SCHLESINGER AND BUCHBINDER, LLP
ATTORNEYS AT LAW
1200 WALNUT STREET
NEWTON, MASSACHUSETTS 02461-1267

STEPHEN J. BUCHBINDER
ALAN J. SCHLESINGER
LEONARD M. DAVIDSON
SHERMAN H. STARR, JR.
HEATHER G. MERRILL
PAUL N. BELL
KRISTINE H.P. HUNG
KATHERINE BRAUCHER ADAMS
FRANKLIN J. SCHWARZER
RACHAEL C. CARVER

TELEPHONE (617) 965-3500
FACSIMILE (617) 965-6824

OF COUNSEL
ROBIN GORENBERG

E-Mail: sjbuchbinder@sab-law.com

November 21, 2014

BY HAND

Ms. Linda Finucane
Chief Committee Clerk, Newton Board of Aldermen
1000 Commonwealth Avenue
Newton, MA 02459-1449

Re: Petition of 112 Needham Street, LLC / 112 Needham Street

Dear Linda,

Enclosed please find thirteen copies of the following:

Traffic Assessment by MDM Transportation Consultants, Inc. dated November 20, 2014.

Please feel free to call me if you have any questions respecting the foregoing.

Very truly yours,

Stephen J. Buchbinder

SJB/fjs
enclosures
cc: (By Hand, w/enclosures)
Ms. Alexandra Ananth, Chief Planner
Ouida C. M. Young, Associate City Solicitor
(By First Class Mail, w/enclosures)
Mr. Ronald Cahaly

MDM TRANSPORTATION CONSULTANTS, INC.
Planners & Engineers

PRINCIPALS
Robert J. Michaud, P.E.
Ronald D. Desrosiers, P.E., PTOE
Daniel J. Mills, P.E., PTOE

November 20, 2014

Mr. Franklin J. Schwarzer, II
Schlesinger and Buchbinder, LLP
1200 Walnut Street
Newton, MA 02461

Subject: Traffic Assessment – Proposed Office Redevelopment
112 Needham Street – Newton, Massachusetts

Dear Franklin:

MDM Transportation Consultants, Inc. (MDM) has prepared this technical letter to provide a traffic assessment of the proposed redevelopment of 112 Needham Street in Newton, Massachusetts. This letter discusses the proposed access and anticipated trip generation characteristics of the proposed office use as they relate to historical site conditions.

In summary, MDM finds that the proposed office development program generally results in reduced impact relative to historical retail use at the site. Furthermore, the proposed office development is a very low traffic generator that is estimated to generate one vehicle trip every 5 minutes during peak hours. The existing curb cut will be narrowed to provide a single driveway that is subject to Massachusetts Department of Transportation (MassDOT) design standards and will result in a reduction in vehicular conflicts and enhanced operating conditions.

PROJECT DESCRIPTION

Existing Site Conditions

The project site is an approximate 0.17-acre parcel located at 112 Needham Street in Newton, Massachusetts. The site is currently occupied by a 5,120± sf commercial building consisting of one retail tenant (Play It Again Video) and vacant retail space (recently occupied by JTC Printing). Access to the site is provided by a single, wide curb cut that extends the entire property frontage along Needham Street. On-site parking is provided with 6 marked parking spaces located perpendicular to the existing commercial building immediately adjacent to Needham Street requiring vehicles to back out onto Needham Street to exit the site.

Proposed Conditions

The current site development program includes razing the existing commercial building and constructing a 7,210± sf office building with 5,810± sf of office space designated for a single real estate office tenant and 1,400± sf of ancillary storage space. On-site parking will be provided on the first level of the proposed building with 11 marked parking spaces. The existing curb cut will be narrowed to provide a single driveway that is subject to Massachusetts Department of Transportation (MassDOT) design standards. The preliminary site layout prepared by R.E. Cameron & Associates, Inc. is presented in **Figure 1.**

EXISTING ROADWAY CHARACTERISTICS

Needham Street

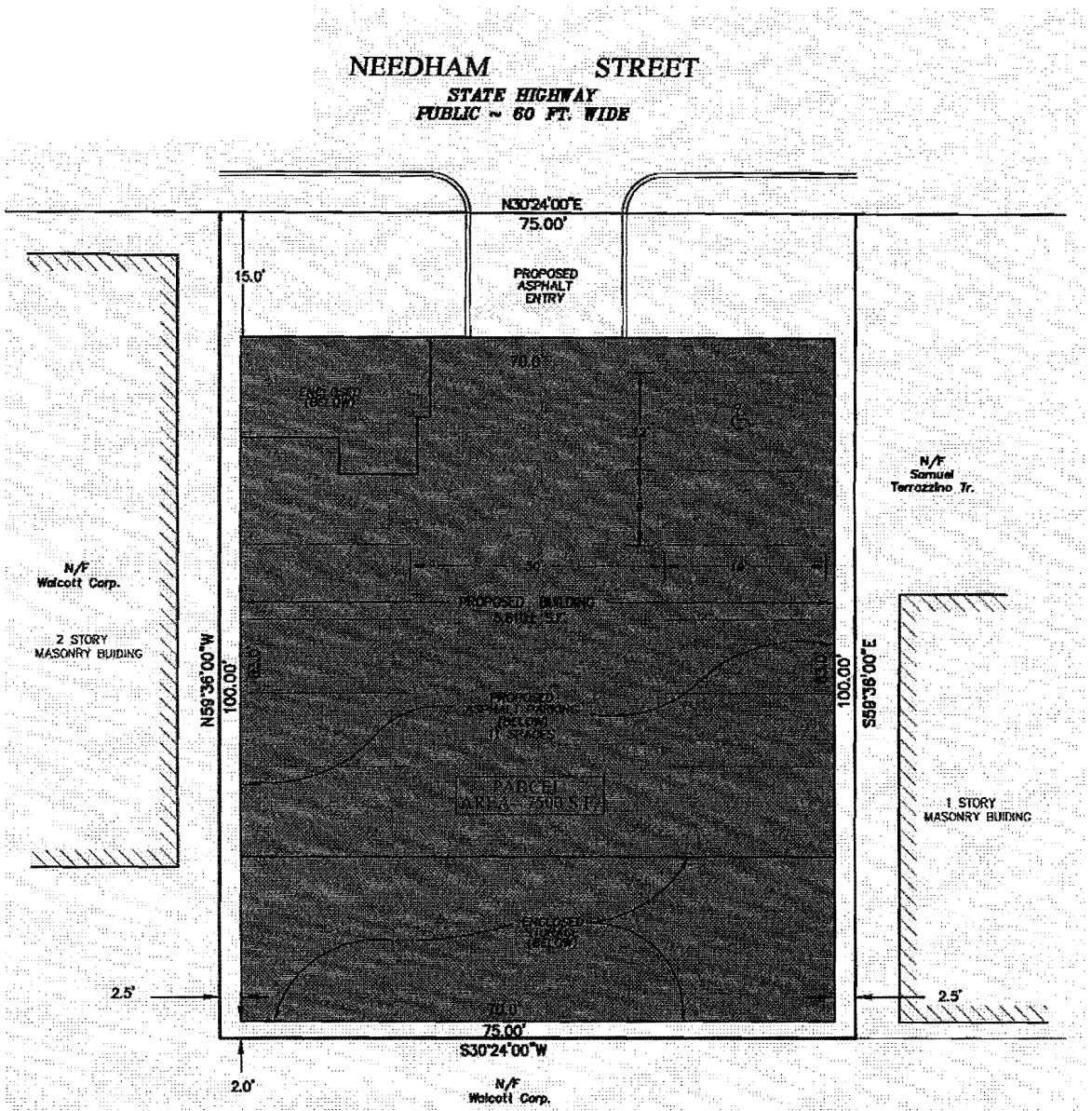
Needham Street is a State (MassDOT) jurisdiction roadway that is classified by the Massachusetts Department of Transportation (MassDOT) as an Urban Minor Arterial roadway. Needham Street generally provides one travel lane in each direction with a two-way left turn lane within the site vicinity that turns into an exclusive northbound left-turn lane for vehicles traveling through the nearby Needham Street/Columbia Avenue intersection. Sidewalks are currently provided on both sides of the roadway. Land use along Needham Street in the site vicinity is primarily commercial.

MassDOT is currently in the preliminary design phase of MassDOT Project No. 606635 which includes proposed geometric improvements along the Needham Street corridor, including in front of the site. Based on the Functional Design Report[1] (FDR) prepared for the MassDOT project, Needham Street in the site vicinity carries approximately 27,600 vehicles per day (vpd). The roadway project is expected to improve traffic flow along the corridor and enhance traffic operations in the site vicinity. Re-development of the site is not expected to preclude the implementation of these improvements.

Public Transportation Facilities

The Massachusetts Bay Transportation Authority (MBTA) operates the following bus line in the area. This bus route provides service along Needham Street with a stop in at the adjacent Needham Street/Columbia Avenue intersection. Specific route and schedule information is provided in the **Attachments.**

[1] *Functional Design Report, Highland Avenue/Needham Street/Winchester Street, Needham and Newton, Massachusetts, Project Nos. 601827 & 604344,* prepared by Fay Spofford & Thorndike, LLC, May 2011.



North
Scale: Not to Scale

Site Plan Source: R.E. Cameron & Associates, Inc.

Figure 1

Preliminary Site Layout

MDM TRANSPORTATION CONSULTANTS, INC.
Planners & Engineers

Date: November 2014
Dwg No. 800 LTR01.dwg

- **Route 59 – Needham Junction – Watertown Square:** This line provides service between the Needham Junction commuter rail station in Neeedham and Watertown Square in Watertown via Needham Street in Newton.

As a conservative measure, no credit (reduction) in site trips was taken in the following section as a result of the available public transportation services.

TRIP GENERATION ESTIMATES

The proposed development consists of a 7,210± sf office building. As a point of comparison, site trip generation characteristics for the proposed office use are compared to the existing retail uses at the site. **Table 1** presents a summary comparison of traffic generation for the existing and proposed uses based on trip rates published in ITE's *Trip Generation*[2]. Trip generation calculations are provided in the **Attachments.**

TABLE 1
TRIP-GENERATION COMPARISON

	SITE TRIPS		
Peak Hour/ Direction of Travel	Existing Use (5.12 ksf Retail)[1]	Proposed Use (7.21 ksf Office)[2]	Net New Trips[3]
Weekday Morning Peak Hour:			
Entering	2	10	+8
Exiting	2	1	-1
Total	4	11	+7
Weekday Evening Peak Hour:			
Entering	6	2	-4
Exiting	8	9	+1
Total	14	11	-3
Saturday Midday Peak Hour:			
Entering	11	2	-9
Exiting	10	1	-9
Total	21	3	-18
Weekday Daily:	226	80	-146
Saturday Daily:	216	18	-198

[1] ITE LUC 826 (Specialty Retail Center) trip rates applied to 5,120 sf without any adjustment for pass-by related trip activity.
[2] ITE LUC 710 (General Office Building) trip rates applied to 7,210 sf.
[3] Proposed minus Existing trips.

[2] *Trip Generation*, Ninth Edition; Institute of Transportation Engineers; Washington, DC; 2012.

The proposed site programming as a 7,210± sf office building results in overall reduced traffic volumes compared to the historical 5,120± sf of retail use at the site with approximately 146 *fewer* vehicle trips on weekdays and 198 *fewer* vehicle trips on Saturdays. During the critical weekday morning and evening peak hours, the anticipated trip generation for the proposed office use is highly consistent with historical retail use of the site. During the Saturday midday peak hour, the proposed office use is expected to generate up to 18 *fewer* vehicle trips when compared to historical site retail use. Furthermore, traffic generated by the site may be reduced by the proximity of the site to the local public transportation system.

ESTIMATED TRAFFIC IMPACTS

The proposed development program generally results in a reduced impact relative to historical retail use of the site. The site will experience a reduction in traffic during the weekday evening and Saturday midday peak hours. No material change in trip generation is anticipated during the critical weekday morning peak hour with 1 additional vehicle trip every 8 minutes anticipated compared to historical site use – an amount that is imperceptible to the average motorist. Furthermore, the proposed site layout will minimize vehicular conflicts and enhance operations by formalizing a single access driveway along Needham Street and relocating parking further away from Needham Street

We trust that this technical letter provides sufficient justification for approval of the proposed project.

Sincerely,

MDM TRANSPORTATION CONSULTANTS, INC.

Robert J. Michaud, P.E.
Managing Principal

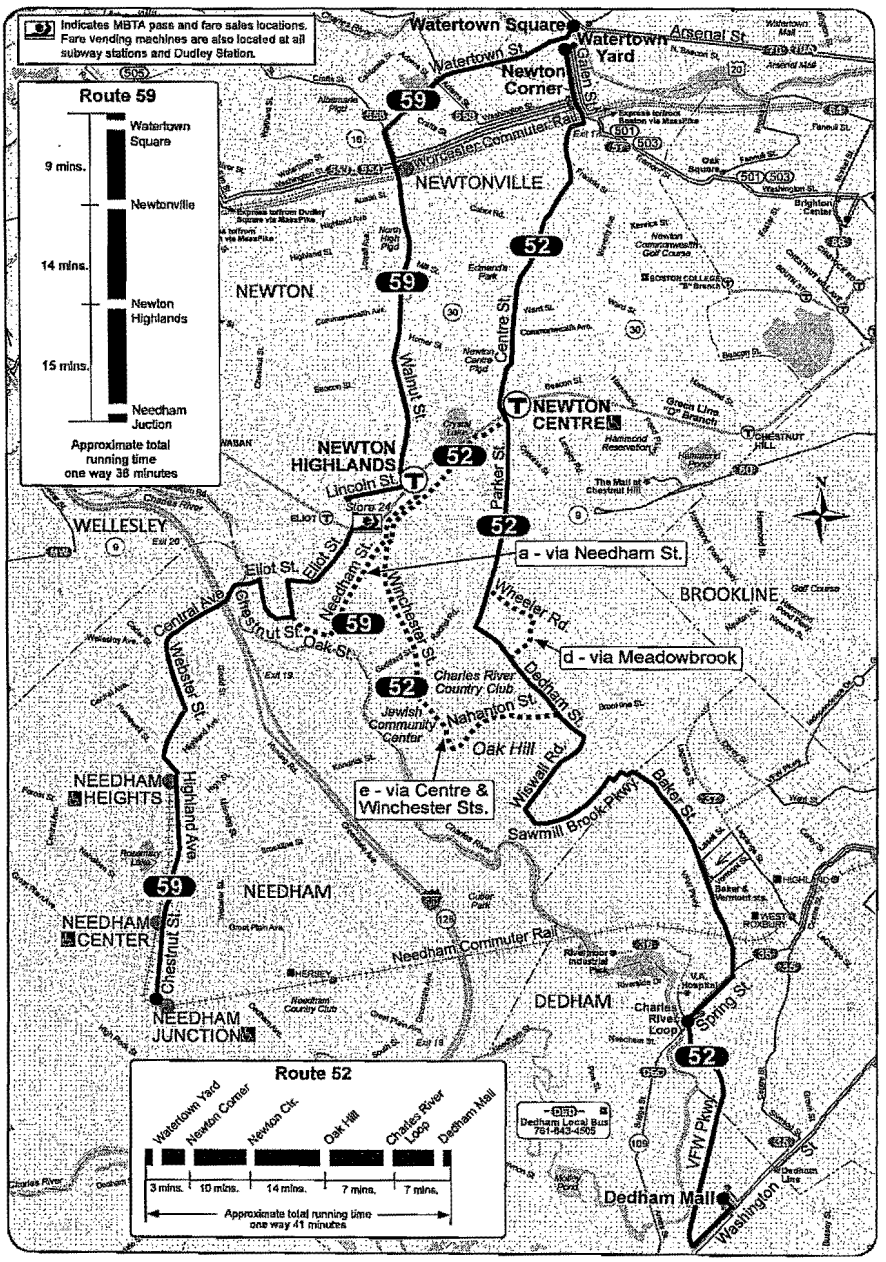
Courtney E. Jones, P.E.
Senior Transportation Engineer

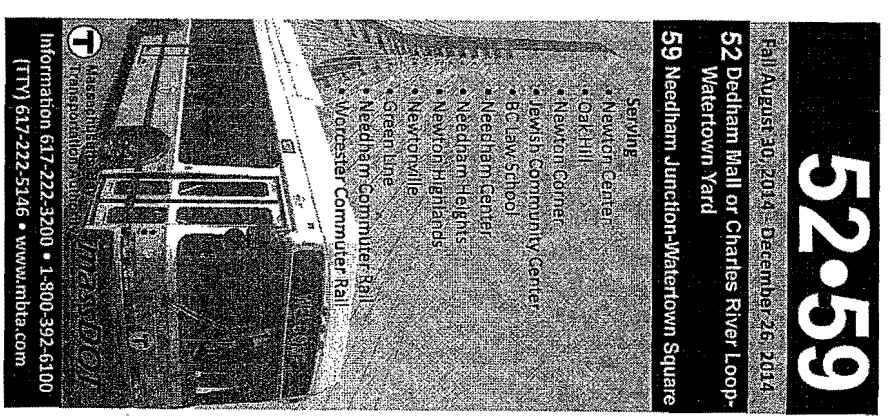
APPENDIX

- Public Transportation Information
- Trip Generation Calculations

□ Public Transportation Information

Route 52 Dedham Mall or Charles River Loop - Watertown Yard
Route 59 Needham Junction - Watertown Square





52 Weekday

Inbound				Outbound			
Leave Dedham Mall	Lv/Arrive Charles River	Arrive Newton Center	Arrive Watertown Yard	Leave Watertown Yard	Arrive Newton Center	Arrive Charles River	Arrive Dedham Mall
.....	6:15A	6:33A	6:43A	d 7:00A	7:10A	7:31A	.....
.....	6:45	7:03	7:13	d 7:25	7:37	7:59	.....
.....	bs 7:05	7:26	.....	d 8:05	8:19	8:42	8:46A
.....	7:20	7:42	7:56	e 8:30	8:44	9:08	.....
.....	d 7:45	8:07	8:19	9:00	9:09	9:26	9:32
.....	d 8:15	8:37	8:49	9:45	9:54	10:10	10:16
9:00	9:13	9:27	9:35	e11:15	11:24	11:45	11:49
e10:30	10:36	10:56	11:06				
				12:45P	12:53P	1:08P	1:14P
12:00N	12:11P	12:30P	12:39P	e 2:15	2:24	2:46	2:50
d 1:30P	1:34	1:53	2:11	ds 2:47	3:00	3:23	.....
d 2:20	2:24	2:43	3:00	e 3:00	3:12	3:33	3:41
d 3:05	3:09	3:28	3:43	3:50	4:01	4:21	4:29
e 3:50	3:54	4:16	4:29	e 4:35	4:47	5:08	5:16
4:25	4:32	4:48	5:02	5:10	5:25	5:47	5:52
e 4:45	4:49	5:12	5:25	e 5:45	5:57	6:18	6:26
5:30	5:39	5:55	6:09	6:20	6:32	6:52	6:59
e 6:10	6:14	6:37	6:50	6:55	7:05	7:23	.....
e 6:45	6:49	7:12	7:22	7:30	7:39	7:57	.....

b - To Newton Corner
d - Via Meadowbrook & Wheeler Roads
e - Via Centre & Winchester Streets
s - Does NOT run during school vacation

No Route 52 service on Saturday or Sunday

Route 52
Dedham Mall or Charles River Loop-Watertown Yard

59 Weekday

Inbound			Outbound		
Leave Needham Junction	Arrive Newton Highlands	Arrive Watertown Square	Leave Watertown Square	Arrive Newton Highlands	Arrive Needham Junction
6:20A	6:38A	6:52A	a 6:05A	6:19A	6:38A
a 6:55	7:14	7:31	6:35	6:48	7:07
7:30	7:53	8:17	a 7:10	7:30	7:53
8:05	8:28	8:43	a 7:45	8:08	8:31
a 8:40	9:01	9:21	8:20	8:40	9:03
9:15	9:35	9:51	a 8:55	9:11	9:33
a 9:50	10:10	10:25	a 9:30	9:46	10:08
10:35	10:54	11:10	10:05	10:21	10:42
a 11:20	11:40	11:55	a 10:35	10:51	11:13
			11:20	11:36	11:57
12:05P	12:25P	12:42P			
a12:50	1:10	1:25	a 12:05P	12:21P	12:43P
1:35	1:55	2:13	12:50	1:06	1:27
a 2:20	2:40	2:59	a 1:30	1:46	2:08
2:55	3:18	3:35	2:05	2:20	2:44
a 3:30	3:50	4:09	2:40	2:59	3:22
4:05	4:28	4:45	a 3:15	3:34	3:57
a 4:40	5:00	5:20	3:50	4:08	4:34
a 5:15	5:39	5:59	a 4:25	4:44	5:08
5:50	6:10	6:26	4:55	5:18	5:43
6:25	6:45	7:01	5:25	5:49	6:17
a 7:00	7:19	7:33	a 6:05	6:24	6:45
7:40	7:57	8:11	6:45	7:02	7:22

a - Via Needham Street

Route 59
Needham Junction-Watertown Square

59 Saturday

Inbound			Outbound		
Leave Needham Junction	Arrive Newton Highlands	Arrive Watertown Square	Leave Watertown Square	Arrive Newton Highlands	Arrive Needham Junction
7:05A	7:25A	7:40A	6:20	6:31	6:48
8:35	8:55	9:10	7:50	8:04	8:21
10:05	10:25	10:40	9:20	9:37	9:55
11:35	11:55	12:14P	10:50	11:07	11:25
1:05P	1:25P	1:42P	12:20P	12:37P	1:00P
2:35	2:54	3:10	1:50	2:07	2:27
4:05	4:23	4:39	3:20	3:37	3:57
5:35	5:53	6:09	4:50	5:05	5:24
7:05	7:22	7:35	6:20	6:35	6:54

NOTE:
Approximate running time from Watertown Square to Newtonville Square is 7 minutes.

Approximate running time from Needham Junction to Newtonville Square is 25 minutes.

Approximate running time from Watertown Square to Homer and Walnut Streets is 11 minutes.

Approximate running time from Needham Junction to Homer and Walnut Streets is 18 minutes.

59 Sunday

Inbound			Outbound		
Leave Needham Junction	Arrive Newton Highlands	Arrive Watertown Square	Leave Watertown Square	Arrive Newton Highlands	Arrive Needham Junction
7:50A	8:08A	8:20A	7:05A	7:16A	7:32A
9:20	9:38	9:50	8:35	8:48	9:07
10:50	11:08	11:22	10:05	10:18	10:37
			11:35	11:49	12:08P
12:20P	12:39P	12:54P	1:05P	1:19P	1:38P
1:50	2:06	2:21	2:35	2:49	3:08
3:20	3:39	3:56	4:05	4:19	4:39
4:50	5:08	5:24	5:35	5:49	6:09
6:20	6:36	6:51			

All buses are accessible to persons with disabilities

Fare	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	$1.60	$1.60	$2.10	$2.10
CharlieTicket	$2.10	$2.10	$2.65	$4.75
Cash-on-Board	$2.10	$4.20	$2.65	$4.75
Student CharlieCard*	$0.80	$0.80	$1.05	$1.05
Senior/TAP CharlieCard**	$0.80	$0.80	$1.05	$1.05

VALID PASSES: LinkPass ($75/mo.); Monthly Local Bus ($50/mo.); *StudentPass ($26.00/Month for 5-Day validity Mon-Fri or 7-Day validity on all days); **Senior/TAP Pass ($29/mo.); and express bus, commuter rail, and boat passes.
FREE FARES: Children 11 and under ride free when accompanied by an adult; Blind Access CharlieCard holders ride free and if using a guide, the guide rides free.
* Requires Student CharlieCard, available to students through participating middle schools and high schools.
** Requires Senior/TAP CharlieCard, available to Medicare cardholders, seniors 65+, and persons with disabilities.

Fall 2014 Holidays
October 13 & November 11: see Weekday
September 1, November 27, & December 25: see Sunday

□ Trip Generation Calculations

Institute of Transportation Engineers (ITE) 9th Edition
Land Use Code (LUC) 826 - Specialty Retail Center

Average Vehicle Trips Ends vs: 1,000 Sq. Feet Gross Leasable Area
Independent Variable (X): 5.12

AVERAGE WEEKDAY DAILY

T = 44.32 * (X) (Small Sample Size - Use with Caution)
T = 44.32 * 5.12
T = 226.92
T = 226 vehicle trips
with 50% (113 vpd) entering and 50% (113 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

ITE LUC 820 Weekday Morning Trip Rate / ITE LUC 820 Weekday Evening Trip Rate = ITE LUC 826 Weekday Morning Trip Rate / ITE LUC 826 Weekday Evening Trip Rate

$$\frac{0.96}{3.73} = \frac{(Y)}{2.71} \qquad Y = 0.69747989$$

T = Y * 5.1
T = 3.5711
T = 4 vehicle trips
with 62% (2 vph) entering and 38% (2 vph) exiting.

(same distribution split as ITE LUC 820 during the weekday morning peak hour of adjacent street traffic)

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 2.71 * (X) (Small Sample Size - Use with Caution)
T = 2.71 * 5.1
T = 13.88
T = 14 vehicle trips
with 44% (6 vph) entering and 56% (8 vph) exiting.

SATURDAY DAILY

T = 42.040 * (X) (Small Sample Size - Use with Caution)
T = 42.040 * 5.12
T = 215.24
T = 216 vehicle trips
with 50% (108 vpd) entering and 50% (108 vpd) exiting.

SATURDAY MIDDAY PEAK HOUR

ITE LUC 820 Saturday Midday Trip Rate / ITE LUC 820 Saturday Daily Trip Rate = ITE LUC 826 Saturday Midday Trip Rate / ITE LUC 826 Saturday Daily Trip Rate

$$\frac{4.82}{49.97} = \frac{(Y)}{42.04} \qquad Y = 4.05508905$$

T = Y * 5.1
T = 20.762
T = 21 vehicle trips
with 52% (11 vph) entering and 48% (10 vph) exiting.

(same distribution split as ITE LUC 820 during the Saturday midday peak hour of generator)

Institute of Transportation Engineers (ITE) 9th Edition
Land Use Code (LUC) 710 - General Office Building

Average Vehicle Trips Ends vs: 1000 Sq. Feet Gross Floor Area
Independent Variable (X): 7.21

Average Weekday Daily

T = 11.03 * (X)
T = 11.03 * 7.21
T = 79.53
T = 80 vehicle trips
with 50% (40 vpd) entering and 50% (40 vpd) exiting.

Weekday Morning Peak Hour Of Adjacent Street Traffic

T = 1:56 * (X)
T = 1.56 * 7.21
T = 11.25
T = 11 vehicle trips
with 88% (10 vph) entering and 12% (1 vph) exiting.

Weekday Evening Peak Hour Of Adjacent Street Traffic

T = 1.49 * (X)
T = 1.49 * 7.21
T = 10.74
T = 11 vehicle trips
with 17% (2 vph) entering and 83% (9 vph) exiting.

Saturday Daily

T = 2.46 * (x)
T = 2.46 * 7.21
T = 17.74
T = 18 vehicle trips
with 50% (9 vpd) entering and 50% (9 vpd) exiting.

Saturday Midday Peak Hour Of Generator

T = 0.43 * (X)
T = 0.43 * 7.21
T = 3.10
T = 3 vehicle trips
with 54% (2 vph) entering and 46% (1 vph) exiting.