

MEMORANDUM

TO: Mr. Daniel Krantz
Vice President
Construction & Development
The Kraft Group
1 Patriot Place
Foxborough, MA 02035

FROM: Mr. Jeffrey S. Dirk, P.E., PTOE, FITE
Principal
Vanasse & Associates, Inc.
10 New England Business Center Drive
Suite 314
Andover, MA 01810-1066
(978) 474-8800

DATE: January 23, 2013

RE: 6384

SUBJECT: Patriot Place – 2012 Traffic Monitoring Program
Foxborough, Massachusetts

On behalf of NPP Development LLC (NPP), Vanasse & Associates, Inc. (VAI) is pleased to submit the results of the Traffic Monitoring Program for 2012 for Patriot Place located off Washington Street (Route 1) and proximate to Gillette Stadium in Foxborough, Massachusetts (the "Project"). This information is being submitted pursuant to Condition No. 32, *Traffic Monitoring Program*, of the January 12, 2007 Site Plan Approval (the "Site Plan Approval") issued by the Town of Foxborough Planning Board to NPP for the Project. As described therein, the Proponent is required to: 1) obtain traffic volume information for the drives serving the Project site (P1, P6, P8 and P9) for an average weekday and Saturday, weekday evening peak period (4:00 to 6:00 PM), Saturday midday peak period (11:00 AM to 2:00 PM), Sunday pre-NFL event peak period (10:00 AM to 1:00 PM) and during the peak holiday season and minor event periods; 2) conduct an employee survey of commuting modes; and 3) obtain automatic traffic recorder (ATR) counts on North Street and Beach Street; once per year following occupancy of the first commercial building and continuing for a period of five (5) years after completion of 1.2 million square feet (sf) of leasable floor area within the Project.

This report presents the results of the traffic count program for the Project in accordance with the stated condition, with subsequent reporting to be provided in 2013 for a minor event condition and a survey of employee commuting modes.

The results of the 2012 traffic monitoring program have indicated the following:

- i) Measured traffic volumes for the Project are approximately 34 percent lower than the traffic volume projections for the Project that were assessed in the May 2006 Traffic Impact and Access Study (the "May 2006 TIAS")¹ prepared by VAI in support of the Project on an average weekday and approximately 46 percent lower on a Saturday;
- ii) During the peak traffic volume hours, the measured traffic volumes were found to be approximately 35 percent lower during the weekday evening peak hour and 49 percent lower during the Saturday midday peak hour;

¹*Trip Impact and Access Study*; Proposed Phase III Patriot Place Mixed-Use Development; Foxborough, Massachusetts; VAI May 15, 2006.

- iii) Under Sunday pre-NFL event conditions, the measured traffic volumes for the Project were found to be approximately 8 percent lower than the associated conditions that were assessed in the May 2006 TIAS;
- iv) Measured traffic volumes during the peak holiday shopping season were found to be approximately 28 percent lower than the traffic volume conditions assessed in the May 2006 TIAS on an average weekday, which were representative of an “average” traffic volume condition, and approximately 24 percent lower on a Saturday, with peak-hour traffic volumes also found to be up to 23 percent lower during the weekday evening and 16 percent lower during the Saturday midday; and
- v) Traffic volumes on North Street and Beach Street were found to be approximately 20 percent lower and 7 percent higher than the traffic volume estimates presented in the May 2006 TIAS on an average weekday, respectively, and approximately 19 and 2 percent lower on an average Saturday. *The noted traffic volume increase on Beach Street on an average weekday is considered nominal (less than a 10 percent variation or 148 vehicles over a 24-hour period) and can be attributed in part to development in the area unrelated to the Project that has occurred since the May 2006 TIAS was prepared. This is further reinforced by the fact that the measured traffic for the Project is significantly less than was modeled in the May 2006 TIAS.*

Based on the above, we have concluded that the original traffic projections assessed in the May 2006 TIAS and that formed the basis of the design of the Project access and associated off-site roadway and intersection improvements have resulted in the creation of more than adequate capacity on the transportation infrastructure under all conditions (average weekday, Saturday, peak hours, pre-NFL event and peak shopping season) to accommodate the current and remaining build-out and occupancy of the Project.

The following provides a summary of the Project status and the results of the 2012 Traffic Monitoring Program.

PROJECT DESCRIPTION AND STATUS

As assessed in the May 2006 TIAS, the Project consists of the development of approximately 1,016,000 square feet (sf) of mixed-use retail/restaurant/commercial and office/medical office space; a 200-room hotel; and a 3,500 seat, 16-screen cinema; on a parcel of land located proximate to Gillette Stadium and along the east side of Route 1 in Foxborough, Massachusetts. To date, the approximate 160,000± sf Bass Pro Shops; 413,795± sf of general retail space; a 14-screen cinema; approximately 51,729± sf of general office space; approximately 109,768± sf of medical-office space; and a 150-room hotel; have been constructed and occupied. Primary access to the Project site is provided by way of three (3) signalized driveways located along the east side of Route 1 (P1, P6 and P9) and an unsignalized drive (P8) that is limited to right-turn only operation (right turns entering and exiting only) due to the raised median along the proximate segment of the Route 1 corridor.

The Proponent has completed the roadway, intersection and traffic control improvements along the Route 1 corridor required by the town and the Massachusetts Department of Transportation (MassDOT), as well as the local roadway improvements and associated plans, studies and reports required as a part of the Site Plan Approval for the Project.

TRAFFIC MONITORING PROGRAM – DATA COLLECTION

In accordance with the requirements of the Site Plan Approval, the 2012 Traffic Monitoring Program consisted of the following elements:

1. Collection of peak period, average weekday and Saturday traffic volume data on the driveways serving the Project site (P1, P6, P8 and P9) for both average and peak holiday season conditions;
2. Collection of peak period traffic counts for a Sunday pre-NFL event condition at the driveways serving the Project site;
3. Collection of traffic volume data on North Street and Beach Street from Wednesday at 12 AM through Sunday at 12 AM; and
4. Assessment of the collected traffic volume data in relation to the traffic volume conditions assessed in the May 2006 TIAS and the 2009 Traffic Monitoring Program prepared in support of the Project.

The roadways and intersections included as a part of the 2012 Traffic Monitoring Program study area are depicted on Figure 1.

Data Collection and Adjustment

In order to measure the traffic characteristics of the Project, automatic traffic recorder (ATR) counts and manual turning movement counts were completed in November 2012. ATR counts were conducted on North Street south of Beach Street and on Beach Street east of North Street between 12:00 AM on a Wednesday and 12:00 AM on a Sunday. TMCs were conducted at all four driveways serving the Project site (P1, P6, P8 and P9) during the weekday evening (4:00 to 6:00 PM), Saturday midday (11:00 AM to 2:00 PM), and Sunday pre-NFL Event (10:00 AM to 1:00 PM) peak periods in November 2012. ATR data for the Project site driveways was obtained from the automated traffic count (ATC) system which is installed on the access points to the Project site and provides continuous traffic monitoring 24-hours a day, 365 days a year. The peak holiday season ATC data was used to develop peak-hour turning movement data for the Project site driveways by distributing the peak-hour ATC entering and exiting traffic volume data to a specific entering/exiting turning movement using a similar distribution as that obtained from the November 2012 TMC data. Where necessary, the November 2012 TMC data was proportionately adjusted upward based on the ratio of the peak holiday season ATC data to reflect peak holiday season traffic volume conditions.

In order to evaluate the potential for seasonal fluctuation of traffic volumes within the study area, historic traffic count data were reviewed for the nearest MassDOT permanent count station to the Project site not located on an interstate highway.² Based on a review of this data, it was determined that traffic volumes for the month of November are approximately 0.8 percent above average-month conditions. In order to allow for a comparative assessment of future traffic volume data to be collected as a part of subsequent traffic monitoring for the Project and to normalize the count data to a common baseline, the November non-NFL event traffic volumes were adjusted accordingly to reflect average-month conditions within the study area. *The Sunday pre-NFL event traffic volumes and those associated with the peak holiday shopping season were not adjusted.*

²MassDOT Traffic Volumes for the Commonwealth of Massachusetts; Permanent Count Station 6647 located in Plainville on Route 1, south of Route 152.

Legend:

- Turning Movement Count Location
- X-X Automatic Traffic Recorder Count Location

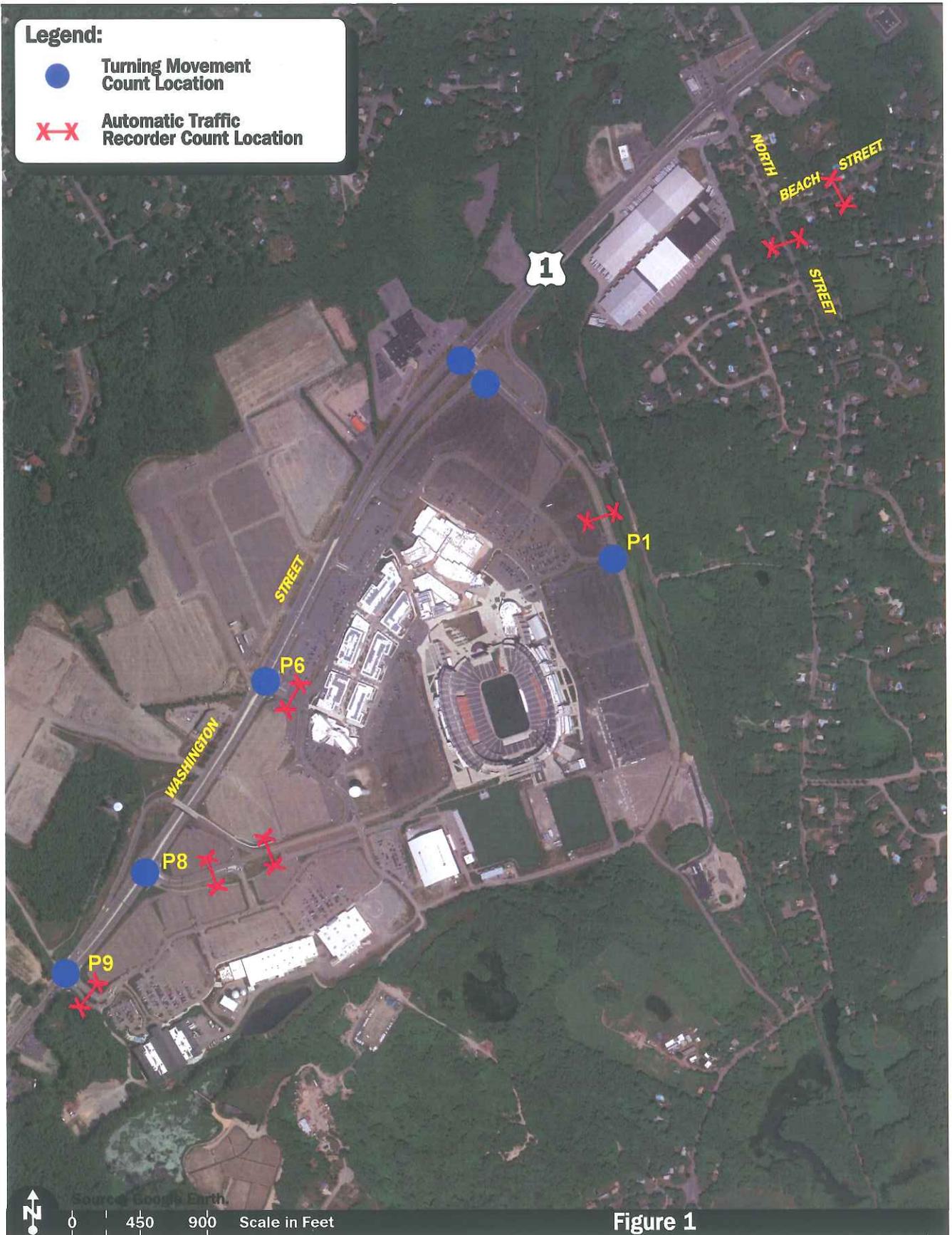


Figure 1
Study Area Map



The 2012 Existing weekday evening and Saturday midday peak-hour traffic volumes at the driveways serving the Project site under average-month conditions are depicted on Figures 2 and 3, respectively, with the peak holiday shopping season peak-hour traffic volumes depicted on Figures 4 and 5, and the 2012 Existing Sunday pre-NFL event peak-hour traffic volumes depicted on Figure 6. The 2012 Existing traffic volumes as measured along North Street and Beach Street are summarized in Table 1.

Table 1
2012 EXISTING TRAFFIC VOLUMES

Location	Average Weekday ^a	Saturday ^b
North Street south of Beach Street	6,260	6,479
Beach Street east of North Street	2,153	2,591

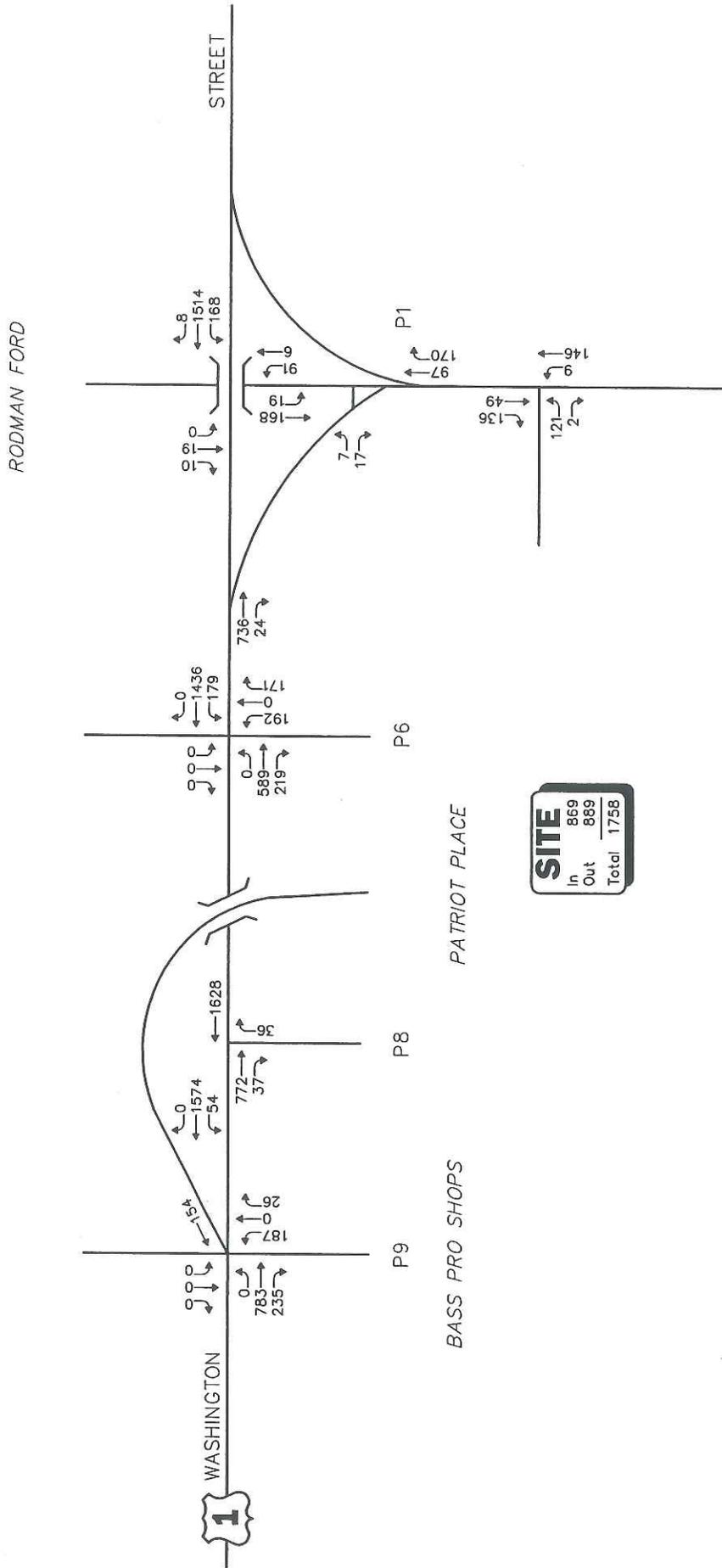
^aAverage weekday traffic in vehicles per day.
^bSaturday traffic volume in vehicles.

As can be seen in Table 1, North Street south of Beach Street was found to accommodate approximately 6,260 vehicles on an average weekday (two-way, 24-hour volume) and 6,479 vehicles on a Saturday. Beach Street east of North Street was found to accommodate approximately 2,153 vehicles on an average weekday and 2,591 vehicles on a Saturday.

PATRIOT PLACE TRAFFIC CHARACTERISTICS - PROJECTED

At the time of the completion of the 2012 Traffic Monitoring Program (November 2012), the Project site encompassed the following elements: approximately 160,000± sf Bass Pro Shops; 413,795± sf of general retail space; a 14-screen cinema; approximately 51,729± sf of general office space; approximately 109,768± sf of medical-office space; and a 150-room hotel. In order to determine the projected (vs. actual/measured) traffic volumes associated with the current built and occupied space within the Project site, the approved trip-generation methodology and procedures presented in the May 2006 TIAS were used and applied to the current occupied uses on a proportionate basis. *Note that a pass-by trip reduction was not applied to the traffic volume projections as the actual measured volumes include pass-by trips.* Table 2 presents the projected traffic characteristics of the Project as occupied in November 2012 using the above methodology.





VAI Vanasse & Associates, Inc.
 Transportation Engineers & Planners

Figure 2

2012 Existing
 Weekday Evening
 Peak Hour Traffic Volumes
 Average Month Conditions

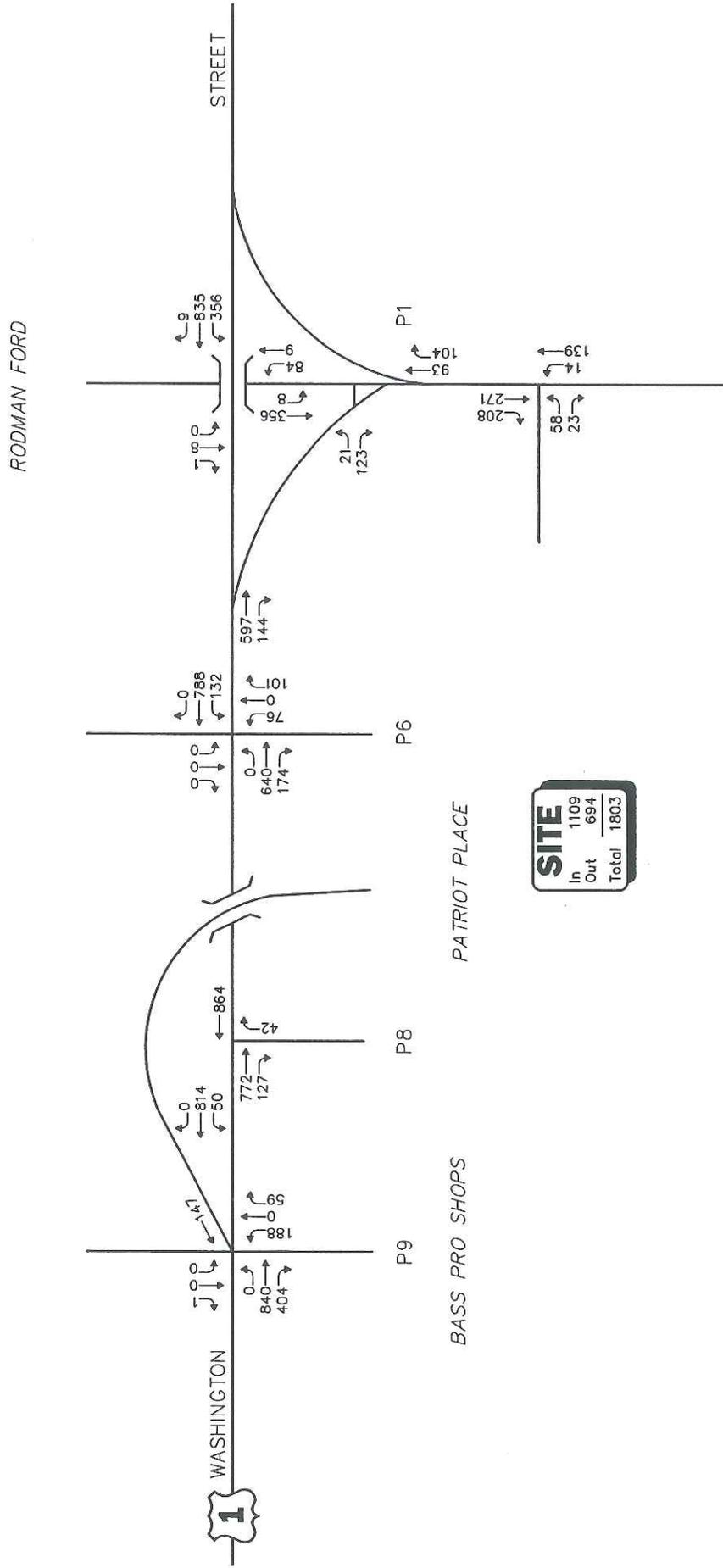


Figure 3
 2012 Existing
 Saturday Midday
 Peak Hour Traffic Volumes
 Average Month Conditions

0 1000 2000 Scale in Feet

VAI
 Vanasse & Associates, Inc.
 Transportation Engineers & Planners

RODMAN FORD

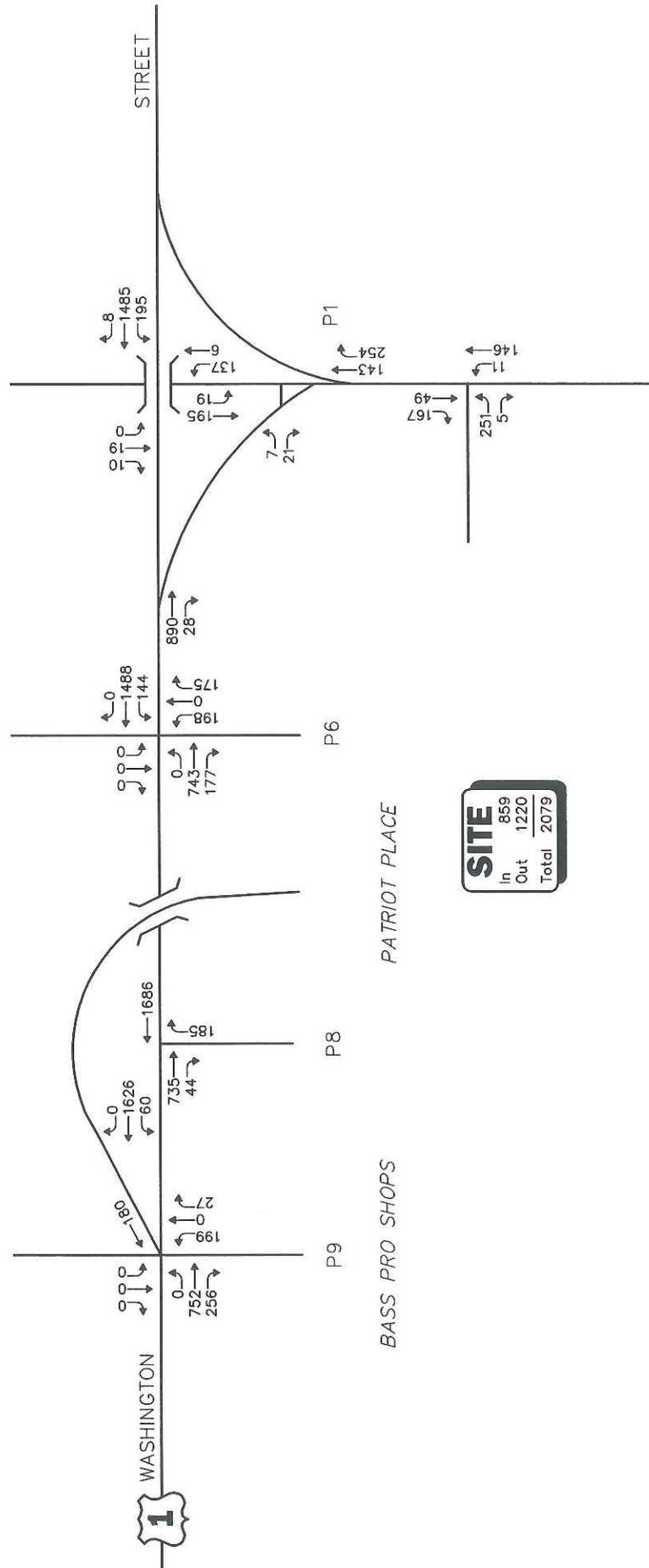


Figure 4

2012 Existing
Weekday Evening
Peak Hour Traffic Volumes
Christmas Season Conditions

Vanasse & Associates, Inc.
Transportation Engineers & Planners



RODMAN FORD

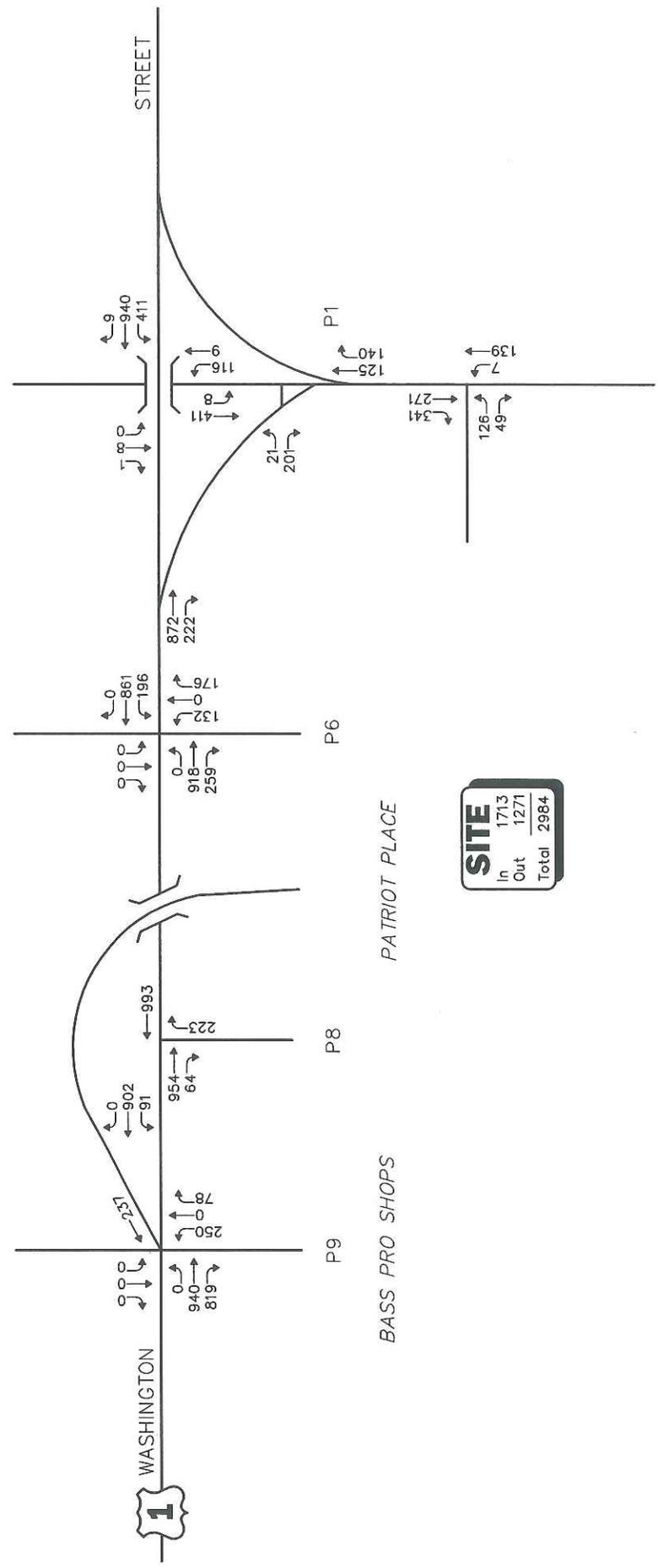


Figure 5

2012 Existing
Saturday Midday
Peak Hour Traffic Volumes
Christmas Season Conditions

0 1000 2000 Scale in Feet

Vanasse & Associates, Inc.
TRANSPORTATION ENGINEERS & PLANNERS



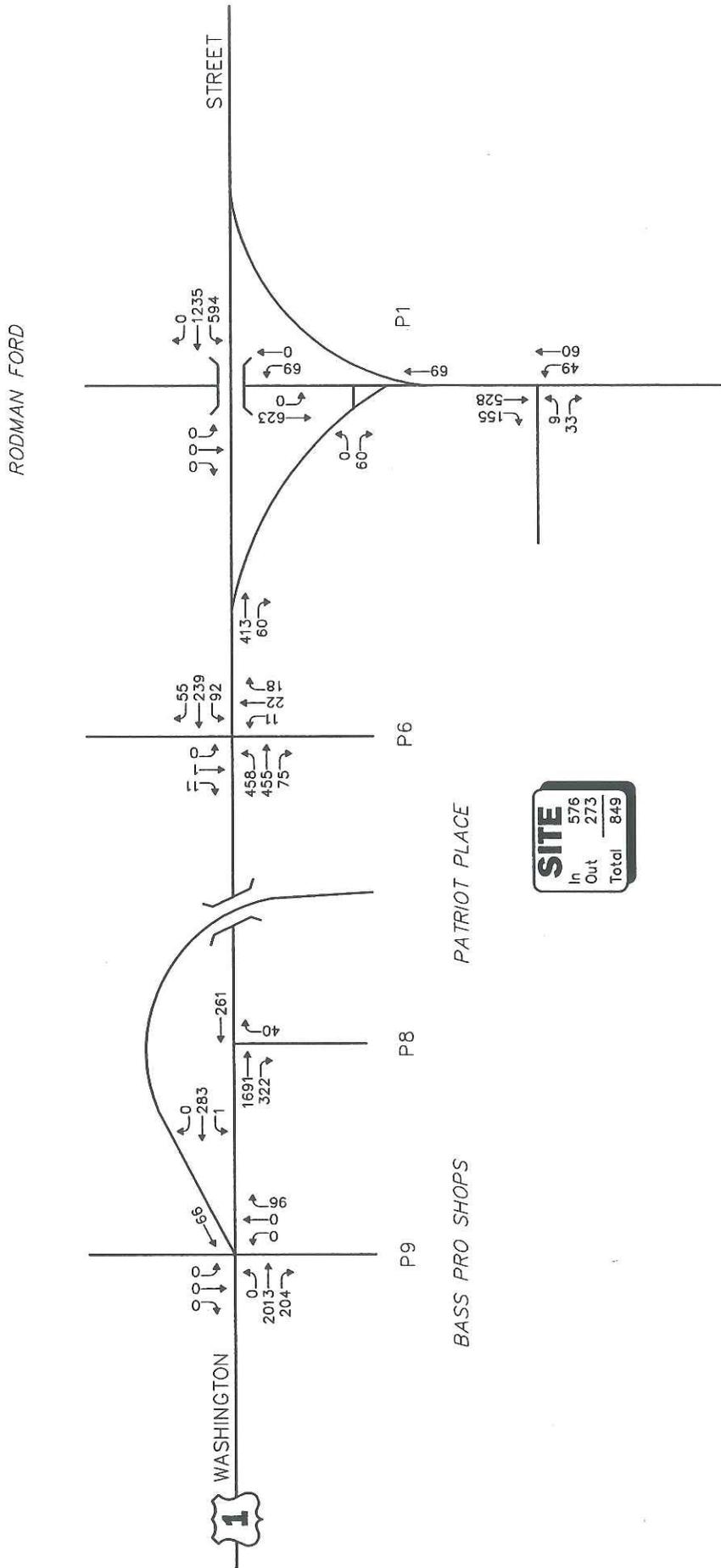


Figure 6
 2012 Existing
 Sunday Pre-NFL Event
 Peak Hour Traffic Volumes

VAI Vanasse & Associates, Inc.
 Transportation Engineers & Planners

Table 2
PATRIOT PLACE
EXISTING TRAFFIC VOLUME SUMMARY - PROJECTED

Time Period/Direction	Projected Vehicle Trips Patriot Place as Occupied November 2012
<i>Average Weekday Daily:</i>	
Entering	14,838
<u>Exiting</u>	<u>14,838</u>
Total	29,676
<i>Weekday Evening Peak Hour:</i>	
Entering	1,216
<u>Exiting</u>	<u>1,478</u>
Total	2,694
<i>Saturday Daily:</i>	
Entering	18,443
<u>Exiting</u>	<u>18,443</u>
Total	36,886
<i>Saturday Midday Peak Hour:</i>	
Entering	1,897
<u>Exiting</u>	<u>1,639</u>
Total	3,536
<i>Sunday Pre-NFL Event Peak Hour:</i>	
Entering	448
<u>Exiting</u>	<u>472</u>
Total	920

As can be seen in Table 2, the Project as built and occupied as of November 2012 and using the trip-generation methodology approved as a part of the May 2006 TIAS is projected to generate approximately 29,676 vehicle trips on an average weekday (14,838 vehicles entering and 14,838 exiting), with 2,694 vehicle trips (1,216 vehicles entering and 1,478 exiting) during the weekday evening peak hour. On a Saturday, the Project is projected to generate approximately 36,886 vehicle trips (18,443 vehicles entering and 18,443 exiting), with 3,536 vehicle trips (1,897 vehicles entering and 1,639 exiting) during the Saturday midday peak hour. Under Sunday pre-NFL event peak hour conditions, the Project is projected to generate 920 vehicle trips (448 vehicles entering and 472 exiting).



TRAFFIC MONITORING PROGRAM RESULTS

Table 3 presents a comparison of the 2012 measured traffic volumes on the driveways serving the Project site under average-month and Sunday pre-NFL event conditions to the traffic volume projections for the Project as constructed and occupied as of November 2012. In addition, the measured peak holiday season traffic volumes are also provided. Note that the May 2006 TIAS did not include an assessment of peak holiday season traffic volumes for the Project.

Table 3
PATRIOT PLACE
TRAFFIC-VOLUME SUMMARY AND COMPARISON

Time Period/Direction	(A) 2012 Measured Average- Month Traffic Volumes ^a	(B) 2012 Projected Average-Month Traffic Volumes ^b	(C = A - B) Difference	(D = C ÷ B x 100%) Percent Difference	(E) 2012 Measured Peak Holiday Season Traffic Volumes ^c
<i>Average Weekday Daily:</i>					
Entering	9,794	14,838	-5,044		10,750
Exiting	<u>9,794</u>	<u>14,838</u>	<u>-5,044</u>		<u>10,750</u>
Total	19,588	29,676	-10,088	-34.0%	21,500
<i>Weekday Evening Peak Hour:</i>					
Entering	869	1,217	-348		859
Exiting	<u>889</u>	<u>1,480</u>	<u>-591</u>		<u>1,220</u>
Total	1,758	2,697	-939	-34.8%	2,079
<i>Saturday Daily:</i>					
Entering	9,963	18,443	-8,480		14,043
Exiting	<u>9,963</u>	<u>18,443</u>	<u>-8,480</u>		<u>14,043</u>
Total	19,926	36,886	-16,960	-46.0%	28,086
<i>Saturday Midday Peak Hour:</i>					
Entering	1,109	1,901	-792		1,713
Exiting	<u>694</u>	<u>1,643</u>	<u>-949</u>		<u>1,271</u>
Total	1,803	3,544	-1,741	-49.1%	2,984
<i>Sunday Pre-NFL Event Peak Hour:</i>					
Entering	576	448	+128		--
Exiting	<u>273</u>	<u>472</u>	<u>-199</u>		--
Total	849	920	-71	-7.7%	--

^aAs measured from November 1-21, 2012 and seasonally adjusted to average-month conditions.

^bBased on the approved methodology used in the May 2006 TIAS.

^cAs measured from November 23-30, 2012.



As can be seen in Table 3, the Project as configured and occupied as of November 2012, was shown to generate 19,588 vehicle trips on an average weekday (9,794 vehicles entering and 9,794 exiting) as measured at the four (4) driveways serving the Project site, with 1,758 vehicle trips (869 vehicles entering and 889 exiting) during the weekday evening peak-hour. On a Saturday the Project was shown to generate 19,926 vehicle trips (9,963 vehicles entering and 9,963 exiting), with 1,803 vehicle trips (1,109 vehicles entering and 694 exiting) during the Saturday midday peak-hour. Under Sunday pre-NFL event conditions, the Project was shown to generate 849 vehicle trips during the pre-event peak-hour (576 vehicles entering and 273 exiting).

Under peak holiday shopping season conditions, the Project was shown to generate 21,500 vehicle trips on a weekday (10,750 vehicles entering and 10,750 exiting), with 2,079 vehicle trips (859 vehicles entering and 1,220 exiting) during the weekday evening peak-hour. On a Saturday during the peak holiday shopping season, the Project was shown to generate 28,086 vehicle trips (14,043 vehicles entering and 14,043 exiting), with 2,984 vehicle trips (1,713 vehicles entering and 1,271 exiting) during the Saturday midday peak-hour.

In comparison to the traffic-volume projections for the Project as configured and occupied as of November 2012, the actual measured traffic volumes were found to be approximately 10,088 vehicle trips lower on an average weekday, and 939 vehicle trips lower during the weekday evening peak-hour. On a Saturday, the actual measured traffic volumes were found to be approximately 16,960 vehicle trips lower than the projected traffic volumes for the Project as configured and occupied as of November 2012, with Saturday midday peak-hour traffic volumes found to be approximately 1,741 vehicle trips lower. Similarly, under Sunday pre-NFL event conditions, the measured traffic volumes were found to be 71 vehicle trips lower than the projected traffic volumes for the Project.

North Street/Beach Street Traffic Volumes

Table 4 presents a comparison of the 2012 measured traffic volumes on North Street and Beach Street under average-month conditions to the traffic volume projections for the Project as constructed and occupied as of November 2012. The projected traffic volumes were assigned to each roadway based on the approved trip distribution pattern for the Project presented in the May 2006 TIAS.

Table 4
NORTH STREET AND BEACH STREET
TRAFFIC-VOLUME SUMMARY AND COMPARISON

Roadway/Time Period	(A) 2012 Measured Traffic Volumes ^a	(B) 2012 Projected Traffic Volumes ^b	(C = A - B) Difference	(D = C ÷ B x 100%) Percent Difference
<i>North Street, south of Beach Street</i>				
Average Weekday Daily	6,260	7,847	-1,587	-20.2%
Saturday Daily	6,479	7,967	-1,488	-18.7%
<i>Beach Street, east of North Street</i>				
Average Weekday Daily	2,153	2,005	+148	+7.4%
Saturday Daily	2,591	2,652	-61	-2.3%

^aAs measured in November 2012 and seasonally adjusted to average-month conditions.

^bBased on the approved methodology used in the May 2006 TIAS.

As can be seen in Table 4, North Street was found to have approximately 1,587 fewer vehicle trips on an average weekday in comparison to the projected traffic volume for this roadway with the Project as constructed and occupied as of November 2012, with 1,488 fewer vehicle trips on a Saturday. Beach Street was found to have approximately 148 more vehicle trips on an average weekday, with 61 fewer vehicle trips on a Saturday.

The noted traffic volume increase on Beach Street on an average weekday is considered nominal (less than a 10 percent variation or 148 vehicles over a 24-hour period) and can be attributed in part to development in the area unrelated to the Project that has occurred since the May 2006 TIAS was prepared. This is further reinforced by the fact that the measured traffic for the Project is significantly less than was modeled in the May 2006 TIAS.

SUMMARY

VAI has completed the 2012 Traffic Monitoring Program for the Project pursuant to Condition No. 32, *Traffic Monitoring Program*, of the January 12, 2007 Site Plan Approval issued by the Town of Foxborough Planning Board to NPP for the Project. As described therein, the Proponent is required to: 1) obtain traffic volume information for the drives serving the Project site (P1, P6, P8 and P9) for an average weekday and Saturday, weekday evening peak period (4:00 to 6:00 PM), Saturday midday peak period (11:00 AM to 2:00 PM), Sunday pre-NFL event peak period (10:00 AM to 1:00 PM) and during the peak holiday season and minor event periods; 2) conduct an employee survey of commuting modes; and 3) obtain ATR counts on North Street and Beach Street; once per year following occupancy of the first commercial building and continuing for a period of five years after completion of 1.2 million square feet of leasable floor area within the Project. The data presented herein presents the results of the traffic count program for the Project in accordance with items 1 and 3 described above, with subsequent reporting to be provided in 2013 for a minor event condition and a survey of employee commuting modes.

The results of the 2012 traffic monitoring program have indicated the following:

- i) Measured traffic volumes for the Project are approximately 34 percent lower than the traffic volume projections for the Project that were assessed in the May 2006 Traffic Impact and Access Study (the "May 2006 TIAS")³ prepared by VAI in support of the Project on an average weekday and approximately 46 percent lower on a Saturday;
- ii) During the peak traffic volume hours, the measured traffic volumes were found to be approximately 35 percent lower during the weekday evening peak hour and 49 percent lower during the Saturday midday peak hour;
- iii) Under Sunday pre-NFL event conditions, the measured traffic volumes for the Project were found to be approximately 8 percent lower than the associated conditions that were assessed in the May 2006 TIAS;
- iv) Measured traffic volumes during the peak holiday shopping season were found to be approximately 28 percent lower than the traffic volume conditions assessed in the May 2006 TIAS on an average weekday, which were representative of an "average" traffic volume condition, and approximately 24 percent lower on a Saturday, with peak-hour traffic volumes also found to be up to 23 percent lower during the weekday evening and 16 percent lower during the Saturday midday; and
- v) Traffic volumes on North Street and Beach Street were found to be approximately 20 percent lower and 7 percent higher than the traffic volume estimates presented in the May 2006 TIAS on an average weekday, respectively, and approximately 19 and 2 percent lower on an average Saturday. *The noted traffic volume increase on Beach Street on an average weekday is considered nominal (less than a 10 percent variation or 148 vehicles over a 24-hour period) and can be attributed in part to development in the area unrelated to the Project that has occurred since the May 2006 TIAS was prepared. This is further reinforced by the fact that the measured traffic for the Project is significantly less than was modeled in the May 2006 TIAS.*

³*Trip Impact and Access Study*; Proposed Phase III Patriot Place Mixed-Use Development; Foxborough, Massachusetts; VAI May 15, 2006.

Based on the results of the 2012 traffic monitoring program described above, we have concluded that the original traffic projections assessed in the May 2006 TIAS and that formed the basis of the design of the Project access and associated off-site roadway and intersection improvements have resulted in the creation of more than adequate capacity on the transportation infrastructure under all conditions (average weekday, Saturday, peak hours, pre-NFL event and peak shopping season) to accommodate the current and remaining build-out and occupancy of the Project.

cc: MF, File