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Introduction

SR 54 is major east-west arterial connecting the municipalities of Fayetteville, Peachtree City, and Newman as well as providing access to I-85. This study examines the section of SR 54/Floy Farr Parkway east of SR 74, in Peachtree City and immediately to the east, from Commerce Drive to Sumner Road. Through this segment, SR 54 is a GDOT-maintained four-lane divided highway with signals at major intersections and a raised median with limited breaks.

Goals of Study

This study is intended to analyze existing and expected conditions along SR 54 and identify improvements that may be needed in the future to preserve and improve the roadway’s capacity. Specific subjects of analysis include:

- Existing access conditions along the corridor, including potential median opening closures or other conversions to preserve vehicular capacity
- Vehicular safety along SR 54, including a review of recent crash history
- Impacts of planned developments along the corridor on the roadway’s capacity and safety

For the purposes of this report, the corridor is broken into three segments as shown on the facing page:

1. Commerce Drive to the Peachtree City Hotel and Conference Center (west)
2. Peachtree Parkway to Prime Point/Robinson Road (center)
3. Walt Banks Road/Carriage Lane to Sumner Road (east)

Corridor Overview

Immediately west of the study corridor is the intersection of SR 54 with SR 74, a major intersection and development node including a wide assortment of office and retail uses. Many commuters pass through this intersection, either using SR 54 or SR 74 to access I-85. The county seat of Fayette County, Fayetteville is a local employment hub and lies to the east of the study area.

Traffic Volumes

Throughout the entire 3.6 mile study corridor, SR 54 features two travel lanes in each direction of travel, with auxiliary turn lanes at major intersections. On Wednesday, December 12, 2018, two twenty-four hour traffic counts were conducted on SR 54 as shown in the table to the right, with full count details included in Appendix A. These counts showed that SR 54 carries 27,000-30,000 vehicles on a typical weekday, including approximately six percent trucks (or heavy vehicles). This piece of roadway is classified by the Atlanta Regional Commission (ARC) and GDOT to be a principal arterial, and therefore is intended to efficiently carry through traffic as part of the regional roadway network.

Between signalized intersections, the corridor tends to operate relatively well. This is due to the raised median and turn restrictions that are present, as well as the number of travel lanes and the roadway geometrics. Certain signalized intersections act as bottlenecks for traffic. These bottlenecks can create vehicle queues that build and can even spill back to adjacent intersections. Congestion on the corridor can be attributed to two main causes:

- Signalized intersection operations
- Vehicle Crashes

<table>
<thead>
<tr>
<th>Year 2018 Vehicular Volumes</th>
<th>Observed Average Daily Traffic (ADT)</th>
<th>Daily Truck Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>West of Flat Creek Road/Willowbend Road</td>
<td>27,462</td>
<td>6%</td>
</tr>
<tr>
<td>Northeast of Walt Banks Road/Carriage Lane</td>
<td>29,106</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Crashes
Traffic safety is a key consideration of how the existing transportation network is functioning. Three years of crash data (July 1, 2015 to June 30, 2018) was obtained from Georgia DOT’s database for the corridor from Commerce Drive to Sumner Road. For the three year period a total of 482 crashes occurred along the SR 54 corridor. Of these, a total of 109 were injury crashes and none were fatalities. The crash data shows that there were five pedestrian/bicycle crash recorded during the observation period. The table on the left of the facing page summarizes the crashes along the SR 54 corridor. The figure below illustrates the crash locations. The heat map shows the frequency of all crashes, regardless of severity. Crashes that involved injuries are shown with a yellow circle.

The crash rate for this section of the SR 54 corridor was calculated and compared to the statewide averages for urban principal arterials. The average crash rate of 411 crashes per 100 million vehicle miles (100 MVM) for the three year period was notably lower than the statewide average of 583 in the year 2016.

The predominant types of crashes was rear end, accounting for 53% of the total. Angle crashes accounted for an additional 26%. The high percentage of rear end crashes is commonly associated with congestion. The high percentage of angle crashes suggests conflicts between turning vehicles at intersections and other access points. Analysis of the crashes by roadway segments and by intersection was performed to better understand the location of the accidents along the corridor. The table on the right of the facing page summarizes the total crashes at median opening locations, ranked from highest to lowest.

Study Corridor Crashes, 7/1/2015-6/30/2018
### Crashes on Study Corridor, 7/1/2015 - 6/30/2018

<table>
<thead>
<tr>
<th>Type</th>
<th>Number of Crashes</th>
<th>Percentage of Total Crashes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angle</td>
<td>127</td>
<td>26%</td>
</tr>
<tr>
<td>Head-On</td>
<td>6</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Not A Collision with Motor Vehicle</td>
<td>43</td>
<td>1%</td>
</tr>
<tr>
<td>Rear End</td>
<td>263</td>
<td>53%</td>
</tr>
<tr>
<td>Sideswipe-Opposite Direction</td>
<td>4</td>
<td>8%</td>
</tr>
<tr>
<td>Sideswipe-Same Direction</td>
<td>37</td>
<td>1%</td>
</tr>
<tr>
<td>Other/Unspecified</td>
<td>2</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Total Crashes</strong></td>
<td><strong>482</strong></td>
<td><strong>100%</strong></td>
</tr>
<tr>
<td>Crashes with Injuries</td>
<td>109</td>
<td>23%</td>
</tr>
<tr>
<td>Crashes with Fatalities</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Crashes involving Bicyclists or Pedestrians</td>
<td>5</td>
<td>1%</td>
</tr>
</tbody>
</table>

### Crashes by Intersection, Ranked from Highest to Lowest, 7/1/2015-6/30/2018

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Total Crashes</th>
<th>Property Damage Only Crashes</th>
<th>Injury Crashes</th>
<th>Fatal Crashes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Peachtree Parkway</td>
<td>80</td>
<td>63</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>2 Commerce Drive</td>
<td>57</td>
<td>51</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>3 Flat Creek Road/Willowbend Road</td>
<td>41</td>
<td>27</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td>4 Northlake Drive/Willowbend Road</td>
<td>39</td>
<td>26</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>5 Walt Banks Road/Carriage Lane</td>
<td>37</td>
<td>30</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>6 Prime Point/Robinson Road</td>
<td>32</td>
<td>27</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>7 Lexington Circle/Broken Bow Drive</td>
<td>29</td>
<td>20</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>8 Sumner Road (west)/Shiloh Drive</td>
<td>29</td>
<td>25</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>9 Stevens Entry</td>
<td>26</td>
<td>25</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>10 Dan Lakly Drive</td>
<td>15</td>
<td>11</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>11 Governors Square</td>
<td>14</td>
<td>11</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>12 Peachtree City Hotel and Conference Center</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>13 Petrol Point</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>14 Genevieve Court</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>15 Sumner Road (east)</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Access Management Overview

Access management is an umbrella term for a system of policies, projects, and strategies used to improve a roadway's safety and operations by selecting specific locations at which to provide access to a roadway. Access management practices may include restricting or modifying the locations or types of access at developments, and modification of roadway intersections for the enhancement of safety.

Safety

The most hazardous points along any roadway are the intersections. At intersections, driving paths converge, diverge, and cross at a series of conflict points. An intersection can be made safer by reducing the number of conflict points present between vehicular travel paths. As part of this study, modifying unsignalized median openings to become Restricted Crossing U-turns was considered. The graphic below, which compares a traditional intersection to a Restricted Crossing U-Turn (RCUT) intersection (sometimes called a J-Turn intersection). By limiting the access, the number of conflict points at the intersection is reduced from thirty-two to fourteen, and the number of crossing points (the most dangerous type of conflict point) is reduced from sixteen to two. Past studies have shown fatal and injury crashes can be reduced by 53 percent and property damage only crashes can be reduced 31 percent (based on information from Georgia DOT sources).

![Conflict Points in Conventional Intersections vs. Conflict Points in RCUT/J-Turn Intersections](image)

Impacts to Property Values

Property value changes due to the modification of access are in most cases minimal or even positive depending on the intersection improvement type and the adjacent land use type. Increase in corridor throughput also benefits retail and commercial land uses, as motorists can enter and exit more quickly under improved corridor conditions. In many cases, streets with strong access control can provide direct ingress to roadside parcels otherwise not possible under a conventional corridor treatment.

FHWA’s Office of Safety reports that, “Business owners along a corridor may fear that access management improvements [such as Superstreets] will disrupt or otherwise negatively impact their businesses, but several studies over many years have dispelled this myth. Studies and surveys of property owners and businesses from North Carolina, Texas, Florida, Minnesota, Kansas, and Iowa, among others, reveal that access management projects do not result in adverse effects, and, in fact, can be beneficial. Importantly, a common factor in achieving this long-term success is early and frequent consultation between the road agency and corridor stakeholders, with special emphasis on the construction phase.” Therefore, implementation of these projects is most likely to occur without substantial pushback if implementation agencies are able to get property owners support early in the implementation process.
Commerce Drive to the Peachtree City Hotel and Conference Center

The western segment of the study area begins at Commerce Drive, approximately 550 feet from SR 74, passes Peachtree City’s library and City Hall, crosses over Peachtree Lake, and ends at the Peachtree City Hotel and Conference Center. This section of the corridor includes eight existing access points, two signals, two unsignalized median openings, and four right in/right out driveways.

Safety
A table showing reported crashes from July 1, 2015 through June 30, 2018 by intersection is presented to the right. Commerce Drive has the highest number of reported crashes in this time period, followed by Northlake Drive and Flat Creek Road. Commerce Drive has shown a lower severity of crashes than the latter two intersections.

Access
As shown in the map on the following page, this segment of the study corridor includes five median openings, four of which are full-access intersections, two signalized (Northlake Drive/Willowbend Road and Flat Creek Road/Willowbend Road), and two unsignalized (Commerce Drive and the Peachtree City Hotel and Conference Center. There is an additional median opening east of Flat Creek Road/Willowbend Road, with no cross-street. Just beyond the study limits, there is also a signalized intersection with SR 74 approximately 550 feet west of Commerce Drive.

<table>
<thead>
<tr>
<th>Crashes by Intersection, Commerce Drive to the Peachtree City Hotel and Conference Center, 7/2015-6/2018</th>
<th>Total Crashes</th>
<th>Property Damage Only Crashes</th>
<th>Injury Crashes</th>
<th>Fatal Crashes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commerce Drive</td>
<td>57</td>
<td>51</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Northlake Drive/Willowbend Road</td>
<td>39</td>
<td>26</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>Flat Creek Road/Willowbend Road</td>
<td>41</td>
<td>27</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td>Peachtree City Hotel and Conference Center</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>
The intersection with Commerce Drive is only 550 feet away from the intersection with SR 74. GDOT access management standards require a minimum of 1000 feet between median openings, and prefer a distance of 1320 feet. The notably higher incidence of crashes at this intersection may be related to this proximity to SR 74, which is a major intersection that has queues on SR 54 that regularly extend past Commerce Drive. The intersection is also currently undergoing design of a major improvement, most likely a Continuous Flow Intersection/Displaced Left Turn (CFI/DLT), which may have impacts on this access point. To bring this into compliance with GDOT access management standards, reduce crashes at this intersection, and prepare for future needed changes to access, it is recommended that the existing median opening at Commerce Drive be removed and Commerce Drive be restricted to right in/right out access at SR 54.

Due to a lack of roadway network connectivity, closing this median opening would make it very difficult for travelers from Commerce Drive to get to SR 54 eastbound. To alleviate this concern and maintain a robust, accessible roadway network, it has been suggested that the Commerce Dive/Westpark Drive area be connected to Aberdeen Parkway and/or Northlake Drive. With either of these connections, trips originating in the Commerce Drive/Westpark Drive area could access SR 54 eastbound via the existing signal at Northlake Drive/Willowbend Road and SR 54. The two locations shown below were considered, but a preliminary field review revealed that the northern option presented challenges and was not as readily implementable as the southern option. The northern location would impact an existing parking lot, stormwater detention, and require intersections along the Aberdeen Parkway one-way pair. A more detailed feasibility study of the southern option - which would be built adjacent to an existing golf cart path - was conducted. An initial concept investigation was performed for a potential new road connection. Overall, constructing a new two-lane road connection between Westpark Drive and Northlake Drive appears feasible.
The concept was evaluated both horizontally and vertically to identify potential impacts and constraints for implementation. The concept layout to the right illustrates the two-lane roadway and modifications to the multi-use path. Additional engineering investigation will be required, as well as determining the optimal design within the context of the adjacent creek, cemetery, and utility services. A technical memo documenting the evaluation is included in Appendix B.
City Hall Area Redevelopment

Along SR 54, a redevelopment is planned to bring a substantial increase in activity to the portion of SR 54 near its intersections with Willowbend Road, Northlake Drive, and Flat Creek Road. This site sits immediately west of Lake Peachtree, and includes Peachtree City’s City Hall and library. This mixed-use development is currently expected to include substantial retail and office components, mixed with single family homes, townhomes, and apartments, while preserving the existing municipal complex. An examination of this development was undertaken to anticipate the traffic impacts it will have on the roadway network and to identify specific improvements that can be made to mitigate these impacts and improve overall circulation throughout.

Existing Condition Analysis

In order to understand future impacts, an assessment of current traffic conditions was made. The redevelopment is expected to primarily impact the intersections of SR 54 with Northlake Drive/Willowbend Road and Flat Creek Road/Willowbend Road. Turning movement counts were taken at each of these intersections on Wednesday, December 12, 2018 during the morning and evening peak periods. Full count details are included in Appendix A, and peak hour turning movements are shown on the facing page. These traffic counts were analyzed in Trafficware’s Synchro 10, a traffic analysis software, using Highway Capacity Manual (HCM) 2000 methodology. HCM 2000 methodology was used due to constraints with newer methodologies that make them incompatible with these intersections.

Results of this analysis are given in average delay, in seconds per vehicle, and in Level of Service (LOS). LOS is reported as a letter, from A through F, related to the amount of congestion experienced at a certain location. Generally speaking an LOS of A through D is considered acceptable, while LOS of E or F are considered less desirable, with infrastructure improvements often needed to improve the movement of traffic.

Existing traffic conditions during the morning and evening peak periods are shown the table above, with full Synchro output included in Appendix C. These results show that currently the two intersection being studied are sufficient to process the amount of traffic that moves through them without substantial delay. This analysis does not capture impacts from adjacent signals. Specifically, queues from the existing intersection with SR 74 extend into the Northlake Drive intersection. This is not included in these analysis results.

### Year 2018 Traffic Conditions

<table>
<thead>
<tr>
<th>Year 2018 Traffic Conditions</th>
<th>AM</th>
<th>PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOS</td>
<td>Delay (sec/veh)</td>
<td>LOS</td>
</tr>
<tr>
<td>Northlake Drive/Willowbend Road</td>
<td>B</td>
<td>20</td>
</tr>
<tr>
<td>Flat Creek Road/Willowbend Road</td>
<td>B</td>
<td>14</td>
</tr>
</tbody>
</table>

### Year 2018 Turning Movement Counts

<table>
<thead>
<tr>
<th>Northlake Drive</th>
<th>Flat Creek Road</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 (38)</td>
<td>5 (25)</td>
</tr>
<tr>
<td>16 (72)</td>
<td>16 (37)</td>
</tr>
<tr>
<td>28 (110)</td>
<td>16 (37)</td>
</tr>
<tr>
<td>31 (46)</td>
<td>34 (56)</td>
</tr>
<tr>
<td>851 (963)</td>
<td>1,048 (1,024)</td>
</tr>
<tr>
<td>8 (23)</td>
<td>31 (27)</td>
</tr>
<tr>
<td></td>
<td>22 (39)</td>
</tr>
<tr>
<td></td>
<td>16 (37)</td>
</tr>
<tr>
<td>SR 54/Floy Farr Parkway</td>
<td>Willowbend Road</td>
</tr>
<tr>
<td>2 (10)</td>
<td>5 (25)</td>
</tr>
<tr>
<td>15 (29)</td>
<td>16 (37)</td>
</tr>
<tr>
<td>1,000 (989)</td>
<td>1,048 (1,024)</td>
</tr>
<tr>
<td>93 (51)</td>
<td>34 (56)</td>
</tr>
<tr>
<td></td>
<td>31 (27)</td>
</tr>
<tr>
<td></td>
<td>5 (25)</td>
</tr>
<tr>
<td></td>
<td>6 (21)</td>
</tr>
<tr>
<td></td>
<td>49 (84)</td>
</tr>
</tbody>
</table>
Future Condition Analysis

In order to anticipate future traffic needs and identify the best improvements to accommodate those needs, we must estimate how much traffic will grow based on regional travel patterns. Based on an analysis of GDOT-maintained historic counts along SR 54, an average linear background growth rate of 1.5% per year was identified and applied to all traffic counts. The resulting turning movement counts for each intersection are included in Appendix D. An identical analysis was performed with these projected traffic volumes, and the results of this analysis can be seen to the right, with full output included in Appendix C. While congestion is expected to increase in this no-build scenario, increase are modest and don’t inherently justify any major infrastructure improvements.
Build Condition Analysis

In addition to regional traffic growth, increased traffic from this redevelopment was considered in this scenario. The Institute of Transportation Engineers (ITE) produces the “Trip Generation Manual” which was used to estimate future traffic demands of the proposed development. A few notes about the trip generation methodology follow:

- Estimated development intensities were provided by the developer for all areas south of SR 54. Specific estimated development intensities are included in Appendix E.
- Peachtree City is host to a well-connected network of off-road trails for the use of golf carts and other personal transportation vehicles. The City has chosen to allow the developer to provide 10% of required parking spaces as golf cart spaces in anticipation of golf cart usage. As such, it was assumed that 10% of all trips to and from the new development would be made by golf cart, off of the vehicular roadway system.
- Total trips generated by each land use were reduced based on methodologies for mixed-use reductions and pass-by reductions provided in the ITE Trip Generation Manual.
- Anticipated travel paths of the new trips were estimated based on the distribution of development intensity and on existing travel patterns in the area.

Generated volumes and the resulting future year turning movement volumes are included in Appendix D. With the new trips generated by the redevelopment included, another analysis was performed, yielding the results shown in the top right, with full Synchro output included in Appendix C.
Suggested Improvements

These two intersections are anticipated to operate with fairly low levels of congestion, but some minor modifications to each of the intersections could further improve operations and could provide key safety improvements. Potential improvements are described below.

Northlake Drive

Right turn lanes improve capacity at intersections, and improve safety by separating vehicles continuing through an intersection from those decelerating to turn right. Based on GDOT standards and projected development traffic, a right turn lane should be constructed in both directions of SR 54 at Northlake Drive/Willowbend Road.

GDOT standards specify a minimum left turn length of 235 feet on roadways with posted speed limits of 45 miles per hour (mph), as exists on this section of SR 54. Both of the left turn lanes on SR 54 are approximately 160 feet long. In order to meet GDOT standard and provide sufficient deceleration distance, both of these turn lanes should be extended to 235 feet.

During the afternoon peak hour in year 2030, northbound right turns and through vehicles are expected to exceed 100 vehicles per hour each, including development-generated traffic. In order to serve all of these movement, and to improve access to the existing dedicated left turn lane, a separate right turn lane could be constructed and the existing left turn lane should be extended. In order to provide access around queuing through vehicles, each of these turn lanes should be 150 feet long, plus the needed taper. This addition would improve both throughput and safety for Willowbend Road travelers.

Flat Creek Road

Currently, Flat Creek Road and Willowbend Road both have a shared through-left lane and a dedicated right turn lane at SR 54. Both directions of the side street are given a green light at the same time, putting through travelers and left turning vehicles in a delicate dance. This configuration may contribute to this intersection’s higher crash history than Northlake Drive, even with similar or lower traffic volumes. In order to rectify this, the following changes could be made:

- Restripe the approach of Flat Creek Road to include a shared through-right lane, a dedicated left turn lane, and a northbound receiving lane
- Widen the approach of Willowbend Road to accommodate separate left, through, and right turn lanes at the intersection. The left and right turn lanes need only be approximately 60 feet long, due to low through volumes. Keeping these lanes short will also allow golf cart crossing length to be minimized.

These modifications will separate left turn vehicles which must slow down and yield at the intersection from through vehicles, which can continue through, improving safety and capacity of the intersection.

Based on projected turning volumes including the new development, the westbound left turn lane from SR 54 should be extended approximately 50 feet to a total length of 335 feet to handle future turning volumes.

East of the intersection with Flat Creek Road/Willowbend Road is an existing median opening that has been shown in the redevelopment plan as the future location of a new driveway into the Peachtree City Hall area. In order to accommodate extending the westbound left turn lane at Flat Creek Road/Willowbend Road, the existing eastbound U-turn area should be removed at this driveway. In the existing and proposed configurations, this eastbound U-turn serves no need that the signal doesn’t serve. To ensure safety, preserve capacity, and comply with GDOT standards, this driveway should be converted to an RCUT intersection. Travelers from the library area who wish to travel west on SR 54 can make a U-turn at the Peachtree City Hotel and Conference Center intersection, or use internal roadways to access SR 54 from Willowbend Road.
Peachtree Parkway to Prime Point/Robinson Road

Safety

This segment of corridor includes five intersections with full median openings. These include three signalized intersections (Peachtree Parkway, Stevens Entry, and Prime Point/Robinson Road), and two unsignalized intersections (Dan Lakly Drive and Petrol Point). The crash history at each of these is shown in the table to the right.

The intersection with Peachtree Parkway is the site of the highest concentration of crashes along the study corridor. Of the eighty crashes reported, fifty-five (sixty-nine percent) were rear ends, the vast majority of which (eighty percent) did not include an injury. High rates of low-speed rear end crashes are commonly associated with congestion. It is possible that a contributing factor to these crashes is the presence of channelized right turns but no dedicated right turn lanes on Peachtree Parkway. Vehicles who intend to turn right may be rear ending vehicles that are traveling through and are stopping at the signal. Dedicated right turn lanes on both approaches of Peachtree Parkway could alleviate this conflict and reduce crashes at this intersection.

Access

This segment of the corridor features two unsignalized median openings, both of which provide duplicative access, and are closer to other median openings than considered acceptable in GDOT standards. Dan Lakly Drive is 940 feet northeast of the intersection with Peachtree Parkway, and provides access to the shopping center in the north quadrant of the intersection (minimum GDOT distance is 1000 feet). This shopping center also has access along Peachtree Parkway, and a right in/right out driveway between Peachtree Parkway and Dan Lakly Drive. To improve safety and bring this section of SR 54 up to GDOT standards, it is recommended that the intersection with Dan Lakly Drive be converted to an RCUT intersection. This will still allow ingress to the shopping center from both directions, but vehicles exiting the shopping center who intend to travel eastbound on SR 54 can either access SR 54 via Peachtree Parkway, or can exit at Dan Lakly Drive, and make a U-turn at Peachtree Parkway.

Similarly, Petrol Point crosses SR 54 only 440 feet northeast of Stevens Entry, much closer than the GDOT standard 1000 feet. Petrol Point is well integrated into the local roadway network, which provides signalized access to SR 54 at Stevens Entry and at Prime Point/Robinson Road. To improve safety and throughput on SR 54, it is recommended that the intersection with Petrol Point be converted to an RCUT intersection.

Crashes by Intersection, Peachtree Parkway to Prime Point/Robinson Road, 7/2015-6/2018

<table>
<thead>
<tr>
<th></th>
<th>Total Crashes</th>
<th>Property Damage Only Crashes</th>
<th>Injury Crashes</th>
<th>Fatal Crashes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peachtree Parkway</td>
<td>80</td>
<td>63</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>Dan Lakly Drive</td>
<td>15</td>
<td>11</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Stevens Entry</td>
<td>26</td>
<td>25</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Petrol Point</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Prime Point/Robinson Road</td>
<td>32</td>
<td>27</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>
Existing Access Points

- Signalized, Full Access
- Unsignalized, Full Access
- Unsignalized, Right In/Right Out Only

Existing Access Points:

- Petrol Point
- Prime Point
- Robinson Road
- Stevens Entry
- Dan Lakly Drive
- Peachtree Parkway

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Walt Banks Road/Carriage Lane to Sumner Road (east)

Safety

Crashes by severity and intersection are shown to the right for the six full-access intersections present in this corridor segment. These include three signalized intersections (Walt Banks Road/carriage Lane, Lexington Circle/Broken Bow Drive, and Sumner Road (west)/Shiloh Drive) and three unsignalized median openings (Governors Square, Genevieve Court, and Sumner Road (east)).

While not the location with the most crashes, the intersection with Governors Square stands out. Thirteen of the fourteen crashes observed there were angle crashes and many of those were related to vehicles making left turns from the side streets onto SR 54. At the eastern end of Governors Square, additional residential development is expected to bring 100 single-family homes, which will bring an estimated 1,040 new vehicular trips through this intersection on the average weekday (including both entering and exiting trips). This intersection is approximately 1100 feet north of the existing signal at Sumner Road (west)/Shiloh Drive, short of the 1320 feet minimum space between signals in GDOT standards. While counts were not performed at this location, based on existing roadway network and land uses, it is unlikely that current demand or future demand will warrant a signal at this location.

In order to reduce the crash rate in anticipation of future development at this location and maintain compliance with GDOT standards, it is recommended that this intersection be converted to an RCUT intersection. U-turn areas already exist in both directions from this intersection - and Genevieve Court and Sumner Road (west)/Shiloh Drive.

Access

At the southern edge of this segment, Walt Banks Road/Carriage Lane is 930 feet north of Prime Point/Robinson Road, which is less than the GDOT standard of 1320 feet between signals. However, these signals each serve distinct and important parts of the broader roadway network, and neither fully serves the need of the entire network. Currently, no substantial safety or operational issues have been reported at these locations. There is currently no access along SR 54 between these intersections, and this should be maintained in the future to ensure safe and efficient operations at these intersections.

Further north, the signal at Lexington Circle/Broken Bow Drive is only 950 feet from the signal at Sumner Road (west)/Shiloh Drive. Similarly to the previous pair, these signals serve distinct portions of the roadway network and do not currently show signs of substantial safety or operational problems. In this case, there is some access present between the two signals.

GDOT standards require 350 feet between right in/right out driveways on roads with speed limits of 55 mph, as is the case on this section of SR 54. Several of the right in/right out driveways north of Lexington Circle/Broken Bow Drive are not in compliance with this standard. In many cases, the configuration of the sites and history of access would preclude any modifications of access. However, if any of these locations redevelop, the City and/or County should work with GDOT and the property owners to ensure that future access complies with GDOT's standards. It may be possible to consolidate some driveways and provide additional interparcel access.
Existing Access Points
- Signalized, Full Access
- Unsignalized, Full Access
- Unsignalized, Right In/Right Out Only

Sumner Road (east)
Genevieve Court
Governors Square
Sumner Road (west)
Shiloh Drive
Broken Bow Drive
Walt Banks Road
Carriage Lane
Prime Point
Robinson Road

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
**Sumner Road East**

Potential development along Sumner Road and roads that connect to it have raised interest in signaling the intersection of SR 54 and Sumner Road (east). In order to better evaluate the need for signalization, traffic counts were taken on Wednesday, December 12, 2018, and are shown at the top of the facing page. Current volumes coming from Sumner Road are much lower than volumes that would warrant signalization of this intersection. Based on the observed turning movement volumes and the four hour signal warrant, it is estimated that approximately 280-320 single-family detached homes could be built in the neighborhoods off of Sumner Road before a signal would be warranted at this location. Currently, two developments that would use Sumner Road are known. One includes 27 homes as part of a broader development between Sumner Road and SR 54, shown to the right. The other would be located north of Sumner Road near the intersection with Smokerise Point and could include approximately 140 single-family detached homes. These planned developments (totaling 167 homes) are estimated to create 1,667 new trips (including both entering and exiting trips) on a typical weekday. This volume is unlikely to warrant signalization at Sumner Road (east). Other types of development may generate sufficient traffic to warrant a signal, or another warrant may be passed first, but the current volumes of development being planned does not appear to justify signalizing this intersection.

Crash history at this intersection does not indicate a safety problem, but this may change as development in the area increases. In order to preserve safety and reduce the need for signalization at this intersection, an unsignalized RCUT intersection could be installed. Vehicles traveling on Sumner Road towards SR 54 eastbound could make a U-turn at the existing median opening at Genevieve Court, or a new U-turn could be installed approximately 700 feet south of the intersection.
Observed 2018 Peak Hour Volumes

Example of an RCUT Intersection along SR 6 in Paulding County

Source: Google Earth Professional
Corridor Recommendations

Project recommendations presented in this report are as follows, with locations also indicated on the map on the facing page:

Segment 1 (Commerce Drive to the Peachtree City Hotel and Conference Center)

1. Close the median break at SR 54 and Commerce Drive, making access at Commerce Drive right in/right out only
2. Construct a new roadway between Westpark Walk and Northlake Drive to improve access from the Commerce Drive/Westpark Walk area to SR 54 eastbound
3. Add right turn lanes to both directions of SR 54 at Northlake Drive/Willowbend Road
4. Extend left turn lanes on SR 54 at Northlake Drive/Willowbend Road to GDOT standard of 235 feet, plus appropriate taper
5. Extend the northbound left turn lane to 160 feet and construct a new northbound right turn lane of 160 feet at Northlake Drive/Willowbend Road
6. Convert the southbound approach of Flat Creek Road at SR 54 to include a dedicated left turn lane and shared through-right lane
7. Widen the northbound approach of Willowbend Road (east) to include separate left, through, and right lanes, with the turn lanes approximately 50 feet long
8. Extend the eastbound left turn lane on SR 54 at Flat Creek Road/Willowbend Road to GDOT standard of 235 feet
9. Extend the westbound left turn lane on SR 54 to 335 feet, to provide sufficient queue storage
10. Convert the existing median opening east of Flat Creek Road/Willowbend Road to an RCUT intersection, and remove the westbound U-turn when the new driveway is constructed to the City Hall area to the south

Segment 2 (Peachtree Parkway to Prime Point/Robinson Road)

11. Consider adding northbound and southbound right turn lanes on Peachtree Parkway
12. Convert existing intersection with Dan Lakly Drive to an RCUT intersection
13. Convert existing intersection with Petrol Point to an RCUT intersection

Segment 3 (Walt Banks Road/Carriage Lane)

14. Consider converting existing intersection with Governors Square to an RCUT intersection
15. Consider converting the intersection of Sumner Road (east) to an RCUT

Additional Corridor-Wide Recommendations

In addition to the specific project recommendations presented in previous sections of the report, the following includes some overall recommendations that should be considered when implementing projects and constructing new developments along the corridor.

Upgrade to Flashing Yellow Arrows

GDOT as well as most maintaining agencies in Georgia are converting the ‘five-section’ signal heads for protected/permissive phasing to Flashing Yellow Arrow (FYA) four-section
heads. The FYA signal heads have been shown to improve safety and be more understood by drivers as to the yield condition. Many locations along SR 54 still have the five-section signals for left turn lanes. When future projects on SR 54 necessitate changes to or replacement of these signal heads, they should be upgraded to FYA heads to bring the corridor into compliance. This may require replacing some mast arm poles as the current arms may not be long enough.

**Preserve and Improve Access Management**

The majority of the study corridor is currently in compliance with GDOT access management standards, or could be with implementation of projects recommended in this study. The segment between Sumner Road (west)/Shiloh Drive and Genevieve Court currently has more right in/right out access points than GDOT’s standards dictate. In the future, it will be important to maintain the existing low frequency of access points and median breaks present along the corridor, using all tools Peachtree City, Fayette County, and GDOT can leverage. Any new development, or especially redevelopment, is an opportunity to preserve the capacity and safety of the SR 54 corridor with strong access management policies.
Conclusions
This study examined the section of SR 54/Floy Farr Parkway east of SR 74, in Peachtree City and immediately to the east, from Commerce Drive to Sumner Road. This study focused on transportation projects that address safety, capacity, and accessibility along the SR 54 Corridor. Project recommendations are provided to achieve improved traffic conditions as well as preserve through capacity along SR 54.

Implementation of the recommendations will require coordination and cooperation with partner agencies. Maintaining and improving the transportation network is an effort that many organizations and agencies must partner together to achieve. This study recommends that the City of Peachtree City continue coordinating with:

- Fayette County DOT – related to funding and the implementation of the projects
- Georgia DOT – related to state route maintenance, and funding for improvements