailable
Cambridge-side Galleria	Cambridgeside Galleria – Kendall/MIT	20	Unavailable	Unavailable
MIT Costco/Target Shuttle	MIT – Costco/Target	60	Unavailable	Unavailable

1. Source: MBTA.com, August 2014. Headway varies.

2. Source: MBTA 2013 Ridership and Service Statistics

MBTA weekday average daily boarding and capacity shown above in Table 2.E.1 was obtained from 2013 MBTA Ridership and Service Statistics. Lechmere station on the MBTA Green Line E Branch and Kendall / MIT station on the MBTA Red Line Branch are within a ½-mile radius of the Project Site. Lechmere station is a terminus for several MBTA local bus routes including the 69, 80, 87, and 88. Kendall / MIT station is the terminus for the 64, 68, and 85 MBTA local bus routes. The station is also an intermediary stop for the CT2 limited stop bus route.

In addition, the Charles River Transportation Management Association operates the EZRide shuttle service which includes a stop at Binney Street and Third Street. The free Cambridgeside Galleria shuttle service stops at the Kendall/MIT station as well as Binney Street and Sixth Street. On Saturdays, a shuttle bus transports MIT students to and from the Costco and Target in Everett from 11:00 a.m. to 4:30 p.m.

Bicycle and Car Sharing

Hubway is a bicycle sharing system in the Boston, Cambridge, and Somerville areas, which was launched in 2011 and consists of over 140 stations and 1,300 bicycles. There are five Hubway Stations within a one-quarter mile radius (an approximately 5-10 minute walk) of the site, containing 77 bike docks.

Car sharing, predominantly served by Zipcar in the Cambridge area, provides easy access to vehicular transportation for those who do not own cars. Vehicles are rented hourly or daily and are checked out for a specific time period and returned to their original designated location. There are a total of three Zipcar locations containing within a one-quarter mile radius of the Project site. Of the three locations, the 285/303 Third Street garage houses Zipcar vehicles, and the existing 249 Third Street Lot provides parking accommodations for two Zipcar vehicles.

Project Traffic

Upon completion, the proposed Project would include the development of 75,971 sf composed of 84 residential units and approximately 1,500 sf of ground-floor retail space. Resident parking will be provided offsite at the 195 Binney Street garage, accessed on Rogers Street. Vehicular access on site will be limited to loading, deliveries, and trash/recycling services, which will occur via a proposed curb cut on Rogers Street. The primary pedestrian access to the building will be provided via an entrance to a courtyard off of Third Street (see the Figure 3.A).

Trip Generation

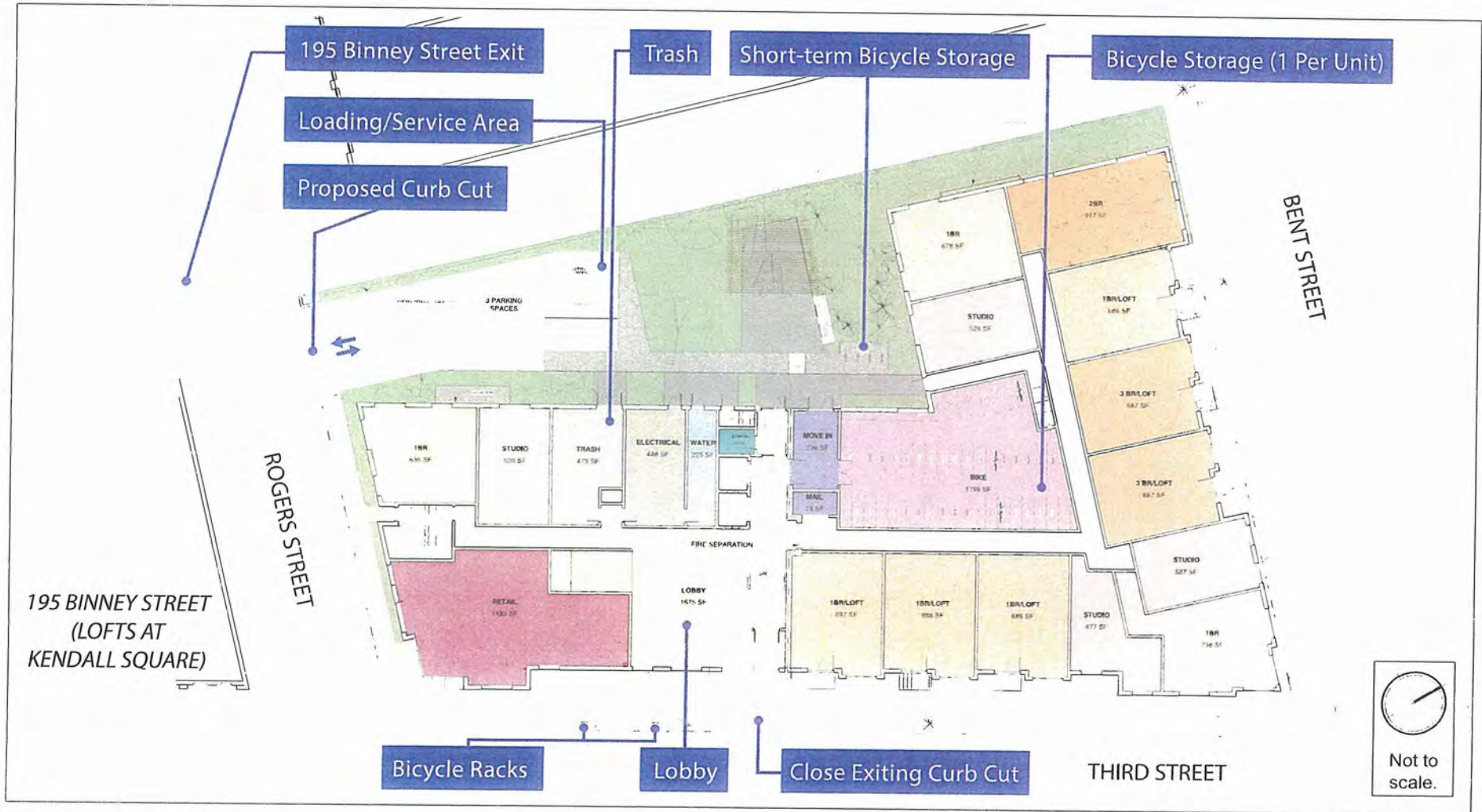
To estimate the unadjusted number of vehicular trips for the Project, land use data published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual*¹ were used. ITE provides data to estimate the total number of unadjusted vehicular trips associated with the Project. In an urban setting well-served by transit, adjustments are necessary to account for other travel mode shares such as walking, bicycling, and transit.

The ITE Land Use code (LUC) 220 defines apartments as rental dwellings located within the same building with at least three other dwelling units. Trip generation estimates are based on average vehicle rates per unit. The Apartment land use code was selected because it has slightly higher trip generation rates than the other similar residential land uses provided in the *Trip Generation Manual* and presents a more conservative scenario.

The ITE Land Use code (LUC) 820 defines shopping centers as integrated groups of commercial establishments that are planned, developed, owned, and managed as a unit. Trip generation estimates are based on average vehicle rates per unit. The Shopping Center land use code was selected because it has slightly higher trip generation rates than the other similar residential land uses provided in the *Trip Generation Manual* and presents a more conservative scenario.

¹ *Trip Generation Manual*, 9th Edition; Institute of Transportation Engineers; Washington, D.C.; 2012.

Figure 3.A Site Plan



Mode Share

The unadjusted vehicular trips were converted to person trips using the national vehicle occupancy rate of 1.13 published by the Federal Highway Administration (FHWA)². The person trips were then distributed to different modes. The mode split data for the proposed Project was obtained from the 2008-2012 American Community Survey 5-year estimate data for Census Tract 3523 as detailed in **Table 3.B.1**.

Table 3.B.1 Mode Split

Mode	Percent of People
Drove Alone	26.3%
Carpool	2.6%
Transit	31.7%
Bicycle	7.2%
Walk	30.7%
Work from Home	1.5%

Source: Means of Transportation to Work by Geography, American Community Survey 2008-2012 5-Year Estimates, US Census Tract 3523

The total mode split assumes vehicle trips is 28.9% (26.3% drove alone and 2.6% carpool), 31.7% for transit use, 7.2% for bicycle use, 30.7% for walk use, and 1.5% for people who work from home.

Vehicle Trip Generation

To convert vehicle-person trips to vehicle trips, a local vehicle occupancy rate is applied to trips with the residential component as either an origin or destination. For residential trips, vehicle-person trips are adjusted back to vehicle trips by applying the calculated average vehicle occupancy rate (AVO) of 1.05 based on the 2008-2012 US Census data for Tract 3523. The AVO calculation is derived from the vehicle occupancy data provided in **Table 3.C.1**. Retail vehicle-person trips are adjusted back to vehicle trips by applying the 2009 national vehicle occupancy rate for shopping trips of 1.78.

² Summary of Travel Trends: 2009 National Household Travel Survey, FHWA, Washington, D.C.; June 2011.

Table 3.C.1 Vehicle Occupancy by Means of Transportation to Work

Mode	Number of Workers
Drove Alone	449
2 Person Carpool	44
3 Person Carpool	0
4 Person Carpool	0
5 or 6 Person Carpool	0
7 or more Person Carpool	0
Calculated Average Vehicle Occupancy Rate	1.05

Source: 2008 to 2012 American Community Survey 5-Year Estimates, Census Bureau for Tract 3523

The project generated trips are distributed based on the mode share previously listed in **Table 3.B.1** to determine the number of vehicle, transit, bicycle, walk, and work from home trips estimated to be generated by the Project. **Table 3.C.2** presents the estimated project trips by each mode.

Table 3.C.2 Project Trip Generation by Mode

Time Period	Direction	Transit Trips	Bicycle Trips	Walk Trips	Work at Home Trips	Vehicle Trips
Daily	In	130	29	126	6	106
	Out	130	29	126	6	106
	Total	260	58	252	12	212
a.m. Peak Hour	In	4	1	4	0	4
	Out	13	3	12	1	10
	Total	17	4	16	1	14
p.m. Peak Hour	In	17	3	16	1	13
	Out	10	2	10	0	8
	Total	27	5	26	1	21

Source: Mode shares based on 2008-2012 American Community Survey, US Census Bureau for Tract 3523.

As shown in **Table 3.C.2**, the Project is expected to generate only approximately 14 vehicle trips during the morning peak hour (4 entering and 10 exiting) and 18 vehicle trips during the evening peak hour (13 entering and 8 exiting). This corresponds to an increase of approximately one vehicle trip every 3 to 5 minutes on the adjacent roadway network during the peak periods as a result of the Project.

The trip generation worksheet with mode share splits is included in **Appendix D**.

Trip Rate Comparison

For comparison, the existing trip generation, using count data at the 195 Binney Street and the 285/303 Third Street were compared to the ITE trip generation rates. Parking for the 195 Binney Street residents is provided via a surface lot at 249 Third Street, on-street parking on Rogers Street, and via a parking garage off of Rogers Street at 195 Binney Street. Parking for 285/303 Third Street is provided for residents via a below-grade parking garage. 12-hour turning movement counts were collected at the driveways to the residential buildings. The traffic observed counts were used to calculate the site-generated trip rates associated with each building, and are compared to the ITE LUC 220 (Apartments) in **Table 3.A.5** and **Table 3.A.6**.

Table 3.D.1 Comparison of Actual Trips and ITE Trip Generation Estimates – 195 Binney Street

Period	Direction	Observed ¹		ITE Trip Generation Estimate ²	
		Number of Trips	Trip Rate (Trips/Unit)	Number of Trips	Trip Rate (Trips/Unit)
Daily	In	100	0.54	192	1.03
	Out	100	0.54	192	1.03
	Total	200	1.08	384	2.06
a.m. Peak Hour	In	3	0.02	6	0.03
	Out	11	0.06	24	0.13
	Total	14	0.08	30	0.16
p.m. Peak Hour	In	11	0.06	23	0.12
	Out	9	0.05	12	0.07
	Total	20	0.11	35	0.19

1. The trips were counted on June 12, 2014. The 195 Binney Street trips include the 249 Third Street Lot Driveway and the 195 Binney Street garage driveways.

2. The ITE Trip Generation was calculated as LUC 220 (Apartment) for 186 units.

Table 3.D.2 Comparison of Actual Trips and ITE Trip Generation Estimates – 285/303 Third Street

Period	Direction	Observed ¹		ITE Trip Generation Estimate ²	
		Number of Trips	Trip Rate (Trips/Unit)	Number of Trips	Trip Rate (Trips/Unit)
Daily	In	280	0.58	487	1.03
	Out	280	0.58	498	1.01
	Total	560	1.16	974	2.02
a.m. Peak Hour	In	9	0.02	15	0.03
	Out	36	0.07	60	0.12
	Total	45	0.09	75	0.16
p.m. Peak Hour	In	34	0.07	59	0.12
	Out	16	0.03	31	0.06
	Total	50	0.10	90	0.19

1. The trips were counted on June 12, 2014. The LKS trips include the 249 Third Street Lot Driveway and the LKS Driveway.

2. The ITE Trip Generation was calculated using as LUC 220 (Apartment) for 482 units.

As seen in Table 3.D.1, the current observed trips at the 195 Binney Street are generally half (45%-50%) of the estimated number of adjusted vehicle trips. As seen in Table 3.D.2, the current observed trips at the 285/303 Third Street are generally half (40%-45%) of the estimated number of adjusted vehicle trips. Therefore, the Project generated trips, as summarized in Table 3.C.2, are conservative.

Proposed Parking and Reassignment

The Project-generated and existing garage vehicle trips were relocated assuming a future parking ratio of 0.7 spaces per residential unit at 195 Binney Street and 285/303 Third Street. The existing vehicle trips to and from the Project site were redistributed to the 195 Binney Street parking garage and a portion of the 195 Binney Street trips were redistributed to the 285/303 Third Street garage driveway (see Table 3.C.3 for future parking space assignment). The resulting a.m. and p.m. peak hour re-distributed traffic volume networks are shown in Figure 3.D.1 through Figure 3.D.4.

Table 3.C.3 Proposed Parking Allocation Plan

Location	Units	Existing		Proposed	
		Spaces	Ratio (spaces/unit)	Required Spaces	Ratio (spaces/unit)
195 Binney Street	186				
195 Binney Street Garage		106		46	
249 Third Street Lot		74		-	
Rogers Street		14		14	
285/303 Third Street Garage		-	-	70	
<i>Subtotal</i>	<i>186</i>	<i>194</i>	<i>1.04</i>	<i>130</i>	<i>0.70</i>
285/303 Third Street	482				
285/303 Third Street Garage		527	1.12	338	0.70
<i>Subtotal</i>	<i>482</i>	<i>527</i>	<i>1.12</i>	<i>338</i>	<i>0.70</i>
249 Third Street Proposed Project	84				
195 Binney Street Garage				59	0.70
<i>Subtotal</i>	<i>84</i>	<i>-</i>	<i>-</i>	<i>59</i>	<i>0.70</i>
Total	752	721	0.97	527¹	0.70

1. 527 spaces would be required at 0.70 spaces per unit, leaving 120 spaces unused in the 285/303 Third Street Garage.

Following the redevelopment of the 74-space surface lot at 249 Third Street, the combined parking supply at 249 Third Street, 285/303 Third Street, and 195 Binney Street would total 647 spaces (721-74=647). As shown in Table 3.C.3, 527 spaces would be allocated for the combined 752 units at the proposed parking ratio of 0.70 spaces per unit rather than the 1.0 ratio required in the IA-1 district. Therefore, the 285/303 Third Street garage will have an additional capacity of 120 spaces (647-527=120).

Figure 3.D.1 Project Relocated Trips - 249 Third Lot, a.m. Peak Hour

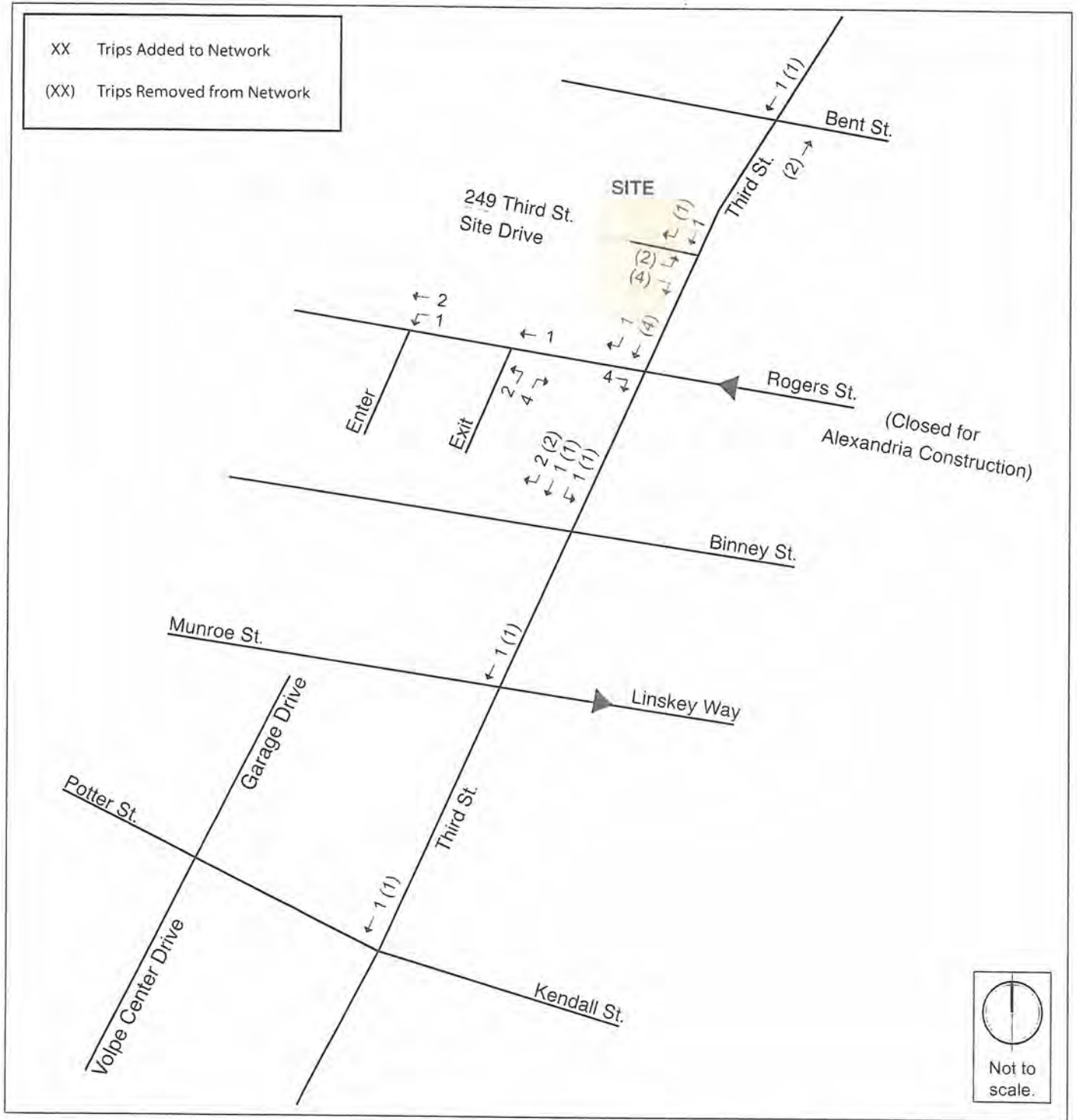


Figure 3.D.3 Project Relocated Trips - 249 Third Lot, p.m. Peak Hour

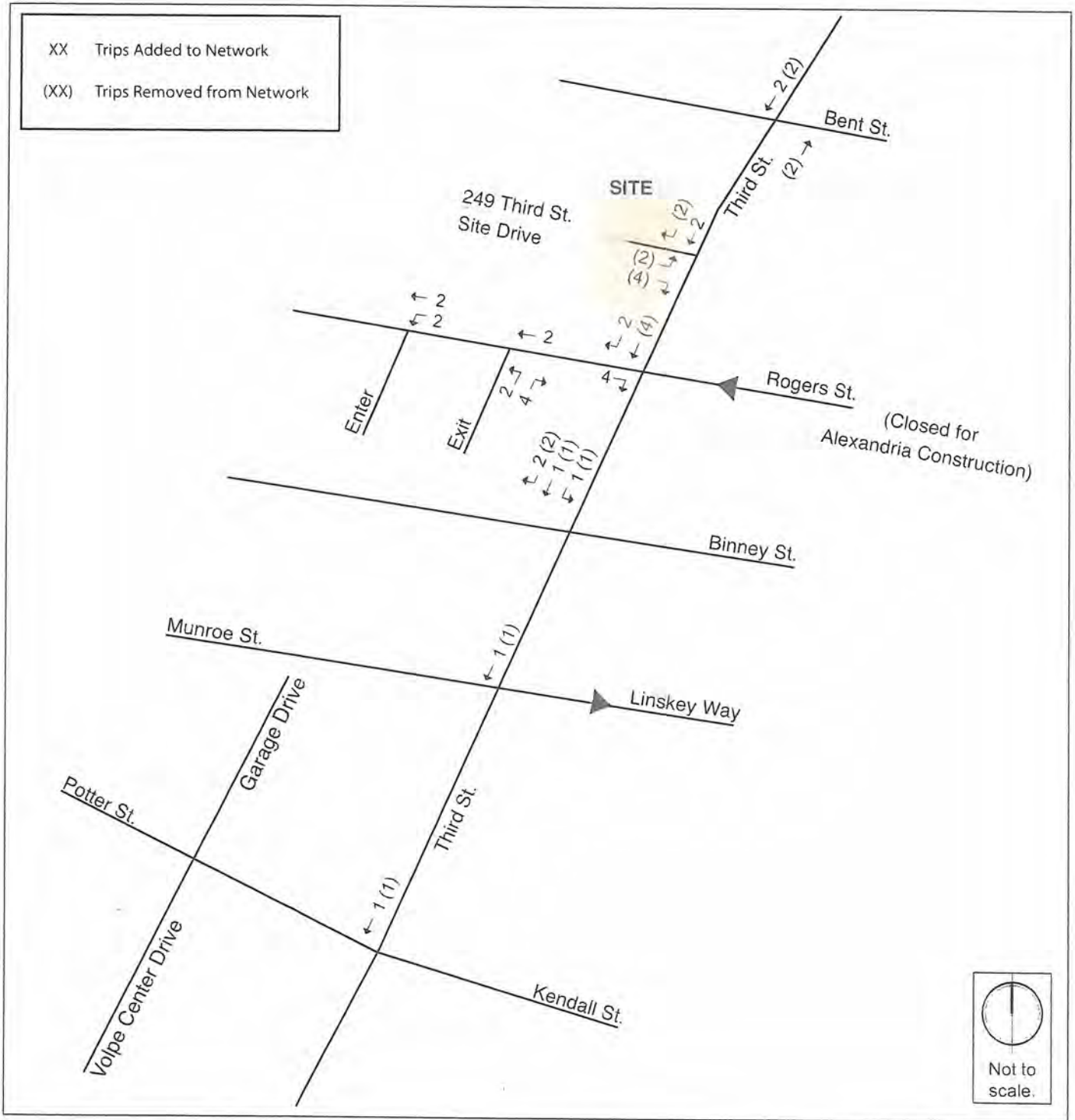
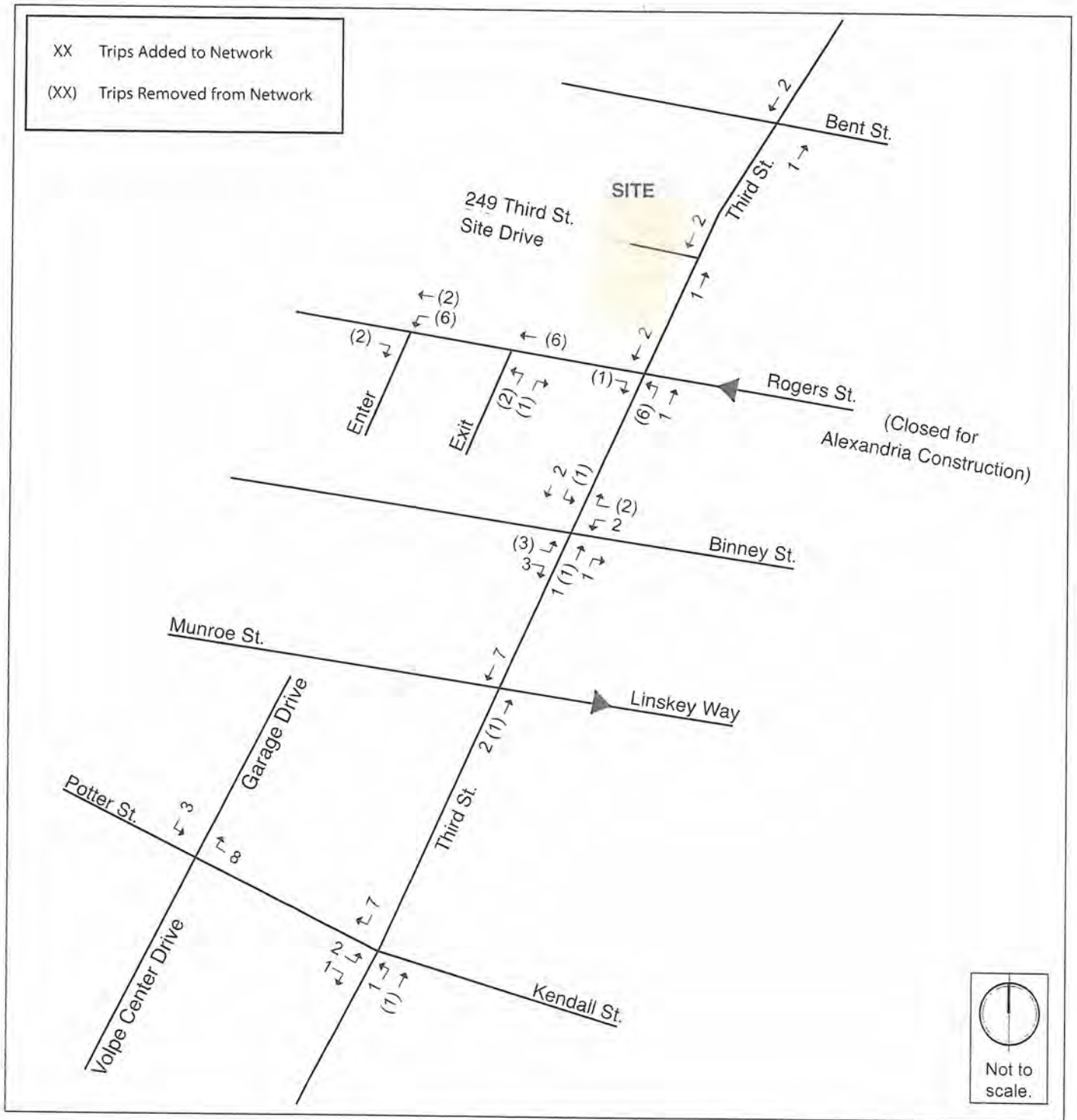


Figure 3.D.4 Project Relocated Trips - Lofts at Kendall square, p.m. Peak Hour



Trip Distribution

The trip distribution identifies the various travel paths for vehicles arriving and leaving the Project site. Trip distribution patterns for the Project were based on the 2010 journey-to-work census data for tract 3523³. The trip distribution patterns were refined based on existing traffic patterns and review of the adjacent roadway network. The trip distribution pattern for the overall Project is illustrated in **Figure 3.E.1**. Based on the future parking plan as described in Table 3.C.3, all project generated trips will enter and exit the 195 Binney Street garage driveway via Rogers Street. The Project generated trips are shown in **Figure 3.E.2** and **Figure 3.E.3**.

Although 25% of Project trips to and from the garage at 195 Binney Street are distributed along Fifth Street, the traffic impact on Fifth Street will be minimal. After taking into account both the Project-relocated and Project-generated trips, five trips will be added to Fifth Street in the a.m. peak hour and three trips will be added to Fifth Street in the p.m. peak hour. This amounts to approximately one trip every 12 minutes in the a.m. peak hour and approximately one trip every 20 minutes in the p.m. peak hour, which will have an imperceptible impact.

Loading and Deliveries

Service and loading activity will occur on-site within a designated loading area at the southwest corner of the site. Access and egress to the loading area will be provided by a proposed curb cut along Rogers Street.

3. 2006-2010 Journey to Work data by workplace, Census Bureau

Figure 3.E.1 Trip Distribution



Figure 3.E.2 Project Generated Trips, a.m. Peak Hour

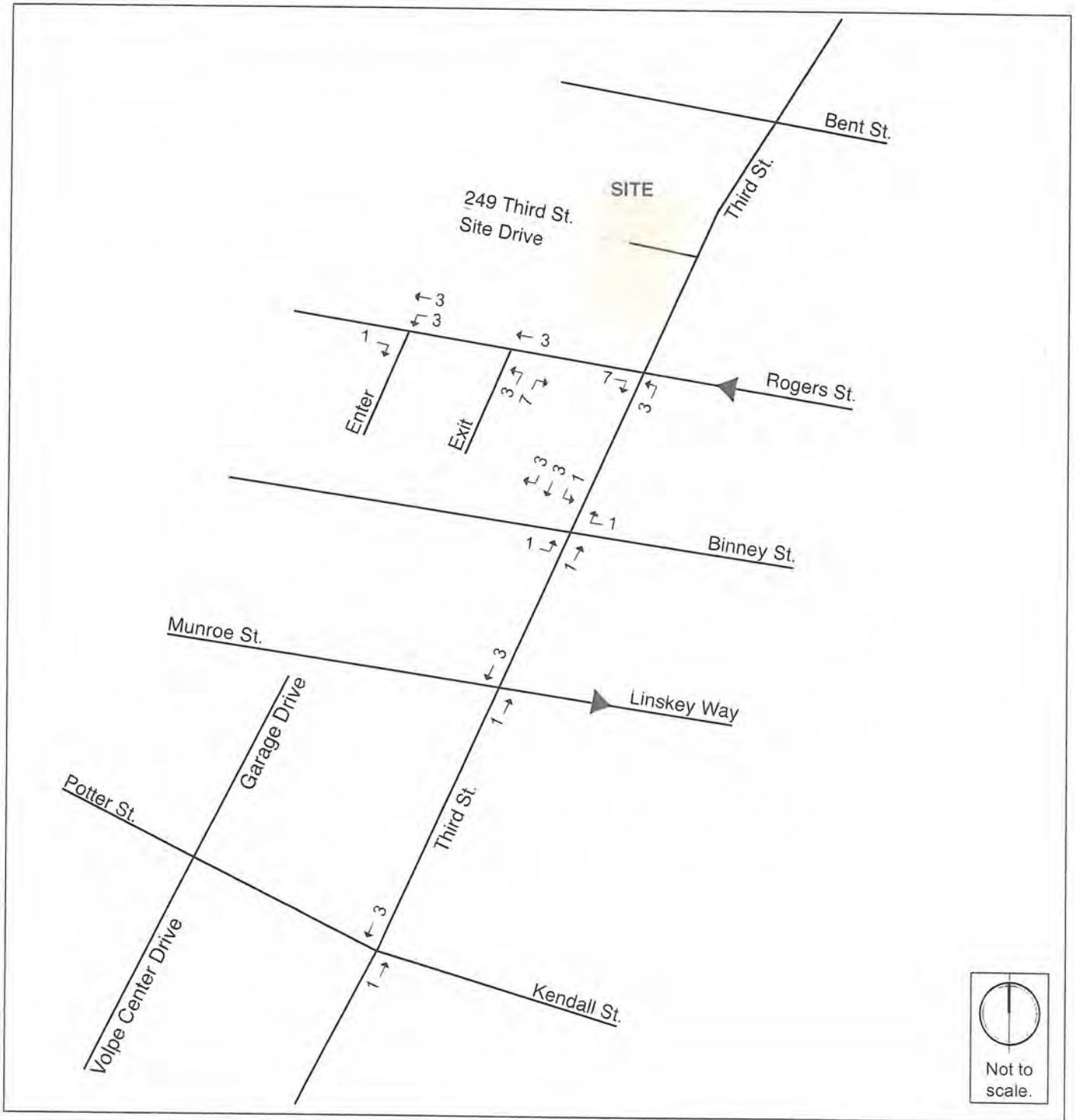
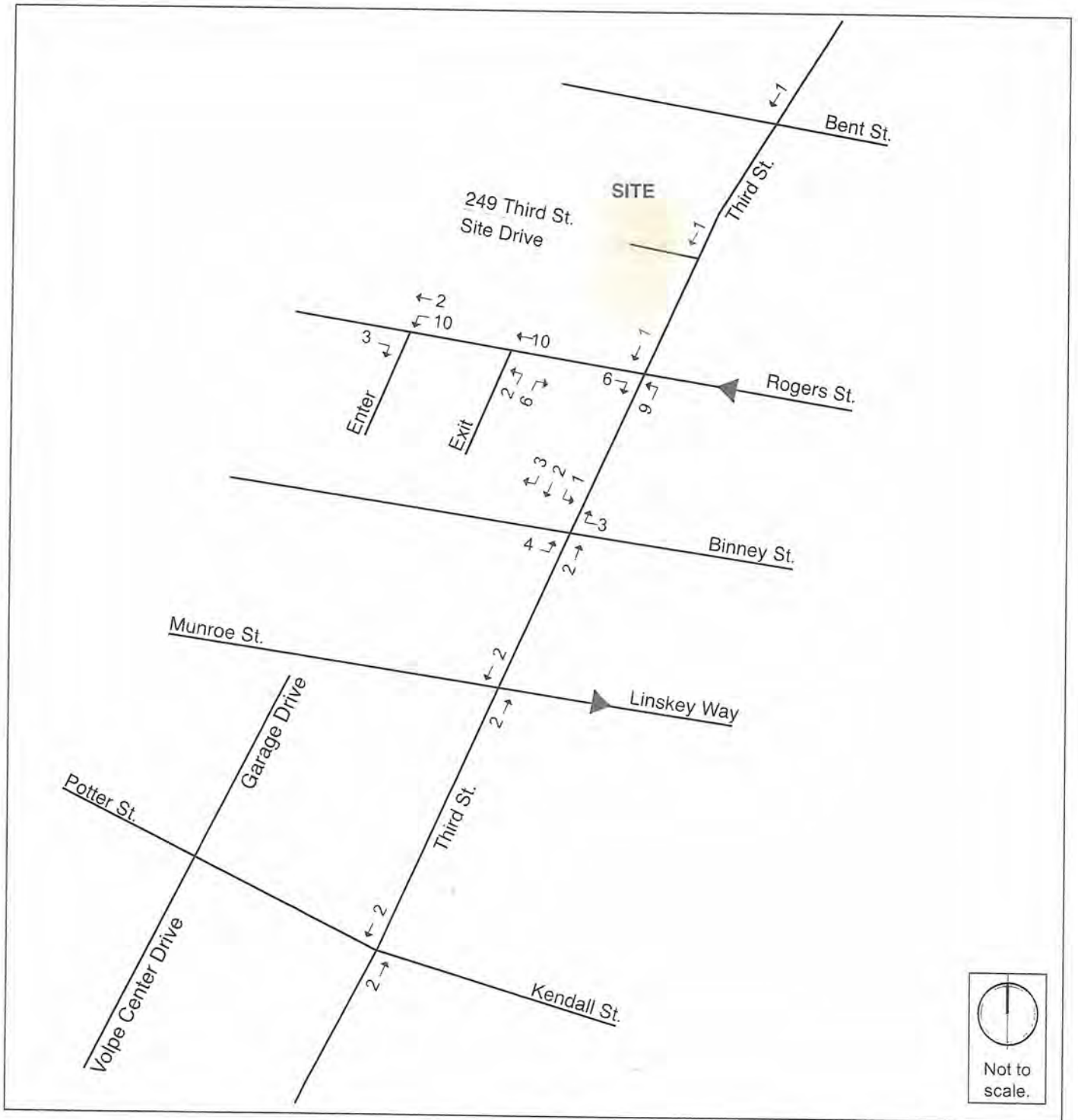


Figure 3.E.3 Project Generated Trips, p.m. Peak Hour



Background Traffic

Two methodologies are used to account for future traffic growth, independent of the Project. The first methodology accounts for general background traffic growth that may be affected by changes in demographics, automobile usage, and automobile ownership. Based on information provided by the City of Cambridge, a 0.5% annual traffic growth rate was used to develop the future conditions traffic volumes.

The second methodology identifies any specific planned developments that are expected to affect traffic patterns throughout the study area within the future analysis time horizon. The following projects were specified by the City of Cambridge to be included as background projects. The traffic volumes associated with these projects were incorporated into the future conditions traffic volumes.

- **Courthouse Redevelopment**— Located to the north of the Project site at 40 Thorndike Street, this existing building will be redeveloped into approximately 420,000 square feet (sf) of R&D/office space, 15,000 sf of retail space, and 24 residential apartment units. The project will provide 92 on-site parking spaces and 420 leased spaces from the nearby existing First Street parking garage. This project is currently under review by the Cambridge Planning Board. Traffic volumes were obtained from the traffic study conducted for this project and were included in the Future Build conditions.
- **Alexandria's Binney Street Development** – This multi-site development with buildings located both to the west and east of the Project site consists of a total of 1,753,200 sf, including R&D, residential, and retail uses. The 75 Binney Street, 125 Binney Street, and 270 Third Street proposed buildings will include 237,000 SF of Research and Design space, 10,000 SF of retail space, and approximately 91 residential units, with a 532-space, below-grade parking garage. The garage entry will be on Second Street and the loading dock entry points will be on Rogers Street. The project is currently under construction and traffic volumes were included in the Future Build conditions.
- **Ames Street Residences** – Located south of the Project site, this proposed project will include 280 residential apartment units and 16,000 sf of ground-level retail space. Parking spaces for the development will be allocated within the existing East Garage adjacent to the Project site. This project is currently under review by the Cambridge Planning Board. Traffic volumes were obtained from the traffic study conducted for this project and were included in the Future Build conditions.
- **Cambridge Research Park (unbuilt)** – This multi-site development, consisting of approximately 757,970 sf of R&D/office space, 467,530 sf of residential space, and 150,500 sf of retail (including theater) is currently 89 percent complete and occupied, based on information from the City of Cambridge. The remaining project to be constructed will consist of 53,000 SF of research and design space and office space, and a 75,000 SF theater. The traffic volumes were included in the Future Build Conditions.
- **First and Bent Street project (i.e., 159 First Street, 150 Second Street)** - This multi-site development is located east of the Project site. A 108,000 sf office and laboratory building at 150 Second Street has already been completed and occupied. A 115-unit residential building with ground-floor retail space at 159 First Street is currently under construction. A third site at 29 Charles Street remains a commercial parking lot and is not yet seeking any building permit. Based on the Traffic Impact Study, there are no projected generated trips associated with this project that go through the study area intersections.

Traffic Analysis

The criterion for evaluating traffic operations is level of service (LOS), which is determined by assessing average delay incurred by vehicles at intersections and along intersection approaches. Trafficware’s Synchro Version 6.0 was used to calculate average delay and associated LOS at the study area intersections. This software is based on the traffic operational analysis methodology of the Transportation Research Board’s 2000 *Highway Capacity Manual* (HCM).

Level of service and delay (in seconds) are based on intersection geometry, traffic data, and traffic control for each intersection. For the signalized intersections within the study area, traffic signal timing and phasing plans provided by the City of Cambridge were used in the analysis.

Table 5.1 summarizes the delay and LOS thresholds for signalized and unsignalized intersections, as defined in the HCM. LOS A defines the most favorable condition, with minimum traffic delay. LOS F represents the worst condition (unacceptable), with significant traffic delay. The threshold at LOS E/LOS F indicates that the intersection, or intersection approach, is theoretically at capacity. However, in an urban setting, LOS E or LOS F are typical for stop controlled minor approaches that intersect a major roadway. LOS D is generally considered acceptable in an urban environment, such as the Project study area, and below theoretical operating capacity.

Table 5.1 Level of Service Criteria

Level of Service	Average Stopped Delay (seconds/vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	≤10	≤10
B	> 10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	>80	>50

Source: 2000 Highway Capacity Manual, Transportation Research Board.

Vehicle Capacity Analysis

The following sections summarize the Existing 2014, Build 2014, and Future Build 2019 Conditions during the morning and evening peak hours at the study area intersections, using the methodology described above. Synchro output reports are provided in **Appendix E**.

Existing Conditions

The Existing 2014 Conditions Analysis is based on the current data collected at the study area intersections including traffic counts, signal timings, and geometries. Construction activity related to the Alexandria Binney Street Development resulted in (i) a temporary lane reduction in each direction of Binney Street between First Street and Third Street and (ii) a temporary closure of the through/right-turn lane at the Binney Street westbound approach at the intersection with Third Street. The reduction in vehicle capacity along Binney Street may have resulted in greater delay at the intersection of Third Street than there would be with full use of the roadway. It is not anticipated that the reduction in travel lanes resulted in a significant change in travel behavior on the network. The operational analysis for the morning and evening peak hours is provided in **Table 5.A.1** and **Table 5.A.2**, respectively.

Build Conditions

The Build 2014 Conditions Analysis is based on analysis of the existing study area intersections with the additional project generated vehicle trips, as previously described in the report. The morning and evening peak hour Build (2014) Conditions volumes are provided in **Figure 5.B.1** and **Figure 5.B.2**, respectively. The operational analysis for the morning and evening peak hours is provided in **Table 5.B.1** and **Table 5.B.2**, respectively.

Future Conditions

The Future Build 2019 Conditions Analysis uses the methodology discussed in the background section of this report to understand the roadway capacity in 2019. The Future Build volumes combine the grown existing volumes, the project generated volumes, and any trips related to projects currently under construction or undergoing City of Cambridge permitting process.

In the Existing and Build Conditions, the Binney Street westbound approach had consisted of two approach lanes (a left-turn lane and a through/right-turn lane) due to a lane reduction related to construction of the Alexandria Development. In the Future Condition, the Binney Street westbound approach is assumed to be re-opened to its original condition of 3 approach lanes (a left-turn lane, a through-only lane, and a through/right-turn lane) as it is expected that construction of the Alexandria Development will be complete prior to the 2019 Future Condition. The additional lane is accommodated in the inputs for the Synchro analysis for this intersection. It is also assumed that Binney Street between First Street and Third Street is restored to two lanes in each direction following the completion of Alexandria.

Additionally, as part of the Alexandria mitigation, the project has committed to reconstructing the Binney Street/Third Street intersection to include a cycle track, an updated traffic signal controller, cabinet, loops, and vehicle count station, and to coordinate the Binney Street/Third Street intersection with the proposed signal at Binney Street/First Street.

The morning and evening peak hour Future Build (2019) Conditions volumes are provided in **Figure 5.C.1** and **Figure 5.C.2**, respectively. The operational analysis for the morning and evening peak hours is provided in **Table 5.C.1** and **Table 5.C.2**, respectively.

Figure 5.B.1 Build Conditions (2014) Turning Movement Volumes, a.m. Peak Hour

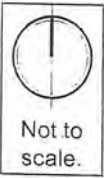
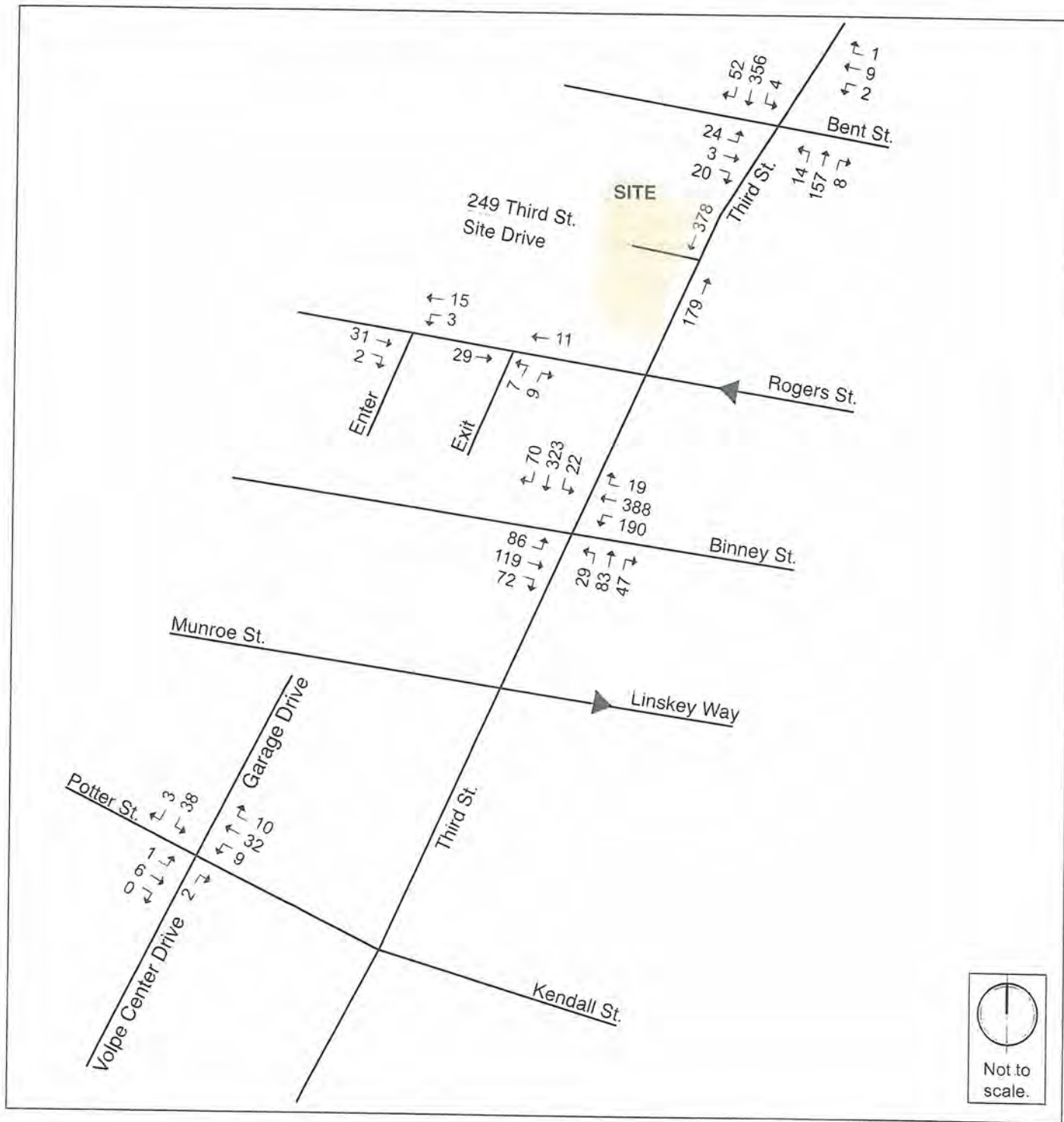


Figure 5.B.2 Build Conditions (2014) Turning Movement Volumes, p.m. Peak Hour

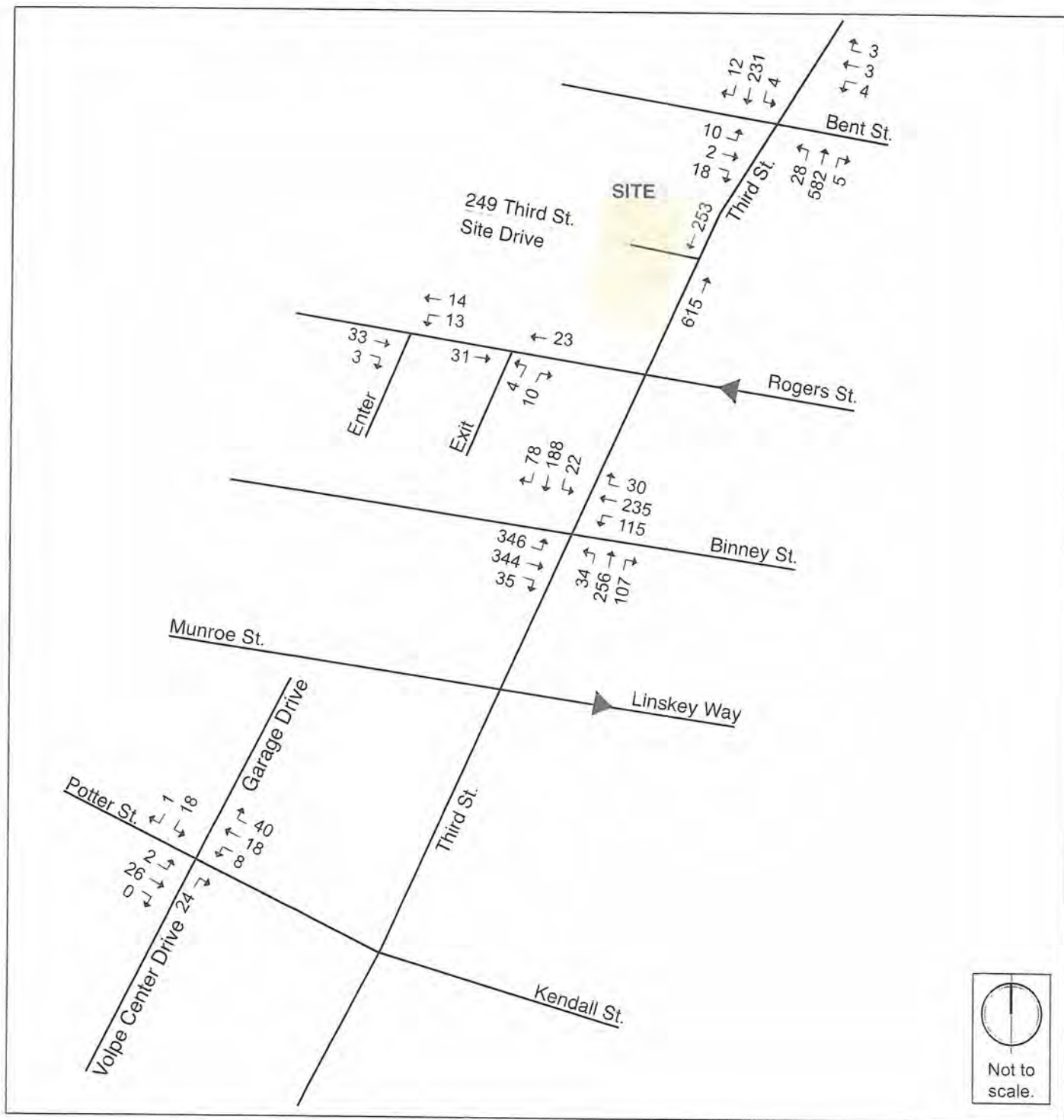


Figure 5.C.1 Future Build Conditions (2019) Turning Movement Volumes, a.m. Peak Hour

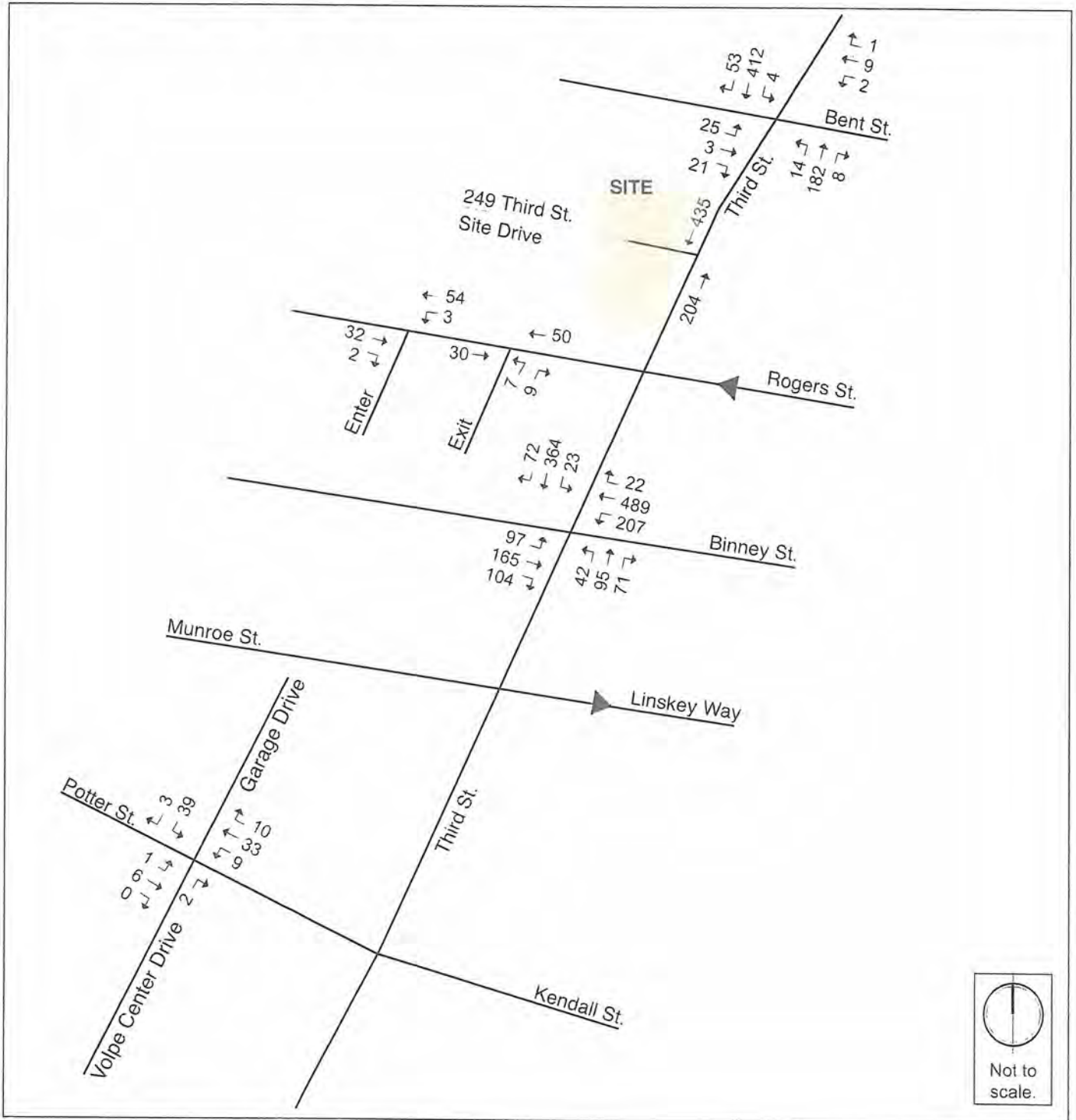


Figure 5.C.2 Future Build Conditions (2019) Turning Movement Volumes, p.m. Peak Hour

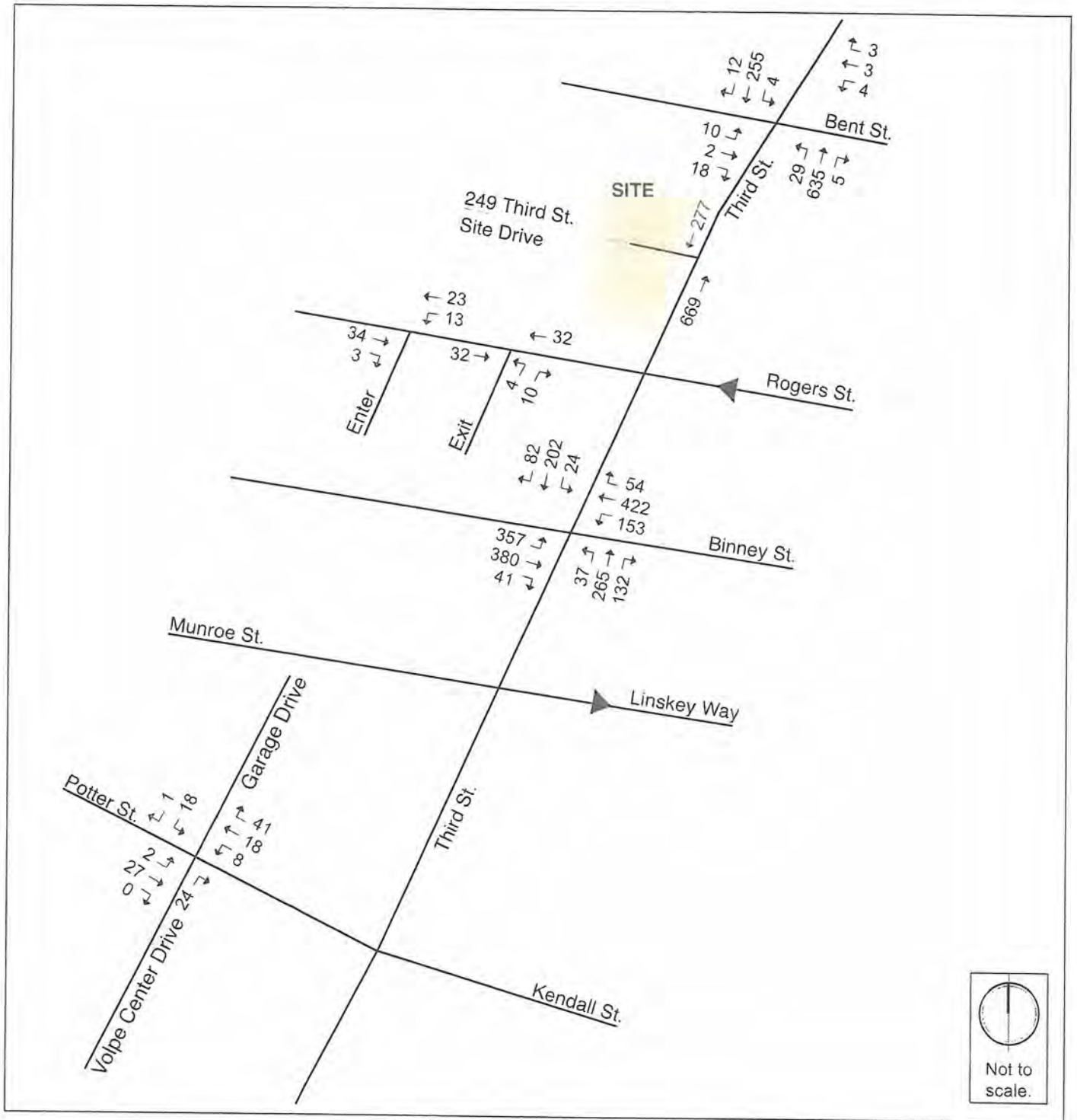


Table 5.A.1 Existing Conditions (2014), Capacity Analysis Summary, a.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50 th Percentile Queue (ft)	95 th Percentile Queue (ft)
<i>Signalized Intersection</i>					
Third Street at Binney Street	C	34.4	-	-	-
Binney EB left	D	50.0	0.58	52	100
Binney EB thru thru/right	C	26.0	0.32	49	82
Binney WB left	D	45.6	0.70	98	#186
Binney WB thru/right	C	34.5	0.75	204	#406
Third NB left/thru	B	19.5	0.25	43	81
Third NB right	B	18.2	0.14	17	41
Third SB left/thru/right	D	35.8	0.81	203	322
<i>Unsignalized Intersections</i>					
Third Street at Bent Street					
Bent EB left/thru/right	C	18.0	0.16	-	14
Parking Lot WB left/thru/right	C	19.2	0.10	-	8
Third NB left/thru/right	A	0.8	0.02	-	1
Third SB left/thru/right	A	0.1	0.00	-	0
Third Street at 249 Third Street Lot Driveway					
Driveway EB left/thru/right	B	14.9	0.03	-	2
Third NB left/thru	A	0.0	0.00	-	0
Third SB thru/right	A	0.0	0.25	-	0
Rogers Street at 195 Binney Exit Driveway					
Rogers EB thru	A	0.0	0.03	-	0
Rogers WB thru	A	0.0	0.01	-	0
Driveway SB left/right	A	8.8	0.01	-	1
Rogers Street at 195 Binney Entrance Driveway					
Rogers EB thru/right	A	0.0	0.03	-	0
Rogers WB left/thru	A	0.6	0.00	-	0
Potter Street at 285/303 Third Street Driveway					
Potter EB left/thru/right	A	1.1	0.00	-	0
Potter WB left/thru/right	A	1.4	0.01	-	1
Private Driveway NB left/thru/right	A	8.7	0.00	-	0
Driveway SB left/thru/right	B	10.2	0.08	-	7

95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

Table 5.A.2 Existing Conditions (2014), Capacity Analysis Summary, p.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50 th Percentile Queue (ft)	95 th Percentile Queue (ft)
<i>Signalized Intersection</i>					
Third Street at Binney Street	D	38.6	-	-	-
Binney EB left	D	54.4	0.88	182	#369
Binney EB thru thru/right	B	15.3	0.31	64	108
Binney WB left	F	98.8	0.90	65	#182
Binney WB thru/right	D	39.1	0.70	133	#262
Third NB left/thru	C	31.8	0.64	137	222
Third NB right	C	25.8	0.34	45	89
Third SB left/thru/right	D	37.2	0.74	151	241
<i>Unsignalized Intersections</i>					
Third Street at Bent Street					
Bent EB left/thru/right	C	20.2	0.13	-	11
Parking Lot WB left/thru/right	D	25.2	0.08	-	7
Third NB left/thru/right	A	0.7	0.03	-	2
Third SB left/thru/right	A	0.2	0.01	-	0
Third Street at 249 Third Street Lot Driveway					
Driveway EB left/thru/right	B	14.4	0.02	-	2
Third NB left/thru	A	0.0	0.00	-	0
Third SB thru/right	A	0.0	0.18	-	0
Rogers Street at 195 Binney Exit Driveway					
Rogers EB thru	A	0.0	0.03	-	0
Rogers WB thru	A	0.0	0.01	-	0
Driveway SB left/right	A	8.9	0.01	-	1
Rogers Street at 195 Binney Entrance Driveway					
Rogers EB thru/right	A	0.0	0.03	-	0
Rogers WB left/thru	A	2.7	0.01	-	0
Potter Street at 285/303 Third Street Driveway					
Potter EB left/thru/right	A	0.5	0.00	-	0
Potter WB left/thru/right	A	1.1	0.01	-	0
Private Driveway NB left/thru/right	A	8.9	0.04	-	3
Driveway SB left/thru/right	B	10.0	0.05	-	4

95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.
 GRAY shading indicates LOS E or F

All of the study area intersections operate at a LOS D or better, which is typically considered acceptable in an urban environment such as this study area, with the exception of the Binney Street westbound left-turn lane at the Third Street/Binney Street intersection, which is operating at a LOS F. However, it should be noted that the Binney Street westbound through movement is operating at LOS C and LOS D during the morning and evening

peak hours, respectively. If the additional through lane was available for use under existing conditions, these approaches would operate at LOS C during both peak hours. Given the small change in operations if the additional lane were available, it is not anticipated that the lane closure resulted in a significant number of diverted vehicle trips.

Table 5.B.1 Build Conditions (2014), Capacity Analysis Summary, a.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50 th Percentile Queue (ft)	95 th Percentile Queue (ft)
<i>Signalized Intersection</i>					
Third Street at Binney Street	C	34.6	-	-	-
Binney EB left	D	50.3	0.59	52	100
Binney EB thru thru/right	C	26.2	0.33	50	82
Binney WB left	D	45.9	0.70	99	#189
Binney WB thru/right	C	34.7	0.75	206	#406
Third NB left/thru	B	19.5	0.26	43	83
Third NB right	B	18.3	0.15	18	42
Third SB left/thru/right	D	36.0	0.81	206	325
<i>Unsignalized Intersections</i>					
Third Street at Bent Street					
Bent EB left/thru/right	C	18.0	0.16	-	14
Parking Lot WB left/thru/right	C	19.2	0.10	-	8
Third NB left/thru/right	A	0.8	0.02	-	1
Third SB left/thru/right	A	0.1	0.00	-	0
Rogers Street at 195 Binney Exit Driveway					
Rogers EB thru	A	0.0	0.03	-	0
Rogers WB thru	A	0.0	0.01	-	0
Driveway SB left/right	A	8.9	0.03	-	3
Rogers Street at 195 Binney Entrance Driveway					
Rogers EB thru/right	A	0.0	0.03	-	0
Rogers WB left/thru	A	1.3	0.00	-	0
Potter Street at 285/303 Third Street Driveway					
Potter EB left/thru/right	A	1.1	0.00	-	0
Potter WB left/thru/right	A	1.4	0.01	-	1
Private Driveway NB left/thru/right	A	8.7	0.00	-	0
Driveway SB left/thru/right	B	10.3	0.09	-	8

95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

Table 5.B.2 Build Conditions (2014), Capacity Analysis Summary, p.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50 th Percentile Queue (ft)	95 th Percentile Queue (ft)
<i>Signalized Intersection</i>					
Third Street at Binney Street	D	39.3	-	-	-
Binney EB left	E	55.2	0.89	184	#372
Binney EB thru thru/right	B	15.4	0.31	65	110
Binney WB left	F	102.8	0.93	67	#185
Binney WB thru/right	D	39.6	0.70	135	#265
Third NB left/thru	C	31.7	0.64	139	224
Third NB right	C	25.7	0.34	46	90
Third SB left/thru/right	D	38.1	0.75	156	249
<i>Unsignalized Intersections</i>					
Third Street at Bent Street					
Bent EB left/thru/right	C	20.3	0.13	-	11
Parking Lot WB left/thru/right	D	25.3	0.08	-	7
Third NB left/thru/right	A	0.7	0.03	-	2
Third SB left/thru/right	A	0.2	0.01	-	0
Rogers Street at 195 Binney Exit Driveway					
Rogers EB thru	A	0.0	0.03	-	0
Rogers WB thru	A	0.0	0.02	-	0
Driveway SB left/right	A	8.9	0.04	-	3
Rogers Street at 195 Binney Entrance Driveway					
Rogers EB thru/right	A	0.0	0.03	-	0
Rogers WB left/thru	A	3.6	0.01	-	1
Potter Street at 285/303 Third Street Driveway					
Potter EB left/thru/right	A	0.5	0.00	-	0
Potter WB left/thru/right	A	0.9	0.01	-	0
Private Driveway NB left/thru/right	A	8.9	0.04	-	3
Driveway SB left/thru/right	B	10.1	0.05	-	4

95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.
 GRAY shading indicates a decrease in LOS from existing conditions to the Build scenario.

All of the study area intersections continue to operate at the same LOS as the Existing Conditions with the exception of the Binney Street eastbound left turn lane at the Third Street/Binney Street intersection. This change in LOS is due to the increase in delay of less than one second.

Table 5.C.1 Future Build Conditions (2019), Capacity Analysis Summary, a.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50 th Percentile Queue (ft)	95 th Percentile Queue (ft)
<i>Signalized Intersection</i>					
Third Street at Binney Street	C	32.6	-	-	-
Binney EB left	D	51.1	0.59	53	#121
Binney EB thru thru/right	C	28.7	0.45	71	114
Binney WB left	D	47.9	0.74	110	#224
Binney WB thru thru/right	C	24.2	0.52	130	190
Third NB left/thru	C	20.0	0.33	52	103
Third NB right	B	18.7	0.21	26	59
Third SB left/thru/right	D	39.1	0.86	228	#417
<i>Unsignalized Intersection</i>					
Third Street at Bent Street					
Bent EB left/thru/right	C	19.6	0.18	-	16
Parking Lot WB left/thru/right	C	20.2	0.05	-	4
Third NB left/thru/right	A	0.8	0.02	-	1
Third SB left/thru/right	A	0.1	0.00	-	0
Rogers Street at 195 Binney Exit Driveway					
Rogers EB thru	A	0.0	0.02	-	0
Rogers WB thru	A	0.0	0.03	-	0
Driveway SB left/right	A	8.8	0.02	-	1
Rogers Street at 195 Binney Entrance Driveway					
Rogers EB thru/right	A	0.0	0.02	-	0
Rogers WB left/thru	A	0.4	0.00	-	0
Potter Street at 285/303 Third Street Driveway					
Potter EB left/thru/right	A	1.1	0.00	-	0
Potter WB left/thru/right	A	1.3	0.01	-	1
Private Driveway NB left/thru/right	A	8.7	0.00	-	0
Driveway SB left/thru/right	B	10.3	0.10	-	8

95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.
 GRAY shading indicates a decrease in LOS from the Build scenario to the Future Build scenario.

Table 5.C.2 Future Build Conditions (2019), Capacity Analysis Summary, p.m. Peak Hour

Intersection/Approach	LOS	Delay (s)	V/C Ratio	50 th Percentile Queue (ft)	95 th Percentile Queue (ft)
<i>Signalized Intersection</i>					
Third Street at Binney Street	D	46.3	-	-	-
Binney EB left	E	57.6	0.91	198	#399
Binney EB thru thru/right	B	15.8	0.35	76	125
Binney WB left	F	198.0	>1.00	~113	#250
Binney WB thru thru/right	C	33.7	0.68	128	198
Third NB left/thru	C	34.7	0.70	154	246
Third NB right	C	28.1	0.44	61	114
Third SB left/thru/right	D	38.6	0.76	161	260
<i>Unsignalized Intersection</i>					
Third Street at Bent Street					
Bent EB left/thru/right	C	21.4	0.13	-	11
Parking Lot WB left/thru/right	D	26.8	0.06	-	5
Third NB left/thru/right	A	0.7	0.03	-	2
Third SB left/thru/right	A	0.2	0.01	-	0
Rogers Street at 195 Binney Exit Driveway					
Rogers EB thru	A	0.0	0.02	-	0
Rogers WB thru	A	0.0	0.02	-	0
Driveway SB left/right	A	8.7	0.02	-	1
Rogers Street at 195 Binney Entrance Driveway					
Rogers EB thru/right	A	0.0	0.02	-	0
Rogers WB left/thru	A	2.7	0.01	-	1
Potter Street at 285/303 Third Street Driveway					
Rogers EB left/thru/right	A	0.5	0.00	-	0
Rogers WB left/thru/right	A	0.9	0.01	-	0
Private Driveway NB left/thru/right	A	8.9	0.04	-	3
Driveway SB left/thru/right	B	10.2	0.05	-	4

95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

- Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.

All of the study area intersections continue to operate at the same or improved LOS from the Build 2014 conditions with the exception of one approach at the intersection of Third Street/Binney Street. During the morning peak hour at this intersection, the Third Street northbound left-turn/through approach will decrease from LOS B to LOS C as a result of an increase in delay of less than one second.

Meanwhile, operations at the Binney Street westbound approach at the intersection of Third Street/Binney Street are expected to improve during both peak hours due to the re-opening of the third approach lane following the completion of construction at Alexandirai.

Queue Analysis

HSH performed vehicle queue analysis during field observations on September 4, 2014 to verify the Synchro capacity analysis. Table 6.A.1 and Table 6.A.2 summarize the actual Existing, modeled Existing, modeled Build, and modeled Future queues. During the time of queue observations, construction was occurring on the north side of Binney Street from Third Street to First Street. As a result, the right-most westbound lane along Binney Street was closed. The construction activity reduced the westbound approach capacity to a left-turn lane with limited storage length and a through/right-turn lane. The Existing through Build conditions were modeled based on this lane reduction.

Table 6.A.1 Signalized Average Queue Analysis – a.m. Peak Hour

Intersection/Approach	Observed Existing 2014 (ft)	Modeled Existing 2014 (ft)	Modeled Build 2014 (ft)	Modeled Future Build 2019 (ft)
Third Street at Binney Street				
Binney EB left	46	52	52	53
Binney EB thru thru/right	50	49	50	71
Binney WB left	54	98	99	110
Binney WB thru/right	83	204	206	-
Binney WB thru thru/right	-	-	-	130
Third NB left/thru	25	43	43	52
Third NB right	0	17	18	26
Third SB left/thru/right	246	203	206	228

¹ Average queues observed assume one vehicle length equals 25 feet.

Table 6.A.2 Signalized Average Queue Analysis – p.m. Peak Hour

Intersection/Approach	Observed Existing 2014 (ft)	Modeled Existing 2014 (ft)	Modeled Build 2014 (ft)	Modeled Future Build 2019 (ft)
Third Street at Binney Street				
Binney EB left	80	182	184	198
Binney EB thru thru/right	65	64	65	76
Binney WB left	65	65	67	~113
Binney WB thru/right	110	133	135	-
Binney WB thru thru/right	-	-	-	128
Third NB left/thru	310	137	139	154
Third NB right	80	45	46	61
Third SB left/thru/right	95	151	156	161

¹ Average queues observed assume one vehicle length equals 25 feet.

~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.

Residential Street Volume Analysis

The peak hour volumes and percent increase on the study area roadways are presented in Table 7.A.

Table 7.A Vehicular Traffic on Study Area Roadways

Study Area Roadway	Existing Conditions 2014 ¹ (veh)	Build Conditions 2014		Future Build Conditions 2019 (veh)	
		(veh)	Change in Volume		% Change
<i>a.m. Peak Hour</i>					
Third Street (north of Charles Street)	555	554	-1	-0.2%	637
Binney Street (west of Third Street)	835	837	2	+0.2%	1042
<i>p.m. Peak Hour</i>					
Third Street (north of Charles Street)	798	800	2	+0.3%	877
Binney Street (west of Third Street)	975	982	7	+0.5%	1229

¹ Peak Hour volumes summed from ATR counts on September 10, 2014

As shown in Table 7.A, the Project will have little impact on the adjacent street network, with volumes changing less than 1%. During the morning peak hour, it is anticipated that traffic volumes will decrease by one vehicle on Third Street north of Charles Street as a result of the relocation of vehicle trips from the existing 249 Third Street Lot to 195 Binney Street Garage. Due to the new position on the network, it is anticipated that some of these vehicles will in the future choose to use Fifth Street rather than Third Street to access points north and west – this is more consistent with the trip distribution illustrated in Figure 3.E.1.

Transit Analysis

Based on the transit mode shares presented in Table 3.B.1, the future transit trips associated with the Project were estimated and are summarized in Table 9.A.1.

Table 9.A.1 Project Transit Trips

Time Period	Direction	Transit Trips
Daily	In	130
	Out	130
	Total	260
a.m. Peak Hour	In	4
	Out	13
	Total	17
p.m. Peak Hour	In	17
	Out	10
	Total	27

As shown in **Table 9.A.1**, the Project is expected to generate approximately 260 new transit trips daily, with 17 new transit trips (4 alighting and 13 boarding) during the a.m. peak hour and 27 new trips (17 alighting and 10 boarding) during the p.m. peak hour.

Based on the 2005-2013 American Community Survey data for Census Tract 3523, approximately 82% of persons using transit for work/retail purposes use rail-based options and approximately 18% use the bus. Transit trips were assigned based on the 2010 journey-to-work census data for tract 3523⁴. Since the retail portion of the Project generates a relatively low number of transit trips, both the residential and retail-based transit trips were not distributed separately. The assignment of Project-generated transit trips to each of the main transit lines is shown on **Table 9.A.2**.

Table 9.A.2 Project Transit Trip Assignment

Line	Direction	a.m. Peak Hour			p.m. Peak Hour		
		In	Out	Total	In	Out	Total
Red Line (Kendall)	<i>Inbound</i>	2	5	7	7	4	11
	<i>Outbound</i>	1	5	6	6	4	10
	<i>Both Directions</i>	3	10	13	13	8	21
Green Line (Lechmere)	<i>Inbound</i>	-	1	1	-	1	1
	<i>Outbound</i>	0	-	0	1	-	1
	<i>Both Directions</i>	0	1	1	1	1	2
Buses (all)	<i>All Directions</i>	1	2	3	3	2	5

All residents and retail customers/employees using the Red Line are assumed to board or exit the transit system at Kendall/MIT Station. With approximately 13 trains per peak hour per direction, the Project is adding an average of less than one rider per Red Line train during both the a.m. and p.m. peak hours, which should be easily accommodated. The increases in peak hour ridership along the inbound and outbound segments before and after Kendall/MIT Station are presented in **Table 9.B.1**.

All residents and retail customers/employees using the Green Line are assumed to board or exit the transit system at Lechmere Station. With a peak hour headway of 6 minutes, equivalent to 10 trains per peak hour per direction, the Green Line should not be affected by the addition of Project-generated transit trips with just one additional trip during the a.m. peak hour and two additional trips during the p.m. peak hour.

Eight MBTA bus routes plus the EZ-Ride bus service provided by the Charles River Transportation Management Association serve the Project site. With just three additional bus trips in the a.m. peak hour and five additional trips in the p.m. peak hour, the number of Project-generated bus riders is not high enough to distribute to all the bus routes. Therefore, the addition of Project-generated bus trips is not expected to result in a noticeable impact to any of the bus routes.

4. 2006-2010 Journey to Work data by workplace, Census Bureau

Table 9.B.1 Red Line Capacity Analysis

Segment	Frequency* (trains/ hour)	Capacity (riders/ hour)	a.m. Peak Hour					p.m. Peak Hour				
			Existing Ridership ^	Existing V/C	Project Trips	Build Ridership	Build V/C	Existing Ridership ^	Existing V/C	Project Trips	Build Ridership	Build V/C
Inbound												
Entering Kendall	13	13,026	9,000	0.69	2	9,002	0.69	4,094	0.31	7	4,101	0.31
Exiting Kendall	13	13,026	8,677	0.67	5	8,682	0.67	5,822	0.45	4	5,825	0.45
Outbound												
Entering Kendall	13	13,026	4,808	0.37	1	4,810	0.37	6,417	0.49	6	6,423	0.49
Exiting Kendall	13	13,026	3,199	0.25	5	3,204	0.25	7,102	0.55	4	7,106	0.55

*MBTA.com, December 2014

^From MBTA Red Line Passenger Flows and Capacity by Hour (FY2012)

Pedestrian Analysis

Pedestrian level of service is determined through analysis of crosswalk geometry, signal timing, and pedestrian volumes. The methodology for determining the pedestrian LOS analysis is based on the TRB's HCM 2000 methodologies, as previously described. Based on HCM 2000 methodologies, the level of service for a signalized intersection is determined based on the effective green time dedicated to a pedestrian crossing and the dimensions of the crosswalk they are crossing. At unsignalized intersections, the LOS is based on the average delay per pedestrian as a result of conflicting vehicular turning movements and critical gap time.

LOS A defines the most favorable condition, with minimal delay to cross the intersection, while LOS F represents the worst condition, with significant delay to a pedestrian. LOS D is generally considered acceptable for the urban nature of the Project study area.

Turning movement counts were performed on September 4, 2014 at Third Street/Binney Street and at Third Street/Bent Street. The pedestrian volumes were shown in Figure 2.C.1 in the Existing Conditions section of the report. Pedestrian level of service analysis was analyzed at the two intersections use the HCM 2000 methodologies, similar to that described in the Methodology section. The morning and evening intersection pedestrian LOS is shown in Table 10.A.1 for Existing 2014, Build 2014, and Future Build 2019 conditions.

Table 10.A.1 Pedestrian Level of Service Summary

Intersection/ Crosswalk Approach	a.m. Peak Hour			p.m. Peak Hour		
	Existing 2014 (peds)	Build 2014 (peds)	Future 2019 (peds)	Existing 2014 (peds)	Build 2014 (peds)	Future 2019 (peds)
<i>Signalized Intersection</i>						
Third Street/ Binney Street						
Binney East	D	D	D	D	D	D
Binney West	D	D	D	D	D	D
Third North	C	C	C	C	C	C
Third South	C	C	C	C	C	C
<i>Unsignalized Intersection</i>						
Third Street/ Bent Street						
Bent East	A	A	A	A	A	A
Bent West	A	A	A	A	A	A
Third North	D	D	D	E	F	F
Third South	C	C	D	F	F	F

Note: GRAY shading in Existing 2014 Conditions indicates LOS E or LOS F. GRAY shading in Future 2019 Conditions indicates a worsening LOS from Build 2014 Conditions.

The Third Street/Binney Street signalized intersection operates at a LOS D or better at all crossings during all study analysis periods.

At the Third Street/Bent Street unsignalized intersection, during the p.m. peak hour, the Third Street North crossing currently operates at a pedestrian LOS E, and the Third Street South crossing operates at a pedestrian LOS F. During the morning peak hour, the Third Street South crossing worsens from a pedestrian LOS C to pedestrian LOS D from the Build 2014 condition to the Future Build 2019 condition. During the evening peak hour, the Third Street North crossing worsens from a pedestrian LOS E to pedestrian LOS F from the Existing 2014 condition to the Build 2019 condition.

Pedestrian operations at Third Street/Bent Street are conservative based on HCM 2000 analysis. HSH observed that pedestrians generally experience no delay to cross Third Street. In addition, the Third Street north crosswalk across the southbound approach is a raised crossing which slows vehicles down to allow pedestrians to cross safely.

Full pedestrian level-of-service analysis worksheets for both intersections at each time period and condition are included in **Appendix F**.

Pedestrian conditions in the study area are generally in good condition, with sidewalks provided along all roadways and crosswalks at all intersections. The north side of Rogers Street currently does not have a sidewalk, but the Project is proposing a new sidewalk.

Based on the walk mode shares presented in Table 3.B.1, the future walk trips were estimated and are summarized in **Table 10.A.2**.

Table 10.A.2 Project Pedestrian Trips

Time Period	Direction	Pedestrian Trips
Daily	In	126
	Out	126
	Total	252
a.m. Peak Hour	In	4
	Out	12
	Total	16
p.m. Peak Hour	In	16
	Out	10
	Total	26

As shown in Table 10.A, the Project is expected to generate approximately 16 new pedestrian trips during the a.m. peak hour and approximately 26 new pedestrian trips during the p.m. peak hour. Approximately 252 new pedestrian trips will occur daily, with an additional 260 new transit trips that will require a walk to or from the site, resulting in a total of 512 new pedestrian trips per day.

Bicycle Analysis

Based on the bicycle mode shares presented in Table 3.B.1, the future bicycle trips were estimated and are summarized in Table 11.A.

Table 11.A Project Bicycle Trips

Time Period	Direction	Bicycle Trips
Daily	In	29
	Out	29
	Total	58
a.m. Peak Hour	In	1
	Out	3
	Total	4
p.m. Peak Hour	In	3
	Out	2
	Total	5

As shown in Table 11.A, the Project is expected to generate approximately 58 new bicycle trips daily, with approximately 4 new bicycle trips during the a.m. peak hour and approximately 5 new bicycle trips during the p.m. peak hour. The Project will provide covered bicycle parking spaces at ratio of one per unit inside the building with access via the pedestrian courtyard. Additional bicycle parking will be provided on-site for residents and visitors.

Transportation Demand Management

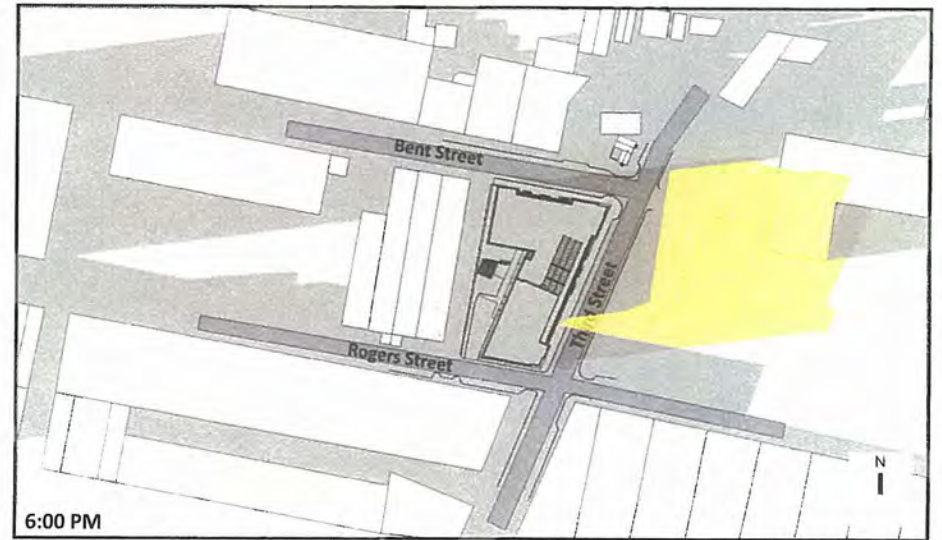
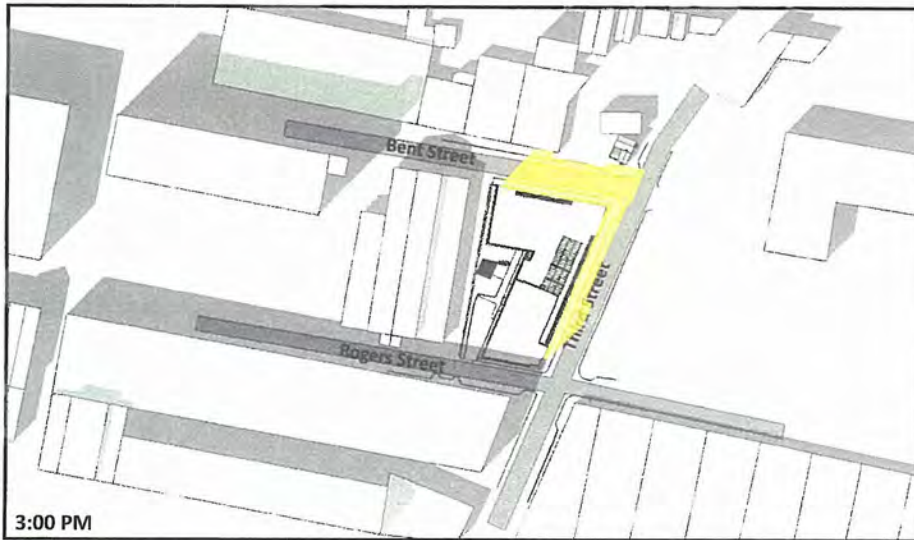
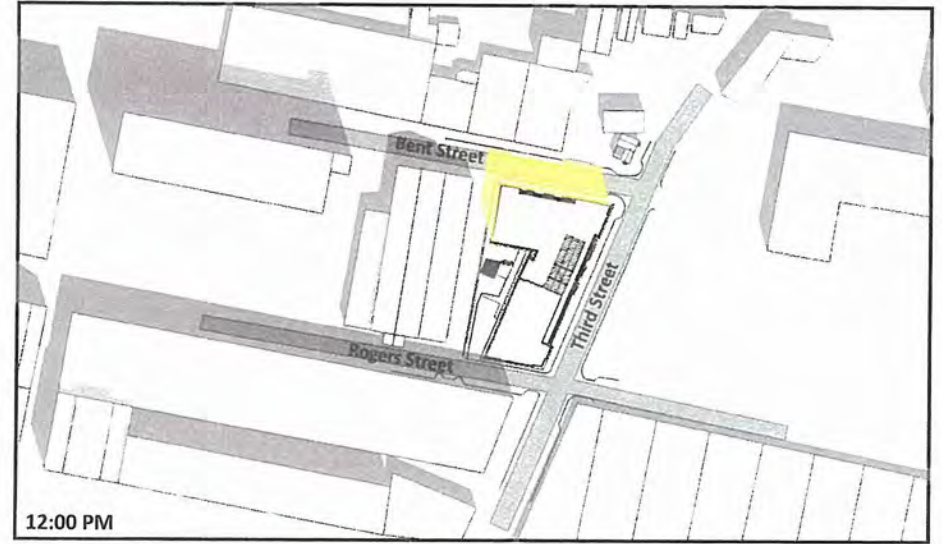
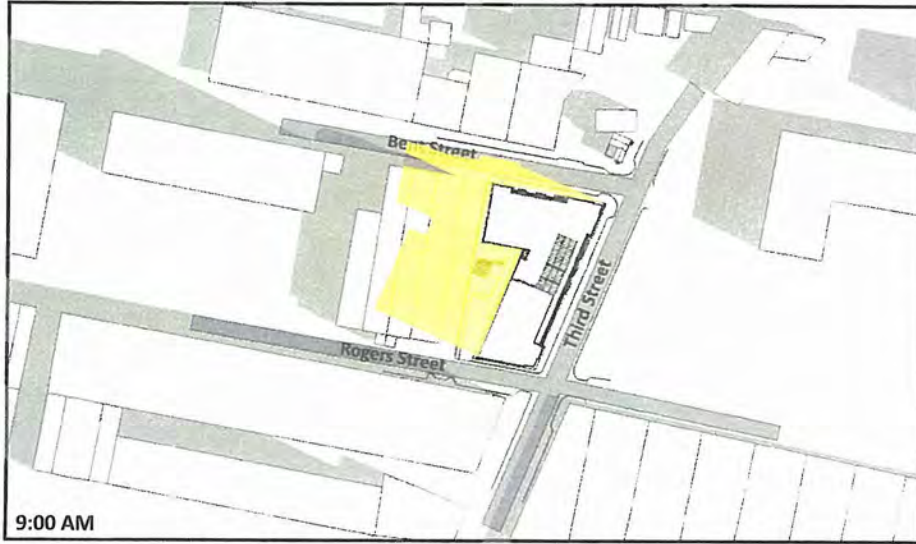
TDM measures encourage travelers to use alternatives to driving, especially during peak periods and will be facilitated by the transit oriented nature of the Project and its convenient proximity to a wide range of non-auto alternatives. The Proponent will emphasize the site's convenient transit and pedestrian access in marketing the Project to future residents and tenants.

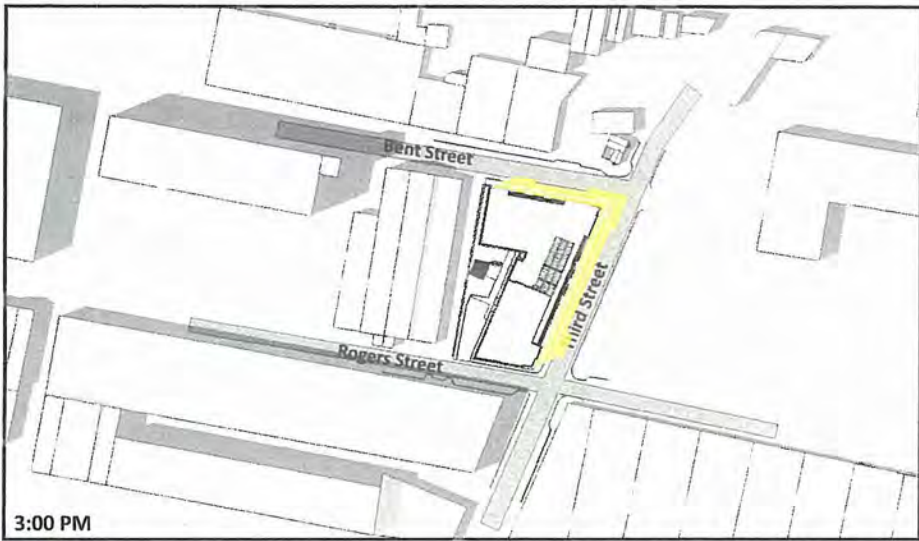
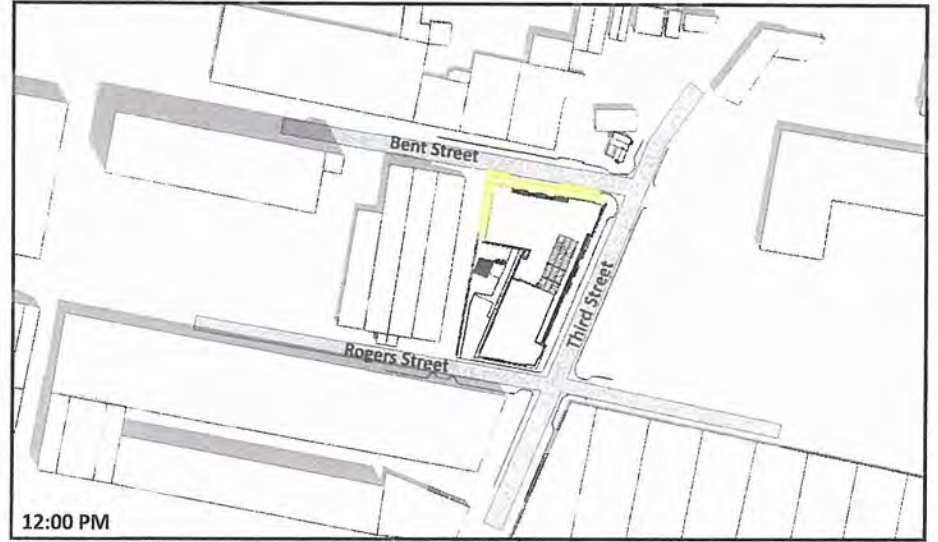
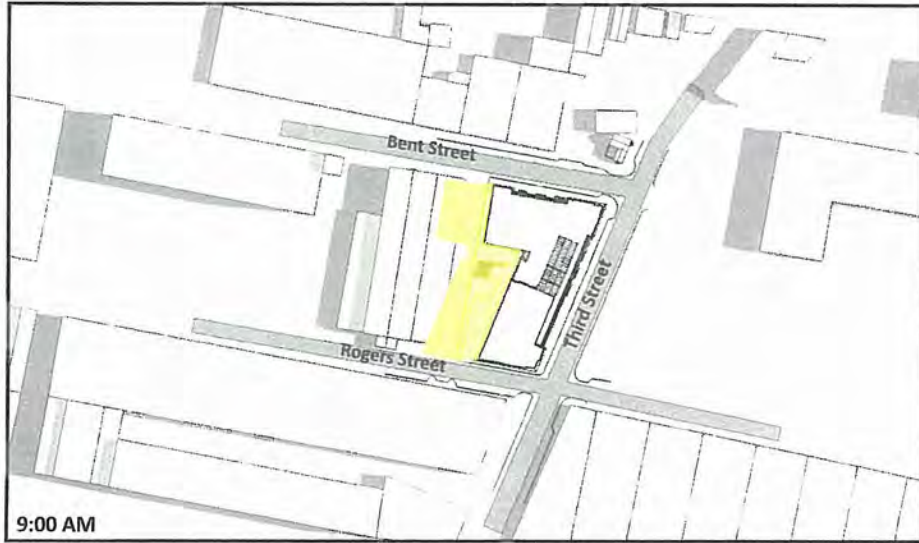
TDM measures for the Project may include but are not limited to the following:

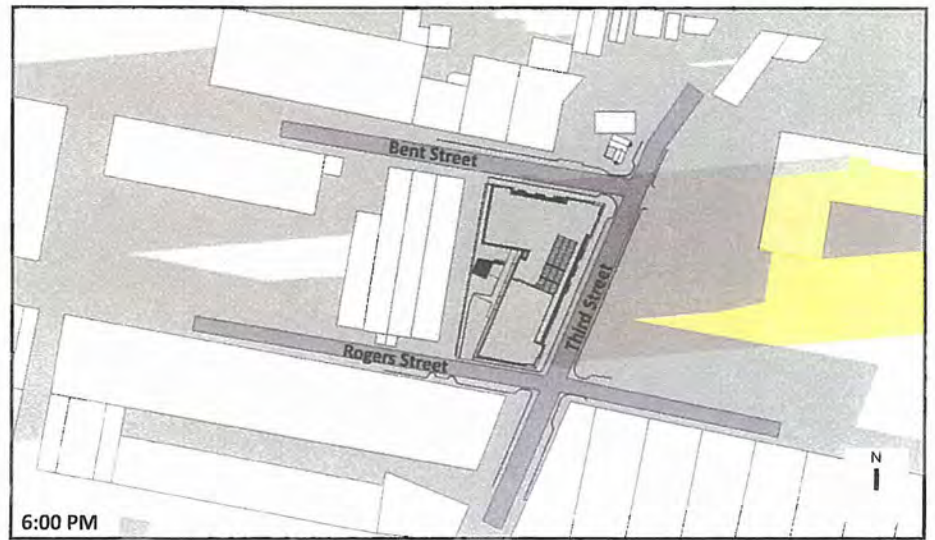
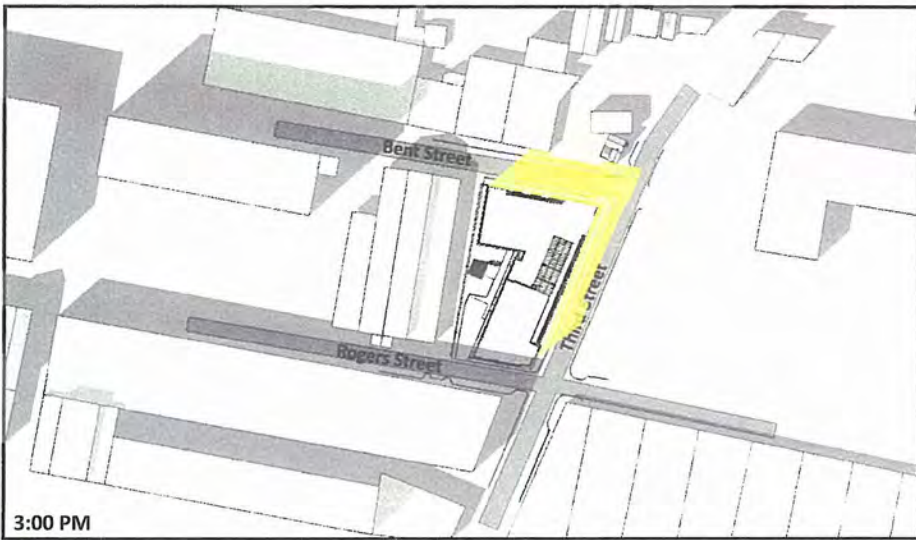
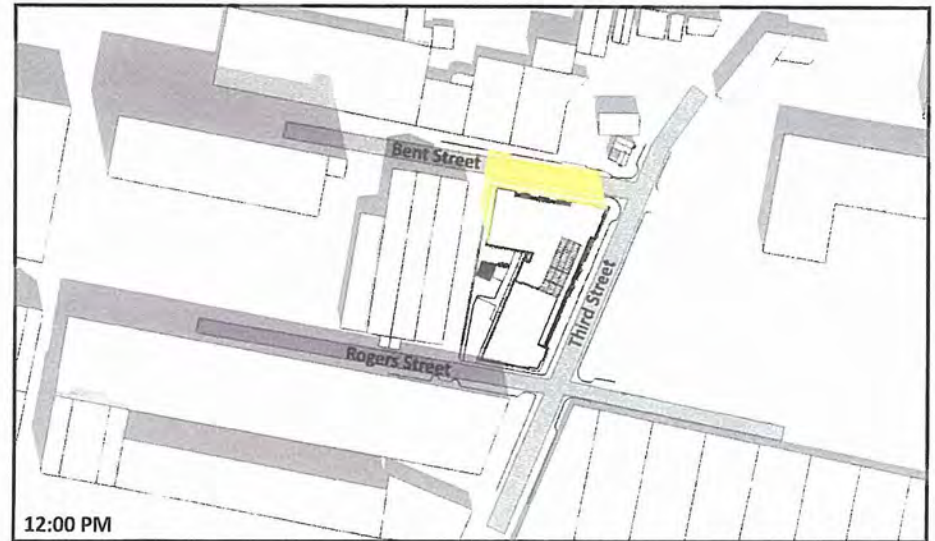
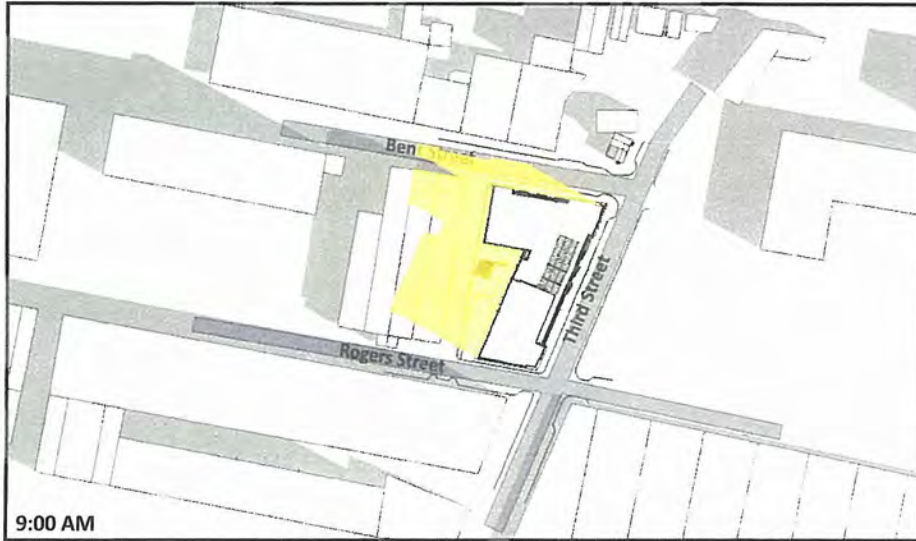
- Orientation Packets: The Proponent will provide orientation packets to new residents and tenants containing information on available transportation choices, including transit routes/schedules and nearby ZipCar locations. On-site management will work with residents and tenants as they move in to help facilitate transportation for new arrivals.
- Electric Vehicle Charging: The Proponent will explore the feasibility of providing electric vehicle charging stations within the garage for the Phase III office use.
- Shared-car Services: the Proponent will explore the feasibility of providing a shared car service (e.g., ZipCar) on-site to help reduce the need for residents to own a vehicle.
- Transportation Coordinator: The Proponent will designate a transportation coordinator to oversee transportation issues including parking, service and loading, and deliveries and will work with residents as they move in to raise awareness of public transportation, bicycling, and walking opportunities.
- Project Web Site: The web site will include transportation-related information for residents, workers, and visitors.

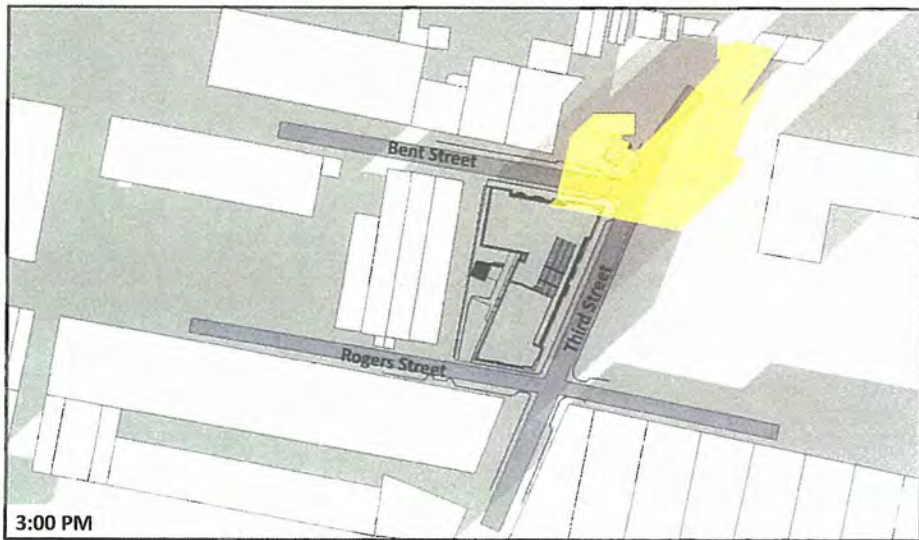
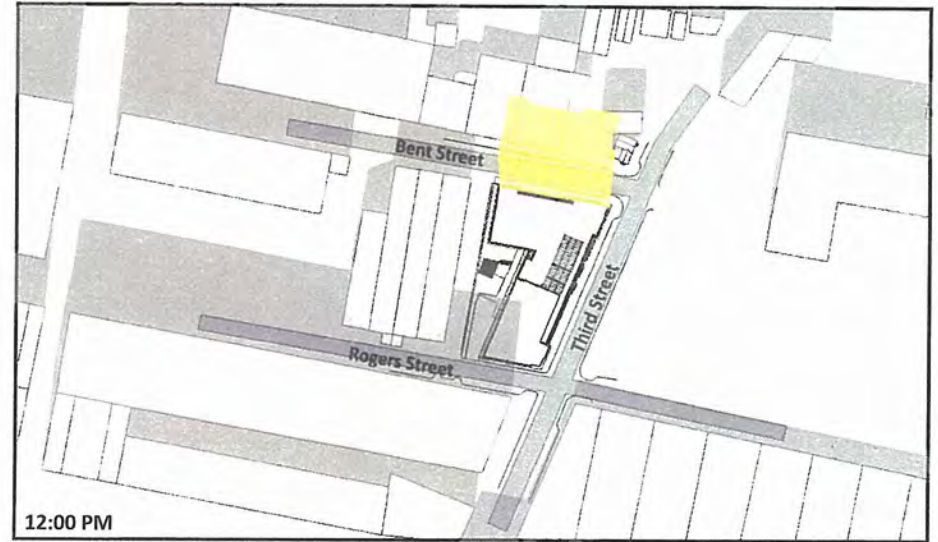
The Proponent will work with the City of Cambridge to determine an appropriate TDM .

TAB D

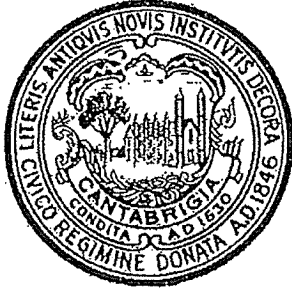








TAB E



CITY OF CAMBRIDGE, MASSACHUSETTS

PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

CERTIFICATION OF RECEIPT OF PLANS BY CITY OF CAMBRIDGE TREE ARBORIST

City Department/Office: City of Cambridge Tree Arborist

Project Address: 249 Third Street, Cambridge, MA 02142

Applicant Name: Equity Residential

For the purpose of fulfilling the requirements of Section 4.26, 19.20 or 11.10 of the Cambridge Zoning Ordinance, this is to certify that this Department is in receipt of the application documents submitted to the Planning Board for approval of a MultiFamily, Project Review or Townhouse Special Permit for the above referenced development project: a Tree Study which shall include (a) Tree Survey, (b) Tree Protection Plan and if applicable, (c) Mitigation Plan, twenty one days before the Special Permit application to Community Development.



Signature of City Department/Office Representative

1-16-15
~~1/13/15~~

Date



January 9, 2015

Mr. David Lefcourt,
ISA Certified Municipal Specialist, MCA, MCL
City Arborist/Tree Warden, City of Cambridge DPW
147 Hampshire Street
Cambridge, MA 02139

Re: Tree Study Submission
Multi-Family Residential Project
249 Third Street, Cambridge, MA

Dear Mr. Lefcourt,

On behalf of our client, Equity Residential, we are pleased to submit to you this letter and the enclosed exhibit plans in compliance with the Tree Study submission requirements as required by applications for a Project Review Multifamily Housing Special Permit.

We have reviewed an existing conditions survey prepared for the project (see Figure 1 enclosed) and have determined that there are no Significant Trees (those that exceed 8" DBH) on the premises. We also note that there are nine (9) existing trees within the Right of Way adjacent to the project on Bent Street, Rogers Street and Third Street combined.

This project does not propose to remove existing trees within any Right of Way (see Figure 2) but does propose to remove all of the existing trees on the project premises. While there are no Significant Trees being removed, we note that future landscaping designs plan on improving the overall tree canopy by incorporating approximately 6 new trees, totaling 21 inches of DBH.

Please do not hesitate to contact me directly should you have any questions concerns or require additional information regarding this submission. My direct line is (781) 770-0970 or you may email me at mfabbiano@highpointeng.com.

Best regards,
HIGHPOINT ENGINEERING, Inc.

A handwritten signature in black ink that reads "M. Fabbiano". The signature is written in a cursive, flowing style.

Michael Fabbiano
Vice President, Managing Principal

Enclosures

Cc: David Stockless, ICON Architecture
James Heroux, Copley Wolff Design Group
Andrew Copelotti, Equity Residential
Paul Barrett, Equity Residential



HIGHPOINT ENGINEERING INC.
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 www.highpointeng.com

MULTI-FAMILY BUILDING

249 THIRD STREET
 CAMBRIDGE, MA 02142

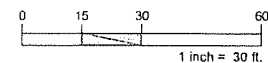
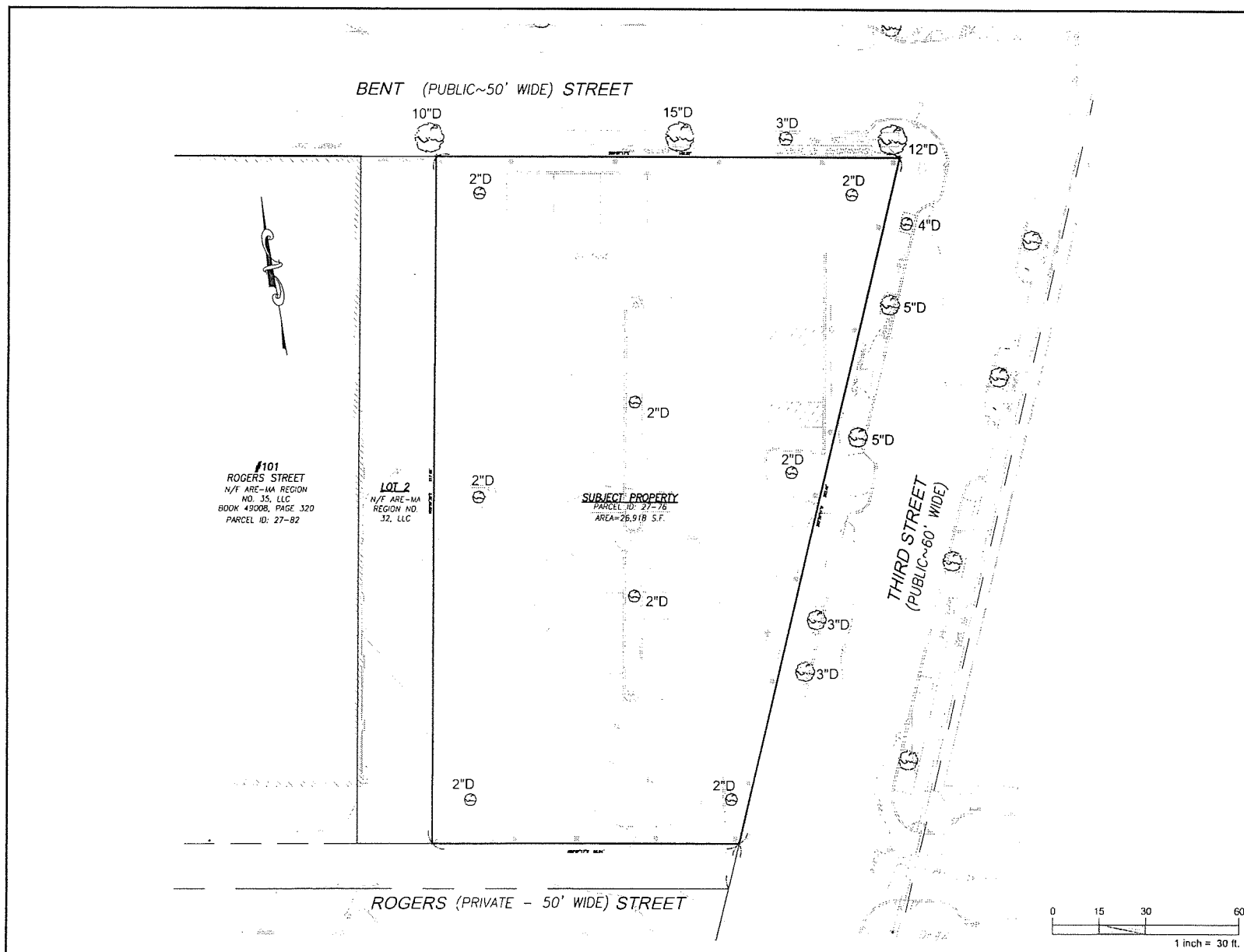
OWNER/APPLICANT: EQUITY RESIDENTIAL

ISSUE DATE:
01/09/2015
 PROJECT NUMBER:
14027

SHEET TITLE:

 TREE STUDY -
 EXISTING TREE
 LOCATION PLAN

SHEET NUMBER:
TR-1





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MULTI-FAMILY BUILDING

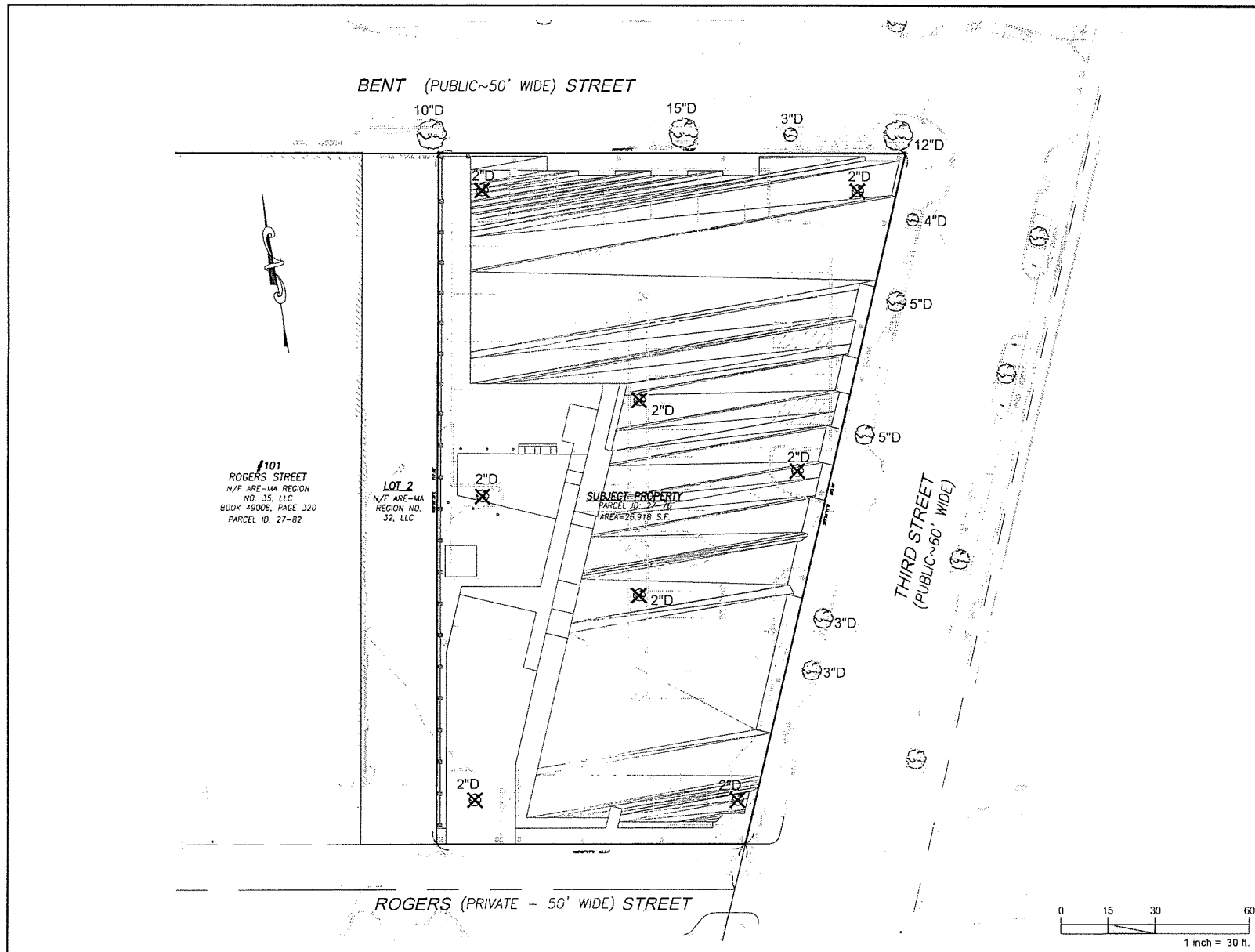
249 THIRD STREET
CAMBRIDGE, MA 02142

OWNER/APPLICANT: EQUITY RESIDENTIAL

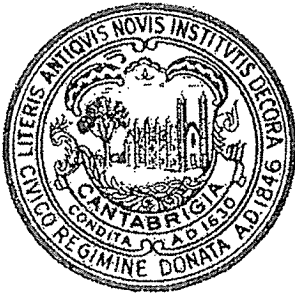
ISSUE DATE:
01/09/2015
PROJECT NUMBER:
14027

SHEET TITLE:
**TREE STUDY -
TREE REMOVAL
PLAN**

SHEET NUMBER:
TR-2



TAB F



CITY OF CAMBRIDGE, MASSACHUSETTS

PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

CERTIFICATION OF RECEIPT OF PLANS BY CITY OF CAMBRIDGE LEED SPECIALIST

City Department/Office:

Project Address: 139 Third Street

Applicant Name: _____

For the purpose of fulfilling the requirements of Section 22.20 of the Cambridge Zoning Ordinance, this is to certify that this Department is in receipt of the application documents submitted to the Planning Board for approval of a Special Permit for the above referenced development project: (a) an application narrative, (b) small format application plans at 11" x 17" or the equivalent and (c) completed LEED Project Checklist for the appropriate LEED building standard, accompanying narrative and affidavit. The Department understands that the receipt of these documents does not obligate it to take any action related thereto.

Laure Thorne 1/16/2015
Signature of City Department/Office Representative Date

The Project will achieve compliance with Cambridge Stretch Code by being “LEED Certifiable” under the LEED for Mid-Rise building rating system.

Major sustainable design elements of the overall project include:

- Redevelopment of a currently Parking Lot. The Project is in an urban area, close to regional and local public transportation. The new residential building will be located within .1 miles to public transportation on the MBTA’s red line at Kendall Square, and .7 miles from the Green Line. Numerous bus lines are nearby, encouraging minimal vehicle use.
- The Project will embody urban principles encouraging public transportation and pedestrian activity. The use of cars at this site is expected to be minimal in comparison to the public transportation and pedestrian trips. Other transportation related characteristics include:
 - Only 2 parking spaces for the entire project.
 - Covered bicycle parking will be included for residents. Visitor bicycle parking will be adjacent to the primary building entrance.
- Mechanical Systems:
 - No CFCs or HCFCs will be used in cooling equipment.
 - The Project will seek to save energy across systems with energy efficient equipment and appropriate insulation.
 - High efficiency lighting with occupancy sensors will be incorporated where suitable.
- ◆ Residential Units:
 - Energy Star appliances, lighting and low-flow fixtures will be integrated into residential units.
 - Operable and high-quality insulated glass will allow residents to control air movement within the units.

LEED for Homes (Midrise) Checklist and description of targeted Credits

The project will achieve compliance by being “LEED Certifiable” under the LEED for Homes (Mid Rise) building rating system. The LEED checklist will continue to be revised and developed as the project moves through the design stages. The project, as currently envisioned, may achieve LEED Silver certifiability, with 57 expected credit points. The following sections describe the elements incorporated into the LEED Checklist.

INNOVATION AND DESIGN PROCESS (ID)

4 points expected

ID Prereq 1.1 **Preliminary Rating** The LEED certification threshold set for this project is Silver.

ID Prereq 1.2 **Energy Expertise in MID-RISE** The design team will include expertise in energy for Mid-Rise construction.

ID 1.3 **Professional Credentialed with Respect to LEED for Homes** A LEED for Homes Accredited Professional will be part of the project team (1 pt)

ID 1.4 **Design Charrette** A design charrette will be held with the design and development teams to review LEED goals and responsibilities (1 pt)

ID 1.5 **Building Orientation for Solar Design** This Credit will not be met.

ID 1.6 **Trades Training for MID-RISE** The design team will discuss with the construction team trades training for mid-rise construction. (1 pt).

ID Prereqs 2.1 and 2.2 **Durability Planning and Durability Management** Durability strategies will be developed, recorded in the checklist and implemented. The builder shall have a quality management process in place.

ID 2.3 **Third-Party Durability Management Verification** The development team will explore the possibility of third party durability management verification (0 pts).

LOCATION & LINKAGES (LL)

6 points expected

LL 2 **Site Selection** The project site does not meet the requirements of this section. The site is not currently in a 100 year flood plain, however, it is in an area that may be delineated as an AE Coastal Flood Zone, according to preliminary FEMA maps, dated November, 2013. The site is within 100 feet of water including wetlands. As such, the team does not include points for Site Selection. The site is not a habitat for threatened or endangered species. The land was not public parkland prior to acquisition. The soils are not prime, unique or of state significance (0 pts).

LL 3.1 **Preferred Locations: Edge Development** Seventy-five percent of the site perimeter immediately borders previously developed land. Industrial, Residential across on Bent Street to the northern edge, residential buildings across Roger Street to the South, and multi family and Rogers Park across Third Street to the east, as well as the Foundry Building to the West. (1 pt).

LL 4 **Existing Infrastructure** Existing water service and sewer lines immediately surround the site. City utilities are located in Third Street. (1 pt).

LL 5.1 **Basic Community Resources for MID-RISE** The site is within 1/2 mile of at fourteen basic community services: The nearby Kendall Square is the primary shopping district in the area. (3 pts).

LL 6 Access to Open Space The site is located within 1/8 mile of Rogers Park, which is a large 4 acre park on Third Street. The park offers significant area for passive enjoyment or flexible activity, as well as future designated active areas for play area (1 pt).

SUSTAINABLE SITES (SS)

13 points expected

SS Site Stewardship PreReq 1 Erosion control measures in compliance with this prerequisite will be implemented.

SS 1.2. Minimize Disturbed Area of Site for MID-RISE The project will achieve a density greater than 40 units per acre. (1 pt.) Buildable Site Area above MHW = 26,918 SF; 0.62 ac, results in 135 DU/ac

SS 2.2 Basic Landscaping Design The project will use drought-tolerant turf located away from densely shaded areas, on less than 25% slope, with compacted construction soil tilled to at 6 inches in depth. (1pt.)

SS 2.3 Limit Conventional Turf for MID-RISE The design team may limit the percentage of designed landscape that is turf to no more than 40% of the total soft-scape (0 pt.)

SS 3.2 Reduce Roof Heat Island Effects for MID-RISE It is anticipated that 100% of the roofing will be comprised of high albedo materials. (1 pt.)

SS 5 Nontoxic Pest Control The project will strive to meet four of the non-toxic pest controls described in this section, including maintaining exterior wood 12" above soil. (1/2 point each, maximum 2 pts.)

SS 6.3 Very High Density for MID-RISE The project meets the requirement for Very High Density for Mid-Rise. Buildable Site Area above MHW = 26,918 SF; 0.62 ac, results in 135 DU/ac. (4 pts.)

SS 7.1 Public Transit The project is three-tenths of a mile walk to the MBTA Kendall Station on the Red Line and bus stops with regional access. These transit services provide more than 60 rides per weekday (2 pts).

SS 7.2 Bicycle Storage The project will provide 89 bicycle storage spaces which will be in excess of the 15% of the building occupants. The proponent will provide one bike parking space for each residential unit, as required by the Bicycle Parking Guidelines- City of Cambridge.(1 pt.)

SS 7.3 Parking Capacity / Low-Emitting and Fuel-Efficient Vehicles Parking density has been sized not to exceed the minimum zoning requirements. The project will provide less than .7 parking space per dwelling unit. The team is exploring the possibility of including low-emitting or fuel-efficient vehicles. One option would provide alternative fueling stations for 3% of the total vehicle parking capacity (4 stations). Another option would offer a discounted parking rate for preferred parking for low-emitting/fuel efficient vehicles. (1 pt.)

WATER EFFICIENCY (WE)

4 points expected

WE 1 Water Reuse for MID-RISE The project will investigate Rainwater, Graywater and Recycled water systems for viability. (0 pts.)

WE 2.1 High-Efficiency Irrigation System for MID-RISE The design team will work to create a high efficiency irrigation system for the proposed landscaping (0 pts.)

or

WE 2.2 Reduce Overall Irrigation Demand by at Least 45% for MID-RISE The design team will study the opportunity of reducing overall irrigation demand by at least 45% for mid-rise (maximum 2 points, as specified in Table 12. 0 pts.)

WE 3.1 High-Efficiency Fixtures and Fittings It is the intent of this project to install high efficiency fixtures and fittings including lavatory faucets with average flows less than or equal to 2.00 gpm, showers with flows less than or equal to 2.00 gpm per stall, and water closets with flow rates less than or equal to 1.30 gpf. (1 point each, maximum 3 pts) (2-3 pts.)

WE 3.3 Water Efficient Appliances for MIDRISE The project will include water-efficient clothes washers and ENERGY STAR labeled dishwashers that use 6.0 or less gallons per cycle. (2 pts.)

ENERGY AND ATMOSPHERE (EA)

10 points expected

EA Prereq 1.1 Minimum Energy Performance for MID-RISE The project's intent is to minimize energy performance for Mid-Rise per the requirements of this section.

EA Prereq 1.2 Testing and Verification for MID-RISE The proponent will verify implementation of testing and verification of for Mid-Rise, likely EPA MHFR Testing and Verification Protocols.

EA 1.3 Optimize Energy Performance The project will strive to optimize energy performance for mid-rise construction and realize energy cost savings of 21% compared with ASHRAE 90.1 2007 (8 pts.)

EA 7.1 Water Heating The team will strive to design and implement an Efficient Hot Water Distribution System (0 pts.)

EA 7.2 Pipe Insulation The team will include R4 insulation on all domestic hot water piping (1 pt.)

EA Prereq 11 Residential Refrigerant Charge Test The project will provide documentation of proper refrigerant charge of the building air conditioning systems.

EA 11.1 Residential Refrigerant Management It is the intent of this project to use non-HCFC refrigerants. (1 pt.)

MATERIALS AND RESOURCES (MR)

8.5 points expected

MR Prereq 1 **Framing Order Waste Factor Limit** It is the intent of this project to limit the overall estimated waste factor to 10% or less.

MR 1.2 **Detailed Framing Documents** Detailed framing documents will be created for use on the job site. (1 pt.)

MR 1.3: **Detailed Cut List and Lumber Order** The construction team will create a detailed cut list and lumber order. (1 pt.)

MR 1.5: **Off-Site Fabrication** It is anticipated that panelized construction, requiring off-site fabrication will be utilized for this project. (4 pts.)

MR Prereq 2.1: **FSC Certified Tropical Wood** It is the intent of this project to install no tropical wood, to install FSC certified wood products and to provide suppliers with a notice of preference for FSC products and to request the country of manufacture for each product.

MR 2.2: **Environmentally Preferable Products** Use of environmentally preferred products including masonry siding, and cellulose building insulation are a priority. Use of Low emission products including paints, adhesives and sealants are also a priority (2.0 -3.5 pts.).

MR Prereq 3.1: **Construction Waste Management Planning** The construction team shall institute a Construction Waste Management Plan, including investigation of local options for waste diversion and documentation of diversion rate for construction waste.

MR 3.2 **Construction Waste Reduction** The construction team shall strive to reduce construction waste to a level below the industry norm. (3 pts.)

INDOOR ENVIRONMENTAL QUALITY (EQ)
9.5 points expected

IEQ Prereq 2 **Basic Combustion Venting Measures** The team will implement Basic Combustion Venting Measures for Mid-Rise Construction.

IEQ Prereq 4.1 **Basic Outdoor Air Ventilation for Mid-Rise** The project will meet basic outdoor ventilation for Mid-Rise for Midrise.

IEQ 4.3 **Third-Party Performance Testing for MID-RISE** The development team will explore the possibility of 3rd party performance testing for the flow rate of ventilation to each unit (0 pt.)

IEQ Prereq 5.1 **Basic Local Exhaust** It is the intent of this project to meet all the requirements for Basic Local Exhaust.

IEQ 5.2 **Enhanced Local Exhaust** It is the intent of this project to achieve enhanced local exhaust through the installation of a continuously operating exhaust fan at each bathroom (1 pt.)

IEQ 5.3 **Third Party Performance Testing** The development team intends to incorporate 3rd party performance testing of each exhaust air flow rate (1 pt.)

IEQ Prereq 6.1 **Room-by-Room Load Calculations** Room by room design load calculations will be performed. System will be installed per calculations.

IEQ 6.2 **Return Air Flow** Ducted HVAC systems are anticipated. It is the intent of this project to install return air openings of 1 sq. in. per cfm of supply (1 pt.)

IEQ 6.3 **Third Party Performance Test** The development team will explore 3rd party performance testing of supply air flow rate in each room. (2 pts.)

IEQ Prereq 7.1 **Good Filters** it is the intent of this project to install air filters with a minimum efficiency rating of equal or greater than MERV 8.

IEQ 8.1 **Indoor Contaminant Control During Construction** The team will seal all permanent ducts and vents to minimize contaminants during construction. (1 pt.)

IEQ 8.3 **Preoccupancy Flush** The team will explore the possibility of conducting a pre-occupancy flush when all phases of construction are completed, prior to occupancy. (0 pt.)

IEQ Prereq 9.1 **Radon-Resistant Construction in High-Risk Areas** Suffolk County is a low-risk zone.

IEQ 10.2 **Minimize Pollutants from Garage for MID-RISE** It is the intent of this project to tightly seal shared surfaces between garage and conditioned spaces to minimize pollutants into the mid-rise. (2 pts.)

IEQ 11.1 **Environmental Tobacco Smoke Reduction for MID-RISE** It is the intent of this project to prohibit smoking in common areas, exterior areas on the property that are within 25' from entries, air intakes and windows and to communicate these prohibitions through lease agreements, CC&Rs and signage. (0.5 pts.)

AWARENESS & EDUCATION

3 points expected

AE Prereq 1.1 **Basic Operations Training** Basic operations training will take place and will include provision of operations and training manuals to home occupants and a one hour walkthrough of the home with the occupants.

AE 1.2 **Enhanced Training** The construction team will provide 2 hours of training for occupants in addition to the training provided in AE prereq 1.1 (1 pt.)

AE 1.3 **Public Awareness** The team will promote general public awareness about LEED for Homes by carrying out the following activities: Conduct an open house for the public lasting at least 4 hours, publish a website with at least 2 pages of detailed information and display LEED for Homes signage on the exterior of the buildings (1 pt.)

AE 2 Education of Building Manager The construction team will provide the building manager with an operations and training manual. The team may have the construction team provide a one hour walkthrough for the building manager of the building prior to occupancy. (1 pt.)

AFFIDAVIT

LEED DESIGN

To the City of Cambridge Planning Department:

Re: LEED Silver

I certify that to the best of my knowledge, information and belief, the plans and computations in the checklist accompanying the attached application concerning the proposal at 249 Third Street are in accordance with LEED for Homes Midrise, qualifying for Silver Certifiability as currently designed.

Nancy Ludwig
NAME

81985
LEED registration no.

ICON architecture, mc
COMPANY

101 Summer Street, Boston
ADDRESS

617.451.3333
PHONE

January 12, 2015

Then personally appeared the above-named _____
and made oath that the above statement is true.

Nancy Ludwig

Before me,

Stephanie Ross

My Commission expires October 15, 2021



STEPHANIE M. ROSS
Notary Public
Commonwealth of Massachusetts
My Commission Expires
October 15, 2021

LEED for Homes Mid-rise Simplified Project Checklist

for Homes

Builder Name:	TBD
Project Team Leader (if different):	Kendra Halliwell, ICON architecture, inc
Home Address (Street/City/State):	249 Third Street, Cambridge,

Project Description:

Building type: *Mid-rise multi-family* # of stories: **5**
 # of units: **84** Avg. Home Size Adjustment: **-8.5**

Adjusted Certification Thresholds

Certified: **36.5** Gold: **66.5**
 Silver: **51.5** Platinum: **81.5**

Project Point Total	Final Credit Category Total Points				
Prelim: 3 + 10 maybe pts.	Final: 57	ID: 8	SS: 13	EA: 10	EQ: 9.5
Certification Level		LL: 6	WE: 4	MR: 8.5	AE: 3
Prelim: Not Certified	Final: Silver				

date last updated :
 last updated by :

Max Pts **Project Points Preliminary Final**

Innovation and Design Process (ID)		(No Minimum Points Required)		Max	Y/Pts	Maybe	No	Y/Pts	
1. Integrated Project Planning	1.1	Preliminary Rating		Prereq	Y/Pts			Y	
	1.2	Energy Expertise for MID-RISE		Prereq	Y/Pts			Y	
	1.3	Professional Credentialed with Respect to LEED for Homes		1	1	0		1	
	1.4	Design Charrette		1	1	0		1	
	1.5	Building Orientation for Solar Design		1	0	0		0	
	1.6	Trades Training for MID-RISE		1	1	0		1	
	<i>Sub-Total for ID Category:</i>				11	3	3		3
Location and Linkages (LL)		(No Minimum Points Required)		OR	Max	Y/Pts	Maybe	No	Y/Pts
1. LEED ND	1	LEED for Neighborhood Development	LL2-6		10	0	0		0
	2. Site Selection 2 Site Selection								
3. Preferred Locations	3.1	Edge Development			1	0	0		1
	3.2	Infill	LL 3.1		2	0	0		0
	3.3	Brownfield Redevelopment for MID-RISE			1	0	0		0
4. Infrastructure	4	Existing Infrastructure			1	0	0		1
5. Community Resources/ Transit	5.1	Basic Community Resources for MID-RISE			1	0	0		0
	5.2	Extensive Community Resources for MID-RISE	LL 5.1, 5.3		2	0	0		0
	5.3	Outstanding Community Resources for MID-RISE	LL 5.1, 5.2		3	0	0		3
6. Access to Open Space	6	Access to Open Space			1	0	0		1
<i>Sub-Total for LL Category:</i>				10	0	0		6	
Sustainable Sites (SS)		(Minimum of 5 SS Points Required)		OR	Max	Y/Pts	Maybe	No	Y/Pts
1. Site Stewardship	1.1	Erosion Controls During Construction		Prerequisite					Y
	1.2	Minimize Disturbed Area of Site for MID-RISE		1	0	0		1	
2. Landscaping	2.1	No Invasive Plants		Prerequisite				Y	
	2.2	Basic Landscape Design	SS 2.5	1	0	0		1	
	2.3	Limit Conventional Turf for MID-RISE	SS 2.5	2	0	0		0	
	2.4	Drought Tolerant Plants for MID-RISE	SS 2.5	1	0	0		0	
	2.5	Reduce Overall Irrigation Demand by at Least 20% for MID-RISE		3	0	0		0	
3. Local Heat Island Effects	3.1	Reduce Site Heat Island Effects for MID-RISE			1	0	0		0
	3.2	Reduce Roof Heat Island Effects for MID-RISE			1	0	0		1
4. Surface Water Management	4.1	Permeable Lot for MID-RISE			2	0	0		0
	4.2	Permanent Erosion Controls			1	0	0		0
	4.3	Stormwater Quality Control for MID-RISE			2	0	0		0
5. Nontoxic Pest Control	5	Pest Control Alternatives			2	0	0		2
6. Compact Development	6.1	Moderate Density for MID-RISE			2	0	0		0
	6.2	High Density for MID-RISE	SS 6.1, 6.3		3	0	0		0
	6.3	Very High Density for MID-RISE	SS 6.1, 6.2		4	0	0		4
7. Alternative Transportation	7.1	Public Transit for MID-RISE			2	0	0		2
	7.2	Bicycle Storage for MID-RISE			1	0	0		1
	7.3	Parking Capacity/Low-Emitting Vehicles for MID-RISE			1	0	0		1
<i>Sub-Total for SS Category:</i>				22	0	0		13	

LEED for Homes Mid-rise Pilot Simplified Project Checklist (continued)

				Max Pts	Project Points			
					Preliminary			Final
					Y/Pts	Maybe	No	Y/Pts
Water Efficiency (WE) (Minimum of 3 WE Points Required) OR				Max	Y/Pts	Maybe	No	Y/Pts
1. Water Reuse	➤	1	Water Reuse for MID-RISE	5	0	0	0	0
2. Irrigation System	➤	2.1	High Efficiency Irrigation System for MID-RISE	2	0	2	0	0
	➤	2.2	Reduce Overall Irrigation Demand by at Least 45% for MID-RISE	2	0	0.5	0	0
3. Indoor Water Use	➤	3.1	High-Efficiency Fixtures and Fittings	3	0	0	0	2
	➤	3.2	Very High Efficiency Fixtures and Fittings	6	0	0	0	0
	➤	3.3	Water Efficient Appliances for MID-RISE	2	0	0	0	2
<i>Sub-Total for WE Category:</i>				15	0	3	0	4
Energy and Atmosphere (EA) (Minimum of 0 EA Points Required) OR				Max	Y/Pts	Maybe	No	Y/Pts
1. Optimize Energy Performance	➤	1.1	Minimum Energy Performance for MID-RISE	Prereq				Y
	➤	1.2	Testing and Verification for MID-RISE	Prereq				Y
	➤	1.3	Optimize Energy Performance for MID-RISE	34	0	0	0	8
7. Water Heating	➤	7.1	Efficient Hot Water Distribution	2	0	2	0	0
	➤	7.2	Pipe Insulation	1	0	0	0	1
11. Residential Refrigerant Management	➤	11.1	Refrigerant Charge Test	Prereq				Y
	➤	11.2	Appropriate HVAC Refrigerants	1	0	0	0	1
<i>Sub-Total for EA Category:</i>				38	0	2	0	10
Materials and Resources (MR) (Minimum of 2 MR Points Required) OR				Max	Y/Pts	Maybe	No	Y/Pts
1. Material-Efficient Framing	➤	1.1	Framing Order Waste Factor Limit	Prereq				Y
	➤	1.2	Detailed Framing Documents	1	0	0	0	1
	➤	1.3	Detailed Cut List and Lumber Order	1	0	0	0	1
	➤	1.4	Framing Efficiencies	3	0	0	0	0
	➤	1.5	Off-site Fabrication	4	0	0	0	4
2. Environmentally Preferable Products	➤	2.1	FSC Certified Tropical Wood	Prereq				Y
	➤	2.2	Environmentally Preferable Products	8	0	0	0	2
3. Waste Management	➤	3.1	Construction Waste Management Planning	Prereq				Y
	➤	3.2	Construction Waste Reduction	3	0	0	0	2.5
<i>Sub-Total for MR Category:</i>				16	0	0	0	8.5
Indoor Environmental Quality (EQ) (Minimum of 6 EQ Points Required) OR				Max	Y/Pts	Maybe	No	Y/Pts
2. Combustion Venting	➤	2	Basic Combustion Venting Measures	Prereq				Y
3. Moisture Control	➤	3	Moisture Load Control	1	0	0	0	0
4. Outdoor Air Ventilation	➤	4.1	Basic Outdoor Air Ventilation for MID-RISE	Prereq				Y
	➤	4.2	Enhanced Outdoor Air Ventilation for MID-RISE	2	0	0	0	0
	➤	4.3	Third-Party Performance Testing for MID-RISE	1	0	0	0	0
5. Local Exhaust	➤	5.1	Basic Local Exhaust	Prerequisite				Y
	➤	5.2	Enhanced Local Exhaust	1	0	0	0	1
	➤	5.3	Third-Party Performance Testing	1	0	0	0	1
6. Distribution of Space Heating and Cooling	➤	6.1	Room-by-Room Load Calculations	Prereq				Y
	➤	6.2	Return Air Flow / Room by Room Controls	1	0	0	0	1
	➤	6.3	Third-Party Performance Test / Multiple Zones	2	0	0	0	2
7. Air Filtering	➤	7.1	Good Filters	Prereq				Y
	➤	7.2	Better Filters	1	0	0	0	0
	➤	7.3	Best Filters	2	0	0	0	0
8. Contaminant Control	➤	8.1	Indoor Contaminant Control during Construction	1	0	0	0	1
	➤	8.2	Indoor Contaminant Control for MID-RISE	2	0	0	0	0
	➤	8.3	Preoccupancy Flush	1	0	0	0	0
9. Radon Protection	➤	9.1	Radon-Resistant Construction in High-Risk Areas	Prereq				N/A
	➤	9.2	Radon-Resistant Construction in Moderate-Risk Areas	1	0	0	0	0
10. Garage Pollutant Protection	➤	10.1	No HVAC in Garage for MID-RISE	Prereq				Y
	➤	10.2	Minimize Pollutants from Garage for MID-RISE	2	0	0	0	0
	➤	10.3	Detached Garage or No Garage for MID-RISE	3	0	0	0	3
11. ETS Control	➤	11	Environmental Tobacco Smoke Reduction for MID-RISE	1	0	0	0	0.5
12. Compartmentalization of Units	➤	12.1	Compartmentalization of Units	Prereq				Y
	➤	12.2	Enhanced Compartmentalization of Units	1	0	0	0	0
<i>Sub-Total for EQ Category:</i>				21	0	2	0	9.5
Awareness and Education (AE) (Minimum of 0 AE Points Required) OR				Max	Y/Pts	Maybe	No	Y/Pts
1. Education of the Homeowner or Tenant	➤	1.1	Basic Operations Training	Prereq				Y
	➤	1.2	Enhanced Training	1	0	0	0	1
	➤	1.3	Public Awareness	1	0	0	0	1
2. Education of Building Manager	➤	2	Education of Building Manager	1	0	0	0	1
<i>Sub-Total for AE Category:</i>				3	0	0	0	3

TAB G



Memorandum | Flood Zone Determination

249 Third Street, Cambridge, MA

January 9, 2015

Ms. Jennifer Letourneau,
Department Director
City of Cambridge Conservation Commission
344 Broadway
Cambridge, MA 02139

Re: Flood Zone Determination
249 Third Street, Cambridge, MA

Dear Ms. Letourneau,

On behalf of our client, Equity Residential, we are pleased to submit to you this letter and the enclosed FEMA flood plain documentation exhibit plan as required by applications for a Project Review Multifamily Housing Special Permit for the above mentioned address.

We have reviewed available Flood Insurance Rate Map information for Middlesex County and have determined that the project is not located within a flood plain and therefore does not require a Special Permit for development in a flood plain pursuant to Sections 20.70 and 5.25.42 of the City of Cambridge Zoning Ordinance.

Please do not hesitate to contact me directly should you have any questions concerns or require additional information regarding this submission. My direct line is (781) 770-0970 or you may email me at mfabbiano@highpointeng.com.

Best regards,
HIGHPOINT ENGINEERING, Inc.

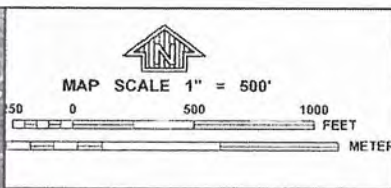
A handwritten signature in cursive script that reads "M. Fabbiano".

Michael Fabbiano
Vice President, Managing Principal

Enclosures

Cc: David Stockless, ICON Architecture
James Heroux, Copley Wolff Design Group
Andrew Copelotti, Equity Residential
Paul Barrett, Equity Residential

Highpoint Engineering Inc.
Canton Corporate Place
45 Dan Road, Suite 140
Canton, MA 02021



PANEL 0577E

FIRM
FLOOD INSURANCE RATE MAP
MIDDLESEX COUNTY,
MASSACHUSETTS
(ALL JURISDICTIONS)

PANEL 577 OF 656
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

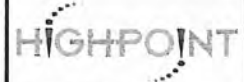
CONTRACT NO. 14509
ISSUED 01/09/2015

MAP NUMBER
25017C0577E

EFFECTIVE DATE
JUNE 4, 2010

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using FIRM Connect. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about the National Flood Insurance Program flood maps, check the FEMA Flood Map Site at www.nrc.fema.gov



HIGHPOINT ENGINEERING INC.
CANTON CORPORATE PLACE
45 DAN ROAD, SUITE 140
CANTON, MA 02021
t 781.770.0970
e mfabbian@highpointeng.com
www.highpointeng.com

MULTI-FAMILY BUILDING

249 THIRD STREET
CAMBRIDGE, MA 02142

OWNER/APPLICANT: EQUITY RESIDENTIAL

ISSUE DATE:
01/09/2015

PROJECT NUMBER:
14027

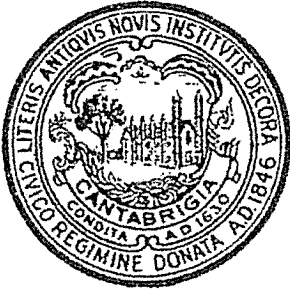
SHEET TITLE:

FEMA FLOOD
ZONE EXHIBIT

SHEET NUMBER:

FZ-1

TAB H



CITY OF CAMBRIDGE, MASSACHUSETTS

PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

CERTIFICATION OF RECEIPT OF PLANS BY CITY OF CAMBRIDGE WATER DEPARTMENT

City Department/Office: Cambridge Water Department - Engineering

Project Address: 249 Third Street, Cambridge, MA

Applicant Name: Equity Residential

For the purpose of fulfilling the requirements of Section 19.20 of the Cambridge Zoning Ordinance, this is to certify that this Department is in receipt of the application documents submitted to the Planning Board for approval of a Project Review Special Permit for the above referenced development project: (a) an application narrative and (b) small format application plans at 11" x 17" or the equivalent. The Department understands that the receipt of these documents does not obligate it to take any action related thereto.

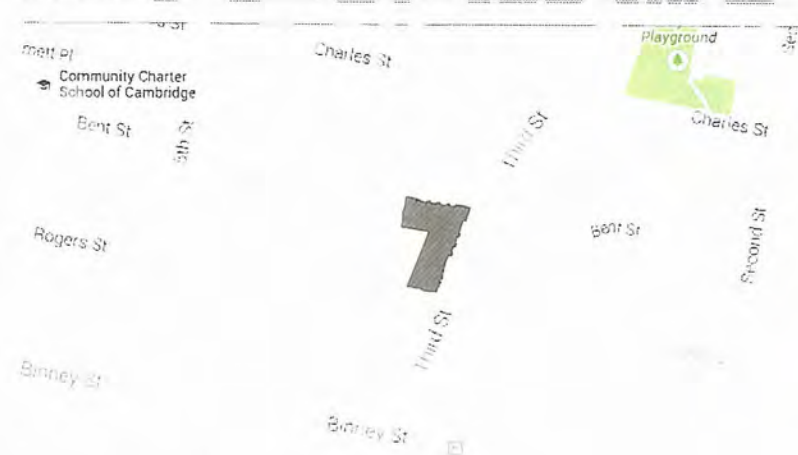
6/19/15

6/19/15

Signature of City Department/Office Representative

Date

LOCUS MAP:



DRAWING LIST

- G-000 COVER
- G-001 PROPOSED PERSPECTIVE VIEWS
- G-002 PROPOSED PERSPECTIVE VIEWS
- G-003 PROPOSED PERSPECTIVE VIEWS
- G-004 PROPOSED PERSPECTIVE VIEWS
- G-005 SITE CONTEXT MAP
- G-006 EXISTING VIEWS
- PLAN OF THE LAND
- SP-001 SCHEMATIC SITE PLAN

L-1.00 LANDSCAPE PLANTING PLAN

- A-101 FIRST FLOOR PLAN
- A-101.1 BIKE STORAGE LAYOUT
- A-102 SECOND FLOOR PLAN
- A-103 THIRD FLOOR PLAN
- A-104 FOURTH FLOOR PLAN
- A-105 FIFTH FLOOR PLAN
- A-106 ROOF PLAN
- A-201 BUILDING ELEVATIONS
- A-202 BUILDING ELEVATIONS
- A-203 STREET ELEVATION



Residences at 249 Third Street

East Cambridge, MA

Equity Residential June 17, 2015

PROJECT TEAM:

OWNER/DEVELOPER:

Equity Residential
50 Staniford St.
Boston, MA 02114

ARCHITECT:

ICON Architecture
101 Summer St.
Boston, MA 02110

LANDSCAPE ARCHITECT:

Copley Wolff Design Group
160 Boylston St.
3rd Floor
Boston, MA 02116

CIVIL ENGINEER:

Highpoint Engineering, Inc.
45 Dan Rd.
Suite 140
Canton, MA 02021

STRUCTURAL ENGINEER:

JML Engineering
20 Winthrop St.
Winchester, MA 01890

MECHANICAL/ PLUMBING/ ELECTRICAL AND FIRE PROTECTION:

R.W. Sullivan Engineering
529 Main St.
Suite 203
Boston, MA 02129





THIRD STREET & ROGERS STREET CORNER



THIRD STREET & BENT STREET CORNER

Residences at
249 Third Street

East Cambridge, MA

Equity Residential

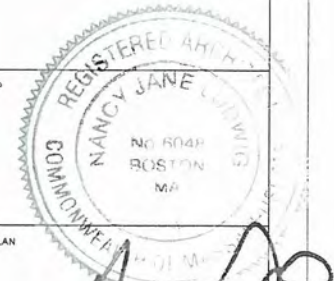
ARCHITECT

E-ICON
ARCHITECTURE

101 SUMMER ST BOSTON MA 02110
617-451-3333 www.iconarch.com

CONSULTANT

STAMP



KEY PLAN

MARK	DATE	DESCRIPTION
	06/17/2015	Special Permit

PROJECT NUMBER: 21412
DRAWN BY: MAM
CHECKED BY: DS

SHEET TITLE

Perspective Views

G-001



BENT STREET AT THE FOUNDRY WORKS BUILDING



ROGERS STREET AT THE FOUNDRY WORKS BUILDING

Residences at
249 Third Street

East Cambridge, MA

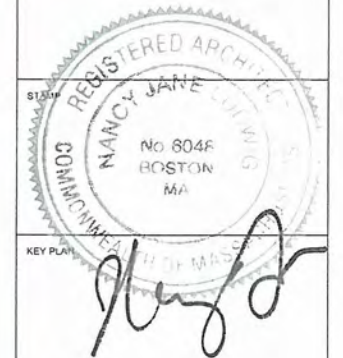
Equity Residential

ARCHITECT

E-ICON
ARCHITECTURE

101 SUMMER ST BOSTON MA 02110
617-451-3333 www.iconarch.com

CONSULTANT



MARK	DATE	DESCRIPTION
	06/17/2015	Special Permit

PROJECT NUMBER: 21412
DRAWN BY: MAM
CHECKED BY: DS

SHEET TITLE

Perspective Views

G-002



ENLARGED ENTRY VIEW ON THIRD STREET



249 THIRD STREET FROM ROGERS STREET PARK

Residences at
249 Third Street

East Cambridge, MA

Equity Residential

ARCHITECT

E-ICON
ARCHITECTURE

101 SUMMER ST BOSTON MA 02110
617-451-3333 www.iconarch.com

CONSULTANT



KEY PLAN
[Signature]

MARK	DATE	DESCRIPTION
	06/17/2015	Special Permit

PROJECT NUMBER: 21412
DRAWN BY: MAM
CHECKED BY: DS

SHEET TITLE

Perspective Views

G-003

Residences at
249 Third Street

East Cambridge, MA

Equity Residential

ARCHITECT

E-ICON
ARCHITECTURE

101 SUMMER ST BOSTON MA 02110
617-451-3333 www.iconarch.com

CONSULTANT



KEY PLAN
[Handwritten signature]



LOBBY VIEW FROM THIRD STREET

MARK	DATE	DESCRIPTION
	06/17/2015	Special Permit

PROJECT NUMBER: 21412
DRAWN BY: MAM
CHECKED BY: DS

SHEET TITLE

Perspective Views

G-004

Residences at
249 Third Street

East Cambridge, MA

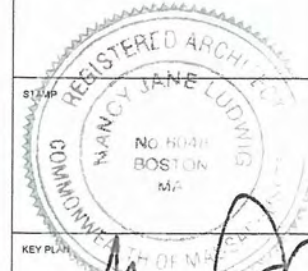
Equity Residential

ARCHITECT

E-ICON
ARCHITECTURE

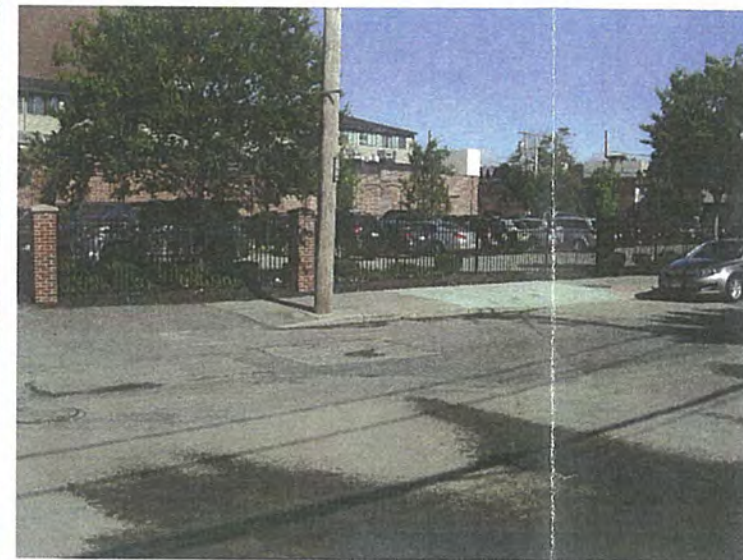
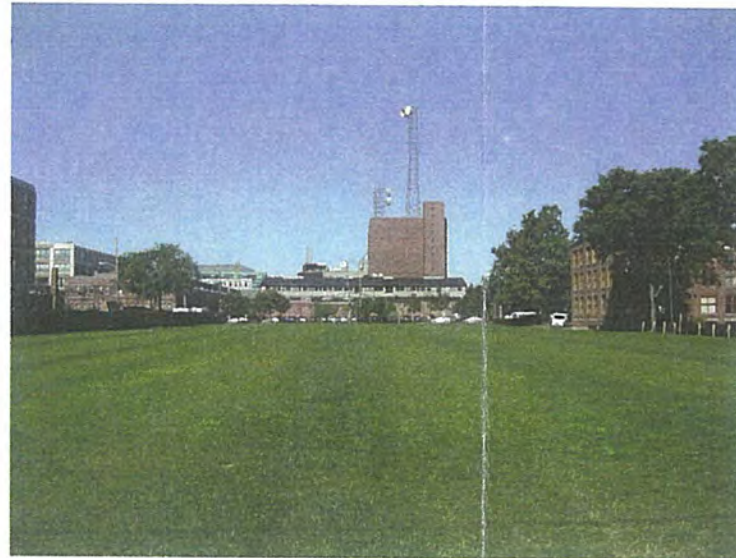
101 SUMMER ST BOSTON MA 02110
617-451-3333 www.iconarch.com

CONSULTANT



KEY PLAN

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MARK	DATE	DESCRIPTION
	06/17/2015	Special Permit

PROJECT NUMBER: 21412
DRAWN BY: MAM
CHECKED BY: DS

SHEET TITLE

Existing Views

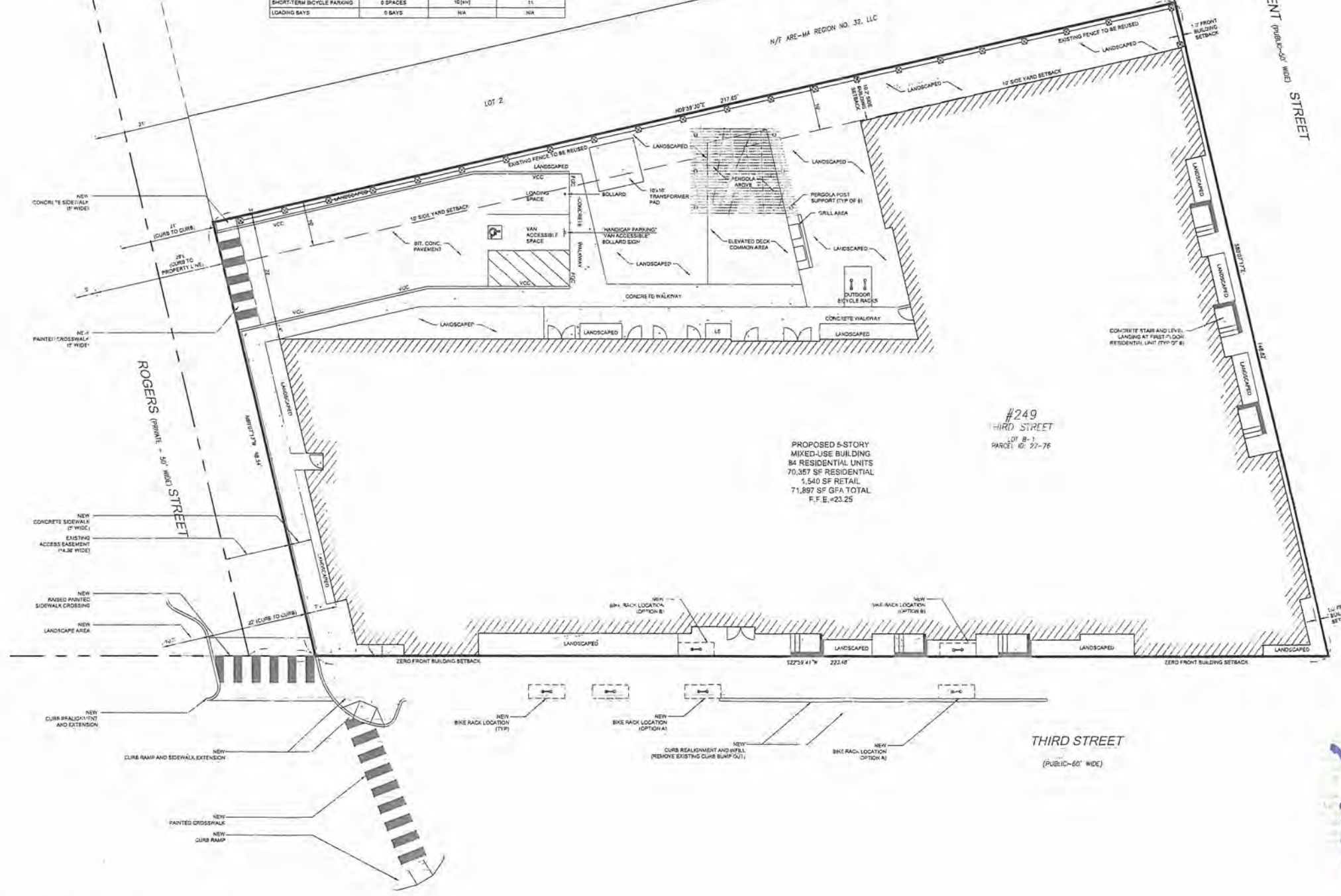
G-005

DIMENSIONAL SUMMARY			
DISTRICTS: IA-1, PUD-4C, ECHO			
USE: RETAIL AND MULTI-FAMILY RESIDENTIAL (SPECIAL PERMIT REQUIRED)			
BUILDING DIMENSIONAL REQUIREMENTS			
CRITERIA	EXISTING	ALLOWED OR REQUIRED	PROPOSED
MIN LOT AREA	2118 SF	5,200 SF	25,918 SF (E2)
MIN LOT WIDTH	217.63 FT	50 FT	217.63 FT (E2)
MIN GROSS FLOOR AREA	N/A	81,484 (E)	71,837 SF
RESIDENTIAL BASE	N/A	87,255 SF (MAX)	54,121 SF
NON-RESIDENTIAL BASE	N/A	33,837 SF (MAX)	1,540 SF (RETAIL)
INCL. HOUSING BONUS	N/A	20,189 SF (MAX)	18,258 SF
MAX. FLOOR AREA RATIO	N/A	3.75 (MAX)(E)	2.67
RESIDENTIAL BASE	N/A	2.5 (MAX)(E)	2.0
NON-RESIDENTIAL BASE	N/A	1.25 (MAX)	0.06
INCL. HOUSING BONUS	N/A	5.25 (MAX)	0.8%
MAX. DWELLING UNITS	N/A	116 (MAX)	84
BASE UNITS	N/A	85	84
INCL. BONUS UNITS	N/A	25	2/30
BASE LOT AREA (UNIT)	N/A	300 (MAX)(E)	329.45 SF (UNIT)
TOTAL LOT AREA (UNIT)	N/A	300 (MAX)(E)	329.45 SF (UNIT)
MAX. BUILDING HEIGHT	N/A	45 & 60 FT (E)	45 FT & 65 FT
MIN. FRONT YARD	N/A	0 FT (E)	0 FT (E)
MIN. SIDE YARD	N/A	10 FT (E)	10.2 FT (E)
MIN. REAR YARD	N/A	10 FT (E)	10.2 FT (E)
MIN. OPEN SPACE	20.7%	NONE (E)	20.3%
PRIVATE OPEN SPACE	0 SF	-	730 SF (E)
PERMEABLE OPEN SPACE	5,571 SF	-	4,708 SF
OTHER OPEN SPACE	0 SF	-	2 SF
OFF-STREET PARKING	78 SPACES	84 (E)	2 (E)
LONG-TERM BICYCLE PARKING	0 SPACES	80 (E)	80
SHORT-TERM BICYCLE PARKING	0 SPACES	16 (E)	11
LOADING BAYS	0 BAYS	N/A	N/A

DIMENSIONAL FOOTNOTES

- (E) Per Section 11.201.2 (e) of City of Cambridge Zoning Ordinance
- (E) Per Section 20.43 of City of Cambridge Zoning Ordinance
- (E) Intake/return requirements to be determined during Building Permit stage
- (E) Per Section 13.54(e) of City of Cambridge Zoning Ordinance
- (E) Per Section 13.55 (f) of City of Cambridge Zoning Ordinance
- (E) 6-foot setback from property right-of-way line of Rogers Street proposed. No setback from property right-of-way line of Third Street proposed. 1-foot setback from easterly right-of-way line of Bent Street proposed.
- (E) Minimum side yard setback per Section 5.34, Table 5.4 of City of Cambridge Zoning Ordinance. Reduction of side yard setback to 10 feet is being sought by Special Permit.
- (E) Lot has frontage on street of three of four sides with fourth side designated as side lot line per Section 5.24.1 of City of Cambridge Zoning Ordinance and there may be no rear yard or side yard setback.
- (E) No open space requirement for IA-1 District of ECHO Overlay District.
- (E) Defines area of private park at roof level.
- (E) As required: retail spaces located under Small Business provision in Section 6.32.1 of City of Cambridge Zoning Ordinance.
- (E) 2 spaces proposed on site, remainder of parking to be provided in off-site parking facility.
- (E) Per Section 5.107.2 of City of Cambridge Zoning Ordinance:
 - Long-term bicycle parking (residential): + 1 per unit for first 20 units + 1.00 per unit thereafter
 - + 20 = (1,050 x 64) + 87 = 67,820
 - Long-term bicycle parking (retail): + 0.1 per 1,000 sq ft
 - + 0.1 = (1,540 / 1,000) + 0.15 = 1,694
 - Total long-term bicycle parking required: + 68 = 68,514
- (E) Per Section 5.107.3 of City of Cambridge Zoning Ordinance:
 - Short-term bicycle parking (residential): + 0.1 per parking unit
 - + 0.1 = 84
 - Short-term bicycle parking (retail): + 0.8 per 1,000 sq ft
 - + 0.8 = (1,540 / 1,000) + 0.02 = 1,562
 - Total short-term bicycle parking required: + 9 = 93

#101
ROGERS STREET
N/Y ARE-1A REGION NO. 33, LLC
BOOK 4900L, PAGE 320
PARCEL ID: 27-82



PROPOSED 5-STORY
MIXED-USE BUILDING
84 RESIDENTIAL UNITS
70,357 SF RESIDENTIAL
1,540 SF RETAIL
71,897 SF GFA TOTAL
F.F.E. #23.25

#249
THIRD STREET
LOT B-1
PARCEL #27-76



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EQUITY RESIDENTIAL
30 STAVROS STREET FOUR
BOSTON, MA 02114
www.equityresidential.com

MULTI-FAMILY BUILDING
EQR THIRD STREET
249 THIRD STREET
CAMBRIDGE, MASSACHUSETTS
OWNER/APPLICANT: Equity Residential

ISSUE TYPE: SPECIAL PERMIT
ISSUE DATE: JUNE 17, 2015
PROJECT NUMBER: 14027
DRAWN BY: JJA
CHECKED BY: MF
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SCHEMATIC SITE PLAN
SHEET NO.: SP002

249 Third Street

East Cambridge, MA

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C W Copley Wolf Design Group
D G Landscape Architects & Planners

STAMP

KEY PLAN

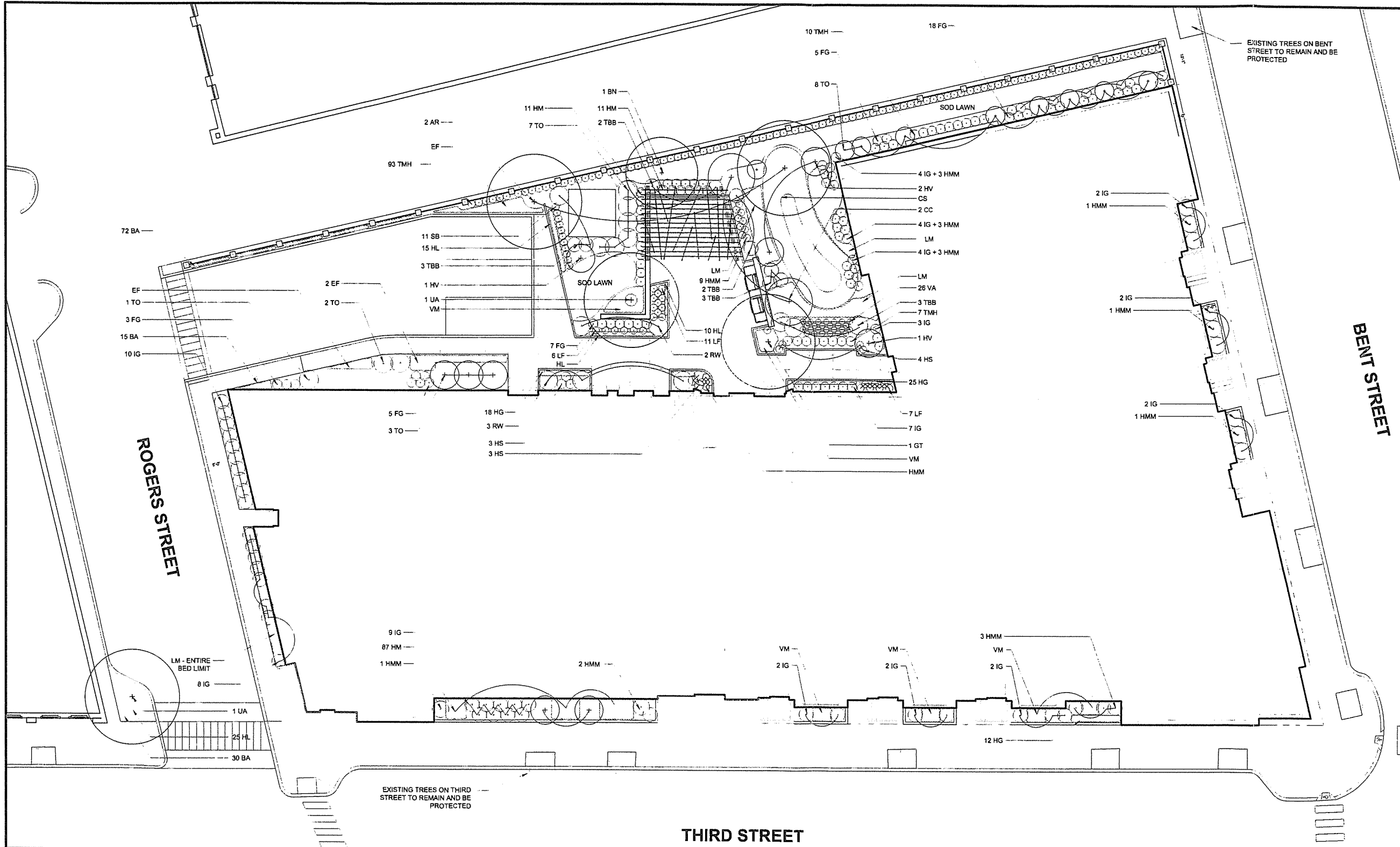
MARK	DATE	DESCRIPTION
	06/17/2015	

PROJECT NUMBER: 21412
DRAWN BY: JH
CHECKED BY: DS
SCALE: 1" = 10'-0"

SHEET TITLE

LANDSCAPE PLANTING PLAN

L1.00



PLANT LIST

TREES				
Qty.	Sym.	Scientific Name	Common Name	Size
	AR	Acer rubrum 'Red Sunset'	Red Sunset Red Maple	3.5"-4" cal.
	UA	Ulmus Americana 'Princeton'	Princeton American Elm	3.5"-4" cal.
	BN	Betula Nigra	River Birch	10-12' HGT.
	CC	Cercis Canadensis	Eastern Redbud	10-12' HGT.
	GT	Gleditsia Triacanthos	Honey Locust	3.5"-4" cal.
	HV	Hamamelis Virginiana	American Witch-hazel	8-10' HGT
	TO	Thuja occidentalis	American Arborvitae	10-12' HGT
SHRUBS				
Qty.	Sym.	Scientific Name	Common Name	Size
	FG	Fothergilla gardenii	Fothergilla	3' B&B
	IG	Ilex Gloabra 'Densa'	Dense Inkberry	3' B&B
	HS	Hibiscus syriacus 'White Chiffon'	Rose-of-Sharon	6' Hgt. B&B - "White"
	HMM	Hydrangea Macrophylla 'Mariesii'	Lacecap Hydrangea	3', B&B
	SB	Spirea japonica 'Goldflame'	Goldflame Spirea	24-30" Hgt & SPD
	LF	Leucothoe fontansiana 'Nana'	Dwarf Fetterbush	24-30" SPD
	RW	Rhododendron x laetvirens	Wilson Rhododendron	30"-36 SPD

SHRUBS, continued

Qty.	Sym.	Scientific Name	Common Name	Size
	TBB	Toxus baccata "Repens"	Spreading Taxus	36" SPD
	TMH	Taxus media "Hicksii"	Hedge Taxus	30" HGT
	VA	Vaccinium angustifolium	Low-bush blueberry	2 Gal. 8" O.C.

GROUNDCOVERS & VINES

Qty.	Sym.	Scientific Name	Common Name	Size
	BA	Baptisita australis	False Indigo	1 Gal. @ 10" O.C.
	EF	Euonymus Fortunei 'Coloratus'	Wintercreeper	1 Gal. @ 12" O.C.
	HG	Hosta 'Guacamole'	Guacamole Hosta	2 Gal. 12" O.C.
	VA	Vaccinium Angustifolium "Burgundy"	Lawbush Blueberry	2 Gal. 12" O.C.
	LM	Liriope Muscari 'Variegata'	Variegated Liriope	1 Gal. 12" O.C.
	HM	Hakonechlaa Macra	Hakone Grass	2 Gal. 12" O.C.
	HL	Hemerocallis Lilioasphodelus	Yellow Daylily	2 Gal. 18" O.C.
	VM	Vinca minor	Periwinkle	1 Gal. 10" O.C.
	CS	Carex stricta	Tussock Sedge - wet	1 Gal. 18" O.C.

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SHEET TITLE

1st Floor Plan

A-101



6/24/2015 12:24:50 PM

1 Level 1
1" = 10'-0"

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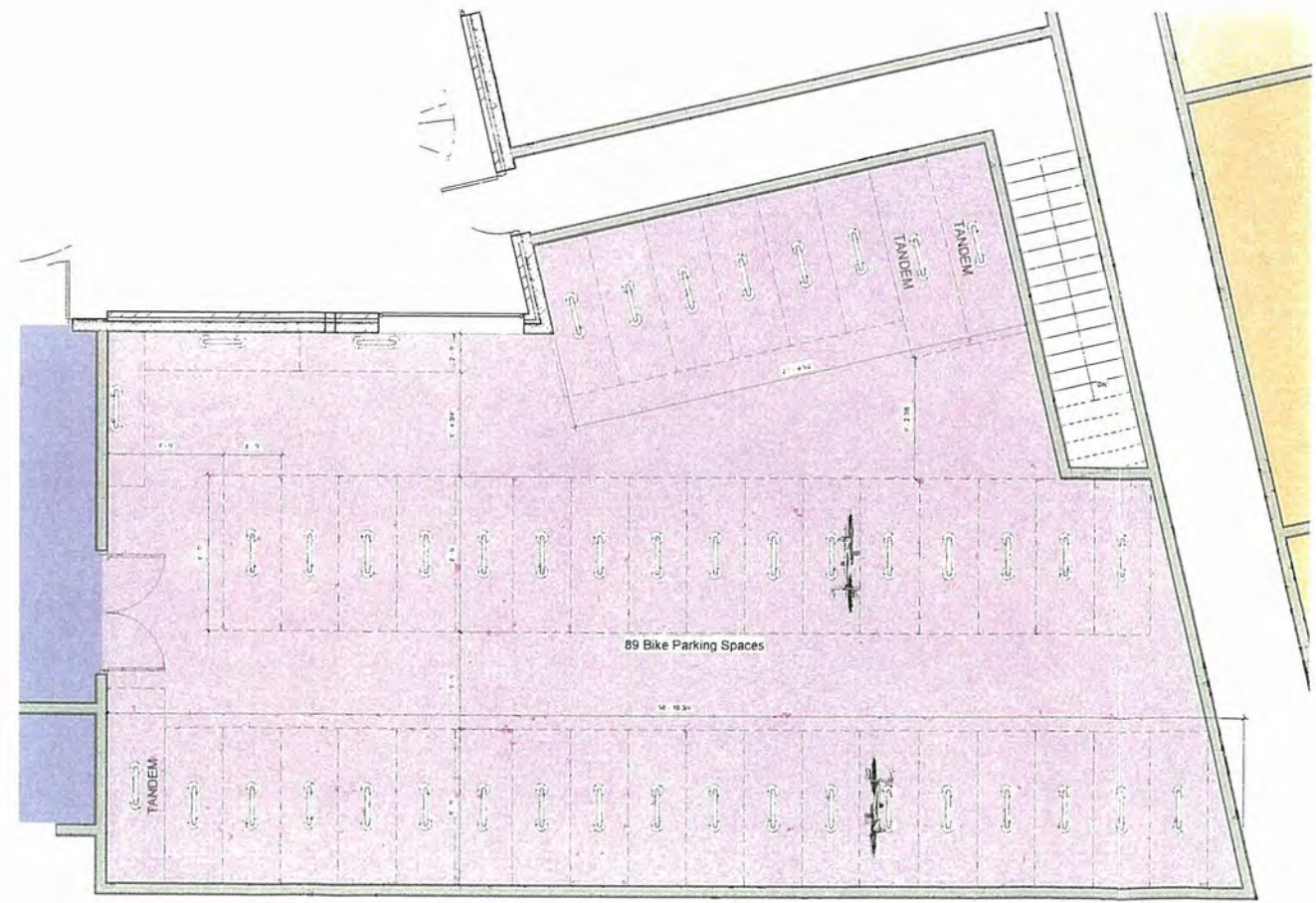
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KEY PLAN

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SHEET TITLE
Bike Storage Layout

A-101.1



1 Bike Storage
1/4" = 1'-0"

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KEY PLAN



FIRE SEPARATION →

1 Level 2
1" = 10'-0"

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SHEET TITLE

2nd Floor Plan

A-102

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STATUS

KEY PLAN

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SHEET TITLE

3rd Floor Plan

A-103



1 Level 3
1" = 10'-0"

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SHEET TITLE

4th Floor Plan

A-104



1 Level 4
1" = 10'-0"

6/24/2015 12:24:59 PM

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KEY PLAN

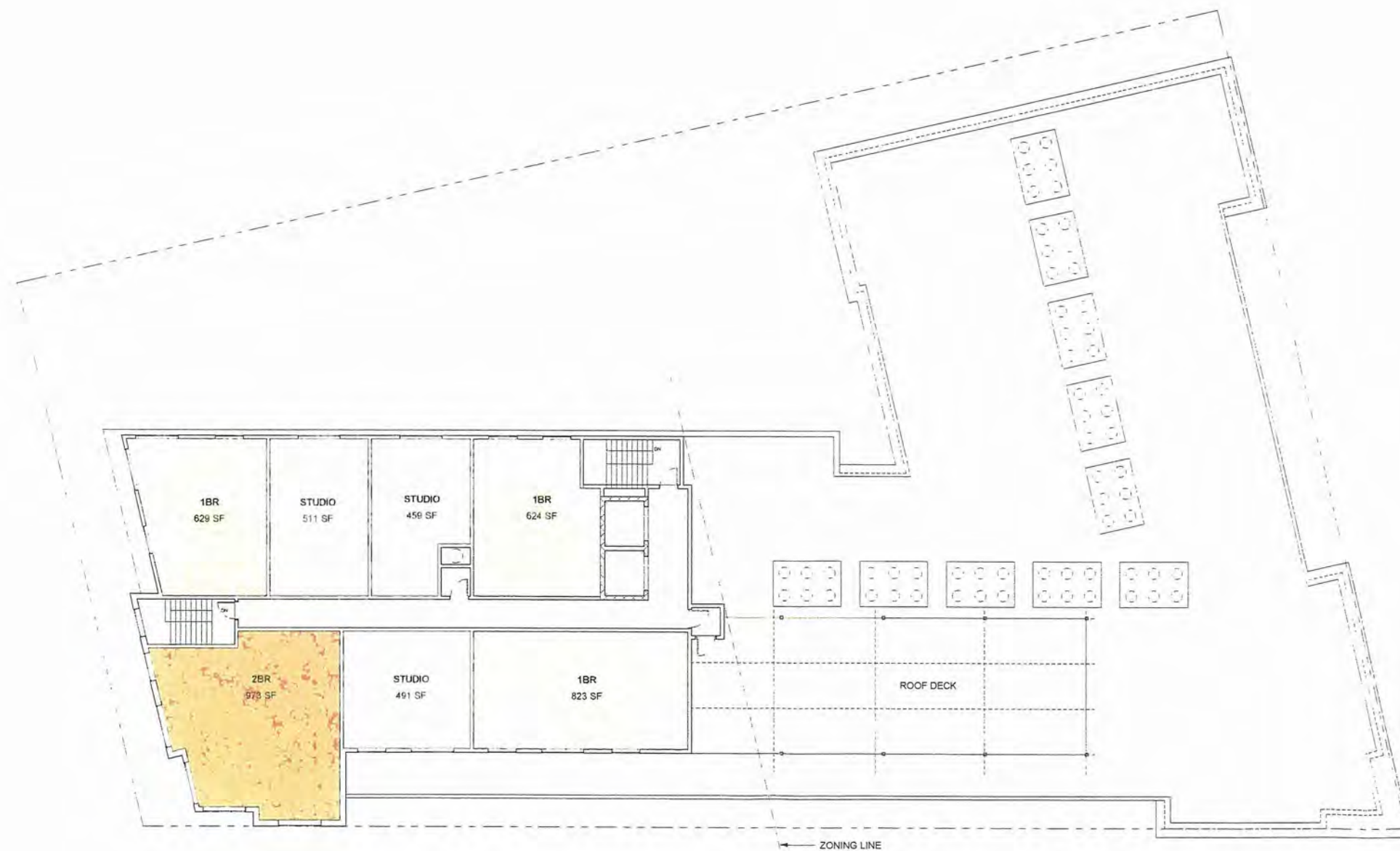
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SHEET TITLE

5th Floor Plan

A-105



1 Level 5
1" = 10'-0"

6/24/2015 12:24:59 PM

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East Cambridge, MA

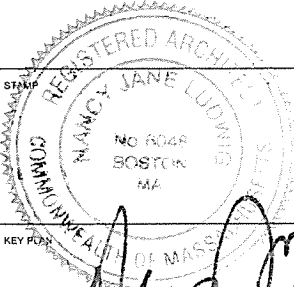
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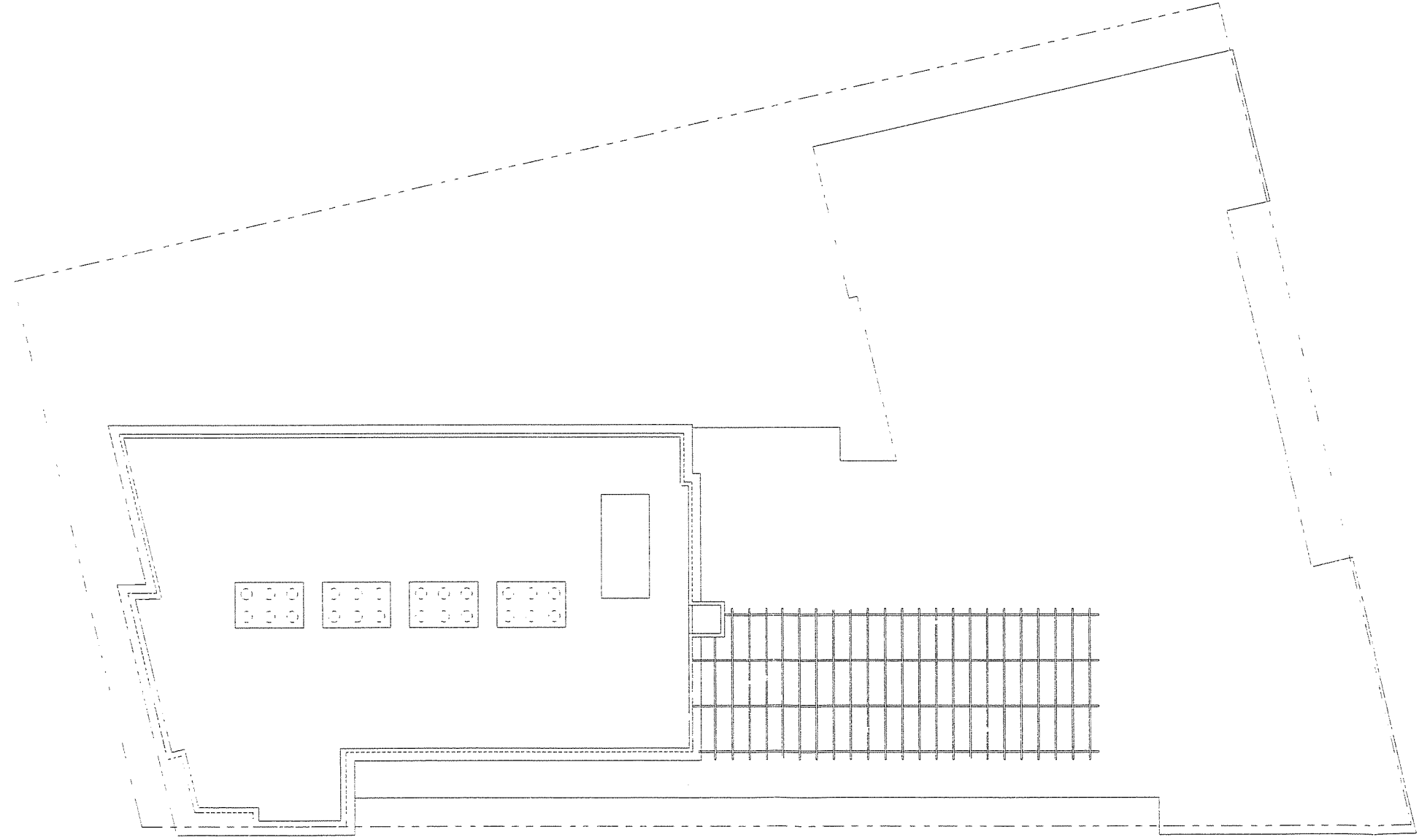
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SHEET TITLE

Roof Plan

A-106



1 Roof Plan
1" = 10'-0"

6/24/2015 12:25:00 PM



2 North Elevation
1/8" = 1'-0"



1 East Elevation
1/8" = 1'-0"

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SHEET TITLE
Building Elevations

A-201



3 South Elevation - East
1/8" = 1'-0"



2 South Elevation
1/8" = 1'-0"

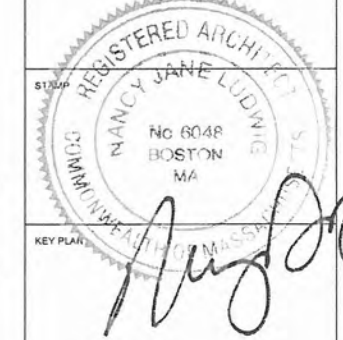


1 West Elevation Full
1/8" = 1'-0"

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SHEET TITLE
Building Elevations

A-202

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SHEET TITLE
Street Elevations

A-203



1 Third Street Elevation
1/16" = 1'-0"



2 Rogers Street Elevation
1/16" = 1'-0"



3 Bent Street Elevation
1/16" = 1'-0"