



Bright View Engineering
Moving you forward

February 19, 2021

VIA E-MAIL (JSLATE@MORRISTWP.COM)

James Slate, PE
Morris Township Engineer
50 Woodland Avenue
Morristown, NJ 07960

**Re: Parking and Trip Generation Evaluation – 340 Mount Kemble Avenue
Morris Township, Morris County, New Jersey
Project No.: 212627**

Dear Mr. Slate:

As requested, Bright View Engineering (BVE) has conducted a trip generation and parking review of the property known as 340 Mt Kemble Avenue and surrounding commercial lots. This letter report represents a summary of our findings.

Existing Conditions

340 Mount Kemble Avenue

340 Mount Kemble Avenue is located on the northeast quadrant of the area in question and based on the information provided by the Township, consists of approximately 410,820 sf of office space with 1,797 parking spaces provided. Based on the township parking requirement of 4 parking spaces per 1,000 sf of office space, 1,644 spaces are required.

412 Mount Kemble Avenue

412 Mount Kemble Avenue is located on the western quadrant of the area in question and based on the information provided by the Township, consists of approximately 475,100 sf of office space with 1,614 parking spaces provided. Based on the township parking requirement of 4 parking spaces per 1,000 sf of office space, 1,900 spaces are required.

350/360 Mount Kemble Avenue

350/360 Mount Kemble Avenue is located on the southeast quadrant of the area in question and based on the information provided by the Township, consists of approximately 229,510 sf of office space with 881 parking spaces provided. Based on the township parking requirement of 4 parking spaces per 1,000 sf of office space, 918 spaces are required.

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Existing Trip Generation

Based on the aforementioned building sizes, BVE calculated the anticipated trip generation for the site based on the Institute of Transportation Engineer’s 10th Edition Trip Generation Manual. Land Use Code 710 (General Office) was chosen as this use most closely represents the current and anticipated use of these buildings, whereas the buildings consist of multiple tenants within each building. Table 1, below, provides the resulting trip generation for each office building and the resulting aggregate totals.

TABLE 1
10th Edition Trip Generation Estimates – Existing Conditions

Land Use	Morning Peak Hour			Evening Peak Hour			Saturday Peak Hour			Daily	Saturday
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL		
412 Mt. Kemble Ave 475,100 sf office (LU 710)	614	84	698	122	553	675	136	116	252	4,811	1,050
350/360 Mt. Kemble Ave 229,510 sf office (LU 710)	304	41	345	59	267	326	66	56	122	2,375	507
340 Mt. Kemble Ave 410,820 sf office (LU 710)	532	72	604	105	478	583	118	100	218	4,178	908
Total	1,450	197	1,647	286	1,298	1,584	320	272	592	11,364	2,465

As Table 1 indicates, the complex, if fully occupied, would generate 1,647 trips during the weekday morning peak hour, 1,584 trips during the weekday evening peak hour, and approximately 592 trips on the Saturday mid-day peak hour.

Proposed Trip Generation

Based on the contemplated redevelopment plan, portions of the parking lot at 340 Mt Kemble Avenue would be replaced with an approximately 225 room hotel with ancillary meeting and restaurant space. This use most closely matches ITE Land Use Code 310, Hotel, which is described as “...a place of lodging that provides sleeping accommodations and supporting facilities such as restaurants, cocktail lounges, meeting and banquet rooms or convention facilities, limited recreational facilities (pool, fitness room) and/or other retail and service shops.”



Based on the ITE Trip Generation Estimates, a stand alone 225 room hotel will generate the following vehicle trips:

TABLE 2
10th Edition Trip Generation Estimates – 225 Room Hotel

Land Use	Morning Peak Hour			Evening Peak Hour			Saturday Peak Hour			Daily	Saturday
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL		
225 Room Hotel (LU 310)	63	44	107	73	70	143	91	71	162	2113	1870

A portion of the trips associated with the hotel use are expected to come from the adjacent office uses and vice versa. This concept is known as internal capture, where a portion of the trips associated with each individual land use stay internal to the site and do not utilize the adjacent street network. Applying the NJDOT approved internal capture rates between the office and hotel uses results in the following total trip generation for the area:

TABLE 3
Total Trip Generation Estimates with Internal Capture Adjustments

Land Use	Morning Peak Hour			Evening Peak Hour			Saturday Peak Hour			Daily	Saturday
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL		
475,100 sf office (LU 710)	614	84	698	122	553	675	136	116	252	4811	1050
229,510 sf office (LU 710)	304	41	345	59	267	326	66	56	122	2375	507
410,820 sf office (LU 710)	532	72	604	105	478	583	118	100	218	4178	908
Total	1450	197	1647	286	1298	1584	320	272	592	11364	2465
225 Room Hotel (LU 310)	63	44	107	73	70	143	91	71	162	2113	1870
Total	1513	241	1754	359	1368	1727	411	343	754	13477	4335
Reduction due to Internal Capture	-33	-33	-66	0	0	0	0	0	0		
Total	1480	208	1688	359	1368	1727	411	343	754		
Percent Increase Due to Hotel Use	2%	6%	2%	26%	5%	9%	28%	26%	27%		

No credit was taken for internal capture for the weekday evening and Saturday mid-day peak hours as NJDOT has not identified an approved internal capture credit for these time periods and uses.

As is indicated in Table 3 above, the addition of a 225 room hotel to the site will result in an approximately 41 vehicle increase (2%) in morning peak hour trips and a 143 trip increase (9%) in evening peak hour trips. Since NJDOT considers an increase of over 100 vehicles and 10% of daily trips to be a significant increase in traffic, the proposed hotel will likely require the NJDOT access permit to be updated should a hotel on site move forward.



Parking Supply and Demand

Based on available aerial photography and historical site plans the following parking supplies and parking requirements were noted for the various office buildings in question:

**TABLE 4
 Existing Parking Supply and Projected Parking Demand**

Site	Required Parking Per Ordinance (4 spaces / 1,000 sf)	Parking Demand Per ITE 5th Edition Parking Generation (3.3 spaces / 1,000 sf)	Parking Supply
412 Mt Kemble Ave 475,100 sf Office	1,900	1,568	1,614
350/360 Mt Kemble Ave 229,510 sf Office	918	757	881
340 Mt Kemble Ave 410,820 sf Office	1,644	1,356	1,797

Proposed Parking Requirements

The 225 Room hotel under consideration adjacent to the 340 Mt Kemble office building will reduce the parking supply in the vicinity of that building by 99 spaces, resulting in a post construction parking supply of 1,698 spaces for the office building and hotel. The parking requirement for the Hotel is 1 space per room as per the redevelopment plan under consideration which is equal to the ITE 5th Edition 85th percentile parking rate for a hotel use. Thus the 225 room hotel requires 225 parking spaces.

Shared Parking

To determine if the office and hotel uses can benefit from a shared parking arrangement, a shared parking analysis was conducted for the 340 Mt Kemble lot and area utilizing both the required parking per township ordinance and the anticipated parking demand per ITE 5th Edition parking projections. The parking demand for each use over the course of the day was determined based on the temporal distributions provided in the in the ITE 5th Edition parking manual for the office and hotel uses. Tables 5 and 6 below indicate the results of the shared parking analysis based on both ordinance requirements and ITE anticipated parking demand.



TABLE 5
Shared Parking Analysis by Parking Requirement – 340 Mount Kemble Avenue
Parking Rates based on Twp Ordinance

Time			LU Code 710 (General Office)		LU Code 210 (Hotel)		Total Required Parking
			Percent of Maximum Parking Demand	Required Parking (4 spaces / 1,000 sf)	Percent of Maximum Parking Demand	Required Parking (1 space / room)	
12:00 AM	to	1:00 AM	0%	0	96%	216	216
1:00 AM	to	2:00 AM	0%	0	96%	216	216
2:00 AM	to	3:00 AM	0%	0	96%	216	216
3:00 AM	to	4:00 AM	0%	0	96%	216	216
4:00 AM	to	5:00 AM	0%	0	96%	216	216
5:00 AM	to	6:00 AM	0%	0	96%	216	216
6:00 AM	to	7:00 AM	0%	0	91%	205	205
7:00 AM	to	8:00 AM	13%	214	89%	200	414
8:00 AM	to	9:00 AM	48%	789	90%	203	992
9:00 AM	to	10:00 AM	88%	1447	100%	225	1672
10:00 AM	to	11:00 AM	100%	1644	98%	221	1865
11:00 AM	to	12:00 PM	100%	1644	89%	200	1844
12:00 PM	to	1:00 PM	85%	1397	85%	191	1588
1:00 PM	to	2:00 PM	84%	1381	75%	169	1550
2:00 PM	to	3:00 PM	93%	1529	81%	182	1711
3:00 PM	to	4:00 PM	94%	1545	70%	158	1703
4:00 PM	to	5:00 PM	85%	1397	74%	167	1564
5:00 PM	to	6:00 PM	56%	921	65%	146	1067
6:00 PM	to	7:00 PM	20%	329	73%	164	493
7:00 PM	to	8:00 PM	11%	181	78%	176	357
8:00 PM	to	9:00 PM	0%	0	93%	209	209
9:00 PM	to	10:00 PM	0%	0	96%	216	216
10:00 PM	to	11:00 PM	0%	0	95%	214	214
11:00 PM	to	12:00 AM	0%	0	95%	214	214



TABLE6
Shared Parking Analysis by Parking Requirement – 340 Mount Kemble Avenue
Parking Rates based on ITE 85th Percentile Rates

Time	LU Code 710 (General Office)		LU Code 210 (Hotel)		Total Required Parking
	Percent of Maximum Parking Demand	Required Parking (3.3 spaces / 1,000 sf)	Percent of Maximum Parking Demand	Required Parking (1 space / room)	
12:00 AM to 1:00 AM	0%	0	96%	216	216
1:00 AM to 2:00 AM	0%	0	96%	216	216
2:00 AM to 3:00 AM	0%	0	96%	216	216
3:00 AM to 4:00 AM	0%	0	96%	216	216
4:00 AM to 5:00 AM	0%	0	96%	216	216
5:00 AM to 6:00 AM	0%	0	96%	216	216
6:00 AM to 7:00 AM	0%	0	91%	205	205
7:00 AM to 8:00 AM	13%	176	89%	200	376
8:00 AM to 9:00 AM	48%	651	90%	203	854
9:00 AM to 10:00 AM	88%	1193	100%	225	1418
10:00 AM to 11:00 AM	100%	1356	98%	221	1577
11:00 AM to 12:00 PM	100%	1356	89%	200	1556
12:00 PM to 1:00 PM	85%	1153	85%	191	1344
1:00 PM to 2:00 PM	84%	1139	75%	169	1308
2:00 PM to 3:00 PM	93%	1261	81%	182	1443
3:00 PM to 4:00 PM	94%	1275	70%	158	1433
4:00 PM to 5:00 PM	85%	1153	74%	167	1320
5:00 PM to 6:00 PM	56%	759	65%	146	905
6:00 PM to 7:00 PM	20%	271	73%	164	435
7:00 PM to 8:00 PM	11%	149	78%	176	325
8:00 PM to 9:00 PM	0%	0	93%	209	209
9:00 PM to 10:00 PM	0%	0	96%	216	216
10:00 PM to 11:00 PM	0%	0	95%	214	214
11:00 PM to 12:00 AM	0%	0	95%	214	214



As Tables 5 and 6 indicate, the maximum required parking occurs between 10:00 AM and 11:00 AM, with 1,865 spaces required based on the current parking ordinances and 1,577 spaces required based on ITE projected demands. With construction of the hotel use, an estimated 1,698 spaces will be available on the 340 Mt Kemble Lot. This results in the lot providing 167 less spaces than required by ordinance and 121 spaces more than the anticipated demand.

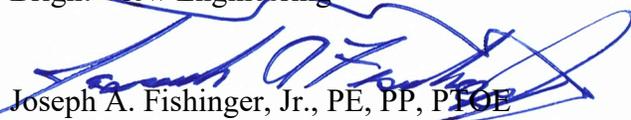
Parking at 350/360 Mt Kemble and 412 Mt Kemble follow similar patterns to 340 Mt Kemble, whereas the existing parking supply is slightly below the required 4 spaces per 1,000 sf required by ordinance but above the ITE projected demand of 3.3 spaces per 1,000 sf.

Summary

Based on the analysis contained herewith, the addition of a 225 room hotel to the lot on 340 Mt Kemble Avenue will have a modest increase in the trip generation for the overall site, resulting in an increase of approximately 41 vehicles (2%) in morning peak hour trips and a 143 vehicles (9%) in evening peak hour. The addition of the 225 room hotel will reduce the parking supply on 340 Mt Kemble Avenue from 1,797 spaces to 1,698 spaces. The parking required for the two uses based on ordinance, after adjusting for shared parking, will be 1,865 spaces whereas the parking required based on 85th percentile ITE parking demand will be 1,577. Although the parking provided will be below the parking required by ordinance, the lot contains 121 more spaces that are projected to be required based on anticipated demand.

I trust this information assists the Township as they consider the redevelopment plan for the property in question. If you have any questions or concerns, as always, I can be reached at 908-421-4674 or via email at JFishinger@BVEngr.com.

Sincerely,
Bright View Engineering



Joseph A. Fishinger, Jr., PE, PP, PTOE
Director of Traffic Engineering