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Traffic Study

Drive-Thru Vehicle Queuing Analysis

For

Scooter's Coffee, LLC

5805 State Bridge Road
Johns Creek, GA 30097

22032SCR

Prepared for:

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Introduction

This study presents the results of a drive-thru vehicle queuing study for the proposed Scooter's Coffee located at 5805 State Bridge Road, Johns Creek, GA. This study is prepared at the request of the city to determine if the drive-thru stacking during peak times will curve off the site, through the shopping center access aisles and into State Bridge Road. The site is located northeast of State Bridge Road. It is currently full of parking for the Shopping Center it is located in.

Scooter's Coffee is a national brand founded in 1998. The brand started in the mid-west and is rapidly expanding nationwide. The Scooter's Brand is a drive-thru only coffee kiosk.

Proposed Site Conditions

The subject site includes 0.580 acres of area. The proposed building will be a 664 square foot drive-thru only coffee kiosk with a single lane drive-thru system. The site plan contains 175 feet of drive-thru que from the pick-up window to the access aisle which equates to 9 cars. From the pick-up window to the City of Johns Creek (CoJC) right of way at State Bridge Road the distance is about 560 ft, equating to 28 cars. The building and traffic flow on the site has been strategically placed to maximize the que length to ensure drive-thru vehicles will not back up into the CoJC right of way. The peak drive-thru traffic as expected is during the AM peak hour.

Data Collection

Ticket sales from existing locations were examined entering the drive-thru lane for each of the peak periods in order to determine the arrival rate for Scooter's customers. In addition, ticket transactions from existing stores were provided by the Scooter's Corporate Office. There are two main data collection points for this study outlined below.



1. Payment Options:

Scooter's Coffee has multiple options for payment and service which decreases the time a customer is in the queue. The following data was collected from the Scooter's Corporate Office and includes a 12-month review.

Payment Options:

Scooter's Coffee app – the fastest and safest way for customers to pay. This payment type has doubled in the last year and is expected to continue to increase significantly in the future. 19% of orders are paid with the Scooter's Coffee App allowing for an instant scan of a QR code. The tender time for this app utilization is less than 5 seconds.

Credit Card – 57% of all transactions are paid with a credit card. Tender time is 23 – 26 seconds

Cash – 24% of all transactions are paid with cash. Tender time is 20-30 seconds.

2. Current stores

The busiest Scooter's Coffee that exists does over \$2,000,000 in sales and has maybe 12-15 cars at one time. The average wait time from the menu board to driving away with coffee is under 3 minutes. Based off this information, it is highly unlikely there will be 28 spaces needed for this site.

3. Trip Generation

The Generation Trip Manual, 10th Edition: Volume 2 was used to gather trip data for the building. Using ITE Code 937 (Coffee/Donut shop with drive thru) the data was obtained for the number of trips based on a 1,000 square foot building in a General Urban/Suburban location. The values were taken from pages 231 (for weekday values), 234 (for AM peak hour), and 235 (for PM peak hour). Since the Scooter's Coffee building size is 664 S.F, the trip rate was multiplied by 0.664 in order to give values more accurate for the site. A pass-by trip reduction percentage of 50% was also applied to the values obtained from the manual. See the Table below for the AM & PM peak hour values.



Table 1

| Project Trip Generation | | | | | | | | | | |
|---|----------|-----------|--------------|-----------|-----------|-----------|--------------|-----------|----------|-----------|
| Scooters Coffee | | | | | | | | | | |
| Project Trip Generation | | | AM Peak Hour | | | | PM Peak hour | | | |
| Description | ITE Code | Size (sf) | Rate | Total | In (49%) | Out (51%) | Rate | Total | In (51%) | Out (49%) |
| Coffee/Donut shop with drive thru | 937 | 664 | 97.96 | 65.05 | 31.87 | 33.17 | 37.43 | 24.85 | 12.68 | 12.18 |
| Total Trips | | | 97.96 | 65.05 | 31.87 | 33.17 | 37.43 | 24.85 | 12.68 | 12.18 |
| Reductions for Pass-by Trips | | | | 32.52 | 15.94 | 16.59 | | 12.43 | 6.34 | 6.09 |
| Total Net New Project Trips | | | | 33 | 16 | 17 | | 12 | 6 | 6 |
| *Setting/Location: General Urban/Suburban | | | | | | | | | | |

Observations and Results

The heaviest use of the drive-thru as expected is during the AM peak hour with 16 cars coming in and 17 cars going out. There is enough room for the 16-car stack coming in since there can be up to 28 cars between the drive-thru window and the CoJC right of way (see Proposed Site Conditions). Therefore, the Scooter’s Coffee development will provide adequate drive-thru capacity for this proposed development and will not back up into the CoJC right of way.

ITE Daily Trip Generation Calculations

Per ITE 937 the average daily trips per 1000 sq. ft. of GFA is 820.38. For a building that is only 664 sq. ft., the site will average 544.73 Daily Trips. See the Table below for the Daily Trip breakdown.

Table 2

| Daily Trip Counts | | | | | | | | |
|---|-----|---------------------|-----|------|----------------------|--------|----------|----------|
| Land Use | LUC | Unit Rate | %IN | %OUT | Weekday Average Rate | ADT | IN | OUT |
| Coffee/Donut Shop with Drive-Through Window | 937 | Trips/ 1,000 SF GFA | 50% | 50% | 820.38 | 544.73 | 272.3662 | 272.3662 |