

STEP *STUDENTS IN TRANSPORTATION
ENGINEERING AND PLANNING*

Summary of Findings:
Parking, Queueing, and Mode Split Study
Mixed-Use Outdoor Equipment Retail, Condominium Loft Residential, and
Home-Loan Commercial Facility
Pearl District – Portland, OR

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Summary of Abstract Findings

The Portland State University Institute of Transportation Engineers (ITE) student chapter, Students in Transportation Engineering and Planning (STEP), conducted a trip generation and parking study at the Recreational Equipment, Inc. (REI)/Edge Lofts/Bank of America (BOA) Home Loans mixed-use building located at the NW Johnson St/NW 14th Ave intersection in the Pearl District of Portland, Oregon. The building houses the 35,000 square foot outdoor gear retailer REI, a small ~2,000 square foot home loan office, and the Edge Lofts consisting of 123 (studio through three-bedroom) condominiums. Because of site configuration, transit access, and a high-density location in an urban environment, an intercept survey was deemed necessary to obtain bicycle, pedestrian, and transit mode-splits. Figure 1 presents the site layout.

Twenty-seven graduate and undergraduate STEP students collected two days data on Tuesday February 16th and Thursday February 18th. Each customer and/or resident entering and exiting the five building accesses were asked what mode they used to travel to the building and which mode they were going use to their next destination. 2,777 people were surveyed over the two days, with 216 non-responses. Non-response answers were not used. Vehicles were counted at garage entrances and exits. Building layout does not allow for internal trips.

Mode splits for REI and for the entire mixed-use facility are presented in Figure 2 and Figure 3, respectively. REI hours of operation are 10 AM – 9 PM, therefore, REI data presented prior to 10 AM are employee trips. Transit riders were classified as pedestrians based on low mode share and also for simplicity.

Table 2 presents the average value of 4.87 automobile trips per 1000 square feet (/KSF) of gross floor area which is in the realm of the 1.60-4.69 trips/KSF reported in ITE *Trip Generation*, 8th Edition, Land Use Code 861 (Sporting Goods Superstore). To compare this mixed-use facility, trip generation rates were calculated as if each facility were an individual entity. Using this approach, there were 5.00 vehicle trips during the PM peak hour for the building. Comparing with the ITE Trip Generation Manual using the same approach, we arrive at a range of 2.23-5.32 vehicle trips. Our collected data falls within this range. In this analysis we did not use the home loans office since no trips occurred during the peak hour of analysis and there is not an appropriate land use code for this store type.

When comparing parking rates for Land Use Code 861, we obtain a value of 2.62 compared with 2.76 per 1000 square feet(/KSF) of gross floor area from the one 90,000 square foot urban facility listed under Land Use Code 861. These values are fairly comparable. We could not obtain building-wide peak parking demand since the parking at the Edge Lofts is private.

There are many possible influences to the data collected. A hiking club met at REI on Tuesday and Thursday nights at 5PM. However, since REI offers many classes and seminars, these meetings are probably more the norm than an exception. Weather was sunny and unseasonably warm for February during both collection days. Furthermore, with twenty-seven different persons conducting intercept surveys, there is a lot of variability with respect to response rates.

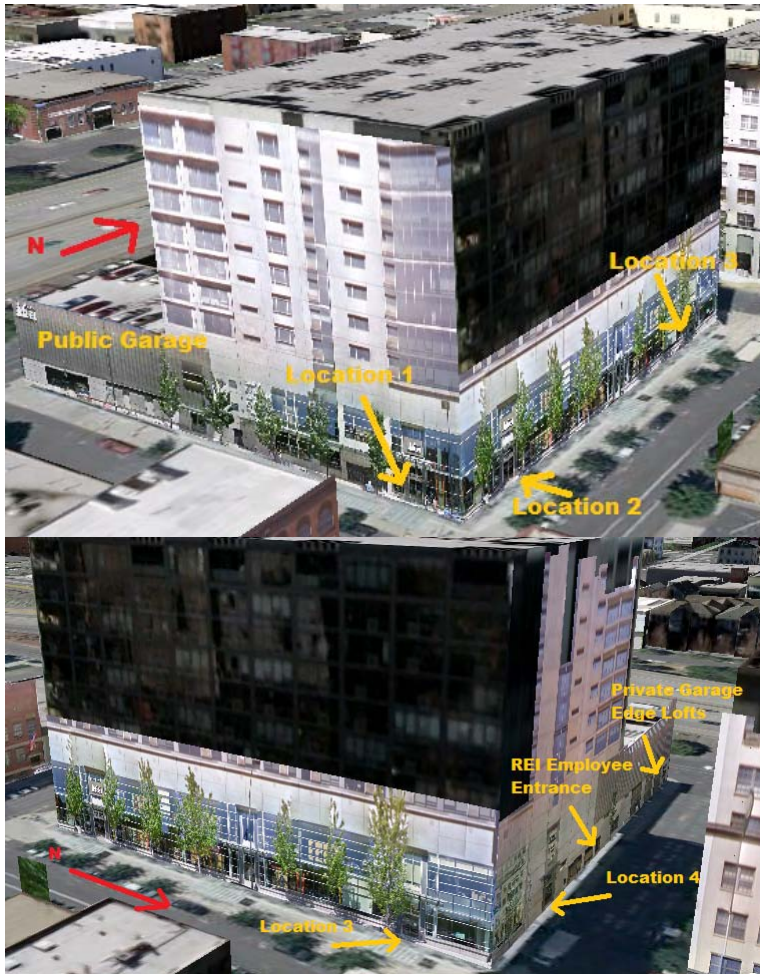


Figure 1: 3d Rendering of REI/Edge Lofts/BOA Home Loans Building

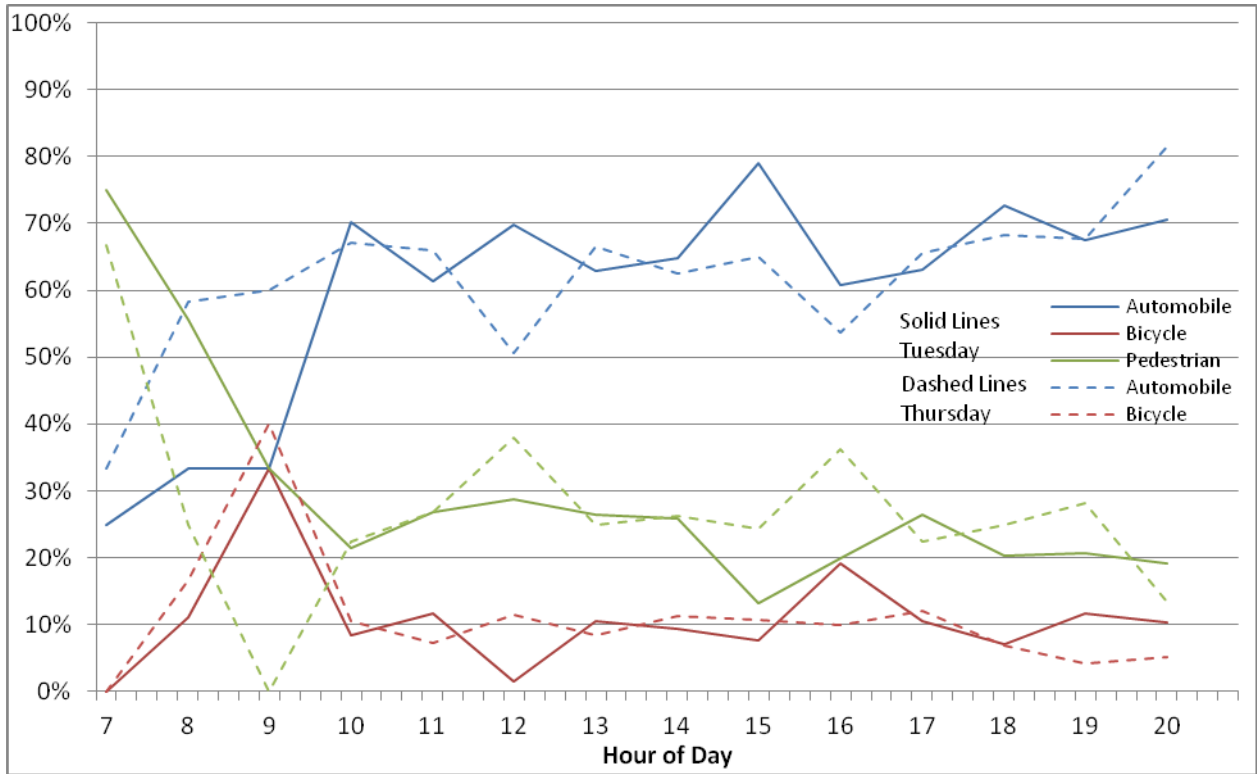


Figure 2: Mode Split by Hour – REI

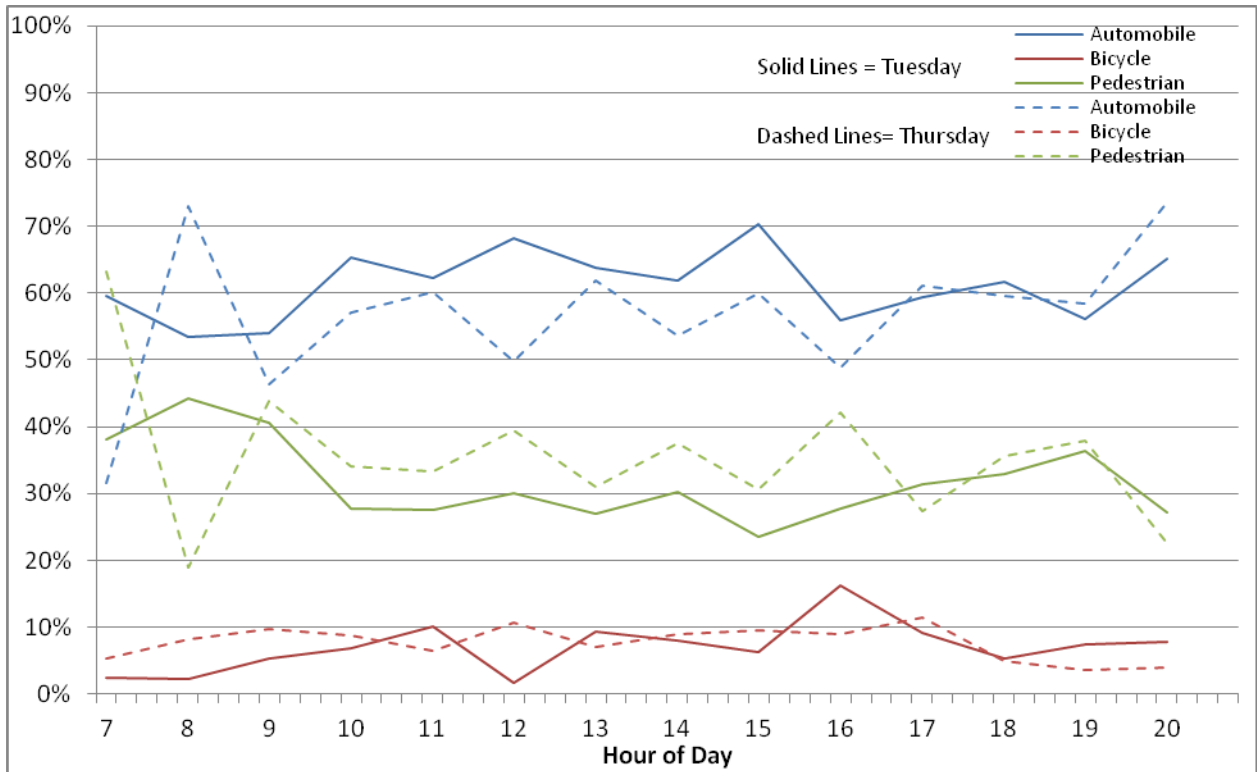


Figure 3: Mode Split by Hour - Mixed-Use Building

Location	REI			Mixed-Use (REI/Edge/BOA)		
Day	Tuesday Feb 16	Thursday Feb 18	2-day Average	Tuesday Feb 16	Thursday Feb 18	2-day Average
Peak Hour	11- 12PM	10:45 - 11:45	N/A	11- 12PM	10:45 - 11:45 AM	N/A
Number of Vehicles	89	123	106	104	132	118
Vehicle Occupants	115	179	147	N/A	N/A	N/A
Vehicle Occupancy	1.29	1.46	1.38	N/A	N/A	N/A
Vehicle Trip Rate/KSF	2.54	3.51	3.03	2.66*	3.61*	3.14*
Pedestrians	39	49	44	46	75	61
Bicycles	17	15	16	17	15	16
Transit (subset of Ped)	7	2	5	7	2	5
Total Trips	145	187	166	167	222	195
Total Trip Rate/KSF	4.14	5.34	4.74	4.32*	5.62*	4.97*
Total Persons	171	243	207	N/A	N/A	N/A
Person Trip Rate/KSF	4.89	6.94	5.92	N/A	N/A	N/A
% Entering	43.2	55.6	49.4	50.9	54.5	52.7
% Exiting	56.8	44.4	50.6	49.1	45.5	47.3

Table 1: Summary Table Peak Hour - AM Period

*Note that the Mixed-Use Trip rate is the summation of three trip rates measured per KSF (REI and BOA) and Trips per dwelling unit (Edge)

Location	REI			Mixed-Use (REI/Edge/BOA)		
Day	Tuesday Feb 16	Thursday Feb 18	2-day Average	Tuesday Feb 16	Thursday Feb 18	2-day Average
Peak Hour	5-6 PM	5-6PM	N/A	5-6PM	5:15- 6:15 PM	N/A
Number of Vehicles	157	184	171	176	187	182
Vehicle Occupants	221	235	228	N/A	N/A	N/A
Vehicle Occupancy	1.41	1.27	1.33	N/A	N/A	N/A
Vehicle Trip Rate/KSF	4.49	5.25	4.87	4.64*	5.36*	5.00*
Pedestrians	66	63	65	93	83	88
Bicycles	26	34	30	27	31	29
Transit (subset of Ped)	5	12	9	6	12	9
Total Trips	249	281	265	296	301	299
Total Trip Rate/KSF	7.11	8.02	7.57	7.49*	8.18*	7.84*
Total Persons	313	332	323	N/A	N/A	N/A
Person Trip Rate/KSF	8.94	9.48	9.23	N/A	N/A	N/A
% Entering	54.6	52.7	53.7	56.8	51.8	54.3
% Exiting	45.4	47.3	46.3	43.2	48.2	45.7

Table 2: Summary Table Peak Hour – PM Period

*Note that the Mixed-Use Trip rate is the summation of three trip rates measured per KSF (REI and BOA) and Trips per dwelling unit (Edge)

ite **Parking Demand Survey Form**
 Institute of Transportation Engineers
*(fill in all highlighted cells - * are required data)*

Land Use Code* 861
 Name of Site Recreational Equipment, Inc (REI)
 Brief Description of Site outdoor equipment store in high-density urban area

Transit* yes
 Area* CND
 TMP* yes
 City Portland
 State OR Country USA
 Parking Price* \$0 Daily Rate \$0 Hourly Rate

Site Size* 35,000 Units* GSF Occupancy* 100% Land Use
 Site Size
 Site Size
 Site Size

Number of Parking Spaces Provided at Site

Highest Observed Parking Demand for the following hours of the day (hour beginning)*

Date	2/16/2010	2/18/2010
Day	Tuesday	Thursday
6:00 AM		
7:00 AM	1 (0)	1 (0)
8:00 AM	2 (1)	5 (2)
9:00 AM	2 (2)	2 (2)
10:00 AM	55 (8)	54 (9)
11:00 AM	45 (10)	56 (7)
12 Noon	77 (1)	59 (11)
1:00 PM	47 (8)	69 (10)
2:00 PM	58 (8)	49 (9)
3:00 PM	51 (8)	64 (10)
4:00 PM	48 (17)	65 (15)
5:00 PM	87 (13)	96 (18)
6:00 PM	42 (5)	45 (5)
7:00 PM	22 (5)	51 (3)
8:00 PM	23 (2)	27 (1)
9:00 PM		

Person Todd Johnson Organization Portland State University
 Phone 510-928-1982
 Fax
 Email Todd@californiascanda.com

Notes There is shared parking occurring. Counts include garage usage AND on-street parking obtained via intercept survey. Bicycle parking demand in (parenthesis). TDM is employee commute option with employees getting bike tune-ups or discounts on merchandise when carpooling or not taking auto. Parking is free in provided garage for store patrons.

Enter data on the web at www.ite.org Comments to: ite_staff@ite.org
 IF not entered on web site, please mail to:
 Institute of Transportation Engineers, 1099 14th Street, NW Suite 300 West; Washington, DC 20005-3438

Form version 1.4

Table 3: Parking Demand – REI

Day	Tuesday	Thursday	Average
Peak Hour	5-6PM	5-6PM	N/A
Observed Peak Period Parking Demand	87	96	92
Peak Parking Demand Rate	2.49	2.74	2.62

ite **Parking Demand Survey Form**
 Institute of Transportation Engineers
*(fill in all highlighted cells - * are required data)*

Land Use Code*

Name of Site
 Brief Description of Site

Transit*
 Area*
 TMP*

City
 State Country
 Parking Price* Daily Rate Hourly Rate

Site Size*	<input type="text" value="121,417"/>	Units*	<input type="text" value="GSF"/>	Occupancy*	<input type="text" value="100%"/>	Land Use
Site Size	<input type="text" value="123"/>	Units	<input type="text" value="Condos"/>	Occupancy	<input type="text" value="100%"/>	<input type="text" value="230"/>
Site Size	<input type="text" value="35,000"/>	Units	<input type="text" value="GSF"/>	Occupancy	<input type="text" value="100%"/>	<input type="text" value="881"/>
Site Size	<input type="text" value="5,000"/>	Units	<input type="text" value="GSF"/>	Occupancy	<input type="text" value="100%"/>	<input type="text" value="710"/>

Number of Parking Spaces Provided at Site

Highest Observed Parking Demand for the following hours of the day (hour beginning)*

Date	<input type="text" value="2/18/2010"/>	<input type="text" value="2/18/2010"/>
Day	<input type="text" value="Tuesday"/>	<input type="text" value="Thursday"/>
6:00 AM		
7:00 AM	<input type="text" value="6 (0)"/>	<input type="text" value="1 (0)"/>
8:00 AM	<input type="text" value="4 (1)"/>	<input type="text" value="11 (2)"/>
9:00 AM	<input type="text" value="9 (2)"/>	<input type="text" value="6 (3)"/>
10:00 AM	<input type="text" value="59 (8)"/>	<input type="text" value="55 (10)"/>
11:00 AM	<input type="text" value="53 (10)"/>	<input type="text" value="63 (7)"/>
12 Noon	<input type="text" value="88 (1)"/>	<input type="text" value="67 (13)"/>
1:00 PM	<input type="text" value="51 (8)"/>	<input type="text" value="76 (10)"/>
2:00 PM	<input type="text" value="64 (8)"/>	<input type="text" value="54 (9)"/>
3:00 PM	<input type="text" value="81 (8)"/>	<input type="text" value="68 (10)"/>
4:00 PM	<input type="text" value="54 (17)"/>	<input type="text" value="65 (15)"/>
5:00 PM	<input type="text" value="103 (14)"/>	<input type="text" value="97 (18)"/>
6:00 PM	<input type="text" value="56 (5)"/>	<input type="text" value="63 (5)"/>
7:00 PM	<input type="text" value="32 (5)"/>	<input type="text" value="67 (4)"/>
8:00 PM	<input type="text" value="32 (2)"/>	<input type="text" value="37 (1)"/>
9:00 PM		
10:00 PM		
11:00 PM		

Person Organization
 Phone
 Fax
 Email

Notes

Enter data on the web at www.ite.org Comments to: ite_staff@ite.org
 IF not entered on web site, please mail to:
 Institute of Transportation Engineers, 1099 14th Street, NW Suite 300 West, Washington, DC 20005-3438

Form version 1.4

Table 4: Parking Demand - Mixed-Use

Day	Tuesday	Thursday	Average
Peak Hour	5-6PM	5-6PM	N/A
Observed Parking Demand	103	97	100
Peak Parking Demand Rate*	2.62	2.75	2.69

*Note that the mixed-use parking demand is the summation of three trip rates measured per KSF (REI and BOA) and Trips per dwelling unit (Edge)

Trip Generation Data Form (Part 1)

Land Use/Building Type: ¹ Sporting Goods Superstore	ITE Land Use Code: 861
Source:	Source No. (ITE use only):
Name of Development: Recreational Equipment Inc (REI) - Portland	Day of the Week: Tuesday
City: Portland State/Province: OR Zip/Postal Code: 97209	Day: 16 Month: February Year: 2010
Country: USA	Metropolitan Area: portland Metro

1. For fast-food land use, please specify if hamburger- or nonhamburger-based.

Location Within Area: <input type="checkbox"/> (1) CBD <input type="checkbox"/> (3) Suburban (Non-CBD) <input type="checkbox"/> (5) Rural <input checked="" type="checkbox"/> (2) Urban (Non-CBD) <input type="checkbox"/> (4) Suburban CBD <input type="checkbox"/> (6) Freeway Interchange Area (Rural) <input type="checkbox"/> (7) Not Given				Detailed Description of Development:³ This REI store is located in the Pearl District in downtown Portland. The Pearl District is known for its high density mixed-use buildings and the REI store is no exception. A streetcar and two bus lines provide service within 3 blocks of REI. Furthermore, bicycle racks are outside of the entrance to the store. REI sells outdoor gear and clothing. This location has bike-shop services and bicycle racks are located directly outside the entrance to the store.			
Independent Variable: (include data for as many as possible)²		Actual	Estimated	Actual	Estimated		
<u>30</u> (1) Employees (#)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u> </u> (9) Parking Spaces (% occupied: <u> </u>)	<input type="checkbox"/>	<input type="checkbox"/>		
<u> </u> (2) Persons (#)	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u> (10) Beds (% occupied: <u> </u>)	<input type="checkbox"/>	<input type="checkbox"/>		
<u> </u> (3) Total Units (#) (indicate unit: <u> </u>)	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u> (11) Seats (#)	<input type="checkbox"/>	<input type="checkbox"/>		
<u> </u> (4) Occupied Units (#) (indicate unit: <u> </u>)	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u> (12) Servicing Positions/Vehicle Fueling Positions	<input type="checkbox"/>	<input type="checkbox"/>		
<u>35,000</u> (5) Gross Floor Area (gross sq. ft.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u> </u> (13) Shopping Center % Out-parcels/pads	<input type="checkbox"/>	<input type="checkbox"/>		
(% of development occupied <u>100%</u>)			<u> </u> (14) A.M. Peak Hour Volume of Adjacent Street Traffic	<input type="checkbox"/>	<input type="checkbox"/>		
<u> </u> (6) Net Rentable Area (sq. ft.)	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u> (15) P.M. Peak Hour Volume of Adjacent Street Traffic	<input type="checkbox"/>	<input type="checkbox"/>		
<u> </u> (7) Gross Leasable Area (sq. ft.)	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u> (16) Other <u> </u>	<input type="checkbox"/>	<input type="checkbox"/>		
(% of development occupied <u> </u>)			<u> </u> (17) Other <u> </u>	<input type="checkbox"/>	<input type="checkbox"/>		
<u> </u> (8) Total Acres (% developed: <u> </u>)	<input type="checkbox"/>	<input type="checkbox"/>					

2. Definitions for several independent variables can be found in the Trip Generation, Second Edition, User's Guide Glossary.

3. Please provide all pertinent information to describe the subject project, including the presence of bicycle/pedestrian facilities. To report bicycle/pedestrian volumes, please refer to Part 4 of this data form.

Other Data: Vehicle Occupancy (#): <u> </u> A.M. <u> </u> P.M. <u> </u> 24-hour % Percent by Transit: <u> </u> A.M. % <u> </u> P.M. % <u> </u> 24-hour % Percent by Carpool/Vanpool: <u> </u> A.M. % <u> </u> P.M. % <u> </u> 24-hour % Employees by Shift: First Shift: Start Time <u>10AM</u> End Time <u>9PM</u> Employees (#) <u>30</u> Second Shift: Start Time <u> </u> End Time <u> </u> Employees (#) <u> </u> Third Shift: Start Time <u> </u> End Time <u> </u> Employees (#) <u> </u> Parking Cost on Site: Hourly <u> </u> Daily <u> </u>		Transportation Demand Management (TDM) Information: At the time of this study, was there a TDM program (that may have impacted the trip generation characteristics of this site) underway? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (If yes, please check appropriate box/boxes, describe the nature of the TDM program(s) and provide a source for any studies that may help quantify this impact. Attach additional sheets if necessary) <input type="checkbox"/> (1) Transit Service <input checked="" type="checkbox"/> (5) Employer Support Measures <input type="checkbox"/> (9) Tolls and Congestion Pricing <input type="checkbox"/> (2) Carpool Programs <input type="checkbox"/> (6) Preferential HOV Treatments <input type="checkbox"/> (10) Variable Work Hours/Compressed Work Weeks <input type="checkbox"/> (3) Vanpool Programs <input checked="" type="checkbox"/> (7) Transit and Ridesharing Incentives <input type="checkbox"/> (11) Telecommuting <input checked="" type="checkbox"/> (4) Bicycle/Pedestrian Facilities and Site Improvements <input type="checkbox"/> (8) Parking Supply and Pricing Management <input type="checkbox"/> (12) Other <u> </u>	
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Trip Generation Data Form (Part 2)

Summary of Driveway Volumes

(All = All Vehicles Counted, Including Trucks; Trucks = Heavy Duty Trucks and Buses)

	Average Weekday (M-F)						Saturday						Sunday					
	Enter		Exit		Total		Enter		Exit		Total		Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks
24-Hour Volume	560	1	556	1	1116	2												
A.M. Peak Hour of Adjacent Street Traffic (7 - 9) Time: 8 - 9	2		1		3													
P.M. Peak Hour of Adjacent Street Traffic (4 - 6) Time: 5 - 6	87	0	70	0	157	0												
A.M. Peak Hour Generator ² Time: 10 - 11	55	0	37	0	92	0												
P.M. Peak Hour Generator ² Time: 5 - 6	87	0	70	0	157	0												
Peak Hour Generator ³ Time (Weekend):																		

¹ Highest hourly volume between 7 a.m. and 9 a.m. (4 p.m. and 6 p.m.). Please specify the peak hour.

² Highest hourly volume during the a.m. or p.m. period. Please specify the peak hour.

³ Highest hourly volume during the entire day. Please specify the peak hour.

Please refer to the *Trip Generation User's Guide* for full definition of terms.

Hourly Driveway Volumes- Average Weekday (M-F)

A.M. Period	Enter		Exit		Total		Mid-Day Period	Enter		Exit		Total		P.M. Period	Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks
6:00-7:00							11:00-12:00	45		44		89		3:00-4:00	51		62		113	
6:15-7:15							11:15-12:15	56		44		100		3:15-4:15	44		57		101	
6:30-7:30							11:30-12:30	62		50		112		3:30-4:30	41		57		98	
6:45-7:45							11:45-12:45	71		55		126		3:45-4:45	46		47		93	
7:00-8:00	1				1		12:00-1:00	77		64		141		4:00-5:00	48		50		98	
7:15-8:15	1				1		12:15-1:15	66		77		143		4:15-5:15	56		53		109	
7:30-8:30	1		1		2		12:30-1:30	57		72		129		4:30-5:30	69		57		126	
7:45-8:45	1		1		2		12:45-1:45	46		64		110		4:45-5:45	75		62		137	
8:00-9:00	2		1		3		1:00-2:00	47		55		102		5:00-6:00	87		70		157	

Check if Part 3, 4 and/or additional information is attached.

Survey conducted by: Name: Todd Johnson
 Organization: Portland State University
 Address: 1930 SW 4th Ave, Suite 200
 City/State/Zip: Portland, OR 97201
 Telephone #: 503-725-4285 Fax #: _____

E-mail: Todd@Californiascanada.com

Please return to: Institute of Transportation Engineers
 Technical Projects Division
 1099 14th Street, NW, Suite 300 West
 Washington, DC 20005-3438 USA
 Telephone: +1 202-289-0222
 Fax: +1 202-289-7722
 ITE on the Web: www.ite.org



Institute of Transportation Engineers

Trip Generation Data Form (Part 3)

Name/Organization: Todd Johnson - STEP Portland State Univ City/State: Portland, OR

Telephone Number: 510-928-1982

Detailed Driveway Volumes: Attach this sheet to Parts 1 and 2 if you are providing additional information.

Day of the week: Tuesday Feb 16th 2010 (All = All Vehicles Counted, Including Trucks; Trucks = Heavy Duty Trucks and Buses)

A.M. Period	Enter		Exit		Total		P.M. Period	Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks
12:00-12:15							12:00-12:15	25		7		32	
12:15-12:30							12:15-12:30	18		20		38	
12:30-12:45							12:30-12:45	20		18		38	
12:45-1:00							12:45-1:00	14		19		33	
1:00-1:15							1:00-1:15	14		20		34	
1:15-1:30							1:15-1:30	9		15		24	
1:30-1:45							1:30-1:45	9		10		19	
1:45-2:00							1:45-2:00	15		10		25	
2:00-2:15							2:00-2:15	11		22		33	
2:15-2:30							2:15-2:30	20		13		33	
2:30-2:45							2:30-2:45	16		12		28	
2:45-3:00							2:45-3:00	11		13		24	
3:00-3:15							3:00-3:15	16		17		33	
3:15-3:30							3:15-3:30	12		10		22	
3:30-3:45							3:30-3:45	12		22		34	
3:45-4:00							3:45-4:00	11		13		24	
4:00-4:15							4:00-4:15	9		12		21	
4:15-4:30							4:15-4:30	9		10		19	
4:30-4:45							4:30-4:45	17		12		29	
4:45-5:00							4:45-5:00	13		16		29	
5:00-5:15							5:00-5:15	17		15		32	
5:15-5:30							5:15-5:30	22		14		36	
5:30-5:45							5:30-5:45	23		17		40	
5:45-6:00							5:45-6:00	25		24		49	
6:00-6:15							6:00-6:15	12		18		30	
6:15-6:30							6:15-6:30	10		11		21	
6:30-6:45							6:30-6:45	11		10		21	
6:45-7:00							6:45-7:00	9		12		21	
7:00-7:15	0		0		0		7:00-7:15	7		13		20	
7:15-7:30	0		0		0		7:15-7:30	6		11		17	
7:30-7:45	0		0		0		7:30-7:45	4		2		6	
7:45-8:00	1		0		1		7:45-8:00	5		4		9	
8:00-8:15	0		0		0		8:00-8:15	10		8		18	
8:15-8:30	0		1		1		8:15-8:30	8		5		13	
8:30-8:45	0		0		0		8:30-8:45	4		14		18	
8:45-9:00	2		0		2		8:45-9:00	1		5		6	
9:00-9:15	0		0		0		9:00-9:15						
9:15-9:30	0		0		0		9:15-9:30						
9:30-9:45	1		0		1		9:30-9:45						
9:45-10:00	1		0		1		9:45-10:00						
10:00-10:15	16		8		24		10:00-10:15						
10:15-10:30	17		8		25		10:15-10:30						
10:30-10:45	12		11		23		10:30-10:45						
10:45-11:00	10		10		20		10:45-11:00						
11:00-11:15	14		7		21		11:00-11:15						
11:15-11:30	12		14		26		11:15-11:30						
11:30-11:45	11		13		24		11:30-11:45						
11:45-12:00	8		10		18		11:45-12:00						

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Trip Generation Data Form (Part 4)

Summary of Bicycle Volumes

	Average Weekday (M-F)			Saturday			Sunday		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
24-Hour Volume	86	76	162						
A.M. Peak Hour of Adjacent ¹ Street Traffic (7 – 9) Time: 8 – 9	1	0	1						
P.M. Peak Hour of Adjacent ¹ Street Traffic (4 – 6) Time: 4 – 5	17	14	31						
A.M. Peak Hour Generator ² Time: 11 – 12	10	7	17						
P.M. Peak Hour Generator ² Time: 4 – 5	17	14	31						
Peak Hour Generator ³ Time (Weekend):									

¹ Highest hourly volume between 7 a.m. and 9 a.m. (4 p.m. and 6 p.m.) as defined in Trip Generation Data Form (Part 2). Please specify the peak hour.

² Highest hourly volume during the a.m. or p.m. period. Please specify the peak hour.

³ Highest hourly volume during the entire day. Please specify the peak hour. Please attach supplemental hourly volumes.

Please refer to the *Trip Generation User's Guide* for full definition of terms.

Summary of Pedestrian Volumes

	Average Weekday (M-F)			Saturday			Sunday		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
24-Hour Volume	213	186	399						
A.M. Peak Hour of Adjacent ¹ Street Traffic (7 – 9) Time: 8 – 9	5	0	5						
P.M. Peak Hour of Adjacent ¹ Street Traffic (4 – 6) Time: 5 – 6	36	30	66						
A.M. Peak Hour Generator ² Time: 11 – 12	19	20	39						
P.M. Peak Hour Generator ² Time: 5 – 6	36	30	66						
Peak Hour Generator ³ Time (Weekend):									

Survey conducted by: Name: Todd Johnson

Organization: Portland State University

Address: 1930 SW 4th Ave, Suite 200

City/State/Zip: Portland, OR 97201

Telephone #: 503-725-4285 Fax #: _____

E-mail: Todd@Californiascanada.com

Please return to: Institute of Transportation Engineers
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 1099 14th Street, NW, Suite 300 West
 Washington, DC 20005-3438 USA
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 ITE on the Web: www.ite.org

Trip Generation Data Form (Part 1)

Land Use/Building Type: ¹ Mixed-Use Facility	ITE Land Use Code:
Source:	Source No. (ITE use only):
Name of Development: Edge Lofts/REI/Bank of America Home Loans	Day of the Week: Tuesday
City: Portland State/Province: OR Zip/Postal Code: 97209	Day: 16 Month: February Year: 2010
Country: USA	Metropolitan Area: Portland Metro

1. For fast-food land use, please specify if hamburger- or nonhamburger-based.

Location Within Area: <input type="checkbox"/> (1) CBD <input type="checkbox"/> (3) Suburban (Non-CBD) <input type="checkbox"/> (5) Rural <input checked="" type="checkbox"/> (2) Urban (Non-CBD) <input type="checkbox"/> (4) Suburban CBD <input type="checkbox"/> (6) Freeway Interchange Area (Rural) <input type="checkbox"/> (7) Not Given				Detailed Description of Development:³ This mixed-use facility has a 35,000 square foot REI with 30 employees, a ~2,000 square foot Home Loans Office with 2 employees, and a 123 unit condominium high-rise. Each facility has separate entrances and exits so that inner-building movements are not possible. The Edge Lofts has a private parking garage only available to residents. There is a public parking garage used by REI customers. However, customers parking in the garage must enter the REI store from an outside entrance. Bicycle parking is available near every door to the building. Two bus lines and a streetcar operate within three blocks of the building.			
Independent Variable: (include data for as many as possible)²		Actual	Estimated	Actual	Estimated		
<u>32</u> (1) Employees (#)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u> </u> (9) Parking Spaces (% occupied: <u> </u>)	<input type="checkbox"/>	<input type="checkbox"/>		
<u> </u> (2) Persons (#)	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u> (10) Beds (% occupied: <u> </u>)	<input type="checkbox"/>	<input type="checkbox"/>		
<u>123</u> (3) Total Units (#) (indicate unit: <u>condos</u>)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u> </u> (11) Seats (#)	<input type="checkbox"/>	<input type="checkbox"/>		
<u> </u> (4) Occupied Units (#) (indicate unit: <u> </u>)	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u> (12) Servicing Positions/Vehicle Fueling Positions	<input type="checkbox"/>	<input type="checkbox"/>		
<u>121, 417</u> (5) Gross Floor Area (gross sq. ft.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u> </u> (13) Shopping Center % Out-parcels/pads	<input type="checkbox"/>	<input type="checkbox"/>		
(% of development occupied <u>100%</u>)			<u> </u> (14) A.M. Peak Hour Volume of Adjacent Street Traffic	<input type="checkbox"/>	<input type="checkbox"/>		
<u> </u> (6) Net Rentable Area (sq. ft.)	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u> (15) P.M. Peak Hour Volume of Adjacent Street Traffic	<input type="checkbox"/>	<input type="checkbox"/>		
<u> </u> (7) Gross Leasable Area (sq. ft.)	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u> (16) Other <u> </u>	<input type="checkbox"/>	<input type="checkbox"/>		
(% of development occupied <u> </u>)			<u> </u> (17) Other <u> </u>	<input type="checkbox"/>	<input type="checkbox"/>		
<u>.92</u> (8) Total Acres (% developed: <u>100%</u>)	<input checked="" type="checkbox"/>	<input type="checkbox"/>					

2. Definitions for several independent variables can be found in the Trip Generation, Second Edition, User's Guide Glossary.

3. Please provide all pertinent information to describe the subject project, including the presence of bicycle/pedestrian facilities. To report bicycle/pedestrian volumes, please refer to Part 4 of this data form.

Other Data: Vehicle Occupancy (#): <u> </u> A.M. <u> </u> P.M. <u> </u> 24-hour % Percent by Transit: <u> </u> A.M. % <u> </u> P.M. % <u> </u> 24-hour % Percent by Carpool/Vanpool: <u> </u> A.M. % <u> </u> P.M. % <u> </u> 24-hour % Employees by Shift: First Shift: Start Time <u>10AM</u> End Time <u>9PM</u> Employees (#) <u>30</u> Second Shift: Start Time <u>10AM</u> End Time <u>5PM</u> Employees (#) <u>2</u> Third Shift: Start Time <u> </u> End Time <u> </u> Employees (#) <u> </u> Parking Cost on Site: Hourly <u>0</u> Daily <u> </u>		Transportation Demand Management (TDM) Information: At the time of this study, was there a TDM program (that may have impacted the trip generation characteristics of this site) underway? <input type="checkbox"/> No <input type="checkbox"/> Yes (If yes, please check appropriate box/boxes, describe the nature of the TDM program(s) and provide a source for any studies that may help quantify this impact. Attach additional sheets if necessary) <input type="checkbox"/> (1) Transit Service <input checked="" type="checkbox"/> (5) Employer Support Measures <input type="checkbox"/> (9) Tolls and Congestion Pricing <input type="checkbox"/> (2) Carpool Programs <input type="checkbox"/> (6) Preferential HOV Treatments <input type="checkbox"/> (10) Variable Work Hours/Compressed Work Weeks <input type="checkbox"/> (3) Vanpool Programs <input checked="" type="checkbox"/> (7) Transit and Ridesharing Incentives <input type="checkbox"/> (11) Telecommuting <input checked="" type="checkbox"/> (4) Bicycle/Pedestrian Facilities and Site Improvements <input type="checkbox"/> (8) Parking Supply and Pricing Management <input type="checkbox"/> (12) Other <u> </u>	
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Trip Generation Data Form (Part 2)

Summary of Driveway Volumes

(All = All Vehicles Counted, Including Trucks; Trucks = Heavy Duty Trucks and Buses)

	Average Weekday (M-F)						Saturday						Sunday					
	Enter		Exit		Total		Enter		Exit		Total		Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks
24-Hour Volume	672	1	664	1	1336	2												
A.M. Peak Hour of Adjacent ¹ Street Traffic (7 – 9) Time: 7:30–8:30	4		27		31													
P.M. Peak Hour of Adjacent ¹ Street Traffic (4 – 6) Time: 5–6	103	0	73	0	176	0												
A.M. Peak Hour Generator ² Time: 11–12	53	0	51	0	104	0												
P.M. Peak Hour Generator ² Time: 5–6	103	0	73	0	176	0												
Peak Hour Generator ³ Time (Weekend):																		

¹ Highest hourly volume between 7 a.m. and 9 a.m. (4 p.m. and 6 p.m.). Please specify the peak hour.

² Highest hourly volume during the a.m. or p.m. period. Please specify the peak hour.

³ Highest hourly volume during the entire day. Please specify the peak hour.

Please refer to the *Trip Generation User's Guide* for full definition of terms.

Hourly Driveway Volumes- Average Weekday (M-F)

A.M. Period	Enter		Exit		Total		Mid-Day Period	Enter		Exit		Total		P.M. Period	Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks
6:00-7:00							11:00-12:00	53		51		104		3:00-4:00	61		64		125	
6:15-7:15							11:15-12:15	63		52		115		3:15-4:15	55		60		115	
6:30-7:30							11:30-12:30	71		59		130		3:30-4:30	51		59		110	
6:45-7:45							11:45-12:45	83		63		146		3:45-4:45	55		50		105	
7:00-8:00	6		19		25		12:00-1:00	88		68		156		4:00-5:00	54		53		107	
7:15-8:15	7		25		32		12:15-1:15	76		82		158		4:15-5:15	62		55		117	
7:30-8:30	6		25		31		12:30-1:30	66		79		145		4:30-5:30	74		59		133	
7:45-8:45	4		27		31		12:45-1:45	52		72		124		4:45-5:45	86		65		151	
8:00-9:00	4		19		23		1:00-2:00	51		65		116		5:00-6:00	103		73		176	

Check if Part 3, 4 and/or additional information is attached.

Survey conducted by: Name: Todd Johnson
 Organization: Portland State University
 Address: 1930 SW 4th Ave, Suite 200
 City/State/Zip: Portland, OR 97201
 Telephone #: 503-725-4285 Fax #: _____ E-mail: Todd@Californiascanada.com

Please return to: Institute of Transportation Engineers
 Technical Projects Division
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 Washington, DC 20005-3438 USA
 Telephone: +1 202-289-0222
 Fax: +1 202-289-7722
 ITE on the Web: www.ite.org

ITE Institute of Transportation Engineers
Trip Generation Data Form (Part 3)

Name/Organization: Todd Johnson - STEP Portland State Univ **City/State:** Portland, OR
Telephone Number: 510-928-1982

Detailed Driveway Volumes: Attach this sheet to Parts 1 and 2 if you are providing additional information.

Day of the week: Tuesday Feb 16th 2010 (All = All Vehicles Counted, Including Trucks; Trucks = Heavy Duty Trucks and Buses)

A.M. Period	Enter		Exit		Total		P.M. Period	Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks
12:00-12:15							12:00-12:15	28		10		38	
12:15-12:30							12:15-12:30	20		21		41	
12:30-12:45							12:30-12:45	24		18		42	
12:45-1:00							12:45-1:00	16		19		35	
1:00-1:15							1:00-1:15	16		24		40	
1:15-1:30							1:15-1:30	10		18		28	
1:30-1:45							1:30-1:45	10		11		21	
1:45-2:00							1:45-2:00	15		12		27	
2:00-2:15							2:00-2:15	11		22		33	
2:15-2:30							2:15-2:30	21		16		37	
2:30-2:45							2:30-2:45	18		13		31	
2:45-3:00							2:45-3:00	14		16		30	
3:00-3:15							3:00-3:15	18		17		35	
3:15-3:30							3:15-3:30	15		11		26	
3:30-3:45							3:30-3:45	14		22		36	
3:45-4:00							3:45-4:00	14		14		28	
4:00-4:15							4:00-4:15	12		13		25	
4:15-4:30							4:15-4:30	11		10		21	
4:30-4:45							4:30-4:45	18		13		31	
4:45-5:00							4:45-5:00	13		17		30	
5:00-5:15							5:00-5:15	20		15		35	
5:15-5:30							5:15-5:30	23		14		37	
5:30-5:45							5:30-5:45	30		19		49	
5:45-6:00							5:45-6:00	30		25		55	
6:00-6:15							6:00-6:15	14		22		36	
6:15-6:30							6:15-6:30	16		11		27	
6:30-6:45							6:30-6:45	14		12		26	
6:45-7:00							6:45-7:00	12		13		25	
7:00-7:15	0		2		2		7:00-7:15	9		13		22	
7:15-7:30	1		5		6		7:15-7:30	10		14		24	
7:30-7:45	2		2		4		7:30-7:45	5		3		8	
7:45-8:00	3		10		13		7:45-8:00	8		6		14	
8:00-8:15	1		8		9		8:00-8:15	12		9		21	
8:15-8:30	0		5		5		8:15-8:30	12		6		18	
8:30-8:45	0		4		4		8:30-8:45	7		15		22	
8:45-9:00	3		2		5		8:45-9:00	1		5		6	
9:00-9:15	2		2		4		9:00-9:15						
9:15-9:30	1		3		4		9:15-9:30						
9:30-9:45	3		4		7		9:30-9:45						
9:45-10:00	3		2		5		9:45-10:00						
10:00-10:15	17		10		27		10:00-10:15						
10:15-10:30	17		9		26		10:15-10:30						
10:30-10:45	12		15		27		10:30-10:45						
10:45-11:00	13		11		24		10:45-11:00						
11:00-11:15	18		9		27		11:00-11:15						
11:15-11:30	12		14		26		11:15-11:30						
11:30-11:45	12		14		26		11:30-11:45						
11:45-12:00	11		14		25		11:45-12:00						

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Trip Generation Data Form (Part 4)

Summary of Bicycle Volumes

	Average Weekday (M-F)			Saturday			Sunday		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
24-Hour Volume	87	79	166						
A.M. Peak Hour of Adjacent Street Traffic (7 - 9) Time: 8 - 9	1	0	1						
P.M. Peak Hour of Adjacent Street Traffic (4 - 6) Time: 4 - 5	17	14	31						
A.M. Peak Hour Generator ² Time: 11 - 12	10	7	17						
P.M. Peak Hour Generator ² Time: 4 - 5	17	14	31						
Peak Hour Generator ³ Time (Weekend):									

¹ Highest hourly volume between 7 a.m. and 9 a.m. (4 p.m. and 6 p.m.) as defined in Trip Generation Data Form (Part 2). Please specify the peak hour.

² Highest hourly volume during the a.m. or p.m. period. Please specify the peak hour.

³ Highest hourly volume during the entire day. Please specify the peak hour. Please attach supplemental hourly volumes.

Please refer to the *Trip Generation User's Guide* for full definition of terms.

Summary of Pedestrian Volumes

	Average Weekday (M-F)			Saturday			Sunday		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
24-Hour Volume	340	303	643						
A.M. Peak Hour of Adjacent Street Traffic (7 - 9) Time: 8:15 - 9:15	6	15	21						
P.M. Peak Hour of Adjacent Street Traffic (4 - 6) Time: 5 - 6	51	42	93						
A.M. Peak Hour Generator ² Time: 11 - 12	22	24	46						
P.M. Peak Hour Generator ² Time: 5 - 6	51	42	93						
Peak Hour Generator ³ Time (Weekend):									

Survey conducted by: Name: Todd Johnson
 Organization: Portland State University
 Address: 1930 SW 4th Ave, Suite 200
 City/State/Zip: Portland, OR 97201
 Telephone #: 503-725-4285 Fax #: _____

E-mail: Todd@Californiascanada.com

Please return to: Institute of Transportation Engineers
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 Fax: +1 202-289-7722
 ITE on the Web: www.ite.org

Trip Generation Data Form (Part 1)

Land Use/Building Type: ¹ Sporting Goods Superstore	ITE Land Use Code: 861
Source:	Source No. (ITE use only):
Name of Development: Recreational Equipment Inc (REI) - Portland	Day of the Week: Thursday
City: Portland State/Province: OR Zip/Postal Code: 97209	Day: 18 Month: February Year: 2010
Country: USA	Metropolitan Area: Portland Metro

1. For fast-food land use, please specify if hamburger- or nonhamburger-based.

Location Within Area: <input type="checkbox"/> (1) CBD <input type="checkbox"/> (3) Suburban (Non-CBD) <input type="checkbox"/> (5) Rural <input checked="" type="checkbox"/> (2) Urban (Non-CBD) <input type="checkbox"/> (4) Suburban CBD <input type="checkbox"/> (6) Freeway Interchange Area (Rural) <input type="checkbox"/> (7) Not Given				Detailed Description of Development:³ This REI store is located in the Pearl District in downtown Portland. The Pearl District is known for its high density mixed-use buildings and the REI store is no exception. A streetcar and two bus lines provide service within 3 blocks of REI. Furthermore, bicycle racks are outside of the entrance to the store. REI sells outdoor gear and clothing. This location has bike-shop services and bicycle racks are located directly outside the entrance to the store.			
Independent Variable: (include data for as many as possible)²		Actual	Estimated	Actual	Estimated		
<u>30</u> (1) Employees (#)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u> </u> (9) Parking Spaces (% occupied: <u> </u>)	<input type="checkbox"/>	<input type="checkbox"/>		
<u> </u> (2) Persons (#)	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u> (10) Beds (% occupied: <u> </u>)	<input type="checkbox"/>	<input type="checkbox"/>		
<u> </u> (3) Total Units (#) (indicate unit: <u> </u>)	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u> (11) Seats (#)	<input type="checkbox"/>	<input type="checkbox"/>		
<u> </u> (4) Occupied Units (#) (indicate unit: <u> </u>)	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u> (12) Servicing Positions/Vehicle Fueling Positions	<input type="checkbox"/>	<input type="checkbox"/>		
<u>35,000</u> (5) Gross Floor Area (gross sq. ft.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u> </u> (13) Shopping Center % Out-parcels/pads	<input type="checkbox"/>	<input type="checkbox"/>		
(% of development occupied <u>100%</u>)			<u> </u> (14) A.M. Peak Hour Volume of Adjacent Street Traffic	<input type="checkbox"/>	<input type="checkbox"/>		
<u> </u> (6) Net Rentable Area (sq. ft.)	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u> (15) P.M. Peak Hour Volume of Adjacent Street Traffic	<input type="checkbox"/>	<input type="checkbox"/>		
<u> </u> (7) Gross Leasable Area (sq. ft.)	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u> (16) Other <u> </u>	<input type="checkbox"/>	<input type="checkbox"/>		
(% of development occupied <u> </u>)			<u> </u> (17) Other <u> </u>	<input type="checkbox"/>	<input type="checkbox"/>		
<u> </u> (8) Total Acres (% developed: <u> </u>)	<input type="checkbox"/>	<input type="checkbox"/>					

2. Definitions for several independent variables can be found in the Trip Generation, Second Edition, User's Guide Glossary.

3. Please provide all pertinent information to describe the subject project, including the presence of bicycle/pedestrian facilities. To report bicycle/pedestrian volumes, please refer to Part 4 of this data form.

Other Data: Vehicle Occupancy (#): <u> </u> A.M. <u> </u> P.M. <u> </u> 24-hour % Percent by Transit: <u> </u> A.M. % <u> </u> P.M. % <u> </u> 24-hour % Percent by Carpool/Vanpool: <u> </u> A.M. % <u> </u> P.M. % <u> </u> 24-hour % Employees by Shift: First Shift: Start Time <u>10AM</u> End Time <u>9PM</u> Employees (#) <u>30</u> Second Shift: Start Time <u> </u> End Time <u> </u> Employees (#) <u> </u> Third Shift: Start Time <u> </u> End Time <u> </u> Employees (#) <u> </u> Parking Cost on Site: Hourly <u> </u> Daily <u> </u>		Transportation Demand Management (TDM) Information: At the time of this study, was there a TDM program (that may have impacted the trip generation characteristics of this site) underway? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (If yes, please check appropriate box/boxes, describe the nature of the TDM program(s) and provide a source for any studies that may help quantify this impact. Attach additional sheets if necessary) <input type="checkbox"/> (1) Transit Service <input checked="" type="checkbox"/> (5) Employer Support Measures <input type="checkbox"/> (9) Tolls and Congestion Pricing <input type="checkbox"/> (2) Carpool Programs <input type="checkbox"/> (6) Preferential HOV Treatments <input type="checkbox"/> (10) Variable Work Hours/Compressed Work Weeks <input type="checkbox"/> (3) Vanpool Programs <input checked="" type="checkbox"/> (7) Transit and Ridesharing Incentives <input type="checkbox"/> (11) Telecommuting <input checked="" type="checkbox"/> (4) Bicycle/Pedestrian Facilities and Site Improvements <input type="checkbox"/> (8) Parking Supply and Pricing Management <input type="checkbox"/> (12) Other <u> </u>	
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Trip Generation Data Form (Part 2)

Summary of Driveway Volumes

(All = All Vehicles Counted, Including Trucks; Trucks = Heavy Duty Trucks and Buses)

	Average Weekday (M-F)						Saturday						Sunday					
	Enter		Exit		Total		Enter		Exit		Total		Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks
24-Hour Volume	643	2	617	2	1260	4												
A.M. Peak Hour of Adjacent ¹ Street Traffic (7 – 9) Time: 7:15–8:15	16		3		19													
P.M. Peak Hour of Adjacent ¹ Street Traffic (4 – 6) Time: 5 – 6	96	0	88	0	184	0												
A.M. Peak Hour Generator ² Time: 10:45–11:45	64	0	59	0	123	0												
P.M. Peak Hour Generator ² Time: 5 – 6	96	0	88	0	184	0												
Peak Hour Generator ³ Time (Weekend):																		

¹ Highest hourly volume between 7 a.m. and 9 a.m. (4 p.m. and 6 p.m.). Please specify the peak hour.

² Highest hourly volume during the a.m. or p.m. period. Please specify the peak hour.

³ Highest hourly volume during the entire day. Please specify the peak hour.

Please refer to the *Trip Generation User's Guide* for full definition of terms.

Hourly Driveway Volumes- Average Weekday (M-F)

A.M. Period	Enter		Exit		Total		Mid-Day Period	Enter		Exit		Total		P.M. Period	Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks
6:00-7:00							11:00-12:00	56	1	62	1	118	1	3:00-4:00	64		64		128	
6:15-7:15							11:15-12:15	64		64		128		3:15-4:15	67		63		130	
6:30-7:30							11:30-12:30	56		68		124		3:30-4:30	67		60		127	
6:45-7:45							11:45-12:45	52		53		105		3:45-4:45	66		58		124	
7:00-8:00	1		0		1		12:00-1:00	59		52		111		4:00-5:00	65		49		114	
7:15-8:15	1		0		1		12:15-1:15	59		51		110		4:15-5:15	67		54		121	
7:30-8:30	5		0		5		12:30-1:30	65		52		117		4:30-5:30	73		56		129	
7:45-8:45	5		1		6		12:45-1:45	71		63		134		4:45-5:45	98		61		159	
8:00-9:00	5		2		7		1:00-2:00	69		64		133		5:00-6:00	96		88		184	

Check if Part 3, 4 and/or additional information is attached.

Survey conducted by: Name: Todd Johnson
 Organization: Portland State University
 Address: 1930 SW 4th Ave, Suite 200
 City/State/Zip: Portland, OR 97201
 Telephone #: 503-725-4285 Fax #: _____

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 ITE on the Web: www.ite.org



Trip Generation Data Form (Part 3)

Name/Organization: Todd Johnson - STEP Portland State Univ City/State: Portland, OR

Telephone Number: 510-928-1982

Detailed Driveway Volumes: Attach this sheet to Parts 1 and 2 if you are providing additional information.

Day of the week: Thursday Feb 18th 2010 (All = All Vehicles Counted, Including Trucks; Trucks = Heavy Duty Trucks and Buses)

A.M. Period	Enter		Exit		Total		P.M. Period	Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks
12:00-12:15							12:00-12:15	19		15		34	
12:15-12:30							12:15-12:30	13		16		29	
12:30-12:45							12:30-12:45	12		10		22	
12:45-1:00							12:45-1:00	15		11		26	
1:00-1:15							1:00-1:15	19		14		33	
1:15-1:30							1:15-1:30	19		17		36	
1:30-1:45							1:30-1:45	18		21		39	
1:45-2:00							1:45-2:00	13		12		25	
2:00-2:15							2:00-2:15	11		14		25	
2:15-2:30							2:15-2:30	14		18		32	
2:30-2:45							2:30-2:45	4		10		14	
2:45-3:00							2:45-3:00	20		9		29	
3:00-3:15							3:00-3:15	18		13		31	
3:15-3:30							3:15-3:30	15	1	15	1	30	2
3:30-3:45							3:30-3:45	15		17		32	
3:45-4:00							3:45-4:00	16		19		35	
4:00-4:15							4:00-4:15	21		12		33	
4:15-4:30							4:15-4:30	15		12		27	
4:30-4:45							4:30-4:45	14		15		29	
4:45-5:00							4:45-5:00	15		10		25	
5:00-5:15							5:00-5:15	23		17		40	
5:15-5:30							5:15-5:30	21		14		35	
5:30-5:45							5:30-5:45	39		20		59	
5:45-6:00							5:45-6:00	13		37		50	
6:00-6:15							6:00-6:15	15		15		30	
6:15-6:30							6:15-6:30	7		7		14	
6:30-6:45							6:30-6:45	11		15		26	
6:45-7:00							6:45-7:00	12		8		20	
7:00-7:15	0		0		0		7:00-7:15	12		7		19	
7:15-7:30	0		0		0		7:15-7:30	10		8		18	
7:30-7:45	1		0		1		7:30-7:45	15		17		32	
7:45-8:00	0		0		0		7:45-8:00	14		13		27	
8:00-8:15	0		0		0		8:00-8:15	11		11		22	
8:15-8:30	4		0		4		8:15-8:30	5		14		19	
8:30-8:45	1		1		2		8:30-8:45	5		7		12	
8:45-9:00	0		1		1		8:45-9:00	6		20		26	
9:00-9:15	1		0		1		9:00-9:15						
9:15-9:30	0		0		0		9:15-9:30						
9:30-9:45	0		1		1		9:30-9:45						
9:45-10:00	1		0		1		9:45-10:00						
10:00-10:15	20		7		27		10:00-10:15						
10:15-10:30	12		12		24		10:15-10:30						
10:30-10:45	6		14		20		10:30-10:45						
10:45-11:00	16	1	9	1	25	2	10:45-11:00						
11:00-11:15	11		13		24		11:00-11:15						
11:15-11:30	21		12		33		11:15-11:30						
11:30-11:45	16		25		41		11:30-11:45						
11:45-12:00	8		12		20		11:45-12:00						

 Institute of Transportation Engineers
Trip Generation Data Form (Part 4)

Summary of Bicycle Volumes

	Average Weekday (M-F)			Saturday			Sunday		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
24-Hour Volume	100	88	188						
A.M. Peak Hour of Adjacent Street Traffic (7 - 9) Time: 8 - 9	2	0	2						
P.M. Peak Hour of Adjacent Street Traffic (4 - 6) Time: 4 : 45 - 5 : 45	21	16	37						
A.M. Peak Hour Generator ² Time: 10 : 45 - 11 : 45	8	7	15						
P.M. Peak Hour Generator ² Time: 4 : 45 - 5 : 45	21	16	37						
Peak Hour Generator ³ Time (Weekend):									

¹ Highest hourly volume between 7 a.m. and 9 a.m. (4 p.m. and 6 p.m.) as defined in Trip Generation Data Form (Part 2). Please specify the peak hour.

² Highest hourly volume during the a.m. or p.m. period. Please specify the peak hour.

³ Highest hourly volume during the entire day. Please specify the peak hour. Please attach supplemental hourly volumes.

Please refer to the *Trip Generation User's Guide* for full definition of terms.

Summary of Pedestrian Volumes

	Average Weekday (M-F)			Saturday			Sunday		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
24-Hour Volume	292	242	534						
A.M. Peak Hour of Adjacent Street Traffic (7 - 9) Time: 8 - 9	2	1	3						
P.M. Peak Hour of Adjacent Street Traffic (4 - 6) Time: 4 - 5	45	32	77						
A.M. Peak Hour Generator ² Time: 10 : 45 - 11 : 45	32	17	39						
P.M. Peak Hour Generator ² Time: 4 - 5	45	32	77						
Peak Hour Generator ³ Time (Weekend):									

Survey conducted by: Name: Todd Johnson
 Organization: Portland State University
 Address: 1930 SW 4th Ave, Suite 200
 City/State/Zip: Portland, OR 97201
 Telephone #: 503-725-4285 Fax #: _____

E-mail: Todd@Californiascanada.com

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Trip Generation Data Form (Part 1)

Land Use/Building Type: ¹ Mixed-Use Facility	ITE Land Use Code:
Source:	Source No. (ITE use only):
Name of Development: Edge Lofts/REI/Bank of America Home Loans	Day of the Week: Thursday
City: Portland State/Province: OR Zip/Postal Code: 97209	Day: 16 Month: February Year: 2010
Country: USA	Metropolitan Area: Portland Metro

1. For fast-food land use, please specify if hamburger- or nonhamburger-based.

Location Within Area: <input type="checkbox"/> (1) CBD <input type="checkbox"/> (3) Suburban (Non-CBD) <input type="checkbox"/> (5) Rural <input checked="" type="checkbox"/> (2) Urban (Non-CBD) <input type="checkbox"/> (4) Suburban CBD <input type="checkbox"/> (6) Freeway Interchange Area (Rural) <input type="checkbox"/> (7) Not Given				Detailed Description of Development:³ This mixed-use facility has a 35,000 square foot REI with 30 employees, a ~2,000 square foot Home Loans Office with 2 employees, and a 123 unit condominium high-rise. Each facility has separate entrances and exits so that inner-building movements are not possible. The Edge Lofts has a private parking garage only available to residents. There is a public parking garage used by REI customers. However, customers parking in the garage must enter the REI store from an outside entrance. Bicycle parking is available near every door to the building. Two bus lines and a streetcar operate within three blocks of the building.			
Independent Variable: (include data for as many as possible)²		Actual	Estimated	Actual	Estimated		
<u>32</u> (1) Employees (#)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u> </u> (9) Parking Spaces (% occupied: <u> </u>)	<input type="checkbox"/>	<input type="checkbox"/>		
<u> </u> (2) Persons (#)	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u> (10) Beds (% occupied: <u> </u>)	<input type="checkbox"/>	<input type="checkbox"/>		
<u>123</u> (3) Total Units (#) (indicate unit: <u>condos</u>)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u> </u> (11) Seats (#)	<input type="checkbox"/>	<input type="checkbox"/>		
<u> </u> (4) Occupied Units (#) (indicate unit: <u> </u>)	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u> (12) Servicing Positions/Vehicle Fueling Positions	<input type="checkbox"/>	<input type="checkbox"/>		
<u>121, 417</u> (5) Gross Floor Area (gross sq. ft.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u> </u> (13) Shopping Center % Out-parcels/pads	<input type="checkbox"/>	<input type="checkbox"/>		
(% of development occupied <u>100%</u>)			<u> </u> (14) A.M. Peak Hour Volume of Adjacent Street Traffic	<input type="checkbox"/>	<input type="checkbox"/>		
<u> </u> (6) Net Rentable Area (sq. ft.)	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u> (15) P.M. Peak Hour Volume of Adjacent Street Traffic	<input type="checkbox"/>	<input type="checkbox"/>		
<u> </u> (7) Gross Leasable Area (sq. ft.)	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u> (16) Other <u> </u>	<input type="checkbox"/>	<input type="checkbox"/>		
(% of development occupied <u> </u>)			<u> </u> (17) Other <u> </u>	<input type="checkbox"/>	<input type="checkbox"/>		
<u>.92</u> (8) Total Acres (% developed: <u>100%</u>)	<input checked="" type="checkbox"/>	<input type="checkbox"/>					

2. Definitions for several independent variables can be found in the Trip Generation, Second Edition, User's Guide Glossary.

3. Please provide all pertinent information to describe the subject project, including the presence of bicycle/pedestrian facilities. To report bicycle/pedestrian volumes, please refer to Part 4 of this data form.

Other Data: Vehicle Occupancy (#): <u> </u> A.M. <u> </u> P.M. <u> </u> 24-hour % Percent by Transit: <u> </u> A.M. % <u> </u> P.M. % <u> </u> 24-hour % Percent by Carpool/Vanpool: <u> </u> A.M. % <u> </u> P.M. % <u> </u> 24-hour % Employees by Shift: First Shift: Start Time <u>10AM</u> End Time <u>9PM</u> Employees (#) <u>30</u> Second Shift: Start Time <u>10AM</u> End Time <u>5PM</u> Employees (#) <u>2</u> Third Shift: Start Time <u> </u> End Time <u> </u> Employees (#) <u> </u> Parking Cost on Site: Hourly <u>0</u> Daily <u> </u>		Transportation Demand Management (TDM) Information: At the time of this study, was there a TDM program (that may have impacted the trip generation characteristics of this site) underway? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (If yes, please check appropriate box/boxes, describe the nature of the TDM program(s) and provide a source for any studies that may help quantify this impact. Attach additional sheets if necessary) <input type="checkbox"/> (1) Transit Service <input checked="" type="checkbox"/> (5) Employer Support Measures <input type="checkbox"/> (9) Tolls and Congestion Pricing <input type="checkbox"/> (2) Carpool Programs <input type="checkbox"/> (6) Preferential HOV Treatments <input type="checkbox"/> (10) Variable Work Hours/Compressed Work Weeks <input type="checkbox"/> (3) Vanpool Programs <input checked="" type="checkbox"/> (7) Transit and Ridesharing Incentives <input type="checkbox"/> (11) Telecommuting <input checked="" type="checkbox"/> (4) Bicycle/Pedestrian Facilities and Site Improvements <input type="checkbox"/> (8) Parking Supply and Pricing Management <input type="checkbox"/> (12) Other <u> </u>	
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Trip Generation Data Form (Part 2)

Summary of Driveway Volumes

(All = All Vehicles Counted, Including Trucks; Trucks = Heavy Duty Trucks and Buses)

	Average Weekday (M-F)						Saturday						Sunday						
	Enter		Exit		Total		Enter		Exit		Total		Enter		Exit		Total		
	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	
24-Hour Volume	728	2	713	2	1441	4													
A.M. Peak Hour of Adjacent Street Traffic (7 - 9) Time: 8 - 9	11		16		27														
P.M. Peak Hour of Adjacent Street Traffic (4 - 6) Time: 5 - 6	97	0	89	0	186	0													
A.M. Peak Hour Generator ² Time: 10:45 - 11:45	70	0	62	0	132	0													
P.M. Peak Hour Generator ² Time: 5:15 - 6:15	97	0	90	0	187	0													
Peak Hour Generator ³ Time (Weekend):																			

¹ Highest hourly volume between 7 a.m. and 9 a.m. (4 p.m. and 6 p.m.). Please specify the peak hour.

² Highest hourly volume during the a.m. or p.m. period. Please specify the peak hour.

³ Highest hourly volume during the entire day. Please specify the peak hour.

Please refer to the *Trip Generation User's Guide* for full definition of terms.

Hourly Driveway Volumes- Average Weekday (M-F)

A.M. Period	Enter		Exit		Total		Mid-Day Period	Enter		Exit		Total		P.M. Period	Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks
6:00-7:00							11:00-12:00	63		67		130	3:00-4:00	66		67		133		
6:15-7:15							11:15-12:15	71		70		141	3:15-4:15	69		66		135		
6:30-7:30							11:30-12:30	64		73		137	3:30-4:30	68		62		130		
6:45-7:45							11:45-12:45	60		60		120	3:45-4:45	67		59		126		
7:00-8:00	1		11		12		12:00-1:00	67		58		125	4:00-5:00	65		49		114		
7:15-8:15	3		12		15		12:15-1:15	69		60		129	4:15-5:15	68		54		122		
7:30-8:30	7		16		23		12:30-1:30	72		61		133	4:30-5:30	74		57		131		
7:45-8:45	9		15		24		12:45-1:45	78		71		149	4:45-5:45	99		62		161		
8:00-9:00	11		16		27		1:00-2:00	76		72		148	5:00-6:00	97		89		186		

Check if Part 3, 4 and/or additional information is attached.

Survey conducted by: Name: Todd Johnson
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 City/State/Zip: Portland, OR 97201
 Telephone #: 503-725-4285 Fax #: _____ E-mail: Todd@Californiascanada.com

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Trip Generation Data Form (Part 3)

Name/Organization: Todd Johnson - STEP Portland State Univ City/State: Portland, OR

Telephone Number: 510-928-1982

Detailed Driveway Volumes: Attach this sheet to Parts 1 and 2 if you are providing additional information.

Day of the week: Thursday Feb 18th 2010 (All = All Vehicles Counted, Including Trucks; Trucks = Heavy Duty Trucks and Buses)

A.M. Period	Enter		Exit		Total		P.M. Period	Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks
12:00-12:15							12:00-12:15	20		17		37	
12:15-12:30							12:15-12:30	16		17		33	
12:30-12:45							12:30-12:45	15		12		27	
12:45-1:00							12:45-1:00	16		12		28	
1:00-1:15							1:00-1:15	22		19		41	
1:15-1:30							1:15-1:30	19		18		37	
1:30-1:45							1:30-1:45	21		22		43	
1:45-2:00							1:45-2:00	14		13		27	
2:00-2:15							2:00-2:15	12		16		28	
2:15-2:30							2:15-2:30	15		18		33	
2:30-2:45							2:30-2:45	7		12		19	
2:45-3:00							2:45-3:00	20		9		29	
3:00-3:15							3:00-3:15	18		13		31	
3:15-3:30							3:15-3:30	16	1	16	1	32	2
3:30-3:45							3:30-3:45	15		18		33	
3:45-4:00							3:45-4:00	17		20		37	
4:00-4:15							4:00-4:15	21		12		33	
4:15-4:30							4:15-4:30	15		12		27	
4:30-4:45							4:30-4:45	14		15		29	
4:45-5:00							4:45-5:00	15		10		25	
5:00-5:15							5:00-5:15	24		17		41	
5:15-5:30							5:15-5:30	21		15		36	
5:30-5:45							5:30-5:45	39		20		59	
5:45-6:00							5:45-6:00	13		37		50	
6:00-6:15							6:00-6:15	24		18		42	
6:15-6:30							6:15-6:30	11		8		19	
6:30-6:45							6:30-6:45	14		20		34	
6:45-7:00							6:45-7:00	14		13		27	
7:00-7:15	0		1		1		7:00-7:15	19		8		27	
7:15-7:30	0		1		1		7:15-7:30	12		9		21	
7:30-7:45	1		2		3		7:30-7:45	19		18		37	
7:45-8:00	0		7		7		7:45-8:00	17		15		32	
8:00-8:15	2		2		4		8:00-8:15	15		13		28	
8:15-8:30	4		5		9		8:15-8:30	8		16		24	
8:30-8:45	3		1		4		8:30-8:45	7		9		16	
8:45-9:00	2		8		10		8:45-9:00	7		20		27	
9:00-9:15	1		3		4		9:00-9:15						
9:15-9:30	2		2		4		9:15-9:30						
9:30-9:45	2		4		6		9:30-9:45						
9:45-10:00	1		4		5		9:45-10:00						
10:00-10:15	20		12		32		10:00-10:15						
10:15-10:30	13		13		26		10:15-10:30						
10:30-10:45	6		15		21		10:30-10:45						
10:45-11:00	16	1	9	1	25	2	10:45-11:00						
11:00-11:15	12		14		26		11:00-11:15						
11:15-11:30	23		14		37		11:15-11:30						
11:30-11:45	19		25		44		11:30-11:45						
11:45-12:00	9		14		23		11:45-12:00						

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Trip Generation Data Form (Part 4)

Summary of Bicycle Volumes

	Average Weekday (M-F)			Saturday			Sunday		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
24-Hour Volume	105	95	200						
A.M. Peak Hour of Adjacent Street Traffic (7 - 9) Time: 8 - 9	2	1	3						
P.M. Peak Hour of Adjacent Street Traffic (4 - 6) Time: 4 : 45 - 5 : 45	21	17	38						
A.M. Peak Hour Generator ² Time: 10 : 45 - 11 : 45	8	7	15						
P.M. Peak Hour Generator ² Time: 4 : 45 - 5 : 45	21	17	38						
Peak Hour Generator ³ Time (Weekend):									

¹ Highest hourly volume between 7 a.m. and 9 a.m. (4 p.m. and 6 p.m.) as defined in Trip Generation Data Form (Part 2). Please specify the peak hour.

² Highest hourly volume during the a.m. or p.m. period. Please specify the peak hour.

³ Highest hourly volume during the entire day. Please specify the peak hour. Please attach supplemental hourly volumes.

Please refer to the *Trip Generation User's Guide* for full definition of terms.

Summary of Pedestrian Volumes

	Average Weekday (M-F)			Saturday			Sunday		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
24-Hour Volume	470	389	859						
A.M. Peak Hour of Adjacent Street Traffic (7 - 9) Time: 7 - 8	12	12	24						
P.M. Peak Hour of Adjacent Street Traffic (4 - 6) Time: 4 : 15 - 5 : 15	62	39	101						
A.M. Peak Hour Generator ² Time: 10 : 45 - 11 : 45	42	31	73						
P.M. Peak Hour Generator ² Time: 5 - 6	62	39	101						
Peak Hour Generator ³ Time (Weekend):									

Survey conducted by: Name: Todd Johnson
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