MEMORANDUM

TO: Winn Development Company LP
c/o Ms. Angela Gile
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FROM: Mr. Jeffrey S. Dirk, P.E., PTOE, FITE
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DATE: September 28, 2021

RE: 8688

SUBJECT: Parking Demand Study

Vanasse & Associates, Inc. (VAI) has completed parking demand observations at three (3) multifamily residential communities located proximate to transit facilities in order to establish baseline parking demands for each community and to assess parking requirements for the Elm Place multifamily residential community that is to be located off Pitman Road and Elm Place in Swampscott, Massachusetts. Parking demands were observed at the following residential communities: Vantage Pointe Apartments, Swampscott, Massachusetts; Bell North Shore Apartments, Salem, Massachusetts; and Hamilton Highlands in Needham, Massachusetts. The parking demand observations were performed in June and July 2021 on a typical weekday (i.e., Tuesday, Wednesday or Thursday) and on a Saturday, between 5:00 and 8:00 AM. For reference, peak parking demands for a residential community generally occur on a weekday after 10:00 PM and before 6:00 AM.

The Vantage Pointe Apartments and Bell North Shore Apartments are both located within 1.5 miles of Swampscott Station on the Massachusetts Bay Transportation Authority (MBTA) Newburyport/Rockport Commuter Rail Line, and are directly served by MBTA Bus Route 445, *Salem Depot - Wonderland Station*. Hamilton Highlands is located approximately 1,500 feet (an approximate 7-minute walking distance) north of Needham Heights station on the MBTA Needham Commuter Rail Line. As such, it can be reasonably assumed that a portion of the residents of these communities use public transportation and that this utilization is reflected in the observed parking demands.

Table 1 summarizes the observed parking demand ratio at each residential community during the observation periods, along with the average observed parking demand of the three sites.

Table 1
PARKING DEMAND OBSERVATIONS

Time	Weekday Parking Ratio per Unit				Saturday Parking Ratio per Unit			
	Vantage Pointe Apartments[a]	Bell North Shore Apartments[b]	Hamilton Highlands[c]	Average	Vantage Pointe Apartments[a]	Bell North Shore Apartments[b]	Hamilton Highlands[c]	Average
5:00 AM	1.40	0.86	1.08	1.11	1.35	0.85	1.05	1.08
5:15 AM	1.39	0.88	1.06	1.11	1.35	0.85	1.05	1.08
5:30 AM	1.36	0.88	1.05	1.10	1.33	0.83	1.05	1.07
5:45 AM	1.32	0.86	1.05	1.08	1.34	0.83	1.05	1.07
6:00 AM	1.32	0.86	1.03	1.07	1.34	0.81	1.05	1.07
6:15 AM	1.28	0.86	1.01	1.05	1.35	0.80	1.03	1.06
6:30 AM	1.27	0.85	1.00	1.04	1.35	0.80	1.03	1.06
6:45 AM	1.21	0.78	1.00	1.00	1.35	0.76	1.01	1.04
7:00 AM	1.20	0.76	1.01	0.99	1.31	0.73	1.01	1.02
7:15 AM	1.15	0.75	1.00	0.97	1.28	0.73	0.99	1.00
7:30 AM	1.14	0.75	0.97	0.95	1.26	0.75	0.96	0.99
7:45 AM	1.07	0.73	0.95	0.92	1.25	0.71	0.92	0.96
8:00 AM	1.06	0.73	0.92	0.90	1.21	0.68	0.91	0.93

[a]Vantage Pointe Apartments located at 100 Vantage Terrace, Swampscott, Massachusetts with 96 units and 189 parking spaces.
[a]Bell North Shore Apartments located at 1 Carol Way, Salem, Massachusetts with 59 units and 74 parking spaces.
[a]Hamilton Highlands located at 757 Highland Avenue, Needham, Massachusetts with 77 units and 116 parking spaces.

As can be seen in Table 1, the peak parking demand at the **Vantage Point Apartments** was observed to occur at 5:00 AM on both a weekday and a Saturday, with the weekday peak parking demand ratio observed to be 1.40 spaces per dwelling unit and the Saturday peak parking demand ratio observed to be 1.35 spaces per dwelling unit. The peak parking demand at the **Bell North Shore Apartments** was observed to occur at 5:15 AM on a weekday, with an observed peak parking demand ratio of 0.88 spaces per unit, and at 5:00 AM on a Saturday, with an observed peak parking demand of 0.85 spaces per unit. The peak-parking demand at **Hamilton Highlands** was observed to occur at 5:00 AM on both a weekday and a Saturday, with the weekday peak parking demand ratio observed to be 1.08 spaces per dwelling unit and the Saturday peak parking demand ratio observed to be 1.05 spaces per dwelling unit.

On average, the three sites were observed to have a peak-parking demand ratio of 1.11 spaces per dwelling unit on a weekday and 1.08 spaces per dwelling unit on a Saturday. Additionally, the observed peak-parking demand ratios at the three multifamily residential communities are within the range of values documented by the Institute of Transportation Engineers (ITE)[1] for similar communities.

The Elm Place residential community will provide 130 parking spaces to support 120 residential units, or a parking ratio of 1.08 parking spaces per unit, which is generally consistent with the average peak parking demand observed at the three residential communities. Of note with specific regard to the parking demands for Elm Place: i) 70 percent of the residential units will consist of one-bedroom units, which are more likely to be occupied by a single tenant and a lower parking demand than a two or three-bedroom unit; ii) the Massachusetts Bay Transportation Authority (MBTA) Route 455 bus includes a stop along Essex Street at the proposed location of Elm Place that will include a bus shelter to be installed in conjunction with the project; and iii) Swampscott Station on the Newburyport/Rockport Line of the MBTA Commuter Rail system is located approximately 0.3 miles to the southwest of the Project site, or an approximate 4 to 5 minute walking distance.

cc: File

[1] *Parking Generation Manual*, 5th Edition; Institute of Transportation Engineers; Washington, D.C.; January 2019. Observed parking demand ratios for a multifamily (mid-rise) residential community in a similar setting were found to range from 0.75 to 2.03 spaces per dwelling unit on a weekday, with an average parking demand of 1.31 spaces per dwelling unit and an 85th percentile peak parking demand of 1.47 spaces per dwelling unit.