



181 WEST HIGH STREET  
SOMERVILLE, NJ 08876

908 927 0100 p  
908 927 0181 f

TRAFFIC IMPACT STATEMENT  
FOR  
HULLFISH REAL ESTATE COMPANY, LLC  
MARMALADE RESTAURANT

BLOCK 6301, LOTS 58-60 & 68-70  
20-180 NORTH MAIN STREET

LAWRENCE TOWNSHIP  
MERCER COUNTY, NEW JERSEY

MARCH 10, 2022

ELIZABETH DOLAN, P.E.  
NJ LICENSE NO. 37071

GARY W. DEAN, P.E., P.P.  
NJ LICENSE NO. 33722

## INTRODUCTION

An application has been filed with Lawrence Township for a new restaurant proposed on Gordon Avenue. A 2,634 square foot restaurant and basement storage area of 2,136 square feet will be constructed on a site located on the north side of Gordon Avenue, generally opposite James Street, approximately 380 feet northwest of Route 206.

Dolan & Dean Consulting Engineers, LLC (D&D) has been retained to prepare this report for Marmalade Restaurant. This report has been prepared to respond to review comments issued by Arora and Associates, P.C. (Arora) in their January 27, 2022 letter. Specifically, this report addresses peak hour traffic activity in the site vicinity and discusses the trip generation and parking associated with the proposed restaurant. In addition, this report includes a review of access and on-site circulation.

According to the applicant, Marmalade Restaurant will be open for breakfast and lunch. The restaurant will close at approximately 3:00 p.m. and will therefore not impact the weekday evening peak hour. This report therefore focuses on the peak weekday and weekend morning and midday periods when Marmalade Restaurant will generate maximum driveway activity.



## EXISTING CONDITIONS

As mentioned, the site is located on the north side of Gordon Avenue, northwest of Route 206 and opposite James Street. The site is currently a parking lot, between Lawrenceville Fuel, and a mixed-use building. Other land use between James Street and Route 206 include the Gingered Peach on the north side of Gordon Avenue and Starbucks on the south side of Gordon Avenue, in addition to other commercial buildings.

Gordon Avenue is a local roadway with a general east-west orientation, between Route 206 and Village Park. One lane per direction of travel is provided, and the posted speed limit is 25 miles per hour. NO STOPPING OR STANDING is posted on the westbound side of Gordon Avenue, just west of Route 206, and again west of Gingered Peach. DO NOT BLOCK DRIVEWAY OR GORDON AVENUE signs are posted on both sides of the street facing westbound traffic in advance of the Gingered Peach and Starbucks driveways, and on the eastbound approach to the Starbucks driveway. Gingered Peach has separate ingress and egress driveways, plus parking in front of the building. While the Starbucks driveway on Gordon Avenue is two-way, it is primarily used as an ingress, and most egress occurs onto Route 206.

Gorden Avenue forms a T-type intersection with Route 206, which is controlled by a traffic signal. The Gordon Avenue approach provides one lane for left-turn and right-turn movements. The northbound Route 206 approach provides a left-turn lane and a thru lane. One lane is provided on the southbound Route 206 approach.

James Street is a one-block roadway between Gordon Avenue and Phillips Avenue. The approaches to Gordon Avenue and Phillips Avenue are controlled by STOP signs.



## EXISTING TRAFFIC VOLUMES AND OPERATIONS

The Arora review letter requested an evaluation of activity on Gordon Avenue during peak hours of Marmalade Restaurant operations, which was earlier identified as breakfast and lunch times. The breakfast period is also the peak timeframe associated with Starbucks driveway activity as well as Gingered Peach.

D&D therefore performed traffic counts at the Route 206 and Gordon Avenue intersection on Tuesday, February 22, 2022 from 7:00 a.m. to 9:00 a.m. and from 11:30 a.m. to 1:30 p.m. The traffic counts are appended, as is Figure 1 showing peak hour volumes recorded between 7:30 a.m. and 8:30 a.m. and between 12:00 p.m. and 1:00 p.m. As shown, the two-way volume on Gordon Avenue is low, with 229 vehicles traveling along the site frontage during the morning peak hour and 195 during the midday/lunch peak hour.

A maximum queue of 6 vehicles was observed once per count on the Gordon Avenue approach to Route 206. Typical queues of 3 to 5 vehicles routinely occurred.

During the morning count, westbound vehicles waiting to enter Starbucks created a backup on Gordon Avenue towards Route 206. However, eastbound motorists were often observed to provide courtesy gaps to allow left-turns into Starbucks. Parking maneuvers are made to/from spaces in front of Gingered Peach. Parking and driveway maneuvers along Gordon Avenue are typically made with minimal delay given the low thru volumes traveling to/from Route 206.

Based on the results of the morning traffic count, a second count/observation was performed on Friday March 4, 2022. Between 7:30 a.m. and 9:00 a.m., the same type of driveway activity was observed, with limited delay for movements into and out of Starbucks and



Gingered Peach, and other driveways along Gordon Avenue. The following was also observed between 7:45 a.m. and 8:45 a.m.:

- 53 vehicles entered Gingered Peach and 52 exited on Gordon Avenue
- 90 vehicles entered Starbucks from Gordon Avenue and 12 exited to Gordon Avenue
- 66 vehicles entered James Street from Gordon Avenue and 57 vehicles exited James Street to Gordon Avenue
- Approximately 60% of Starbucks and Gingered Peach traffic was routed to/from Route 206
- At no time were the Marmalade Restaurant driveway locations blocked
- Movements to/from Gingered Peach and Starbucks mostly occurred with courtesy gaps
- On occasion thru traffic on Gordon Avenue was temporarily blocked by driveway movements
- There was little delay entering/exiting James Street



## TRAFFIC CHARACTERISTICS OF THE PROPOSED USE

The potential traffic generation from any use is directly related to the type, size, and characteristic of the use itself. The specific location of a particular use may also affect trip generation due to volumes of passing street traffic and competing uses. Trip generation projections are customarily made using estimates compiled by the Institute of Transportation Engineers (ITE) in the 11<sup>th</sup> Edition of the Trip Generation Manual for uses that closely resemble the anticipated operation.

The various ITE restaurant categories and trip rates were reviewed, and compared against activity recorded at Gingered Peach. Table I summarizes the projected trip generation for the proposed Marmalade Restaurant based on ITE Land Use 933 “Fast Food Restaurant”.

TABLE I  
ESTIMATED TRIP GENERATION  
2,634 SF MARMALADE RESTAURANT

Morning Peak Hour			Lunch Peak Hour			Saturday Peak Hour		
Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
66	46	112	69	69	138	71	71	142

The above estimates are likely high for a non-branded restaurant, particularly considering the existing activity generated by Gingered Peach, which is also owned and operated by the applicant. However, use of ITE “Fast Casual” or “High Turnover” restaurant rates results in unrealistically low trip generation projections.

Based on our traffic counts and observations, there is ample capacity along Gordon Avenue to accommodate peak breakfast and lunch activity at the proposed restaurant. While the driveways for Gingered Peach and Starbucks are busy, there is no impact of that activity along the site frontage. Similarly, the volumes to/from James Street are low and will not hinder site ingress or egress.



## SITE ACCESS & CIRCULATION

A review has been made of the Site Plan prepared by Hopewell Valley Engineering, P.C. The following items address access and on-site design characteristics:

- Separate ingress and egress driveways are proposed, along with a one-way, counterclockwise circulation system. Perpendicular parking spaces are proposed along the one-way aisle. This conventional design will promote safe and efficient vehicular circulation.
- A sidewalk is proposed from Gordon Avenue to the restaurant, on the east side of the proposed parking lot. The sidewalk connection will allow pedestrians to access the site without walking in the parking lot.
- The site plan summarizes the parking requirements based on proposed restaurant seats, the bakery, plus the mix of uses on adjacent Lot 68. Based on the combination of uses, 48 spaces are required, whereas 60 are proposed.
- During the D&D field visit on March 4, 2022, there was a tractor trailer parked on the north side of Gordon Avenue, east of the site. When the truck left, it performed a clockwise maneuver on site, and exited via a left-turn onto Gordon Avenue. Based on the observations of actual truck movement, combined with a review of the Circulation Plan Exhibit, the site has been designed to accommodate a WB-62 tractor trailer.



## CONCLUSIONS

In summary, the proposed Marmalade Restaurant will generate a moderate amount of traffic that will be able to enter and exit the site with little or no delay. This is based on the low volumes passing the site along Gordon Avenue, limited turning movements to/from James Street, and the fact that other driveway operations in the area will not obstruct site access.

The site has been designed to promote safe and efficient vehicular and pedestrian circulation, as well as to accommodate larger wheelbase vehicles, and will provide more than adequate parking.

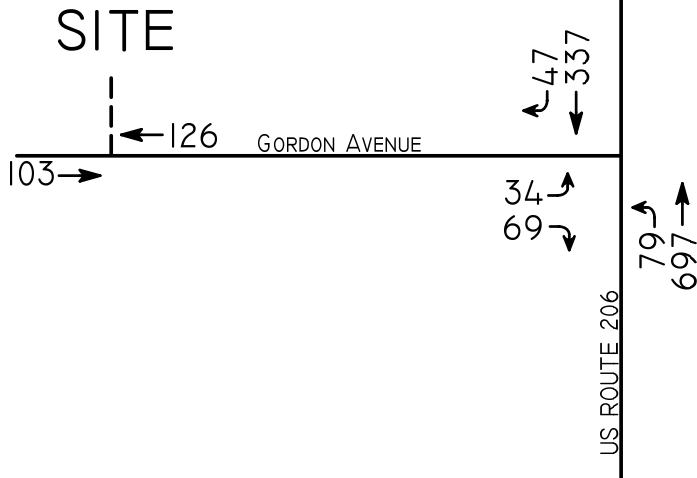
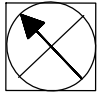
Based on these findings, it is concluded that the site is well suited for the proposed redevelopment. The proposed Marmalade Restaurant operation will not negatively impact the traffic in the surrounding area.



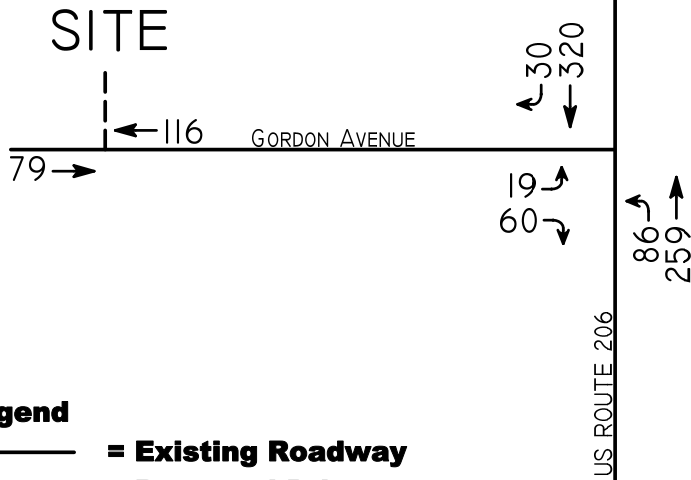


## TECHNICAL APPENDIX

MORNING PEAK HOUR  
7:30 A.M TO 8:30 A.M.



AFTERNOON PEAK HOUR  
12:00 P.M. TO 1:00 P.M.



**Legend**

- = Existing Roadway
- - - - = Proposed Driveway

MARMALADE RESTAURANT  
LAWRENCE TOWNSHIP  
MERCER COUNTY, NEW JERSEY

FIGURE I

US Route 206 & Gordon Avenue										
Time	Northbound		Southbound			Eastbound		15-Min		Hourly Total
	Left	Thru	Thru	Right	Left	Right	Total	Total		
7:00 AM	5	121	37	10	11	8		192		
7:15 AM	14	149	68	9	4	12		256		
7:30 AM	13	209	58	3	10	20		313		
7:45 AM	20	184	69	13	5	17		308		1069
8:00 AM	18	154	108	17	9	14		320		1197
8:15 AM	28	150	102	14	10	18		322		1263
8:30 AM	20	122	105	14	13	11		285		1235
8:45 AM	19	126	76	10	15	16		262		1189

PHF = 0.98  
HV % = 8%

US Route 206 & Gordon Avenue										
Time	Northbound		Southbound			Eastbound		15-Min		Hourly Total
	Left	Thru	Thru	Right	Left	Right	Total	Total		
11:30 AM	17	68	52	13	8	10		168		
11:45 AM	19	67	71	12	8	16		193		
12:00 PM	18	67	76	10	8	15		194		
12:15 PM	13	61	78	6	4	17		179		734
12:30 PM	24	56	88	6	0	14		188		754
12:45 PM	31	75	78	8	7	14		213		774
1:00 PM	21	52	77	13	6	16		185		765
1:15 PM	22	65	74	7	8	12		188		774

PHF = 0.91  
HV % = 12%