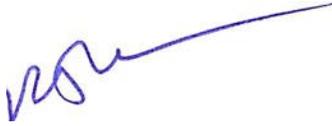


MEMORANDUM

DATE: September 15, 2020

TO: Zdorovie Senior Services, LLC
34 Peregrine Road
Newton, MA 02459

FROM: Robert J. Michaud, P.E. – Managing Principal 
Daniel A. Dumais, P.E. – Senior Project Manager

RE: **Proposed Zdorovie Senior Services – Adult Day Care Expansion**
141 – 149 California Street, Newton, MA

MDM Transportation Consultants, Inc. (MDM) has prepared this traffic memorandum (TM) for the proposed expansion of the Zdorovie Senior Services to be located at 141-149 California Street in Newton, MA. The project location and surrounding roadway network is shown in **Figure 1**. This memorandum describes baseline traffic volumes along California Street, summarizes the projected trip generation for the proposed uses with a comparison to the trip generation for the existing Site uses, and evaluates the peak parking demand for the Site.

Key findings of the traffic assessment are as follows:

- *Baseline Traffic Volumes.* The weekday daily traffic volume on California Street adjacent to the Site is approximately 13,525 vehicles per day (vpd). Peak hour traffic flow is approximately 960 vehicles per hour (vph) during the morning peak hour (7:00 – 8:00 am) and 1,140 vph hour during the evening peak hour (5:00 – 6:00 pm). The existing traffic along California Street during the 2:00 – 3:00 pm period which is the peak dismissal period for the Zdorovie Senior Center use is 25% less than during the traditional weekday evening peak hour between 5:00 – 6:00 pm which aligns with the existing Site uses.
- *Nominal Trip Generation.* Based on empirical trip generation methodology, the proposed project is estimated to generate approximately 2 fewer vehicle trips during the weekday morning peak hour, no change in vehicle trips during the weekday afternoon peak hour and 51 fewer trips during the weekday evening peak hour. Operating at full capacity with 46 employees, the project will result in no change in operating conditions during the weekday morning peak hour and weekday afternoon periods, and 1 fewer directional trip per minute during the weekday evening peak hour compared to the existing Site uses.



Figure 1

- *Adequate Capacity.* The use of the Site exclusively by Zdorovie will result in a shift in afternoon peak activity to 2:00 – 3:00 pm when traffic volumes on California Street are 25% less than during the traditional 5:00 – 6:00 pm weekday evening peak hour. The level of change in trip activity during the weekday morning and weekday afternoon will be imperceptible by the average motorist with no impact to the operations along California Street. The reduction in traffic during the weekday evening peak hour will result in slightly improved operations along California Street.
- *Adequate Parking Supply.* The car parking demand was observed to include approximately a 35% reduction for alternative mode share use by staff with the additional car demand by visitors, curriculum teachers, food staff, and maintenance through the day. When applied to the proposed 46 staff members the project is estimated to have a peak car parking demand of 38 cars. The facility will also have 15 vans for a total on-site peak parking demand of 53 vehicles. At full occupancy with clients and staff without further reduction for alternative travel modes or efficiency of an on-site kitchen and storage is projected at 53-spaces which is less than the parking supply with a 4 spaces surplus (7%). The peak parking demand periods were observed to occur between 10:00 AM and 3:00 PM.

In summary, trip generation for the development is estimated at 2 fewer vehicle trips during the weekday morning peak period, no change in vehicle trips during the weekday afternoon peak periods, and 51 fewer vehicle trips during the weekday evening peak hour compared to the existing Site uses. The use of the Site exclusively by Zdorovie will result in a shift in afternoon peak activity to 2:00 – 3:00 pm when traffic volumes on California Street are 25% less than during the traditional 5:00 to 6:00 pm weekday evening peak hour. The level of change in trip activity during the weekday morning and weekday afternoon will be imperceptible by the average motorist with no impact to the operations along California Street. The 4.5% reduction in traffic during the weekday evening peak hour will result in improved operations along California Street. The on-site parking supply of 57 spaces will adequately accommodate the peak parking demand of 53 vehicles at the Site (15 vans and 38 staff) under a maximum operating scenario. Design elements are outlined under *Recommendations and Conclusions* that will promote alternative modes of transportation and manage the on-site parking supply.

Project Description

The Site consists of approximately 1.5± acres of land located at 141-149 California Street in Newton, MA that includes five commercial buildings totaling 26,460 sf within a manufacturing zone. Zdorovie Senior Services occupies 5,700 sf (#149A) with a capacity for 87 clients, 15 staff and 5 vans, 5,000 sf recently occupied by a dental office (#143), 3,000 sf recently occupied by a ballroom dance studio (#141), and 12,800 sf occupied by a video camera rental and production company (#145 and #149). The uses are supported by approximately 67 surface parking spaces. Access/egress is provided via a single shared driveway along California Street.

Under the proposed Site programming Zdorovie Senior Services will continue to occupy 5,700 sf in building #149A and will expand to take over the remaining 4- buildings. The proposed use of buildings #143 and #145 would be expanded Senior Day Care services while building #141 will be converted to a kitchen and building #149 will be used for ancillary storage. The storage of items in #149 will include but are not limited to office supplies, medical supplies, and personal protective equipment (PPE). The Zdorovie use has a core operating time of 7:30 am to 4:00 pm (see **Attachments** for sample schedule) and the project will allow the expansion in client capacity to 258 with 46 staff and 15 vans (see **Attachments** for project narrative). The proposed uses will be supported by 57 surface parking spaces with 15 spaces dedicated to vans and the remaining 42 spaces dedicated to staff parking (includes 3 accessible spaces). The Site will include three drop-off/pick-up areas for the client vans. Access/egress will continue to be provide along a single driveway along California Street. A preliminary site plan prepared by VTP Associates; Inc. is presented in **Figure 2**.

Daily Traffic Volumes

Daily traffic volumes along California Street to the east of Riverdale Avenue in January 2019 using an automatic traffic recorder (ATR) device with results summarized in **Table 1**. The data is summarized for the weekday morning peak hour, the Zdorovie dismissal period, and the weekday evening peak hour.

**TABLE 1
ROADWAY TRAFFIC-VOLUME SUMMARY – CALIFORNIA STREET**

Time Period	Daily Volume (vpd) ¹	Percent		Peak Flow Direction ⁴	Peak Hour Directional Volume (vph)
		Daily Traffic ²	Peak Hour Volume (vph) ³		
Weekday Morning (7:00 – 8:00 am)	13,525	7%	960	58% EB	557
Weekday Afternoon (2:00 – 3:00 pm)	13,525	6%	845	54% WB	459
Weekday Evening (5:00 – 6:00 pm)	13,525	8%	1,140	57% WB	648

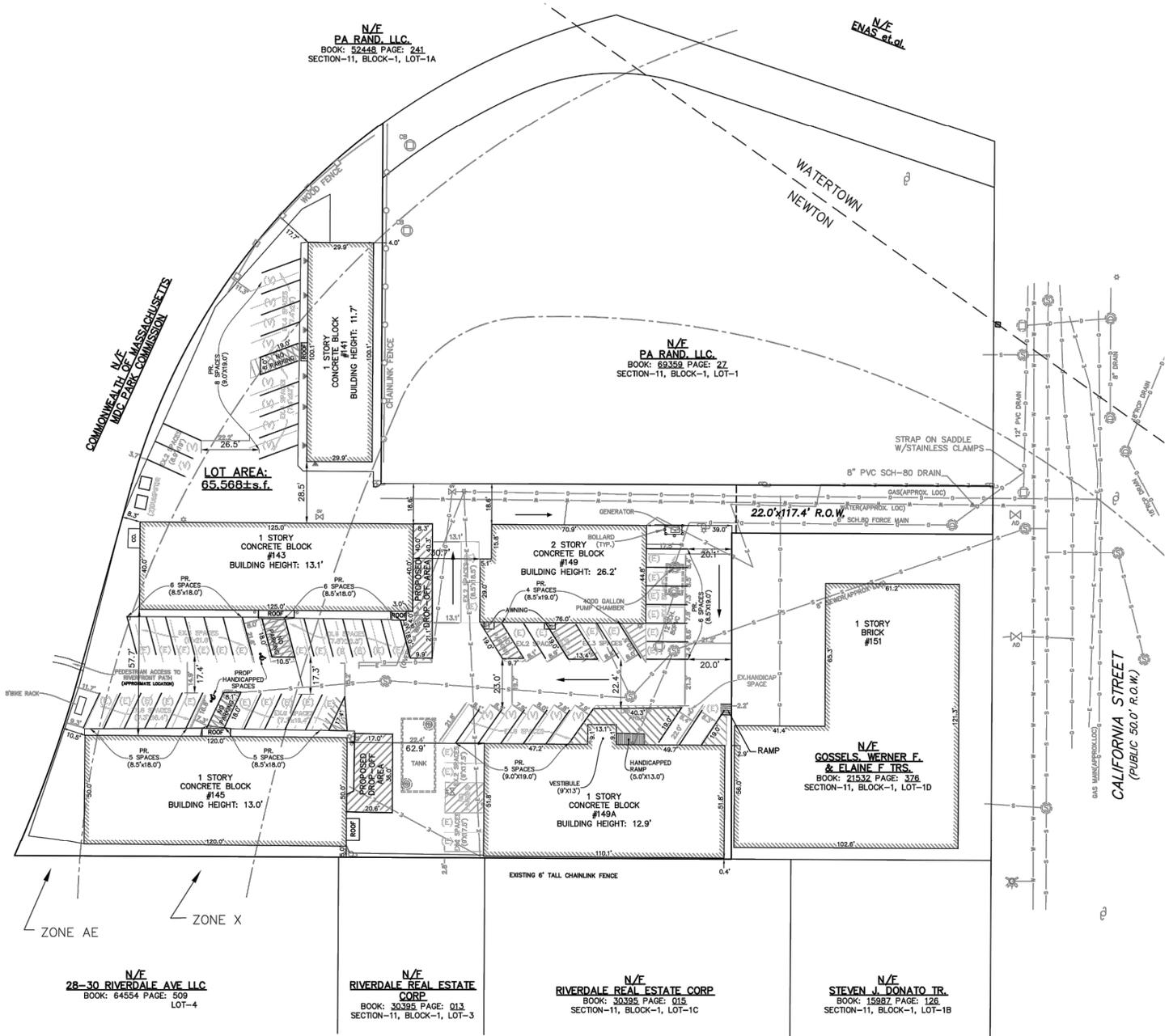
¹Two-way daily traffic expressed in vehicles per day without seasonal adjustment.

²Two-way peak-hour volume expressed in vehicles per hour.

³The percent of daily traffic that occurs during the peak hour.

⁴EB = Eastbound, WB = Westbound

As summarized in **Table 1**, California Street to the east of Riverdale Avenue carries approximately 13,525 vehicles per day (vpd) on weekdays. Peak hour traffic flow on California Street is approximately 7 to 8 percent of the daily flow with directional flow slightly skewed eastbound during the weekday morning peak traffic hour and slightly skewed westbound during the weekday evening peak hour. The existing traffic along California Street during the 2:00 – 3:00 pm period which is the peak dismissal period for the Zdorovie Senior Services use is 25% less than during the traditional weekday evening peak hour between 5:00 – 6:00 pm which aligns with the existing Site uses.



North

Scale: Not to Scale

Site Plan Source: VTP Associates, Inc.

Figure 2

MDM TRANSPORTATION CONSULTANTS, INC.
 Planners & Engineers

Preliminary Site Plan

Observed Trip Generation

Observed trip generation for the two existing Zdorovie Senior Services facilities was observed in September 2020 and is summarized in **Table 2**. The trip generation was then used to calculate an average trip rate per employee.

TABLE 2
OBSERVED TRIP-GENERATION – ZDOROVIE SENIOR SERVICES

Period	Newton Facility¹	Natick Facility²	Average Rate (per Employee)
<i>Weekday Morning Peak-Hour (7:00 – 8:00 am):</i>			
Enter	8	5	0.80
<u>Exit</u>	<u>6</u>	<u>3</u>	<u>0.55</u>
Total	14	8	1.35
<i>Weekday Afternoon Peak-Hour of Generator (2:00 – 3:00 pm):</i>			
Enter	7	3	0.60
<u>Exit</u>	<u>7</u>	<u>6</u>	<u>0.82</u>
Total	14	9	1.42
<i>Weekday Evening Peak-Hour (5:00 – 6:00 pm):</i>			
Enter	0	0	0.00
<u>Exit</u>	<u>0</u>	<u>0</u>	<u>0.00</u>
Total	0	0	0.00

¹Based on trips observed on September 1, 2020 at 149A California Street in Newton, MA with 40 clients and 9 staff.

²Based on trips observed on September 1, 2020 at 17 Strathmore Road in Natick, MA with 30 clients and 7 staff.

As summarized in **Table 2**, the Zdorovie Senior Centers generate approximately 1.35 trips per employee during the weekday morning peak hour which generally occurs from 7:00 – 8:00 am for the Newton facility, 1.42 trips per employee during the weekday afternoon peak hour which generally occurs between 2:00 – 3:00 pm for the Newton facility, and the Zdorovie Senior Services were observed to be closed for the day resulting in no trips during the weekday evening peak hour.

Projected Trip Generation

The trip generation estimates for the Site are provided for the weekday morning, weekday afternoon, and weekday evening periods, which correspond to the critical analysis periods for Site or the adjacent street traffic flow.

The traffic generated by the project was estimated using the trip rates observed at the existing Newton and Natick facilities as shown in **Table 2** applied to the employee projections for the expanded Zdorovie use in Newton. **Table 3** presents the trip-generation summary for the expanded Zdorovie use with up to 46 employees in buildings #141 #143, #145, and #149A. Trip calculation are provided in the **Attachments**.

TABLE 3
TRIP-GENERATION SUMMARY

Period	Existing Zdorovie Use ¹	Expanded Zdorovie Use ²
<i>Weekday Morning Peak-Hour (7:00 – 8:00 am):</i>		
Enter	13	37
<u>Exit</u>	<u>9</u>	<u>26</u>
Total	22	63
<i>Weekday Afternoon Peak-Hour of Generator (2:00 – 3:00 pm)</i>		
Enter	10	28
<u>Exit</u>	<u>13</u>	<u>38</u>
Total	23	66
<i>Weekday Evening Peak-Hour (5:00 – 6:00 pm):</i>		
Enter	0	0
<u>Exit</u>	<u>0</u>	<u>0</u>
Total	0	0

¹Based on trips observed on September 1, 2020 at 149A California Street in Newton, MA adjusted to capacity at 15 employees.

²Based on existing trip generation rates by employee applied to proposed 46 employees.

As summarized in **Table 3**, based on the observed trip generation the proposed Expanded Zdorovie Use is estimated to result in approximately 63 vehicle trips (37 entering and 26 exiting) during the weekday morning peak hour (7:00 – 8:00 am) , 66 vehicle trips (28 entering and 38 exiting) during the weekday afternoon peak hour (2:00 – 3:00 pm), and no trips during the weekday evening peak hour.

Table 4 provides a trip generation comparison between the exiting Site uses based on ITE trip generation rates for the closest applicable land use categories and the proposed Site use exclusively by Zdorovie Senior Services. Trip generation calculations are provided in the **Attachments**.

**TABLE 4
TRIP-GENERATION COMPARISON**

Period	Existing Uses (#141 – 149) ¹	Expanded Zdorovie Use ¹	Net New Trips
<i>Weekday Morning Peak-Hour (7:00 – 8:00 am):</i>			
Enter	45	37	-8
<u>Exit</u>	<u>20</u>	<u>26</u>	<u>+6</u>
Total	65	63	-2
<i>Weekday Afternoon Peak-Hour of Generator (2:00 – 3:00 pm)</i>			
Enter	26	28	+2
<u>Exit</u>	<u>40</u>	<u>38</u>	<u>-2</u>
Total	66	66	+0
<i>Weekday Evening Peak-Hour (5:00 – 6:00 pm):</i>			
Enter	19	0	-19
<u>Exit</u>	<u>32</u>	<u>0</u>	<u>-32</u>
Total	51	0	-51

¹Based on ITE LUC 493 (Athletic Club) trip rates applied to 3,000 sf for the Ballroom Dance Studio, ITE LUC 720 (Medical-Dental Office) applied to 5,000 sf for the Dentist Office, ITE LUC 710 (General Office) applied to 12,800 sf. for camera rental and studio space, and Existing Zdorovie Use of building #149A as shown in **Table 3**.

²Proposed vehicle trips as shown in **Table 3** under Expanded Zdorovie Use.

As summarized in **Table 4**, the proposed project is estimated to generate approximately 2 net *fewer* vehicle trips (8 fewer entering and 6 exiting) during the weekday morning peak hour, no change in trips during the weekday afternoon peak hour (2 entering and 2 fewer exiting), and 51 net *fewer* trips during the weekday evening peak hour. Operating at full capacity with 46 employees, the project will result in no change in operating conditions during the weekday morning peak hour and weekday afternoon periods, and 1 *fewer* directional trip per minute during the weekday evening peak hour compared to the existing Site uses. The use of the Site exclusively by Zdorovie will result in a shift in afternoon peak activity to 2:00 – 3:00 pm when traffic volumes on California Street are 25% less than during the traditional 5:00 to 6:00 pm weekday evening peak hour. The level of change in trip activity during the weekday morning and weekday afternoon will be imperceptible by the average motorist with no impact to the operations along California Street. The 4.5% *reduction* in traffic during the weekday evening peak hour will result in improved operations along California Street.

Peak Parking Observations – Empirical Rates

Parking observations at two (2) Zdorovie Senior Centers were conducted on September 1, 2020 to coincide with trip generation data collected for the facilities. The parking demand was observed for employee passenger cars and client vans and are presented in **Table 5**. Based on discussions with Zdorovie staff the Newton, MA facility was operational on the count date with 40 clients, 9 staff and 4 vans while the Natick, MA facility was operational with 30 clients, 7 staff and 3 vans. Zdorovie indicates that approximately 35% of the staff currently use alternative travel modes to commute which include carpool, walk, and public transit. The peak use of the facility can accommodate 258 clients with 46 staff (includes two kitchen staff) and 15 vans.

TABLE 5
PEAK PARKING DEMAND – Empirical Zdorovie Data

Location	Cars (#)	Vans (#)	Peak Parking Time	Cars Peak Parking Rate (spaces per employee)
Newton, MA ¹	8	5	10:00 AM - 3:00 PM	0.80/staff
Natick, MA ²	6	5	10:00 AM - 3:00 PM	0.86/staff
AVERAGE	7	5	10:00 AM - 3:00 PM	0.82/staff

¹Based on trips observed on September 1, 2020 at 149A California Street in Newton, MA with 40 clients, 10 staff (9 on-site staff and 1 food delivery staff, and 5 vans.

²Based on trips observed on September 1, 2020 at 17 Strathmore Road in Natick, MA with 30 clients, 7 staff and 5 vans.

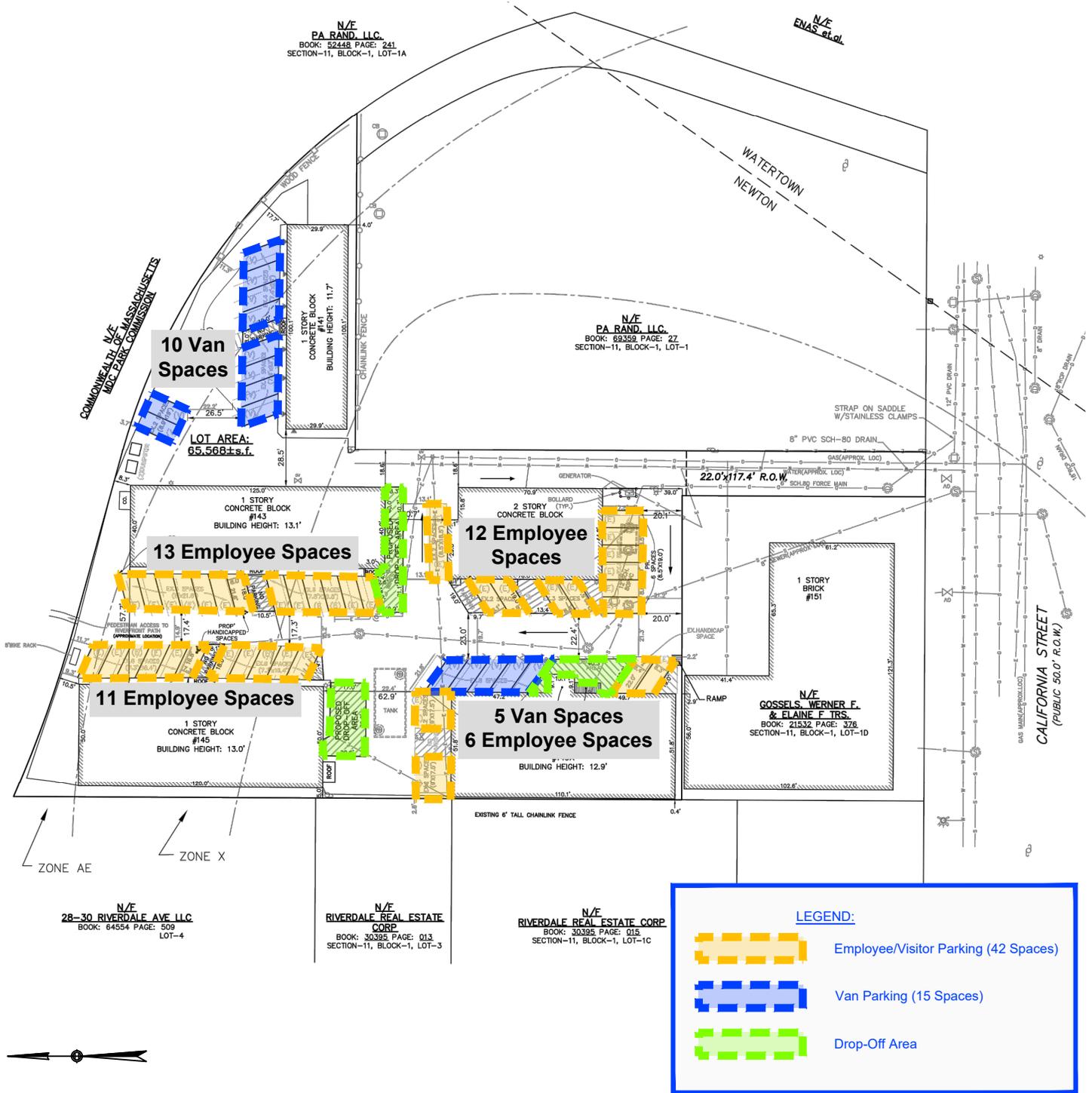
As presented in **Table 5**, peak parking demand rate of 0.82 spaces per staff member exhibited by existing Zdorovie facilities as described above. The car parking demand was observed to include approximately a 35% reduction for alternative mode share use by staff with the additional car demand by visitors, curriculum teachers, food staff, and maintenance through the day. When applied to the proposed 46 staff members the project is estimated to have a peak car parking demand of 38 cars. The facility will also have 15 vans for a total on-site peak parking demand of 53 vehicles. At full occupancy with clients and staff and without further reduction for alternative travel modes or efficiency of an on-site kitchen and storage is projected at 53-spaces which is less than the parking supply with a 4 spaces surplus (7%). The peak parking demand periods were observed to occur between 10:00 AM and 3:00 PM.

Conclusions and Recommendations

In summary, trip generation for the development is estimated at less than 2 *fewer* vehicle trips during the weekday morning peak period, no change in vehicle trips during the weekday afternoon peak period, and 51 *fewer* vehicle trips during the weekday evening peak hour compared to the existing Site uses. The use of the Site exclusively by Zdorovie will result in a shift in afternoon peak activity to 2:00 – 3:00 pm when traffic volumes on California Street are 25% less than during the traditional 5:00 to 6:00 pm weekday evening peak hour. The level of change in trip activity during the weekday morning and weekday afternoon will be imperceptible by the average motorist with no impact to the operations along California Street. The 4.5% *reduction* in traffic during the weekday evening peak hour will result in improved operations along California Street. The on-site parking supply of 57 spaces will adequately accommodate the peak parking demand of 53 vehicles at the Site (15 vans and 38 staff) under a maximum operating scenario.

MDM recommends the following to promote alternative modes of transportation and manage the on-site parking supply:

- *Dedicated Van Space.* To maximize parking efficiency and maneuverability for the larger vans, the Proponent will dedicate 15 van spaces at the Site with 10 van spaces near the kitchen building (#141) and 5 van spaces near #149A.
- *Bicycle Accommodations.* A bike rack will continue to be provided on-site near building #145 which is adjacent to the Charles River Greenway.
- *Van Loading Areas.* Three van drop-off/pick-up areas will be provided at the Site with one near each of the Senior Center buildings. These areas will also be used for deliveries.
- *Parking Management Plan.* The parking supply is projected to satisfy the peak parking demand; the Proponent has prepared a parking management plan (see **Figure 3**) to allocate the parking between employees and vans with the Site. As with the existing operations of the Site (building #149A), the Proponent will monitor parking by staff, vans, and visitors as the Zdorovie Senior Services client numbers and staff increase to maximum levels to ensure that everyone can safely and efficiently park on-site. Given the efficiencies of having the three Senior Center buildings within a single complex, the on-site kitchen facilities, and the storage for office supplies and PPE equipment is on-site is expected to reduce the projected demand which is based on empirical parking data for two facilities without these accommodations.



North
 Scale: Not to Scale

Site Plan Source: VTP Associates, Inc.

Figure 3

MDM TRANSPORTATION CONSULTANTS, INC.
 Planners & Engineers

Designated Parking Areas

- *TDM Actions.* The Proponent will offer the following TDM items at the Site to further encourage alternative transportation modes by employees which was observed at approximately 35% for existing Zdorovie employees.
 - *Transit Pass* – The Proponent will provide a 100% subsidy for employees who commute via nearby transit.
 - *Bike Racks* – A bike rack will continue to be provided near building #145. The bike rack will be expanded if needed based on demand.
 - *Bike Trail* – The Proponent will continue to use the Charles River Greenway for employees and client therapeutic exercise.

ATTACHMENTS

- Educational Activities and Van Schedules
- Project Narrative
- Traffic Volume Data
- Trip Generation
- Parking Data

□ Educational Activities and Van Schedule

Educational Activities/Sample Schedule

8:00 am – 9:00 am	Client arrival time
9:15 am	Therapeutic morning exercise
9:30 am	Breakfast time
10:00 am – 11:00 am	English Language Class/Life Skills
11:30 am – 12:15 pm	Computer class
12:30 pm – 1:00 pm	Memory enhancement games and quizzes
1:30 pm	Lunch time
2:00 – 3:00 pm	Departure time

Van Schedule



Arrival Times

8:00 – 8:15 AM

8:15 – 8:30 AM

8:30 – 8:45 AM

8:45 – 9:00 AM

9:00 – 9:15 AM

9:30AM Any additional route as needed



Departure Times

2:00 – 2:15 PM

2:15 – 2:30 PM

2:30 – 2:45 PM

2:45 – 3:00 PM

3:00 – 3:15 PM

3:30PM Any additional route as needed

□ Project Narrative

Operations Narrative

Zdorovie Senior Services, LLC, 141-145 California Street

Zdorovie Senior Services, LLC. (“Zdorovie” or “the petitioner”) operates an adult day care center at 149A California Street (“the facility”). There is currently a capacity of 87 clients and 15 staff. In 2011, a parking waiver of 22 stalls was found to be appropriate since none of the clients drive. The facility serves a local population of elders who desire to continue to live in a residential setting, often with extended family, and need support during the day. Many of these clients are Russian-Jewish immigrants, and the program offers health and educational services, food as well cultural enrichment experiences which are familiar and comforting. Zdorovie currently has a lengthy waiting list of clients who desire to attend its program. The facility provides an important service for Newton families who wish to keep their elders living at home but need coverage during the day.

Zdorovie recently purchased the entire site, which contains five buildings (specifically 141, 143, 145, 149A and 149 California Street). The petitioner seeks to expand its operations into the four other buildings. The proposal is to convert 143 and 145 California Street into adult day care facilities with a similar layout to 149A California Street. The two buildings would have capacities of 75 clients/13 staff and 96 clients/16 staff, respectively. 141 California Street would be used as a commercial kitchen to prepare food for clients at the site, as well as at Zdorovie’s other facilities in Needham and Natick, and 149 California Street would be used for overflow storage.

The kitchen staff will grocery shop twice per week to prepare food for its centers daily. Lunch meals will be shipped out once per day to Zdorovie’s other facilities in Natick and Needham. These deliveries will be made in the middle of the day.

The proposed expansion would require an additional parking waiver of 18 stalls. Since none of the clients drive themselves to the facility, the proposed parking lot capacity of 61 stalls is adequate for the total proposed staff of 46 and 15 vans. Historically about a third of Zdorovie’s staff do not drive themselves to work. Some of these staffers live in the immediate local area and walk to work. Others carpool. In some instances, members of the same family work together at the facility. This is a locally run and operated business, and it is important for the staff to speak in Russian with the clients.

Hours of operation are 8:00 am – 4:00 pm, Monday through Sunday. The facility currently offers home pick-up and drop-off of its clients in five dedicated vans, and all clients take advantage of this service. If the proposed expansion is approved, Zdorovie will purchase an additional ten vans (5 vans per each additional building expansion) to accommodate the increased capacity of the facility. The vans will operate on staggered schedules over a period of an hour and a half window in the morning and afternoon to minimize traffic in the parking lot. The only proposed change to the current layout of the parking lot would be the creation of van

drop off areas in front of the two new adult day care buildings, and the addition of a handicap parking stall in front of each of these buildings.

Zdorovie staff arrive around 7:30am and leave when the facility closes at 4:00 pm. (Staff work one shift per day.) Staff have a dedicated break room which is utilized as needed throughout the business day and they typically do not leave the site during their break. Weekend and weekdays generally have the same daily capacity.

During the arrival and departure process, most of Zdorovie staff is involved in assisting in ambulation to and from the vans, assisting in loading in and out of the vans, assisting clients with their belongings, and making sure clients are safe. Nurses, program aids and supervisors all work together in the mornings and afternoons to ensure smooth and safe operations.

Sample Class Schedule

8:00 am – 9:00 am	Client arrival time
9:15 am	Therapeutic morning exercise
9:30 am	Breakfast time
10:00 am – 11:00 am	English Class
11:30 am – 12:15 pm	Computer class
12:30 pm – 1:00 pm	Memory enhancement games and quizzes
1:30 pm	Lunch time
2:00 – 3:00 pm	Departure time

During breaks in the schedule, clients may choose to rest, meet with nurses or other staff, go for walks, or participate in additional activities under the supervision of staff members.

Therapeutic Activity plan is developed monthly past topics have included the following:

- Health education and nursing procedure
- English language teaching
- Computer/technology proficiency teaching
- Education on signs of elder abuse
- Education of fraud and scams
- Education of assistive devices usage
- Education of proper body mechanics
- Education, supervision and assistance of physical exercise
- Cognitive stimulation games

- Historical and cultural educational field trips
- Lectures

Van Drop off and Pick up Schedule

(Van stalls are labeled on the Proposed Conditions site plan as “V”, and employee stalls as “E”)

Vehicle Schedule per each of 3 centers:

- Arrival
 - 8:00AM Van 1
 - 8:15AM Van 2
 - 8:30AM Van 3
 - 8:45AM Van 4
 - 9:00AM Van 5
 - 9:30AM Any additional route as needed
- Departure
 - 2:00PM Van 1
 - 2:15PM Van 2
 - 2:30PM Van 3
 - 2:45PM Van 4
 - 3:00PM Van 5
 - 3:30PM Any additional route as needed

□ Traffic Volume Data

MDM Transportation Consultants, Inc.

E/W: California Street
 East of Site Driveways
 Newton, MA

28 Lord Road, Suite 280
 Marlborough, MA 01752
 508-303-0370
 www.mdmtrans.com

Date Start: Wednesday, January 02, 2019
 Site Code:
 Station ID:

Date Start: Wednesday, January 02, 2019

Start Time	Thursday, Thu	Westbound		Hour Totals		Eastbound		Combined Totals			
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon		
12:00		17	106			10	99				
12:15		15	105			9	98				
12:30		15	94			1	104				
12:45		10	106	57	411	4	99	24	400		
01:00		7	104			3	101				
01:15		10	93			2	106				
01:30		9	97			2	102				
01:45		2	124	28	418	3	86	10	395		
02:00		10	109			1	94				
02:15		8	108			4	91				
02:30		5	126			1	113				
02:45		7	116	30	459	3	86	9	384		
03:00		11	96			2	98				
03:15		4	152			8	102				
03:30		7	137			18	106				
03:45		3	174	25	559	9	101	37	407		
04:00		4	133			1	130				
04:15		1	116			4	108				
04:30		9	123			6	100				
04:45		10	160	24	532	10	117	21	455		
05:00		10	166			14	150				
05:15		7	154			23	125				
05:30		20	158			20	123				
05:45		25	170	62	648	33	94	90	492		
06:00		34	120			46	113				
06:15		54	149			61	99				
06:30		54	120			96	91				
06:45		69	107	211	496	93	85	296	388		
07:00		77	99			134	97				
07:15		91	105			133	81				
07:30		111	87			148	56				
07:45		122	88	401	379	142	65	557	299		
08:00		117	83			132	65				
08:15		146	79			144	46				
08:30		131	77			147	42				
08:45		103	60	497	299	116	34	539	187		
09:00		86	53			84	29				
09:15		104	55			97	21				
09:30		80	61			107	29				
09:45		73	63	343	232	102	41	390	120		
10:00		83	50			92	21				
10:15		89	64			98	20				
10:30		89	49			90	21				
10:45		89	40	350	203	109	18	389	80		
11:00		89	37			99	21				
11:15		87	22			73	11				
11:30		91	30			93	14				
11:45		104	21	371	110	91	9	356	55		
Total		2399	4746			2718	3662			5117	8408
Percent		33.6%	66.4%			42.6%	57.4%			37.8%	62.2%
Combined Total		7145				6380				13525	

□ Trip Generation

Zdorovie Natick

Clients: 30

Employees: 7

	Passenger Vehicle		Van	
	Entering	Exiting	Pickup/Dropoff	
7:00	1	0	0	0
7:15	2	0	0	0
7:30	0	3	0	0
7:45	2	0	0	0
8:00	0	0	1	1
8:15	0	0	0	0
8:30	0	0	2	2
8:45	2	1	0	0
2:00	0	0	1	1
2:15	0	0	1	1
2:30	0	0	1	1
2:45	0	0	1	1
3:00	2	0	0	0
3:15	0	1	0	0
3:30	1	2	1	1
3:45	0	1	0	0
4:00	1	1	0	0
4:15	0	0	0	0
4:30	0	0	0	0
4:45	0	0	0	0
5:00	0	0	0	0
5:15	0	0	0	0
5:30	0	0	0	0
5:45	0	0	0	0

Zdorovie Newton

Clients: 40

Employees: 9

	Vehicle	
	Entering	Exiting
	0	1
	2	3
	2	1
	3	1
	1	1
	2	0
	2	3
	1	2
	1	3
	0	1
	1	1
	5	2
	0	0
	1	0
	2	3
	0	0
	2	1
	0	0
	0	0
	0	0
	0	0
	0	0
	0	0
	0	0
	0	0

By Employee	Natick		Newton		Average Rate
AM					
Enter	5	0.71	8	0.89	0.80
Exit	3	<u>0.43</u>	6	<u>0.67</u>	0.55
Total	8	1.14	14	1.56	1.35
Afternoon					
Enter	3	0.43	7	0.78	0.60
Exit	6	<u>0.86</u>	7	<u>0.78</u>	0.82
Total	9	1.29	14	1.56	1.42
PM					
Enter	0	0.00	0	0.00	0.00
Exit	0	<u>0.00</u>	0	<u>0.00</u>	0.00
Total	0	0.00	0	0.00	0.00

Institute of Transportation Engineers (ITE) 10th Edition
Land Use Code (LUC) 493 - Athletic Club

Average Vehicle Trips Ends vs: 1000 Sq. Feet Gross Floor Area
Independent Variable (X): 3

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 3.16 * (X)
T = 3.16 * 3
T = 9.48
T = 9 vehicle trips
with 61% (5 vph) entering and 39% (4 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 6.29 * (X)
T = 6.29* 3
T = 18.87
T = 19 vehicle trips
with 62% (12 vph) entering and 38% (7 vph) exiting.

WEEKDAY MORNING PEAK HOUR OF GENERATOR

T = 3.40 * (X)
T = 3.40* 3
T = 10.20
T = 10 vehicle trips
with 58% (6 vpd) entering and 42% (4 vpd) exiting.

WEEKDAY EVENING PEAK HOUR OF GENERATOR

T = 6.36* (X)
T = 6.36 * 3
T = 19.08
T = 19 vehicle trips
with 63% (12 vph) entering and 37% (7 vph) exiting.

SATURDAY PEAK HOUR OF GENERATOR

T = 8.60* (X)
T = 8.60* 0
T = 25.80
T = 26 vehicle trips
with 49% (13 vph) entering and 51% (13 vph) exiting.

Institute of Transportation Engineers (ITE) 10th Edition
Land Use Code (LUC) 710 - General Office Building

Average Vehicle Trips Ends vs: 1000 Sq. Feet Gross Floor Area
Independent Variable (X): 12.8

AVERAGE WEEKDAY DAILY

$$T = 9.74 * (X)$$

$$T = 9.74 * 12.8$$

$$T = 124.67$$

T = 124 vehicle trips
with 50% (62 vpd) entering and 50% (62 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

$$T = 1.16 * (X)$$

$$T = 1.16 * 12.8$$

$$T = 14.85$$

T = 15 vehicle trips
with 86% (13 vph) entering and 14% (2 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

$$T = 1.15 * (X)$$

$$T = 1.15 * 12.8$$

$$T = 14.72$$

T = 15 vehicle trips
with 16% (2 vph) entering and 84% (13 vph) exiting.

SATURDAY DAILY

$$T = 2.21 * (x)$$

$$T = 2.21 * 12.8$$

$$T = 28.29$$

T = 28 vehicle trips
with 50% (14 vpd) entering and 50% (14 vpd) exiting.

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

$$T = 0.53 * (X)$$

$$T = 0.53 * 12.8$$

$$T = 6.78$$

T = 7 vehicle trips
with 54% (4 vph) entering and 46% (3 vph) exiting.

Institute of Transportation Engineers (ITE) 10th Edition
Land Use Code (LUC) 720 - Medical-Dental Office Building

Average Vehicle Trips Ends vs: 1000 Sq. Feet Gross Floor Area
Independent Variable (X): 5.00

AVERAGE WEEKDAY DAILY

$T = 34.80 * (X)$
 $T = 34.80 * 5.00$
 $T = 174.00$
 $T = 174$ vehicle trips
with 50% (87 vpd) entering and 50% (87 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

$T = 2.78 * (X)$
 $T = 2.78 * 5.00$
 $T = 13.90$
 $T = 14$ vehicle trips
with 79% (11 vpd) entering and 21% (3 vpd) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

$T = 3.46 * (X)$
 $T = 3.46 * 5.00$
 $T = 17.30$
 $T = 17$ vehicle trips
with 28% (5 vpd) entering and 72% (12 vpd) exiting.

SATURDAY DAILY

$T = 8.57 * (X)$ (Small Sample Size - Use with Caution)
 $T = 8.57 * 5$
 $T = 42.85$
 $T = 42$ vehicle trips
with 50% (21 vpd) entering and 50% (21 vpd) exiting.

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

$T = 3.10 * (X)$ (Small Sample Size - Use with Caution)
 $T = 3.10 * 5$
 $T = 15.50$
 $T = 16$ vehicle trips
with 57% (9 vph) entering and 43% (7 vph) exiting.

Zdorovie Newton

2:00 to 3:00 Trip Generation

Weekday Afternoon Trip Generation - Existing Use

	Boston Ballroom	Talamas	Smile-Vision
Use	Dancing Center		
Building	#141	#145	#143
SqFt.	3,000 sf	12,800 sf	5,000 sf
Closest LUC	<u>493 Athletic Club</u>	<u>710 Office</u>	<u>720 Medical Office</u>
Enter	12	2	5
Exit	<u>7</u>	<u>13</u>	<u>12</u>
Total	19	15	17
Percentage of Daily Traffic			
2:00 - 3:00	3.1	7.5	9.1
PM Peak	6.6	11.7	8.3
2:00 to 3:00			
Enter	6	2	6
Exit	<u>3</u>	<u>8</u>	<u>13</u>
Total	9	10	19

□ Parking Data

Site: Zdorovie Newton
 Date: 9/1/2020
 Address: 149A California Street
 40 Clients, 9 Staff

Time	Cars on Site	Vans on Site	Total Vehicles on Site
7:00 AM	3	5	8
8:00 AM	7	0	7
9:00 AM	6	0	6
10:00 AM	5	5	10
11:00 AM	6	5	11
12:00 PM	6	5	11
1:00 PM	8	5	13
2:00 PM	5	2	7
3:00 PM	3	4	7
4:00 PM	4	5	9
5:00 PM	3	5	8
6:00 PM	1	5	6
MAX	8	5	13

1 Additional Staff Delivering Food

Site: Zdorovie Natick
 Date: 9/1/2020
 Address: 17 Strathmore Road
 30 Clients, 7 Staff

10:00 AM 6 Cars and 5 Vans for 11 Total Vehicles were on site at time of observation
 3:00 PM 6 Cars and 5 Vans for 11 Total Vehicles were on site at time of observation

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