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# Mobility



Transportation is always an important component of any planning or visioning process, but the location of the Crescent Springs Gateway study area makes transportation especially critical. Located at the intersection of Buttermilk Pike and Interstate 71/75 the study area is part of a larger commercial center that relies on vehicular access for customers. Serving as a primary access to large residential areas, Buttermilk Pike extends east to Dixie Highway into Fort Mitchell and west into the City of Villa Hills. Buttermilk Pike carries high volumes of traffic to serve both the commercial uses and the surrounding residential activities.

## Buttermilk Pike

Traffic congestion on Buttermilk Pike is a primary concern. The section of Buttermilk Pike between I-71/75 and its intersection with Anderson/Erlanger Crescent Springs Road, contains four stoplights within one-third of a mile. This concentration of traffic signals can cause significant delays and traffic can back up into the preceding intersection creating gridlock and safety concerns. The transportation analysis found the stretch of Buttermilk Pike running through the study area operates poorly during peak periods and it can be assumed this will only worsen as time progresses and traffic volumes increase (see Tables 1 and 2).

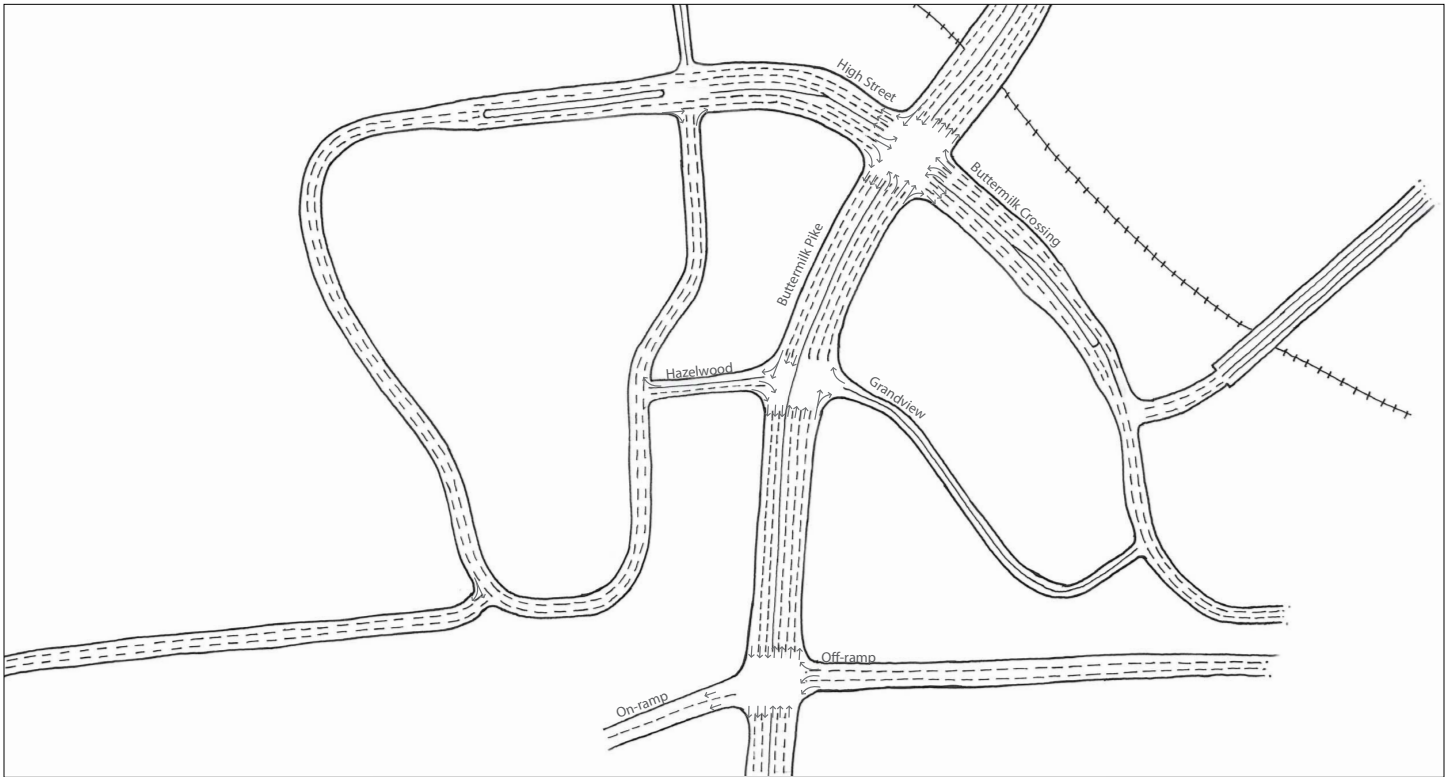
One of the major problems is a frequent queue (i.e. a line of traffic waiting for a green light) which extends from the intersection at Hazelwood Road/Grandview Drive to the I-71/75 southbound off-ramp onto Buttermilk Pike. To address this issue it is recommended to make the Hazelwood Road/Grandview Drive/Buttermilk Pike intersection right-in/right-out. This conversion would remove the traffic signal at Hazelwood Road eliminating queues starting at that location on Buttermilk Pike. The next intersection at Buttermilk Pike and High Street/Buttermilk Crossing is further away from the southbound off-ramp and therefore provides a longer collection area for traffic to queue before blocking the intersection (see Figure 2).

## Study Area Access

Access to the Sub Area A is limited, primarily due to the area's isolation caused by the CSX railroad and Interstate 71/75. Ingress and egress is currently provided at two signalized intersections on Buttermilk Pike, one at Hazelwood Road and one at High Street. As a result of the Buttermilk Pike improvements identified above, this access is proposed to be reconfigured with a single signalized access point at High Street and Buttermilk Crossing (see Figure 2). Access to Hazelwood Road would operate as a right-in/right-out only intersection. Egress capacity at Hazelwood Road may remain largely unaffected as the critical turning movement served by the access is to I-71/75, i.e., a right turn movement. Left turn ingress from Buttermilk Pike into Sub Area A would be served at the High Street intersection. This intersection would also serve displaced left turn traffic from the conversion of Grandview Avenue to right turn movements only. As a long term impact of this reconfiguration, highway service land use, now concentrated on Hazelwood Road, would likely relocate to the High Street area. This relocation is discussed in Chapter 4.

Significant improvement will be required to accommodate the increase in traffic at the High Street/Buttermilk Crossing intersection caused by traffic displaced from Hazelwood Road and Grandview Avenue. At a minimum, these improvements would include the widening of the intersection of High Street and Buttermilk Crossing to a six lane section to accommodate dual left turns into and out of the study area. In addition, widening of the Buttermilk Pike/Norfolk Southern Railroad Bridge would also be required to accommodate an additional westbound lane. Even with the proposed improvements it is estimated that only about 2000 vehicles an hour can access the portion of the

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**Figure 2: Concept drawing of changes to Buttermilk Pike, Hazelwood Road, Grandview Avenue, High Street and Buttermilk Crossing**

study area served by Hazelwood Road and High Street. This level of traffic flow places a limit on the amount of building space and activity levels that can occupy the study area. A full discussion of these constraints is provided in Chapter 4.

Sub Area B would also benefit from improvements to Buttermilk Pike. In order to improve flow, it is recommended that Grandview Avenue be redirected at its intersection with Buttermilk Crossing, to provide a continuous movement to/from Buttermilk Crossing. The extension of Grandview Avenue between Buttermilk Crossing and Buttermilk Pike would then “T” into the continuous movement (see Figure 3).

One option to increase capacity is to connect the western portion of Sub Area A to the Erlanger/Crescent Springs Road by constructing a bridge over the Norfolk Southern railroad and Pleasant Run Creek (see Figure 4). This connection would allow vehicles from Erlanger/Crescent

Springs Road to enter and exit the area without using Buttermilk Pike. The land uses in Sub Area A produce limited demand for access from Erlanger/Crescent Springs Road to this location. Instead, the majority of the traffic enters and leaves Sub Area A from I-71/75. It is anticipated that minimal exiting traffic from the study area would utilize this access. Therefore, it is likely that a bridge to access Erlanger/Crescent Springs Road would not significantly increase the capacity of the intersections on Buttermilk Pike. In fact, a bridge connecting Sub Area A with Erlanger/Crescent Springs Road may have the detrimental effect of providing a ‘cut-through’ route to the interstate, effectively decreasing capacity at the intersections at Buttermilk Pike. Adding the bridge could further limit the development capacity in Sub Area A because of the additional capacity generated by this cut through. This would further limit development because capacity would be generated from ‘cut-through’ traffic and not only from businesses within the study area.

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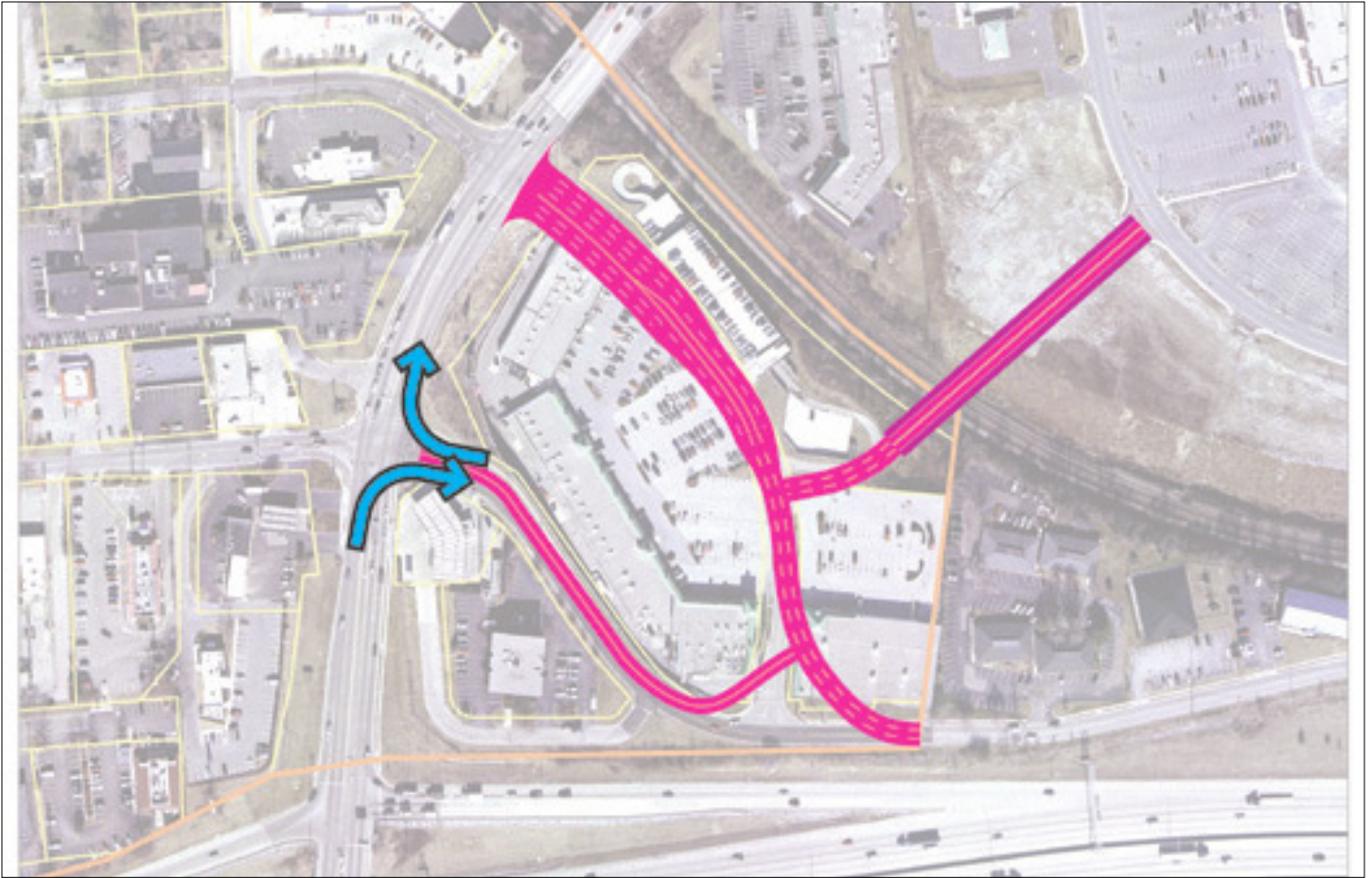


Figure 3: Concept drawing showing changes to Grandview Avenue and Buttermilk Crossing

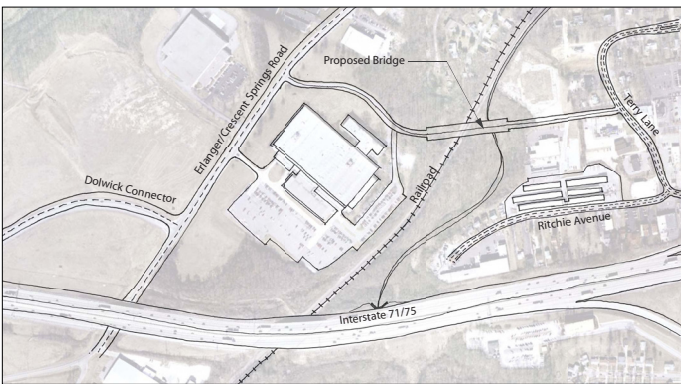


Figure 4: Possible bridge over railroad and Dry Creek connecting Sub Area A to Erlanger/Crescent Springs Road

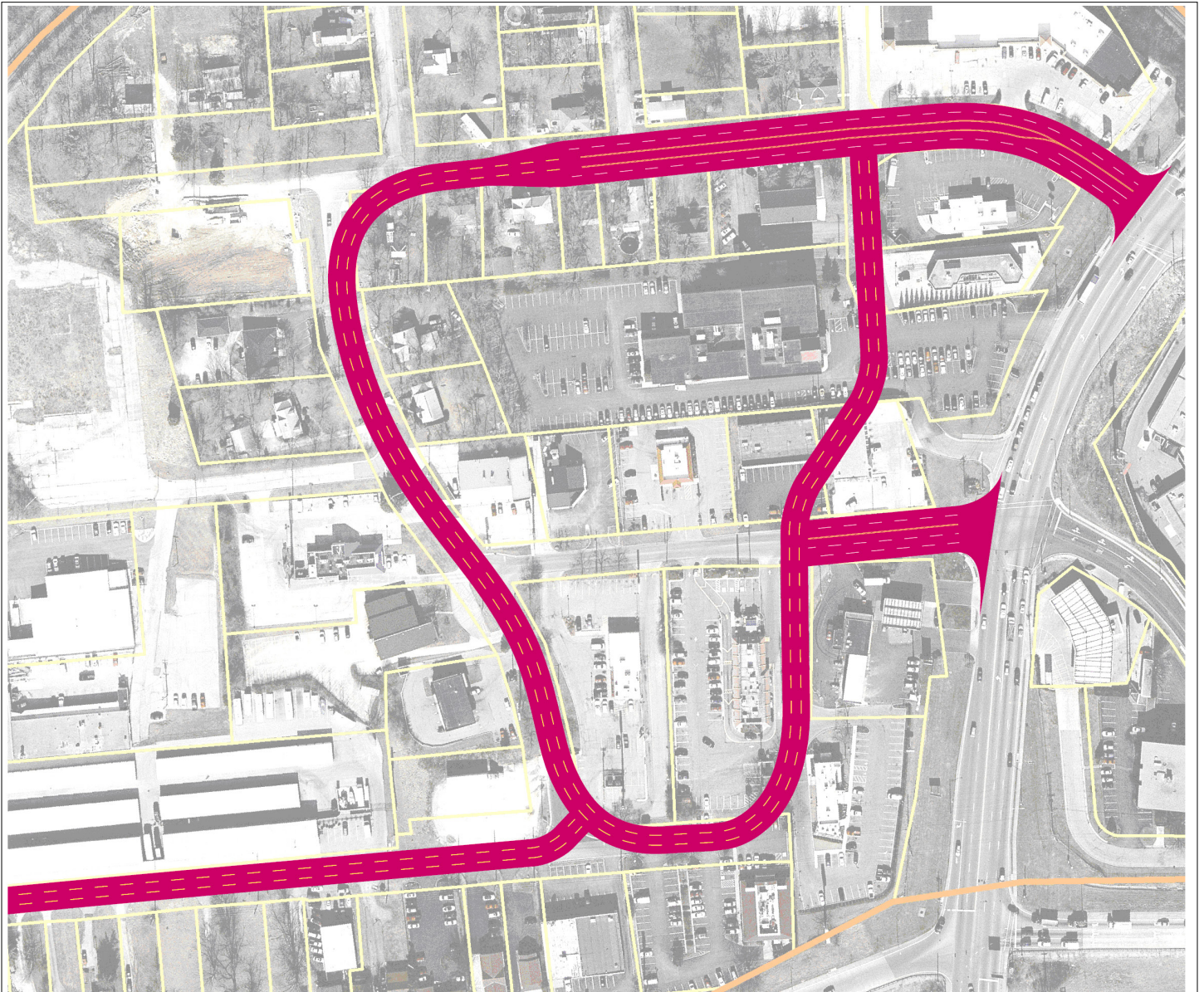
## Internal Circulation

In order to accommodate the change in access proposed above, internal circulation within Sub Area A must be improved as well. Currently internal access is provided by High Street and Hazelwood Road with limited or poor access between the two streets. While Terry Lane does connect both streets, its condition and visibility is poor. Proper connectivity and circulation within the study area and between High Street and Hazelwood Road is critical if the access is to be maintained to properties on the south side of Sub Area A bordering the interstate after reconfiguration of the Hazelwood Road intersection (see Figure 3).

In order to accommodate internal circulation it is proposed that a loop road be constructed within Sub Area A. The proposed loop road would align along High Street and



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**Figure 5: Concept drawing showing recommended road configuration in Sub Area A**

Ritchie Avenue in the north and south, along the general alignment of Terry Lane to the west and provide a frontage road along Buttermilk Pike. This configuration allows for maximum circulation between the north and south portions of Sub Area A, as well as opens up the back of the property to the west. As a result of the frontage road, outparcel lots would be created. This would require the closure of additional access points along Buttermilk Pike beyond those at Hazelwood Road and High Street (see Figure 5).

## **Land Use and Transportation**

As identified above, the proposed transportation plan has a significant impact on and is in response to the land use on the site. The full use of the entire study area is constrained by the maximum capacity of the access points; the proposed plan attempts to maximize this capacity by eliminating major queues and conflicts on Buttermilk Pike. The relocation of the major access point from Hazelwood Road to High Street will ultimately have the effect of

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attracting highway commercial uses, such as fast food and service stations. The proposed loop road will improve the connectivity within the area and allowing for auxiliary uses, such as office, shopping, or light industrial uses to have improved access to the intersections at High Street and Hazelwood Road. A more in-depth discussion of these issues is provided in Chapter 4.

## Mass Transit

The study area contains a TANK Park and Ride facility. This facility provides express bus service (Route Number 17x) to and from the Villa Hills, Crescent Springs, Fort Mitchell area to the Covington and Cincinnati downtown areas. The service is a valuable asset providing another means of transport connecting the study area to local residential and more distant commercial centers. The facility is operating at near capacity, and it is recommended that at an appropriate time in the future the city work with TANK to expand the facility to ensure the continued bus service for the area.

## Pedestrian Activity

Currently there are few sidewalks in the study area and with high volumes of traffic the area is not pedestrian friendly. Buttermilk Pike has a sidewalk on its south side from east of the study area to Hazelwood Road. There is a sidewalk on the north side of Buttermilk Pike from Fort Mitchell to Grandview Avenue. This provides access to the study area from the surrounding neighborhood, but crossing Buttermilk Pike is not easy and therefore creates an impediment to pedestrian traffic. The five lane street does not have a pedestrian signal control to allow for comfortable crossing. The foot bridge across the railroad on the west side of the study area provides more convenient access into Sub Area A for pedestrians coming from the west side. The following are recommendations that can improve the area's walkability and accesses.

- The design recommendations of this plan calls for sidewalks along at least one side of every street in order to increase the walkability.
- Crosswalks with pedestrian islands should be created at the High Street, Buttermilk Crossing, and Buttermilk Pike intersection.
- A signal control for pedestrian should be considered for the High Street, Buttermilk Crossing, and Buttermilk Pike intersection.

- Extending the pedestrian bridge across Erlanger/ Crescent Springs Road should be considered.
- The design recommendations call for placing buildings close to the street to improve walkability.

## Bicycle Activity

The study area is not bicycle friendly because of the lack of bicycle lanes and routes within and into the study area. The Kenton County Bicycle Plan, prepared in 1999, routes bicyclists to alternate roadways due to high traffic volumes on Buttermilk Pike. It is, therefore, not considered very probable that there will be improved facilities for bicycle access into the area. However, placing bicycle racks and lockers at the TANK Park and Ride facility could be an enticement for some bicyclists. Bicyclists could use the bus to enter and exit the area with their bikes on the racks already provided on most TANK buses. Racks and lockers at the Park and Ride facility give the bicyclist a place to leave their bike safely while they walk to their destination.

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**Table 1: AM Peak hour traffic along Buttermilk Pike**

**Table 2: PM Peak hour traffic along Buttermilk Pike**

AM Peak Hour		Anderson		Baxter		Buttermilk Crossing		Grandview		I-75 SB Off Ramp	
		↓ 30	↑ 490	↓ 250	↑ 890	↓ 1	↑ 0	↓ 660	↑ 330	↓ 650	↑ 0
↓ 130	← 500	↓ 60	← 230	↓ 80	← 50	↓ 1	← 0	↓ 1110	← 790	↓ 0	← 770
↓ 80	↑ 290	↓ 30	↑ 1240	↓ 30	↑ 1480	↓ 0	↑ 0	↓ 0	↑ 0	↓ 0	↑ 0
↓ 130	↑ 310	↓ 440	↑ 440	↓ 190	↑ 190	↓ 0	↑ 0	↓ 0	↑ 0	↓ 0	↑ 0
		High Street		Hazelwood						I-75 SB On Ramp	
		↑ 90	↑ 90	↑ 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	↑ 0	↑ 0	↑ 0	↑ 0	↑ 0	↑ 0	↑ 0	↑ 0

PM Peak Hour		Anderson		Baxter		Buttermilk Crossing		Grandview		I-75 SB Off Ramp	
		↓ 100	↑ 290	↓ 590	↑ 1170	↓ 10	↑ 10	↓ 1060	↑ 780	↓ 750	↑ 0
↓ 160	← 930	↓ 140	← 340	↓ 10	← 100	↓ 10	← 0	↓ 1240	← 980	↓ 0	← 440
↓ 620	↑ 240	↓ 40	↑ 1020	↓ 40	↑ 1030	↓ 0	↑ 0	↓ 0	↑ 0	↓ 0	↑ 0
↓ 180	↑ 310	↓ 480	↑ 480	↓ 170	↑ 170	↓ 0	↑ 0	↓ 0	↑ 0	↓ 0	↑ 0
		High Street		Hazelwood						I-75 SB On Ramp	
		↑ 280	↑ 280	↑ 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	↑ 0	↑ 0	↑ 0	↑ 0	↑ 0	↑ 0	↑ 0	↑ 0