



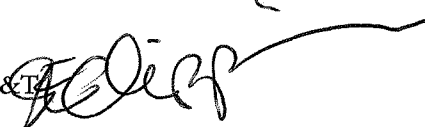
CITY OF CAMBRIDGE
Traffic, Parking and Transportation
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MEMORANDUM

To: Cambridge Planning Board
From: Susan Clippinger, Director TP&T 
Date: December 6, 2011
Re: Novartis Campus Expansion Project

The Traffic, Parking & Transportation (TP&T) Department has reviewed the Transportation Impact Study (TIS) for the proposed Novartis Campus Expansion Project located at 181 Massachusetts Avenue and 22 Windsor Street by Novartis Institute for Biomedical Research Inc. We certified the TIS as complete and reliable on October 13, 2011.

The project involves the construction of two buildings totaling 539,513 sf. for office and laboratory space, including 8,000 sf. ground floor retail space. The project also involves the renovation of the existing 33,150 sf. building at 211 Massachusetts Avenue for administrative use. The project proposes 458 underground parking spaces (0.8 spaces/1,000 sf.), 120 indoor bicycle parking spaces and at least 16 short-term bicycle spaces.

The Novartis Campus Expansion Project will generate the following Trips:

- 2,046 daily vehicle trips, including 250 AM and 240 PM peak hour vehicle trips,
- 2,208 daily transit trips (277 AM/259 PM Peak Hour),
- 422 daily pedestrian trips (45 AM/48 PM Peak Hour),
- 270 daily bicycle trips (32 AM/32 PM Peak Hour).

1. **Planning Board Exceedences.** The TIS studied 13 intersections, and out of 171 Planning Board Special Permit Transportation Criteria indicators reviewed 7 where exceeded. Below is a summary of the exceedences and our comments (the full summary is attached):

- a) The project exceeded the Weekday and AM peak hour vehicle trips (it will generate 2,046 daily and 250 AM peak hour vehicle trips and the trigger is over 2,000 daily and 240 peak hour vehicle trips). We believe the best way to mitigate this exceedence is to continue to encourage employees to not drive-alone to work. Novartis already is achieving a very good 35% drive-alone rate in 2011 at their 220 and 250 Massachusetts Avenue site with 1,195 employees. Novartis is extending their PTDM plan to cover both buildings and their parking ratio is 0.8 spaces per 1,000 sf.
- b) The remaining 5 exceedences were triggered at two unsignalized intersections: At Windsor Street/Massachusetts Avenue, the Pedestrian Level of Service (PLOS) went from A to B for pedestrians crossing Windsor Street. We believe this change is not significant enough to require any mitigation. At Main Street at Osborn Street, pedestrians Level of Service crossing Main Street was exceeded under existing conditions (PLOS F) but since the project is not adding new pedestrians or impacts to this intersection we do not recommend mitigation.

2. **Parking.** We support the proposed 458 underground parking spaces for the two new buildings and renovated 211 Massachusetts Avenue building, for a total of approximately 572,663 square or 0.8 parking spaces per 1,000 sf.

The TIS stated the project is expected to have approximately 1,060 employees and estimated 270 daily bicycle trips (135 bike trips in, 135 bike trips out). We support the proposed 120 indoor bicycle parking spaces which will accommodate approximately 10% of site employees and is consistent with our goal of providing bike parking for 10% of users of a site. Bike spaces should meet city bike parking guidelines. We also support them providing short-term bicycle parking spaces near building entrances. Novartis will exceed zoning minimum for bike parking and we commend them for their commitment to non-auto modes of transportation.

3. **Site Plan.** We have been working with Novartis on their site plan and have the following comments:
- a) We strongly support access to the parking garage and loading docks from State Street because we believe is the best location for that activity.
 - b) We have been working with Novartis and the revised site plan dated November 29, 2011 being presented at the December 6, 2011 hearing has addressed our comments. We will continue to work with Novartis on the operational details and signage for the loading area being requested on Osborne Street for CO2 and Nitrogen deliveries to the proposed building at 181 Massachusetts Avenue (adjacent to Osborne Street).
 - c) Finally, we will continue to work with Novartis on finalizing their building permit site plans, including making sure parking meter poles are located in places that do not conflict with trees, and corners can accommodate truck turns.
4. **PTDM Plan.** Finally the project is subject to Parking and Transportation Demand Management (PTDM) plan per City Ordinance 10.18.

Cc: Adam Shulman, TP&T, Brian Murphy, Susanne Rasmussen, Cara Seiderman, Liza Paden, Roger Boothe, CDD, Grace Belcher, Novartis, Jim Rafferty.

CITY OF CAMBRIDGE

Special Permit Transportation Impact Study (TIS)

Summary Sheet

Planning Board Permit Number: 265

Project Name: Novartis Campus Expansion

Address: 181 Massachusetts Avenue; 209 Massachusetts Avenue; 21 Osborn Street

Owner/Developer Name: Novartis Institutes for BioMedical Research, Inc.

Contact Person: Grace Belcher

Contact Address: 250 Massachusetts Avenue

Cambridge, MA 02138

Contact Phone: 617-871-4960

ITE sq. ft.: 565,000 sf / 8,000 sf

Zoning sq. ft.: _____

Land Use Type: R&D Lab Space / Ground Floor Retail Space

Existing Parking Spaces: 234

Use: Employee

New Parking Spaces: 458

Use: Employee

Date of Parking Registration Approval: _____

Trip Generation:	Daily	AM Peak Hour	PM Peak Hour
Total Trips	5,186	633	604
Vehicle	2,046	250	240
Transit	2,208	277	259
Pedestrian	422	45	48
Bicycle	270	32	32

Mode Split (person trips): Vehicle: 45/44 %

Transit: 24/44 %

(Retail/R&D use) Pedestrian: 23/7 %

Bicycle: 8/5 %

Transportation Consultant: Vanasse and Associates, Inc.

Contact Name: Scott W. Thornton, P.E.

Phone: 978-474-8800

Date of Building Permit Approval: _____

Planning Board Permit Number: 265Project Name: Novartis Campus ExpansionTotal Data Entries = 171Total Number of Criteria Exceedences = 71. Project Vehicle Trip GenerationWeekday = 2,046 AM Peak Hour = 250 PM Peak Hour = 240 Meets Criteria? [Y/N] N/N/Y2. Level of Service (LOS)

Intersection	A.M. Peak Hour			P.M. Peak Hour		
	Existing	With Project	Meets Criteria?	Existing	With Project	Meets Criteria?
Massachusetts Avenue at Sidney Street	C	C	Y	C	C	Y
Massachusetts Avenue at Landsdowne/Front	B	B	Y	B	B	Y
Massachusetts Avenue at Albany Street	B	B	Y	B	B	Y
Massachusetts Avenue at Vassar Street	B	B	Y	B	B	Y
Main Street at Windsor Street	B	B	Y	B	B	Y
Main Street at Portland Street	B	B	Y	B	C	Y
Massachusetts Avenue at Windsor Street	B	B	Y	C	C	Y
Albany Street at Osborn Street	B	B	Y	A	B	Y
Osborn Street at State Street	A	A	Y	A	A	Y
Main Street at Osborn Street	B	B	Y	B	B	Y
Windsor Street at State Street	B	B	Y	B	B	Y
Windsor Street at Front Street	A	A	Y	A	A	Y

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?
Windsor Street, Main Street to Washington Street (Amount of Residential = 1/2 or more)	295	305	Y	358	367	Y
Portland Street, Main Street to Harvard Street (Amount of Residential = >1/3 but <1/2)	616	653	Y	593	629	Y
Albany Street, Pacific Street to Massachusetts Avenue (Amount of Residential = 1/3 or less)	611	639	Y	587	604	Y

4. Lane Queue

Intersection	No. of Lanes Analyzed	A.M. Peak Hour			P.M. Peak Hour		
		Existing	With Project	Meets Criteria?	Existing	With Project	Meets Criteria?
<i>Massachusetts Avenue at Sidney Street:</i>	7						
Massachusetts Avenue EB LT		3	3	Y	3	3	Y
Massachusetts Avenue EB TH/RT		7	7	Y	4	5	Y
Massachusetts Avenue WB LT		4	4	Y	3	3	Y
Massachusetts Avenue WB TH/RT		5	5	Y	14	14	Y
Sidney Street NB RT		2	2	Y	3	3	Y
Main Street SB LT/TH		6	6	Y	5	5	Y
Main Street SB RT		1	1	Y	2	3	Y
<i>Massachusetts Avenue at Front Street/Landsdowne Street:</i>	5						
Massachusetts Avenue EB TH/RT		3	3	Y	8	8	Y
Massachusetts Avenue WB LT/TH		6	6	Y	4	4	Y
Massachusetts Avenue WB TH		6	6	Y	4	4	Y
Landsdowne Street NB LT/RT		1	1	Y	2	2	Y
Front Street SB LT/TH/RT		2	2	Y	2	4	Y
<i>Massachusetts Avenue at Albany Street:</i>	8						
Massachusetts Avenue EB LT/TH		3	3	Y	5	7	Y
Massachusetts Avenue EB TH/RT		3	3	Y	5	7	Y
Massachusetts Avenue WB LT/TH		11	11	Y	4	4	Y
Massachusetts Avenue WB TH/RT		11	11	Y	4	4	Y
Albany Street NB LT		1	1	Y	1	1	Y
Albany Street NB TH/RT		6	6	Y	7	7	Y
Albany Street SB LT		3	3	Y	2	3	Y
Albany Street SB TH/RT		5	5	Y	5	5	Y

4. Lane Queue (continued)

Intersection	No. of Lanes Analyzed	A.M. Peak Hour			P.M. Peak Hour		
		Existing	With Project	Meets Criteria?	Existing	With Project	Meets Criteria?
Massachusetts Avenue at Vassar Street:	8						
Massachusetts Avenue EB LT/TH		6	6	Y	4	4	Y
Massachusetts Avenue EB TH/RT		6	6	Y	4	4	Y
Massachusetts Avenue WB LT/TH		7	8	Y	5	5	Y
Massachusetts Avenue WB TH/RT		7	8	Y	5	5	Y
Vassar Street NB LT		2	2	Y	1	1	Y
Vassar Street NB TH/RT		5	5	Y	3	3	Y
Vassar Street SB LT		3	3	Y	4	4	Y
Vassar Street SB TH/RT		4	4	Y	5	5	Y
Main Street at Portland Street:	4						
Main Street EB LT/TH/RT		3	3	Y	7	12	Y
Main Street WB LT/TH/RT		3	4	Y	5	5	Y
Portland Street NB LT/TH/RT		2	2	Y	3	3	Y
Portland Street SB LT/TH/RT		6	7	Y	5	5	Y
Main Street at Windsor Street:	4						
Main Street EB LT/TH/RT		3	3	Y	3	3	Y
Main Street WB LT/TH/RT		3	3	Y	4	4	Y
Windsor Street NB LT/TH/RT		2	3	Y	6	7	Y
Windsor Street SB LT/TH/RT		4	4	Y	5	5	Y

5. Pedestrian and Bicycle Facilities (Pedestrian LOS)

Intersection	A.M. Peak Hour			P.M. Peak Hour		
	Existing PLOS	With Project	Meets Criteria?	Existing PLOS	With Project	Meets Criteria?
Massachusetts Avenue at Sidney Street						
Crossing Massachusetts Avenue (East)	B	B	Y	B	B	Y
Crossing Massachusetts Avenue (West)	B	B	Y	B	B	Y
Crossing Main Street (North)	D	D	Y	D	D	Y
Crossing Sidney Street (South)	D	D	Y	D	D	Y
Massachusetts Avenue at Front Street and Landsdowne Street						
Crossing Massachusetts Avenue (East)	D	D	Y	D	D	Y
Crossing Massachusetts Avenue (West)	D	D	na ^a	D	D	na
Crossing Front Street (North)	D	D	Y	D	D	Y
Crossing Landsdowne Street (South)	D	D	Y	D	D	Y
Massachusetts Avenue at Albany Street						
Crossing Massachusetts Avenue (East)	C	C	Y	C	C	Y
Crossing Massachusetts Avenue (West)	C	C	Y	C	C	Y
Crossing Albany Street (North)	B	B	Y	B	B	Y
Crossing Albany Street (South)	B	B	Y	B	B	Y
Massachusetts Avenue at Vassar Street						
Crossing Massachusetts Avenue (East)	C	C	Y	C	C	Y
Crossing Massachusetts Avenue (West)	C	C	Y	C	C	Y
Crossing Vassar Street (North)	B	B	Y	B	B	Y
Crossing Vassar Street (South)	B	B	Y	B	B	Y

5. Pedestrian and Bicycle Facilities (Pedestrian LOS) (continued)

Intersection	A.M. Peak Hour			P.M. Peak Hour		
	Existing PLOS	With Project	Meets Criteria?	Existing PLOS	With Project	Meets Criteria?
Main Street at Windsor Street						
Crossing Main Street (East)	C	C	Y	C	C	Y
Crossing Main Street (West)	C	C	Y	C	C	Y
Crossing Windsor Street (North)	C	C	Y	C	C	Y
Crossing Windsor Street (South)	C	C	Y	C	C	Y
Main Street at Portland Street						
Crossing Main Street (East)	C	C	Y	C	C	Y
Crossing Main Street (West)	C	C	Y	C	C	Y
Crossing Portland Street (North)	B	B	Y	B	B	Y
Crossing Portland Street (South)	B	B	Y	B	B	Y
Massachusetts Avenue at Windsor Street						
Crossing Massachusetts Avenue (East)	F	F	na	F	F	na
Crossing Massachusetts Avenue (West)	F	F	na	F	F	na
Crossing Windsor Street (North)	A	B	N	B	B	Y
Albany Street at Osborne Street						
Crossing Albany Street (East)	F	F	na	E	E	na
Crossing Albany Street (West)	F	F	na	E	E	na
Crossing Osborne Street (North)	A	A	N	A	A	N
Main Street at Osborne Street						
Crossing Main Street (East)	F	F	N	F	F	N
Crossing Main Street (West)	E	E	N	F	F	N
Crossing Osborne Street (South)	A	A	na	A	A	na
Windsor Street at State Street						
Crossing Windsor Street (North)	B	B	na	B	C	na
Crossing Windsor Street (South)	B	B	na	B	C	na
Crossing State Street (East)	A	A	Y	A	A	Y
Crossing State Street (West)	A	A	na	A	A	na

*na = Not applicable; no crosswalk at this location.

Pedestrian and Bicycle Facilities (Safe Pedestrian and Bicycle Facilities)

Adjacent Street or Public Right-of-Way	Sidewalks or Walkways Present?	Meets Criteria?	Bicycle Facilities or Right-of-Ways Present?	Meets Criteria?
Massachusetts Avenue	Yes	Y	Yes	Y
Albany Street	Yes	Y	Yes	Y
Osborn Street	Yes	Y	Yes	Y
Windsor Street	Yes	Y	Yes	Y
State Street	Yes	Y	Yes	Y