

TRAFFIC IMPACT STUDY

For



Proposed McDonald's Restaurant

Property Located at:

**741 Route 73 South
Block 36 – Lot 4.07
Township of Evesham, Burlington County, NJ**

Prepared by:



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Chester, NJ 07930
732-681-0760**

A handwritten signature in black ink, appearing to read 'C. Peregoy', written over a horizontal line.

**Craig Peregoy, PE
NJ PE License #45880**

A handwritten signature in black ink, appearing to read 'Connor Hughes', written over a horizontal line.

**Connor Hughes, PE
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May 7, 2025

DT# 0114-23-01605

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INTRODUCTION

It is proposed to construct a McDonald's Restaurant with drive-thru on a parcel of land currently developed with a vacant building previously occupied by an OceanFirst Bank branch with drive-thru, located along the southbound side of Route 73, between Commonwealth Drive to the north and Ardsley Drive to the south, in the Township of Evesham, Burlington County, New Jersey (see Site Location Map). The site is designated as Block 36 – Lot 4.07 on the Township of Evesham Tax Maps.

The previous use on-site consisted of a 3-window drive-in bank known as OceanFirst Bank. It should be noted that the subject site is an out parcel to an overall retail development located on Block 36 – Lot 4.06, consisting of an approximately 126,470 SF Target, as well as two (2) recently constructed restaurants consisting of a 2,610 SF Panda Express with drive-thru and a 2,850 SF PDQ Chicken with drive-thru. It is proposed to raze the existing bank building on-site and construct a 3,694 SF McDonald's Restaurant with side-by-side drive-thru lanes ("The Project"). The site is located within the C-1 Commercial zone. Access to the site is currently provided via one (1) right turn in only driveway along Route 73 southbound. Cross-access with Lot 4.06 is proposed to be maintained, providing full movement access via a signalized intersection along Route 73 opposite Ardsley Drive and via a right turn in/right turn out driveway on Lot 4.06 for the subject property. Parking will be provided via 20 on-site parking spaces.

Dynamic Traffic, LLC has been retained to prepare this study to assess the traffic impact associated with the construction of The Project on the adjacent roadway network. This study documents the methodology, analyses, findings and conclusions of our study and includes:

- A detailed field inspection was conducted to obtain an inventory of existing roadway geometry, traffic control, and location and geometry of existing driveways and intersections.
- Projections of traffic to be generated by the previous use on-site and the proposed use were prepared utilizing trip generation data as published by the New Jersey Department of Transportation.
- The proposed points of ingress and egress were inspected for adequacy of geometric design, spacing and/or alignment to streets and driveways on the opposite side of the street, relationship to other driveways adjacent to the development, and conformance with accepted design standards.
- The site plan as designed was reviewed for sufficiency in accommodating the anticipated vehicle mix.
- The parking layout and supply was assessed based on accepted design standards, local requirements, and demand experienced at similar developments.

EXISTING CONDITIONS

A review of the existing roadway conditions near the proposed site was conducted to provide the basis for assessing the traffic impact of the development. This included field investigations of the surrounding roadways and intersections.

Existing Roadway Conditions

The following is a description of the roadway in the study area:

Route 73 is an Urban Principal Arterial roadway under NJDOT jurisdiction with a general north/south orientation. In the vicinity of the site the posted speed limit is 55 MPH and the roadway provides two (2) travel lanes in each direction separated by a grass median. Curb is provided along both sides of the roadway, while sidewalk is provided along the western side of the roadway along the site frontage. Route 73 provides a straight horizontal alignment and a relatively flat vertical alignment. The land uses along Route 73 in the vicinity of The Project are primarily commercial.

Traffic Generation

Trip generation projections for The Project were prepared utilizing the New Jersey Department of Transportation rates. The trip generation projections for the previous use on-site were prepared utilizing data published under Land Use Code (LUC) 912 – Drive-In Bank, while trip generation projections for the proposed use were prepared utilizing data published under LUC 934 – Fast Food Restaurant with Drive Through Window.

Internal Capture

The Institute of Transportation Engineers' (ITE) publication *Trip Generation Handbook, 3rd Edition*, recognizes that when land uses are proximate to each other, individual land uses tend to interact, reducing the overall trip generation for the site. It is anticipated that there will be an overall reduction in site generated trips due to the opportunities for users to visit a combination of the uses in the overall retail development. These trips can be made without accessing the regional roadway network and are considered "internal" to the overall development. In order to calculate the trip generation of the existing uses on Lot 4.06, trip generation projections for the Target were prepared utilizing data published under LUC 820 – Shopping Center, while trip generation projections for the Panda Express and PDQ Chicken were each prepared utilizing data published under LUC 934 – Fast Food Restaurant with Drive Through Window.

Based on the ITE internal capture methodology, reduction rates were applied to the existing use configuration, considering re-occupancy of the bank, as well as reduction rates applied to the future use configuration. Reduction rates of 12.4%, 28.4%, and 4.4% have been applied to the existing trip projections of the overall retail development during the weekday morning, weekday evening, and Saturday midday peak periods, respectively, while reduction rates of 4.1%, 28.8%, and 0.0% have been applied to the future trip projections of the overall retail development during the weekday morning, weekday evening, and Saturday midday peak periods, respectively, to account for this effect. It should be noted that the NJDOT approved internal captures rates were utilized for the analyses contained herein. Notably, NJDOT does not publish internal capture rates between restaurant and retail uses during the Saturday peak period. Realistically, interaction between these uses is anticipated during the Saturday peak period, and this is supported by data published by ITE. All internal capture calculation worksheets are appended.

Passby Traffic

According to studies conducted by ITE, traffic associated with LUC 820, 912, and 934 are not 100% newly generated. Rather, a portion of the traffic is diverted from the existing traffic stream on the adjacent roadway network. This is because these commercial uses are not exclusively destination land uses, instead patrons stop on their way to/from other locations such as home or work. The NJDOT approved passby percentages for these LUCs were utilized. Specifically, NJDOT identifies passby traffic percentages for LUC 820 of 34% and 26% during the weekday evening and Saturday midday peak periods, respectively. Additionally, NJDOT identifies passby traffic percentages for LUC 912 of 29%, 35%, and 38% during the weekday morning, weekday evening, and Saturday midday peak periods, respectively. Further, NJDOT identifies passby traffic percentages for LUC 934 of 49%, 50%, and 37% during the weekday morning, weekday evening, and Saturday midday peak periods, respectively. These passby percentages were applied to the respective trip generation projections.

Tables 1 and 2 below detail the traffic volumes associated with the existing and future overall retail development, respectively, taking into account internal capture and the passby credits. Table 3 below compares the traffic volumes associated with the previous bank use to the proposed McDonald's, taking into account the internal capture behavior of the overall retail development as well as the passby credits.

Table 1
Existing Trip Generation – Overall Retail Development

Land Use	Trip Type	AM Peak			PM Peak			Sat Peak		
		In	Out	Total	In	Out	Total	In	Out	Total
3 Window Drive-In Bank	Total	29	24	53	40	41	81	41	42	83
	Internal	8	8	16	28	20	48	13	12	25
	Passby	6	5	11	4	8	12	11	11	22
	New (Primary)	15	11	26	8	13	21	17	19	36
126,470 SF Target	Total	64	55	119	334	334	668	387	358	745
	Internal	10	13	23	65	49	114	12	13	25
	Passby	-	-	-	91	97	188	98	89	187
	New (Primary)	54	42	96	178	188	366	277	256	533
2,610 SF Panda Express	Total	69	64	133	68	66	134	73	71	144
	Internal	5	3	8	25	37	62	-	-	-
	Passby	31	30	61	22	14	36	27	26	53
	New (Primary)	33	31	64	21	15	36	46	45	91
2,850 SF PDQ Chicken	Total	75	70	145	74	72	146	80	77	157
	Internal	5	4	9	28	40	68	-	-	-
	Passby	34	33	67	23	16	39	30	28	58
	New (Primary)	36	33	69	23	16	39	50	49	99
Total	Total	237	213	450	516	513	1,029	581	548	1,129
	Internal	28	28	56	146	146	292	25	25	50
	Passby	71	68	139	140	135	275	166	154	320
	New (Primary)	138	117	255	230	232	462	390	369	759

Table 2
Future Trip Generation – Overall Retail Development

Land Use	Trip Type	AM Peak			PM Peak			Sat Peak		
		In	Out	Total	In	Out	Total	In	Out	Total
3,694 SF McDonald's	Total	98	90	188	97	93	190	104	100	204
	Internal	3	2	5	28	38	66	-	-	-
	Passby	47	43	90	35	27	62	38	37	75
	New (Primary)	48	45	93	34	28	62	66	63	129
126,470 SF Target	Total	64	55	119	334	334	668	387	358	745
	Internal	5	7	12	95	69	164	-	-	-
	Passby	-	-	-	81	90	171	101	93	194
	New (Primary)	59	48	107	158	175	333	286	265	551
2,610 SF Panda Express	Total	69	64	133	68	66	134	73	71	144
	Internal	2	1	3	20	27	47	-	-	-
	Passby	33	31	64	24	20	44	27	26	53
	New (Primary)	34	32	66	24	19	43	46	45	91
2,850 SF PDQ Chicken	Total	75	70	145	74	72	146	80	77	157
	Internal	2	2	4	21	30	51	-	-	-
	Passby	36	33	69	27	21	48	30	28	58
	New (Primary)	37	35	72	26	21	47	50	49	99
Total	Total	306	279	585	573	565	1,138	644	606	1,250
	Internal	12	12	24	164	164	328	-	-	-
	Passby	116	107	223	167	158	325	196	184	380
	New (Primary)	178	160	338	242	243	485	448	422	870

Table 3
Trip Generation Comparison – Lot 4.07

Land Use	Trip Type	AM Peak			PM Peak			Sat Peak		
		In	Out	Total	In	Out	Total	In	Out	Total
3 Window Drive-In Bank	Total	29	24	53	40	41	81	41	42	83
	Internal	8	8	16	28	20	48	13	12	25
	Passby	6	5	11	4	8	12	11	11	22
	New (Primary)	15	11	26	8	13	21	17	19	36
3,694 SF McDonald's	Total	98	90	188	97	93	190	104	100	204
	Internal	3	2	5	28	38	66	-	-	-
	Passby	47	43	90	35	27	62	38	37	75
	New (Primary)	48	45	93	34	28	62	66	63	129
Difference	Total	+69	+66	+135	+57	+52	+109	+63	+58	+121
	Internal	-5	-6	-11	+0	+18	+18	-13	-12	-25
	Passby	+41	+38	+79	+31	+19	+50	+27	+26	+53
	New (Primary)	+33	+34	+67	+26	+15	+41	+49	+44	+93

As shown above, the proposed McDonald's is anticipated to result in a maximum of 93 new trips to the adjacent roadway network compared to if the existing building were to be re-occupied as a bank. It should be noted that the number of new trips falls below the NJDOT accepted threshold of a significant increase in traffic of 100 peak hour trips. As such, it is not anticipated that the change in use will have any perceptible impact on the traffic operation of the adjacent roadway network.

SITE PLAN

Site Access and Circulation

The site plan was reviewed with respect to the site access and on-site circulation design. As noted previously, access to the site is proposed to be maintained via the existing right turn in only driveway along Route 73 southbound. Cross-access with Lot 4.06 is proposed to be maintained, providing full movement access via a signalized intersection along Route 73 opposite Ardsley Drive and via a right turn in/right turn out driveway on Lot 4.06 for the subject property.

The parking lot will be serviced by one-way parking aisles with widths of at least 20', which satisfy the Ordinance requirement of 18' for 60 degree parking. Review of the site plan design indicates that the site can sufficiently accommodate the anticipated vehicle mix.

Parking

The Evesham Ordinance sets forth a parking requirement of 15 parking spaces per 1,000 SF for restaurant uses without bar or lounge. This equates to a parking requirement of 55 parking spaces for the proposed 3,694 SF McDonald's. The site as proposed provides 20 parking spaces, inclusive of two (2) ADA-accessible spaces and the Ordinance requirement is not satisfied and a variance is requested. It should be noted that ITE identifies a peak parking demand of 0.47 spaces per seat. For the proposed McDonald's consisting of 35 seats, this equates to a total demand for the site of 16 spaces, which is exceeded as designed. As such, the Board can feel comfortable granting the variance.

Drive-Thru System

The basic shift in the customer base of the fast-food/quick-serve restaurant industry in customer usage has shifted over the past years from primarily park and walk-in to drive-thru. In the past, the drive-thru usage approximated 50% of customers but has since increased to 2/3's of the customers or sometimes more.

The physical stacking capacity of the proposed drive-thru system will accommodate 11 cars within the dual-lane drive-thru system. The increased efficiency of the double-order lanes will have a significant beneficial effect in eliminating stacking beyond the capacity of the drive-thru stacking lane. The increased efficiency in the food-ordering process produced by the double-order lanes will eliminate gaps in the stacking line of vehicles and decrease customer service times to allow vehicles to move through the drive-thru system quicker, thereby reducing queues behind the order board.

A queueing analysis was prepared based on the stochastic queueing methods as presented in multiple Traffic Engineering Publications including ITE. As shown in the appended worksheet, the 95th percentile queue length is calculated to be five (5) vehicles behind the order board whereas a total of eight (8) vehicle storage spaces are available. The calculated probability of exceeding eight (8) vehicles is essentially non-existent at 0.94%. This is consistent with queueing observations made by our office at three (3) other McDonald's locations with a side-by-side drive-thru configuration. In fact, the maximum queue noted at these locations was found to be only six (6) vehicles.

FINDINGS & CONCLUSIONS

Findings

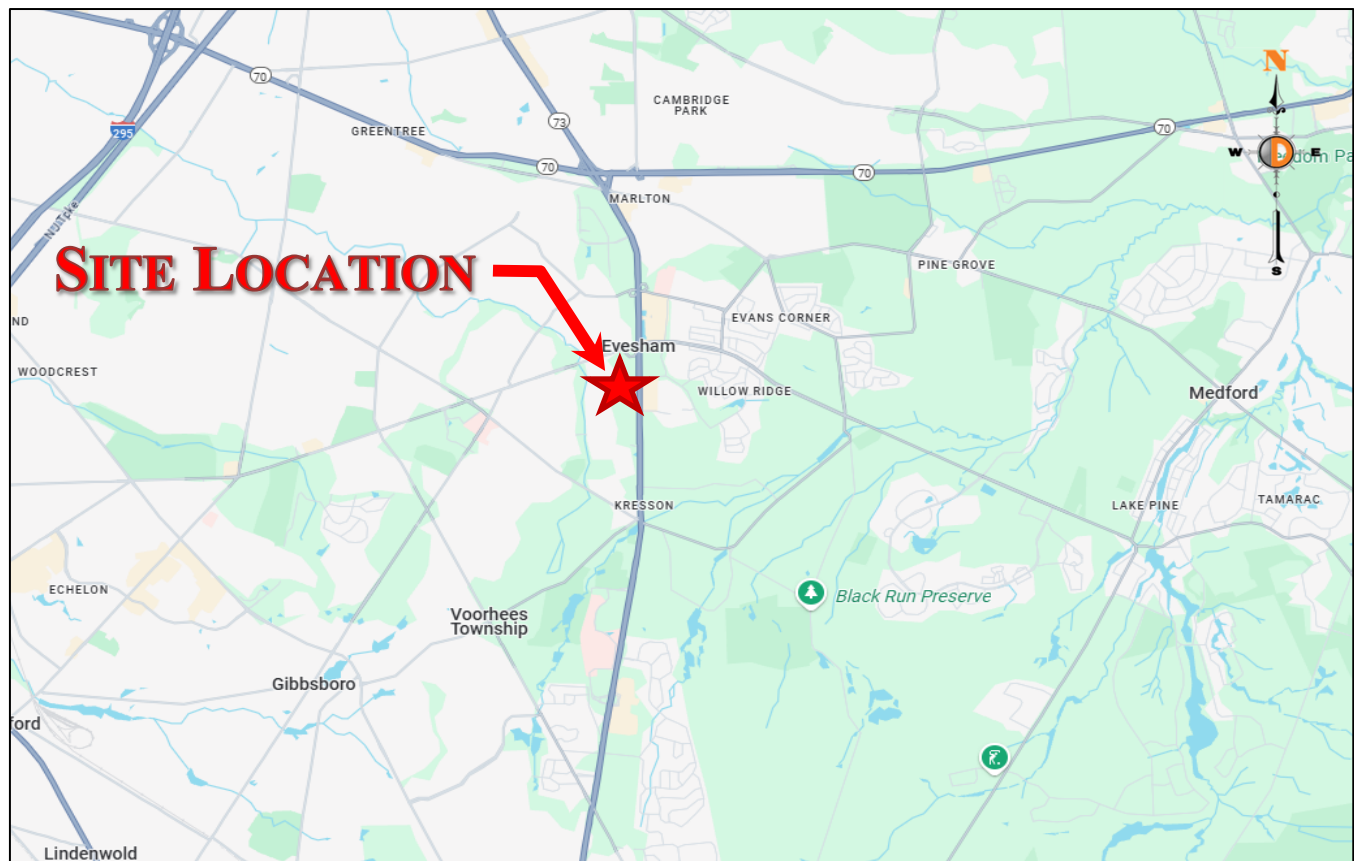
Based upon the detailed analyses as documented herein, the following findings are noted:

- The proposed 3,694 SF McDonald's Restaurant with Drive-Thru, is projected to generate 48 entering trips and 45 exiting trips during the weekday morning peak period, 34 entering trips and 28 exiting trips during the evening peak period, and 66 entering trips and 63 exiting trips during the Saturday peak period that are "new" to the adjacent roadway network.
- Based on a comparison between the trip generation projections of the previous bank use and the proposed McDonald's, the proposed development is anticipated to generate a maximum of 93 additional peak hour trips that are "new" to the adjacent roadway network.
- Access to the site is proposed to be maintained via the existing right turn in only driveway along Route 73 southbound. Cross-access with Lot 4.06 is proposed to be maintained, providing full movement access via a signalized intersection along Route 73 opposite Ardsley Drive and via a right turn in/right turn out driveway along Lot 4.06 for the subject property.
- As proposed, The Project's site driveway and internal circulation have been designed to provide for safe and efficient movement of the anticipated vehicle mix.
- The proposed parking supply and design is sufficient to support the projected demand.

Conclusions

Based upon our Traffic Impact Study as detailed in the body of this report, it is the professional opinion of Dynamic Traffic, LLC that the adjacent street system of the NJDOT will not experience any significant degradation in operating conditions with the construction of The Project. The site driveway is located to provide safe and efficient access to the adjacent roadway system. The site plan as proposed provides for effective circulation throughout the site and provides adequate parking to accommodate The Project's needs.

Appendix

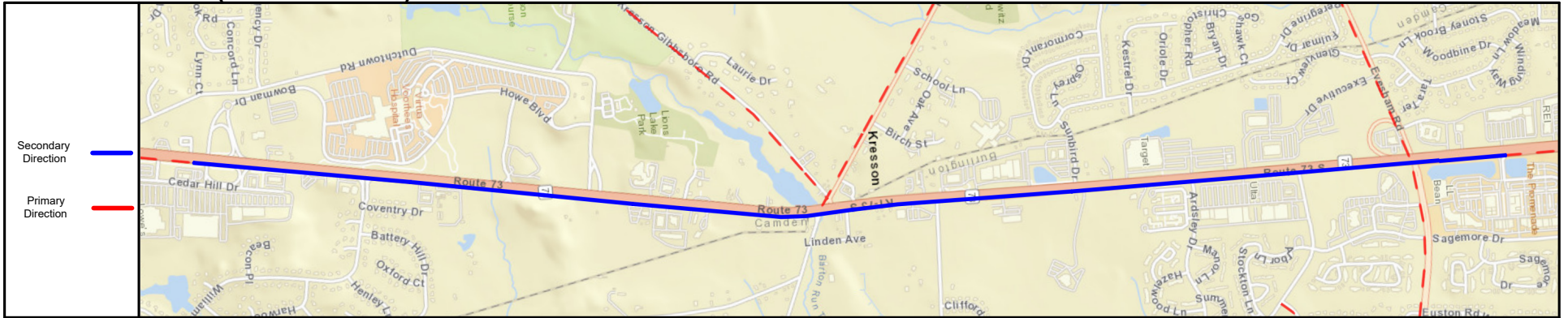


Proposed McDonald's Restaurant
Traffic Impact Study
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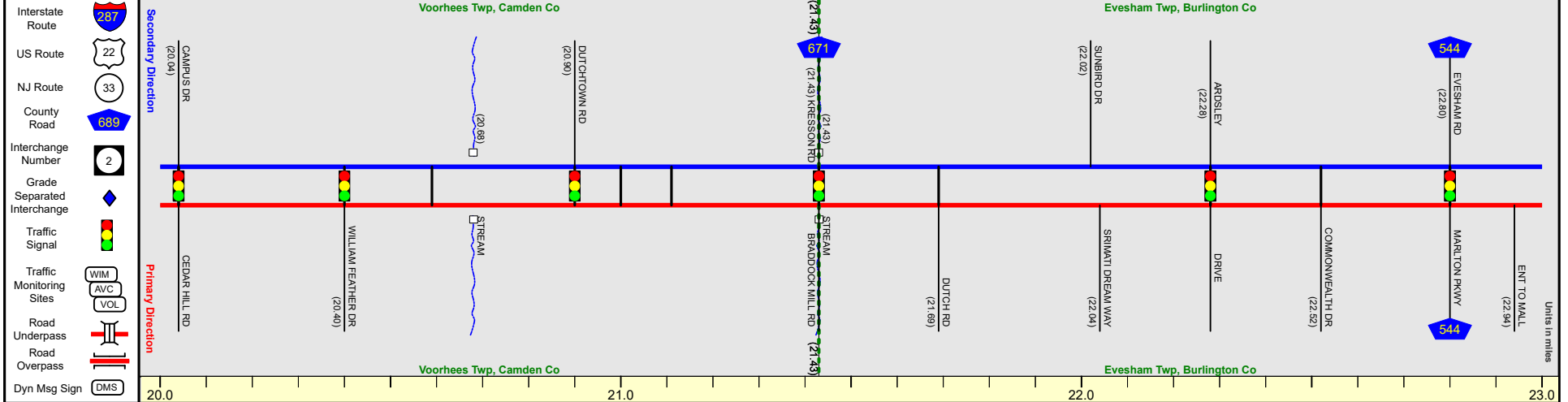
Site Location Map

NJ 73 (South to North)

Mile Posts: 20.000 - 23.000



Pavement	24	20
Shoulder	10	13
Number of Lanes	2	
Speed Limit	55	50
Street Name	NJ 73	



Street Name	NJ 73	
Jurisdiction	N.J.D.O.T.	
Functional Class	Urban Principal Arterial	
Federal Aid - NHS Sy	NHS	
Control Section	0415	0313
Speed Limit	55	50
Number of Lanes	2	
Med. Type	Curbed	Unprotected
Med. Width	24	20
Pavement	24	
Shoulder	10	15 + 10 + 15
Traffic Volume	37,890 (2019)	44,110 (2019)
Traffic Sta. ID	7-9,422	7-5,169
Structure No.	0313150	477 (PMS)
Enlarged Views		

SRI = 0000073_

Date last inventoried: March 2021

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	0114-23-01605	Organization:	Dynamic Traffic, LLC
Project Location:	Evesham Township, Burlington County, NJ	Performed By:	JDP
Scenario Description:	Existing	Date:	1/10/2025
Analysis Year:	2025	Checked By:	
Analysis Period:	AM Street Peak Hour	Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Retail	912	3	Windows	53	29	24
Restaurant	934	Total	SF	278	144	134
Retail	820	126,470	SF	119	64	55
				0		
				0		
				0		
				0		
				450	237	213

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	LUC 912	LUC 934	LUC 820	-	-	-
	3 Windows	Total SF	126470 SF			
	Retail	Restaurant	Retail			
Retail		3	5	0	0	0
Restaurant	2		5	0	0	0
Retail	6	7		0	0	0
-	0	0	0		0	0
-	0	0	0	0		0
-	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	450	237	213
Internal Capture Percentage	12.4%	11.8%	13.1%
External Vehicle-Trips ⁵	394	209	185
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Retail	27.6%	33.3%
Restaurant	6.9%	5.2%
Retail	15.6%	23.6%
-	N/A	N/A
-	N/A	N/A
-	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	0114-23-01605
Analysis Period:	AM Street Peak Hour

Land Use			Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
			Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Retail	LUC 912	3 Windows	1.00	29	29	1.00	24	24
Restaurant	LUC 934	Total SF	1.00	144	144	1.00	134	134
Retail	LUC 820	126470 SF	1.00	64	64	1.00	55	55
-	-	-	1.00	0	0	1.00	0	0
-	-	-	1.00	0	0	1.00	0	0
-	-	-	1.00	0	0	1.00	0	0

Origin (From)			Destination (To)					
			LUC 912	LUC 934	LUC 820	-	-	-
			3 Windows	Total SF	126470 SF			
			Retail	Restaurant	Retail			
Retail	LUC 912	3 Windows		3	5	0	0	0
Restaurant	LUC 934	Total SF	19		19	0	0	0
Retail	LUC 820	126470 SF	11	7		0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0

Origin (From)			Destination (To)					
			LUC 912	LUC 934	LUC 820	-	-	-
			3 Windows	Total SF	126470 SF			
			Retail	Restaurant	Retail			
Retail	LUC 912	3 Windows		72	13	0	0	0
Restaurant	LUC 934	Total SF	2		5	0	0	0
Retail	LUC 820	126470 SF	6	72		0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0

Destination Land Use			Person-Trip Estimates			External Trips by Mode*		
			Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Retail	LUC 912	3 Windows	8	21	29	21	0	0
Restaurant	LUC 934	Total SF	10	134	144	134	0	0
Retail	LUC 820	126470 SF	10	54	64	54	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
All Other Land Uses ³	-	-	0	0	0	0	0	0

Origin Land Use			Person-Trip Estimates			External Trips by Mode*		
			Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Retail	LUC 912	3 Windows	8	16	24	16	0	0
Restaurant	LUC 934	Total SF	7	127	134	127	0	0
Retail	LUC 820	126470 SF	13	42	55	42	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
All Other Land Uses ³	-	-	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A
²Person-Trips
³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	0114-23-01605	Organization:	Dynamic Traffic, LLC
Project Location:	Evesham Township, Burlington County, NJ	Performed By:	JDP
Scenario Description:	Existing	Date:	1/10/2025
Analysis Year:	2025	Checked By:	
Analysis Period:	PM Street Peak Hour	Date:	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Retail	912	3	Windows	81	40	41
Restaurant	934	Total	SF	280	142	138
Retail	820	126,470	SF	668	334	334
				0		
				0		
				0		
				0		
				1,029	516	513

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	LUC 912	LUC 934	LUC 820	-	-	-
	3 Windows	Total SF	126470 SF			
	Retail	Restaurant	Retail			
Retail		12	8	0	0	0
Restaurant	20		57	0	0	0
Retail	8	41		0	0	0
-	0	0	0		0	0
-	0	0	0	0		0
-	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	1,029	516	513
Internal Capture Percentage	28.4%	28.3%	28.5%
External Vehicle-Trips ⁵	737	370	367
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Retail	70.0%	48.8%
Restaurant	37.3%	55.8%
Retail	19.5%	14.7%
-	N/A	N/A
-	N/A	N/A
-	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-P, 9-P (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

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Project Name:	0114-23-01605
Analysis Period:	PM Street Peak Hour

Land Use			Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
			Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Retail	LUC 912	3 Windows	1.00	40	40	1.00	41	41
Restaurant	LUC 934	Total SF	1.00	142	142	1.00	138	138
Retail	LUC 820	126470 SF	1.00	334	334	1.00	334	334
-	-	-	1.00	0	0	1.00	0	0
-	-	-	1.00	0	0	1.00	0	0
-	-	-	1.00	0	0	1.00	0	0

Origin (From)			Destination (To)					
			LUC 912	LUC 934	LUC 820	-	-	-
			3 Windows	Total SF	126470 SF			
			Retail	Restaurant	Retail			
Retail	LUC 912	3 Windows		12	8	0	0	0
Restaurant	LUC 934	Total SF	57		57	0	0	0
Retail	LUC 820	126470 SF	67	97		0	0	0
-	-	-	0	0	0		0	0
-	-	-	0	0	0			0
-	-	-	0	0	0		0	

Origin (From)			Destination (To)					
			LUC 912	LUC 934	LUC 820	-	-	-
			3 Windows	Total SF	126470 SF			
			Retail	Restaurant	Retail			
Retail	LUC 912	3 Windows		41	67	0	0	0
Restaurant	LUC 934	Total SF	20		167	0	0	0
Retail	LUC 820	126470 SF	8	41		0	0	0
-	-	-	0	0	0		0	0
-	-	-	0	0	0			0
-	-	-	0	0	0		0	

Destination Land Use			Person-Trip Estimates			External Trips by Mode*		
			Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Retail	LUC 912	3 Windows	28	12	40	12	0	0
Restaurant	LUC 934	Total SF	53	89	142	89	0	0
Retail	LUC 820	126470 SF	65	269	334	269	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
All Other Land Uses ³	-	-	0	0	0	0	0	0

Origin Land Use			Person-Trip Estimates			External Trips by Mode*		
			Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Retail	LUC 912	3 Windows	20	21	41	21	0	0
Restaurant	LUC 934	Total SF	77	61	138	61	0	0
Retail	LUC 820	126470 SF	49	285	334	285	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
All Other Land Uses ³	-	-	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P
²Person-Trips
³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	0114-23-01605	Organization:	Dynamic Traffic, LLC
Project Location:	Evesham Township, Burlington County, NJ	Performed By:	JDP
Scenario Description:	Existing	Date:	1/10/2025
Analysis Year:	2025	Checked By:	
Analysis Period:	SAT Street Peak Hour	Date:	

Table 1-S: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Retail	912	3	Windows	83	41	42
Restaurant	934	Total	SF	301	153	148
Retail	820	126,470	SF	745	387	358
				0		
				0		
				0		
				0		
				1,129	581	548

Table 2-S: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-S: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-S: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	LUC 912	LUC 934	LUC 820	-	-	-
	3 Windows	Total SF	126470 SF			
Retail		0	12	0	0	0
Restaurant	0		0	0	0	0
Retail	13	0		0	0	0
-	0	0	0		0	0
-	0	0	0	0		0
-	0	0	0	0	0	

Table 5-S: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	1,129	581	548
Internal Capture Percentage	4.4%	4.3%	4.6%
External Vehicle-Trips ⁵	1,079	556	523
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Table 6-S: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Retail	31.7%	28.6%
Restaurant	0.0%	0.0%
Retail	3.1%	3.6%
-	N/A	N/A
-	N/A	N/A
-	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-S vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-S, 9-S (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-S.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

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Project Name:	0114-23-01605
Analysis Period:	SAT Street Peak Hour

Land Use			Table 7-S (D): Entering Trips			Table 7-S (O): Exiting Trips		
			Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Retail	LUC 912	3 Windows	1.00	41	41	1.00	42	42
Restaurant	LUC 934	Total SF	1.00	153	153	1.00	148	148
Retail	LUC 820	126470 SF	1.00	387	387	1.00	358	358
-	-	-	1.00	0	0	1.00	0	0
-	-	-	1.00	0	0	1.00	0	0
-	-	-	1.00	0	0	1.00	0	0

Origin (From)			Destination (To)					
			LUC 912	LUC 934	LUC 820	-	-	-
			3 Windows	Total SF	126470 SF			
			Retail	Restaurant	Retail			
Retail	LUC 912	3 Windows		0	12	0	0	0
Restaurant	LUC 934	Total SF	0		0	0	0	0
Retail	LUC 820	126470 SF	104	0		0	0	0
-	-	-	0	0	0		0	0
-	-	-	0	0	0			0
-	-	-	0	0	0		0	

Origin (From)			Destination (To)					
			LUC 912	LUC 934	LUC 820	-	-	-
			3 Windows	Total SF	126470 SF			
			Retail	Restaurant	Retail			
Retail	LUC 912	3 Windows		0	120	0	0	0
Restaurant	LUC 934	Total SF	0		0	0	0	0
Retail	LUC 820	126470 SF	13	0		0	0	0
-	-	-	0	0	0		0	0
-	-	-	0	0	0			0
-	-	-	0	0	0		0	

Destination Land Use			Person-Trip Estimates			External Trips by Mode*		
			Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Retail	LUC 912	3 Windows	13	28	41	28	0	0
Restaurant	LUC 934	Total SF	0	153	153	153	0	0
Retail	LUC 820	126470 SF	12	375	387	375	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
All Other Land Uses ³	-	-	0	0	0	0	0	0

Origin Land Use			Person-Trip Estimates			External Trips by Mode*		
			Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Retail	LUC 912	3 Windows	12	30	42	30	0	0
Restaurant	LUC 934	Total SF	0	148	148	148	0	0
Retail	LUC 820	126470 SF	13	345	358	345	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
All Other Land Uses ³	-	-	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-S
²Person-Trips
³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	0114-23-01605	Organization:	Dynamic Traffic, LLC
Project Location:	Evesham Township, Burlington County, NJ	Performed By:	JDP
Scenario Description:	Proposed	Date:	5/6/2025
Analysis Year:	2027	Checked By:	
Analysis Period:	AM Street Peak Hour	Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Restaurant	934	Total	SF	466	242	224
Retail	820	126,470	SF	119	64	55
				0		
				0		
				0		
				0		
				0		
				585	306	279

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	LUC 934	LUC 820	-	-	-	-
	Total SF	126470 SF	-	-	-	-
Restaurant	Restaurant	Retail	-	-	-	-
Retail	7	5	0	0	0	0
-	0	0	0	0	0	0
-	0	0	0	0	0	0
-	0	0	0	0	0	0
-	0	0	0	0	0	0

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	585	306	279
Internal Capture Percentage	4.1%	3.9%	4.3%
External Vehicle-Trips ⁵	561	294	267
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Restaurant	2.9%	2.2%
Retail	7.8%	12.7%
-	N/A	N/A
-	N/A	N/A
-	N/A	N/A
-	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

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Project Name:	0114-23-01605
Analysis Period:	AM Street Peak Hour

Land Use			Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
			Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Restaurant	LUC 934	Total SF	1.00	242	242	1.00	224	224
Retail	LUC 820	126470 SF	1.00	64	64	1.00	55	55
-	-	-	1.00	0	0	1.00	0	0
-	-	-	1.00	0	0	1.00	0	0
-	-	-	1.00	0	0	1.00	0	0
-	-	-	1.00	0	0	1.00	0	0

Origin (From)			Destination (To)			
			LUC 934	LUC 820	-	-
Total SF			126470 SF	-	-	-
Restaurant			Retail	-	-	-
Restaurant	LUC 934	Total SF	31	0	0	0
Retail	LUC 820	126470 SF	7	0	0	0
-	-	-	0	0	0	0
-	-	-	0	0	0	0
-	-	-	0	0	0	0
-	-	-	0	0	0	0

Origin (From)			Destination (To)			
			LUC 934	LUC 820	-	-
Total SF			126470 SF	-	-	-
Restaurant			Retail	-	-	-
Restaurant	LUC 934	Total SF	5	0	0	0
Retail	LUC 820	126470 SF	121	0	0	0
-	-	-	0	0	0	0
-	-	-	0	0	0	0
-	-	-	0	0	0	0
-	-	-	0	0	0	0

Destination Land Use			Person-Trip Estimates			External Trips by Mode*		
			Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Restaurant	LUC 934	Total SF	7	235	242	235	0	0
Retail	LUC 820	126470 SF	5	59	64	59	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
All Other Land Uses ³	-	-	0	0	0	0	0	0

Origin Land Use			Person-Trip Estimates			External Trips by Mode*		
			Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Restaurant	LUC 934	Total SF	5	219	224	219	0	0
Retail	LUC 820	126470 SF	7	48	55	48	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
All Other Land Uses ³	-	-	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A
²Person-Trips
³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	0114-23-01605	Organization:	Dynamic Traffic, LLC
Project Location:	Evesham Township, Burlington County, NJ	Performed By:	JDP
Scenario Description:	Proposed	Date:	5/6/2025
Analysis Year:	2027	Checked By:	
Analysis Period:	PM Street Peak Hour	Date:	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Restaurant	934	Total	SF	470	239	231
Retail	820	126,470	SF	668	334	334
				0		
				0		
				0		
				0		
				0		
				1,138	573	565

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	LUC 934	LUC 820	-	-	-	-
	Total SF	126470 SF	-	-	-	-
	Restaurant	Retail	-	-	-	-
Restaurant		95	0	0	0	0
Retail	69		0	0	0	0
-	0	0		0	0	0
-	0	0	0		0	0
-	0	0	0	0		0
-	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	1,138	573	565
Internal Capture Percentage	28.8%	28.6%	29.0%
External Vehicle-Trips ⁵	810	409	401
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Restaurant	28.9%	41.1%
Retail	28.4%	20.7%
-	N/A	N/A
-	N/A	N/A
-	N/A	N/A
-	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-P, 9-P (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

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Project Name:	0114-23-01605
Analysis Period:	PM Street Peak Hour

Land Use			Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
			Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Restaurant	LUC 934	Total SF	1.00	239	239	1.00	231	231
Retail	LUC 820	126470 SF	1.00	334	334	1.00	334	334
-	-	-	1.00	0	0	1.00	0	0
-	-	-	1.00	0	0	1.00	0	0
-	-	-	1.00	0	0	1.00	0	0
-	-	-	1.00	0	0	1.00	0	0

Origin (From)			Destination (To)			
			LUC 934	LUC 820	-	-
Total SF			126470 SF	-	-	-
Restaurant			Retail	-	-	-
Restaurant	LUC 934	Total SF	95	0	0	0
Retail	LUC 820	126470 SF	97	0	0	0
-	-	-	0	0	0	0
-	-	-	0	0	0	0
-	-	-	0	0	0	0
-	-	-	0	0	0	0

Origin (From)			Destination (To)			
			LUC 934	LUC 820	-	-
Total SF			126470 SF	-	-	-
Restaurant			Retail	-	-	-
Restaurant	LUC 934	Total SF	167	0	0	0
Retail	LUC 820	126470 SF	69	0	0	0
-	-	-	0	0	0	0
-	-	-	0	0	0	0
-	-	-	0	0	0	0
-	-	-	0	0	0	0

Destination Land Use			Person-Trip Estimates			External Trips by Mode*		
			Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Restaurant	LUC 934	Total SF	69	170	239	170	0	0
Retail	LUC 820	126470 SF	95	239	334	239	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
All Other Land Uses ³	-	-	0	0	0	0	0	0

Origin Land Use			Person-Trip Estimates			External Trips by Mode*		
			Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Restaurant	LUC 934	Total SF	95	136	231	136	0	0
Retail	LUC 820	126470 SF	69	265	334	265	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
All Other Land Uses ³	-	-	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P
²Person-Trips
³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	0114-23-01605	Organization:	Dynamic Traffic, LLC
Project Location:	Evesham Township, Burlington County, NJ	Performed By:	JDP
Scenario Description:	Proposed	Date:	5/6/2025
Analysis Year:	2027	Checked By:	
Analysis Period:	SAT Street Peak Hour	Date:	

Table 1-S: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Restaurant	934	Total	SF	505	257	248
Retail	820	126,470	SF	745	387	358
				0		
				0		
				0		
				0		
				0		
				1,250	644	606

Table 2-S: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-S: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-S: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	LUC 934	LUC 820	-	-	-	-
	Total SF	126470 SF				
Restaurant	Restaurant	Retail	-	-	-	-
Retail	0	0	0	0	0	0
-	0	0	0	0	0	0
-	0	0	0	0	0	0
-	0	0	0	0	0	0
-	0	0	0	0	0	0

Table 5-S: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	1,250	644	606
Internal Capture Percentage	0.0%	0.0%	0.0%
External Vehicle-Trips ⁵	1,250	644	606
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Table 6-S: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Restaurant	0.0%	0.0%
Retail	0.0%	0.0%
-	N/A	N/A
-	N/A	N/A
-	N/A	N/A
-	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-S vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-S, 9-S (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-S.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	0114-23-01605
Analysis Period:	SAT Street Peak Hour

Land Use			Table 7-S (D): Entering Trips			Table 7-S (O): Exiting Trips		
			Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Restaurant	LUC 934	Total SF	1.00	257	257	1.00	248	248
Retail	LUC 820	126470 SF	1.00	387	387	1.00	358	358
-	-	-	1.00	0	0	1.00	0	0
-	-	-	1.00	0	0	1.00	0	0
-	-	-	1.00	0	0	1.00	0	0
-	-	-	1.00	0	0	1.00	0	0

Origin (From)			Destination (To)			
			LUC 934	LUC 820	-	-
Total SF			126470 SF	-	-	-
Restaurant			Retail	-	-	-
Restaurant	LUC 934	Total SF	0	0	0	0
Retail	LUC 820	126470 SF	0	0	0	0
-	-	-	0	0	0	0
-	-	-	0	0	0	0
-	-	-	0	0	0	0
-	-	-	0	0	0	0

Origin (From)			Destination (To)			
			LUC 934	LUC 820	-	-
Total SF			126470 SF	-	-	-
Restaurant			Retail	-	-	-
Restaurant	LUC 934	Total SF	0	0	0	0
Retail	LUC 820	126470 SF	0	0	0	0
-	-	-	0	0	0	0
-	-	-	0	0	0	0
-	-	-	0	0	0	0
-	-	-	0	0	0	0

Destination Land Use			Person-Trip Estimates			External Trips by Mode*		
			Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Restaurant	LUC 934	Total SF	0	257	257	257	0	0
Retail	LUC 820	126470 SF	0	387	387	387	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
All Other Land Uses ³	-	-	0	0	0	0	0	0

Origin Land Use			Person-Trip Estimates			External Trips by Mode*		
			Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Restaurant	LUC 934	Total SF	0	248	248	248	0	0
Retail	LUC 820	126470 SF	0	358	358	358	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
-	-	-	0	0	0	0	0	0
All Other Land Uses ³	-	-	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-S
²Person-Trips
³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.



QUEUE CALCULATION - Multiple Service Lanes

McDonald's - Evesham

Job Info	
Project Number:	0114-23-01605
Project Description:	McDonald's - Evesham
Analyst:	JDP
Date:	5/6/2025

Traffic Demand	
Hourly Demand, v	78 veh/hr
Peak Hour Factor, PHF	0.90
Available Queue Storage	8 veh

Service Rate	
Service Time	48 sec/veh
Number of Service Lanes, s	2

Calculations	
Pk Flow Rate, $\lambda = v / PHF$	87 veh/hr
Service Rate per Hour per Lane, μ	75.0 veh/hr
Service Rate per Hour of System, μ_s	150.0 veh/hr
Traffic intensity, $\rho = \lambda / \mu_s$	0.58

*Caution when model results with ρ less than 0.5 or greater than 0.85^{-1}

Avg. Queue, $L_q = (P\{0\} * \rho * (W\mu)^s) / (s! * (1-\rho)^2)$	0.59 veh.
Avg. System Length, $L_s = L_q + \lambda / \mu$	1.75 veh.

Avg. Queue Waiting Time, $W_q = L_q / \lambda$	0.01 min.
Avg. Time in System, $W_s = W_q + 1 / \mu$	0.02 min.

95th Percentile Queue:	5
Probability of queue exceeding 8 vehicles:	0.94%

Notes

- Queue calculations assume one service lane.
- Queue calculations based on stochastic queueing methods as described by M/M/1 Single-Server Queue Model as presented in "Parking" as published by the ENO foundation(1) and within the Civil Engineering Reference Manual.
- System times and length includes time/presence at service point.
- Calculated queue includes first vehicle(s) being processed and vehicles in line(s) behind.

Probability Calculations				
X' Veh. in Queue	P{X} Probability of exactly 'X' Veh. in Queue	Probability of 'X' or less Veh. in Queue	Probability of Queue Greater than 'X' Veh.	95 th Percentile Queue
0	26.58%	26.58%	73.42%	
1	30.84%	57.42%	42.58%	
2	17.88%	75.30%	24.70%	
3	10.37%	85.68%	14.32%	
4	6.02%	91.69%	8.31%	
5	3.49%	95.18%	4.82%	5
6	2.02%	97.21%	2.79%	
7	1.17%	98.38%	1.62%	
8	0.68%	99.06%	0.94%	
9	0.39%	99.45%	0.55%	
10	0.23%	99.68%	0.32%	
11	0.13%	99.82%	0.18%	
12	0.08%	99.89%	0.11%	
13	0.04%	99.94%	0.06%	
14	0.03%	99.96%	0.04%	
15	0.02%	99.98%	0.02%	
16	0.01%	99.99%	0.01%	
17	0.01%	99.99%	0.01%	
18	0.00%	100.00%	0.00%	
19	0.00%	100.00%	0.00%	
20	0.00%	100.00%	0.00%	
21	0.00%	100.00%	0.00%	
22	0.00%	100.00%	0.00%	
23	0.00%	100.00%	0.00%	
24	0.00%	100.00%	0.00%	
25	0.00%	100.00%	0.00%	