


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

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**MEMORANDUM**

**To:** Cambridge Planning Board  
**From:** Joseph E. Barr, Director   
**Date:** September 2, 2015  
**Re:** MIT Kendall Square Redevelopment (PB#302 and #303)

The MIT Kendall Square Redevelopment Planned Unit Development (PUD) and Project Review Special Permit Application consists of redevelopment of six parcels in Kendall Square into six buildings totaling 1,759,600 gross square feet (GSF), and 1,673 parking spaces (179 spaces North of Main Street and 1,494 spaces South of Main Street). Overall, the Project will create 1,074 net new parking spaces in Kendall Square. The Project will provide 827 long-term and 197 short-term bicycle parking spaces to meet zoning.

MIT is seeking permits for two separate PUD areas, referred to as "NoMa" (North of Main) and "SoMa" (South of Main). Nonetheless, a single Traffic Impact Study (TIS) for the full Project was completed by Vanasse Hangen Brustlin, Inc. on behalf of MIT. The TIS evaluated the existing vehicular, bicycle, transit and pedestrian conditions, the proposed MIT Kendall Square Redevelopment project transportation impacts, and the cumulative traffic impacts for the study area by taking into account other approved or under construction projects.

The TIS was completed and certified by the Cambridge Traffic, Parking and Transportation Department (TP&T) on July 21, 2015. The TIS indicated that there were 65 Planning Board Special Permit transportation exceedances (out of 500 data points evaluated), and the Project will generate the following trips:

- 5,858 daily vehicle trips, including 643 AM and 708 PM peak hour vehicle trips;
- 7,508 daily transit trips (761AM/893 PM peak hour transit trips);
- 3,524 daily pedestrian trips (201 AM/359 PM peak hour pedestrian trips); and,
- 1,922 daily bicycle trips (190 AM/227 PM peak hour bicycle trips).

The TIS summary sheets are attached and the TIS is available on the City's web site located at <http://www.cambridgema.gov/CDD/zoninganddevelopment/specialpermits/specialpermits.aspx>. The TIS reported the following key transportation impacts:

- Weekday Daily, AM and PM peak hour vehicle trips exceeded the Planning Board Special Permit criteria thresholds.
- The Project will degrade the Vehicle level of service (VLOS) at 8 intersections.

- The Project exceeded the Planning Board Special Permit criteria thresholds for increased traffic volume on residential streets on segments of Broadway, Memorial Drive, Third Street, O'Brien Highway, and Amherst Street based on 1/3 or more residential uses on first floor frontage.
- The Project exceeded the vehicle lane queue criteria at the Land Boulevard/Binney Street and Third Street/ Broadway intersections.
- The Pedestrian Level of Service (PLOS) criteria threshold was exceeded at Binney Street/First Street, Binney Street/Third Street, and Binney Street/Galileo Galilei Way/Fulkerson Street intersections (note that these exceedances are due to signal timing changes for the Binney Street reconstruction project and not directly because of the MIT Project).
- The TIS reported a lack of bicycle facilities on Wadsworth Street, Amherst Street, Hayward Street and Carleton Street (note that protected bicycle lane is proposed by the City for Ames Street between Main Street and Memorial Drive).
- The Project will add new daily and peak hour transit trips to the MBTA Red Line and will cause the MBTA bus routes #CT2 and #85 to be over capacity during peak hours.

The TP&T Department has been working with MIT and has reviewed the PUD and Project Review Special Permit Application. Overall, TP&T believes that the MIT Kendall Square Redevelopment Project is in many ways consistent with City goals for mixed-use development, including residential, retail, office uses, and open space. The TP&T Department offers the following initial comments to the Planning Board for consideration in your Preliminary Determination, which typically asks for additional information, further refinement or changes to be incorporated into a Final Development Plan.

#### **NoMa Project**

The NoMa (North of Main) Project proposes to construct a 290-300 unit residential building with 15,000 GSF office space, and 16,000 GSF ground floor retail space. The building will replace a 114 space surface parking lot with a 179 space above-grade parking garage, which will provide 157 residential spaces (0.52 space/unit), 14 office parking spaces (0.9 space/1,000 s.f.), and 8 retail parking spaces (0.5 space/1,000 s.f.). The existing One Broadway building, which uses a 316 space parking garage and the 114 parking space surface lot today will be able to meet its parking needs by shifting parkers from the surface parking lot into the One Broadway garage, which has a peak occupancy of 64%.

Access to the parking garage will be from Main Street and include two loading docks that can accommodate single unit 30 foot trucks (SU-30). The proposed NoMa parking plan is summarized below.

<b>NoMA Parking Facilities</b>	<b>Spaces</b>	<b>Notes</b>
Building 1 Garage	179	157 residential, 14 office, 8 retail spaces
One Broadway Garage	316	No Change from existing
<b>Total</b>	<b>495</b>	

The TP&T Department believes that NoMa is a positive project because it will create additional residential housing units, including 50 affordable units, ground floor retail space, and an improved pedestrian/bicycle connection between Main Street and Broad Canal Way. The Planning Board may want to consider asking the Applicant for more information on the following questions:

- How will parking at the NoMa Garage be managed to not exceed the maximum 0.9 space/1,000 s.f. Office parking ratio and maximum 0.5 space/1,000 s.f. Retail parking ratio?

- Are the two proposed SU-30 loading docks sufficient in size and number to accommodate the building's service needs and how will resident move-in/move-out be accommodated?
- Why is it necessary for the new parking facility to be above-grade instead of below-grade?
- The graphic materials showing Main Street should reflect a final layout plan approved by the City.
- The Transportation Impact Study (TIS) discussed examples of Transportation Demand Management (TDM) programs, but the PUD and Special Permit Applications for NoMa provided no definitive TDM commitments. Residential TDM commitments should be included in the Final Development Plan for NoMa.

### **SoMa Project**

The SoMa (South of Main) Project proposes to turn five surface parking lots into 5 buildings consisting of office, research and development, retail, museum, graduate housing (470 units to replace the existing 201 unit Eastgate graduate housing building), and child care space. The SoMa Project will total 1.4 million gross square feet. The full Project is expected to be constructed in 7-10 years.

The SoMa area currently contains 990 parking spaces (874 academic and 116 office/retail parking spaces). The SoMa Project proposes 1,999 total parking spaces (1,009 net new parking spaces) including; a 1,156 space below-grade parking garage (SoMa garage), 278 space below-grade parking garage (Building 2 garage), a new 60 space surface parking lot, and no changes to the existing 60 space Amherst Street parking lot, 419 space East Campus parking garage, and 26 space Hermann parking garage. A summary of the proposed SoMa parking facilities and allocation of spaces is shown below.

<b>SoMa Parking Facilities</b>	<b>Academic</b>	<b>Non-Academic</b>	<b>Total</b>	<b>Notes</b>
SoMa Garage	509	647	1156	* see below
Building 2 Garage	0	278	278	269 office, 9 retail spaces
Site R Parking Lot	60	0	60	Replacement of existing spaces
<i>Subtotal</i>	<i>569</i>	<i>925</i>	<i>1,494</i>	
East Campus Garage	419	0	419	No Change from existing
Amherst Street Lot	60	0	60	No Change from existing
Hermann Garage	26	0	26	No Change from existing
<b>Total</b>	<b>1074</b>	<b>925</b>	<b>1,999</b>	

\* SoMa garage:

Academic spaces - 260 replacement of existing academic spaces, 49 replacement graduate housing spaces, 200 MIT academic spaces shifted from elsewhere on campus.

Non Academic spaces - 275 office spaces, 216 R&D spaces, 40 Retail spaces, and 116 replacement spaces of existing commercial land use spaces.

The SoMa Project will provide 504 long-term bicycle parking spaces and 123 short-term bicycle parking spaces, as required by zoning,

Eleven Loading bays will be provided below-grade in the SoMa garage with access from Hayward Street off of Main Street. Trucks up to 50 feet long (WB-50) will be accommodated in the below-grade parking garage. Loading for Building 6 is proposed at-grade behind the building on the existing surface parking lot. Loading for Building 2 will take place at-grade off Wadsworth Street and contain 3 loading bays; two that could accommodate a 55 foot truck (WB-55).

TP&T believes that the SoMa Project is an exciting opportunity to transform Kendall Square into a more vibrant urban, mixed use district. The development program for additional graduate housing, open space,

ground floor retail, and office/R&D space is a very positive change from the existing surface parking lots. The trade-off is that the project will create traffic impacts. However, because it is located in a transit-oriented development area, containing the MBTA Kendall Square Red Line Station, the Project will create more transit trips than vehicle trips which reduces the roadway impacts.

The existing Red Line and bus capacity and their ability to accommodate new transit trips is a concern. The Project also proposes over 1,000 new parking spaces, which can be contrary to the City's transportation and sustainability goals to discourage automobile usage and encourage transit, bicycling and walking.

The Planning Board will need to determine if the benefits of the project outweigh its adverse impacts and if the investment in a large parking garage outweigh needed investments in transit improvements, while recognizing that one Project cannot solve the MBTA Red Line and bus capacity issues on its own. The Planning Board may want to consider asking the Applicant for more information on the following aspects of the SoMa Project:

- Are the proposed number of parking spaces the right amount?
  - Why does 100% of the 485 existing surface parking spaces (369 academic and 116 non-academic spaces) need to be replaced given that according to the TIS, only 75 percent are occupied at one time today?
  - Why relocate 200 parking spaces to Kendall Square from elsewhere on campus, given that transit, bicycling and walking is preferred for Kendall Square?
- The TP&T Department is concerned about how we will be able to monitor the proposed 1,156 parking space SoMa garage with regards to the final approved parking ratios and PTDM plan, commercial parking regulations, and MIT's academic parking space inventory (i.e. maximum 0.8 space/1,000 sf for R&D use, maximum 0.9 space/1,000 sf for office use, maximum 0.5 space/1,000 sf for retail use, and MIT's parking inventory cap of 4,359 spaces).
  - The TIS stated that the SoMa garage will be managed with state of the art card access technology, including a fixed number of permits for academic and commercial users. Why would a fixed number of permits be the best method to manage the parking? Separate parking facilities for academic and commercial spaces may be a simpler way to manage and monitor parking spaces. A more detailed parking management plan is needed, including parking best practices and how the TP&T Department will monitor the use of the parking spaces. In developing this parking management plan, MIT should also consider how the parking can be used in the most flexible possible way, so that commuters can make decisions on a daily basis as to how they commute, rather than being locked into traveling by car because they have prepaid for a parking pass/permit.
  - Parking programs such as, universal transportation passes, peak parking demand pricing, and other innovative parking management measures that allow people to drive on days when they need to drive but also provide incentives to use transit, bicycling or other non-single occupancy modes on other days should be implemented.
- The Graphic Materials for SoMa shows new paving material on Wadsworth Street, between Amherst Street and Main Street. Additional information should be provided to explain what is proposed.
- Provide additional information on the expected new truck trips and consider design options for Hayward Street, such as a shared street, for all users including trucks, pedestrians, and cyclists.
- Further detailed review of the locations for short-term bicycle parking will be needed.

- Although the TIS provided examples of TDM measures, the PUD and Special Permit Application provided no specific commitments. The Project will need a very robust PTDM and TDM program in order to achieve the mode shares assumed in the TIS (i.e. 33% office employee SOV rate). What is the status of the Project's required Parking and Transportation Demand Management Plan (PTDM Plan)?

#### **Overall Transportation Impacts and Mitigation**

The TP&T Department believes that the MIT Kendall Square Redevelopment Project has many positive aspects, and recognizes that MIT has made commitments through the zoning process as discussed in the PUD and Special Permit Application including:

- Community Fund Contribution up to \$8.8 million,
- Non-profit Community Benefits fund contribution up to \$3.5 million,
- 35 Cherry Street land contribution to the City,
- \$20,000 over 10 years for building trade apprenticeship path program, and
- The Project will create public open space and create new tax revenue.

However, the Project will have transportation impacts and will create significant new demands on the local and regional transportation networks, and yet no substantial commitments have been made. The TP&T Department will work with MIT on transportation mitigation including when the conditions will need to be completed. A final transportation mitigation package should be established as part of the Final Development Plan. The TP&T Department will work with MIT to develop a range of appropriate transportation mitigation elements in the areas described below.

- **Transit improvements.**

- TP&T appreciates that MIT is participating in the Kendall Square Mobility Task Force, which is looking to identify short-, medium and long-term transit improvement projects in Kendall Square. The study will not be completed for another 6-9 months, but the Planning Board may want to consider asking MIT to indicate what financial commitments MIT will provide for the final recommendations. Some potential commitments could be:
  - Transit contributions based on a dollar amount per square feet of new development.
  - Daily or yearly parking surcharges that are allocated to transit improvements.
  - Financial or in-kind contributions to advancing a feasibility study of communication-based-train-control (CBTC) for the Red Line, which could significantly improve Red Line Capacity by allowing trains to run closer together (i.e. shorter headways).
- The MIT Kendall Square Redevelopment PUD and Special Permit Applications stated that MIT has had discussions with the MBTA and is exploring the opportunity to relocate and update the MBTA Red Line Headhouse. The Planning Board may want to consider asking MIT to provide more information, including MIT's commitments. One item to consider is how much the Headhouse should be setback from Main Street without reducing visibility and wayfinding on Main Street? Also, do the other Headhouses in Kendall Square need restoration (i.e. do stairways and bricks need cleaning or straightening, do the metal handrails need restoration, is the wayfinding signage and lighting sufficient?).
- According to the TIS, the MBTA Bus routes #CT2 and #85 will be over capacity because of new riders generated by the MIT Project. There is also currently no weekend bus service

from the EZ Ride and CT2 bus. How will these issues be mitigated (i.e. new buses and operating costs)?

- **Infrastructure improvements**

- Design and reconstruct Ames Street, from Main Street to Memorial Drive to the Paul Dudley White Multiuse Path. This work should include extending the existing two-way cycle track on Ames Street to the River as part of the bicycle network.
- Design and reconstruct Wadsworth Street between Main to Memorial Drive, including intersections.
- Design and construct improvements to Vassar Street/Massachusetts Avenue and Vassar Street/ Main Street intersections, with particular attention to bike accommodation and the cycle track transitions.
- Update outdated traffic signal equipment (i.e. controllers, conduit, mast arms, signal heads) at Ames Street/Main Street, Broadway/Ames Street, and Vassar/Main/Galileo Galilei Way.
- Possibly design and reconstruct Galileo Galilei Way, from Broadway to Main (unless undertaken by Cambridge Redevelopment Authority).

- **Bicycle Improvements**

- The TIS indicated that there was insufficient bicycle parking in Kendall Square (250 bike spaces and as many as 321 bikes counted). Although the Project will provide bicycle parking to meet zoning, TP&T does not consider meeting zoning a transportation mitigation unless the commitments are above and beyond what zoning requires. The Planning Board may want to consider asking MIT to demonstrate why the proposed bicycle parking plan will be sufficient to meet the growing need for bicycle parking in Kendall Square.
- Hubway Station planning should be occurring at this stage so that it is well integrated with the site planning and access. The TIS found that all Hubway bikes were used at 6:00 pm at Binney/Sixth and Kendall Street. A minimum of one new Hubway Station at the Broad Canal and another large station or two in other areas are needed.
- If the MBTA Headhouse is reconstructed, a public bicycle station should be included in the design. Another potential location for a public bicycle station can be at Building 6.
- MIT should evaluate the option of raising the cycle track on Main Street between the Longfellow Bridge and Third Street.
- More information about the Memorial Drive Phase II improvements should be provided and any contributions that MIT might be able to provide.

Cc: Adam Shulman, TPT; Iram Farooq, Jeff Roberts, Liza Paden, Susanne Rasmussen, Stuart Dash, Cara Seiderman, Suzannah Bigolin, Stephanie Groll, CDD; Michael Owu, MIT.

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

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Planning Board Permit Number: \_\_\_\_\_

**PROJECT NAME:**

MIT Kendall Square

Address:

238 Main Street, Suite 200  
Cambridge MA 02139

Owner/Developer Name:

Massachusetts Institute of Technology (MIT)

Contact Person:

Michael K. Owu

Contact Address:

238 Main Street, Suite 200  
Cambridge, MA 02142

Contact Phone:

(617) 258-1012

**SIZE:**

ITE sq. ft.:

1,759,600

Land Use Type:

Mixed Use Development Office, Research & Development, Residential, Retail,  
Museum, Academic Graduate Housing, and Daycare**PARKING:**

Existing Parking Spaces\*:

599 Use: 230 Commercial/369 Academic

New Parking Spaces\*\*:

1,673 Use: 947 Commercial/569 Academic/157 residential

Net New Parking Spaces\*\*\*

+1,074

\*Existing parking spaces on TIS Building sites

\*\*The total parking spaces of 1,673 include 200 relocated academic spaces and 485 replacement spaces of which 369 are academic spaces and 116 are commercial spaces

\*\*\*Includes the 200 relocated academic spaces

Date of Parking Registration Approval: N/A

**TRIP GENERATION\*:**

	Daily	AM Peak Hour	PM Peak Hour
Total Trips	18,812	1,795	2,187
Vehicle	5,858	643	708
Transit	7,508	761	893
Pedestrian	3,524	201	359
Bicycle	1,922	190	227

\*Does not take into account existing site trip credits

**MODE SPLIT (PERSON TRIPS):**

RESEARCH &amp; DEVELOPMENT/OFFICE (RESIDENTIAL) [RETAIL] {ACADEMIC}

Auto: 41% (32%) [31%] {27%}

Transit: 42% (30%) [30%] {41%}

Walk: 7% (25%) [29%] {15%}

Bike: 10% (10%) [8%] {14%}

Other: 0% (3%) [2%] {3%}

**TRANSPORTATION CONSULTANT:**

Company Name: Vanasse Hangen Brustlin, Inc.

Contact Name: Susan Sloan-Rossiter

Phone: 617.728.7777

Date of Building Permit Approval: \_\_\_\_\_

Planning Board Permit Number: \_\_\_\_\_

# CITY OF CAMBRIDGE

## Planning Board Criteria Performance Summary

### Special Permit Transportation Impact Study (TIS)

Project Name: MIT Kendall Square

Total Data Entries = 500

Total Number of Criteria Exceedances = Full Build = 65

#### 1. Project Vehicle Trip Generation\*

Time Period	Criteria (trips)	Build	Exceeds Criteria?
Weekday Daily	2,000	5,858	Yes
Weekday AM Peak Hour	240	643	Yes
Weekday PM Peak Hour	240	708	Yes

\*Does not take into account existing site trip credits

#### 2. Level of Service (LOS)

Intersection	AM Peak Hour				PM Peak Hour			
	Existing Condition	Build Condition	Traffic Increase	Exceeds Criteria?	Existing Condition	Build Condition	Traffic Increase	Exceeds Criteria?
O'Brien Highway at Third Street	F	F	3.0%	No	F	F	2.9%	No
Cambridge Street at Third Street	D	D	5.9%	No	F	F	5.1%	Yes
Cambridge Street at First Street	E	E	3.7%	No	F	F	3.1%	No
O'Brien Highway at Cambridge Street/ East Street	C	C	1.4%	No	B	B	1.5%	No
O'Brien Highway at Land Boulevard/ Gilmore Bridge	E	E	2.5%	No	F	F	2.9%	No
Binney Street / Galileo Galilei Way / Fulkerson Street	C	C	0.3%	No	D	C	3.8%	No
Binney Street at Third Street	D	D	7.5%	Yes	D	D	7.5%	Yes
Binney Street at First Street	C	C	3.1%	No	C	C	3.7%	No
Land Boulevard at Binney Street	B	C	3.5%	No	C	C	4.2%	No
Hampshire Street at Cardinal Medeiros Avenue	C	D	3.1%	Yes	C	C	2.7%	No
Broadway at Portland Street	C	D	2.8%	Yes	D	D	2.9%	No
Broadway at Hampshire Street	D	E	5.4%	Yes	D	D	5.6%	No
Broadway at Galileo Galilei Way	F	F	3.4%	No	E	E	5.4%	No
Broadway at Ames Street	E	E	9.4%	Yes	D	D	11.7%	Yes
Third Street at Broadway	C	E	15.2%	Yes	D	D	7.9%	Yes
Vassar Street at Main Street	C	C	9.2%	No	C	C	10.2%	No
Main Street at Ames Street	C	C	44.9%	Yes	C	D	37.9%	Yes
Memorial Drive WB at Wadsworth Street	B	B	10.2%	No	B	B	5.1%	No
Memorial Drive EB at Wadsworth Street	A	A	4.9%	No	A	A	5.2%	No



# CITY OF CAMBRIDGE

## Planning Board Criteria Performance Summary

### Special Permit Transportation Impact Study (TIS)

#### 3. Traffic on Residential Streets

Roadway	Reviewed Segment	Amount of Residential	AM Peak Hour			PM Peak Hour		
			Existing 2015	Project Trips	Exceeds Criteria?	Existing 2015	Project Trips	Exceeds Criteria?
Portland Street	Main St to Washington St	>1/3 but <1/2	655	0	No	733	0	No
	Washington St to Harvard St	>1/3 but <1/2	653	0	No	733	0	No
	Harvard St to Broadway	1/3 or less	653	0	No	733	0	No
	Broadway to Hampshire St	1/3 or less	650	0	No	727	0	No
	Hampshire St to Binney St	>1/3 but <1/2	730	0	No	830	0	No
Broadway	Windsor St to Dickinson St	1/2 or more	828	42	Yes	921	46	Yes
	Dickinson St to Clark St	1/2 or more	828	42	Yes	921	46	Yes
Hampshire Street	Medeiros Ave to Webster Ave	1/3 or less	653	40	No	762	41	No
	Webster Ave to Clark St	>1/3 but <1/2	653	40	No	762	41	No
Memorial Drive	Ames St to Wadsworth St	1/2 or more	2343	68	Yes	3002	131	Yes
Third Street	Rodgers St to Bent St	1/3 or less	769	82	No	893	90	No
	Bent St to Charles St	>1/3 but <1/2	769	82	Yes	893	90	Yes
	Charles St to Hurley St	1/2 or more	769	82	Yes	893	90	Yes
	Hurley St to Spring St	1/2 or more	769	82	Yes	893	90	Yes
	Spring St to Thorndike St	1/3 or less	769	82	No	893	90	No
	Thorndike St to Otis St	1/2 or more	769	82	Yes	893	90	Yes
Cambridge Street	Third St to Sciarappa St	1/3 or less	612	0	No	649	0	No
	Sciarappa St to 5th St	1/3 to 1/2	612	0	No	649	0	No
O'Brien Highway	Land Blvd to Leighton St	1/2 or more	2405	36	No	2095	41	Yes
	Leighton St to East St/Cambridge St	1/2 or more	2388	36	No	2233	41	Yes
Amherst Street	Ames St to Carleton St	1/3 or less	255	287	No	349	391	No
	Carleton St to Hayward St	>1/3 but <1/2	246	287	Yes	314	391	Yes
	Hayward St to Wadsworth St	1/3 or less	236	97	No	268	128	No

\*volume interpolated from nearest data available in study area

#### 4. Lane Queue (for signalized intersections)

Intersection	Movement	AM Peak Hour			PM Peak Hour		
		Existing	Build	Exceeds Criteria?	Existing	Build	Exceeds Criteria?
O'Brien Highway at Third Street	NB L/R	1	1	No	5	5	No
	SEB T/R	~24	~25	No	~17	~18	No
	NWB L/T	0	0	No	~13	~13	No
Cambridge Street at Third Street	EB L/T/R	7	7	No	~13	~13	No
	WB L/T/R	5	5	No	~14	~14	No
	NB L/T/R	3	3	No	7	8	No
	SB L	1	1	No	0	0	No
	SB T/R	14	16	No	3	4	No

# CITY OF CAMBRIDGE

## Planning Board Criteria Performance Summary

### Special Permit Transportation Impact Study (TIS)

Intersection	Movement	AM Peak Hour			PM Peak Hour		
		Existing	Build	Exceeds Criteria?	Existing	Build	Exceeds Criteria?
Cambridge Street at First Street	EB T/R	7	7	No	~9	~9	No
	WB L	~5	~6	No	2	3	No
	W T	4	4	No	3	3	No
	NB L	1	1	No	3	3	No
	NB R	2	2	No	~13	~14	No
O'Brien Highway at Cambridge Street/East Street	EB L	2	2	No	1	1	No
	EB T	13	13	No	1	1	No
	EB R	3	3	No	0	0	No
	WB L	5	5	No	2	2	No
	WB T/R	3	3	No	9	9	No
	NB L/T	0	0	No	5	5	No
	NB R	0	0	No	0	0	No
	SB L/T/R	1	1	No	1	1	No
O'Brien Highway at Land Boulevard	SEB L	4	4	No	~14	~15	No
	SEB T	11	11	No	6	6	No
	SEB R	6	6	No	9	9	No
	NWB L	~9	~12	No	6	7	No
	NWB T	8	9	No	9	9	No
	NWB R	3	3	No	7	7	No
	NEB L	4	4	No	~14	~12	No
	NEB T	6	6	No	~21	~21	No
	NEB R	0	0	No	10	10	No
	SWB L/T/R	~22	~23	No	~13	~14	No
Binney Street at Galileo Galilei Way/Fulkerson Street	EB T	3	2	No	8	8	No
	WB T/R	3	5	No	5	5	No
	SB R	6	6	No	6	6	No
	SEB L	4	4	No	7	7	No
	SEB R	1	1	No	0	0	No
Binney Street at Third Street	EB L	1	2	No	7	8	No
	EB T/R	3	3	No	6	6	No
	WB L	4	~6	No	2	2	No
	WB T/R	6	6	No	3	3	No
	NB L/T	3	3	No	9	11	No
	NB R	1	1	No	3	4	No
	SB L/T/R	13	~16	No	8	8	No
Binney Street at First Street	EB L	3	2	No	9	7	No
	EB T/R	2	1	No	3	2	No
	WB L/T/R	4	4	No	1	2	No
	NB L/T/R	0	0	No	1	1	No
	SB L/T	5	6	No	6	8	No
	SB R	N/A	5	No	N/A	2	No

# CITY OF CAMBRIDGE

## Planning Board Criteria Performance Summary

### Special Permit Transportation Impact Study (TIS)

Intersection	Movement	AM Peak Hour			PM Peak Hour		
		Existing	Build	Exceeds Criteria?	Existing	Build	Exceeds Criteria?
Land Boulevard at Binney Street	EB L/R	3	2	No	5	2	No
	NEB L	7	6	No	6	7	No
	NEB T	1	2	No	3	7	No
	SWB T	7	17	Yes	11	15	No
	SWB R	5	10	No	3	3	No
Hampshire Street at Cardinal Medeiros Avenue	NB L	0	0	No	1	1	No
	NB T/R	2	2	No	2	2	No
	SB L	0	0	No	0	0	No
	SB T/R	5	5	No	5	5	No
	SEB L/T/R	11	~12	No	6	7	No
Broadway at Portland Street	NWB L/T/R	6	6	No	11	11	No
	EB L/T/R	13	~15	No	10	10	No
	WB L/T/R	7	7	No	10	~11	No
	NB L	1	1	No	1	1	No
	NB T/R	7	7	No	8	8	No
Broadway at Hampshire Street	SB L	1	1	No	0	0	No
	SB T/R	2	2	No	2	2	No
	EB L/T	13	~14	No	9	10	No
	EB R	3	3	No	0	0	No
	WB L	~5	~6	No	0	0	No
Broadway at Galileo Galilei Way	WB T	2	2	No	3	3	No
	WB R	0	0	No	1	2	No
	NB L	0	0	No	2	2	No
	NB T/R	1	1	No	2	2	No
	SB L	5	~8	No	~8	~8	No
	SB T/R	1	1	No	0	0	No
	EB L	4	4	No	3	3	No
	EB T	~17	~18	No	8	~9	No
	EB R	2	3	No	1	1	No
	WB L	2	2	No	~6	~6	No
	WB T/R	5	5	No	6	7	No
	NB L	2	2	No	3	3	No
	NB T/R	4	4	No	8	9	No
	SB L	2	2	No	1	2	No
	SB T	11	11	No	7	7	No
	SB R	~5	~5	No	~5	~5	No

# CITY OF CAMBRIDGE

## Planning Board Criteria Performance Summary

### Special Permit Transportation Impact Study (TIS)

Intersection	Movement	AM Peak Hour			PM Peak Hour		
		Existing	Build	Exceeds Criteria?	Existing	Build	Exceeds Criteria?
Broadway at Ames Street	EB T	~20	~20	No	~15	~15	No
	EB R	2	3	No	1	1	No
	WB L	4	3	No	2	1	No
	WB T	9	8	No	8	7	No
	NB L	2	2	No	2	2	No
	NB R	0	0	No	2	4	No
Third Street at Broadway	EB L	6	6	No	6	7	No
	EB T	5	4	No	3	4	No
	WB T	12	~21	Yes	9	9	No
	WB R	6	8	No	3	3	No
	SB L	2	6	No	~11	~12	No
	SB R	3	2	No	1	2	No
Vassar Street at Main Street	EB L	4	4	No	4	5	No
	EB T/R	5	8	No	5	6	No
	WB L	1	1	No	1	1	No
	WB T/R	5	6	No	2	5	No
	NB L/T/R	5	5	No	5	6	No
	SB L	1	2	No	1	1	No
	SB T	9	9	No	4	4	No
	SB R	6	6	No	2	2	No
Main Street at Ames Street	EB L	1	1	No	0	0	No
	EB T/R	5	9	No	6	6	No
	WB L	0	2	No	0	1	No
	WB T/R	1	1	No	1	1	No
	NB L	1	2	No	1	~7	No
	NB T/R	2	3	No	3	7	No
	SB L/T/R	3	6	No	2	3	No
	SB R	5	4	No	2	2	No
Memorial Drive at Wadsworth Street	EB L	0	0	No	0	0	No
	EBT	0	0	No	0	0	No
	WB T/R	9	11	No	13	14	No
	NB L	0	0	No	0	0	No
	NB T	5	6	No	3	3	No
	SB R	0	0	No	1	2	No

# CITY OF CAMBRIDGE

## Planning Board Criteria Performance Summary

### Special Permit Transportation Impact Study (TIS)

#### 5. Pedestrian and Bicycle Facilities

Intersection	Crosswalk	AM Peak Hour			PM Peak Hour		
		Existing 2015	Build 2015	Exceeds Criteria?	Existing 2015	Build 2015	Exceeds Criteria?
O'Brien Highway at Third Street	East	D	D	No	D	D	No
	West	D	D	No	D	D	No
	South	D	D	No	D	D	No
Cambridge Street at Third Street	East	B	B	No	B	B	No
	West	B	B	No	B	B	No
	North	B	B	No	B	B	No
	South	B	B	No	B	B	No
Cambridge Street at First Street	East	D	D	No	D	D	No
	West	D	D	No	D	D	No
	South	D	D	No	D	D	No
O'Brien Highway at Cambridge Street/East Street	East	D	D	No	D	D	No
	West	D	D	No	D	D	No
	North	D	D	No	D	D	No
	South	C	C	No	C	C	No
O'Brien Highway at Land Boulevard	West	E	E	No	E	E	No
	North	E	E	No	E	E	No
	South	E	E	No	E	E	No
Binney Street at Galileo Galilei Way/Fulkerson Street	East	C	D	Yes	C	D	Yes
	West	C	D	Yes	C	D	Yes
	North	B	D	Yes	B	D	Yes
	South	C	D	Yes	C	D	Yes
Binney Street at Third Street	East	D	D	No	D	D	No
	West	D	D	No	D	D	No
	North	C	D	Yes	C	D	Yes
	South	C	D	Yes	C	D	Yes
Binney Street at First Street	East	E	E	No	E	E	No
	West	E	E	No	E	E	No
	North	B	E	Yes	B	E	Yes
	South	A	E	Yes	A	E	Yes
Land Boulevard at Binney Street	West	E	E	No	E	E	No
	North	E	E	No	E	E	No
	South	E	E	No	E	E	No
Hampshire Street at Cardinal Medeiros Avenue	East	B	B	No	B	B	No
	West	B	B	No	B	B	No
	North	B	B	No	B	B	No
	South	B	B	No	B	B	No

# CITY OF CAMBRIDGE

## Planning Board Criteria Performance Summary

### Special Permit Transportation Impact Study (TIS)

Intersection	Crosswalk	AM Peak Hour			PM Peak Hour		
		Existing 2015	Build 2015	Exceeds Criteria?	Existing 2015	Build 2015	Exceeds Criteria?
Broadway at Portland Street	East	B	B	No	B	B	No
	West	B	B	No	B	B	No
	North	B	B	No	B	B	No
	South	B	B	No	B	B	No
Broadway at Hampshire Street	East	D	D	No	D	D	No
	West	D	D	No	D	D	No
	North	C	C	No	C	C	No
	South	C	C	No	C	C	No
Broadway at Galileo Galilei Way	East	D	D	No	D	D	No
	West	D	D	No	D	D	No
	North	D	D	No	D	D	No
	South	D	D	No	D	D	No
Broadway at Ames Street	East	D	D	No	D	D	No
	West	D	D	No	D	D	No
	South	C	C	No	C	C	No
Third Street at Broadway	East	D	D	No	D	D	No
	West	D	D	No	D	D	No
	North	C	C	No	C	C	No
	South	-	C	No	-	C	No
Vassar Street at Main Street	East	C	C	No	C	C	No
	West	C	C	No	C	C	No
	North	C	C	No	B	B	No
	South	C	C	No	B	B	No
Main Street at Ames Street	East	D	D	No	D	D	No
	West	D	D	No	D	D	No
	North	C	C	No	C	C	No
	South	C	C	No	C	C	No
Memorial Drive at Wadsworth Street	East	D	D	No	D	D	No
	North	D	D	No	D	D	No

# CITY OF CAMBRIDGE

## Planning Board Criteria Performance Summary

### Special Permit Transportation Impact Study (TIS)

#### Sidewalk and Bicycle Facilities

Adjacent Street	Link (between)	Sidewalks or Walkways Present?	Exceeds Criteria?	Bicycle Facilities or Right of Ways Present?	Exceeds Criteria?
Main Street	Ames St to Wadsworth St (north side)	Yes	No	Under Construction*	No
	Ames St to Wadsworth St (south side)	Yes	No	Yes	No
	Wadsworth St to Longfellow Br (south side)	Yes	No	Yes	No
	Third St to Broad Canal Way (north side)	Yes	No	Yes	No
Wadsworth Street	Main St to Amherst St (west side)	Yes	No	No	Yes
	Main St to Amherst St (east side)	Yes	No	No	Yes
	Amherst St to Memorial Dr (west side)	Yes	No	No	Yes
	Amherst St to Memorial Dr (east side)	Yes	No	No	Yes
Third Street	Broad Canal Way to Broadway (west side)	Yes	No	Yes	No
	Broad Canal Way to Broadway (east side)	Yes	No	Yes	No
Amherst Street	Ames St to Carleton St (north side)	Yes	No	No	Yes
	Ames St to Carleton St (south side)	Yes	No	No	Yes
	Carleton St to Hayward St (north side)	Yes	No	No	Yes
	Carleton St to Hayward St (south side)	Yes	No	No	Yes
	Hayward St to Wadsworth St (north side)	Yes	No	No	Yes
	Hayward St to Wadsworth St (south side)	Yes	No	No	Yes
Hayward Street**	Main St to Amherst St (west side)	Yes	No	No	Yes**
	Main St to Amherst St (east side)	Yes	No	No	Yes**
Carleton Street	Dock St/Deacon St to Amherst St (west side)	Yes	No	No	Yes
	Dock St/Deacon St to Amherst St (east side)	Yes	No	No	Yes

\*Main Street is currently under construction and the new roadway design will provide a new bike lane on the north side of the street as well as maintain the bike lane on the south side of the street.

\*\*As part of the MIT Kendall Square Project, Hayward Street will be turned into a pedestrian and bicycle connection through the site and will no longer provide vehicular access from Amherst Street to Main Street under Build Conditions.