


MEMORANDUM

TO: Mr. Philip Gray
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FROM: F. Giles Ham, P.E. 
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DATE: October 7, 2016

RE: 7382

SUBJECT: School Site Selection
Brookline, Massachusetts

As requested, Vanasse & Associates, Inc. (VAI) has provided a brief summary of our transportation review of the Elementary School Selection Study. Back in June of this year VAI visited each of the three sites to observe traffic conditions and conducted area traffic counts in June when schools were in session. Additional observations of traffic conditions were observed in September 2016.

Detailed traffic counts were conducted the week of June 6, 2016 during peak morning and afternoon periods. It is acknowledged that traffic conditions do vary during different periods of the year and different weather conditions. Typically, rainy days and cold weather days do increase drop-off and pick-up activity. In addition, during winter conditions, Beverly Road at the Baker site currently becomes one-way. However, the June 2016, traffic counts do provide a valid basis for the site comparisons.

With respect to parking demand and on-site queue storage we recommend the maximum of 0.17 parking spaces per student enrolled and a queue storage of 1.2 feet per student enrolled. The numbers do not account for transit reductions or expanded bus service. With an approximate 800-student school this would equate to approximately 130-140 parking spaces and 1,200-foot queue area ideally. With site constrains the maximum queue may be difficult to obtain and busing can reduce this requirement.

With respect to the three sites we offer the following comments:

BAKER SITE

Observations were conducted at the existing school in June 2016. Overall, VAI observed the following:

- Limited existing busing
- Drop-off count (estimate) – 58 in/58 out (7:15 – 8:15 AM)
- Pick-up count (estimate) – 42 in/42 out (2:30 – 3:30 PM)
- 9:00 AM – parked 52 cars on street
- 1:45 PM - parked 48 cars on street

The existing school traffic counts were as follows:

TRIP GENERATION SUMMARY

Direction	Morning Period				Afternoon Period			
	Drop-Off On-Street	Teachers Lot	School Driveway	Total	Drop-Off On-Street	Teachers Lot	School Driveway	Total
Entering	58	53	101	212	42	15	7	64
Exiting	58	9	87	154	42	38	8	88
Total	116	62	188	366	84	53	15	152

Beverly Road accommodates 288 two-way morning peak-hour vehicles and 164 two-way evening peak-hour vehicles. Overall, it is our opinion that the existing traffic congestion can be resolved with adequate on-site parking and queue areas. Off-site traffic will disperse in both directions on Beverly Road.

Overall rating –advantageous. Existing traffic conditions are mitigated by off-street parking and newly created drop-off areas.

BALDWIN SITE

Baldwin Base Option – Access from Heath Street

Area conditions were reviewed in June 2016. Hammond Street in this area is very busy with 1,004 vehicles during the weekday morning peak hour and 1,175 vehicles during the weekday evening peak hour. Woodland Road accommodates 745 and 130 weekday morning and evening peak-hour trips respectively. Alternatives have been developed with access and egress from Heath Street. Parking for buses and queue storage is limited due to site constraints. Parking can be reduced to 120 spaces with increased busing and use of public transportation. Severe congestion along Hammond Street is a challenge. Existing queues along Hammond Street in the morning extend 900 feet to Pine Street. Heath Street queues extend back 440 feet past Oak Street where the proposed new school drop-offs area would exit onto Heath Street. With up to 100 parent drop-offs expected, Heath Street queues will extend past Dunster Road blocking both the drop-off entrance and exit. The drop-off area would also become an extension of the Heath Street queues. The addition of the vehicle queue for the new school drop off to the existing queues along Heath Street would fundamentally compromise the ability of parents to reliably drop off their children within a predictable time frame.

Overall rating – very disadvantageous. This site layout is not workable from a traffic perspective.

Baldwin Expanded Option – Access from Soule

VAI also reviewed the Baldwin site with a potential access and egress driveway onto Woodland Road. This option would require Woodland Road to be modified to two-way travel. Under this plan, adequate bus parking and queue storage for drop-offs and pick-ups could be adequately accommodated and our relative rating would be improved from very disadvantageous to disadvantageous. Traffic congestion along Hammond Street and Heath Street still remain a concern. While parent drop-offs can occur via Woodland Road traffic destined to Route 9 and Hammond Street will still be required to enter the existing lengthy queues on both Heath Street and Hammond Street.

Overall rating with Woodland Road access – disadvantageous. This site is not recommended due to existing Hammond Street and Heath Street congestion and queues. Additionally, the change of Woodland Road from one way to two way traffic would require a formal permitting process.

VILLAGE SITE

This site is located at the existing Stop & Shop off Harvard Street. Access and egress can be accommodated via the traffic signal at the Stop & Shop and the Aspinwall Avenue traffic signal. Alternatives have been reviewed with and without the supermarket. Area traffic counts are as follows:

- Harvard Avenue, 949 morning peak-hour traffic volume/1,057 evening peak-hour traffic volume
- School Street, 971 morning peak-hour traffic volume/891 evening peak-hour traffic volume
- Aspinwall Avenue, 743 morning peak-hour traffic volume/735 evening peak-hour traffic volume

The site circulation and access can be a challenge with the combined traffic and loading of the supermarket. Efforts have been made to separate the traffic under the alternatives. Parking can be reduced to 60 spaces due to the availability of public transportation and walking trips, which will also minimize off-site impacts.

Overall rating –disadvantageous. The combination of supermarket traffic and elementary school traffic on a shared site is not recommended.