

William J. Bray, P.E.
235 Bancroft Street
Portland, Maine 04102
Phone (207) 774-3603
trafficsolutions@maine.rr.com

January 23, 2012

Traffic Assessment Proposed 710 Forest Avenue – Used Car Dealership

INTRODUCTION

Jabbar Essa, is proposing to lease and re-develop, as a used car dealership, a portion of an existing unoccupied 2,000 square foot building located at 710 Forest Avenue. The vacant building, with a building design that includes two over head doors and a small office area was previously occupied by a communication systems company.

It is anticipated that two employees will operate the proposed dealership; a vehicle mechanic and an office/sales person. An outside vehicle display area of approximately 2,100 square feet will be created with re-design of the existing surface parking area. Access is provided through an existing driveway from Saunders Street located roughly 120 feet south of Forest Avenue (Route 302).

This document estimates the peak hour trip generation of the proposed project during a typical weekday AM and PM peak travel time; reviews existing roadway safety conditions adjacent to the site, and provides an assessment of vehicle sight distance at the proposed driveway intersection with Portland Road.

SITE TRAFFIC

Trip generation for the proposed project was determined based upon trip tables presented in the seventh edition of the Institute of Transportation Engineers (ITE) “**TRIP GENERATION**” handbook for new car sales. The ITE publication does not provide trip data for a used car sales facility; trip rates for new car sales likely overstates trip generation of the proposed project providing a conservative estimate of trip generation. The following trip rates were used in that effort:

Land-Use Code 841 – New Car Sales

Weekday Street Peak Hour – AM Peak = **2.05** trips/1,000sf of floor area

Weekday Street Peak Hour – PM Peak = **2.64** trips/1,000sf of floor area

Accordingly, the proposed used car dealership will generate 4 trips in the morning peak hour and a total of 6 trips during the afternoon peak hour.

EXISTING SAFETY CONDITIONS

The Maine Department of Transportation's (MDOT) Accident Records Section provided the latest three-year (2008 through 2010) crash data for the entire length of Saunders Street. (Forest Avenue to Nevens Street) MaineDOT's report follows:

2008 through 2010 Accident Records

<u>Location</u>	<u>Total Accidents</u>	<u>Critical Rate Factor</u>
1. Forest Ave., Ocean Ave., and Saunders St.	25	0.83
2. Saunders Street @ Nevens Street	0	0.00
3. Saunders Street, Forest Ave. to Nevens St.	1	0.76

The MaineDOT considers any roadway intersection or segment a high crash location if both of the following criteria are met:

- *8 or more accidents*
- *A Critical Rate Factor greater than 1.00*

As the data presented in the table shows, the incidence of traffic crashes for the entire length of Saunders Street is below MaineDOT's criteria for identification of a high crash location.

VEHICLE SIGHT DISTANCE

The City of Portland's Technical Standards require where driveways enter an existing street that vehicle sight distance conform to standards established by the **Maine Department of Transportation** as contained in their publication, **Chapter 299, Highway Driveway and Entrance Rules**. The stated standards are as follows:

Speed Limit	Sight Distance
25 mph	200 feet
30	250
35	305
40	360
45	425
50	495
55	570

Vehicle sightlines were checked at the centerline of the existing site driveway intersection with Saunders Street based upon MaineDOT's sightline measurement guidelines. The speed limit of Saunders Street is assumed to be 25 mph, typical of minor streets in the City of Portland. An existing small tree and utility pole right of the driveway partially restricts sight distance to the right, although a vehicle operator can move vehicle ahead slightly, without encroaching into the public street and open the sightline to the Neven Street intersection. Sight distance to the left is clear to the signalized intersection at Forest Avenue.

SUMMARY

1. The proposed 710 Forest Avenue Used Auto Dealership site can be expected to generate a total of 4 to 6 vehicle trips during the identified peak travel periods of a typical weekday.
2. MDOT's most recent traffic crash report (2008 through 2010) for the full length of Saunders Street indicated that a total of 26 vehicle crashes have occurred. Twenty-five of the 26 total crashes occurred within the signalized intersection of Forest Avenue, Ocean Avenue and Saunders Street. The frequency of crashes still is below MaineDOT's criteria for identification of a high crash location.
3. Sightline measurements recorded at the centerline of the existing site driveway located on Saunders Street is acceptable for a travel speed of 25 mph.