

MEMORANDUM

TO: Mr. Brian J. Mackey
YMCA of Martha's Vineyard
111R Edgartown-Vineyard
Haven Road
Vineyard Haven, MA 02568

FROM: Mr. Jeffrey S. Dirk, P.E.*, PTOE, FITE
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**Professional Engineer in CT, MA, ME, NH, RI and VA*

DATE: May 9, 2023

RE: 9478

SUBJECT: Parking Demand Assessment
YMCA of Martha's Vineyard – 111R Edgartown-Vineyard Haven Road
Oak Bluffs, Massachusetts

Vanasse & Associates, Inc. (VAI) has completed an evaluation of the parking demands of the YMCA of Martha's Vineyard and the adjacent YMCA ice arena located at 111R and 91 Edgartown-Vineyard Haven Road (E-VH Road), respectively, in Oak Bluffs, Massachusetts. The purpose of this evaluation is to ascertain the peak parking demands for these uses, both with and without an event at the YMCA ice arena, in order to allow for the development of a parking strategy for the proposed expansion of the YMCA (hereafter referred to as the "Project"). Based on this evaluation, we have determined the following with respect to the parking demands for the YMCA and the YMCA ice arena:

- There are 95 parking spaces provided in the three (3) surface parking lots proximate to the YMCA and 116 parking spaces in the three (3) surface parking lots that are located proximate to the YMCA ice arena, or a total of 211 parking spaces, which are shared between the two uses;
- Under non-event conditions, the observed peak parking demand for the YMCA was identified to occur at 5:00 PM on December 14, 2022 (Wednesday), with 156 parking spaces found to be occupied. Adjusting the observed peak parking demand to peak-month membership conditions (July/August) results in a predicted peak-month parking demand of approximately 183 parking spaces between the two uses;
- During the winter months when an event is scheduled at the YMCA ice arena, the maximum observed combined (YMCA and YMCA ice arena) parking demand in the six (6) parking lots was found to be 207 parking spaces, which represents 98 percent of the 211 available parking spaces shared between the two facilities;
- The expansion Project is intended to accommodate an increase in YMCA membership of approximately six (6) percent. Applying this metric to the predicted peak-month parking demand (183 parking spaces) would require approximately 194 parking spaces during the summer months,



or an additional 11 parking spaces, which can be accommodated by the existing parking supply (211 parking spaces); and

- Assuming a similar increase in parking demands for YMCA members during the winter months (11 additional parking spaces), the combined peak parking demand for both facilities would increase from 207 parking spaces to 218 parking spaces, or seven (7) more parking spaces than are currently provided.

As such, this evaluation has determined that there is a need to develop a parking management plan as a part of the Project to accommodate the predicted parking demands for the YMCA and the YMCA ice arena when an event is scheduled at the YMCA ice arena.

The following details our evaluation of the parking demands for the YMCA and the YMCA ice arena.

PROJECT DESCRIPTION

The YMCA of Martha's Vineyard is proposing an expansion of the existing facility located at 111R Edgartown Vineyard Haven Road in Vineyard Haven, Massachusetts. The expansion is intended to accommodate an increase in YMCA membership of approximately six (6) percent. The Project site is bound by areas of open and wooded space to the north, Edgartown-Vineyard Haven Road and the Martha's Vineyard Skatepark to the south; the YMCA of Martha's Vineyard Ice Arena (owned and operated by the YMCA) to the east; and Village Road to the west. Access to the Project site is provided by way of two (2) driveways that intersect the north side of Edgartown-Vineyard Haven Road approximately 500 feet east of Village Road and the east side of Village Road approximately 300 feet north of Edgartown Vineyard Haven Road.

EXISTING PARKING ACCOMMODATIONS

Shared parking for the YMCA and the YMCA ice arena is provided in six (6) surface parking lots that accommodate parking for a total of 211 vehicles, with three (3) lots situated adjacent to each facility as shown on Figure 1 and defined as Lots A through F. Lots A, B and C are located proximate to the YMCA and provide a combined parking supply of 95 parking spaces (40 parking spaces in Lot A, 23 parking spaces in Lot B and 32 parking spaces in Lot C). Lots D, E and F are located proximate to the YMCA ice arena and provide a combined parking supply of 116 parking spaces (55 parking spaces in Lot D, 29 parking spaces in Lot E and 32 parking spaces in Lot F).

PARKING DEMAND OBSERVATIONS WITHOUT AND ARENA EVENT

In order to establish the parking demands for the YMCA and the YMCA ice arena, parking demand observations were performed for the six (6) parking areas shown on Figure 1 both with and without an event at the YMCA ice arena. For non-event conditions, the observations were performed on October 3rd through October 7th, 2022 (Monday through Friday, inclusive), with observations recorded at 5:30 PM and 7:00 PM, and on October 11th through 14th, 2022 (Tuesday through Friday, inclusive) and December 12th through 16th, 2022 (Monday through Friday, inclusive), with observations recorded every hour between 5:00 and 7:00 PM, inclusive. These time periods are representative of the peak parking periods for the YMCA. Table 1 summarizes the non-event parking demands observed within the six (6) surface parking lots during the observation periods.





Figure 1

YMCA and Ice Arena
Surface Parking Lots

Table 1
PARKING DEMAND OBSERVATIONS
NON-EVENT PARKING DEMAND

Date/Time	Number of Occupied Spaces						Total Occupied Spaces	Occupancy ^a
	Lot A	Lot B	Lot C	Lot D	Lot E	Lot F		
<i>October 3, 2022</i>								
5:30 PM	20	7	23	1	3	11	65	30.8%
7:00 PM	23	18	13	0	13	4	71	33.6%
<i>October 4, 2022</i>								
5:30 PM	32	15	23	0	7	22	99	46.9%
7:00 PM	31	8	26	0	5	10	80	37.9%
<i>October 5, 2022</i>								
5:30 PM	36	15	32	1	9	7	100	47.4%
7:00 PM	20	15	11	0	5	12	63	29.9%
<i>October 6, 2022</i>								
5:30 PM	32	18	24	1	10	13	98	46.4%
7:00 PM	30	13	25	0	18	12	98	46.4%
<i>October 7, 2022</i>								
5:30 PM	19	9	19	0	5	10	62	29.4%
7:00 PM	12	6	10	0	6	11	45	21.3%
<i>October 11, 2022</i>								
5:00 PM	5	15	26	2	5	16	89	42.2%
6:00 PM	13	14	25	2	10	23	87	41.2%
7:00 PM	15	8	12	0	11	24	70	33.2%
<i>October 12, 2022</i>								
5:00 PM	35	17	32	2	5	10	101	47.9%
6:00 PM	7	6	27	10	19	8	77	36.5%
7:00 PM	27	9	19	0	6	7	68	32.2%
<i>October 13, 2022</i>								
5:00 PM	24	18	24	0	4	9	79	37.4%
6:00 PM	28	17	12	0	11	11	79	37.4%
7:00 PM	17	14	11	0	8	12	62	29.4%
<i>October 14, 2022</i>								
5:00 PM	23	8	9	0	4	3	47	22.3%
6:00 PM	19	9	7	0	3	4	42	19.9%
7:00 PM	10	11	8	0	4	5	38	18.0%
<i>December 12, 2022</i>								
5:00 PM	34	15	16	0	5	6	76	36.0%
6:00 PM	28	17	15	0	11	7	78	37.0%
7:00 PM	25	13	14	3	28	11	94	44.5%
<i>December 13, 2022</i>								
5:00 PM	26	19	20	1	6	13	85	40.3%
6:00 PM	31	11	22	2	5	27	98	46.4%
7:00 PM	18	12	3	0	22	16	71	33.6%
<i>December 14, 2022</i>								
5:00 PM	40	17	30	10	29	30	156	73.9%
6:00 PM	32	8	24	10	19	11	104	49.3%
7:00 PM	14	8	5	1	2	4	34	16.1%
<i>December 15, 2022</i>								
5:00 PM	27	17	18	2	8	16	88	41.7%
6:00 PM	29	14	21	0	9	9	82	38.9%
7:00 PM	18	10	4	1	21	17	71	33.6%
<i>December 16, 2022</i>								
5:00 PM	31	18	16	0	6	8	79	37.4%
6:00 PM	30	15	20	3	14	12	94	44.5%
7:00 PM	16	8	5	0	12	17	58	27.5%

^aBased on a parking supply of 211 parking spaces.



As can be seen in Table 1, the non-event peak parking demand for the YMCA and YMCA ice arena was observed to occur at 5:00 PM on December 14th (Wednesday), with 156 of the available 211 parking spaces occupied, or an occupancy ratio of 73.9%.

A review of YMCA member visitations for December 2022 indicates that the number of members visiting the facility is approximately 17 percent lower than those that occurred during July and August 2022, which are historically the visitation months. As such, the peak parking demand that was observed on December 14, 2022 (156 occupied parking spaces) was increased by 17 percent to represent the peak parking demand during the peak visitation months, resulting in an overall peak parking demand of 183 parking spaces under non-event conditions (156 spaces x 1.17 = 183 spaces), or an occupancy rate of 86.7%.

PARKING DEMAND OBSERVATIONS WITH AN ARENA EVENT

In order to establish the parking demand for the YMCA and YMCA ice arena with an arena event, parking demand observations were performed on December 8, 2022 (Thursday), on December 21, 2022 (Wednesday) and on January 4, 2023 (Wednesday), with observations recorded every hour between 5:00 and 7:00 PM, inclusive. It should be noted that ice arena events occur approximately 12 times per year during the winter months, with the majority associated with the Martha’s Vineyard Men’s Varsity Hockey league. Table 2 summarizes the parking demands observed within the six (6) surface parking lots during the observation periods with an event at the YMCA ice arena.

Table 2
PARKING DEMAND OBSERVATIONS
ARENA EVENT PARKING DEMAND

Date/Time	Number of Occupied Spaces						Total Occupied Spaces	Occupancy ^a
	Lot A	Lot B	Lot C	Lot D	Lot E	Lot F		
<i>December 8, 2022</i>								
5:00 PM	40	22	32	49	29	32	204	96.7%
6:00 PM	39	23	32	38	29	32	193	91.5%
7:00 PM	32	20	11	6	14	19	99	46.9%
<i>December 21, 2022</i>								
5:00 PM	40	23	32	51	29	32	207	98.1%
6:00 PM	40	23	31	48	29	32	203	96.2%
7:00 PM	27	16	8	3	9	14	77	36.5%
<i>January 4, 2023</i>								
5:00 PM	40	23	32	48	29	32	204	96.7%
6:00 PM	40	23	32	49	29	32	205	97.2%
7:00 PM	31	23	11	5	11	13	94	44.5%

^aBased on a parking supply of 211 parking spaces.

As can be seen in Table 2, the peak parking demand for the YMCA and YMCA ice arena with an event at the YMCA ice arena was observed to occur at 5:00 PM on December 21, 2022 (Wednesday), with 207 of the available 211 parking spaces occupied, or an occupancy ratio of 98.7%.



PROJECT-GENERATED PARKING DEMAND

As described previously, the proposed expansion to the existing YMCA facility is intended to accommodate an increase in membership of six (6) percent. Assuming that a six (6) percent increase in membership corresponds to a six (6) percent increase in parking demand, the peak-month, peak parking demand for the YMCA without an event at the YMCA ice arena is predicted to be 194 parking spaces,¹ or an increase of 11 parking spaces over the existing peak-month, peak-period demand. Given that there are 211 existing parking spaces shared between the two uses, sufficient parking will be available to accommodate the Project under non-event conditions.

Assuming a similar increase in parking demands for YMCA members during the winter months when an event is scheduled at the YMCA ice arena (11 additional parking spaces), the combined peak-parking demand for both facilities would increase from 207 parking spaces to 218 parking spaces, or seven (7) more parking spaces than are currently provided (211 parking spaces are shared between the two facilities). As such, a parking management plan should be developed as a part of the Project to accommodate the predicted on-site parking deficit when an event is scheduled at the YMCA ice arena.

SUMMARY

VAI has completed an evaluation of the parking demands of the YMCA of Martha's Vineyard and the adjacent YMCA ice arena located at 111R and 91 Edgartown-Vineyard Haven Road, respectively, in Oak Bluffs, Massachusetts. This evaluation has been undertaken in order to ascertain the peak parking demands for these uses, both with and without an event at the YMCA ice arena, in order to allow for the development of a parking strategy for the proposed expansion of the YMCA. Based on this evaluation, we have determined the following with respect to the parking demands for the YMCA and the YMCA ice arena:

- There are 95 parking spaces provided in the three (3) surface parking lots proximate to the YMCA and 116 parking spaces in the three (3) surface parking lots that are located proximate to the YMCA ice arena, or a total of 211 parking spaces, which are shared between the two uses;
- Under non-event conditions, the observed peak parking demand for the YMCA was identified to occur at 5:00 PM on December 14, 2022 (Wednesday), with 156 parking spaces found to be occupied. Adjusting the observed peak parking demand to peak-month membership conditions (July/August) results in a predicted peak-month parking demand of approximately 183 parking spaces between the two uses;
- During the winter months when an event is scheduled at the YMCA ice arena, the maximum observed combined (YMCA and YMCA ice arena) parking demand in the six (6) parking lots was found to be 207 parking spaces, which represents 98 percent of the 211 available parking spaces shared between the two facilities;
- The expansion Project is intended to accommodate an increase in YMCA membership of approximately six (6) percent. Applying this metric to the predicted peak-month parking demand (183 parking spaces) would require approximately 194 parking spaces during the summer months, or an additional 11 parking spaces, which can be accommodated by the existing parking supply (211 parking spaces); and

¹183 occupied spaces x 1.06 = 193.98 occupied spaces, which approximates to 194 spaces.



- Assuming a similar increase in parking demands for YMCA members during the winter months (11 additional parking spaces), the combined peak parking demand for both facilities would increase from 207 parking spaces to 218 parking spaces, or seven (7) more parking spaces than are currently provided.

This evaluation has determined that there is a need to develop a parking management plan as a part of the Project to accommodate the predicted parking demands for the YMCA and the YMCA ice arena when an event is scheduled at the YMCA ice arena. This plan should include measures to reduce on-site parking demands when an event is scheduled and should also explore opportunities to use existing available parking that is located proximate to the YMCA facilities. It is our understanding that the YMCA is currently in the process of obtaining a formal agreement with Martha's Vineyard Community Services to use parking at that facility for events, which would allow for overflow parking to occur proximate to the YMCA and eliminate the need for pedestrians to cross Edgartown-Vineyard Haven Road.

cc: File



ATTACHMENTS

YMCA Seasonality
Parking Demand Observation

YMCA Seasonality

Average weekly check-ins per month in 2022

	Weekly Check-Ins	Adjustment Factor to Average Month	Adjustment Factor to Peak Month
January	255	1.25	0.66
February	285	1.12	0.74
March	296	1.07	0.77
April	282	1.13	0.73
May	292	1.09	0.76
June	365	0.87	0.95
July	385	0.83	1
August	385	0.83	1
September	299	1.06	0.78
October	312	1.02	0.81
November	340	0.94	0.88
December	321	0.99	0.83
Avg	318.08		

*per Ryan Gosson Email 2/22/23

Parking Demand Observation

Date/Time	Number of Vehicle Parked						Members who Entered the Building
	Lot A	Lot B	Lot C	Lot D	Lot E	Lot F	
10/3 5:30 PM	20	7	23	1	3	11	10/3 from 5:30 PM to 7:00 PM 48 members
10/3 7:00 PM	23	18	13	0	13	4	10/3 from 7:00 PM to ??? 31 members
10/4 5:30 PM	32	15	23	0	7	22	10/4 from 5:30 PM to 7:00 PM 52 members
10/4 7:00 PM	31	8	26	0	5	10	10/4 from 7:00 PM to ??? 24 members
10/5 5:30 PM	36	15	32	1	9	7	10/5 from 5:30 PM to 7:00 PM 72 members
10/5 7:00 PM	20	15	11	0	5	12	10/5 from 7:00 PM to ??? 16 members
10/6 5:30 PM	32	18	24	1	10	13	10/6 from 5:30 PM to 7:00 PM 41 members
10/6 7:00 PM	30	13	25	0	18	12	10/6 from 7:00 PM to ??? 30 members
10/7 5:30 PM	19	9	19	0	5	10	10/7 from 5:30 PM to 7:00 PM 36 members
10/7 7:00 PM	12	6	10	0	6	11	10/7 from 7:00 PM to ??? 26 members

|| YMCA Cars (Lots A,B,C) || Arena Cars (Lots D,E,F) || Total Vehicles

50	15	65
54	17	71
70	29	99
65	15	80
83	17	100
46	17	63
74	24	98
68	30	98
47	15	62
28	17	45

Maximum spaces per lot **40** **23** **32** **55** **29** **32**

Date/Time	Number of Vehicle Parked						Members who Entered the Building
	Lot A	Lot B	Lot C	Lot D	Lot E	Lot F	
10/11 5:00 PM	25	15	26	2	5	16	10/11 from 5:00 PM to 7:00 PM 76 members
10/11 6:00 PM	13	14	25	2	10	23	
10/11 7:00 PM	15	8	12	0	11	24	
10/12 5:00 PM	35	17	32	2	5	10	10/12 from 5:00 PM to 7:00 PM 76 members
10/12 6:00 PM	7	6	27	10	19	8	
10/12 7:00 PM	27	9	19	0	6	7	
10/13 5:00 PM	24	18	24	0	4	9	10/13 from 5:00 PM to 7:00 PM 69 members
10/13 6:00 PM	28	17	12	0	11	11	
10/13 7:00 PM	17	14	11	0	8	12	
10/14 5:00 PM	23	8	9	0	4	3	10/14 from 5:00 PM to 7:00 PM 64 members
10/14 6:00 PM	19	9	7	0	3	4	
10/14 7:00 PM	10	11	8	0	4	5	

YMCA Cars (Lots A,B,C)	Arena Cars (Lots D,E,F)	Total Vehicles
66	23	89
52	35	87
35	35	70
84	17	101
40	37	77
55	13	68
66	13	79
57	22	79
42	20	62
40	7	47
35	7	42
29	9	38

Maximum spaces per lot
40 23 32 55 29 32

Date/Time	Number of Vehicle Parked						Members who Entered the Building
	Lot A	Lot B	Lot C	Lot D	Lot E	Lot F	
12/12 5:00 PM	34	15	16	0	5	6	12/12 from 5:00 PM to 6:00 PM 44 members
12/12 6:00 PM	28	17	15	0	11	7	12/12 from 6:00 PM to 7:00 PM 34 members
12/12 7:00 PM	25	13	14	3	28	11	12/12 from 7:00 PM to 8:00 PM? 21 members
12/13 5:00 PM	26	19	20	1	6	13	12/13 from 5:00 PM to 6:00 PM 44 members
12/13 6:00 PM	31	11	22	2	5	27	12/13 from 6:00 PM to 7:00 PM 38 members
12/13 7:00 PM	18	12	3	0	22	16	12/13 from 7:00 PM to 8:00 PM? 26 members
12/14 5:00 PM	40	17	30	10	29	30	12/14 from 5:00 PM to 6:00 PM 45 members
12/14 6:00 PM	32	8	24	10	19	11	12/14 from 6:00 PM to 7:00 PM 15 members
12/14 7:00 PM	14	8	5	1	2	4	12/14 from 7:00 PM to 8:00 PM? 27 members
12/15 5:00 PM	27	17	18	2	8	16	12/15 from 5:00 PM to 6:00 PM 41 members
12/15 6:00 PM	29	14	21	0	9	9	12/15 from 6:00 PM to 7:00 PM 30 members
12/15 7:00 PM	18	10	4	1	21	17	12/15 from 7:00 PM to 8:00 PM? 19 members
12/16 5:00 PM	31	18	16	0	6	8	12/16 from 5:00 PM to 6:00 PM 34 members
12/16 6:00 PM	30	15	20	3	14	12	12/16 from 6:00 PM to 7:00 PM 33 members
12/16 7:00 PM	16	8	5	0	12	17	12/16 from 7:00 PM to 8:00 PM? 8 members

|| YMCA Cars (Lots A,B,C) || Arena Cars (Lots D,E,F) || Total Vehicles

65	11	76
60	18	78
52	42	94
65	20	85
64	34	98
33	38	71
87	69	156
64	40	104
27	7	34
62	26	88
64	18	82
32	39	71
65	14	79
65	29	94
29	29	58

Maximum spaces per lot
40 23 32 55 29 32

Date/Time	Number of Vehicle Parked						Members who Entered the Building
	Lot A	Lot B	Lot C	Lot D	Lot E	Lot F	
12/8 5:00 PM	40	22	32	49	29	32	12/8 from 5:00 PM to 6:00 PM 31 members
12/8 6:00 PM	39	23	32	38	29	32	12/8 from 6:00 PM to 7:00 PM 26 members
12/8 7:00 PM	32	20	11	6	14	16	12/8 from 7:00 PM to 8:00 PM? 11 members
12/21 5:00 PM	40	23	32	51	29	32	12/21 from 5:00 PM to 6:00 PM 47 members
12/21 6:00 PM	40	23	31	48	29	32	12/21 from 6:00 PM to 7:00 PM 18 members
12/21 7:00 PM	27	16	8	3	9	14	12/21 from 7:00 PM to 8:00 PM? 34 members
1/4 5:00 PM	40	23	32	48	29	32	1/4 from 5:00 PM to 6:00 PM 60 members
1/4 6:00 PM	40	23	32	49	29	32	1/4 from 6:00 PM to 7:00 PM 39 members
1/4 7:00 PM	31	23	11	5	11	13	1/4 from 7:00 PM to 8:00 PM? 28 members

|| YMCA Cars (Lots A,B,C) || Arena Cars (Lots D,E,F) || Total Vehicles

94 110 204

94 99 193

63 36 99

95 112 207

94 109 203

51 26 77

95 109 204

95 110 205

65 29 94

Maximum spaces per lot **40** **23** **32** **55** **29** **32**

**All data collected during nights where a Men's Varsity Hockey Game was happening at the Arena