

Appendix A

Cultural Resources



**New York State
Parks, Recreation and
Historic Preservation**

KATHY HOCHUL
Governor

RANDY SIMONS
Commissioner *Pro Tempore*

July 24, 2024

Elizabeth Meade
Senior Technical Director/Archaeologist
AKRF
440 Park Avenue South
7th Floor
New York, NY 10016

Re: HUD
New Public Parking Garage
24PR04081

Dear Elizabeth Meade:

Thank you for continuing to consult with the New York State Historic Preservation Office (SHPO). We have reviewed the provided documentation in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include other environmental impacts to New York State Parkland that may be involved in or near your project.

We have reviewed the additional information in the "National Register Eligibility Re-evaluation Request for the former Automobile Garage at 60 East Post Road," provided on June 18, 2024, including the architectural analysis and original design drawings. While the majority of the changes indicated were done prior to the current 50-year mark (1974) and therefore could be considered/were evaluated for significance themselves, SHPO concurs that the changes do alter the original design intent and therefore constitute a loss of integrity under criterion C. As such, SHPO has reversed the previously issued determination of eligibility from June 4, 2024, and has subsequently determined that the building is not eligible for the State or National Registers of Historic Places. Based on that review, it is SHPO's opinion that No Historic Properties will be Affected, architectural and archeological, for the proposed new parking garage project, as described.

If you have any questions, you can call or e-mail me at the contact information below.

Sincerely,

Mariana Staines
Historic Site Restoration Coordinator
518-268-2142 | mariana.montesstaines@parks.ny.gov

cc: A. Ley – AKRF C. Vandrei – DEC C. Gomez – Planning - White Plains

Appendix B

Traffic Impact Study

MEMORANDUM

To: Joseph Mannino
White Plains Hospital

From: John Canning, P.E.
Kimley-Horn Engineering and Landscape Architecture of New York, P.C.

Date: September 5, 2024

Subject: Traffic Impact Evaluation
Proposed East Post Road Garage
City of White Plains, NY

The purpose of this memorandum is to provide a traffic impact evaluation of the proposed East Post Road parking garage, which is to be located on the north side of East Post Road (between S. Lexington Avenue and Dr. Martin Luther King Jr. Boulevard), with direct access under signal control to East Post Road via a relocated Brookfield Street and an indirect access to East Post Road via Winchester Street. The garage is to provide approximately 1,900 public parking spaces.

The City of White Plains has indicated that there is limited available public parking in the area today, including at the nearby Longview-Cromwell and Chester-Maple garages. The need for the proposed garage is driven, to a great extent, by the current limited parking supply availability, with the result that most, if not all, of the vehicles using the new garage would already be on the roads in the area anyway looking for somewhere to park. Thus, the proposed garage will generally have a net positive traffic and parking impact on the neighborhood (by providing a more convenient and more appropriate place to park and by reducing traffic through nearby streets that are less suitable to accommodate such activity).

While the overall traffic and parking impacts of the proposed garage will be positive, the garage will, nevertheless, concentrate traffic on the immediate streets surrounding the proposed facility (all of which are primary arterial roadways on the City's south side). For this reason, it is necessary and appropriate that the potential, close-in traffic impacts of the proposed garage be studied.

In 2020, Maser conducted such a traffic study for the proposed new garage. The results of Maser Traffic Study (traffic volumes and Level of Service Summaries for 15 intersections are attached) indicate that:

- In the busiest hour, 580 vehicles would enter or exit the garage
- All studied intersections would operate at Level of Service ("LOS" D or better)
- The only intersection projected to experience an increase in delay of more than 12 seconds would be the intersection of Dr. Martin Luther King Jr. Boulevard with Quarropas Street
- Traffic volumes at that intersection were projected to increase by only 7.6%
- The increase in delay at that intersection was confined almost entirely to the northbound approach
- The Volume to Capacity ratio increased from 0.64 to 0.69, suggesting that it is only a signal operations issue and not a traffic-volume impact.

Kimley-Horn recently completed a traffic study for the expansion of White Plains Hospital. That study included all 15 Maser study intersections, the addition of the East Post Road Garage, an expansion of the Hospital and optimization of the traffic signal system.

The Hospital Expansion traffic study is attached and it indicates that:

- In the busiest hour, 655 vehicles would enter or exit the garage
- Peak-hour traffic volumes in the future condition in the Hospital Expansion Traffic Study are projected to be 15% higher at key intersections than those in the Maser garage study
- With the signal optimization, all studied intersections will operate at LOS C or better
- No intersections are projected to experience an increase in delay of greater than 12 seconds, when compared to current conditions

As indicated above, the Maser garage traffic study identified only one intersection that might be impacted by the proposed East Post Road garage but a detailed review of the analysis for that intersection indicated that the increase in delay was attributable to the suboptimal configuration of the traffic signal timing plan, not traffic traveling to or from the garage. The White Plains Hospital traffic study confirmed the overall conclusions of the Maser Garage study by:

- Evaluating higher peak-hour traffic volumes
- Evaluating higher traffic volumes at the garage during the busiest peak hour (and also higher in the second busiest peak hour)
- Optimizing the traffic signal configurations so that all intersections operate at Level of Service C or better
- Limiting increases in delays from current to future conditions

Therefore, based on the findings of the Maser study and the White Plains Hospital study, it is concluded that the proposed East Post Road parking garage will serve the latent demand in the area that is currently accommodated at other locations, provide some surplus capacity for future parking demand and reduce traffic through neighborhood streets that are less suitable to accommodate such activity. With the optimization of the configuration of the traffic signal timing plans identified in the White Plains Hospital traffic impact study, the proposed East Post Road garage will generally provide a net positive effect and will not result in a significant adverse impact on area roadways.

2024 Kimley Horn
White Plains Hospital Traffic Study

Traffic Impact Study

White Plains Hospital Hospital Expansion Project 41 East Post Road City of White Plains, New York

PREPARED FOR:

White Plains Hospital

33 Davis Avenue
White Plains, NY 10601

PREPARED BY:

Kimley-Horn Engineering and Landscape Architecture
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May 2024

Project Number 112680000

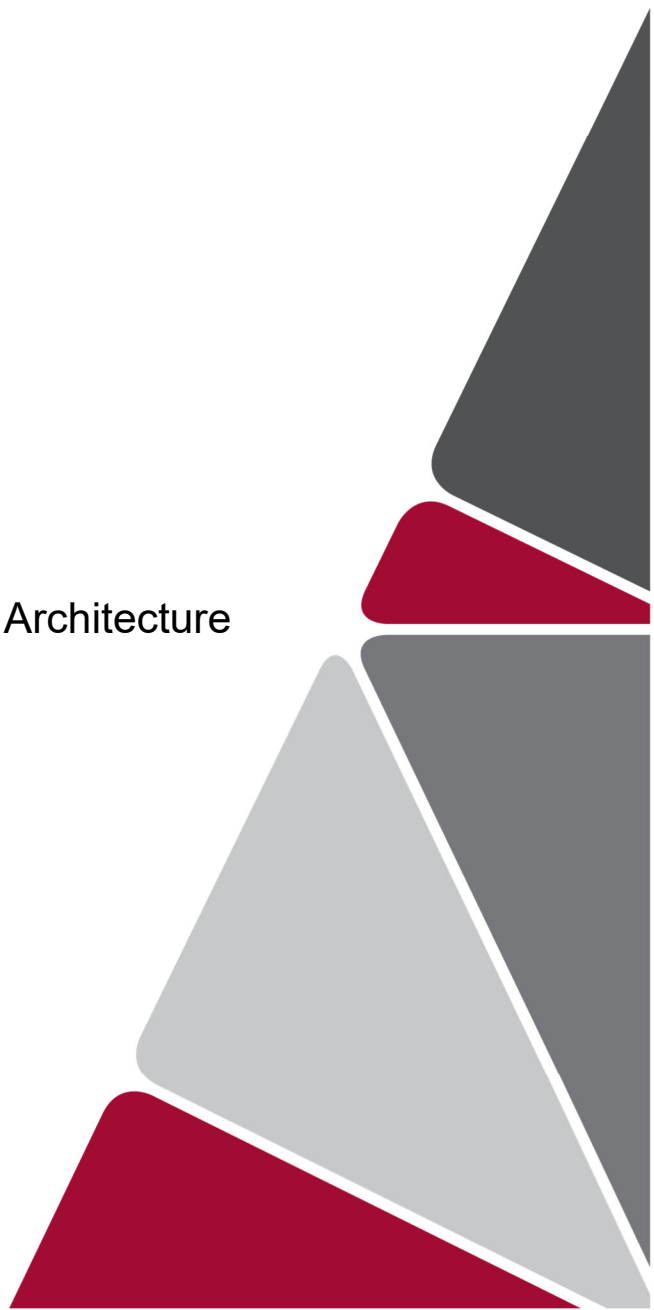


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1.0 EXECUTIVE SUMMARY

This report has been prepared by Kimley-Horn Engineering and Landscape Architecture of New York, P.C. to document the potential traffic impacts associated with the proposed expansion of White Plains Hospital, in the City of White Plains, Westchester County, New York (the “Expansion”/the “Project”). This traffic impact study evaluated existing and future traffic conditions surrounding the site both with and without the Project. To provide a conservative analysis, this traffic study evaluated operating conditions through 2033.

1.1 Project Description

It is proposed to expand White Plains Hospital’s main building, located at Davis Avenue in White Plains. The new construction will take place at the site of the existing Davis Avenue parking garage (“Davis garage”), on the north side of Maple Avenue between South Lexington Avenue and Davis Avenue. Prior to the commencement of construction, the Hospital will need to replace the Davis garage and has constructed an interim replacement surface parking lot (“West Campus lot”) on the existing paved parcels bounded by South Lexington Avenue, Maple Avenue, Rathbun Avenue, and West Post Road. Vehicular access to the West Campus lot is provided via two (2) full-movement driveways on Maple Avenue¹, one (1) full-movement driveway on West Post Road opposite Highland Avenue, and one (1) right-turn-egress-only driveway on West Post Road². The development program will also include the discontinuance of Davis Avenue between Maple Avenue and East Post Road, and the conversion of South Lexington Avenue from one-way southbound operation to two-way traffic flow between Maple Avenue and West Post Road/East Post Road. The analysis also conservatively³ assumes construction of a 1,600-space parking garage on the north side of East Post Road in the vicinity of Brookfield Street and Winchester Street (“East Post Road garage”).

1.2 Study Methodology

This study evaluates existing traffic conditions, as well as future conditions without the Project (“No-Build”) and with the Project (“Build”). The No-Build condition is the benchmark against which the potential impacts of the proposed Project are compared. A total of 24 intersections were determined to have the greatest potential to be impacted by the proposed development and were, therefore, studied in detail.

Traffic counts were conducted in March 2020 and again in May 2022 during the weekday AM, Midday, and PM peak periods, when the combined roadway and Project traffic is expected to be highest. To provide a conservative analysis, the higher traffic volumes for each turning movement were generally utilized and they were divided into “Hospital traffic volumes” (visiting the Hospital) and “non-Hospital traffic volumes”.

¹ One (1) opposite Roosevelt Street, which has widened the existing curb cut, and the other between Odell Avenue and Roosevelt Street, in approximately the same location as a previously existing curb cut.

² In the same location as the former right-turn-egress-only driveway for the Lincoln Lot.

³ If the garage is not built, traffic will be more spread out across the south side of the City’s downtown and will not be concentrated near the hospital.

The non-Hospital traffic volumes were appropriately prorated (“grown”) to account for an increase in background traffic on the surrounding roadways not associated with planned development. Traffic from the 500 City-owned parking spaces in the proposed East Post Road garage, which will not be utilized by the Hospital, was distributed to the surrounding roadway network. With the completion of the West Campus lot, demolition of the Davis garage, and construction of the East Post Road garage, traffic volumes associated with Hospital employees, valets, and patients were grown and reassigned based on their future interim designated parking locations. Traffic associated with six (6) nearby developments was also distributed to the surrounding roadway network. In addition, due to a continued growing need for healthcare in central Westchester, even without the Project, traffic volumes are projected to grow by 15% by 2033 (an increase that is constrained by the limits of the existing hospital facility). The Hospital’s Emergency Department, Center for Advanced Medicine and Surgery (CAMS), and Cancer Center existing valet and patient trips were increased by 24% to account for a general background growth of 2% per year for 11 years. These additional trips were generated and assigned to the study intersections. The traffic volumes associated with all of these pending conditions were summed to represent the future conditions without the Project (“No-Build”). It is noted that it is assumed that the new East Post Road garage will be provided with a signalized access at East Post Road in the approximate location of the current Brookfield Street.

In the future with construction of the expansion building, discontinuation of Davis Avenue approximately 200 feet north of Maple Avenue, and conversion of South Lexington Avenue between West Post Road/East Post Road and Maple Avenue to two-way traffic flow, existing Hospital traffic volumes are expected to further increase and general hospital traffic patterns are expected to change again. The grown non-Hospital traffic volumes utilizing Davis Avenue were reassigned to reflect two-way traffic flow on South Lexington Avenue. In the future, the Project will provide the hospital with 144 more beds, 50% more beds than today, so existing Hospital employee, valet, and patient traffic volumes associated with the current in-patient building were increased by 50% to reflect the increased capacity of the new building. These trips were reassigned based on their future designated parking locations. Trips associated with Hospital employees parking in the Lyon Place and Longview Avenue parking garages were increased by 45% to account for the fact that some, but not all, will be relocated to the East Post Road garage, leaving available spaces for potential future employees in the existing parking garages. Remaining existing traffic volumes associated with employees parking in the 79 East Post Road and Chester Avenue/Maple Avenue parking garages were not grown, as they were assumed to be at their maximum capacity for the Hospital.

The net difference in traffic volumes associated with the proposed action was added to the No-Build traffic volumes to represent the future conditions with the Project (“Build”).

Synchro analyses were conducted for the Existing, No-Build, and Build traffic volume conditions and compared to intersection capacities to identify Project impacts.

The analyses indicated that the reassigned and grown Hospital trips associated with the proposed Project could result in undesirable operating delays at some of the study intersections, so measures were identified

to accommodate the future traffic from the Project. Synchro analyses were conducted for the Build-Improved condition and compared to the Build condition intersection capacities to determine benefits to the proposed improvements.

1.3 Findings

The Traffic Volumes at the Hospital are projected to increase by 195 vehicles during the AM peak hour, 251 vehicles trips in the midday peak hour and 267 vehicles in the PM peak hour. Approximately one third of this increase is attributable to the Project with the remainder attributable to continued growth in patient service at the Hospital (primarily at the Center for Cancer Center, the Center for Advanced Medical Surgery and at other out-patient Hospital Facilities).

In addition, other changes associated with the project (the discontinuance of Davis Avenue) and some that are not (the construction of a new 1,600-space public parking garage on East Post Road between S. Lexington Avenue and Dr. Martin Luther King Junior Boulevard), will also considerably alter traffic patterns immediately surrounding the hospital.

To accommodate projected changes in traffic volumes, the Hospital proposes to implement the following measures as part of the overall development project:

- Discontinue Davis Avenue between Maple Avenue and East Post Road;
- Widen and restripe S. Lexington Avenue between Maple Avenue and Post Road to accommodate two-way traffic (diverted from Davis Avenue);
- Reconstruct the existing traffic signal at the intersection of S. Lexington Avenue with Post Road;
- Reconstruct the existing traffic signal at the intersection of S. Lexington Avenue with Maple Avenue;
- Reconstruct the existing traffic signal at the intersection of Davis Avenue with Maple Avenue;
- Replace the temporary traffic signal at the intersection of Oakwood Avenue with Maple Avenue;
- Install a new traffic signal at the intersection of Highland Avenue with West Post Road;
- Upgrade the signal timing and signal coordination along the Maple Avenue, Post Road, S. Lexington Avenue and Dr. Martin Luther King Junior Boulevard corridors.

With the implementation of these measures, the additional traffic generated by the Expansion can be accommodated without any significant increase in delays or congestion on the streets surrounding the hospital. All study intersections will experience overall intersection levels of service "C" or better operating conditions in the future, and the delays will average less than 31 seconds per vehicle. Individual approaches at each of the unsignalized study intersections will also experience LOS "C" or better operating conditions in the future, and the delays will average less than 23 seconds per vehicle.

1.4 *Conclusions*

Although the analysis indicates that the increase in traffic volumes associated with the proposed Project could result in some undesirable future operating conditions, proposed improvements at various study intersections described herein will prevent the occurrence of undesirable delays and eliminate poor levels of service. Thus, based on the analysis provided, it is concluded that, with the implementation of these measures the increase in traffic volumes associated with the proposed Project will not have a significant adverse impact on area traffic operating conditions.

2.0 INTRODUCTION

This report has been prepared by Kimley-Horn Engineering and Landscape Architecture of New York, P.C. to document the potential traffic impacts associated with the proposed development of a new building and surface lot at White Plains Hospital, in the City of White Plains, Westchester County, New York (the "Project"). This traffic impact study evaluated both existing and future traffic conditions surrounding the site both with and without the Project. To provide a conservative analysis, this traffic study evaluated operating conditions through 2033.

2.1 Project Description

It is proposed to expand White Plains Hospital's main building, located at Davis Avenue in White Plains. The new construction will take place at the site of the existing Davis Avenue parking garage ("Davis garage"), on the north side of Maple Avenue between South Lexington Avenue and Davis Avenue. Concomitant with the new building, the Hospital will need to replace the Davis garage and have proposed to do so on the newly-constructed surface parking lot ("West Campus lot") on the existing paved parcels bounded by South Lexington Avenue, Maple Avenue, Rathbun Avenue, and West Post Road. Vehicular access to the West Campus lot is provided via two (2) full-movement driveways on Maple Avenue⁴, one (1) full-movement driveway on West Post Road opposite Highland Avenue, and one (1) right-turn-egress-only driveway on West Post Road⁵. All other existing curb cuts on West Post Road, South Lexington Avenue, and Maple Avenue will be filled in with curb and sidewalk. The development program will also include the discontinuance of Davis Avenue between Maple Avenue and East Post Road, and the conversion of South Lexington Avenue from one-way southbound operation to two-way traffic flow between Maple Avenue and West Post Road/East Post Road. The analysis also assumes construction of a 1,600-space parking garage on the north side of East Post Road in the vicinity of Brookfield Street and Winchester Street ("East Post Road garage").

2.2 Study Locations

This study evaluates existing traffic conditions, as well as future conditions without the Project ("No-Build") and with the Project ("Build"). The No-Build condition is the benchmark against which the potential impacts of the proposed Project are compared. The following intersections were analyzed:

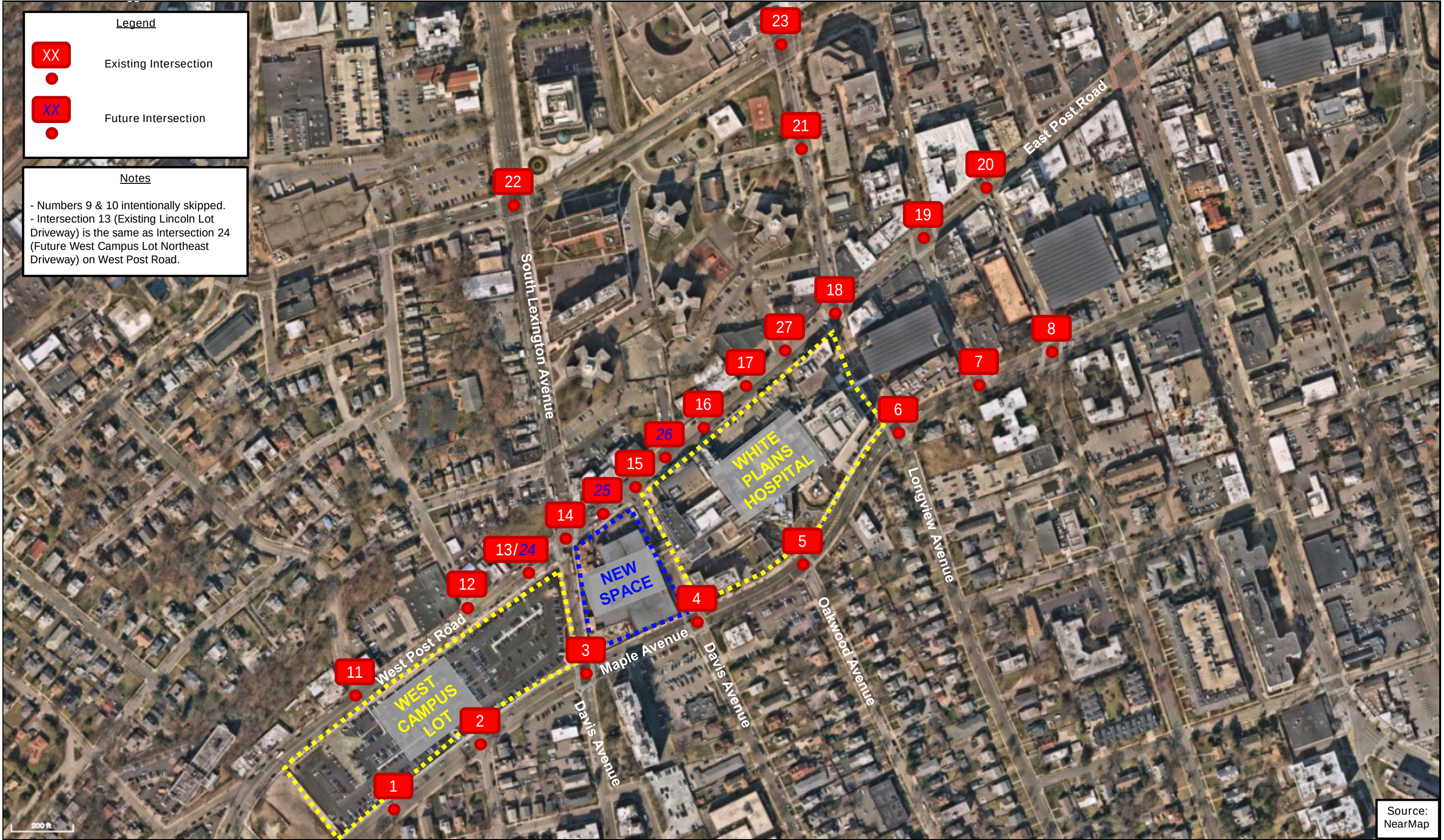
- Maple Avenue & West Campus Lot Southwest Driveway – *Unsignalized*
- Maple Avenue & Roosevelt Street/West Campus Lot Southeast Driveway – *Unsignalized*
- Maple Avenue & South Lexington Avenue – *Signalized*
- Maple Avenue & Davis Avenue/Main Hospital Entrance – *Signalized*
- Maple Avenue & Oakwood Avenue – *Signalized*

⁴ One (1) opposite Roosevelt Street, which has widened the existing curb cut, and the other between Odell Avenue and Roosevelt Street, in approximately the same location as a previously existing curb cut.

⁵ In the same location as the former right-turn-egress-only driveway for the Lincoln Lot.

- Maple Avenue & Longview Avenue – *Signalized*
- Maple Avenue & Cromwell Place – *Signalized*
- Maple Avenue & Chester Avenue/Greenridge Avenue – *Signalized*
- West Post Road & Highland Avenue/West Campus Lot Northwest Driveway – *Unsignalized / Signalized*
- West Post Road & Orawaupum Street – *Unsignalized*
- West Post Road/East Post Road & South Lexington Avenue – *Signalized*
- East Post Road & Davis Avenue – *Unsignalized*
- East Post Road & East Post Road Garage/Emergency Department Entrance – *Unsignalized*
- East Post Road & Emergency Department Exit – *Unsignalized*
- East Post Road & Longview Avenue/Dr. Martin Luther King Jr. Boulevard – *Signalized*
- East Post Road & Cromwell Place/Grand Street – *Signalized*
- East Post Road & Chester Avenue – *Signalized*
- Dr. Martin Luther King Jr. Boulevard & Fisher Court/Parking Garage – *Signalized*
- South Lexington Avenue & Fisher Avenue/Quarropas Street – *Signalized*
- Dr. Martin Luther King Jr. Boulevard & Quarropas Street – *Signalized*
- West Post Road & Lincoln Lot/West Campus Lot Northeast Driveway – *Unsignalized*
- East Post Road & Emergency Department Future Entrance – *Unsignalized*
- East Post Road & Emergency Department Future Exit – *Unsignalized*
- East Post Road & Winchester Street – *Unsignalized*

The study locations are shown on **Figure 1**.



3.0 EXISTING CONDITIONS

3.1 Roadway Network

Evaluation of the traffic impacts associated with the proposed Project requires a thorough understanding of the existing roadway system in the vicinity of the site. The existing conditions observed in the study area include an inventory of the roadways, speed limits, intersection geometry, traffic control devices, pavement condition, and pavement markings. This information is provided below.

West Post Road/East Post Road is an east-west oriented County roadway (County Route 22) classified as an urban “principal arterial other” by the New York State Department of Transportation (NYSDOT). West Post Road extends from the Town of Scarsdale line in the west where it becomes Post Road, to South Lexington Avenue in the east where it becomes East Post Road. East Post Road then extends further east to where it becomes South Broadway. In the study area, West Post Road provides one (1) travel lane per direction and East Post Road provides two (2) travel lanes per direction. Sidewalks are provided, and street parking is generally permitted, along both sides of the road in the vicinity of the site. The road has a posted speed limit of 30 miles per hour (mph), and the pavement is generally in fair to good condition.

Maple Avenue is an east-west oriented City roadway classified as an urban “minor arterial” by the NYSDOT. Maple Avenue extends from the intersection with West Post Road in the west to Bloomingdale Road in the east. Maple Avenue provides two (2) travel lanes per direction and sidewalks are provided along both sides of the road for the entire length. Street parking is prohibited on both sides of Maple Avenue. The road has a posted speed limit of 30 mph, and the pavement is generally in fair to good condition.

South Lexington Avenue is a north-south oriented City roadway classified as an urban “principal arterial other” by the NYSDOT to the north of West Post Road/East Post Road and as an urban “major collector” to the south. South Lexington Avenue extends from the intersection with Main Street in the north where it becomes North Lexington Avenue, to its terminus at Giraffe Park in the south. North of Maple Avenue, South Lexington Avenue is a one-way southbound road. It provides three (3) southbound travel lanes north of West Post Road/East Post Road and two (2) southbound travel lanes between West Post Road/East Post Road and Maple Avenue. South of Maple Avenue, South Lexington Avenue provides one (1) travel lane per direction. In the study area, sidewalks are provided along both sides of the road. North of West Post Road/East Post Road, street parking is generally permitted along both sides of the road. South of West Post Road/East Post Road, street parking is generally permitted along the east side of the road in the vicinity of the site. The road has no posted speed limit; however, the City-wide speed limit is 30 mph unless otherwise posted. The pavement is generally in good condition. As part of the Project, it is proposed to convert South

Lexington Avenue between West Post Road/East Post Road and Maple Avenue from one-way operation to two-way traffic flow.

Davis Avenue is a north-south oriented City roadway classified as an urban local road. Davis Avenue extends from the intersection with East Post Road in the north to the intersection with Hartsdale Avenue in the south. Between East Post Road and the main Hospital entrance, Davis Avenue is a one-way northbound road with one (1) travel lane. South of the main Hospital entrance, Davis Avenue provides one (1) travel lane per direction. In the study area, sidewalks are provided along both sides of the road. North of the main Hospital entrance, street parking is generally permitted along the east side of the road. South of the main Hospital entrance, street parking is generally prohibited along both sides of the road. Davis Avenue has no posted speed limit; however, the City-wide speed limit is 30 mph unless otherwise posted. The pavement is generally in good condition. As part of the Project, it is proposed to discontinue Davis Avenue between East Post Road and Maple Avenue (though the southern portion will remain as the main Hospital entrance to the main hospital buildings).

Longview Avenue is a north-south oriented City roadway classified as an urban “minor arterial” by the NYSDOT to the north of Maple Avenue and as an urban “major collector” to the south. Longview Avenue extends from the intersection with East Post Road in the north where it becomes Dr. Martin Luther King Jr. Boulevard, to the intersection with Thomas Place in the south. North of Maple Avenue, Longview Avenue is a one-way northbound road with two (2) travel lanes and street parking is prohibited along both sides of the road. South of Maple Avenue, Longview Avenue provides one (1) travel lane per direction and street parking is generally permitted along the east side of the road. In the study area, sidewalks are provided along both sides of the road. The road has no posted speed limit; however, the City-wide speed limit is 30 mph unless otherwise posted. The pavement is generally in good condition.

Below is a brief description of the other roadways in the vicinity that intersect with the main study roadways described above.

Highland Avenue is a north-south oriented City roadway with one (1) travel lane per direction, which intersects with West Post Road at an unsignalized T-intersection. In the future with the West Campus lot, this intersection is a four-legged intersection with West Post Road and the West Campus lot northwest driveway. In the future with the Project, this four-legged intersection is proposed to become signalized.

Orawaupum Street is a north-south oriented City roadway with one (1) travel lane per direction, which intersects with West Post Road at an unsignalized T-intersection.

Brookfield Street is a north-south oriented City roadway with one (1) travel lane per direction, which intersects with East Post Road at an unsignalized T-intersection. In the future with the East

Post Road garage, this intersection is proposed to potentially become a four-legged signalized intersection with East Post Road and the Emergency Department entrance driveway.

Winchester Street is a north-south oriented City roadway with one (1) travel lane per direction, which intersects with East Post Road at an unsignalized T-intersection.

Grand Street is a north-south oriented, one-way southbound City roadway, which intersects with East Post Road at a four-legged signalized intersection offset from Cromwell Place. Grand Street has two (2) southbound travel lanes.

Cromwell Place is a north-south oriented, one-way southbound City roadway, which intersects with East Post Road at a four-legged signalized intersection offset from Grand Street, and which intersects with Maple Avenue at a signalized T-intersection. Cromwell Place has two (2) southbound travel lanes.

Chester Avenue is a north-south oriented, one-way northbound City roadway, which intersects with East Post Road at a signalized T-intersection, and which intersects with Maple Avenue at a four-legged signalized intersection offset from Greenridge Avenue. Chester Avenue has two (2) northbound travel lanes.

Greenridge Avenue is a north-south oriented City roadway with one (1) travel lane per direction, which intersects with Maple Avenue at a four-legged signalized intersection offset from Chester Avenue.

Roosevelt Street is a north-south oriented City roadway with one (1) travel lane per direction, which intersects with Maple Avenue at an unsignalized 4-way intersection, with the fourth leg formed by the southeast driveway of the new West Campus lot.

Oakwood Avenue is a north-south oriented City roadway with one (1) travel lane per direction, which intersects with Maple Avenue at a temporarily-signalized T-intersection. In the future with the Project, the signal at this intersection is proposed to be replaced with permanent signal equipment.

Dr. Martin Luther King Jr. Boulevard is a north-south oriented, one-way northbound City roadway, which intersects with Quarropas Street at a four-legged signalized intersection, with Fisher Court at a four-legged signalized intersection with a parking garage driveway, and with East Post Road at a four-legged signalized intersection with Longview Avenue. South of Fisher Court and the parking garage driveway, Dr. Martin Luther King Jr. Boulevard has two (2) northbound travel lanes. North of Fisher Court and the parking garage driveway, Dr. Martin Luther King Jr. Boulevard has three (3) northbound travel lanes.

Quarropas Street is an east-west oriented City roadway, which intersects with Dr. Martin Luther King Jr. Boulevard at a four-legged signalized intersection, with Fisher Court at a four-legged

Post Road garage, this intersection is proposed to potentially become a four-legged signalized intersection with East Post Road and the Emergency Department entrance driveway.

Winchester Street is a north-south oriented City roadway with one (1) travel lane per direction, which intersects with East Post Road at an unsignalized T-intersection.

Grand Street is a north-south oriented, one-way southbound City roadway, which intersects with East Post Road at a four-legged signalized intersection offset from Cromwell Place. Grand Street has two (2) southbound travel lanes.

Cromwell Place is a north-south oriented, one-way southbound City roadway, which intersects with East Post Road at a four-legged signalized intersection offset from Grand Street, and which intersects with Maple Avenue at a signalized T-intersection. Cromwell Place has two (2) southbound travel lanes.

Chester Avenue is a north-south oriented, one-way northbound City roadway, which intersects with East Post Road at a signalized T-intersection, and which intersects with Maple Avenue at a four-legged signalized intersection offset from Greenridge Avenue. Chester Avenue has two (2) northbound travel lanes.

Greenridge Avenue is a north-south oriented City roadway with one (1) travel lane per direction, which intersects with Maple Avenue at a four-legged signalized intersection offset from Chester Avenue.

Roosevelt Street is a north-south oriented City roadway with one (1) travel lane per direction, which intersects with Maple Avenue at an unsignalized 4-way intersection, with the fourth leg formed by the southeast driveway of the new West Campus lot.

Oakwood Avenue is a north-south oriented City roadway with one (1) travel lane per direction, which intersects with Maple Avenue at a temporarily-signalized T-intersection. In the future with the Project, the signal at this intersection is proposed to be replaced with permanent signal equipment.

Dr. Martin Luther King Jr. Boulevard is a north-south oriented, one-way northbound City roadway, which intersects with Quarropas Street at a four-legged signalized intersection, with Fisher Court at a four-legged signalized intersection with a parking garage driveway, and with East Post Road at a four-legged signalized intersection with Longview Avenue. South of Fisher Court and the parking garage driveway, Dr. Martin Luther King Jr. Boulevard has two (2) northbound travel lanes. North of Fisher Court and the parking garage driveway, Dr. Martin Luther King Jr. Boulevard has three (3) northbound travel lanes.

unsignalized intersection, and with South Lexington Avenue at a four-legged signalized intersection with Fisher Avenue. West of Fisher Court, Quarropas Street has two (2) travel lanes per direction. East of Fisher Court, Quarropas Street has two (2) eastbound travel lanes and one (1) westbound travel lane.

Fisher Avenue is an east-west oriented City roadway with two (2) travel lanes per direction, which intersects with South Lexington Avenue at a four-legged signalized intersection with Quarropas Street.

Fisher Court is a City roadway, which intersects with Quarropas Street at a four-legged unsignalized intersection, and which intersects with Dr. Martin Luther King Jr. Boulevard at a four-legged signalized intersection with a parking garage driveway. North of Quarropas Street, Fisher Court is a north-south oriented roadway with one (1) travel lane per direction. South of Quarropas Street, Fisher Court bends to become an east-west oriented, one-way eastbound roadway with two (2) travel lanes.

3.2 Description of Study Intersections

The following provides a description of the intersection geometry and traffic controls at the main study intersections.

Maple Avenue & South Lexington Avenue – Maple Avenue forms the east and west legs to this signalized four-legged intersection with South Lexington Avenue. The southbound South Lexington Avenue approach is one-way and provides one exclusive left-turn lane and one shared through/right-turn lane. The northbound South Lexington Avenue approach provides one exclusive left-turn lane and one exclusive right-turn lane. The eastbound Maple Avenue approach provides one through lane and one shared through/right-turn lane, while the westbound Maple Avenue approach provides one exclusive left-turn lane and two (2) through lanes. The intersection is controlled by a pretimed, multi-phase signal controller. Crosswalks and sidewalks are provided on all four (4) legs of the intersection. As part of the Project, it is proposed to convert the north leg of South Lexington Avenue at this intersection to two-way traffic flow and restripe the south leg to provide one exclusive northbound left-turn lane and one shared northbound through/right-turn lane. The eastbound Maple Avenue approach will be restriped to provide one shared left-turn/through lane and one shared through/right-turn lane, while the westbound Maple Avenue approach will be restriped to provide one exclusive left-turn lane, one through lane, and one shared through/right-turn lane. Signage and signal operations will be updated accordingly.

Maple Avenue & Davis Avenue/Main Hospital Entrance – Maple Avenue forms the east and west legs to this signalized four-legged intersection with Davis Avenue. The northbound Davis Avenue approach provides one shared left-turn/through/right-turn lane. The southbound Davis Avenue approach provides one exclusive left-turn lane and one shared through/right-turn lane. The

eastbound Maple Avenue approach provides one exclusive left-turn lane, one through lane, and one shared through/right-turn lane. The westbound Maple Avenue approach provides one shared left-turn/through lane and one shared through/right-turn lane. The intersection is controlled by a pretimed, multi-phase signal controller. Crosswalks and sidewalks are provided on all four (4) legs of the intersection. As part of the Project, it is proposed to reconfigure the north leg of Davis Avenue by discontinuing Davis Avenue north of the existing main Hospital entrance and converting the north leg of Davis Avenue at this intersection to the main Hospital entrance for in-patient care. The north leg of Davis Avenue at this intersection will be reconfigured to provide access to valet and patient drop-off and pick-up areas and restriped to provide two exiting lanes. Signage and signal operations will be updated accordingly.

Maple Avenue & Longview Avenue – Maple Avenue forms the east and west legs to this signalized four-legged intersection with Longview Avenue. The northbound Longview Avenue approach provides one shared left-turn/through lane and one shared through/right-turn lane. The north leg is one-way and provides two (2) northbound receiving lanes. The eastbound and westbound Maple Avenue approaches each provide one exclusive left-turn lane, one through lane, and one shared through/right-turn lane. The intersection is controlled by an actuated, multi-phase signal controller. Crosswalks and sidewalks are provided on all four (4) legs of the intersection.

West Post Road/East Post Road & South Lexington Avenue – West Post Road forms the west leg and East Post Road forms the east leg to this signalized four-legged intersection with South Lexington Avenue. South Lexington Avenue is one-way southbound, providing one exclusive left-turn lane, one through lane, and one shared through/right-turn lane on the north leg, while the south leg provides two (2) southbound receiving lanes. The westbound East Post Road approach provides one shared left-turn/through lane and one through lane. The eastbound West Post Road approach provides one through lane and one bus stop lane that concurrently acts as an exclusive right-turn lane when there are no buses. The intersection is controlled by a pretimed, multi-phase signal controller. Crosswalks and sidewalks are provided on all four (4) legs of the intersection. As part of the Project, it is proposed to widen and convert the south leg of South Lexington Avenue at this intersection to two-way traffic flow, providing one shared northbound right-turn lane. Signage and signal operations will be updated accordingly.

East Post Road & Davis Avenue – East Post Road forms the east and west legs to this unsignalized, T-intersection with Davis Avenue. Davis Avenue is one-way northbound, providing one exclusive left-turn lane and one exclusive right-turn lane. The eastbound and westbound East Post Road approaches each provide two (2) through lanes. The intersection is controlled by a Stop sign on the Davis Avenue approach. A crosswalk is provided across the Davis Avenue approach, and sidewalks are provided on all three (3) legs of the intersection. As part of the Project, it is

proposed to discontinue the south leg of Davis Avenue, with the discontinuance of Davis Avenue, and eliminate this intersection.

East Post Road & Longview Avenue/Dr. Martin Luther King Jr. Boulevard – Longview Avenue forms the south leg and Dr. Martin Luther King Jr. Boulevard forms the north leg to this signalized four-legged intersection with East Post Road. Longview Avenue and Dr. Martin Luther King Jr. Boulevard are one-way northbound, providing one shared left-turn/through lane and one shared through/right-turn lane on the south leg, while the north leg provides two (2) northbound receiving lanes. The eastbound East Post Road approach provides one shared left-turn/through lane and one through lane. The westbound West Post Road approach provides one through lane and one shared through/right-turn lane. The intersection is controlled by a pretimed, multi-phase signal controller. Crosswalks and sidewalks are provided on all four (4) legs of the intersection.

Below is a brief description of the intersection geometry and traffic controls at the other study intersections.

Maple Avenue & West Campus Lot Southwest Driveway – The southwest driveway of the new West Campus Lot forms the north leg of this unsignalized T- intersection. The driveway is controlled by a Stop sign.

Maple Avenue & Roosevelt Street/West Campus Lot Southeast Driveway – Maple Avenue forms the east and west legs to this unsignalized, 4-way intersection with Roosevelt Street. Roosevelt Street forms the south leg and is controlled by a Stop sign. The southeast driveway of the new West Campus Lot forms the north leg of the intersection and is also controlled by a Stop sign.

Maple Avenue & Oakwood Avenue – Maple Avenue forms the east and west legs to this temporarily signalized, T-intersection with Oakwood Avenue. Oakwood Avenue forms the south leg. In the future with the Project, the signal at this intersection is proposed to be replaced with permanent signal equipment.

Maple Avenue & Cromwell Place – Maple Avenue forms the east and west legs to this signalized, T-intersection with Cromwell Place. Cromwell Place forms the north leg and is one-way southbound. The intersection is controlled by an actuated, multi-phase signal controller.

Maple Avenue & Chester Avenue/Greenridge Avenue – Maple Avenue forms the east and west legs to this signalized, four-legged intersection with Chester Avenue and Greenridge Avenue. Chester Avenue forms the north leg and Greenridge Avenue forms the south leg. Chester Avenue is one-way northbound and slightly offset from Greenridge Avenue. The intersection is controlled by an actuated, multi-phase signal controller.

West Post Road & Highland Avenue/West Campus Lot Northwest Driveway – West Post Road forms the east and west legs to this unsignalized, 4-way intersection with Highland Avenue. Highland Avenue forms the north leg and is controlled by a Stop sign. The northwest driveway of the new West Campus Lot forms the south leg of the intersection and is also controlled by a Stop sign. As part of the Project, it is proposed to signalize this intersection.

West Post Road & Orawaupum Street – West Post Road forms the east and west legs to this unsignalized, T-intersection with Orawaupum Street. Orawaupum Street forms the north leg and is controlled by a Stop sign.

East Post Road & East Post Road Garage/Emergency Department Entrance – East Post Road forms the east and west legs to this unsignalized, T-intersection with Brookfield Street. Brookfield Street forms the north leg and is controlled by a Stop sign. In the future with the East Post Road garage, it is proposed to convert Brookfield Street to the East Post Road garage driveway and potentially realign the Emergency Department public entrance driveway across East Post Road to create a four-legged intersection. This intersection is proposed to be signalized.

East Post Road & Emergency Department Exit – East Post Road forms the east and west legs to this unsignalized, T-intersection with the Emergency Department public exit driveway. The Emergency Department public exit driveway forms the south leg and is controlled by a Stop sign.

East Post Road & Cromwell Place/Grand Street – East Post Road forms the east and west legs to this signalized, four-legged intersection with Cromwell Place and Grand Street. Grand Street forms the north leg and Cromwell Place forms the south leg, slightly offset from Grand Street, both of which are one-way southbound. The intersection is controlled by an actuated, multi-phase signal controller.

East Post Road & Chester Avenue – East Post Road forms the east and west legs to this signalized, T-intersection with Chester Avenue. Chester Avenue forms the south leg and is one-way northbound. The intersection is controlled by an actuated, multi-phase signal controller.

Dr. Martin Luther King Jr. Boulevard & Fisher Court/Parking Garage – Dr. Martin Luther King Jr. Boulevard forms the north and south legs to this signalized, four-legged intersection with Fisher Court and a parking garage driveway. Dr. Martin Luther King Jr. Boulevard is one-way northbound. Fisher Court forms the west leg and is one-way eastbound, while the parking garage driveway forms the east leg. The intersection is controlled by an actuated, multi-phase signal controller.

South Lexington Avenue & Fisher Avenue/Quarropas Street – South Lexington Avenue forms the north and south legs to this signalized, four-legged intersection with Fisher Avenue and Quarropas Street. South Lexington Avenue is one-way southbound. Fisher Avenue forms the west

leg and Quarropas Street forms the east leg. The intersection is controlled by an actuated, multi-phase signal controller.

Dr. Martin Luther King Jr. Boulevard & Quarropas Street – Dr. Martin Luther King Jr. Boulevard forms the north and south legs to this signalized, four-legged intersection with Quarropas Street. Dr. Martin Luther King Jr. Boulevard is one-way northbound. Quarropas Street forms the east and west legs. The intersection is controlled by an actuated, multi-phase signal controller.

West Post Road & West Campus Lot Northeast Driveway – West Post Road forms the east and west legs to this unsignalized, T-intersection with the northeast driveway of the West Campus Lot. The driveway provides right-turn-egress movements only and is controlled by a Stop sign.

East Post Road & Future Emergency Department Ambulance Entrance – In the future with the Project, it is proposed to add an Emergency Department ambulance entrance driveway on East Post Road between South Lexington Avenue and the East Post Road garage. The driveway will form the south leg to a new unsignalized, T-intersection with East Post Road.

East Post Road & Future Emergency Department Ambulance Exit – In the future with the Project, it is proposed to add an Emergency Department ambulance exit driveway on East Post Road between the new Emergency Department ambulance entrance driveway and the East Post Road garage. The egress driveway will form the south leg to a new unsignalized, T-intersection with East Post Road and will be controlled by a Stop sign.

East Post Road & Winchester Street – East Post Road forms the east and west legs to this unsignalized, T-intersection with Winchester Street. Winchester Street forms the north leg and is controlled by a Stop sign.

3.3 Public Transportation

Metro-North Railroad's White Plains station is located 0.8 miles north of the Project site. The station is on the Harlem Line, which provides frequent daily rail service between Wassaic and Grand Central Station in Manhattan. Effective October 16, 2022, there are 170 trains that stop in White Plains (89 northbound; 81 southbound) on a weekday, 93 trains on a Saturday (47 northbound; 46 southbound), and 89 trains on a Sunday (45 northbound; 44 southbound).

Bus service in the area is provided by Westchester County's Bee-line Bus System. The Bee-line system operates two (2) routes that travel along West Post Road/East Post Road and stop at the intersection with South Lexington Avenue: Route #40 which provides daily service, and Route #41 which runs on weekdays. Both routes provide service between Westchester Medical Center in Valhalla and the Bronx (Wakefield/E

241st Street station). Route #40 provides 87 buses on weekdays (44 northbound; 43 southbound), 56 buses on Saturdays (29 northbound; 27 southbound), and 40 buses on Sundays (21 northbound; 19 southbound). Route #41 provides 12 buses each weekday (7 northbound; 5 southbound).

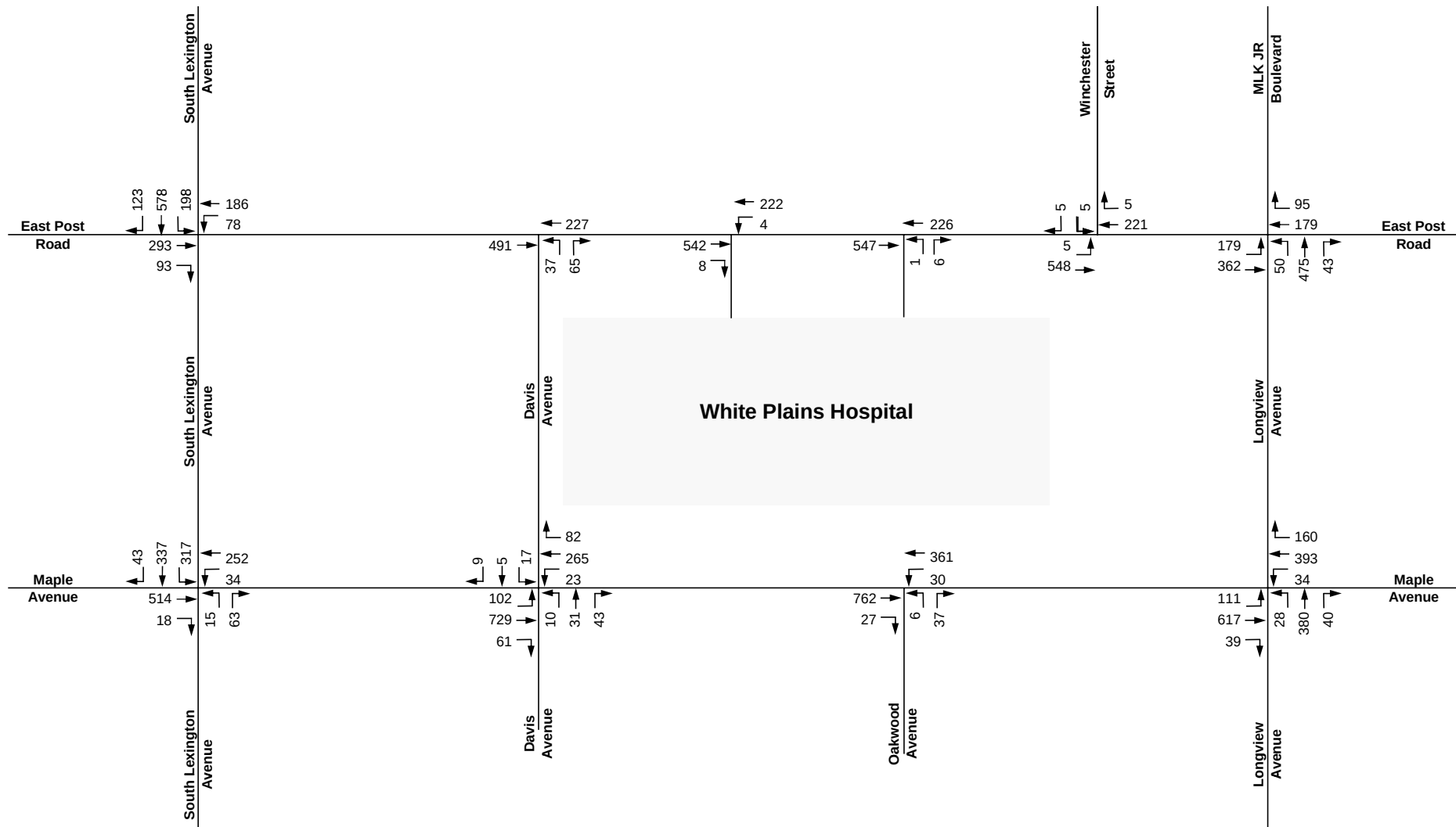
3.4 Traffic Data Collection

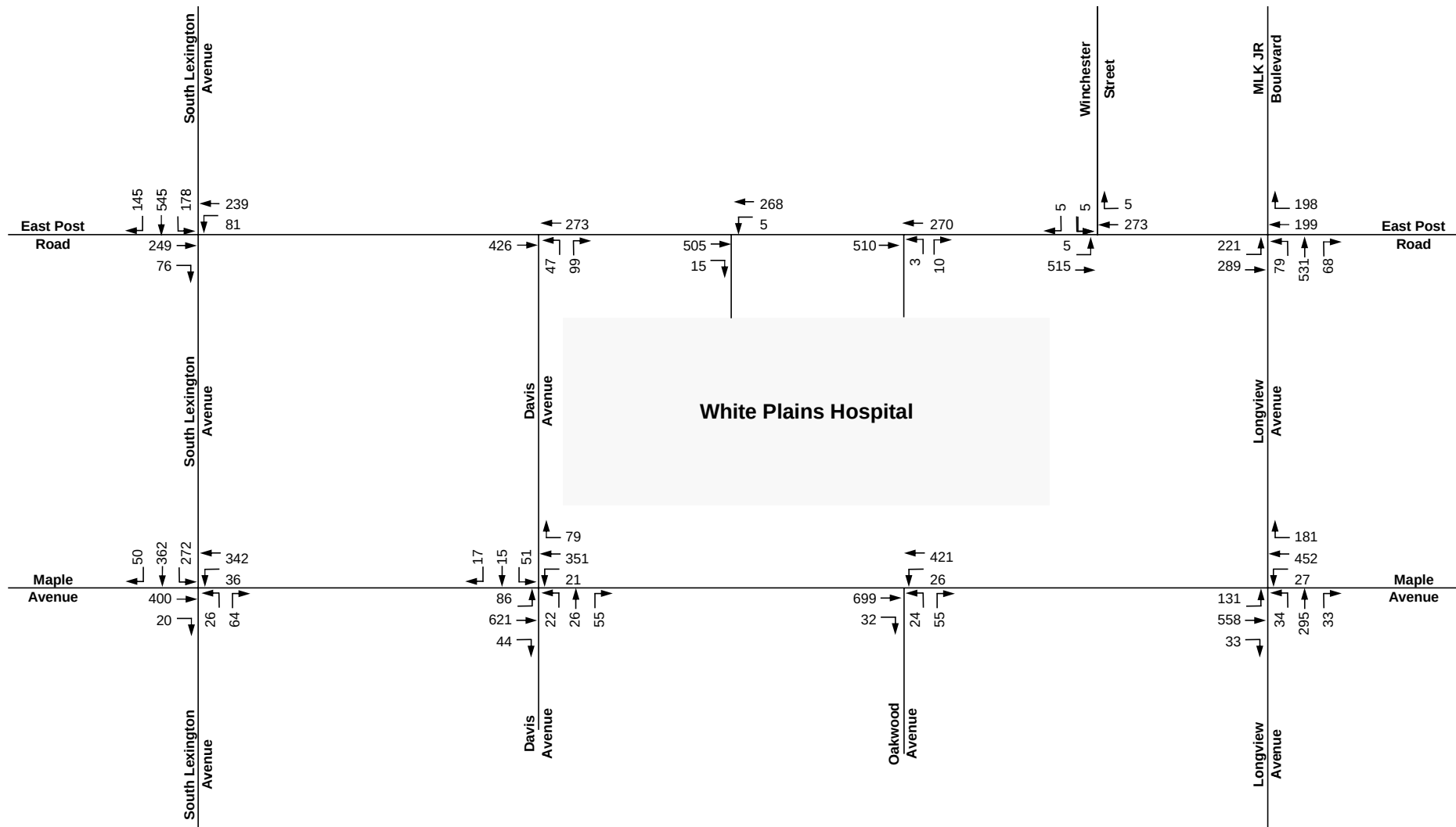
To assess existing traffic conditions, turning movement counts were conducted at the study intersections on March 26, 2020, from 6:00 to 10:00 AM and from 3:00 to 7:00 PM, and on May 17, 2022, from 6:30 AM to 6:30 PM.

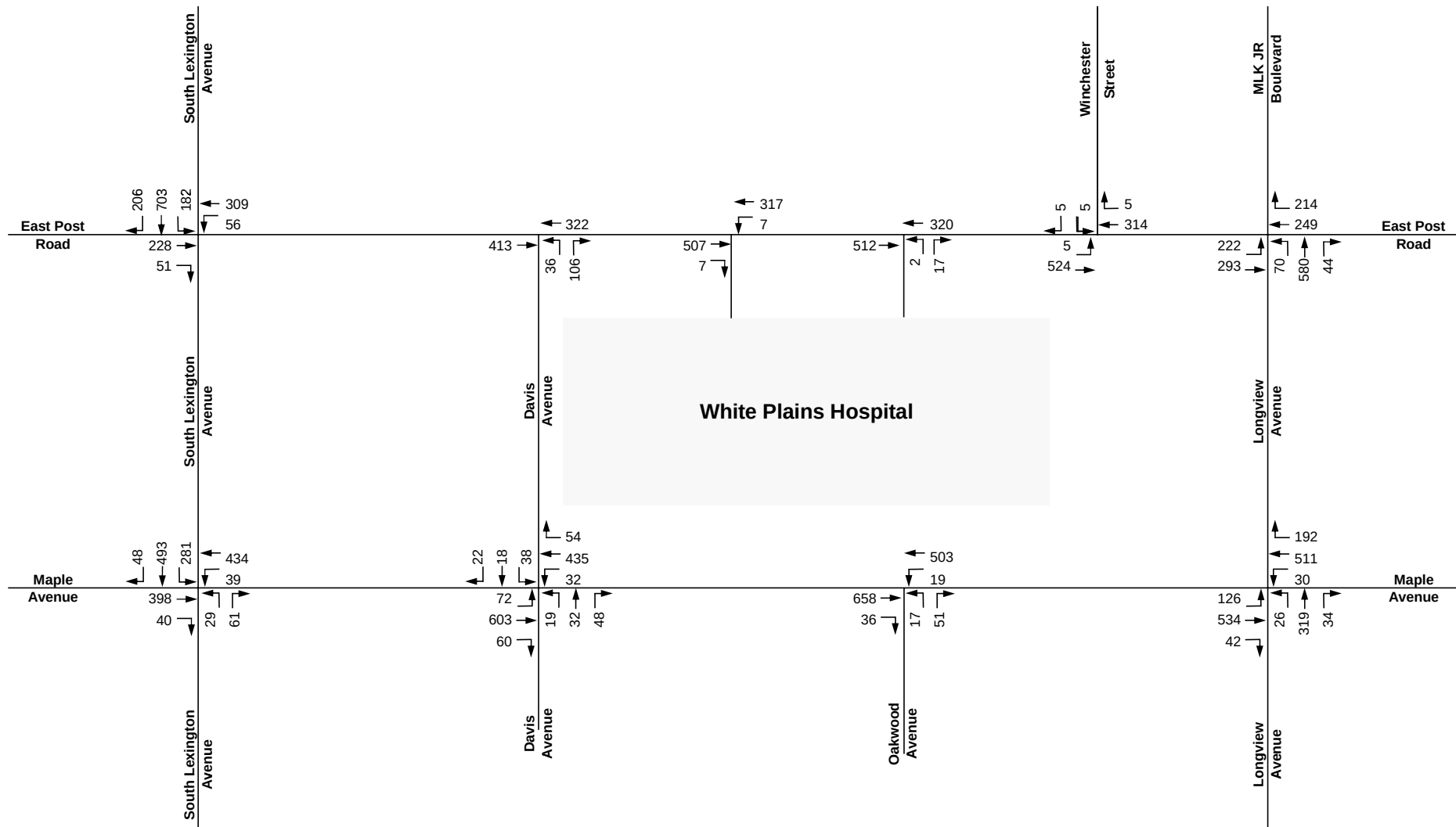
The counts were tabulated, and the following peak hours were identified for study:

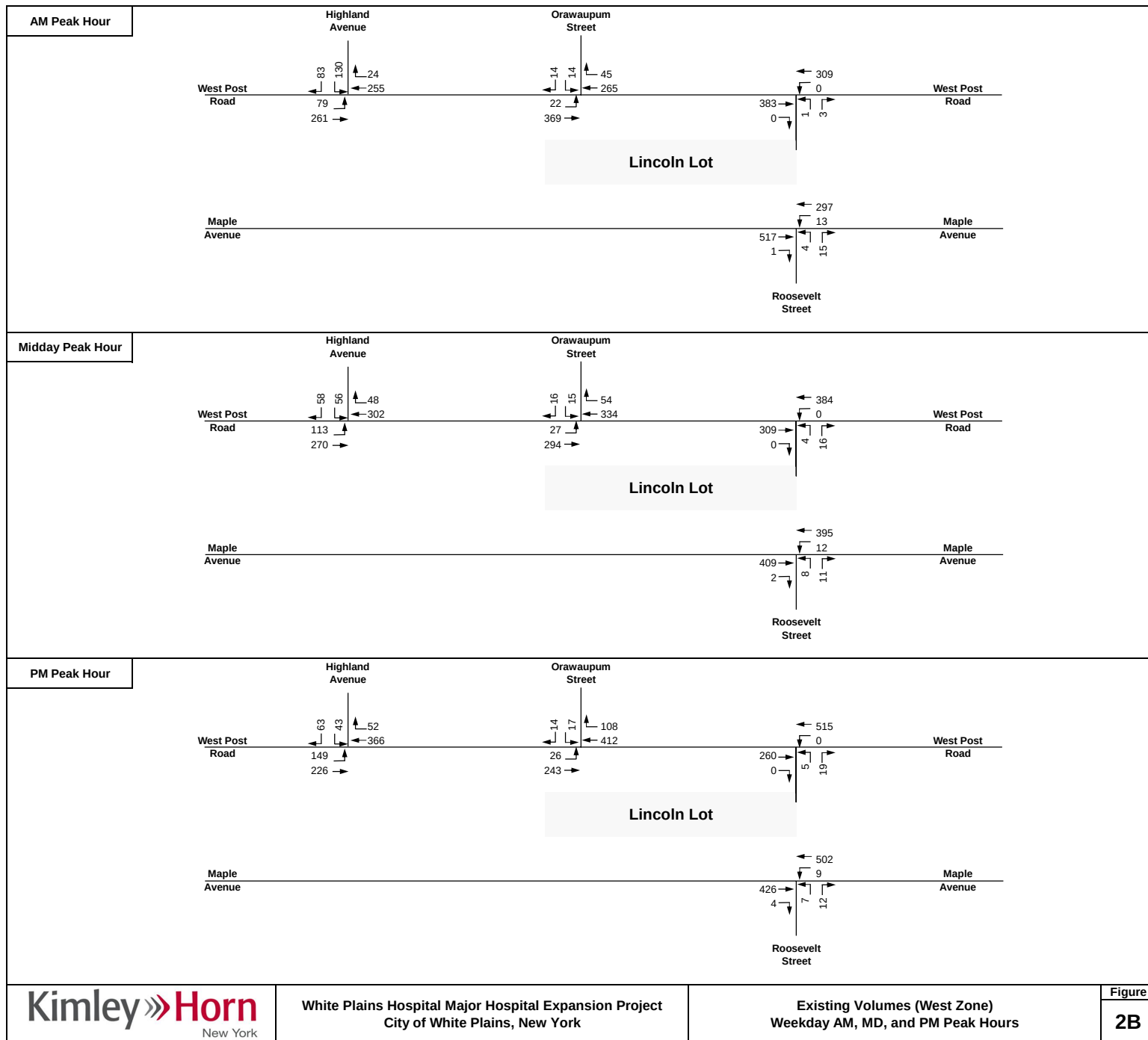
- Weekday AM Peak Hour: 8:00 – 9:00 AM
- Weekday Midday (MD) Peak Hour: 3:00 – 4:00 PM
- Weekday PM Peak Hour: 5:00 – 6:00 PM

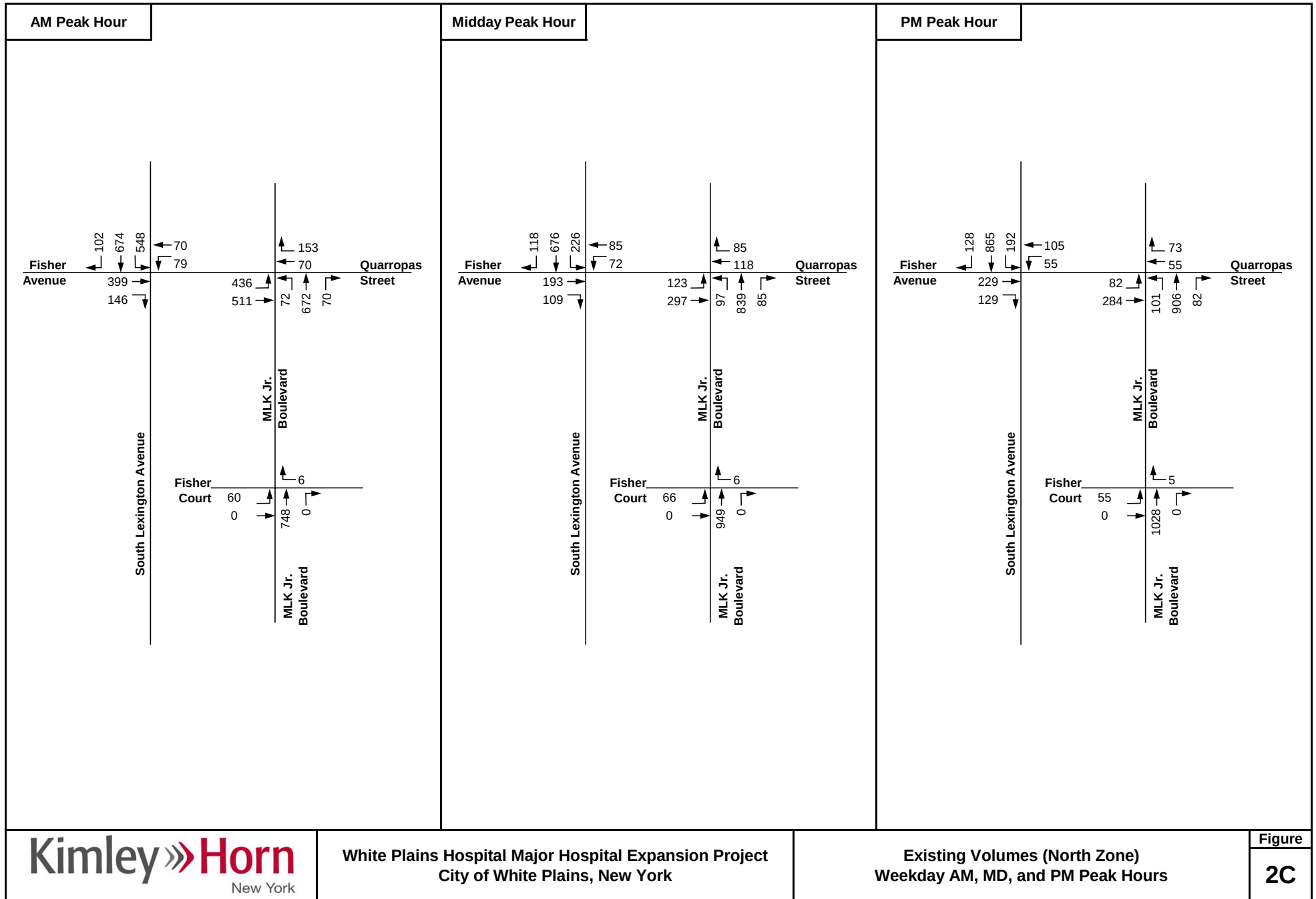
To provide a conservative analysis, the higher of the two (2) sets of traffic volumes for each turning movement was utilized, increased by up to 9 percent, and balanced as needed throughout the study network. Overall, during the peak period, the existing traffic volumes analyzed in this study were 8 percent higher than 2020 counts and 5 percent higher than 2022 counts. The adjusted 2022 existing traffic volumes for the weekday AM, Midday (MD), and PM peak hours are provided on **Figures 2A-1 to 2D**.

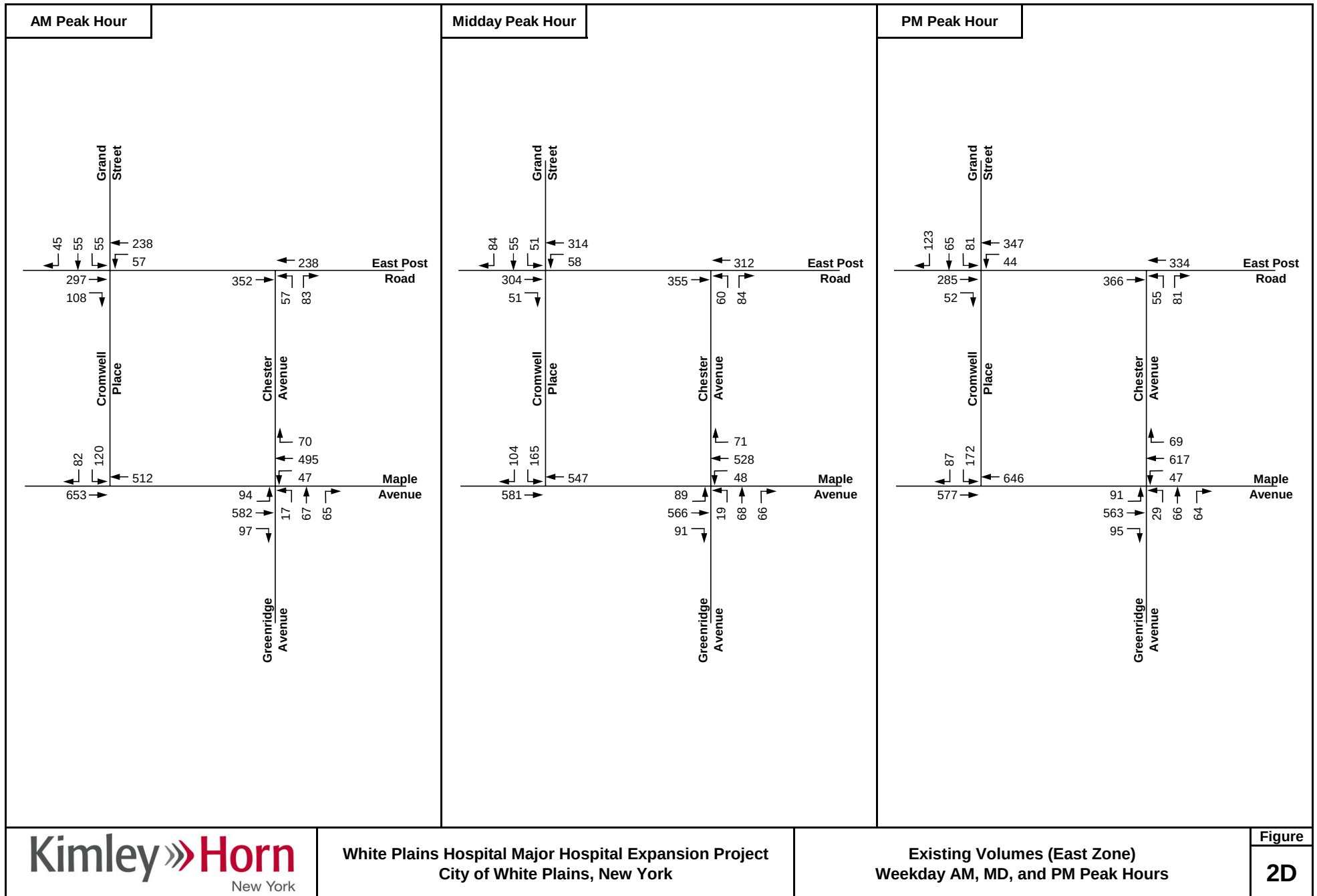












4.0 FUTURE NO-BUILD TRAFFIC CONDITIONS

The future No-Build conditions are the forecast traffic conditions that are expected to occur without the proposed development. This includes background traffic growth, traffic associated with any other planned/ approved developments, and reassigned Hospital trips based on previously-approved/background construction in the City of White Plains, as described below. As part of the non-Project-initiated construction in the City, it is assumed that the Davis garage is demolished, the interim West Campus Lot constructed, and a new municipal garage built on East Post Road (the “East Post Road garage” or “EPR garage”) with access from Winchester Street and Brookfield Street⁶. Thus, the following improvements are reflected in the results of the intersection analysis for the No-Build volume conditions.

- Construction of the West Campus Lot on the parcels between Maple Avenue, East Post Road, South Lexington Avenue, and Rathbun Avenue, with the following intersections:
 - Maple Avenue & West Campus Lot Southwest Driveway, between Odell Avenue and Roosevelt Street – *Unsignalized*
 - Maple Avenue & Roosevelt Street/West Campus Lot Southeast Driveway – *Unsignalized*
 - West Post Road & Highland Avenue/West Campus Lot Northwest Driveway – *Unsignalized*
 - West Post Road & West Campus Lot Northeast Driveway, in place of the former Lincoln Lot driveway – *Unsignalized*
- Demolition of the Davis garage, eliminating the following intersections:
 - South Lexington Avenue & Lincoln Lot/Davis Garage driveways
 - Davis Avenue & Davis Garage/Main Hospital Entrance
- Construction of the East Post Road garage on the north side of East Post Road, between Brookfield Street and Winchester Street, and potential realignment and signalization of the Emergency Department entrance driveway with the East Post Road garage driveway at East Post Road.

Although there is some uncertainty surrounding the schedule and completion of the East Post Road garage, it was assumed that it would be completed prior to the 2033 design year. To provide a conservative analysis, it was assumed that only the 500 public spaces would be used in the No-Build condition and that Hospital staff and patients/visitors would not use the new garage until the Build condition.

⁶ Completion of the contemplated East Post Road was considered to be a conservative assumption as it will concentrate and increase traffic activity in the vicinity of the hospital/center of the study area. If the new EPR garage is not built, Hospital staff and patients/visitors (and the users of the 500 public spaces) will have to have other parking available. Much, if not most, of this parking will be spread out and located significantly further from the Hospital than the EPR garage, resulting in lower levels of traffic in the study area. Further, even though it might be possible for hospital staff and employees to use the new EPR garage in the No-Build condition, it was determined to be more conservative to include the Hospital's relocated traffic in the Build condition (where the impact of this concentration/these relocations is evaluated) than to assume this relocation of traffic occurs in the No-Build condition.

The reassigned Hospital trips associated with the Davis garage demolition, West Campus Lot construction, and East Post Road garage erection are summarized in **Table 1** below.

Table 1 – No-Build Condition: Hospital & Non-Hospital Trips, Growth & Reassignment				
Existing Hospital / Non-Hospital Trips	Existing Parking Location	Growth Rate¹	Reassigned?	Reassigned Interim Parking Location
500 Extra City Spaces, Non-Hospital Trips	East Post Road Garage	1.00	No	N/A
Davis Avenue Non-Hospital Trips	N/A	1.0411	No	N/A
Remaining Non-Hospital Trips	N/A	1.0411	No	N/A
Hospital Emergency Department Self-Park Patient Trips	Longview Avenue Parking Garage	1.24	No	N/A
Hospital Employee Trips	79 East Post Road Parking	1.00	No	N/A
	Chester Avenue / Maple Avenue Parking Garage	1.00	No	N/A
	Davis Avenue Parking Garage	1.15	Yes	Interim West Campus Lot
	Lincoln Parking Lot	1.15	Yes	Interim West Campus Lot
	11 East Post Road Parking Lot	1.15	Yes	Interim West Campus Lot
	Lyon Place Parking Garage	1.45	No	N/A
	Longview Avenue Parking Garage	1.45	No	N/A
Hospital Self-Park Patient Trips	CAMS	1.24	No	N/A
	Cancer Center	1.24	No	N/A
	Davis Avenue Parking Garage	1.15	Yes	Interim West Campus Lot
	Main Hospital Entrance	1.15	Yes	Interim West Campus Lot
	Chester Avenue / Maple Avenue Parking Garage	1.15	No	N/A
	Longview Avenue Parking Garage	1.15	No	N/A
	33 Davis Avenue Parking Lot	1.15	No	N/A
Hospital Valet Patient Trips	CAMS	1.24	No	N/A
	Cancer Center	1.24	No	N/A
	Main Hospital Entrance	1.15	Yes	Interim West Campus Lot

1. See Section 4.2 for details on the projected increases in hospital traffic in the No-Build condition.

As indicated in Table 1, no growth was assumed for the trips associated with the 500 new public parking spaces that will be provided in the East Post Road garage as it was assumed that the vehicles making these trips are already parking elsewhere in the neighborhood and will not increase. Because Kimley-Horn has no knowledge of where these vehicles currently park, it is not possible to determine how they will alter travel patterns because of the availability of the new spaces. Further, assigning them as new trips (as opposed to reassigned/relocated trips) is a more conservative approach.

It was assumed that other non-hospital-generated traffic would not be affected by the construction of the East Post Road garage but that it would increase at a rate of 0.367% per year from 2022 to 2033 (4.11% total) based on a review of how traffic volumes at the City's portals rebounded from 2020 through 2022⁷.

With regard to the current hospital's emergency department (ED), it was assumed that continued growth in the city and the surrounding communities would see an annual increase in visits to the ED of 2% between 2022 and 2033 (24% total) and that these trips would continue to be made to ED parking area on East Post Road (i.e., they would not be reassigned from other locations because of the new EPR garage).

The remaining hospital-generated traffic was divided into three categories for the No-Build analysis:

- Hospital Employee Trips –
 - No change in traffic activity of traffic patterns are expected to occur with hospital employees who currently park at 79 East Post Road or at the Chester/Maple municipal garage as it is assumed that employee parking in those facilities is, effectively, at capacity.
 - Even though the Project proposes to provide additional in-patient capacity, it is assumed that increasing demand for in-patient services can be accommodated in the existing facility (albeit in less-than-ideal conditions) through 2033, assuming an annual increase in employee trips of 1.3% per year (15% total). These trips, which previously occurred at the Davis Avenue garage, the Lincoln Lot and the 11 East Post Road lot have been relocated to the West Campus Lot until the East Post Road garage is completed some time before 2033.
 - To reflect the potential availability of parking spaces in the Longview municipal garage and the Lyon Place municipal garage, it was assumed that additional employee parking demand associated with any other hospital activity would be accommodated in these garages and hospital trips to these facilities were increased by 3.5% per year (1.45% total).
- Trips generated by Hospital Patients who self park –
 - Patient activity at the CAMS and Cancer Center buildings was assumed to increase by 2% per year (24% total), due to continued growth in the city and the surrounding communities, and that these trips would continue to occur at the building driveways.

⁷ See Section 4.1

- Patient activity at the existing in-patient building (which travel to or from the hospital's main entrance as well as to and from the Davis Avenue garage) was assumed to increase by just 1.3% per year (15% total), because of capacity limitations at the exiting in-patient facility, however, these trips would be parked at the Longview Avenue and Chester/Maple municipal parking garages (as where they currently park – the Davis Avenue garage – will no longer be available).
- Patient activity at the Longview Avenue and Chester/Maple municipal parking garages, as well as at the hospital's 33 Davis Avenue parking lot, was also assumed to increase by 1.3% per year (15% total), due to capacity limitations at the exiting in-patient facility, and that these trips would continue to occur at the current garages/33 Davis Avenue.
- Trips generated by Hospital Patients who avail of valet parking –
 - Patient activity at the CAMS and Cancer Center buildings was assumed to increase by 2% per year (24% total), due to continued growth in the city and the surrounding communities, and that these trips would continue to occur at the building driveways.
 - Patient activity at the existing in-patient building was assumed to increase by just 1.3% per year (15% total), because of capacity limitations at the exiting in-patient facility, however, these trips are now parked at the West Campus Lot (as where they previously parked – the Davis Avenue garage – is longer be available).

4.1 Background Non-Hospital Traffic Growth

Background traffic growth represents typical traffic growth not associated with any planned development. Traffic volume data from 2008 through 2022 in the City of White Plains was provided by the City Traffic Engineer. Over the last 14 years, traffic volumes at the City's portals have oscillated but, in 2022, were lower than in 2008 and pre-Covid in 2019. Even in the recovery after the Great Recession (2010 to 2019), traffic volumes were down, on average, 1% per year. Looking at how traffic volumes rebounded from 2020 through 2022, and projecting forward, the data suggests that traffic volumes could increase by 0.367% per year from 2022 to 2033 (4.11% total). Thus, a total growth of 4.11% was applied to the existing non-Hospital traffic volumes to represent background growth in the year 2033, when the Project is anticipated to be completed.

Additionally, as discussed in the previous section, traffic associated with 500 City-owned parking spaces in the proposed East Post Road Garage, which will not be utilized by the Hospital, was projected and distributed to the surrounding roadway network.

4.2 Hospital Traffic Growth and Reassignment

With the opening of the West Campus Lot, approximately 500 Hospital employees, valets, and patients that formerly parked in the parking areas currently serving the main Hospital building (Davis garage, Lincoln

Lot, and 11 East Post Road parking lot) have been relocated to the new West Campus Lot. Thus, traffic and parking volumes and patterns are expected to change in the interim state, as described below.

Traffic volumes associated with Hospital employees and valets who previously parked in the parking areas serving the in-patient building (Davis garage, Lincoln Lot, and 11 East Post Road parking lot) were reassigned to park in the West Campus Lot and increased by 15% because, in the short term, the demand for the existing in-patient building is there but the supply is not. Existing traffic volumes associated with patients who previously self-parked in the parking areas serving the in-patient building were increased by 15% and reassigned to park in the Chester Avenue/Maple Avenue and Longview Avenue parking garages. Existing traffic volumes associated with patients that self-park in the 33 Davis Avenue parking lot, as well as in the Chester Avenue/Maple Avenue and Longview Avenue parking garages, were increased by 15%, to reflect high short-term demand with limited existing in-patient building supply and will continue parking where they park today.

It was assumed that trips associated with employees parking in the Lyon Place and Longview Avenue parking garages would increase by 45% to account for the temporary relocation of employee parking to those facilities as the Hospital reserves more parking spaces near the hospital for patients and visitors in the West Campus parking lot until additional parking near the Hospital is provided. .

The Hospital's Emergency Department, Center for Advanced Medicine and Surgery (CAMS), and Center for Cancer Care (Cancer Center) valet and self-park patient trips were increased by 24% to account for a general background growth of 2% per year for 11 years and will continue parking where they park today.

Existing traffic volumes associated with employees parking in the 79 East Post Road and Chester Avenue/Maple Avenue parking garages were not grown or reassigned, as they were assumed to be at their future capacity for the Hospital.

4.3 Vicinity Developments

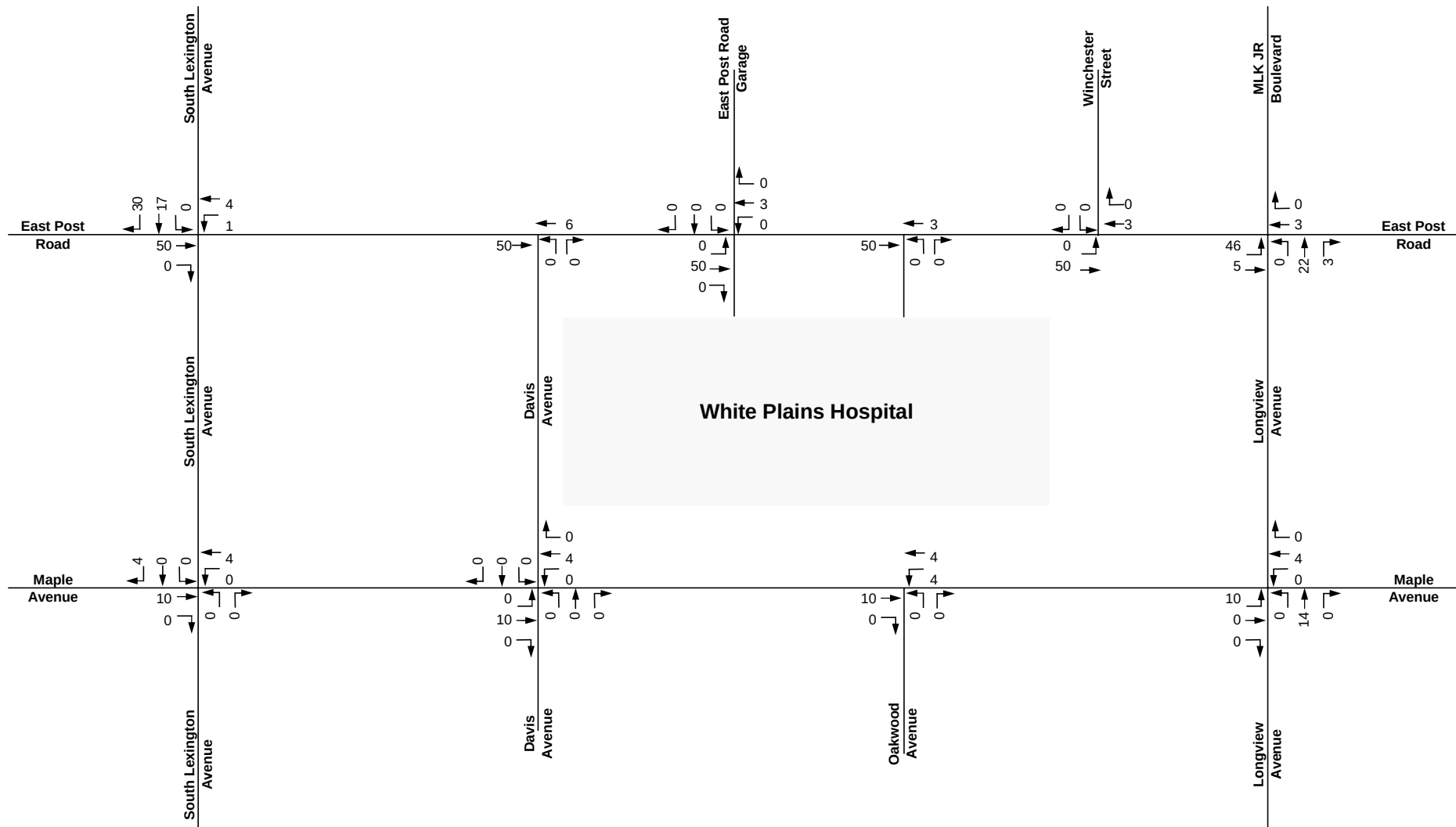
Traffic volumes associated with the following six (6) proposed vicinity developments in the City of White Plains were added to the grown volumes:

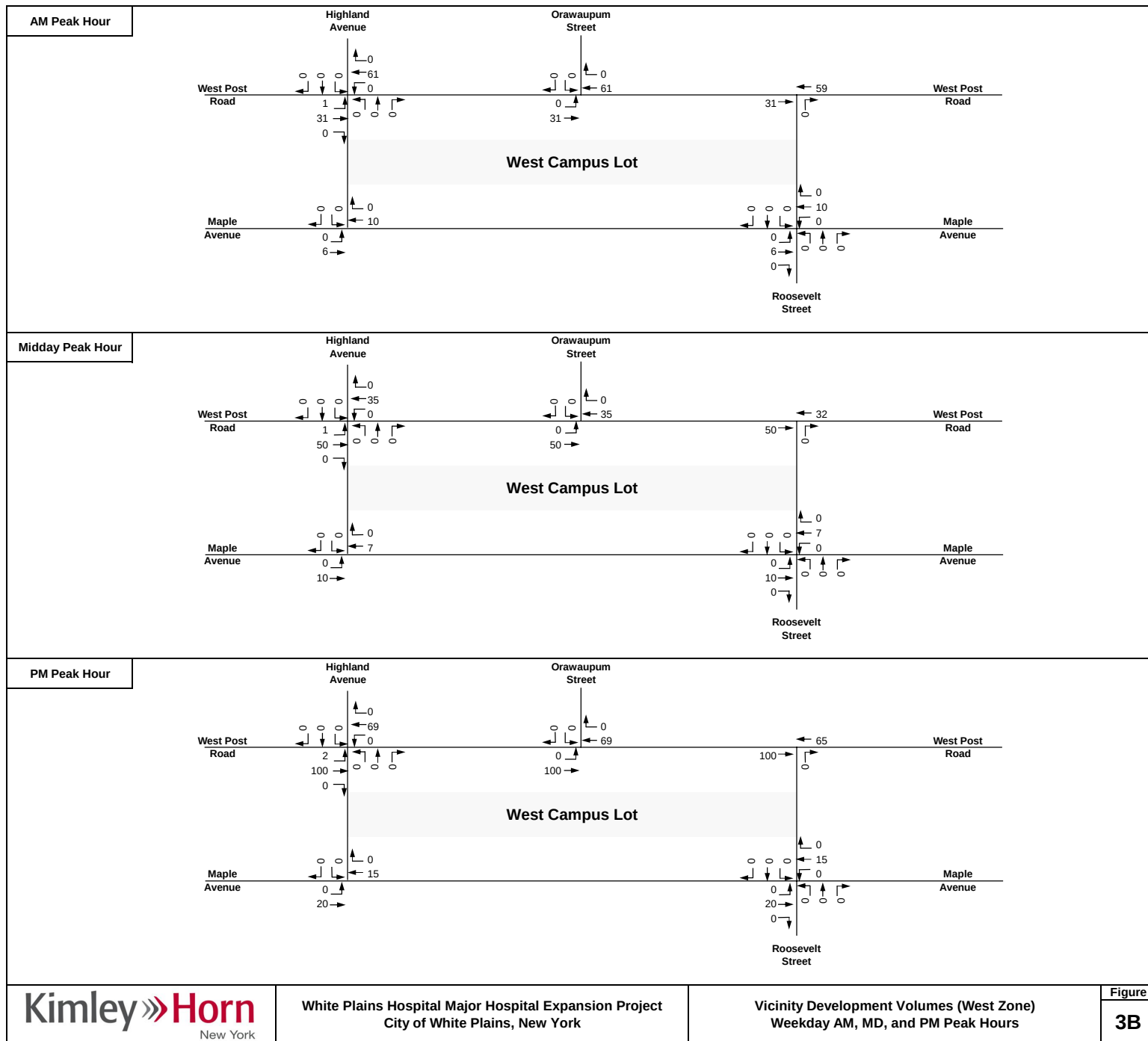
- **1 Water Street** – This proposed redevelopment will consist of the conversion of 45,000 square feet of office space to 301 residential units and 1,347 square feet of ground floor retail. The traffic volumes were extrapolated from the July 25, 2018 Traffic Impact Study prepared by Provident Design Engineering.
- **440 Hamilton Avenue** – This proposed redevelopment will consist of the conversion of 339,000 square feet of office space to 245 residential units and a 1,600 square foot neighborhood market. The traffic volumes were extrapolated from the December 2, 2016 Traffic and Parking Evaluation Letter prepared by Provident Design Engineering.

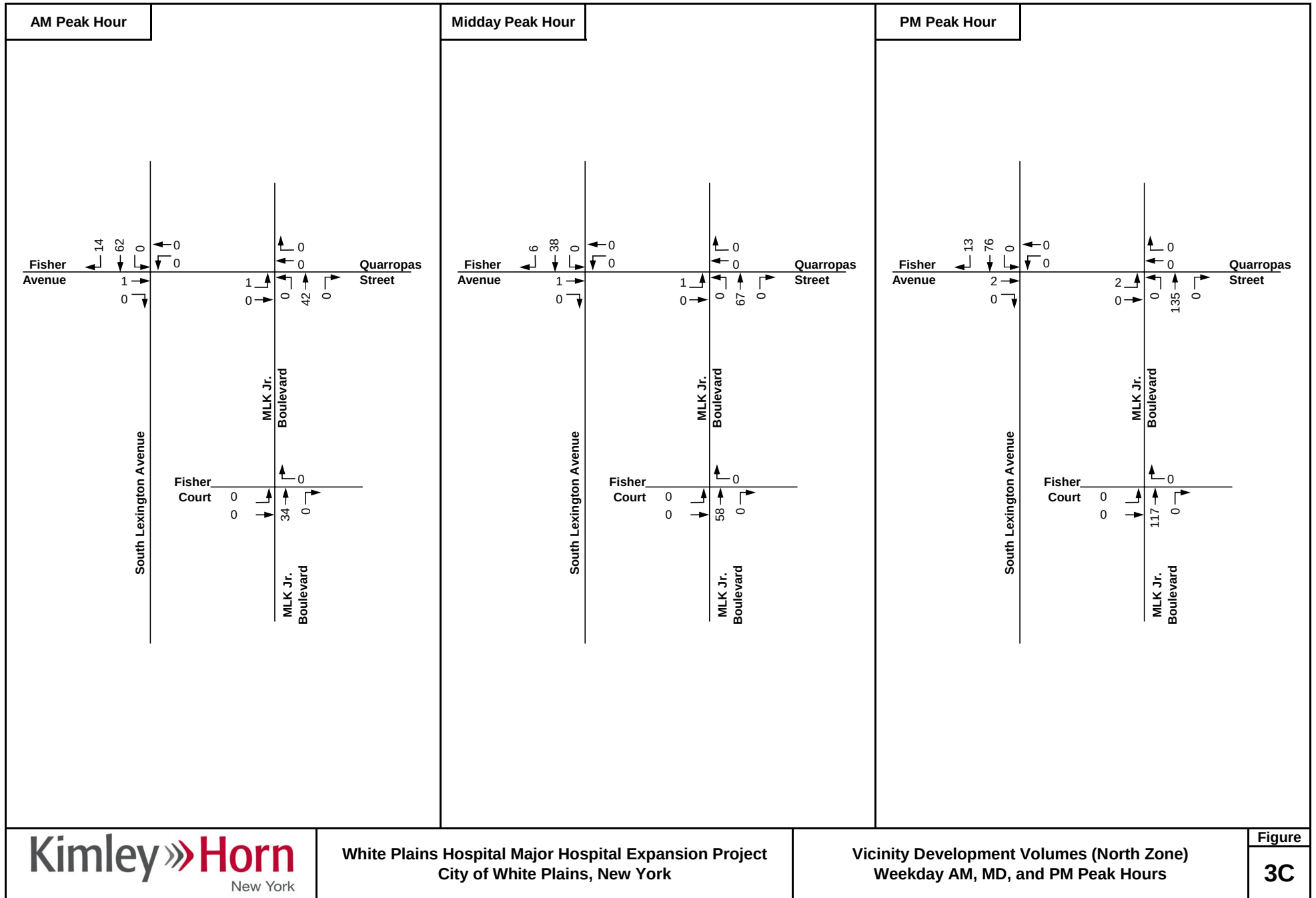
- **Gateway II** – This proposed development located at 85 North Lexington Avenue is to consist of 500 residential units and 19,000 square feet of retail space. The traffic volumes were extrapolated from the February 17, 2021 Traffic Study prepared by JMC.
- **Broadstone** – This proposed development located between Mamaroneck Avenue, East Post Road, and Mitchell Place is to consist of 868 residential units and 7,855 square feet of retail space. The traffic volumes were extrapolated from the January 27, 2017 Traffic Study prepared by JMC.
- **Hamilton Green** – This proposed mixed-use redevelopment located at 200 Hamilton Avenue will consist of the conversion of the 170,000 square foot White Plains Mall to 640 residential units, 42,000 square feet of upscale Food and Craft Hall space, and 53,000 square feet of retail space. The traffic volumes were extrapolated from the May 2017 Traffic Impact Study prepared by Kimley-Horn.
- **Galleria** – This shopping mall is planned to be redeveloped, but the specifics of the redevelopment are not known at this time. Based on other recent developments in downtown White Plains, including Hamilton Green, this redevelopment is likely to be mixed-use, predominantly residential. Since Hamilton Green occupies one entire City block just north of the Galleria, and the Galleria encompasses two similarly-sized City blocks, for traffic generation purposes, it was assumed that each half of the Galleria redevelopment would generate approximately the same volume of traffic as the Hamilton Green development.
- **Brookfield Apartments** – A redevelopment of the existing Brookfield Apartment development is projected to increase the number of residential units from 450 to 750, with the addition of a small amount of neighborhood retail space. The project also envisions generally reestablishing the former local street network (primarily Brookfield Street and Winchester Street). Approximately 230 of the 750 units have already been completed (prior to the traffic counts) and approximately 180 of the existing units have been vacated⁸.

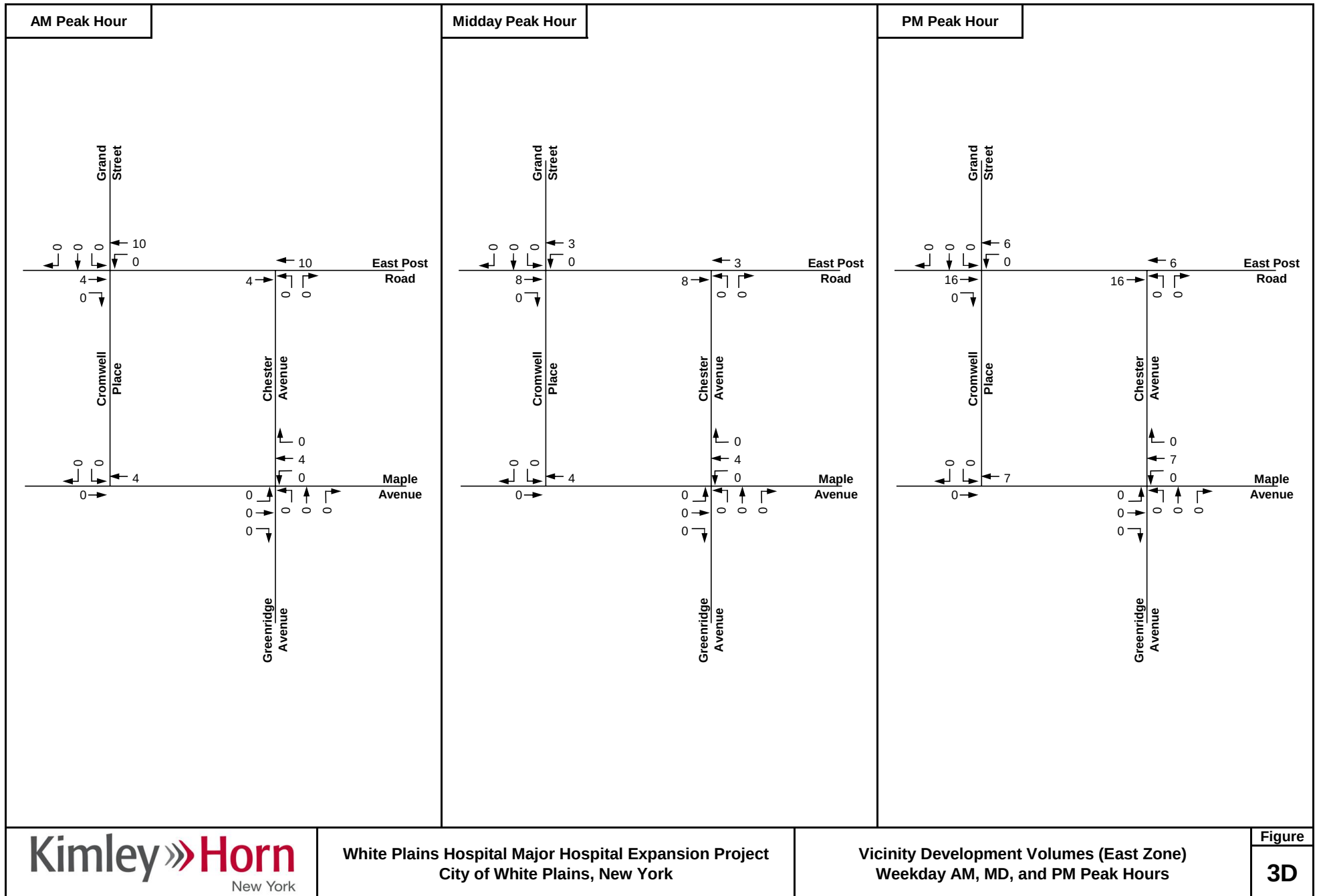
The vicinity development volumes for the peak hours are shown on **Figures 3A-1 through 3D**.

⁸ The Project proposed to rehouse all existing residents who wish to stay in the neighborhood and the project will provide a blend of housing affordability (market rate and below market rate - the original 450 apartments were all below market rate), as well as to include some apartments dedicated for seniors. Since much of the project is a replacement of existing housing (and some of it has already been completed), it is expected that fewer than 75 trips will be added to the surrounding roadways. The Reestablishment of the existing street system will only connect Quarropas Street to East Post Road (and possibly S. Lexington Avenue to MLK Boulevard) and will not provide any new, more-convenient connections outside of the immediate neighborhood. As such, it is only likely to capture current neighborhood traffic volumes before they pass through the study intersections. To provide a conservative analysis, it was assumed that there would be no reduction in traffic volumes at the study intersection because of the contemplated new street connections.





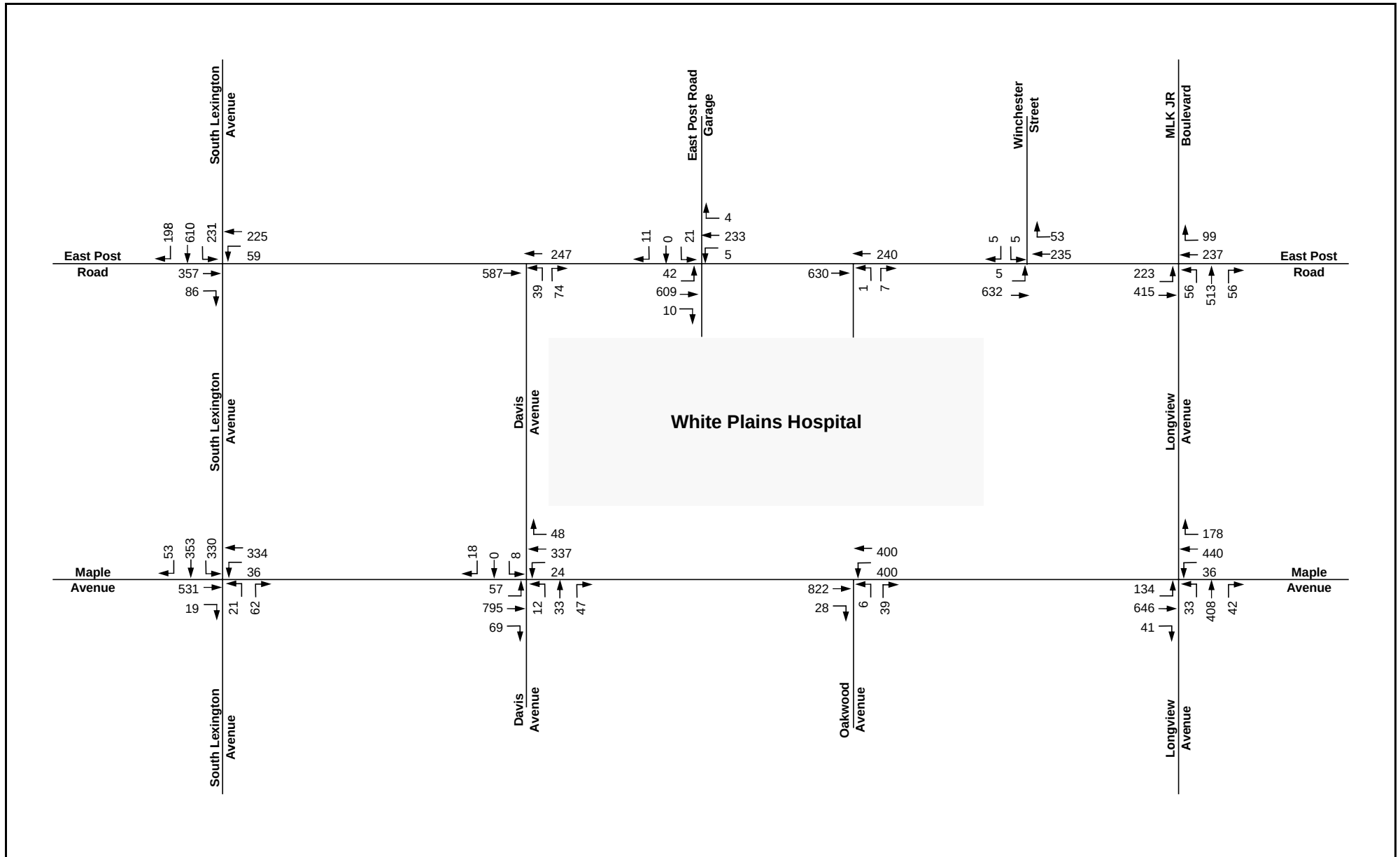


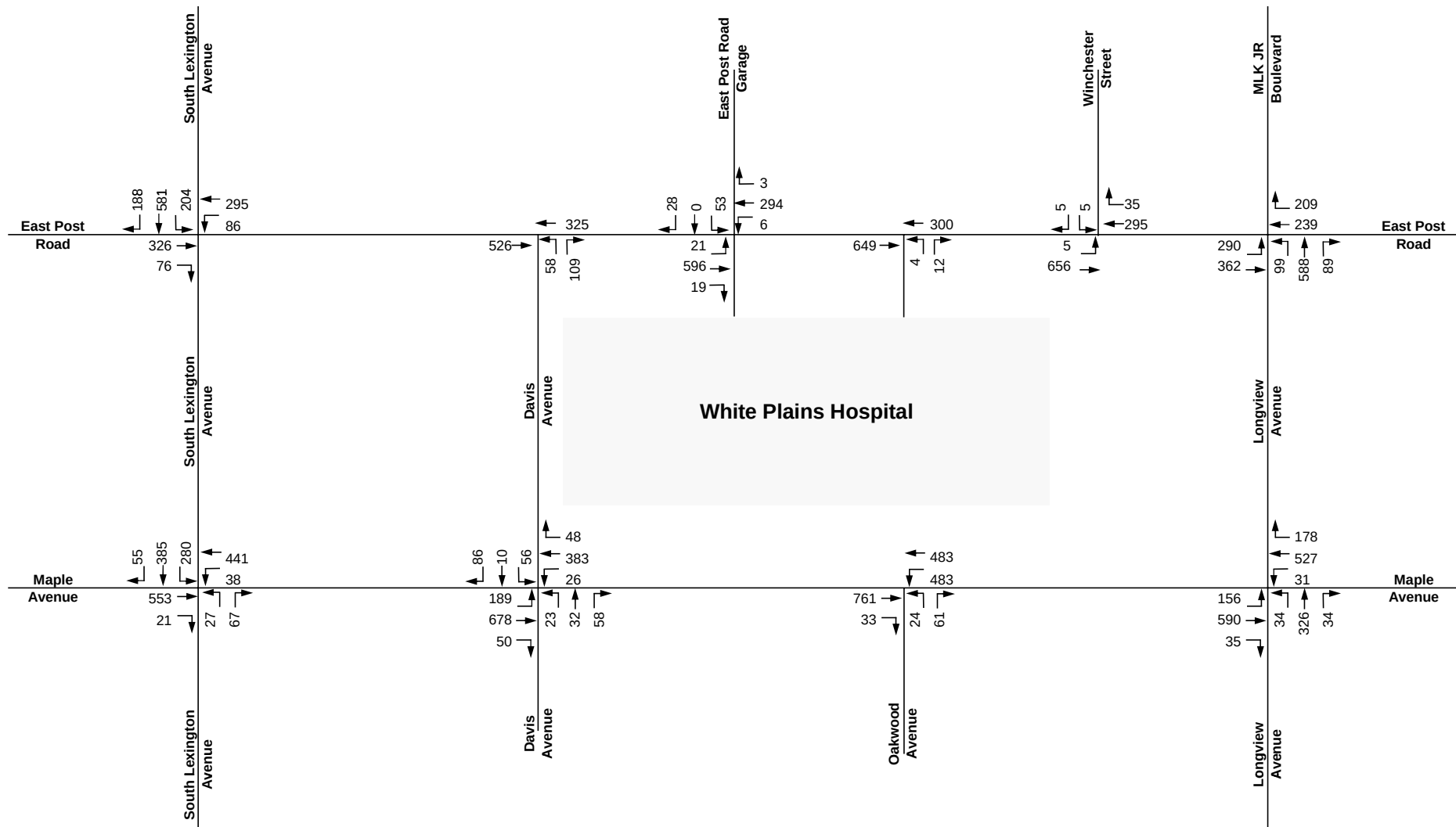


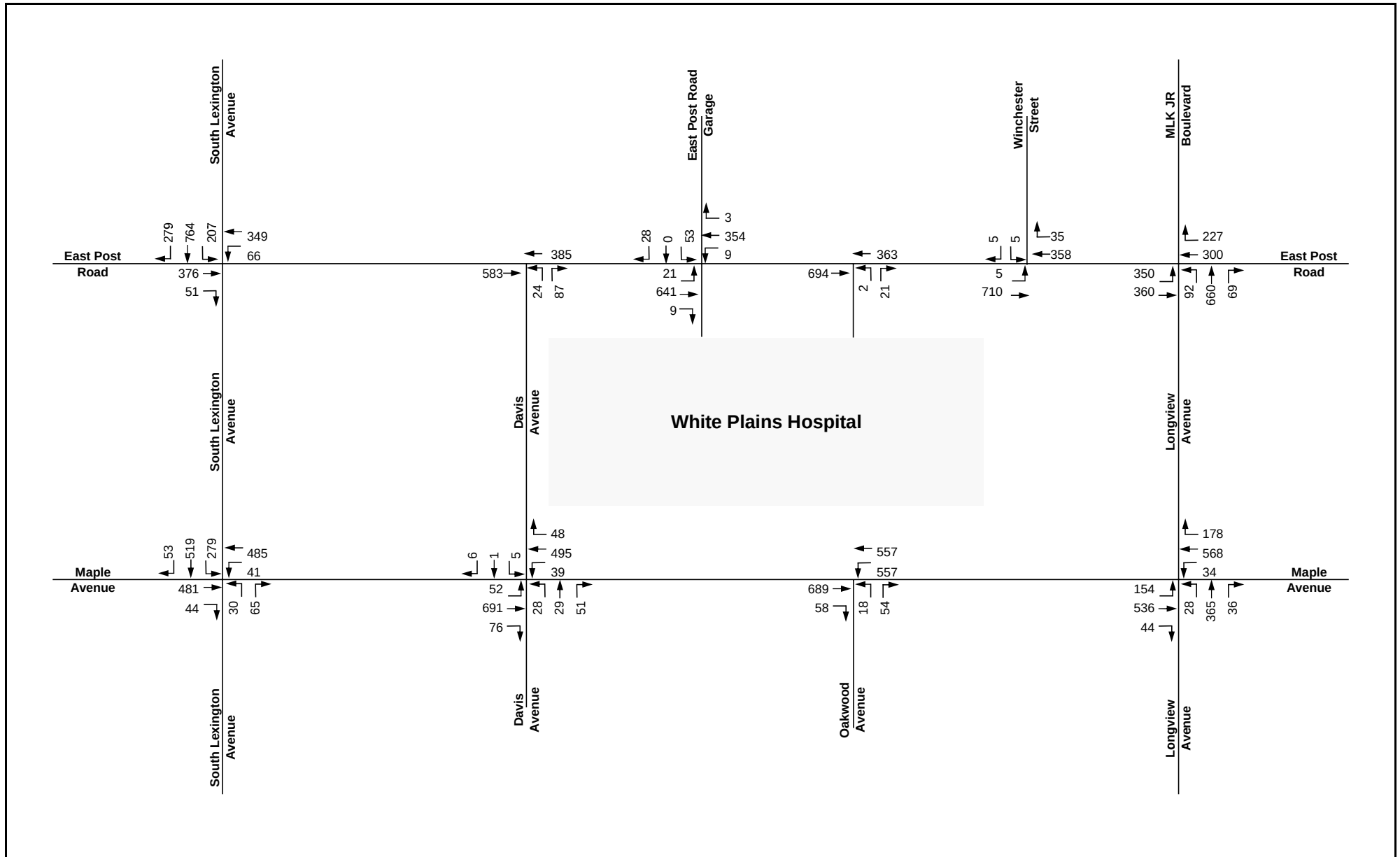
4.4 *No-Build Traffic Volumes*

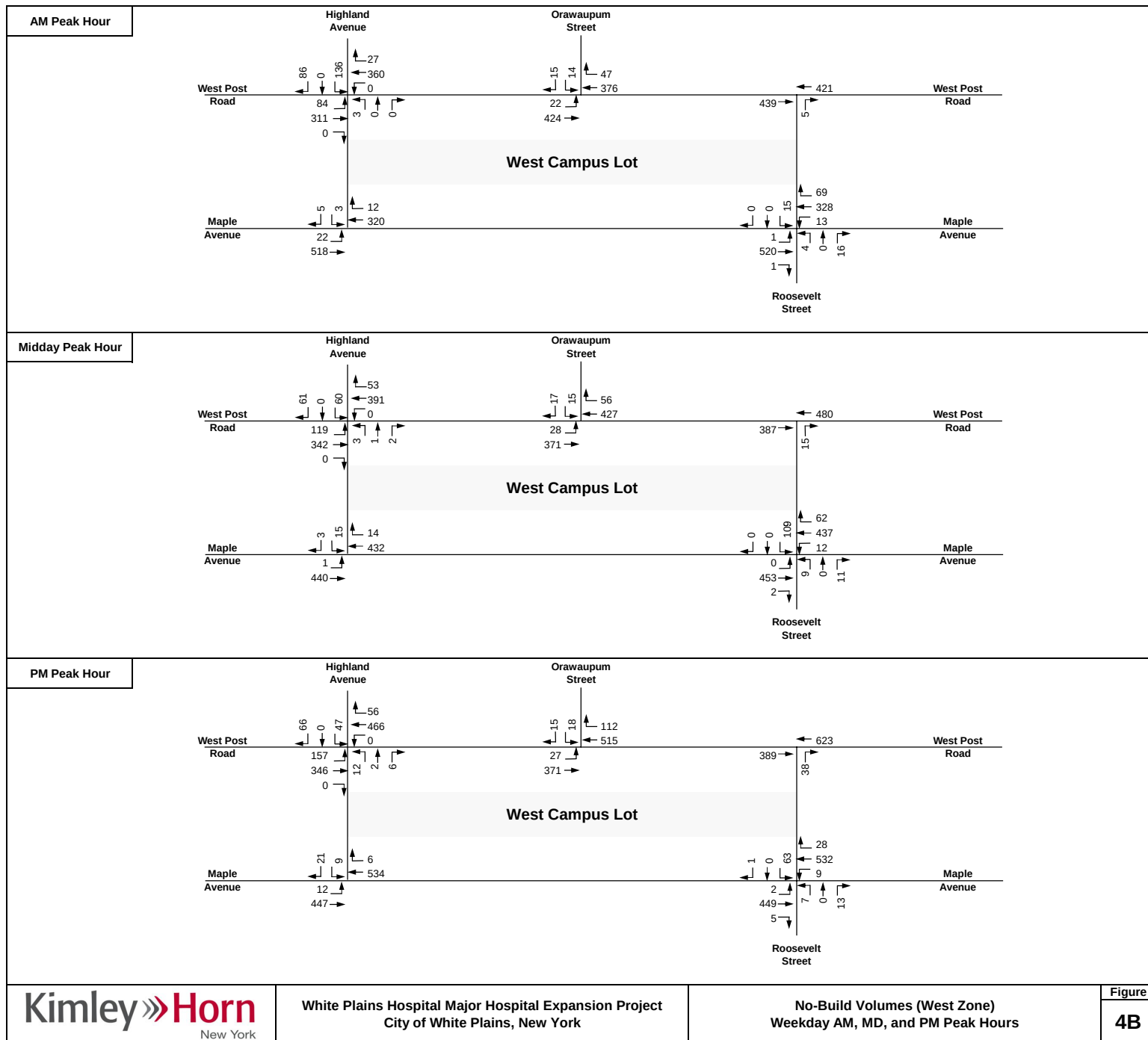
The traffic volumes from the six (6) vicinity developments (shown on Figures 5, 6, and 7) were added to the grown non-Hospital volumes, traffic associated with the 500 City-owned parking spaces in the East Post Road Garage, and the grown and reassigned Hospital traffic volumes, to represent the future conditions without the Project ("No-Build"). The No-Build peak-hour volumes for the AM, MD, and PM peak hours are shown on **Figures 4A-1 through 4D**.

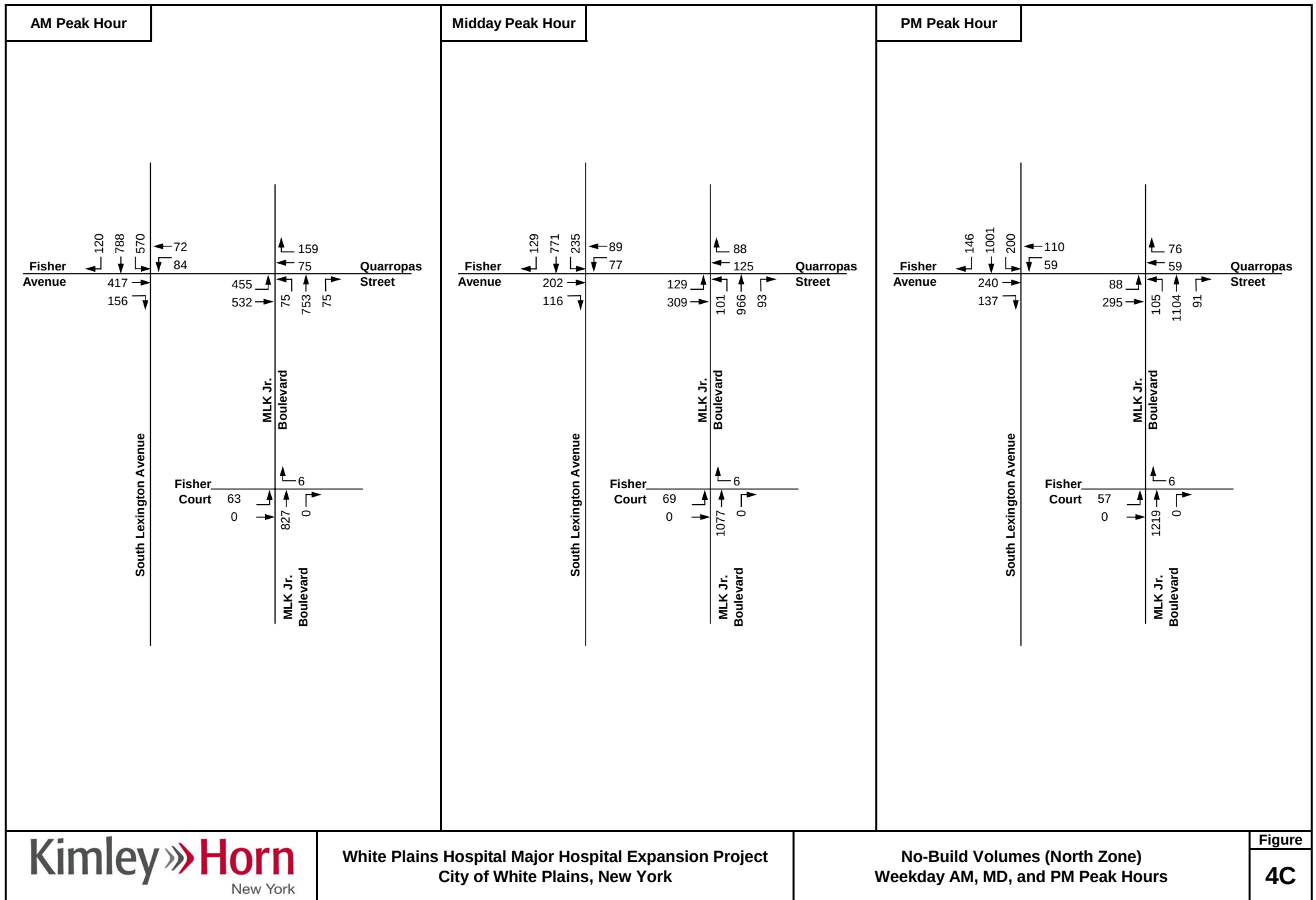
The net overall growth rate from the Existing to No-Build conditions, including vicinity developments and expected growth at the Hospital without the new building, was 11.3% during the AM peak hour, 15.5% during the MD peak hour, and 15.1% in the PM peak hour.

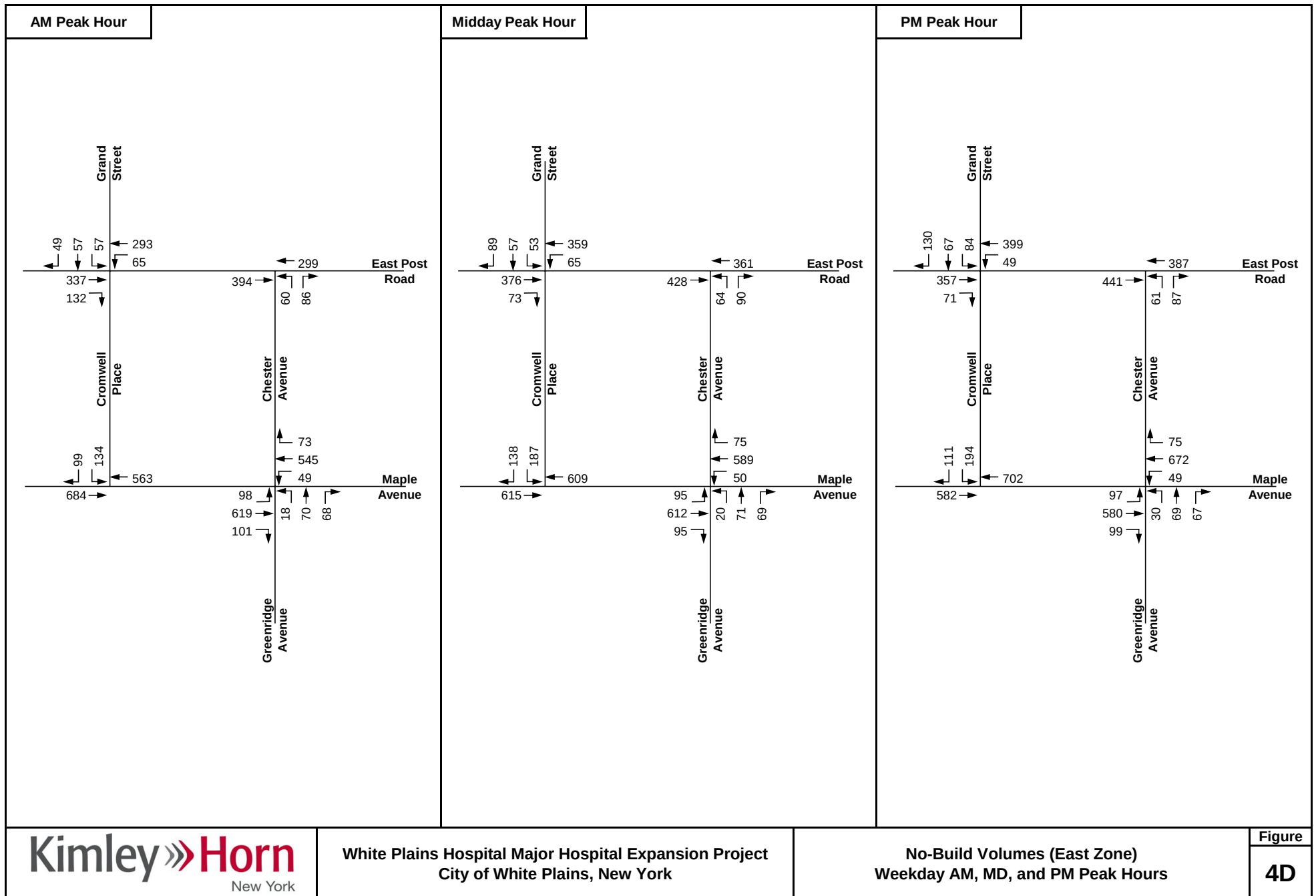












5.0 FUTURE BUILD TRAFFIC CONDITIONS

The Future Build conditions are defined as the forecast traffic conditions on the roadway network in the year 2033, with the proposed development. This includes background traffic growth, traffic associated with any other planned/approved developments, and reassigned Hospital and non-Hospital trips based on Project construction, as described below. As part of the Project construction, the following improvements were implemented at the study intersections and are reflected in the results of the intersection analysis for the Build volume conditions.

- Discontinuation of Davis Avenue between East Post Road and approximately 100 feet north of Maple Avenue, eliminating the following intersection:
 - East Post Road & Davis Avenue
- Construction of the new building where the existing Davis garage is located
- Conversion of South Lexington Avenue between West Post Road/East Post Road and Maple Avenue to two-way traffic flow (with a right-turn only, northbound at East Post Road)
- Construction of vehicular access for the public to the Emergency Department, creating the following intersections:
 - East Post Road & Public Emergency Department Entrance Driveway
 - East Post Road & Public Emergency Department Exit Driveway

The growth and reassignment of Hospital and non-Hospital trips are summarized in **Table 2** below.

Table 2 – Build Condition: Hospital & Non-Hospital Trips, Growth & Reassignment				
Existing Hospital / Non-Hospital Trips	Existing Parking Location	Growth Rate	Reassigned?	Reassigned ¹ Future Parking Location
500 Extra City Spaces, Non-Hospital Trips	East Post Road Garage	1.00	Yes ¹	N/A
Davis Avenue Non-Hospital Trips	N/A	1.0411	Yes ¹	N/A
Remaining Non-Hospital Trips	N/A	1.0411	No	N/A
Hospital Emergency Department Self-Park Patient Trips	Longview Avenue Parking Garage	1.24	No ²	N/A
Hospital Employee Trips	79 East Post Road Parking Garage	1.00	No	N/A
	Chester Avenue / Maple Avenue Parking Garage	1.00	No	N/A
	Davis Avenue Parking Garage	1.50	Yes	East Post Road Garage
	Lincoln Parking Lot	1.50	Yes	East Post Road Garage
	11 East Post Road Parking Lot	1.50	Yes	East Post Road Garage
	Lyon Place Parking Garage	1.45	Yes	East Post Road Garage ³
	Longview Avenue Parking Garage	1.45	No	N/A
Hospital Self-Park Patient Trips	CAMS	1.24	No	N/A ⁴
	Cancer Center	1.24	No	N/A ⁴
	Davis Avenue Parking Garage	1.50	Yes	Interim West Campus Lot
	Main Hospital Entrance	1.50	Yes	Interim West Campus Lot
	Chester Avenue / Maple Avenue Parking Garage	1.50	Yes	Interim West Campus Lot
	Longview Avenue Parking Garage	1.50	No	N/A ⁴
	33 Davis Avenue Parking Lot	1.50	No	N/A ⁴
Hospital Valet Patient Trips	CAMS	1.24	No	-
	Cancer Center	1.24	No	-
	Main Hospital Entrance	1.50	Yes	Interim West Campus Lot

¹ Reassigned based on new two-way traffic flow on South Lexington Avenue between West Post Road/East Post Road and Maple Avenue.

² Evenly split between existing Emergency Department ambulance and proposed Emergency Department public driveways.

³ Not all Hospital employees are being relocated.

⁴ Hospital self-park patient trips for CAMS and Center for Cancer Care to remain in Longview Garage. Staff also, as much as possible. Parking for staff at 33 Davis to remain at that location. Overflow Parking from expected growth in activity at these locations assigned to the interim West Campus Lot.

5.1 Non-Hospital Trip Growth and Reassignment

Upon completion of the new building, to reflect the discontinuation of Davis Avenue between East Post Road and approximately 100 feet north of Maple Avenue, and to reflect the conversion of South Lexington Avenue between West Post Road/East Post Road and Maple Avenue to two-way traffic flow, the existing grown non-Hospital traffic volumes currently utilizing Davis Avenue were reassigned to travel northbound

on Longview Avenue and South Lexington Avenue. Remaining existing grown non-Hospital traffic volumes (not utilizing Davis Avenue) were not reassigned, as they were assumed to continue with their existing traffic patterns.

5.2 Projected Increase in Hospital Peak-hour Traffic Volumes

Based on a review of the study traffic counts (driveways serving the Lincoln Lot, the Davis Avenue garage, the Hospital's main and emergency entrances, the entrances to CAMS and the Cancer Center, as well as the intersections of Davis Avenue with East Post Road and Maple Avenue), and visitor and employee parking information provided by the Hospital, the Hospital's current peak-hour trip generation was calculated and is presented in **Table 3**.

Table 3 – Existing Hospital Peak-Hour Trip Generation

Peak Hour	In	Out	Total
AM	435	168	603
Midday	281	452	733
PM	308	532	840

As discussed in Section 4.0, activity at the existing CAMS and Cancer Center buildings was forecast to increase by 2% per year from 2022 to 2033 (24% total). Further, even without the construction of a new building, patient demand for hospital services is projected to increase. To account for this, traffic volumes associated with Hospital employees and valets who currently park in the parking areas serving the main Hospital building (Davis garage, Lincoln Lot, and 11 East Post Road parking lot) were reassigned to park in the West Campus Lot and increased by 15% because, in the short term.

Increase in overall hospital traffic prior to the construction of the new building are shown in **Table 4**.

**Table 4 – Short-term Hospital Peak-Hour Trip Generation
(Without Expansion)**

Peak Hour	In	Out	Total
AM	533	206	739
Midday	340	549	889
PM	379	654	1033

With the completion of the new building and the addition of 144 additional beds, Hospital Trips are projected to increase further, as indicated in **Table 5**.

Table 5 – 2033 Hospital Peak-Hour Trip Generation (With Expansion)

Peak Hour	In	Out	Total
AM	576	222	798
Midday	378	606	984
PM	406	701	1107

5.3 Hospital Trip Growth and Reassignment

When the new building opens, it is proposed to relocate approximately 1,100 Hospital employees that formerly parked in various parking areas around the site to the East Post Road garage and to relocate patients to self-park in the West Campus Lot. Valets associated with CAMS and the Cancer Center will continue to park in the 2 Oakwood Avenue parking lot and in the Longview Avenue parking garage, while valets associated with patients at the Main Hospital Entrance will be relocated to park in the West Campus Lot Longview Avenue parking garage or in the 33 Davis Avenue parking lot. Thus, traffic and parking volumes and patterns are expected to change significantly in the future, as described below.

Completion of the new building will provide approximately 50% more beds than exist today, so existing traffic volumes associated with Hospital employees who currently park in the parking areas serving the main Hospital building (Davis garage, Lincoln parking lot, and 11 East Post Road parking lot) were increased by 50% and reassigned to park in the East Post Road garage.

Existing trips associated with employees parking in the Lyon Place and Longview Avenue parking garages were reassigned to park in the East Post Road garage and increased by 45% to account for the fact that some, but not all, will be relocated, leaving available spaces for potential future employees in the existing parking garages.

Existing traffic volumes associated with patients that self-park in the Davis garage, Chester Avenue/Maple Avenue parking garage, and Longview Avenue parking garage, were reassigned to park in the West Campus Lot and increased by 50%, to reflect the increased capacity of the new building.

Existing traffic volumes associated with any patients that self-park in the 33 Davis Avenue parking lot were reassigned to park in the West Campus Lot and increased by 50%, to reflect the potential need to use some of the parking in this lot for valet parking.

As previously discussed, the Hospital's CAMS and Cancer Center existing valet trips were increased by 24% to account for a general background growth of 2% per year for 11 years and will continue to park in the 2 Oakwood Avenue parking lot and Longview Avenue parking garage. Similarly, existing trips associated with the Hospital's Emergency Department were increased by 24% to account for general background growth and were split evenly between the existing Emergency Department public and the proposed Emergency Department ambulance driveways.

The Hospital's CAMS and Cancer Center existing self-park patient trips were increased by 24% to account for general background growth and reassigned to park in the West Campus Lot, where this additional growth can be accommodated.

The Main Hospital Entrance's existing valet trips were increased by 50% to reflect the increase in capacity of the new building and were reassigned to park in the West Campus Lot and in the 33 Davis Avenue parking lot.

Existing traffic volumes associated with employees parking in the 79 East Post Road and Chester Avenue/Maple Avenue parking garages were not grown or reassigned, as they were assumed to be at their maximum capacity for the Hospital.

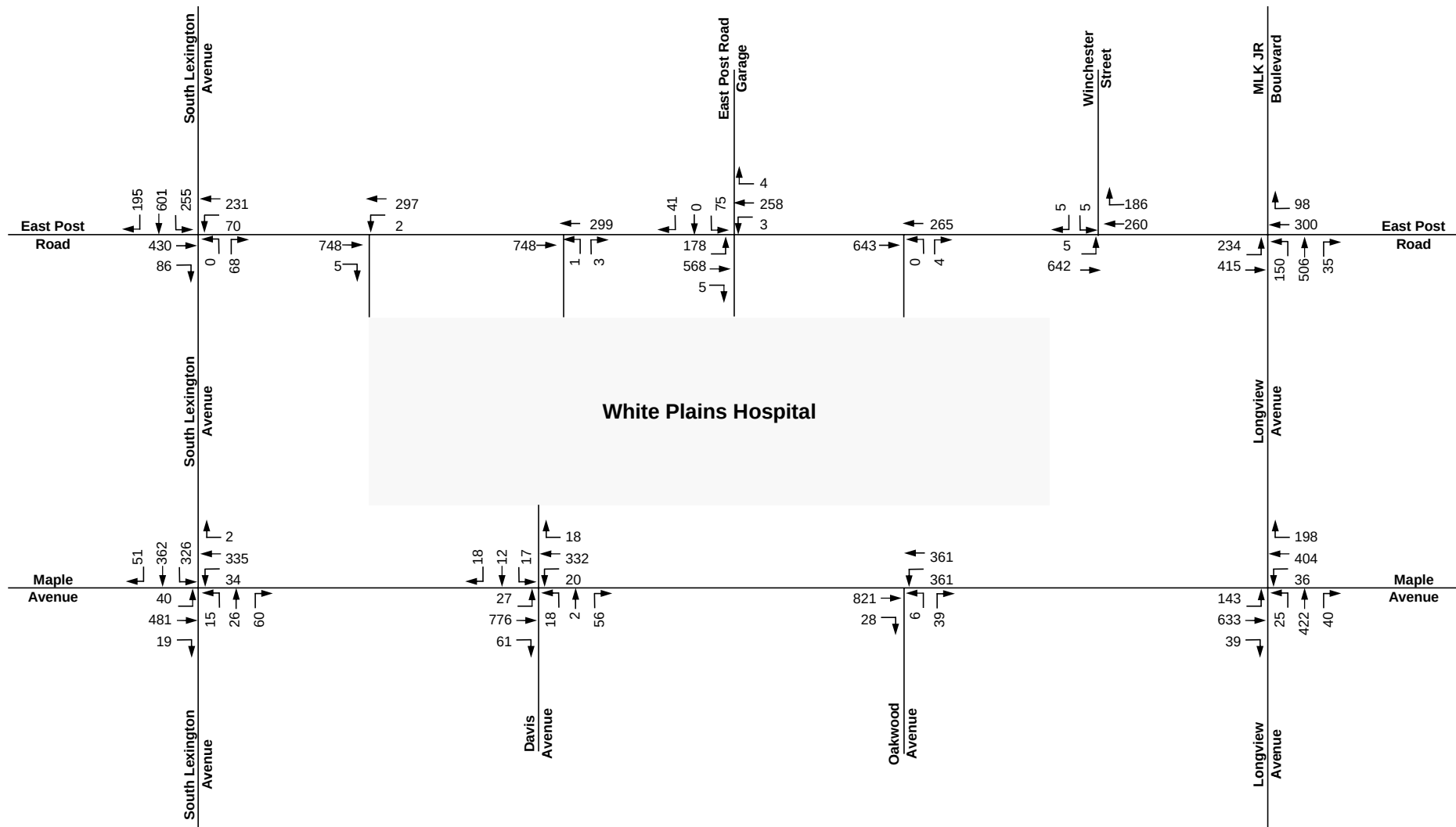
The net change in traffic volumes, from the present time to 2033 is presented in **Table 6**.

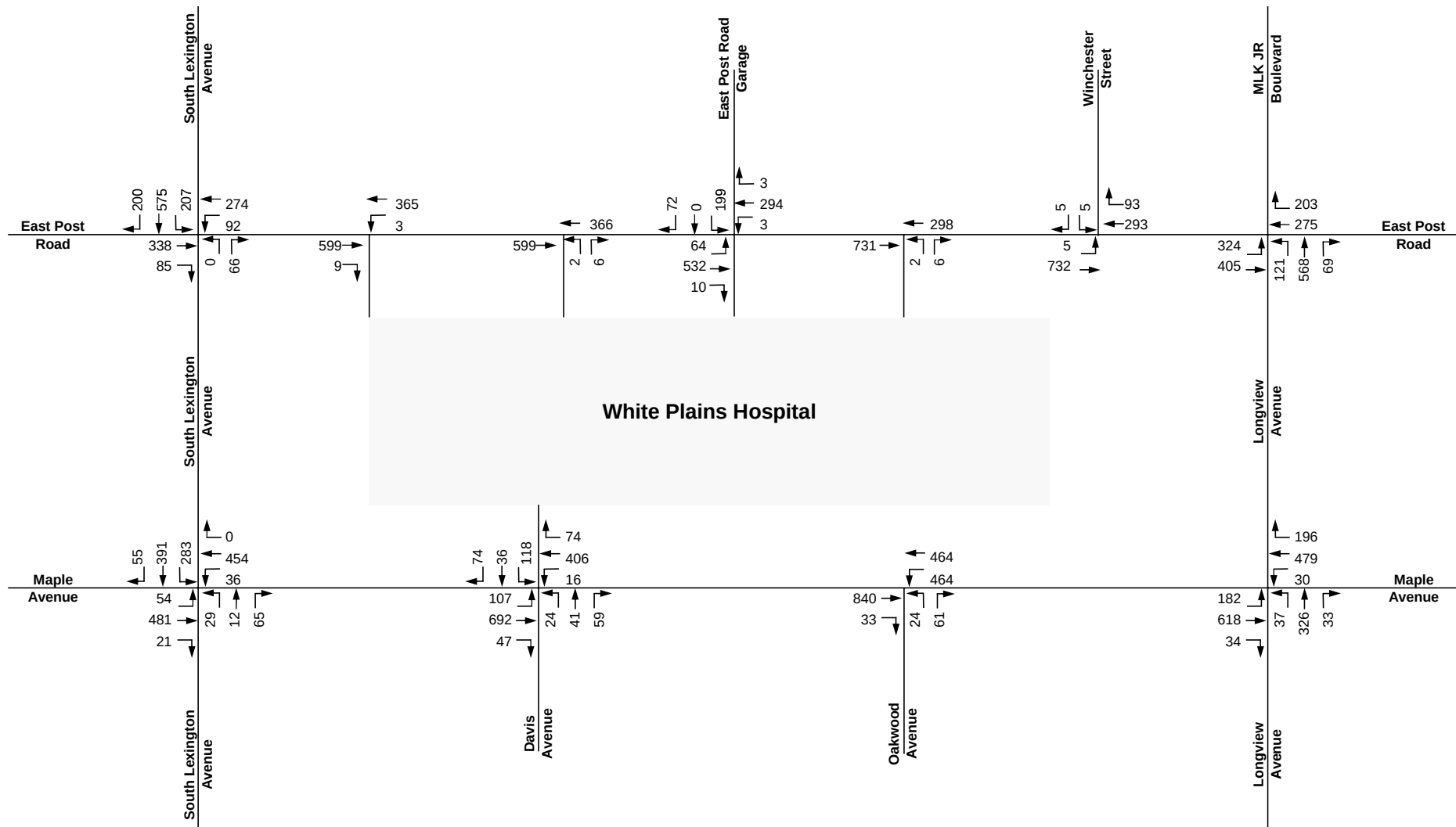
**Table 6 – Net Change in Peak-Hour Hospital Traffic Volumes by 2033
(With Expansion)**

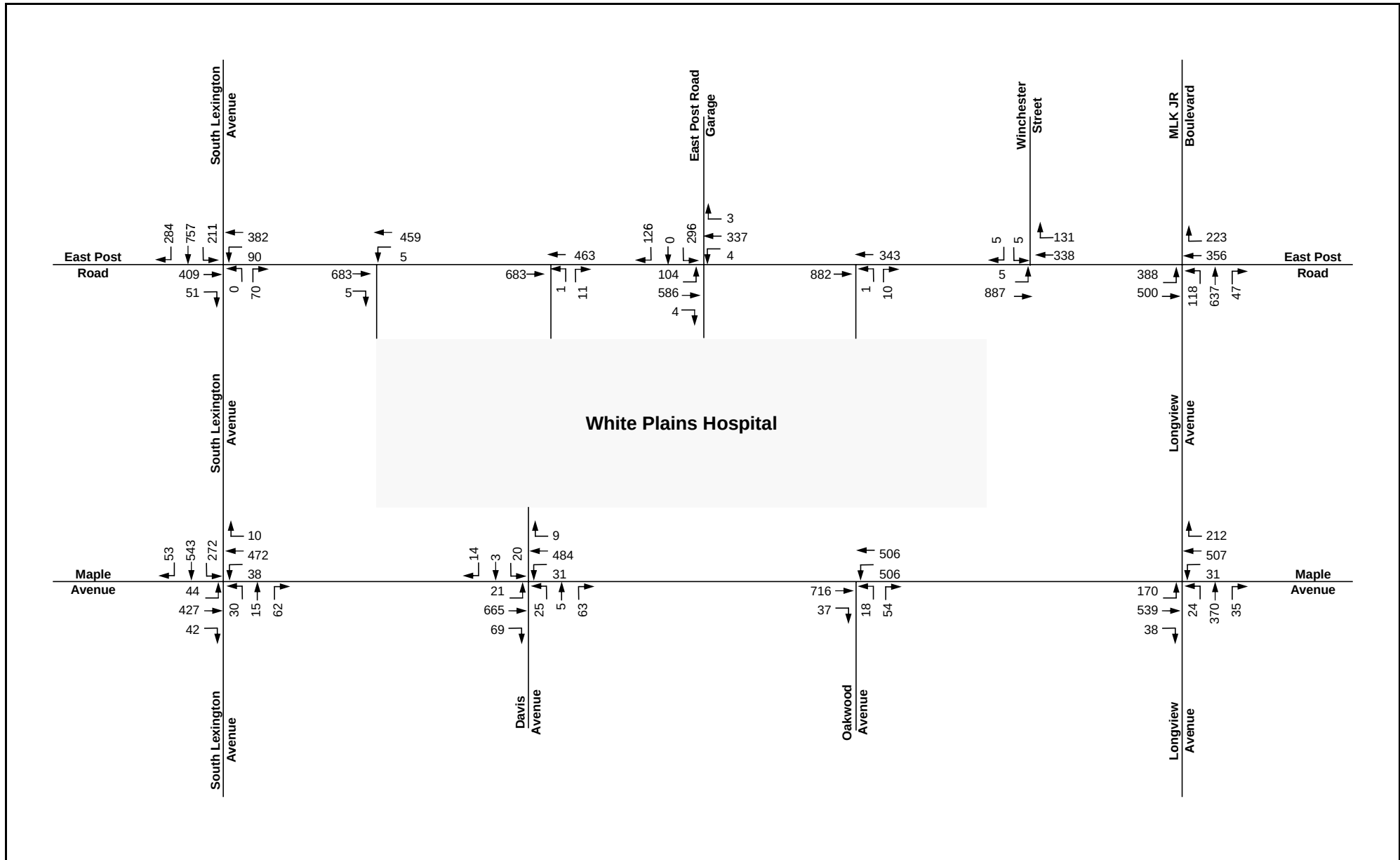
Peak Hour	In	Out	Total
AM	141	54	195
Midday	97	154	251
PM	98	169	267

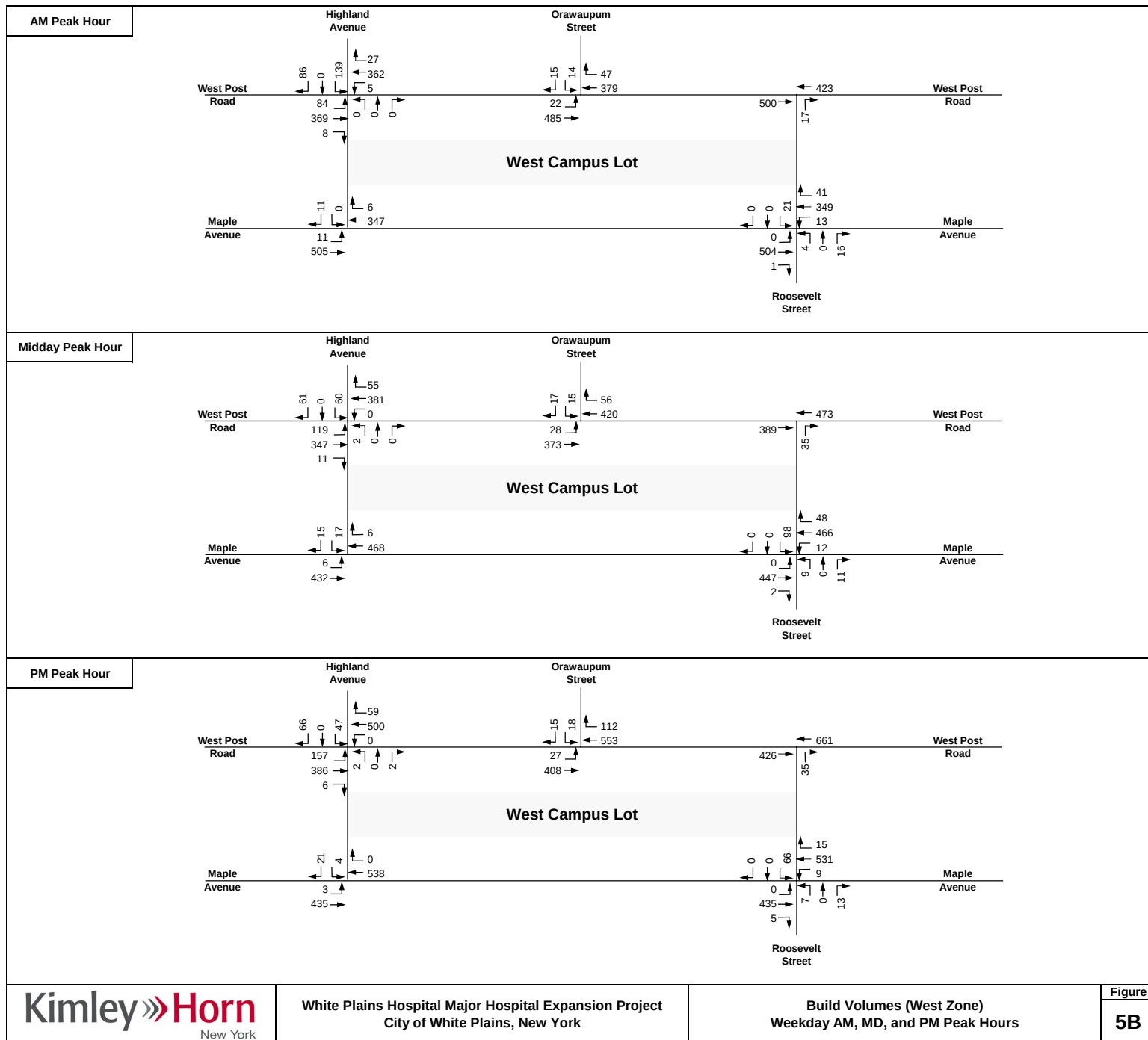
5.4 Build Traffic Volumes

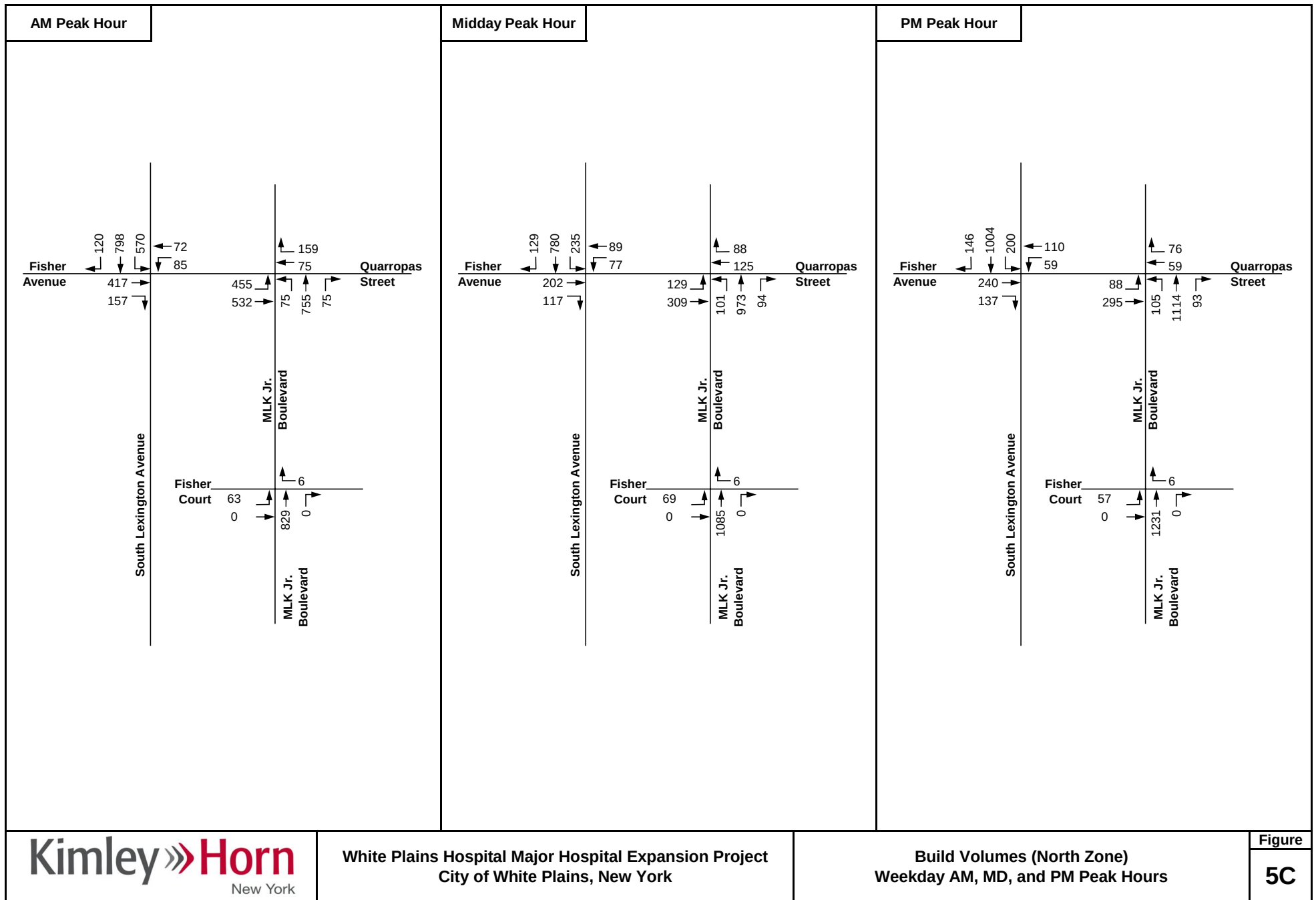
The traffic volumes from the six (6) vicinity developments (shown on Figures 3A-1 to 3D) were added to the grown and reassigned Hospital and non-Hospital volumes, and reassigned traffic associated with the 500 City-owned parking spaces in the East Post Road garage, to represent the future conditions with the Project ("Build"). The Build peak-hour volumes for the AM, MD, and PM peak hours are shown on **Figures 5A-1 to 5D**.

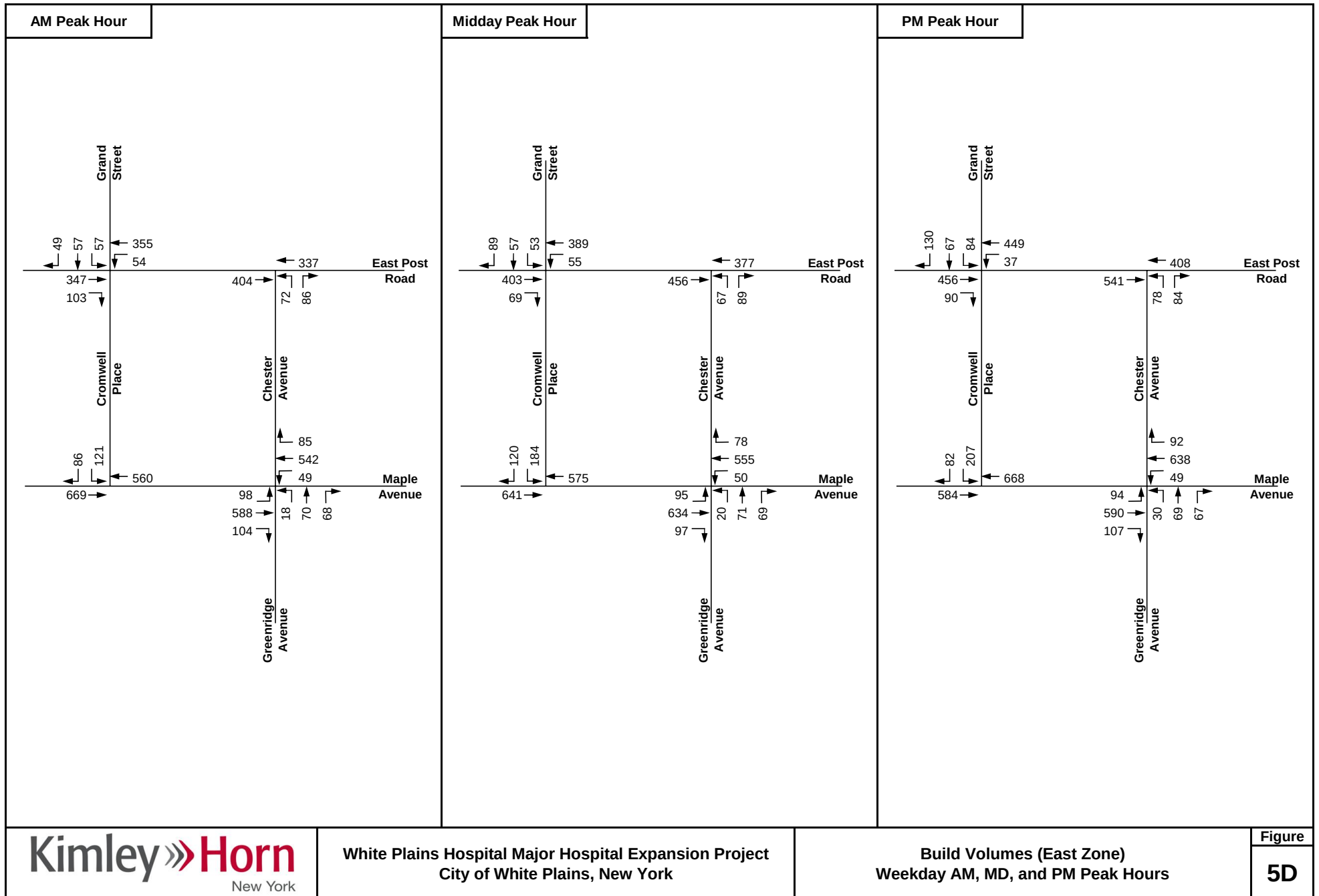












6.0 CAPACITY ANALYSIS

6.1 Intersection Capacity Analysis

An intersection capacity analysis was conducted with the Existing, No-Build, and Build peak-hour traffic volumes (shown on Figures 2A-1 to 2D, 4A-1 to 4D, and 5A-1 to 5D) to assess the quality of the traffic flow at the study intersections.

The criteria used to analyze the study intersections is based on the evaluation criteria contained in the Transportation Research Board's *Highway Capacity Manual* ("HCM") 6th Edition. The term "level of service" ("LOS") is used to denote the different operating conditions that occur at an intersection under various traffic volume loads. It is a qualitative measure that considers a number of factors including roadway geometry, speed, travel delay, and freedom to maneuver. LOS provides an index to the operational qualities of a roadway segment or an intersection. LOS designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions.

Synchro 11 software was used to model the study intersections based on the parameters mentioned above. Synchro 11 software is widely used by traffic engineering professionals, is approved for use by the NYSDOT, and is consistent with the procedures in the HCM.

The LOS designations, which are based on delay, are reported differently for signalized and unsignalized intersections. For signalized intersections, LOS is based on the average control delay per vehicle for the various lane group movements within the intersection. LOS can be reported for individual turning movements, approaches, or for the intersection as a whole. For unsignalized intersections, the analysis assumes that traffic on the mainline is not affected by traffic on the side streets. Thus, the LOS designation is for the critical movement exiting the side street, which is generally the left turn out of the side street or side driveway. For the purposes of this analysis, control delay is defined as the total elapsed time that includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. The control delay criteria for the range of service levels for signalized and unsignalized intersections are shown below in **Table 7**.

Table 7 – LOS Criteria		
Level-of-Service (LOS)	Control Delay Per Vehicle	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10.0 seconds	≤ 10.0 seconds
B	>10.0 and ≤ 20.0 seconds	>10.0 and ≤ 15.0 seconds
C	>20.0 and ≤ 35.0 seconds	>15.0 and ≤ 25.0 seconds
D	>35.0 and ≤ 55.0 seconds	>25.0 and ≤ 35.0 seconds
E	>55.0 and ≤ 80.0 seconds	>35.0 and ≤ 50.0 seconds
F	>80.0 seconds	>50.0 seconds

Source: Transportation Research Board. *Highway Capacity Manual*.

A summary of results of the intersection analysis for the Existing conditions for the three peak hours are shown in **Table 8** below. The full results of the intersection analysis and associated Synchro worksheets are provided in the Appendix.

Table 8 – Intersection Capacity Analysis Results, Existing Conditions				
Peak Hour		AM	MD	PM
Approach	Movement	LOS (Delay)	LOS (Delay)	LOS (Delay)
Intersection 2: Maple Avenue & Roosevelt Street				
Eastbound (Maple Avenue)	EB Approach	A (0.0)	A (0.0)	A (0.0)
Westbound (Maple Avenue)	WB Approach	A (0.4)	A (0.3)	A (0.2)
Northbound (Roosevelt Street)	NB Approach	B (11.9)	B (11.7)	B (11.7)
Intersection 3: South Lexington Avenue & Maple Avenue				
Overall Intersection		D (37.6)	C (25.7)	C (21.0)
Eastbound (Maple Avenue)	EB Approach	C (21.7)	C (32.2)	D (35.1)
Westbound (Maple Avenue)	WB Approach	A (8.6)	C (34.9)	B (18.7)
Northbound (South Lexington Avenue)	NB Approach	D (36.6)	C (22.6)	C (23.6)
Southbound (South Lexington Avenue)	SB Approach	E (61.7)	B (17.0)	B (14.6)
Intersection 4: Maple Avenue & Davis Avenue				
Overall Intersection		B (15.7)	C (20.3)	B (15.6)
Eastbound (Maple Avenue)	EB Approach	B (19.6)	B (14.9)	B (15.2)
Westbound (Maple Avenue)	WB Approach	A (4.9)	C (31.2)	B (15.2)
Northbound (Davis Avenue)	NB Approach	B (18.9)	B (12.7)	B (16.7)
Southbound (Davis Avenue)	SB Approach	C (24.6)	B (18.8)	C (20.5)
Intersection 5: Maple Avenue & Oakwood Avenue				
Overall Intersection		A (2.0)	A (2.4)	A (7.1)
Eastbound (Maple Avenue)	EB Approach	A (1.6)	A (1.9)	A (8.1)
Westbound (Maple Avenue)	WB Approach	A (1.2)	A (0.9)	A (4.6)
Northbound (Oakwood Avenue)	NB Approach	B (14.7)	B (15.5)	B (15.9)
Intersection 6: Maple Avenue & Longview Avenue				
Overall Intersection		B (16.9)	B (18.4)	B (14.0)
Eastbound (Maple Avenue)	EB Approach	A (3.1)	A (3.2)	A (7.8)
Westbound (Maple Avenue)	WB Approach	B (18.7)	C (26.1)	A (7.5)
Northbound (Longview Avenue)	NB Approach	D (38.3)	C (34.4)	D (37.8)
Intersection 7: Maple Avenue & Cromwell Place				
Overall Intersection		B (12.7)	C (20.6)	B (14.9)
Eastbound (Maple Avenue)	EB Approach	B (10.1)	C (28.2)	A (6.0)
Westbound (Maple Avenue)	WB Approach	A (5.6)	B (12.7)	B (11.9)
Southbound (Cromwell Place)	SB Approach	D (39.1)	C (20.2)	D (42.3)

Table 8 – Intersection Capacity Analysis Results, Existing Conditions

Peak Hour		AM	MD	PM
Approach	Movement	LOS (Delay)	LOS (Delay)	LOS (Delay)
Intersection 8: Maple Avenue & Chester Avenue/Greenridge Avenue				
Overall Intersection		B (14.6)	B (14.4)	B (10.9)
Eastbound (Maple Avenue)	EB Approach	B (15.5)	B (15.3)	A (5.9)
Westbound (Maple Avenue)	WB Approach	B (12.9)	B (13.0)	B (14.4)
Northbound (Greenridge Avenue)	NB Approach	B (16.8)	B (15.3)	B (17.7)
Intersection 9: South Lexington Avenue & Lincoln Lot/Davis Garage				
Westbound (Davis Garage)	WB Approach	A (0.0)	A (9.7)	A (9.8)
Southbound (South Lexington Avenue)	SB Approach	A (0.5)	A (0.1)	A (0.0)
Intersection 10: Davis Avenue & Davis Garage/Main Hospital Entrance				
Eastbound (Davis Garage)	EB Approach	A (9.2)	B (11.0)	A (10.0)
Westbound (Main Hospital Entrance)	WB Approach	B (11.6)	B (11.4)	A (10.0)
Northbound (Davis Avenue)	NB Approach	A (3.3)	A (0.6)	A (2.9)
Intersection 11: West Post Road & Highland Avenue				
Eastbound (West Post Road)	EB Approach	A (2.6)	A (3.6)	A (5.0)
Westbound (West Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Southbound (Highland Avenue)	SB Approach	D (31.8)	C (23.4)	D (25.7)
Intersection 12: West Post Road & Orawaupum Street				
Eastbound (West Post Road)	EB Approach	A (0.7)	A (1.0)	A (1.2)
Westbound (West Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Southbound (Orawaupum Street)	SB Approach	B (14.6)	B (15.0)	C (17.2)
Intersection 13: West Post Road & Lincoln Lot				
Eastbound (West Post Road)	EB Approach	A (0.0)	A (0.0)	A (0.0)
Westbound (West Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Northbound (Lincoln Lot)	NB Approach	B (12.0)	B (11.3)	B (11.5)
Intersection 14: South Lexington Avenue & West Post Road/East Post Road				
Overall Intersection		B (18.3)	B (17.4)	B (19.1)
Eastbound (West Post Road)	EB Approach	B (14.4)	C (23.7)	C (24.6)
Westbound (East Post Road)	WB Approach	B (14.0)	C (22.1)	C (29.8)
Southbound (South Lexington Avenue)	SB Approach	C (21.3)	B (13.4)	B (14.0)
Intersection 15: East Post Road & Davis Avenue				
Eastbound (East Post Road)	EB Approach	A (0.0)	A (0.0)	A (0.0)
Westbound (East Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Northbound (Davis Avenue)	NB Approach	B (13.5)	B (13.3)	B (13.0)

Table 8 – Intersection Capacity Analysis Results, Existing Conditions

Peak Hour		AM	MD	PM
Approach	Movement	LOS (Delay)	LOS (Delay)	LOS (Delay)
Intersection 16: East Post Road & Emergency Department Entrance				
Eastbound (East Post Road)	EB Approach	A (0.0)	A (0.0)	A (0.0)
Westbound (East Post Road)	WB Approach	A (0.2)	A (0.2)	A (0.2)
Intersection 17: East Post Road & Emergency Department Exit				
Eastbound (East Post Road)	EB Approach	A (0.0)	A (0.0)	A (0.0)
Westbound (East Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Northbound (Emergency Department Exit)	NB Approach	B (12.9)	B (13.3)	B (12.7)
Intersection 18: East Post Road & Longview Avenue/Dr. Martin Luther King Jr Boulevard				
Overall Intersection		C (20.8)	C (22.0)	B (19.2)
Eastbound (East Post Road)	EB Approach	A (10.0)	B (15.6)	B (15.5)
Westbound (East Post Road)	WB Approach	C (22.6)	C (29.8)	B (10.2)
Northbound (Longview Avenue)	NB Approach	C (30.1)	C (22.2)	C (28.0)
Intersection 19: East Post Road & Cromwell Place/Grand Street				
Overall Intersection		B (16.5)	B (17.4)	B (10.9)
Eastbound (East Post Road)	EB Approach	B (11.7)	B (10.1)	A (2.4)
Westbound (East Post Road)	WB Approach	B (16.8)	C (21.4)	A (5.5)
Southbound (Grand Street)	SB Approach	C (28.6)	C (23.4)	C (29.4)
Intersection 20: East Post Road & Chester Avenue				
Overall Intersection		A (9.1)	B (13.0)	B (12.8)
Eastbound (East Post Road)	EB Approach	A (4.2)	A (9.9)	B (11.5)
Westbound (East Post Road)	WB Approach	A (9.5)	B (11.5)	B (13.5)
Northbound (Chester Avenue)	NB Approach	C (20.5)	C (24.1)	B (14.5)
Intersection 21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage				
Overall Intersection		B (10.9)	B (11.4)	A (4.4)
Eastbound (Fisher Court)	EB Approach	D (39.1)	D (36.2)	D (38.5)
Westbound (Parking Garage)	WB Approach	C (32.8)	C (29.8)	C (32.6)
Northbound (Dr. Martin Luther King Jr Boulevard)	NB Approach	A (8.5)	A (9.5)	A (2.4)
Intersection 22: South Lexington Avenue & Fisher Avenue/Quarropas Street				
Overall Intersection		C (25.0)	C (23.8)	C (23.3)
Eastbound (Fisher Avenue)	EB Approach	C (21.6)	C (20.9)	C (25.3)
Westbound (Quarropas Street)	WB Approach	B (10.1)	B (12.6)	B (19.5)
Southbound (South Lexington Avenue)	SB Approach	C (28.1)	C (26.3)	C (23.3)

Table 8 – Intersection Capacity Analysis Results, Existing Conditions				
Peak Hour		AM	MD	PM
Approach	Movement	LOS (Delay)	LOS (Delay)	LOS (Delay)
Intersection 23: Dr. Martin Luther King Jr Boulevard & Quarropas Street				
Overall Intersection		C (24.0)	D (43.7)	C (23.4)
Eastbound (Quarropas Street)	EB Approach	B (14.6)	B (11.6)	B (12.7)
Westbound (Quarropas Street)	WB Approach	B (13.6)	B (13.4)	B (14.1)
Northbound (Dr. Martin Luther King Jr Boulevard)	NB Approach	D (37.9)	E (63.0)	C (28.1)
Intersection 27: East Post Road & Winchester Street				
Eastbound (East Post Road)	EB Approach	A (0.1)	A (0.1)	A (0.1)
Westbound (East Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Southbound (Winchester Street)	SB Approach	B (13.3)	B (13.7)	B (14.3)

Note: LOS = Level of Service. Delay is shown in seconds.

A summary of results of the intersection analysis for the No-Build conditions for the three peak hours are shown in **Table 9** below. The full results of the intersection analysis and associated Synchro worksheets are provided in the Appendix.

Table 9 – Intersection Capacity Analysis Results, No-Build Conditions				
Peak Hour		AM	MD	PM
Approach	Movement	LOS (Delay)	LOS (Delay)	LOS (Delay)
Intersection 1: Maple Avenue & West Campus Lot Southwest Driveway				
Eastbound (Maple Avenue)	EB Approach	A (0.4)	A (0.0)	A (0.3)
Westbound (Maple Avenue)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Southbound (West Campus Lot Southwest Driveway)	SB Approach	B (11.7)	B (14.3)	B (11.5)
Intersection 2: Maple Avenue & Roosevelt Street/West Campus Lot Southeast Driveway				
Eastbound (Maple Avenue)	EB Approach	A (0.0)	A (0.0)	A (0.0)
Westbound (Maple Avenue)	WB Approach	A (0.3)	A (0.3)	A (0.2)
Northbound (Roosevelt Street)	NB Approach	B (12.2)	B (12.7)	B (12.3)
Southbound (West Campus Lot Southeast Driveway)	SB Approach	C (16.9)	C (21.7)	C (20.2)
Intersection 3: South Lexington Avenue & Maple Avenue				
Overall Intersection		D (40.2)	C (29.2)	C (23.7)
Eastbound (Maple Avenue)	EB Approach	C (22.0)	D (37.7)	D (38.5)
Westbound (Maple Avenue)	WB Approach	B (11.3)	C (34.1)	B (20.0)
Northbound (South Lexington Avenue)	NB Approach	D (36.2)	C (22.8)	C (24.1)
Southbound (South Lexington Avenue)	SB Approach	E (68.8)	C (20.1)	B (16.7)

Table 9 – Intersection Capacity Analysis Results, No-Build Conditions

Peak Hour		AM	MD	PM
Approach	Movement	LOS (Delay)	LOS (Delay)	LOS (Delay)
Intersection 4: Maple Avenue & Davis Avenue				
Overall Intersection		B (16.5)	C (24.3)	B (15.0)
Eastbound (Maple Avenue)	EB Approach	C (20.7)	C (22.6)	B (14.6)
Westbound (Maple Avenue)	WB Approach	A (7.1)	C (33.1)	B (14.9)
Northbound (Davis Avenue)	NB Approach	B (19.0)	B (13.2)	B (18.4)
Southbound (Davis Avenue)	SB Approach	A (9.4)	B (12.8)	B (19.2)
Intersection 5: Maple Avenue & Oakwood Avenue				
Overall Intersection		A (1.7)	A (2.4)	A (7.5)
Eastbound (Maple Avenue)	EB Approach	A (1.3)	A (2.1)	A (8.1)
Westbound (Maple Avenue)	WB Approach	A (1.2)	A (0.9)	A (5.8)
Northbound (Oakwood Avenue)	NB Approach	B (14.4)	B (14.8)	B (15.7)
Intersection 6: Maple Avenue & Longview Avenue				
Overall Intersection		B (17.4)	C (20.5)	B (15.1)
Eastbound (Maple Avenue)	EB Approach	A (3.6)	A (4.4)	A (9.3)
Westbound (Maple Avenue)	WB Approach	B (19.4)	C (29.3)	A (8.2)
Northbound (Longview Avenue)	NB Approach	D (38.2)	D (35.5)	D (38.4)
Intersection 7: Maple Avenue & Cromwell Place				
Overall Intersection		B (13.8)	C (21.7)	B (17.1)
Eastbound (Maple Avenue)	EB Approach	B (11.6)	C (30.0)	A (6.8)
Westbound (Maple Avenue)	WB Approach	A (6.0)	B (13.8)	B (13.7)
Southbound (Cromwell Place)	SB Approach	D (39.1)	C (20.6)	D (44.6)
Intersection 8: Maple Avenue & Chester Avenue/Greenridge Avenue				
Overall Intersection		B (15.6)	B (14.8)	B (11.5)
Eastbound (Maple Avenue)	EB Approach	B (16.7)	B (15.8)	A (6.3)
Westbound (Maple Avenue)	WB Approach	B (14.0)	B (13.5)	B (15.2)
Northbound (Greenridge Avenue)	NB Approach	B (16.8)	B (15.3)	B (17.7)
Intersection 11: West Post Road & Highland Avenue/West Campus Lot Northwest Driveway				
Eastbound (West Post Road)	EB Approach	A (2.7)	A (3.7)	A (5.0)
Westbound (West Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Northbound (West Campus Lot Northwest Driveway)	NB Approach	D (32.1)	D (29.0)	F (51.2)
Southbound (Highland Avenue)	SB Approach	F (109.2)	F (51.8)	F (81.1)
Intersection 12: West Post Road & Orawaupum Street				
Eastbound (West Post Road)	EB Approach	A (0.8)	A (1.1)	A (1.2)
Westbound (West Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Southbound (Orawaupum Street)	SB Approach	C (17.5)	C (18.3)	C (23.9)

Table 9 – Intersection Capacity Analysis Results, No-Build Conditions

Peak Hour		AM	MD	PM
Approach	Movement	LOS (Delay)	LOS (Delay)	LOS (Delay)
Intersection 14: South Lexington Avenue & West Post Road/East Post Road				
Overall Intersection		C (22.9)	B (18.1)	C (25.9)
Eastbound (West Post Road)	EB Approach	B (16.5)	C (29.3)	D (35.8)
Westbound (East Post Road)	WB Approach	B (16.0)	D (36.5)	D (38.2)
Southbound (South Lexington Avenue)	SB Approach	C (27.4)	A (6.2)	B (18.4)
Intersection 15: East Post Road & Davis Avenue				
Eastbound (East Post Road)	EB Approach	A (0.0)	A (0.0)	A (0.0)
Westbound (East Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Northbound (Davis Avenue)	NB Approach	B (14.8)	C (15.4)	B (14.6)
Intersection 16: East Post Road & East Post Road Garage/Emergency Department Entrance				
Overall Intersection		A (8.2)	A (9.0)	A (9.1)
Eastbound (East Post Road)	EB Approach	A (8.6)	A (9.6)	A (9.6)
Westbound (East Post Road)	WB Approach	A (7.0)	A (8.0)	A (8.1)
Southbound (East Post Road Garage)	SB Approach	A (8.2)	A (8.5)	A (9.4)
Intersection 17: East Post Road & Emergency Department Exit				
Eastbound (East Post Road)	EB Approach	A (0.0)	A (0.0)	A (0.0)
Westbound (East Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Northbound (Public Emergency Department Exit)	NB Approach	B (11.0)	B (12.0)	B (11.0)
Intersection 18: East Post Road & Longview Avenue/Dr. Martin Luther King Jr Boulevard				
Overall Intersection		C (25.1)	C (27.3)	C (28.4)
Eastbound (East Post Road)	EB Approach	B (18.0)	C (26.0)	C (29.9)
Westbound (East Post Road)	WB Approach	C (27.4)	C (33.0)	B (16.2)
Northbound (Longview Avenue)	NB Approach	C (31.1)	C (25.1)	C (35.0)
Intersection 19: East Post Road & Cromwell Place/Grand Street				
Overall Intersection		B (18.7)	B (18.6)	B (10.9)
Eastbound (East Post Road)	EB Approach	B (15.2)	B (10.7)	A (3.1)
Westbound (East Post Road)	WB Approach	B (18.6)	C (24.4)	A (6.1)
Southbound (Grand Street)	SB Approach	C (28.9)	C (24.1)	C (30.2)
Intersection 20: East Post Road & Chester Avenue				
Overall Intersection		A (9.6)	B (14.8)	B (13.2)
Eastbound (East Post Road)	EB Approach	A (5.6)	B (14.0)	B (12.1)
Westbound (East Post Road)	WB Approach	A (9.7)	B (11.7)	B (13.8)
Northbound (Chester Avenue)	NB Approach	C (20.5)	C (23.8)	B (14.8)

Table 9 – Intersection Capacity Analysis Results, No-Build Conditions				
Peak Hour		AM	MD	PM
Approach	Movement	LOS (Delay)	LOS (Delay)	LOS (Delay)
Intersection 21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage				
Overall Intersection		B (10.8)	B (11.0)	A (5.6)
Eastbound (Fisher Court)	EB Approach	D (39.4)	D (36.5)	D (38.7)
Westbound (Parking Garage)	WB Approach	C (32.8)	C (29.8)	C (32.8)
Northbound (Dr. Martin Luther King Jr Boulevard)	NB Approach	A (8.5)	A (9.2)	A (3.9)
Intersection 22: South Lexington Avenue & Fisher Avenue/Quarropas Street				
Overall Intersection		C (25.1)	C (22.3)	C (23.1)
Eastbound (Fisher Avenue)	EB Approach	C (23.1)	C (23.7)	C (28.2)
Westbound (Quarropas Street)	WB Approach	B (10.9)	C (20.5)	C (21.8)
Southbound (South Lexington Avenue)	SB Approach	C (27.4)	C (22.2)	C (21.8)
Intersection 23: Dr. Martin Luther King Jr Boulevard & Quarropas Street				
Overall Intersection		C (28.1)	E (66.1)	C (24.0)
Eastbound (Quarropas Street)	EB Approach	B (16.6)	C (20.3)	B (16.9)
Westbound (Quarropas Street)	WB Approach	B (14.5)	B (13.9)	B (15.6)
Northbound (Dr. Martin Luther King Jr Boulevard)	NB Approach	D (44.2)	F (92.9)	C (26.9)
Intersection 24: West Post Road & West Campus Lot Northeast Driveway				
Eastbound (West Post Road)	EB Approach	A (0.0)	A (0.0)	A (0.0)
Westbound (West Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Northbound (West Campus Lot Northeast Driveway)	NB Approach	B (12.2)	B (11.8)	B (12.2)
Intersection 27: East Post Road & Winchester Street				
Eastbound (East Post Road)	EB Approach	A (0.1)	A (0.1)	A (0.1)
Westbound (East Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Southbound (Winchester Street)	SB Approach	B (12.8)	B (13.4)	B (14.2)
Intersection 28: Winchester Street & East Post Road Garage				
Northbound (Winchester Street)	NB Approach	A (6.7)	A (6.4)	A (6.4)
Southbound (Winchester Street)	SB Approach	A (0.0)	A (0.0)	A (0.0)

Note: LOS = Level of Service. Delay is shown in seconds.

As part of the proposed Project, the following improvements were implemented at the study intersections:

- Maple Avenue & South Lexington Avenue
 - Converting the north leg to two-way traffic flow
 - Restriping the northbound right-turn lane to a northbound shared through/right-turn lane and updating the signage on the mast arm to reflect the same
 - Removal of the “One Way Traffic Ahead” sign on the south leg
 - Removal of the “One Way” signs on the north leg
 - Removal of the “Do Not Enter” signs on the north leg

- Removal of the eastbound “No Left-Turn” sign on the east leg mast arm
- Removal of the westbound “No Right-Turn” sign on the west leg mast arm
- Maple Avenue & Davis Avenue/Main Hospital Entrance
 - Reconfiguring the north leg to provide access to valet and patient drop-off and pick-up loops
 - Restriping the southbound left-turn lane to a southbound shared through/left-turn lane
 - Restriping the southbound shared through/right-turn lane to a southbound right-turn only lane
- West Post Road/East Post Road & South Lexington Avenue
 - Converting the south leg to two-way traffic flow
 - Minor widening of the south leg to provide a northbound right-turn lane and two (2) southbound lanes
 - Signal timing modification to accommodate northbound traffic
 - Add a second “Do No Enter” sign on the north leg
 - Removal of the “One Way” signs on the south leg
- Eliminate the intersection of East Post Road & Davis Avenue by discontinuing the south leg
- Separate the Emergency Department ambulance drop-off/pick-up area from the existing Emergency Department public drop-off/pick-up area, creating one entrance driveway and one exit driveway on East Post Road between South Lexington Avenue and the existing Emergency Department public entrance driveway
- Make permanent the traffic signal at Maple Avenue & Oakwood Avenue
- Implement emergency-vehicle traffic signal preemption for the traffic signals adjacent to the Emergency Department, as permitted by the City.

The above improvements are reflected in the results of the intersection analysis for the Build volume conditions summarized in **Table 10** for the AM, MD, and PM peak hours, respectively. The full results of the intersection analysis and associated Synchro worksheets are provided in the Appendix.

Table 10 – Intersection Capacity Analysis Results, Build Conditions

Peak Hour		AM	MD	PM
Approach	Movement	LOS (Delay)	LOS (Delay)	LOS (Delay)
Intersection 1: Maple Avenue & West Campus Lot Southwest Driveway				
Eastbound (Maple Avenue)	EB Approach	A (0.2)	A (0.1)	A (0.1)
Westbound (Maple Avenue)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Southbound (West Campus Lot Southwest Driveway)	SB Approach	A (9.8)	B (12.9)	B (10.2)
Intersection 2: Maple Avenue & Roosevelt Street/West Campus Lot Southeast Driveway				
Eastbound (Maple Avenue)	EB Approach	A (0.0)	A (0.0)	A (0.0)
Westbound (Maple Avenue)	WB Approach	A (0.4)	A (0.3)	A (0.2)
Northbound (Roosevelt Street)	NB Approach	B (12.1)	B (12.7)	B (12.1)
Southbound (West Campus Lot Southeast Driveway)	SB Approach	C (17.1)	C (21.5)	C (20.0)
Intersection 3: South Lexington Avenue & Maple Avenue				
Overall Intersection		E (55.1)	C (33.3)	C (26.6)
Eastbound (Maple Avenue)	EB Approach	C (22.9)	D (46.2)	D (44.4)
Westbound (Maple Avenue)	WB Approach	B (11.2)	D (35.3)	B (19.3)
Northbound (South Lexington Avenue)	NB Approach	D (37.4)	C (22.9)	C (24.4)
Southbound (South Lexington Avenue)	SB Approach	F (103.2)	C (23.6)	C (20.8)
Intersection 4: Maple Avenue & Davis Avenue/Main Hospital Entrance				
Overall Intersection		B (15.9)	C (23.1)	B (14.5)
Eastbound (Maple Avenue)	EB Approach	B (19.7)	B (19.4)	B (14.9)
Westbound (Maple Avenue)	WB Approach	A (6.8)	C (32.2)	B (14.3)
Northbound (Davis Avenue)	NB Approach	B (13.9)	B (15.7)	B (12.3)
Southbound (Main Hospital Entrance)	SB Approach	B (19.4)	C (21.2)	B (15.6)
Intersection 5: Maple Avenue & Oakwood Avenue				
Overall Intersection		A (1.9)	A (3.4)	A (7.4)
Eastbound (Maple Avenue)	EB Approach	A (1.6)	A (3.7)	A (7.8)
Westbound (Maple Avenue)	WB Approach	A (1.2)	A (1.0)	A (5.8)
Northbound (Oakwood Avenue)	NB Approach	B (14.4)	B (14.8)	B (15.7)
Intersection 6: Maple Avenue & Longview Avenue				
Overall Intersection		B (17.5)	B (19.1)	B (14.5)
Eastbound (Maple Avenue)	EB Approach	A (4.3)	A (4.5)	A (9.1)
Westbound (Maple Avenue)	WB Approach	B (18.5)	C (27.1)	A (6.1)
Northbound (Longview Avenue)	NB Approach	D (38.2)	D (35.6)	D (38.4)
Intersection 7: Maple Avenue & Cromwell Place				
Overall Intersection		B (12.4)	C (22.6)	B (17.6)
Eastbound (Maple Avenue)	EB Approach	A (9.9)	C (32.0)	A (7.6)
Westbound (Maple Avenue)	WB Approach	A (5.8)	B (13.3)	B (14.2)
Southbound (Cromwell Place)	SB Approach	D (38.6)	C (20.3)	D (45.7)

Table 10 – Intersection Capacity Analysis Results, Build Conditions				
Peak Hour		AM	MD	PM
Approach	Movement	LOS (Delay)	LOS (Delay)	LOS (Delay)
Intersection 8: Maple Avenue & Chester Avenue/Greenridge Avenue				
Overall Intersection		B (15.3)	B (14.8)	B (11.6)
Eastbound (Maple Avenue)	EB Approach	B (16.1)	B (15.9)	A (7.0)
Westbound (Maple Avenue)	WB Approach	B (14.0)	B (13.3)	B (14.8)
Northbound (Greenridge Avenue)	NB Approach	B (16.8)	B (15.3)	B (17.7)
Intersection 11: West Post Road & Highland Avenue/West Campus Lot Northwest Driveway				
Eastbound (West Post Road)	EB Approach	A (2.5)	A (3.6)	A (5.2)
Westbound (West Post Road)	WB Approach	A (0.1)	A (0.0)	A (0.0)
Northbound (West Campus Lot Northwest Driveway)	NB Approach	A (0.0)	E (39.3)	E (41.8)
Southbound (Highland Avenue)	SB Approach	F (162.7)	F (50.0)	F (115.1)
Intersection 12: West Post Road & Orawaupum Street				
Eastbound (West Post Road)	EB Approach	A (0.7)	A (1.1)	A (1.2)
Westbound (West Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Southbound (Orawaupum Street)	SB Approach	C (18.7)	C (18.1)	D (27.4)
Intersection 14: South Lexington Avenue & West Post Road/East Post Road				
Overall Intersection		C (23.2)	B (17.8)	C (33.0)
Eastbound (West Post Road)	EB Approach	B (19.3)	C (29.9)	D (40.6)
Westbound (East Post Road)	WB Approach	B (17.0)	D (36.9)	E (68.6)
Northbound (South Lexington Avenue)	NB Approach	A (1.0)	A (5.4)	A (1.7)
Southbound (South Lexington Avenue)	SB Approach	C (28.2)	A (6.3)	B (18.5)
Intersection 16: East Post Road & East Post Road Garage/Emergency Department Entrance				
Overall Intersection		A (10.0)	B (12.6)	B (19.2)
Eastbound (East Post Road)	EB Approach	B (10.4)	B (12.2)	B (16.3)
Westbound (East Post Road)	WB Approach	A (6.4)	A (9.0)	B (10.1)
Southbound (East Post Road Garage)	SB Approach	B (15.2)	B (17.4)	C (31.2)
Intersection 17: East Post Road & Emergency Department Exit				
Eastbound (East Post Road)	EB Approach	A (0.0)	A (0.0)	A (0.0)
Westbound (East Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Northbound (Public Emergency Department Exit)	NB Approach	B (10.5)	B (12.6)	B (11.8)
Intersection 18: East Post Road & Longview Avenue/Dr. Martin Luther King Jr Boulevard				
Overall Intersection		C (27.6)	C (29.8)	D (39.4)
Eastbound (East Post Road)	EB Approach	B (19.2)	C (32.3)	E (59.5)
Westbound (East Post Road)	WB Approach	C (31.1)	C (34.9)	B (17.5)
Northbound (Longview Avenue)	NB Approach	C (33.4)	C (24.3)	C (33.1)

Table 10 – Intersection Capacity Analysis Results, Build Conditions				
Peak Hour		AM	MD	PM
Approach	Movement	LOS (Delay)	LOS (Delay)	LOS (Delay)
Intersection 19: East Post Road & Cromwell Place/Grand Street				
Overall Intersection		B (19.2)	B (18.7)	A (9.8)
Eastbound (East Post Road)	EB Approach	B (16.1)	B (10.9)	A (2.2)
Westbound (East Post Road)	WB Approach	B (18.8)	C (24.6)	A (6.5)
Southbound (Grand Street)	SB Approach	C (28.9)	C (24.1)	C (30.2)
Intersection 20: East Post Road & Chester Avenue				
Overall Intersection		A (9.4)	B (15.7)	B (13.0)
Eastbound (East Post Road)	EB Approach	A (4.9)	B (16.2)	B (11.8)
Westbound (East Post Road)	WB Approach	A (9.9)	B (11.9)	B (13.9)
Northbound (Chester Avenue)	NB Approach	B (19.8)	C (23.8)	B (14.6)
Intersection 21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage				
Overall Intersection		B (10.9)	B (10.5)	A (6.0)
Eastbound (Fisher Court)	EB Approach	D (39.4)	D (36.5)	D (38.7)
Westbound (Parking Garage)	WB Approach	C (32.8)	C (29.8)	C (32.8)
Northbound (Dr. Martin Luther King Jr Boulevard)	NB Approach	A (8.6)	A (8.7)	A (4.3)
Intersection 22: South Lexington Avenue & Fisher Avenue/Quarropas Street				
Overall Intersection		C (25.2)	C (22.1)	C (23.1)
Eastbound (Fisher Avenue)	EB Approach	C (23.2)	C (24.1)	C (28.2)
Westbound (Quarropas Street)	WB Approach	B (11.0)	C (21.0)	C (21.8)
Southbound (South Lexington Avenue)	SB Approach	C (27.4)	C (21.8)	C (21.9)
Intersection 23: Dr. Martin Luther King Jr Boulevard & Quarropas Street				
Overall Intersection		C (28.6)	E (65.5)	C (24.8)
Eastbound (Quarropas Street)	EB Approach	B (16.6)	C (20.2)	B (17.1)
Westbound (Quarropas Street)	WB Approach	B (14.5)	B (13.9)	B (15.6)
Northbound (Dr. Martin Luther King Jr Boulevard)	NB Approach	D (45.3)	F (91.9)	C (28.0)
Intersection 24: West Post Road & West Campus Lot Northeast Driveway				
Eastbound (West Post Road)	EB Approach	A (0.0)	A (0.0)	A (0.0)
Westbound (West Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Northbound (West Campus Lot Northeast Driveway)	NB Approach	B (13.1)	B (12.1)	B (12.5)
Intersection 25: East Post Road & Future Emergency Department Entrance				
Eastbound (East Post Road)	EB Approach	A (0.0)	A (0.0)	A (0.0)
Westbound (East Post Road)	WB Approach	A (0.1)	A (0.1)	A (0.1)
Intersection 26: East Post Road & Future Emergency Department Exit				
Eastbound (East Post Road)	EB Approach	A (0.0)	A (0.0)	A (0.0)
Westbound (East Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Northbound (Ambulance Emergency Department Exit)	NB Approach	C (16.4)	B (14.4)	B (14.0)

Table 10 – Intersection Capacity Analysis Results, Build Conditions

Peak Hour		AM	MD	PM
Approach	Movement	LOS (Delay)	LOS (Delay)	LOS (Delay)
Intersection 27: East Post Road & Winchester Street				
Eastbound (East Post Road)	EB Approach	A (0.1)	A (0.1)	A (0.1)
Westbound (East Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Southbound (Winchester Street)	SB Approach	B (14.7)	B (14.2)	C (15.6)
Intersection 28: Winchester Street & East Post Road Garage				
Northbound (Winchester Street)	NB Approach	A (7.4)	A (7.1)	A (7.2)
Southbound (Winchester Street)	SB Approach	A (0.0)	A (0.0)	A (0.0)

Note: LOS = Level of Service. Delay is shown in seconds.

A descriptive summary of the Synchro analysis results shown in Tables 8 through 10 for each study intersection is provided below.

Intersection 3: South Lexington Avenue & Maple Avenue

- Under Existing conditions at this signalized intersection, the overall intersection operates at level of service (LOS) “D” during the AM peak hour. During the MD and PM peak hours, the overall intersection operates at LOS “C”.
- Under No-Build conditions (without the proposed Project, but with forecast increases in existing traffic volumes and vicinity development traffic), the overall intersection will continue to operate at Existing levels of service during the AM, MD, and PM peak hours.
- Under future Build conditions (with the proposed Project traffic added), the overall intersection will continue to operate at No-Build levels of service during the MD and PM peak hours. During the AM peak hour, increased delay at the overall intersection will see the overall level of service drop from LOS “D” under No-Build conditions to LOS “E” during Build conditions.

Intersection 6: Maple Avenue & Longview Avenue

- Under Existing conditions at this signalized intersection, the overall intersection operates at LOS “B” during the AM, MD, and PM peak hours.
- Under No-Build conditions, the overall intersection will continue to operate at Existing levels of service during the AM and PM peak hours. During the MD peak hour, increased delay will see the overall intersection level of service drop from LOS “B” under Existing conditions to LOS “C” under No-Build conditions.
- Under future Build conditions, the overall intersection will continue to operate at No-Build levels of service during the AM and PM peak hours. During the MD peak hour, decreased delay will see the overall intersection level of service rebound back to the Existing conditions level of service, from LOS “C” under No-Build conditions to LOS “B” under Build conditions.

Intersection 7: Maple Avenue & Cromwell Place

- Under Existing conditions at this signalized intersection, the overall intersection operates at LOS “B” during the AM and PM peak hours. During the MD peak hour, the overall intersection operates at LOS “C”.
- Under No-Build conditions, the overall intersection will continue to operate at Existing levels of service during the AM, MD, and PM peak hours.
- Under future Build conditions, the overall intersection will continue to operate at No-Build levels of service during the AM, MD, and PM peak hours.

Intersection 11: West Post Road & Highland Avenue/West Campus Lot Northwest Driveway

- Under Existing conditions at this unsignalized T-intersection, the southbound approach operates at LOS “D” while all other approaches operate at LOS “A” during the AM and PM peak hours. During the MD peak hour, all approaches operate at LOS “C” or better.
- Under No-Build conditions at this unsignalized four-legged intersection, increased delay on the southbound approach during the AM peak hour will see the level of service drop from LOS “D” under Existing conditions to LOS “F” during No-Build conditions. The new northbound approach will operate at LOS “D” and all other approaches will continue to operate at Existing levels of service during the AM peak hour. During the MD peak hour, increased delay on the southbound approach will see the level of service drop from LOS “C” under Existing conditions to LOS “F” during No-Build conditions. The new northbound approach will operate at LOS “D” and all other approaches will continue to operate at Existing levels of service during the MD peak hour. During the PM peak hour, increased delay on the southbound approach will see the level of service drop from LOS “D” under Existing conditions to LOS “F” during No-Build conditions. The new northbound approach will operate at LOS “F” and all other approaches will continue to operate at Existing levels of service during the PM peak hour.
- Under future Build conditions at this unsignalized four-legged intersection, the southbound approach will continue to operate at No-Build levels of service and all other approaches will operate at LOS “A” during the AM peak hour. During the MD peak hour, increased delay on the northbound approach will see the level of service drop from LOS “D” under No-Build conditions to LOS “E” during Build conditions while all other approaches will continue to operate at No-Build levels of service. During the PM peak hour, all approaches will continue to operate at or better than No-Build levels of service.

Intersection 12: West Post Road & Orawaupum Street

- Under Existing conditions at this unsignalized intersection, all approaches operate at LOS “B” or better during the AM and MD peak hours. During the PM peak hour, all approaches operate at LOS “C” or better.

- Under No-Build conditions, increased delay on the southbound approach will see the level of service drop from LOS “B” under Existing conditions to LOS “C” under No-Build conditions while all other approaches will continue to operate at Existing levels of service during the AM and MD peak hours. During the PM peak hour, all approaches will continue to operate at Existing levels of service.
- Under future Build conditions, all approaches will continue to operate at No-Build levels of service during the AM and MD peak hours. During the PM peak hour, increased delay on the southbound approach will see the level of service drop from LOS “C” under No-Build conditions to LOS “D” under Build conditions while all other approaches will continue to operate at No-Build levels of service.

Intersection 14: South Lexington Avenue & West Post Road/East Post Road

- Under Existing conditions at this signalized intersection, the overall intersection operates at LOS “B” during the AM, MD, and PM peak hours.
- Under No-Build conditions, the overall intersection will continue to operate at Existing levels of service during the MD peak hour. During the AM and PM peak hours, increased delay will see the overall intersection level of service drop from LOS “B” under Existing conditions to LOS “C” under No-Build conditions.
- Under future Build conditions, the overall intersection will continue to operate at No-Build levels of service during the AM, MD, and PM peak hours.

Intersection 18: East Post Road & Longview Avenue/Dr. Martin Luther King Jr Boulevard

- Under Existing conditions at this signalized intersection, the overall intersection operates at LOS “C” during the AM and MD peak hours. During the PM peak hour, the overall intersection operates at LOS “B”.
- Under No-Build conditions, the overall intersection will continue to operate at Existing levels of service during the AM and MD peak hours. During the PM peak hour, increased delay will see the overall intersection level of service drop from LOS “B” under Existing conditions to LOS “C” under No-Build conditions.
- Under future Build conditions, the overall intersection will continue to operate at No-Build levels of service during the AM and MD peak hours. During the PM peak hour, increased delay will see the overall intersection level of service drop from LOS “C” under No-Build conditions to LOS “D” under Build conditions.

Intersection 21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage

- Under Existing conditions at this signalized intersection, the overall intersection operates at LOS “B” during the AM and MD peak hours. During the PM peak hour, the overall intersection operates at LOS “A”.
- Under No-Build conditions, the overall intersection will continue to operate at Existing levels of service during the AM, MD, and PM peak hours.

- Under future Build conditions, the overall intersection will continue to operate at No-Build levels of service during the AM, MD, and PM peak hours.

Intersection 23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

- Under Existing conditions at this signalized intersection, the overall intersection operates at LOS “C” during the AM and PM peak hours. During the MD peak hour, the overall intersection operates at LOS “D”.
- Under No-Build conditions, the overall intersection will continue to operate at Existing levels of service during the AM and PM peak hours. During the MD peak hour, increased delay will see the overall intersection level of service drop from LOS “D” under Existing conditions to LOS “E” during No-Build conditions.
- Under future Build conditions, the overall intersection will continue to operate at No-Build levels of service during the AM, MD, and PM peak hours.

All other study intersections operate at overall acceptable levels of service (LOS “C” or better) during the Existing, No-Build, and Build conditions in all three peak hours.

The analyses indicate that the reassigned and grown Hospital trips associated with the proposed building will result in undesirable operating delays at some of the study intersections, as described above. Thus, improvement measures were implemented to accommodate the future traffic from the Expansion, as described below.

7.0 PROJECT IMPACTS

The following measures were implemented to accommodate peak-hour project impacts at the study intersections and are reflected in the results of the intersection analysis for the Build Improved volume conditions summarized in **Table 11** below for the AM, MD, and PM peak hours, respectively. The full results of the intersection analysis and associated Synchro worksheets are provided in the Appendix.

- Maple Avenue & South Lexington Avenue
 - Leading pedestrian interval for pedestrians crossing the north leg (AM/MD/PM Peak Hours)
 - Signal timing modifications to provide additional green time for the northbound, southbound, and southbound left-turn phases (AM Peak Hour)
 - Signal timing modification to provide additional green time for the eastbound phase (MD/PM Peak Hours)
 - Signal offset adjustment (AM/MD/PM Peak Hours)
- Maple Avenue & Davis Avenue/Main Hospital Entrance
 - Signal offset adjustment (AM Peak Hour)
- Maple Avenue & Longview Avenue
 - Signal timing modifications to provide additional green time for the northbound phase (AM/MD/PM Peak Hours)
 - Signal offset adjustment (AM/MD Peak Hours)
- Maple Avenue & Cromwell Place
 - Signal timing modifications to provide additional green time for the southbound phase (AM/PM Peak Hours)
 - Signal offset adjustment (AM/MD/PM Peak Hours)
- Maple Avenue & Chester Avenue/Greenridge Avenue
 - Signal offset adjustment (AM/MD/PM Peak Hours)
- West Post Road & Highland Avenue/West Campus Lot Northwest Driveway
 - Signalization of the intersection
- West Post Road/East Post Road & South Lexington Avenue
 - Leading pedestrian intervals for pedestrians crossing all legs (AM/MD/PM Peak Hours)
 - Signal timing modification to provide additional green time for the northbound and southbound phases (AM Peak Hour)
 - Signal timing modification to provide additional green time for the eastbound and westbound phases (MD/PM Peak Hours)
 - Signal offset adjustment (PM Peak Hour)
- East Post Road & Longview Avenue/Dr. Martin Luther King Jr. Boulevard
 - Signal timing modifications to provide additional green time for the northbound phase (AM Peak Hour)

- Signal timing modifications to provide additional green time for the eastbound left-turn phase (PM Peak Hour)
- Signal offset adjustment (AM/MD/PM Peak Hours)
- East Post Road & Cromwell Place/Grand Street
 - Signal offset adjustment (AM/PM Peak Hours)
- East Post Road & Chester Avenue
 - Signal offset adjustment (AM/MD/PM Peak Hours)
- Dr. Martin Luther King Jr. Boulevard & Fisher Court/Parking Garage
 - Signal offset adjustment (AM Peak Hour)
- South Lexington Avenue & Fisher Avenue/Quarropas Street
 - Signal offset adjustment (AM/PM Peak Hours)
- Dr. Martin Luther King Jr. Boulevard & Quarropas Street
 - Signal timing modifications to provide additional green time for the northbound phase (AM/MD Peak Hours)
 - Signal offset adjustment (AM/MD Peak Hours)

Table 11 – Intersection Capacity Analysis Results, Build Improved Conditions				
Peak Hour		AM	MD	PM
Approach	Movement	LOS (Delay)	LOS (Delay)	LOS (Delay)
Intersection 1: Maple Avenue & West Campus Lot Southwest Driveway				
Eastbound (Maple Avenue)	EB Approach	A (0.2)	A (0.1)	A (0.1)
Westbound (Maple Avenue)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Southbound (West Campus Lot Southwest Driveway)	SB Approach	A (9.4)	B (12.6)	B (10.1)
Intersection 2: Maple Avenue & Roosevelt Street/West Campus Lot Southeast Driveway				
Eastbound (Maple Avenue)	EB Approach	A (0.0)	A (0.0)	A (0.0)
Westbound (Maple Avenue)	WB Approach	A (0.4)	A (0.3)	A (0.2)
Northbound (Roosevelt Street)	NB Approach	B (11.8)	B (12.5)	B (12.0)
Southbound (West Campus Lot Southeast Driveway)	SB Approach	C (16.0)	C (20.7)	C (19.6)
Intersection 3: South Lexington Avenue & Maple Avenue				
Overall Intersection		C (22.1)	C (28.8)	C (22.2)
Eastbound (Maple Avenue)	EB Approach	C (34.4)	C (34.6)	C (33.3)
Westbound (Maple Avenue)	WB Approach	A (6.2)	C (24.6)	B (10.2)
Northbound (South Lexington Avenue)	NB Approach	C (31.2)	C (26.6)	C (29.5)
Southbound (South Lexington Avenue)	SB Approach	B (19.7)	C (27.6)	C (21.9)

Table 11 – Intersection Capacity Analysis Results, Build Improved Conditions				
Peak Hour		AM	MD	PM
Approach	Movement	LOS (Delay)	LOS (Delay)	LOS (Delay)
Intersection 4: Maple Avenue & Davis Avenue/Main Hospital Entrance				
Overall Intersection		B (16.5)	B (18.5)	B (14.7)
Eastbound (Maple Avenue)	EB Approach	B (11.1)	B (16.5)	B (13.8)
Westbound (Maple Avenue)	WB Approach	C (29.2)	C (20.1)	B (16.3)
Northbound (Davis Avenue)	NB Approach	B (13.9)	B (17.2)	B (12.3)
Southbound (Main Hospital Entrance)	SB Approach	B (19.4)	C (23.1)	B (15.6)
Intersection 5: Maple Avenue & Oakwood Avenue				
Overall Intersection		A (2.4)	A (3.7)	A (6.9)
Eastbound (Maple Avenue)	EB Approach	A (1.9)	A (3.5)	A (8.1)
Westbound (Maple Avenue)	WB Approach	A (2.1)	A (2.1)	A (4.1)
Northbound (Oakwood Avenue)	NB Approach	B (14.4)	B (14.8)	B (15.7)
Intersection 6: Maple Avenue & Longview Avenue				
Overall Intersection		B (17.9)	B (14.1)	C (21.6)
Eastbound (Maple Avenue)	EB Approach	A (4.6)	A (7.4)	A (2.7)
Westbound (Maple Avenue)	WB Approach	C (20.2)	B (10.3)	C (31.0)
Northbound (Longview Avenue)	NB Approach	D (37.2)	C (34.8)	D (37.9)
Intersection 7: Maple Avenue & Cromwell Place				
Overall Intersection		A (6.5)	A (9.2)	B (12.7)
Eastbound (Maple Avenue)	EB Approach	A (1.8)	A (4.0)	A (7.7)
Westbound (Maple Avenue)	WB Approach	A (0.7)	A (6.0)	A (3.8)
Southbound (Cromwell Place)	SB Approach	D (37.2)	C (26.1)	D (43.6)
Intersection 8: Maple Avenue & Chester Avenue/Greenridge Avenue				
Overall Intersection		B (10.9)	B (11.4)	B (10.6)
Eastbound (Maple Avenue)	EB Approach	A (7.1)	A (9.2)	A (5.1)
Westbound (Maple Avenue)	WB Approach	B (14.0)	B (13.3)	B (14.6)
Northbound (Greenridge Avenue)	NB Approach	B (16.8)	B (15.3)	B (17.7)
Intersection 11: West Post Road & Highland Avenue/West Campus Lot Northwest Driveway				
Overall Intersection		B (17.3)	A (8.3)	A (10.0)
Eastbound (West Post Road)	EB Approach	B (12.1)	A (6.8)	B (11.1)
Westbound (West Post Road)	WB Approach	A (6.2)	A (2.6)	A (3.9)
Northbound (West Campus Lot Northwest Driveway)	NB Approach	A (0.0)	C (30.0)	A (3.2)
Southbound (Highland Avenue)	SB Approach	D (47.5)	C (34.7)	C (34.8)
Intersection 12: West Post Road & Orawaupum Street				
Eastbound (West Post Road)	EB Approach	A (0.7)	A (1.1)	A (1.2)
Westbound (West Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Southbound (Orawaupum Street)	SB Approach	C (15.7)	C (16.4)	C (22.3)

Table 11 – Intersection Capacity Analysis Results, Build Improved Conditions				
Peak Hour		AM	MD	PM
Approach	Movement	LOS (Delay)	LOS (Delay)	LOS (Delay)
Intersection 14: South Lexington Avenue & West Post Road/East Post Road				
Overall Intersection		B (19.5)	B (16.6)	C (30.6)
Eastbound (West Post Road)	EB Approach	C (30.4)	C (22.5)	C (26.4)
Westbound (East Post Road)	WB Approach	C (28.4)	C (30.3)	C (34.7)
Northbound (South Lexington Avenue)	NB Approach	A (0.7)	A (0.6)	A (3.1)
Southbound (South Lexington Avenue)	SB Approach	B (12.8)	B (10.1)	C (32.1)
Intersection 16: East Post Road & East Post Road Garage/Emergency Department Entrance				
Overall Intersection		A (10.0)	B (12.6)	B (19.2)
Eastbound (East Post Road)	EB Approach	B (10.4)	B (12.2)	B (16.3)
Westbound (East Post Road)	WB Approach	A (6.4)	A (9.0)	B (10.1)
Southbound (East Post Road Garage)	SB Approach	B (15.2)	B (17.4)	C (31.2)
Intersection 17: East Post Road & Emergency Department Exit				
Eastbound (East Post Road)	EB Approach	A (0.0)	A (0.0)	A (0.0)
Westbound (East Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Northbound (Public Emergency Department Exit)	NB Approach	B (10.5)	B (12.6)	B (11.8)
Intersection 18: East Post Road & Longview Avenue/Dr. Martin Luther King Jr Boulevard				
Overall Intersection		C (23.6)	C (22.3)	C (27.8)
Eastbound (East Post Road)	EB Approach	C (21.9)	C (32.3)	C (34.4)
Westbound (East Post Road)	WB Approach	A (9.2)	B (10.7)	B (18.8)
Northbound (Longview Avenue)	NB Approach	C (33.5)	B (20.0)	C (27.0)
Intersection 19: East Post Road & Cromwell Place/Grand Street				
Overall Intersection		A (7.9)	A (7.9)	B (10.8)
Eastbound (East Post Road)	EB Approach	A (1.8)	A (3.0)	A (4.3)
Westbound (East Post Road)	WB Approach	A (6.1)	A (5.8)	A (6.9)
Southbound (Grand Street)	SB Approach	C (28.9)	C (24.1)	C (30.2)
Intersection 20: East Post Road & Chester Avenue				
Overall Intersection		A (9.8)	B (13.0)	B (16.6)
Eastbound (East Post Road)	EB Approach	A (6.3)	A (9.4)	B (16.7)
Westbound (East Post Road)	WB Approach	A (9.9)	B (11.8)	B (13.9)
Northbound (Chester Avenue)	NB Approach	B (18.9)	C (26.5)	C (23.1)
Intersection 21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage				
Overall Intersection		A (6.6)	A (6.3)	A (5.1)
Eastbound (Fisher Court)	EB Approach	D (39.4)	D (36.4)	D (38.7)
Westbound (Parking Garage)	WB Approach	C (32.8)	C (29.8)	C (32.8)
Northbound (Dr. Martin Luther King Jr Boulevard)	NB Approach	A (3.9)	A (4.3)	A (3.4)

Table 11 – Intersection Capacity Analysis Results, Build Improved Conditions				
Peak Hour		AM	MD	PM
Approach	Movement	LOS (Delay)	LOS (Delay)	LOS (Delay)
Intersection 22: South Lexington Avenue & Fisher Avenue/Quarropas Street				
Overall Intersection		C (25.7)	C (21.6)	C (23.4)
Eastbound (Fisher Avenue)	EB Approach	C (23.2)	C (24.1)	C (28.2)
Westbound (Quarropas Street)	WB Approach	B (18.4)	B (15.6)	C (24.6)
Southbound (South Lexington Avenue)	SB Approach	C (27.4)	C (21.8)	C (21.9)
Intersection 23: Dr. Martin Luther King Jr Boulevard & Quarropas Street				
Overall Intersection		C (24.1)	B (16.9)	B (19.6)
Eastbound (Quarropas Street)	EB Approach	B (16.2)	B (18.5)	B (19.5)
Westbound (Quarropas Street)	WB Approach	C (21.2)	B (19.7)	B (15.6)
Northbound (Dr. Martin Luther King Jr Boulevard)	NB Approach	C (33.4)	B (15.8)	C (20.1)
Intersection 24: West Post Road & West Campus Lot Northeast Driveway				
Eastbound (West Post Road)	EB Approach	A (0.0)	A (0.0)	A (0.0)
Westbound (West Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Northbound (West Campus Lot Northeast Driveway)	NB Approach	B (12.9)	B (12.1)	B (12.5)
Intersection 25: East Post Road & Future Emergency Department Entrance				
Eastbound (East Post Road)	EB Approach	A (0.0)	A (0.0)	A (0.0)
Westbound (East Post Road)	WB Approach	A (0.1)	A (0.1)	A (0.1)
Intersection 26: East Post Road & Future Emergency Department Exit				
Eastbound (East Post Road)	EB Approach	A (0.0)	A (0.0)	A (0.0)
Westbound (East Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Northbound (Ambulance Emergency Department Exit)	NB Approach	C (16.4)	B (14.4)	B (14.0)
Intersection 27: East Post Road & Winchester Street				
Eastbound (East Post Road)	EB Approach	A (0.1)	A (0.1)	A (0.1)
Westbound (East Post Road)	WB Approach	A (0.0)	A (0.0)	A (0.0)
Southbound (Winchester Street)	SB Approach	B (14.7)	B (14.2)	C (15.6)
Intersection 28: Winchester Street & East Post Road Garage				
Northbound (Winchester Street)	NB Approach	A (7.4)	A (7.1)	A (7.2)
Southbound (Winchester Street)	SB Approach	A (0.0)	A (0.0)	A (0.0)

Note: LOS = Level of Service. Delay is shown in seconds.

A descriptive summary of the Synchro analysis results with the implemented measures listed above for each study intersection is provided below.

3 – South Lexington Avenue & Maple Avenue

- Under future Build Improved conditions (with the improvement measures implemented) during the AM peak hour, decreased delay on the overall intersection will see the level of service rebound

back to better than the Existing conditions level of service (LOS “D”), from LOS “E” under Build conditions to LOS “C” under Build Improved conditions. During the MD and PM peak hours, the overall intersection will continue to operate at Build levels of service with decreases in delay.

6 – Maple Avenue & Longview Avenue

- Under future Build Improved conditions, the overall intersection will continue to operate at Build levels of service during the AM and MD peak hours. During the PM peak hour, a slight increase in delay on the overall intersection will see the level of service drop from LOS “B” under Build conditions to LOS “C” under Build Improved conditions and will continue to operate acceptably.

7 – Maple Avenue & Cromwell Place

- Under future Build Improved conditions, decreased delay on the overall intersection will see the level of service rebound back to better than the Existing conditions level of service (LOS “B”), from LOS “B” under Build conditions to LOS “A” under Build Mitigated conditions during the AM peak hour. During the MD peak hour, decreased delay on the overall intersection will see the level of service rebound back to better than the Existing conditions level of service (LOS “C”), from LOS “C” under Build conditions to LOS “A” during Build Improved conditions. During the PM peak hour, the overall intersection will continue to operate at Build level of service with a decrease in delay.

11 – West Post Road & Highland Avenue/West Campus Lot Northwest Driveway

- Under future Build Improved conditions at this newly-signalized four-legged intersection, decreased delay on the southbound approach will see the level of service rebound to Existing conditions level of service, from LOS “F” under Build conditions to LOS “D” during Build Improved conditions, and all other approaches will continue to operate at acceptable levels of service during the AM peak hour. The overall intersection will operate at LOS “B” during the AM peak hour. During the MD peak hour, decreased delay on the southbound approach will see the level of service rebound to Existing conditions level of service, from LOS “F” under Build conditions to LOS “C” during Build Improved conditions. Decreased delay on the northbound approach will see the level of service rebound back to better than the No-Build conditions level of service (LOS “D”), from LOS “E” under Build conditions to LOS “C” during Build Improved conditions, and all other approaches will continue to operate at Build levels of service. The overall intersection will operate at LOS “A” during the MD peak hour. During the PM peak hour, decreased delay on the southbound approach will see the level of service rebound back to better than the Existing conditions level of service (LOS “D”), from LOS “F” under Build conditions to LOS “C” under Build Improved conditions. Decreased delay on the northbound approach will see the level of service rebound back to better than the No-Build conditions level of service (LOS “F”), from LOS “E” under Build conditions to LOS “A” during Build Improved conditions, and all other approaches will continue to operate acceptably. The overall intersection will operate at LOS “A” during the PM peak hour.

12 – West Post Road & Orawaupum Street

- Under future Build Improved conditions, all approaches will continue to operate at Build levels of service during the AM and MD peak hours, with the same or decreased delays. During the PM peak hour, decreased delay on the southbound approach will see the level of service rebound to Existing conditions level of service, from LOS “D” under Build conditions to LOS “C” during Build Improved conditions, and all other approaches will continue to operate at Build levels of service.

14 – South Lexington Avenue & West Post Road/East Post Road

- Under future Build Improved conditions, the overall intersection will continue to operate at No-Build levels of service during the MD and PM peak hours. With decreases in delay during the AM peak hour, the overall intersection will see the LOS improve from Build LOS “C” to Existing levels (LOS “B”).

18 – East Post Road & Longview Avenue/Dr. Martin Luther King Jr Boulevard

- Under future Build Improved conditions, the overall intersection will continue to operate at Build levels of service with decreases in delay during the AM and MD peak hours. During the PM peak hour, decreased delay on the overall intersection will see the level of service rebound to No-Build conditions level of service (LOS “C”), from LOS “D” under Build conditions to LOS “C” during Build Improved conditions.

21 – Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage

- Under future Build Improved conditions, decreased delay on the overall intersection will see the level of service rebound back to better than the Existing conditions level of service (LOS “B”), from LOS “B” under Build conditions to LOS “A” under Build Improved conditions during the AM and MD peak hours. During the PM peak hour, the overall intersection will continue to operate at Build level of service with a decrease in delay.

23 – Dr. Martin Luther King Jr Boulevard & Quarropas Street

- Under future Build Improved conditions, the overall intersection will continue to operate at Build level of service with a decrease in delay during the AM peak hour. During the MD peak hour, decreased delay on the overall intersection will see the level of service rebound back to better than the Existing conditions level of service (LOS “D”), from LOS “E” under Build conditions to LOS “B” under Build Improved conditions. During the PM peak hour, decreased delay on the overall intersection will see the level of service rebound back to better than the Existing conditions level of service (LOS “C”), from LOS “C” under Build conditions to LOS “B” under Build Improved conditions.

All other study intersections operate at overall acceptable levels of service (LOS “C” or better) during the Build and Build Improved conditions in all three peak hours.

With the implementation of the measures described above, all study intersections will experience overall intersection levels of service “C” or better operating conditions in the future, and the delays will average less than 32 seconds per vehicle. Individual approaches at each of the unsignalized study intersections will also experience LOS “C” or better operating conditions in the future, and the delays will average less than 24 seconds per vehicle.

8.0 CONCLUSIONS

Although the analysis indicates that the increase in traffic volumes associated with the proposed Project will result in some undesirable future operating conditions, proposed improvements at various study intersections described herein will prevent the occurrence of undesirable delays and eliminate poor levels of service. Thus, based on the analysis provided, it is concluded that, with the implementation of these improvement measures, the increase in traffic volumes associated with the proposed Project will not have a significant adverse impact on area traffic operating conditions.

Appendix

- Synchro Capacity Analysis Reports
 - Existing Conditions
 - No-Build Conditions
 - Build Conditions
 - Build with Improvements Conditions

Existing Conditions

Existing Conditions
2: Roosevelt Street & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘↙	
Traffic Volume (veh/h)	517	1	13	297	4	15
Future Volume (Veh/h)	517	1	13	297	4	15
Sign Control	Free			Free	Stop	
Grade	-2%			-1%	-4%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	594	1	15	341	5	17
Pedestrians	1				16	
Lane Width (ft)	14.0				12.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	0				2	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)				357		
pX, platoon unblocked					0.97	
vC, conflicting volume			611		812	314
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			611		754	314
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		98	97
cM capacity (veh/h)			963		330	678
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	396	199	129	227	22	
Volume Left	0	0	15	0	5	
Volume Right	0	1	0	0	17	
cSH	1700	1700	963	1700	547	
Volume to Capacity	0.23	0.12	0.02	0.13	0.04	
Queue Length 95th (ft)	0	0	1	0	3	
Control Delay (s)	0.0	0.0	1.2	0.0	11.9	
Lane LOS			A		B	
Approach Delay (s)	0.0		0.4		11.9	
Approach LOS					B	
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			29.7%		ICU Level of Service	A
Analysis Period (min)			15			

Existing Conditions
3: South Lexington Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑		↖		↖	↖	↖	
Traffic Volume (vph)	0	514	18	34	252	0	15	0	63	317	337	43
Future Volume (vph)	0	514	18	34	252	0	15	0	63	317	337	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	10	12	10	12	10	10	13	12
Grade (%)		0%			-2%			-5%			4%	
Storage Length (ft)	0		0	140		0	85		0	0		0
Storage Lanes	0		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3090	0	1477	3063	0	1554	0	1337	1324	1693	0
Flt Permitted				0.332			0.211			0.950		
Satd. Flow (perm)	0	3090	0	502	3063	0	340	0	1255	1266	1693	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		4									6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		357			354			564			207	
Travel Time (s)		8.1			8.0			12.8			4.7	
Confl. Peds. (#/hr)	31		30	30		31	29		35	35		29
Confl. Bikes (#/hr)			1			1						3
Peak Hour Factor	0.92	0.94	0.94	0.94	0.94	0.92	0.94	0.92	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	11%	0%	0%	0%	0%	0%	4%	1%	0%	0%
Parking (#/hr)										0		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	566	0	36	268	0	16	0	67	337	405	0
Turn Type		NA		pm+pt	NA		pm+pt		Perm	pm+pt	NA	
Protected Phases		2		1	6		3			7	4	
Permitted Phases				6			8		8	4		
Total Split (s)		47.0		10.0	57.0		9.0		23.9	10.1	34.0	
Total Lost Time (s)		5.0		5.0	5.0		5.0		4.9	5.0	5.0	
Act Effect Green (s)		42.0		52.0	52.0		22.9		19.0	29.0	29.0	
Actuated g/C Ratio		0.42		0.52	0.52		0.23		0.19	0.29	0.29	
v/c Ratio		0.44		0.12	0.17		0.13		0.28	0.91	0.82	
Control Delay		21.7		9.3	8.6		28.8		38.4	69.3	54.2	
Queue Delay		0.0		0.0	0.0		0.0		0.0	0.0	1.2	
Total Delay		21.7		9.3	8.6		28.8		38.4	69.3	55.5	
LOS		C		A	A		C		D	E	E	
Approach Delay		21.7			8.6			36.6			61.7	
Approach LOS		C			A			D			E	
Queue Length 50th (ft)		131		6	22		7		37	183	217	
Queue Length 95th (ft)		177		18	43		24		78	#364	#377	
Internal Link Dist (ft)		277			274			484			127	
Turn Bay Length (ft)				140			85					
Base Capacity (vph)		1300		309	1592		126		238	370	495	
Starvation Cap Reductn		0		0	0		0		0	0	18	
Spillback Cap Reductn		0		0	0		0		0	0	0	
Storage Cap Reductn		0		0	0		0		0	0	0	
Reduced v/c Ratio		0.44		0.12	0.17		0.13		0.28	0.91	0.85	
Intersection Summary												

Existing Conditions
3: South Lexington Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 86 (86%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 37.6

Intersection LOS: D

Intersection Capacity Utilization 65.9%

ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: South Lexington Avenue & Maple Avenue



Existing Conditions
4: Davis Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	729	61	23	265	82	10	31	43	17	5	9
Future Volume (vph)	102	729	61	23	265	82	10	31	43	17	5	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	11	11	12	11	12	12	9	12	11	10	12
Grade (%)		1%			0%			-5%			4%	
Storage Length (ft)	100		0	0		0	0		0	90		0
Storage Lanes	1		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1426	3029	0	0	2883	0	0	1235	0	1539	1366	0
Flt Permitted	0.519				0.880			0.975		0.719		
Satd. Flow (perm)	720	3029	0	0	2541	0	0	1206	0	1081	1366	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			63			46			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		354			356			562			217	
Travel Time (s)		8.0			8.1			12.8			4.9	
Confl. Peds. (#/hr)	45		34	34		45	21		55	55		21
Confl. Bikes (#/hr)			4						1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	1%	1%	0%	0%	7%	0%	3%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	841	0	0	393	0	0	90	0	18	15	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Total Split (s)	64.0	64.0		64.0	64.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)	5.2	5.2			5.2			5.2		5.2	5.2	
Act Effct Green (s)	58.8	58.8			58.8			24.8		24.8	24.8	
Actuated g/C Ratio	0.59	0.59			0.59			0.25		0.25	0.25	
v/c Ratio	0.26	0.47			0.26			0.27		0.07	0.04	
Control Delay	17.5	18.5			4.9			18.9		29.8	18.5	
Queue Delay	0.0	1.4			0.0			0.0		0.0	0.0	
Total Delay	17.5	19.9			4.9			18.9		29.8	18.5	
LOS	B	B			A			B		C	B	
Approach Delay		19.6			4.9			18.9			24.6	
Approach LOS		B			A			B			C	
Queue Length 50th (ft)	42	174			0			22		9	2	
Queue Length 95th (ft)	m66	m203			30			65		27	19	
Internal Link Dist (ft)		274			276			482			137	
Turn Bay Length (ft)	100									90		
Base Capacity (vph)	423	1787			1520			333		268	346	
Starvation Cap Reductn	0	701			0			0		0	0	
Spillback Cap Reductn	0	0			0			0		0	0	
Storage Cap Reductn	0	0			0			0		0	0	
Reduced v/c Ratio	0.26	0.77			0.26			0.27		0.07	0.04	
Intersection Summary												

Existing Conditions
4: Davis Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	6.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Existing Conditions
4: Davis Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	30 (30%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.47
Intersection Signal Delay:	15.7
Intersection LOS:	B
Intersection Capacity Utilization	70.3%
ICU Level of Service	C
Analysis Period (min)	15
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Davis Avenue & Maple Avenue



Existing Conditions
5: Oakwood Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	762	27	30	361	6	37
Future Volume (vph)	762	27	30	361	6	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Grade (%)	1%			0%	-5%	
Satd. Flow (prot)	3180	0	0	3206	1555	0
Flt Permitted				0.850	0.993	
Satd. Flow (perm)	3180	0	0	2735	1553	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	9				41	
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			475	444	
Travel Time (s)	8.1			10.8	10.1	
Confl. Peds. (#/hr)		40	40		6	24
Confl. Bikes (#/hr)		3				
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	0%	0%	1%	7%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	867	0	0	430	48	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			2	4	
Permitted Phases			2			
Total Split (s)	77.2		77.2	77.2	22.8	
Total Lost Time (s)	5.2			5.2	5.0	
Act Effect Green (s)	72.0			72.0	17.8	
Actuated g/C Ratio	0.72			0.72	0.18	
v/c Ratio	0.38			0.22	0.15	
Control Delay	1.5			1.2	14.7	
Queue Delay	0.1			0.0	0.0	
Total Delay	1.6			1.2	14.7	
LOS	A			A	B	
Approach Delay	1.6			1.2	14.7	
Approach LOS	A			A	B	
Queue Length 50th (ft)	18			11	4	
Queue Length 95th (ft)	25			11	35	
Internal Link Dist (ft)	276			395	364	
Turn Bay Length (ft)						
Base Capacity (vph)	2292			1969	310	
Starvation Cap Reductn	400			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.46			0.22	0.15	
Intersection Summary						
Area Type:	CBD					
Cycle Length: 100						
Actuated Cycle Length: 100						
Offset: 31 (31%), Referenced to phase 2:EBWB and 6:, Start of Green						

Existing Conditions
5: Oakwood Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Control Type: Pretimed

Maximum v/c Ratio: 0.38

Intersection Signal Delay: 2.0

Intersection LOS: A

Intersection Capacity Utilization 60.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5: Oakwood Avenue & Maple Avenue



Existing Conditions
6: Longview Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	617	39	34	393	160	28	380	40	0	0	0
Future Volume (vph)	111	617	39	34	393	160	28	380	40	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	11	10	11	10	10	10	9	12	12	12
Grade (%)		0%			-5%			-2%			0%	
Storage Length (ft)	225		0	60		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1462	2962	0	1509	2974	0	0	2837	0	0	0	0
Flt Permitted	0.323			0.389				0.997				
Satd. Flow (perm)	482	2962	0	602	2974	0	0	2827	0	0	0	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		10			75							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		475			281			824			379	
Travel Time (s)		10.8			6.4			18.7			8.6	
Confl. Peds. (#/hr)	60		24	24		60	44		48	48		44
Confl. Bikes (#/hr)			2			1			2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	3%	0%	1%	4%	0%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	690	0	36	582	0	0	471	0	0	0	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2			6			8					
Total Split (s)	13.0	60.0		47.0	47.0		37.0	37.0				
Total Lost Time (s)	5.2	5.2		5.2	5.2			5.2				
Act Effect Green (s)	61.4	61.4		41.8	41.8			25.2				
Actuated g/C Ratio	0.61	0.61		0.42	0.42			0.25				
v/c Ratio	0.27	0.38		0.14	0.45			0.66				
Control Delay	3.9	2.9		16.4	16.7			38.3				
Queue Delay	0.0	0.0		0.0	2.1			0.0				
Total Delay	3.9	2.9		16.4	18.8			38.3				
LOS	A	A		B	B			D				
Approach Delay		3.1			18.7			38.3				
Approach LOS		A			B			D				
Queue Length 50th (ft)	5	15		8	25			146				
Queue Length 95th (ft)	13	26		20	77			185				
Internal Link Dist (ft)		395			201			744			299	
Turn Bay Length (ft)	225			60								
Base Capacity (vph)	437	1823		251	1286			898				
Starvation Cap Reductn	0	0		0	536			0				
Spillback Cap Reductn	0	0		0	0			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.27	0.38		0.14	0.78			0.52				
Intersection Summary												

Existing Conditions
6: Longview Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Existing Conditions
6: Longview Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 52 (52%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 16.9

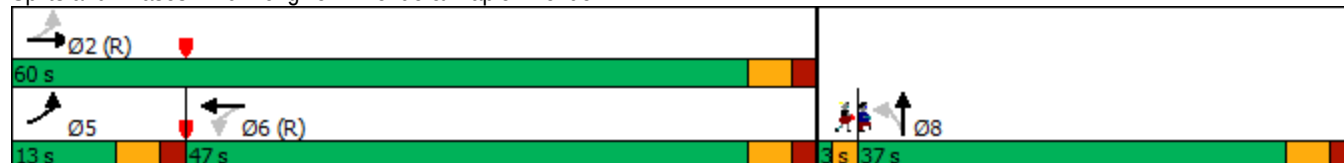
Intersection LOS: B

Intersection Capacity Utilization 66.8%

ICU Level of Service C

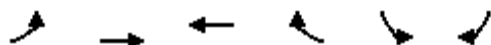
Analysis Period (min) 15

Splits and Phases: 6: Longview Avenue & Maple Avenue



Existing Conditions
7: Maple Avenue & Cromwell Place

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↗	↗
Traffic Volume (vph)	0	653	512	0	120	82
Future Volume (vph)	0	653	512	0	120	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	11	12
Grade (%)		6%	3%		4%	
Storage Length (ft)	0			0	0	60
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	3016	3094	0	1371	1383
Flt Permitted					0.950	
Satd. Flow (perm)	0	3016	3094	0	1360	1383
Right Turn on Red				Yes		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		281	255		455	
Travel Time (s)		6.4	5.8		10.3	
Confl. Peds. (#/hr)	67			67	6	2
Confl. Bikes (#/hr)						2
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%
Parking (#/hr)					0	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	718	563	0	132	90
Turn Type		NA	NA		Perm	Prot
Protected Phases		2	2			4
Permitted Phases					4	
Total Split (s)		71.0	71.0		29.0	29.0
Total Lost Time (s)		4.7	4.7		4.7	4.7
Act Effct Green (s)		73.1	73.1		17.5	17.5
Actuated g/C Ratio		0.73	0.73		0.18	0.18
v/c Ratio		0.33	0.25		0.55	0.37
Control Delay		9.7	5.0		41.6	35.4
Queue Delay		0.4	0.6		0.0	0.0
Total Delay		10.1	5.6		41.6	35.4
LOS		B	A		D	D
Approach Delay		10.1	5.6		39.1	
Approach LOS		B	A		D	
Queue Length 50th (ft)		127	60		83	55
Queue Length 95th (ft)		169	81		144	104
Internal Link Dist (ft)		201	175		375	
Turn Bay Length (ft)						60
Base Capacity (vph)		2204	2261		330	336
Starvation Cap Reductn		885	1252		0	0
Spillback Cap Reductn		4	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.54	0.56		0.40	0.27
Intersection Summary						

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 12.7

Intersection LOS: B

Intersection Capacity Utilization 38.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Maple Avenue & Cromwell Place



Existing Conditions

8: Greenridge Avenue/Chester Avenue & Maple Avenue

AM Peak Hour

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	582	97	47	495	70	17	67	65	0	0	0
Future Volume (vph)	94	582	97	47	495	70	17	67	65	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	11
Grade (%)		2%			3%			0%			-4%	
Storage Length (ft)	125		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1752	3358	0	1743	3382	0	0	3184	0	0	0	0
Flt Permitted	0.375			0.320				0.994				
Satd. Flow (perm)	672	3358	0	565	3382	0	0	3163	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			23			71				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		255			453			507			506	
Travel Time (s)		5.8			10.3			11.5			11.5	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	738	0	51	614	0	0	162	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA				
Protected Phases	1	6		5	2			8				
Permitted Phases	6			2			8					
Total Split (s)	12.0	57.0		12.0	57.0		31.0	31.0				
Total Lost Time (s)	7.0	5.0		5.0	5.0			5.0				
Act Effct Green (s)	56.7	54.7		59.7	54.4			26.0				
Actuated g/C Ratio	0.57	0.55		0.60	0.54			0.26				
v/c Ratio	0.24	0.40		0.12	0.33			0.19				
Control Delay	10.9	15.1		7.5	13.4			16.8				
Queue Delay	0.0	1.1		0.0	0.0			0.0				
Total Delay	10.9	16.2		7.5	13.4			16.8				
LOS	B	B		A	B			B				
Approach Delay		15.5			12.9			16.8				
Approach LOS		B			B			B				
Queue Length 50th (ft)	27	134		11	110			23				
Queue Length 95th (ft)	54	143		24	148			49				
Internal Link Dist (ft)		175			373			427			426	
Turn Bay Length (ft)	125			75								
Base Capacity (vph)	434	1848		421	1850			874				
Starvation Cap Reductn	0	813		0	0			0				
Spillback Cap Reductn	0	0		0	0			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.24	0.71		0.12	0.33			0.19				

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Existing Conditions
8: Greenridge Avenue/Chester Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Offset: 43 (43%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 14.6	Intersection LOS: B
Intersection Capacity Utilization 56.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Greenridge Avenue/Chester Avenue & Maple Avenue



Existing Conditions
9: South Lexington Avenue & Lincoln Lot/Davis Garage

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											 	
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	37	696	16
Future Volume (Veh/h)	0	0	0	0	0	0	0	0	0	37	696	16
Sign Control	Stop			Stop			Free			Free		
Grade	0%			-5%			0%			3%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	0	0	0	40	757	17
Pedestrians	24			49			6			6		
Lane Width (ft)	0.0			10.0			0.0			12.0		
Walking Speed (ft/s)	3.5			3.5			3.5			3.5		
Percent Blockage	0			4			0			1		
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)							207			185		
pX, platoon unblocked	0.80	0.80	0.80	0.80	0.80		0.80					
vC, conflicting volume	876	918	417	514	927	55	798	49				
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	339	393	0	0	404	55	242	49				
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1	4.1				
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2	2.2				
p0 queue free %	100	100	100	100	100	100	100	97				
cM capacity (veh/h)	446	405	866	746	399	956	1055	1496				
Direction, Lane #	WB 1	SB 1	SB 2									
Volume Total	0	418	396									
Volume Left	0	40	0									
Volume Right	0	0	17									
cSH	1700	1496	1700									
Volume to Capacity	0.00	0.03	0.23									
Queue Length 95th (ft)	0	2	0									
Control Delay (s)	0.0	0.9	0.0									
Lane LOS	A	A										
Approach Delay (s)	0.0	0.5										
Approach LOS	A											
Intersection Summary												
Average Delay	0.5											
Intersection Capacity Utilization	38.3%			ICU Level of Service			A					
Analysis Period (min)	15											

Existing Conditions

AM Peak Hour

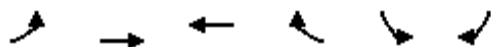
10: Davis Avenue & Davis Garage/Main Hospital Entrance

Timing Plan: 8:00 AM – 9:00 AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	2	28	3	27	2	89	96	30	0	0	0
Future Volume (Veh/h)	6	2	28	3	27	2	89	96	30	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			-1%			-4%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	2	30	3	29	2	97	104	33	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)								217				
pX, platoon unblocked	0.98	0.98		0.98	0.98	0.98				0.98		
vC, conflicting volume	331	331	0	346	314	120	0			137		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	313	313	0	327	296	99	0			116		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	97	99	95	100	94			100		
cM capacity (veh/h)	577	558	1085	570	570	942	1623			1450		
Direction, Lane #	EB 1	WB 1	NB 1									
Volume Total	39	34	234									
Volume Left	7	3	97									
Volume Right	30	2	33									
cSH	899	584	1623									
Volume to Capacity	0.04	0.06	0.06									
Queue Length 95th (ft)	3	5	5									
Control Delay (s)	9.2	11.6	3.3									
Lane LOS	A	B	A									
Approach Delay (s)	9.2	11.6	3.3									
Approach LOS	A	B										
Intersection Summary												
Average Delay			5.0									
Intersection Capacity Utilization			23.7%			ICU Level of Service				A		
Analysis Period (min)			15									

Existing Conditions
11: West Post Road & Highland Avenue

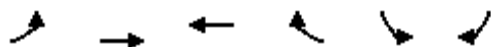
AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	79	261	255	24	130	83
Future Volume (Veh/h)	79	261	255	24	130	83
Sign Control		Free	Free		Stop	
Grade		-4%	3%		-11%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	90	297	290	27	148	94
Pedestrians		22	6		49	
Lane Width (ft)		16.0	16.0		16.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		3	1		6	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			742			
pX, platoon unblocked	0.99				0.99	0.99
vC, conflicting volume	366				836	374
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	359				831	367
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				49	85
cM capacity (veh/h)	1118				292	617
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	387	317	242			
Volume Left	90	0	148			
Volume Right	0	27	94			
cSH	1118	1700	367			
Volume to Capacity	0.08	0.19	0.66			
Queue Length 95th (ft)	7	0	112			
Control Delay (s)	2.6	0.0	31.8			
Lane LOS	A		D			
Approach Delay (s)	2.6	0.0	31.8			
Approach LOS			D			
Intersection Summary						
Average Delay			9.2			
Intersection Capacity Utilization			61.4%		ICU Level of Service	
Analysis Period (min)			15		B	

Existing Conditions
12: West Post Road & Orawaupum Street

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	22	369	265	45	14	14
Future Volume (Veh/h)	22	369	265	45	14	14
Sign Control		Free	Free		Stop	
Grade		-3%	2%		-10%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	26	429	308	52	16	16
Pedestrians			4		56	
Lane Width (ft)			16.0		11.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			1		5	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			361			
pX, platoon unblocked	0.94				0.94	0.94
vC, conflicting volume	416				875	390
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	351				837	323
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				95	98
cM capacity (veh/h)	1094				297	649
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	455	360	32			
Volume Left	26	0	16			
Volume Right	0	52	16			
cSH	1094	1700	407			
Volume to Capacity	0.02	0.21	0.08			
Queue Length 95th (ft)	2	0	6			
Control Delay (s)	0.7	0.0	14.6			
Lane LOS	A		B			
Approach Delay (s)	0.7	0.0	14.6			
Approach LOS			B			
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utilization			51.6%		ICU Level of Service	
Analysis Period (min)			15		A	

Existing Conditions
13: Lincoln Lot & West Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↘	
Traffic Volume (veh/h)	383	0	0	309	1	3
Future Volume (Veh/h)	383	0	0	309	1	3
Sign Control	Free			Free	Stop	
Grade	1%			1%	-2%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	416	0	0	336	1	3
Pedestrians	3			2	23	
Lane Width (ft)	16.0			16.0	10.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	0			0	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)				207		
pX, platoon unblocked					0.94	
vC, conflicting volume			439		778	441
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			439		731	441
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1100		357	604
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	416	336	4			
Volume Left	0	0	1			
Volume Right	0	0	3			
cSH	1700	1700	515			
Volume to Capacity	0.24	0.20	0.01			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	0.0	0.0	12.0			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	12.0			
Approach LOS			B			
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization		33.0%		ICU Level of Service		A
Analysis Period (min)		15				

Existing Conditions

AM Peak Hour

14: South Lexington Avenue & West Post Road/East Post Road

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↕					↖	↕	↘
Traffic Volume (vph)	0	293	93	78	186	0	0	0	0	198	578	123
Future Volume (vph)	0	293	93	78	186	0	0	0	0	198	578	123
Ideal Flow (vphpl)	1900	2050	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	12	12	12	12	11	11	11
Grade (%)		-1%			0%			0%			1%	
Storage Length (ft)	0		105	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1589	1294	0	2553	0	0	0	0	1065	2815	0
Flt Permitted					0.753					0.950		
Satd. Flow (perm)	0	1589	1217	0	1937	0	0	0	0	993	2815	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			101								30	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		207			248			185			1032	
Travel Time (s)		4.7			5.6			4.2			23.5	
Confl. Peds. (#/hr)	61		38	38		61	34		54	54		34
Confl. Bikes (#/hr)			2									4
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	5%	0%	2%	5%	0%	0%	0%	0%	2%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0	0		24					41	4	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	329	104	0	297	0	0	0	0	222	787	0
Turn Type		NA	Perm	Perm	NA					Perm	NA	
Protected Phases		2			2							4
Permitted Phases			2	2						4		
Total Split (s)		55.0	55.0	55.0	55.0					45.0	45.0	
Total Lost Time (s)		5.0	5.0		5.0					5.0	5.0	
Act Effect Green (s)		50.0	50.0		50.0					40.0	40.0	
Actuated g/C Ratio		0.50	0.50		0.50					0.40	0.40	
v/c Ratio		0.41	0.16		0.31					0.56	0.69	
Control Delay		17.8	3.5		14.0					23.8	20.5	
Queue Delay		0.0	0.0		0.0					0.0	0.1	
Total Delay		17.8	3.6		14.0					23.8	20.6	
LOS		B	A		B					C	C	
Approach Delay		14.4			14.0						21.3	
Approach LOS		B			B						C	
Queue Length 50th (ft)		127	1		53					63	115	
Queue Length 95th (ft)		193	27		66					130	191	
Internal Link Dist (ft)		127			168			105			952	
Turn Bay Length (ft)			105									
Base Capacity (vph)		794	659		968					397	1144	
Starvation Cap Reductn		0	0		0					0	0	
Spillback Cap Reductn		0	44		69					0	18	
Storage Cap Reductn		0	0		0					0	0	
Reduced v/c Ratio		0.41	0.17		0.33					0.56	0.70	

Intersection Summary	
Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.69
Intersection Signal Delay:	18.3
Intersection LOS:	B
Intersection Capacity Utilization	75.1%
ICU Level of Service	D
Analysis Period (min)	15



Existing Conditions
15: Davis Avenue & East Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Traffic Volume (veh/h)	491	0	0	227	37	65
Future Volume (Veh/h)	491	0	0	227	37	65
Sign Control	Free			Free	Stop	
Grade	-1%			-1%	-7%	
Peak Hour Factor	0.91	0.92	0.92	0.91	0.91	0.91
Hourly flow rate (vph)	540	0	0	249	41	71
Pedestrians	12			51	31	
Lane Width (ft)	10.0			10.0	11.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			4	3	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	248			755		
pX, platoon unblocked						
vC, conflicting volume			571		708	352
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			571		708	352
tC, single (s)			4.1		6.8	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.4
p0 queue free %			100		89	88
cM capacity (veh/h)			984		361	591
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	270	270	124	124	41	71
Volume Left	0	0	0	0	41	0
Volume Right	0	0	0	0	0	71
cSH	1700	1700	1700	1700	361	591
Volume to Capacity	0.16	0.16	0.07	0.07	0.11	0.12
Queue Length 95th (ft)	0	0	0	0	10	10
Control Delay (s)	0.0	0.0	0.0	0.0	16.2	11.9
Lane LOS					C	B
Approach Delay (s)	0.0		0.0		13.5	
Approach LOS					B	
Intersection Summary						
Average Delay			1.7			
Intersection Capacity Utilization			34.2%		ICU Level of Service	A
Analysis Period (min)			15			

Existing Conditions
16: Emergency Department Entrance & East Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		
Traffic Volume (veh/h)	542	8	4	222	0	0
Future Volume (Veh/h)	542	8	4	222	0	0
Sign Control	Free			Free	Stop	
Grade	0%			-1%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	602	9	4	247	0	0
Pedestrians					100	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	571			432		
pX, platoon unblocked						
vC, conflicting volume			711		838	406
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			711		838	406
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			884		303	595
Direction, Lane #	EB 1	EB 2	WB 1	WB 2		
Volume Total	401	210	86	165		
Volume Left	0	0	4	0		
Volume Right	0	9	0	0		
cSH	1700	1700	884	1700		
Volume to Capacity	0.24	0.12	0.00	0.10		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.5	0.0		
Lane LOS			A			
Approach Delay (s)	0.0		0.2			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			20.3%		ICU Level of Service	A
Analysis Period (min)			15			

Existing Conditions
17: Emergency Department Exit & East Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘↗	
Traffic Volume (veh/h)	547	0	0	226	1	6
Future Volume (Veh/h)	547	0	0	226	1	6
Sign Control	Free			Free	Stop	
Grade	2%			-2%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	608	0	0	251	1	7
Pedestrians	20			20	100	
Lane Width (ft)	9.0			10.0	11.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			2	9	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	741			262		
pX, platoon unblocked						
vC, conflicting volume			708		854	424
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			708		854	424
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			809		268	520
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	304	304	126	126	8	
Volume Left	0	0	0	0	1	
Volume Right	0	0	0	0	7	
cSH	1700	1700	1700	1700	465	
Volume to Capacity	0.18	0.18	0.07	0.07	0.02	
Queue Length 95th (ft)	0	0	0	0	1	
Control Delay (s)	0.0	0.0	0.0	0.0	12.9	
Lane LOS					B	
Approach Delay (s)	0.0		0.0		12.9	
Approach LOS					B	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			31.7%		ICU Level of Service	A
Analysis Period (min)			15			

Existing Conditions

AM Peak Hour

18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	179	362	0	0	179	95	50	475	43	0	0	0
Future Volume (vph)	179	362	0	0	179	95	50	475	43	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	10	10	12	12	12	12	12	12
Grade (%)		2%			-5%			-3%			0%	
Satd. Flow (prot)	0	2707	0	0	2522	0	0	3206	0	0	0	0
Flt Permitted		0.701						0.996				
Satd. Flow (perm)	0	1874	0	0	2522	0	0	3190	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					102			9				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			343			379			494	
Travel Time (s)		3.0			7.8			8.6			11.2	
Confl. Peds. (#/hr)	94		104	104		94	50		23	23		50
Confl. Bikes (#/hr)			2						5			
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.92
Heavy Vehicles (%)	3%	4%	0%	0%	7%	1%	2%	1%	0%	0%	0%	0%
Parking (#/hr)		0			0							
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	581	0	0	294	0	0	611	0	0	0	0
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2						8					
Total Split (s)	10.0	61.0			51.0		39.0	39.0				
Total Lost Time (s)		5.0			5.0			5.0				
Act Effct Green (s)		56.0			46.0			34.0				
Actuated g/C Ratio		0.56			0.46			0.34				
v/c Ratio		0.53			0.24			0.56				
Control Delay		10.0			22.6			29.4				
Queue Delay		0.0			0.0			0.8				
Total Delay		10.0			22.6			30.1				
LOS		B			C			C				
Approach Delay		10.0			22.6			30.1				
Approach LOS		B			C			C				
Queue Length 50th (ft)		76			40			153				
Queue Length 95th (ft)		101			88			204				
Internal Link Dist (ft)		53			263			299			414	
Turn Bay Length (ft)												
Base Capacity (vph)		1091			1215			1090				
Starvation Cap Reductn		0			0			210				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.53			0.24			0.69				
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												
Actuated Cycle Length: 100												

Existing Conditions

AM Peak Hour

18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road

Timing Plan: 8:00 AM – 9:00 AM

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 20.8

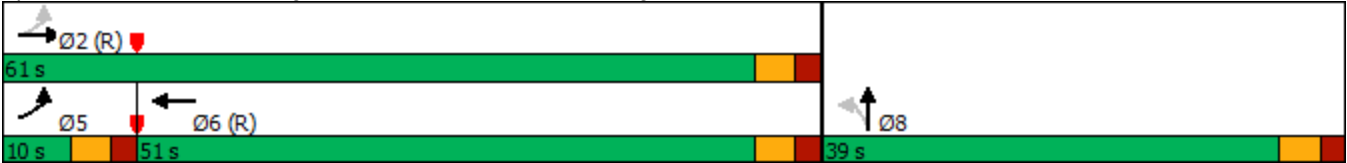
Intersection LOS: C

Intersection Capacity Utilization 67.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road



Existing Conditions

AM Peak Hour

19: Cromwell Place/Grand Street & East Post Road

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	297	108	57	238	0	0	0	0	55	55	45
Future Volume (vph)	0	297	108	57	238	0	0	0	0	55	55	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	10	10	12	12	12	12	9	10	12
Grade (%)		5%			0%			0%			2%	
Satd. Flow (prot)	0	2353	0	0	2705	0	0	0	0	1277	1277	0
Flt Permitted					0.785					0.950		
Satd. Flow (perm)	0	2353	0	0	2085	0	0	0	0	1224	1277	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		108									39	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		343			219			455			494	
Travel Time (s)		7.8			5.0			10.3			11.2	
Confl. Peds. (#/hr)	89		116	116		89	44		32	32		44
Confl. Bikes (#/hr)			1									1
Peak Hour Factor	0.92	0.83	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.83	0.83	0.83
Heavy Vehicles (%)	0%	5%	2%	7%	4%	0%	0%	0%	0%	2%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	4	0	0	0	0	0	0	0
Parking (#/hr)		4			0					0	0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	488	0	0	356	0	0	0	0	66	120	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			2						4	
Permitted Phases				2						4		
Total Split (s)		71.0		71.0	71.0					29.0	29.0	
Total Lost Time (s)		5.0			5.0					5.0	5.0	
Act Effct Green (s)		67.0			67.0					23.0	23.0	
Actuated g/C Ratio		0.67			0.67					0.23	0.23	
v/c Ratio		0.30			0.26					0.23	0.37	
Control Delay		11.2			15.6					34.1	25.6	
Queue Delay		0.6			1.2					0.0	0.0	
Total Delay		11.7			16.8					34.1	25.6	
LOS		B			B					C	C	
Approach Delay		11.7			16.8						28.6	
Approach LOS		B			B						C	
Queue Length 50th (ft)		84			75					34	43	
Queue Length 95th (ft)		112			98					66	85	
Internal Link Dist (ft)		263			139			375			414	
Turn Bay Length (ft)												
Base Capacity (vph)		1612			1396					293	336	
Starvation Cap Reductn		708			798					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.54			0.60					0.23	0.36	
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												

Existing Conditions
19: Cromwell Place/Grand Street & East Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Actuated Cycle Length: 100
Offset: 35 (35%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.37
Intersection Signal Delay: 16.5 Intersection LOS: B
Intersection Capacity Utilization 65.0% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 19: Cromwell Place/Grand Street & East Post Road



Existing Conditions
20: Chester Avenue & East Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

							
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Lane Configurations	↑↑			↑↑	↱	↲	
Traffic Volume (vph)	352	0	0	238	57	83	
Future Volume (vph)	352	0	0	238	57	83	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Grade (%)	4%			1%	0%		
Satd. Flow (prot)	3468	0	0	3522	1770	1583	
Flt Permitted					0.950		
Satd. Flow (perm)	3468	0	0	3522	1567	1387	
Right Turn on Red		No				No	
Satd. Flow (RTOR)							
Link Speed (mph)	30			30	30		
Link Distance (ft)	219			383	506		
Travel Time (s)	5.0			8.7	11.5		
Confl. Peds. (#/hr)		80	80		80	80	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	383	0	0	259	62	90	
Turn Type	NA			NA	Prot	Perm	
Protected Phases	2			2	4		9
Permitted Phases						4	
Total Split (s)	63.0			63.0	32.0	32.0	5.0
Total Lost Time (s)	4.5			4.5	4.5	4.5	
Act Effct Green (s)	58.5			58.5	32.5	32.5	
Actuated g/C Ratio	0.58			0.58	0.32	0.32	
v/c Ratio	0.19			0.13	0.11	0.20	
Control Delay	3.2			9.5	19.7	21.1	
Queue Delay	1.0			0.0	0.0	0.0	
Total Delay	4.2			9.5	19.7	21.1	
LOS	A			A	B	C	
Approach Delay	4.2			9.5	20.5		
Approach LOS	A			A	C		
Queue Length 50th (ft)	15			36	24	38	
Queue Length 95th (ft)	23			54	48	73	
Internal Link Dist (ft)	139			303	426		
Turn Bay Length (ft)							
Base Capacity (vph)	2028			2060	575	450	
Starvation Cap Reductn	1362			0	0	0	
Spillback Cap Reductn	0			0	0	0	
Storage Cap Reductn	0			0	0	0	
Reduced v/c Ratio	0.58			0.13	0.11	0.20	
Intersection Summary							
Area Type:	Other						
Cycle Length: 100							
Actuated Cycle Length: 100							
Offset: 0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green							
Control Type: Actuated-Coordinated							
Maximum v/c Ratio: 0.20							
Intersection Signal Delay: 9.1	Intersection LOS: A						

Existing Conditions
20: Chester Avenue & East Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Intersection Capacity Utilization 37.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 20: Chester Avenue & East Post Road



Existing Conditions

AM Peak Hour

21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	0	0	0	0	6	0	748	0	0	0	0
Future Volume (vph)	60	0	0	0	0	6	0	748	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			1%			0%	
Satd. Flow (prot)	1593	1676	0	0	0	1450	0	4554	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1473	1676	0	0	0	1326	0	4554	0	0	0	0
Right Turn on Red	No		No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		403			216			494			280	
Travel Time (s)		9.2			4.9			11.2			6.4	
Confl. Peds. (#/hr)	50		50	50		50	100		100			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	65	0	0	0	0	7	0	813	0	0	0	0
Turn Type	Perm					Perm		NA				
Protected Phases		4						2				
Permitted Phases	4					4						
Total Split (s)	25.1	25.1				25.1		74.9				
Total Lost Time (s)	5.0	5.0				5.0		4.9				
Act Effct Green (s)	14.7					14.7		78.5				
Actuated g/C Ratio	0.15					0.15		0.78				
v/c Ratio	0.30					0.04		0.23				
Control Delay	39.1					32.8		8.5				
Queue Delay	0.0					0.0		0.0				
Total Delay	39.1					32.8		8.5				
LOS	D					C		A				
Approach Delay		39.1			32.8			8.5				
Approach LOS		D			C			A				
Queue Length 50th (ft)	35					4		79				
Queue Length 95th (ft)	74					16		116				
Internal Link Dist (ft)		323			136			414			200	
Turn Bay Length (ft)												
Base Capacity (vph)	296					266		3573				
Starvation Cap Reductn	0					0		0				
Spillback Cap Reductn	0					0		94				
Storage Cap Reductn	0					0		0				
Reduced v/c Ratio	0.22					0.03		0.23				

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.30

Intersection Signal Delay: 10.9

Intersection LOS: B

Existing Conditions

AM Peak Hour

21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage

Timing Plan: 8:00 AM – 9:00 AM

Intersection Capacity Utilization 47.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage



Existing Conditions

22: South Lexington Avenue & Fisher Avenue/Quarropas Street

AM Peak Hour

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	399	146	79	70	0	0	0	0	548	674	102
Future Volume (vph)	0	399	146	79	70	0	0	0	0	548	674	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	11	11	12	12	12	12	12	12	13
Grade (%)		-1%			0%			0%				-1%
Storage Length (ft)	0		0	135		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	2		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	2810	0	1540	3079	0	0	0	0	3105	3201	1480
Flt Permitted				0.330						0.950		
Satd. Flow (perm)	0	2810	0	524	3079	0	0	0	0	2752	3201	1363
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)												111
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		629			873			1032			215	
Travel Time (s)		14.3			19.8			23.5			4.9	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	593	0	86	76	0	0	0	0	596	733	111
Turn Type		NA		pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Total Split (s)		45.0		10.0	55.0					42.0	42.0	42.0
Total Lost Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Act Effct Green (s)		46.3		55.4	55.4					34.6	34.6	34.6
Actuated g/C Ratio		0.46		0.55	0.55					0.35	0.35	0.35
v/c Ratio		0.46		0.24	0.04					0.63	0.66	0.20
Control Delay		21.6		11.4	8.7					29.8	30.3	4.8
Queue Delay		0.0		0.0	0.0					0.0	0.0	0.0
Total Delay		21.6		11.4	8.7					29.8	30.3	4.8
LOS		C		B	A					C	C	A
Approach Delay		21.6			10.1						28.1	
Approach LOS		C			B						C	
Queue Length 50th (ft)		146		26	11					157	201	0
Queue Length 95th (ft)		202		m54	m22					200	247	33
Internal Link Dist (ft)		549			793			952			135	
Turn Bay Length (ft)				135								
Base Capacity (vph)		1301		353	1704					1051	1222	589
Starvation Cap Reductn		0		0	0					0	0	0
Spillback Cap Reductn		0		0	0					0	0	0
Storage Cap Reductn		0		0	0					0	0	0
Reduced v/c Ratio		0.46		0.24	0.04					0.57	0.60	0.19

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Existing Conditions
22: South Lexington Avenue & Fisher Avenue/Quarropas Street

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Existing Conditions
22: South Lexington Avenue & Fisher Avenue/Quarropas Street

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Offset: 10 (10%), Referenced to phase 2:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 25.0 Intersection LOS: C
Intersection Capacity Utilization 82.8% ICU Level of Service E
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: South Lexington Avenue & Fisher Avenue/Quarropas Street



Existing Conditions

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

AM Peak Hour

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  				
Traffic Volume (vph)	436	511	0	0	70	153	72	672	70	0	0	0
Future Volume (vph)	436	511	0	0	70	153	72	672	70	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	12	12	11	11	12	12	12	12	12	12
Grade (%)		3%			-4%			1%			0%	
Storage Length (ft)	240		0	0		90	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1516	2928	0	0	1653	1405	0	4450	0	0	0	0
Flt Permitted	0.633							0.996				
Satd. Flow (perm)	965	2928	0	0	1653	1312	0	4428	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						83		17				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		873			420			280			604	
Travel Time (s)		19.8			9.5			6.4			13.7	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	474	555	0	0	76	166	0	884	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Total Split (s)	15.0	61.0			46.0	46.0	39.0	39.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Act Effct Green (s)	62.3	62.3			42.6	42.6		27.7				
Actuated g/C Ratio	0.62	0.62			0.43	0.43		0.28				
v/c Ratio	0.70	0.30			0.11	0.27		0.71				
Control Delay	19.4	10.6			18.8	11.3		36.6				
Queue Delay	0.0	0.0			0.0	0.0		1.3				
Total Delay	19.4	10.6			18.8	11.3		37.9				
LOS	B	B			B	B		D				
Approach Delay		14.6			13.6			37.9				
Approach LOS		B			B			D				
Queue Length 50th (ft)	201	114			29	33		154				
Queue Length 95th (ft)	#292	155			59	79		247				
Internal Link Dist (ft)		793			340			200			524	
Turn Bay Length (ft)	240					90						
Base Capacity (vph)	682	1824			703	606		1516				
Starvation Cap Reductn	0	0			0	0		397				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.70	0.30			0.11	0.27		0.79				

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Existing Conditions

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

AM Peak Hour

Timing Plan: 8:00 AM – 9:00 AM

Offset: 15 (15%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 24.0

Intersection LOS: C

Intersection Capacity Utilization 82.8%

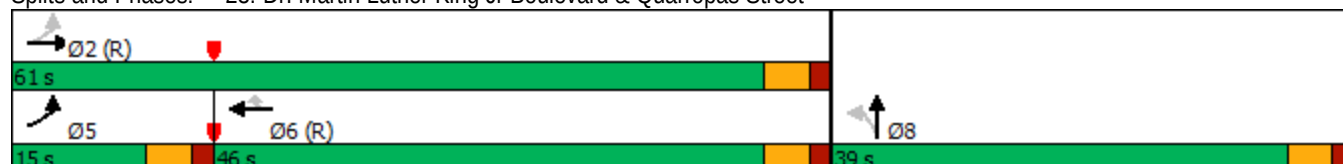
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

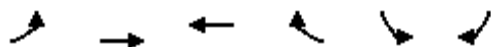
Queue shown is maximum after two cycles.

Splits and Phases: 23: Dr. Martin Luther King Jr Boulevard & Quarropas Street



Existing Conditions
27: East Post Road & Winchester Street

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↔	↔↔		↔↔	
Traffic Volume (veh/h)	5	548	221	5	5	5
Future Volume (Veh/h)	5	548	221	5	5	5
Sign Control		Free	Free		Stop	
Grade		2%	-2%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	609	246	6	6	6
Pedestrians		20	20		100	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		2	2		10	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		870	133			
pX, platoon unblocked						
vC, conflicting volume	352				686	246
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	352				686	246
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	99
cM capacity (veh/h)	1089				337	669
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	209	406	164	88	12	
Volume Left	6	0	0	0	6	
Volume Right	0	0	0	6	6	
cSH	1089	1700	1700	1700	448	
Volume to Capacity	0.01	0.24	0.10	0.05	0.03	
Queue Length 95th (ft)	0	0	0	0	2	
Control Delay (s)	0.3	0.0	0.0	0.0	13.3	
Lane LOS	A				B	
Approach Delay (s)	0.1		0.0		13.3	
Approach LOS					B	
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			33.5%		ICU Level of Service	A
Analysis Period (min)			15			

Existing Conditions
2: Roosevelt Street & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Traffic Volume (veh/h)	409	2	12	395	8	11
Future Volume (Veh/h)	409	2	12	395	8	11
Sign Control	Free			Free	Stop	
Grade	-2%			-1%	-4%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	470	2	14	454	9	13
Pedestrians	1				16	
Lane Width (ft)	14.0				12.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	0				2	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)				357		
pX, platoon unblocked					0.93	
vC, conflicting volume			488		743	252
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			488		578	252
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		98	98
cM capacity (veh/h)			1069		409	742
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	313	159	165	303	22	
Volume Left	0	0	14	0	9	
Volume Right	0	2	0	0	13	
cSH	1700	1700	1069	1700	556	
Volume to Capacity	0.18	0.09	0.01	0.18	0.04	
Queue Length 95th (ft)	0	0	1	0	3	
Control Delay (s)	0.0	0.0	0.8	0.0	11.7	
Lane LOS			A		B	
Approach Delay (s)	0.0		0.3		11.7	
Approach LOS					B	
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			31.8%		ICU Level of Service	A
Analysis Period (min)			15			

Existing Conditions
3: South Lexington Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑		↖		↖	↖	↖	
Traffic Volume (vph)	0	400	20	36	342	0	26	0	64	272	362	50
Future Volume (vph)	0	400	20	36	342	0	26	0	64	272	362	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	10	12	10	12	10	10	13	12
Grade (%)		0%			-2%			-5%			4%	
Storage Length (ft)	0		0	140		0	85		0	0		0
Storage Lanes	0		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3077	0	1477	3063	0	1554	0	1337	1324	1691	0
Flt Permitted				0.323			0.299			0.950		
Satd. Flow (perm)	0	3077	0	486	3063	0	482	0	1259	1270	1691	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		5									9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		357			354			564			207	
Travel Time (s)		8.1			8.0			12.8			4.7	
Confl. Peds. (#/hr)	31		30	30		31	29		35	35		29
Confl. Bikes (#/hr)			1			1						3
Peak Hour Factor	0.92	0.94	0.94	0.94	0.94	0.92	0.94	0.92	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	11%	0%	0%	0%	0%	0%	4%	1%	0%	0%
Parking (#/hr)										0		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	447	0	38	364	0	28	0	68	289	438	0
Turn Type		NA		pm+pt	NA		pm+pt		Perm	pm+pt	NA	
Protected Phases		2		1	6		3			7	4	
Permitted Phases				6			8		8	4		
Total Split (s)		30.0		10.0	40.0		9.0		34.9	10.1	45.0	
Total Lost Time (s)		5.0		5.0	5.0		5.0		4.9	5.0	5.0	
Act Effect Green (s)		25.0		35.0	35.0		33.9		30.0	40.0	40.0	
Actuated g/C Ratio		0.27		0.37	0.37		0.36		0.32	0.43	0.43	
v/c Ratio		0.54		0.16	0.32		0.13		0.17	0.53	0.60	
Control Delay		32.2		32.6	35.1		18.0		24.5	16.6	16.6	
Queue Delay		0.0		0.0	0.0		0.0		0.0	0.2	0.5	
Total Delay		32.2		32.6	35.1		18.0		24.5	16.8	17.1	
LOS		C		C	D		B		C	B	B	
Approach Delay		32.2			34.9			22.6			17.0	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)		118		20	115		10		29	68	100	
Queue Length 95th (ft)		168		54	157		26		62	103	142	
Internal Link Dist (ft)		277			274			484			127	
Turn Bay Length (ft)				140			85					
Base Capacity (vph)		822		233	1140		219		401	543	724	
Starvation Cap Reductn		0		0	0		0		0	29	68	
Spillback Cap Reductn		0		0	0		0		0	0	0	
Storage Cap Reductn		0		0	0		0		0	0	0	
Reduced v/c Ratio		0.54		0.16	0.32		0.13		0.17	0.56	0.67	
Intersection Summary												

Existing Conditions
3: South Lexington Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 25.7

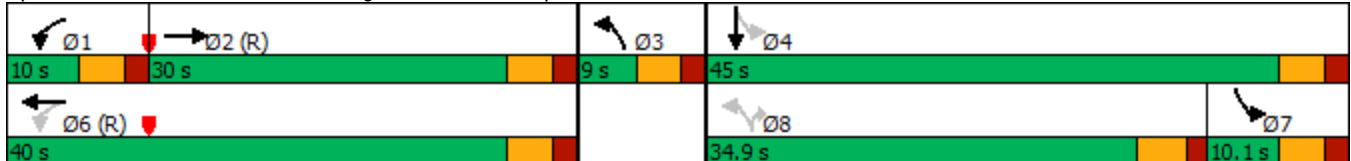
Intersection LOS: C

Intersection Capacity Utilization 60.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: South Lexington Avenue & Maple Avenue



Existing Conditions
4: Davis Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	621	44	21	351	79	22	26	55	51	15	17
Future Volume (vph)	86	621	44	21	351	79	22	26	55	51	15	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	11	11	12	11	12	12	9	12	11	10	12
Grade (%)		1%			0%			-5%			4%	
Storage Length (ft)	100		0	0		0	0		0	90		0
Storage Lanes	1		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1426	3040	0	0	2941	0	0	1230	0	1539	1408	0
Flt Permitted	0.448				0.906			0.949		0.709		
Satd. Flow (perm)	633	3040	0	0	2666	0	0	1172	0	1072	1408	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			37			59			18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		354			356			562			217	
Travel Time (s)		8.0			8.1			12.8			4.9	
Confl. Peds. (#/hr)	45		34	34		45	21		55	55		21
Confl. Bikes (#/hr)			4						1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	1%	1%	0%	0%	7%	0%	3%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	91	708	0	0	479	0	0	110	0	54	34	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Total Split (s)	50.0	50.0		50.0	50.0		38.0	38.0		38.0	38.0	
Total Lost Time (s)	5.2	5.2			5.2			5.2		5.2	5.2	
Act Effect Green (s)	44.8	44.8			44.8			32.8		32.8	32.8	
Actuated g/C Ratio	0.48	0.48			0.48			0.35		0.35	0.35	
v/c Ratio	0.30	0.49			0.37			0.25		0.14	0.07	
Control Delay	14.9	14.3			31.2			12.7		22.4	13.1	
Queue Delay	0.0	0.5			0.0			0.0		0.0	0.0	
Total Delay	14.9	14.9			31.2			12.7		22.4	13.1	
LOS	B	B			C			B		C	B	
Approach Delay		14.9			31.2			12.7			18.8	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)	35	140			105			20		22	6	
Queue Length 95th (ft)	m64	177			156			60		50	27	
Internal Link Dist (ft)		274			276			482			137	
Turn Bay Length (ft)	100									90		
Base Capacity (vph)	301	1454			1289			447		374	503	
Starvation Cap Reductn	0	360			0			0		0	0	
Spillback Cap Reductn	0	0			0			0		0	0	
Storage Cap Reductn	0	0			0			0		0	0	
Reduced v/c Ratio	0.30	0.65			0.37			0.25		0.14	0.07	
Intersection Summary												

Existing Conditions
4: Davis Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	6.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Existing Conditions
4: Davis Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Area Type:	CBD
Cycle Length:	94
Actuated Cycle Length:	94
Offset:	30 (32%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.49
Intersection Signal Delay:	20.3
Intersection LOS:	C
Intersection Capacity Utilization	66.3%
ICU Level of Service	C
Analysis Period (min)	15
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Davis Avenue & Maple Avenue



Existing Conditions
5: Oakwood Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	699	32	26	421	24	55
Future Volume (vph)	699	32	26	421	24	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Grade (%)	1%			0%	-5%	
Satd. Flow (prot)	3173	0	0	3209	1578	0
Flt Permitted				0.881	0.985	
Satd. Flow (perm)	3173	0	0	2834	1574	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	12				60	
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			475	444	
Travel Time (s)	8.1			10.8	10.1	
Confl. Peds. (#/hr)		40	40		6	24
Confl. Bikes (#/hr)		3				
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	0%	0%	1%	7%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	803	0	0	492	86	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			2	4	
Permitted Phases			2			
Total Split (s)	71.2		71.2	71.2	22.8	
Total Lost Time (s)	5.2			5.2	5.0	
Act Effect Green (s)	66.0			66.0	17.8	
Actuated g/C Ratio	0.70			0.70	0.19	
v/c Ratio	0.36			0.25	0.25	
Control Delay	1.7			0.9	15.5	
Queue Delay	0.2			0.0	0.0	
Total Delay	1.9			0.9	15.5	
LOS	A			A	B	
Approach Delay	1.9			0.9	15.5	
Approach LOS	A			A	B	
Queue Length 50th (ft)	13			7	13	
Queue Length 95th (ft)	31			7	53	
Internal Link Dist (ft)	276			395	364	
Turn Bay Length (ft)						
Base Capacity (vph)	2231			1989	347	
Starvation Cap Reductn	558			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.48			0.25	0.25	
Intersection Summary						
Area Type:	CBD					
Cycle Length: 94						
Actuated Cycle Length: 94						
Offset: 31 (33%), Referenced to phase 2:EBWB and 6:, Start of Green						

Existing Conditions
5: Oakwood Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Control Type: Pretimed

Maximum v/c Ratio: 0.36

Intersection Signal Delay: 2.4

Intersection LOS: A

Intersection Capacity Utilization 58.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5: Oakwood Avenue & Maple Avenue



Existing Conditions
6: Longview Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	131	558	33	27	452	181	34	295	33	0	0	0
Future Volume (vph)	131	558	33	27	452	181	34	295	33	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	11	10	11	10	10	10	9	12	12	12
Grade (%)		0%			-5%			-2%			0%	
Storage Length (ft)	225		0	60		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1462	2966	0	1509	2980	0	0	2825	0	0	0	0
Flt Permitted	0.299			0.416				0.995				
Satd. Flow (perm)	449	2966	0	643	2980	0	0	2811	0	0	0	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		12			86							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		475			281			824			379	
Travel Time (s)		10.8			6.4			18.7			8.6	
Confl. Peds. (#/hr)	60		24	24		60	44		48	48		44
Confl. Bikes (#/hr)			2			1			2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	3%	0%	1%	4%	0%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	138	622	0	28	667	0	0	382	0	0	0	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2			6			8					
Total Split (s)	13.0	62.0		49.0	49.0		29.0	29.0				
Total Lost Time (s)	5.2	5.2		5.2	5.2			5.2				
Act Effect Green (s)	57.4	57.4		43.8	43.8			23.2				
Actuated g/C Ratio	0.61	0.61		0.47	0.47			0.25				
v/c Ratio	0.38	0.34		0.09	0.47			0.55				
Control Delay	6.0	2.6		18.7	23.3			34.4				
Queue Delay	0.0	0.0		0.0	3.1			0.0				
Total Delay	6.0	2.6		18.7	26.4			34.4				
LOS	A	A		B	C			C				
Approach Delay		3.2			26.1			34.4				
Approach LOS		A			C			C				
Queue Length 50th (ft)	10	22		11	186			105				
Queue Length 95th (ft)	14	24		36	254			151				
Internal Link Dist (ft)		395			201			744			299	
Turn Bay Length (ft)	225			60								
Base Capacity (vph)	365	1817		299	1434			711				
Starvation Cap Reductn	0	0		0	641			0				
Spillback Cap Reductn	0	84		0	0			12				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.38	0.36		0.09	0.84			0.55				
Intersection Summary												

Existing Conditions
6: Longview Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Existing Conditions
6: Longview Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

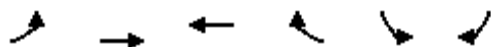
Area Type:	CBD
Cycle Length:	94
Actuated Cycle Length:	94
Offset:	52 (55%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.55
Intersection Signal Delay:	18.4
Intersection LOS:	B
Intersection Capacity Utilization	64.8%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 6: Longview Avenue & Maple Avenue



Existing Conditions
7: Maple Avenue & Cromwell Place

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↱	↲
Traffic Volume (vph)	0	581	547	0	165	104
Future Volume (vph)	0	581	547	0	165	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	11	12
Grade (%)		6%	3%		4%	
Storage Length (ft)	0			0	0	60
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	3016	3094	0	1371	1383
Flt Permitted					0.950	
Satd. Flow (perm)	0	3016	3094	0	1360	1383
Right Turn on Red				Yes		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		281	255		455	
Travel Time (s)		6.4	5.8		10.3	
Confl. Peds. (#/hr)	67			67	6	2
Confl. Bikes (#/hr)						2
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%
Parking (#/hr)					0	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	638	601	0	181	114
Turn Type		NA	NA		Perm	Prot
Protected Phases		2	2			4
Permitted Phases					4	
Total Split (s)		55.0	55.0		39.0	39.0
Total Lost Time (s)		4.7	4.7		4.7	4.7
Act Effct Green (s)		50.3	50.3		34.3	34.3
Actuated g/C Ratio		0.54	0.54		0.36	0.36
v/c Ratio		0.40	0.36		0.36	0.23
Control Delay		25.5	11.7		21.2	18.5
Queue Delay		2.6	1.0		0.0	0.1
Total Delay		28.2	12.7		21.2	18.6
LOS		C	B		C	B
Approach Delay		28.2	12.7		20.2	
Approach LOS		C	B		C	
Queue Length 50th (ft)		170	76		90	50
Queue Length 95th (ft)		217	103		155	95
Internal Link Dist (ft)		201	175		375	
Turn Bay Length (ft)						60
Base Capacity (vph)		1613	1655		496	504
Starvation Cap Reductn		827	761		0	0
Spillback Cap Reductn		212	28		0	48
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.81	0.67		0.36	0.25
Intersection Summary						

Area Type:	CBD
Cycle Length:	94
Actuated Cycle Length:	94
Offset:	0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.40
Intersection Signal Delay:	20.6
Intersection LOS:	C
Intersection Capacity Utilization	43.2%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 7: Maple Avenue & Cromwell Place



Existing Conditions
8: Greenridge Avenue/Chester Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	566	91	48	528	71	19	68	66	0	0	0
Future Volume (vph)	89	566	91	48	528	71	19	68	66	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	11
Grade (%)		2%			3%			0%			-4%	
Storage Length (ft)	125		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1752	3363	0	1743	3389	0	0	3194	0	0	0	0
Flt Permitted	0.356			0.327				0.994				
Satd. Flow (perm)	640	3363	0	578	3389	0	0	3171	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			23			72				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		255			453			507			506	
Travel Time (s)		5.8			10.3			11.5			11.5	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	714	0	52	651	0	0	167	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA				
Protected Phases	1	6		5	2			8				
Permitted Phases	6			2			8					
Total Split (s)	10.0	53.0		10.0	53.0		31.0	31.0				
Total Lost Time (s)	7.0	5.0		5.0	5.0			5.0				
Act Effct Green (s)	50.4	50.0		54.0	50.0			26.0				
Actuated g/C Ratio	0.54	0.53		0.57	0.53			0.28				
v/c Ratio	0.26	0.40		0.13	0.36			0.18				
Control Delay	9.6	15.0		8.1	13.4			15.3				
Queue Delay	0.0	1.1		0.0	0.0			0.0				
Total Delay	9.6	16.1		8.1	13.4			15.3				
LOS	A	B		A	B			B				
Approach Delay		15.3			13.0			15.3				
Approach LOS		B			B			B				
Queue Length 50th (ft)	28	157		11	113			22				
Queue Length 95th (ft)	49	205		25	153			47				
Internal Link Dist (ft)		175			373			427			426	
Turn Bay Length (ft)	125			75								
Base Capacity (vph)	378	1801		393	1813			929				
Starvation Cap Reductn	0	788		0	0			0				
Spillback Cap Reductn	0	0		0	0			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.26	0.70		0.13	0.36			0.18				

Intersection Summary

Area Type: Other

Cycle Length: 94

Actuated Cycle Length: 94

Existing Conditions
8: Greenridge Avenue/Chester Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Offset: 30 (32%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 14.4	Intersection LOS: B
Intersection Capacity Utilization 57.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Greenridge Avenue/Chester Avenue & Maple Avenue



Existing Conditions
9: South Lexington Avenue & Lincoln Lot/Davis Garage

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											 	
Traffic Volume (veh/h)	0	0	0	6	0	0	0	0	0	6	687	9
Future Volume (Veh/h)	0	0	0	6	0	0	0	0	0	6	687	9
Sign Control	Stop			Stop			Free			Free		
Grade	0%			-5%			0%			3%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	7	0	0	0	0	0	7	747	10
Pedestrians	38			32			13			18		
Lane Width (ft)	0.0			10.0			0.0			12.0		
Walking Speed (ft/s)	3.5			3.5			3.5			3.5		
Percent Blockage	0			3			0			2		
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)							207			185		
pX, platoon unblocked	0.87	0.87	0.87	0.87	0.87		0.87					
vC, conflicting volume	822	836	430	432	841	50	795	32				
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	501	517	51	54	523	50	470	32				
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1	4.1				
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2	2.2				
p0 queue free %	100	100	100	99	100	100	100	100				
cM capacity (veh/h)	379	390	877	778	387	965	948	1538				
Direction, Lane #	WB 1	SB 1	SB 2									
Volume Total	7	380	384									
Volume Left	7	7	0									
Volume Right	0	0	10									
cSH	778	1538	1700									
Volume to Capacity	0.01	0.00	0.23									
Queue Length 95th (ft)	1	0	0									
Control Delay (s)	9.7	0.2	0.0									
Lane LOS	A	A										
Approach Delay (s)	9.7	0.1										
Approach LOS	A											
Intersection Summary												
Average Delay	0.2											
Intersection Capacity Utilization	40.7%			ICU Level of Service					A			
Analysis Period (min)	15											

Existing Conditions

MD Peak Hour

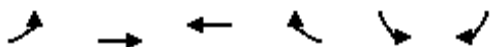
10: Davis Avenue & Davis Garage/Main Hospital Entrance

Timing Plan: 3:00 PM – 4:00 PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	68	14	62	45	40	14	98	79	0	7	0
Future Volume (Veh/h)	10	68	14	62	45	40	14	98	79	0	7	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			-1%			-4%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	74	15	67	49	43	15	107	86	0	8	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								217				
pX, platoon unblocked	0.98	0.98		0.98	0.98	0.98				0.98		
vC, conflicting volume	256	231	8	240	188	150	8			193		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	236	211	8	220	167	129	8			172		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	89	99	90	93	95	99			100		
cM capacity (veh/h)	634	669	1074	649	708	907	1612			1383		
Direction, Lane #	EB 1	WB 1	NB 1									
Volume Total	100	159	208									
Volume Left	11	67	15									
Volume Right	15	43	86									
cSH	705	723	1612									
Volume to Capacity	0.14	0.22	0.01									
Queue Length 95th (ft)	12	21	1									
Control Delay (s)	11.0	11.4	0.6									
Lane LOS	B	B	A									
Approach Delay (s)	11.0	11.4	0.6									
Approach LOS	B	B										
Intersection Summary												
Average Delay			Err									
Intersection Capacity Utilization			Err%		ICU Level of Service				H			
Analysis Period (min)			15									

Existing Conditions
11: West Post Road & Highland Avenue

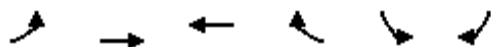
MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	113	270	302	48	56	58
Future Volume (Veh/h)	113	270	302	48	56	58
Sign Control		Free	Free		Stop	
Grade		-4%	3%		-11%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	128	307	343	55	64	66
Pedestrians		22	6		49	
Lane Width (ft)		16.0	16.0		16.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		3	1		6	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			742			
pX, platoon unblocked	0.93				0.93	0.93
vC, conflicting volume	447				988	442
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	369				951	363
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	88				71	89
cM capacity (veh/h)	1039				222	581
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	435	398	130			
Volume Left	128	0	64			
Volume Right	0	55	66			
cSH	1039	1700	324			
Volume to Capacity	0.12	0.23	0.40			
Queue Length 95th (ft)	11	0	47			
Control Delay (s)	3.6	0.0	23.4			
Lane LOS	A		C			
Approach Delay (s)	3.6	0.0	23.4			
Approach LOS			C			
Intersection Summary						
Average Delay			4.8			
Intersection Capacity Utilization			65.2%	ICU Level of Service		C
Analysis Period (min)			15			

Existing Conditions
12: West Post Road & Orawaupum Street

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	27	294	334	54	15	16
Future Volume (Veh/h)	27	294	334	54	15	16
Sign Control		Free	Free		Stop	
Grade		-3%	2%		-10%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	31	342	388	63	17	19
Pedestrians			4		56	
Lane Width (ft)			16.0		11.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			1		5	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			361			
pX, platoon unblocked	0.89				0.89	0.89
vC, conflicting volume	507				884	476
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	389				810	353
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				94	97
cM capacity (veh/h)	1004				290	591
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	373	451	36			
Volume Left	31	0	17			
Volume Right	0	63	19			
cSH	1004	1700	396			
Volume to Capacity	0.03	0.27	0.09			
Queue Length 95th (ft)	2	0	7			
Control Delay (s)	1.0	0.0	15.0			
Lane LOS	A		B			
Approach Delay (s)	1.0	0.0	15.0			
Approach LOS			B			
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			52.1%	ICU Level of Service	A	
Analysis Period (min)			15			

Existing Conditions
13: Lincoln Lot & West Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	309	0	0	384	4	16
Future Volume (Veh/h)	309	0	0	384	4	16
Sign Control	Free			Free	Stop	
Grade	1%			1%	-2%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	336	0	0	417	4	17
Pedestrians	2				9	
Lane Width (ft)	16.0				10.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	0				1	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)				207		
pX, platoon unblocked					0.89	
vC, conflicting volume			345		764	345
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			345		675	345
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	98
cM capacity (veh/h)			1205		371	693
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	336	417	21			
Volume Left	0	0	4			
Volume Right	0	0	17			
cSH	1700	1700	595			
Volume to Capacity	0.20	0.25	0.04			
Queue Length 95th (ft)	0	0	3			
Control Delay (s)	0.0	0.0	11.3			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	11.3			
Approach LOS			B			
Intersection Summary						
Average Delay		0.3				
Intersection Capacity Utilization		32.5%	ICU Level of Service	A		
Analysis Period (min)		15				

Existing Conditions

14: South Lexington Avenue & West Post Road/East Post Road

MD Peak Hour

Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖					↖	↗	
Traffic Volume (vph)	0	249	76	81	239	0	0	0	0	178	545	145
Future Volume (vph)	0	249	76	81	239	0	0	0	0	178	545	145
Ideal Flow (vphpl)	1900	2050	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	12	12	12	12	11	11	11
Grade (%)		-1%			0%			0%			1%	
Storage Length (ft)	0		105	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1589	1294	0	2558	0	0	0	0	1065	2791	0
Flt Permitted					0.729					0.950		
Satd. Flow (perm)	0	1589	1220	0	1875	0	0	0	0	997	2791	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			85								57	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		207			248			185			1032	
Travel Time (s)		4.7			5.6			4.2			23.5	
Confl. Peds. (#/hr)	61		38	38		61	34		54	54		34
Confl. Bikes (#/hr)			2									4
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	5%	0%	2%	5%	0%	0%	0%	0%	2%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0	0		24					41	4	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	280	85	0	360	0	0	0	0	200	775	0
Turn Type		NA	Perm	Perm	NA					Perm	NA	
Protected Phases		2			2							4
Permitted Phases			2	2						4		
Total Split (s)		37.0	37.0	37.0	37.0					57.0	57.0	
Total Lost Time (s)		5.0	5.0		5.0					5.0	5.0	
Act Effct Green (s)		32.0	32.0		32.0					52.0	52.0	
Actuated g/C Ratio		0.34	0.34		0.34					0.55	0.55	
v/c Ratio		0.52	0.18		0.56					0.36	0.49	
Control Delay		29.0	6.1		22.1					14.1	13.1	
Queue Delay		0.0	0.0		0.0					0.0	0.0	
Total Delay		29.0	6.1		22.1					14.1	13.2	
LOS		C	A		C					B	B	
Approach Delay		23.7			22.1						13.4	
Approach LOS		C			C						B	
Queue Length 50th (ft)		132	0		67					63	128	
Queue Length 95th (ft)		209	31		116					110	174	
Internal Link Dist (ft)		127			168			105			952	
Turn Bay Length (ft)			105									
Base Capacity (vph)		540	471		638					551	1569	
Starvation Cap Reductn		0	0		0					0	0	
Spillback Cap Reductn		0	0		0					0	11	
Storage Cap Reductn		0	0		0					0	0	
Reduced v/c Ratio		0.52	0.18		0.56					0.36	0.50	

Existing Conditions
14: South Lexington Avenue & West Post Road/East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Intersection Summary

Area Type:	CBD
Cycle Length:	94
Actuated Cycle Length:	94
Offset:	0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.56
Intersection Signal Delay:	17.4
Intersection LOS:	B
Intersection Capacity Utilization	75.0%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 14: South Lexington Avenue & West Post Road/East Post Road



Existing Conditions
15: Davis Avenue & East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Traffic Volume (veh/h)	426	0	0	273	47	99
Future Volume (Veh/h)	426	0	0	273	47	99
Sign Control	Free			Free	Stop	
Grade	-1%			-1%	-7%	
Peak Hour Factor	0.88	0.92	0.92	0.88	0.88	0.88
Hourly flow rate (vph)	484	0	0	310	53	112
Pedestrians	11			37	38	
Lane Width (ft)	10.0			10.0	11.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			3	3	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	248			755		
pX, platoon unblocked						
vC, conflicting volume			522		688	317
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			522		688	317
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		86	83
cM capacity (veh/h)			1020		370	640
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	242	242	155	155	53	112
Volume Left	0	0	0	0	53	0
Volume Right	0	0	0	0	0	112
cSH	1700	1700	1700	1700	370	640
Volume to Capacity	0.14	0.14	0.09	0.09	0.14	0.17
Queue Length 95th (ft)	0	0	0	0	12	16
Control Delay (s)	0.0	0.0	0.0	0.0	16.4	11.8
Lane LOS					C	B
Approach Delay (s)	0.0		0.0		13.3	
Approach LOS					B	
Intersection Summary						
Average Delay			2.3			
Intersection Capacity Utilization			32.3%		ICU Level of Service	A
Analysis Period (min)			15			

Existing Conditions
16: Emergency Department Entrance & East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	505	15	5	268	0	0
Future Volume (Veh/h)	505	15	5	268	0	0
Sign Control	Free			Free	Stop	
Grade	0%			-1%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	561	17	6	298	0	0
Pedestrians					100	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	571			432		
pX, platoon unblocked						
vC, conflicting volume			678		830	389
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			678		830	389
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		100	100
cM capacity (veh/h)			910		306	610
Direction, Lane #	EB 1	EB 2	WB 1	WB 2		
Volume Total	374	204	105	199		
Volume Left	0	0	6	0		
Volume Right	0	17	0	0		
cSH	1700	1700	910	1700		
Volume to Capacity	0.22	0.12	0.01	0.12		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.6	0.0		
Lane LOS			A			
Approach Delay (s)	0.0		0.2			
Approach LOS						
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			19.5%	ICU Level of Service		A
Analysis Period (min)			15			

Existing Conditions
17: Emergency Department Exit & East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	510	0	0	270	3	10
Future Volume (Veh/h)	510	0	0	270	3	10
Sign Control	Free			Free	Stop	
Grade	2%			-2%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	567	0	0	300	3	11
Pedestrians	20			20	100	
Lane Width (ft)	9.0			10.0	11.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			2	9	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	741			262		
pX, platoon unblocked						
vC, conflicting volume			667		837	404
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			667		837	404
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	98
cM capacity (veh/h)			838		275	536
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	284	284	150	150	14	
Volume Left	0	0	0	0	3	
Volume Right	0	0	0	0	11	
cSH	1700	1700	1700	1700	445	
Volume to Capacity	0.17	0.17	0.09	0.09	0.03	
Queue Length 95th (ft)	0	0	0	0	2	
Control Delay (s)	0.0	0.0	0.0	0.0	13.3	
Lane LOS					B	
Approach Delay (s)	0.0		0.0		13.3	
Approach LOS					B	
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			30.5%		ICU Level of Service	A
Analysis Period (min)			15			

Existing Conditions

MD Peak Hour

18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road Time Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	221	289	0	0	199	198	79	531	68	0	0	0
Future Volume (vph)	221	289	0	0	199	198	79	531	68	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	10	10	12	12	12	12	12	12
Grade (%)		2%			-5%			-3%			0%	
Satd. Flow (prot)	0	2696	0	0	2431	0	0	3184	0	0	0	0
Flt Permitted		0.637						0.994				
Satd. Flow (perm)	0	1701	0	0	2431	0	0	3165	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					197			15				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			343			379			494	
Travel Time (s)		3.0			7.8			8.6			11.2	
Confl. Peds. (#/hr)	94		104	104		94	50		23	23		50
Confl. Bikes (#/hr)			2						5			
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.92
Heavy Vehicles (%)	3%	4%	0%	0%	7%	1%	2%	1%	0%	0%	0%	0%
Parking (#/hr)		0			0							
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	549	0	0	427	0	0	729	0	0	0	0
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2						8					
Total Split (s)	14.0	53.0			39.0		41.0	41.0				
Total Lost Time (s)		5.0			5.0			5.0				
Act Effct Green (s)		48.0			34.0			36.0				
Actuated g/C Ratio		0.51			0.36			0.38				
v/c Ratio		0.57			0.42			0.60				
Control Delay		15.6			29.8			21.3				
Queue Delay		0.0			0.0			0.8				
Total Delay		15.6			29.8			22.2				
LOS		B			C			C				
Approach Delay		15.6			29.8			22.2				
Approach LOS		B			C			C				
Queue Length 50th (ft)		78			91			146				
Queue Length 95th (ft)		105			115			203				
Internal Link Dist (ft)		53			263			299			414	
Turn Bay Length (ft)												
Base Capacity (vph)		963			1005			1221				
Starvation Cap Reductn		0			0			229				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.57			0.42			0.73				
Intersection Summary												
Area Type:	CBD											
Cycle Length: 94												
Actuated Cycle Length: 94												

Existing Conditions

MD Peak Hour

18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road

Timing Plan: 3:00 PM – 4:00 PM

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 22.0

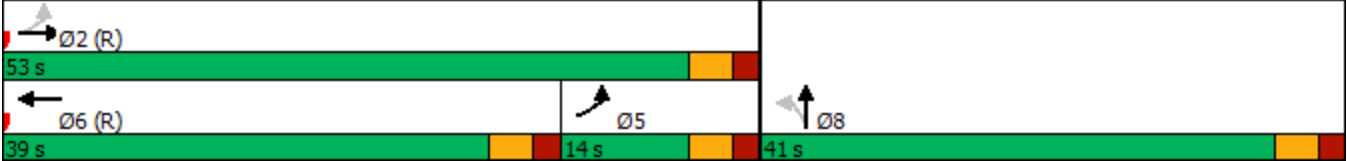
Intersection LOS: C

Intersection Capacity Utilization 69.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road



Existing Conditions
19: Cromwell Place/Grand Street & East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 					 	 	
Traffic Volume (vph)	0	304	51	58	314	0	0	0	0	51	55	84
Future Volume (vph)	0	304	51	58	314	0	0	0	0	51	55	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	10	10	12	12	12	12	9	10	12
Grade (%)		5%			0%			0%			2%	
Satd. Flow (prot)	0	2495	0	0	2714	0	0	0	0	1277	1236	0
Flt Permitted					0.821					0.950		
Satd. Flow (perm)	0	2495	0	0	2193	0	0	0	0	1227	1236	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		39									79	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		343			219			455			494	
Travel Time (s)		7.8			5.0			10.3			11.2	
Confl. Peds. (#/hr)	89		116	116		89	44		32	32		44
Confl. Bikes (#/hr)			1									1
Peak Hour Factor	0.92	0.83	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.83	0.83	0.83
Heavy Vehicles (%)	0%	5%	2%	7%	4%	0%	0%	0%	0%	2%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	4	0	0	0	0	0	0	0
Parking (#/hr)		4			0					0	0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	427	0	0	448	0	0	0	0	61	167	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			2						4	
Permitted Phases				2						4		
Total Split (s)		65.0		65.0	65.0					29.0	29.0	
Total Lost Time (s)		5.0			5.0					5.0	5.0	
Act Effct Green (s)		61.0			61.0					23.0	23.0	
Actuated g/C Ratio		0.65			0.65					0.24	0.24	
v/c Ratio		0.26			0.31					0.20	0.46	
Control Delay		10.1			18.8					30.5	20.8	
Queue Delay		0.0			2.6					0.0	0.0	
Total Delay		10.1			21.4					30.5	20.8	
LOS		B			C					C	C	
Approach Delay		10.1			21.4						23.4	
Approach LOS		B			C						C	
Queue Length 50th (ft)		75			105					29	43	
Queue Length 95th (ft)		93			135					58	91	
Internal Link Dist (ft)		263			139			375			414	
Turn Bay Length (ft)												
Base Capacity (vph)		1632			1423					313	374	
Starvation Cap Reductn		0			832					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.26			0.76					0.19	0.45	
Intersection Summary												
Area Type:	CBD											
Cycle Length: 94												

Existing Conditions
19: Cromwell Place/Grand Street & East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Actuated Cycle Length: 94

Offset: 35 (37%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.46

Intersection Signal Delay: 17.4

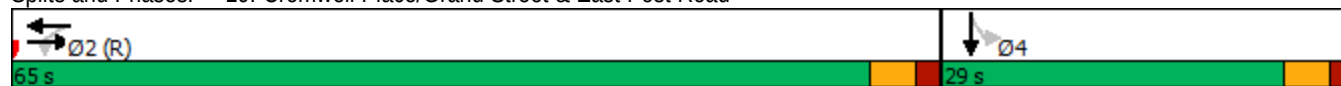
Intersection LOS: B

Intersection Capacity Utilization 65.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 19: Cromwell Place/Grand Street & East Post Road



Existing Conditions
20: Chester Avenue & East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Lane Configurations	↑↑			↑↑	↵	↵	
Traffic Volume (vph)	355	0	0	312	60	84	
Future Volume (vph)	355	0	0	312	60	84	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Grade (%)	4%			1%	0%		
Satd. Flow (prot)	3468	0	0	3522	1770	1583	
Flt Permitted					0.950		
Satd. Flow (perm)	3468	0	0	3522	1580	1398	
Right Turn on Red		No				No	
Satd. Flow (RTOR)							
Link Speed (mph)	30			30	30		
Link Distance (ft)	219			383	506		
Travel Time (s)	5.0			8.7	11.5		
Confl. Peds. (#/hr)		80	80		80	80	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	386	0	0	339	65	91	
Turn Type	NA			NA	Prot	Perm	
Protected Phases	2			2	4		9
Permitted Phases						4	
Total Split (s)	55.0			55.0	34.0	34.0	5.0
Total Lost Time (s)	4.5			4.5	4.5	4.5	
Act Effect Green (s)	50.5			50.5	29.5	29.5	
Actuated g/C Ratio	0.54			0.54	0.31	0.31	
v/c Ratio	0.21			0.18	0.12	0.21	
Control Delay	8.5			11.4	23.3	24.7	
Queue Delay	1.4			0.0	0.0	0.0	
Total Delay	9.9			11.5	23.3	24.7	
LOS	A			B	C	C	
Approach Delay	9.9			11.5	24.1		
Approach LOS	A			B	C		
Queue Length 50th (ft)	28			51	30	42	
Queue Length 95th (ft)	68			74	65	84	
Internal Link Dist (ft)	139			303	426		
Turn Bay Length (ft)							
Base Capacity (vph)	1863			1892	555	438	
Starvation Cap Reductn	1251			0	0	0	
Spillback Cap Reductn	0			199	0	0	
Storage Cap Reductn	0			0	0	0	
Reduced v/c Ratio	0.63			0.20	0.12	0.21	
Intersection Summary							
Area Type:	Other						
Cycle Length:	94						
Actuated Cycle Length:	94						
Offset:	0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green						
Control Type:	Pretimed						
Maximum v/c Ratio:	0.21						
Intersection Signal Delay:	13.0			Intersection LOS: B			

Existing Conditions
20: Chester Avenue & East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Intersection Capacity Utilization 37.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 20: Chester Avenue & East Post Road



Existing Conditions

MD Peak Hour

21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	0	0	0	0	6	0	949	0	0	0	0
Future Volume (vph)	66	0	0	0	0	6	0	949	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			1%			0%	
Satd. Flow (prot)	1593	1676	0	0	0	1450	0	4554	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1480	1676	0	0	0	1333	0	4554	0	0	0	0
Right Turn on Red	No		No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		403			216			494			280	
Travel Time (s)		9.2			4.9			11.2			6.4	
Confl. Peds. (#/hr)	50		50	50		50	100		100			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	72	0	0	0	0	7	0	1032	0	0	0	0
Turn Type	Perm					Perm		NA				
Protected Phases		4						2				
Permitted Phases	4					4						
Total Split (s)	28.1	28.1				28.1		65.9				
Total Lost Time (s)	5.0	5.0				5.0		4.9				
Act Effct Green (s)	14.8					14.8		72.4				
Actuated g/C Ratio	0.16					0.16		0.77				
v/c Ratio	0.31					0.03		0.29				
Control Delay	36.1					29.8		9.3				
Queue Delay	0.0					0.0		0.2				
Total Delay	36.2					29.8		9.5				
LOS	D					C		A				
Approach Delay		36.2			29.8			9.5				
Approach LOS		D			C			A				
Queue Length 50th (ft)	36					3		143				
Queue Length 95th (ft)	74					15		169				
Internal Link Dist (ft)		323			136			414			200	
Turn Bay Length (ft)												
Base Capacity (vph)	363					327		3509				
Starvation Cap Reductn	0					0		0				
Spillback Cap Reductn	17					0		1407				
Storage Cap Reductn	0					0		0				
Reduced v/c Ratio	0.21					0.02		0.49				

Intersection Summary

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.31

Intersection Signal Delay: 11.4

Intersection LOS: B

Intersection Capacity Utilization 51.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage

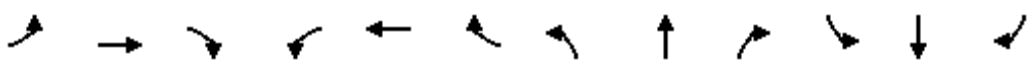


Existing Conditions

22: South Lexington Avenue & Fisher Avenue/Quarropas Street

MD Peak Hour

Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑					↖↖	↑↑	↖
Traffic Volume (vph)	0	193	109	72	85	0	0	0	0	226	676	118
Future Volume (vph)	0	193	109	72	85	0	0	0	0	226	676	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	11	11	12	12	12	12	12	12	13
Grade (%)		-1%			0%			0%			-1%	
Storage Length (ft)	0		0	135		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	2		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	2749	0	1540	3079	0	0	0	0	3105	3201	1480
Flt Permitted				0.487						0.950		
Satd. Flow (perm)	0	2749	0	762	3079	0	0	0	0	2752	3201	1363
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)												128
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		629			873			1032			215	
Travel Time (s)		14.3			19.8			23.5			4.9	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	328	0	78	92	0	0	0	0	246	735	128
Turn Type		NA		pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Total Split (s)		34.0		10.0	44.0					53.0	53.0	53.0
Total Lost Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Act Effct Green (s)		45.2		56.2	56.2					33.8	33.8	33.8
Actuated g/C Ratio		0.45		0.56	0.56					0.34	0.34	0.34
v/c Ratio		0.26		0.16	0.05					0.26	0.68	0.23
Control Delay		20.9		13.2	12.0					23.5	31.1	4.4
Queue Delay		0.0		0.0	0.0					0.0	0.0	0.0
Total Delay		20.9		13.2	12.0					23.5	31.1	4.4
LOS		C		B	B					C	C	A
Approach Delay		20.9			12.6						26.3	
Approach LOS		C			B						C	
Queue Length 50th (ft)		68		22	13					58	210	0
Queue Length 95th (ft)		128		55	31					74	229	33
Internal Link Dist (ft)		549			793			952			135	
Turn Bay Length (ft)				135								
Base Capacity (vph)		1243		491	1729					1320	1536	720
Starvation Cap Reductn		0		0	0					0	0	0
Spillback Cap Reductn		0		0	0					0	0	0
Storage Cap Reductn		0		0	0					0	0	0
Reduced v/c Ratio		0.26		0.16	0.05					0.19	0.48	0.18

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Existing Conditions
 22: South Lexington Avenue & Fisher Avenue/Quarropas Street

MD Peak Hour
 Timing Plan: 3:00 PM – 4:00 PM

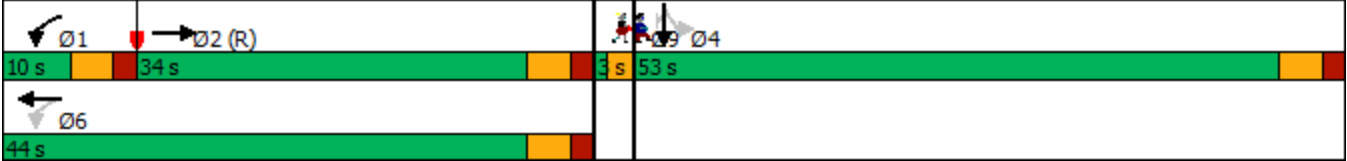
Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Existing Conditions
22: South Lexington Avenue & Fisher Avenue/Quarropas Street

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Offset: 10 (10%), Referenced to phase 2:EBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 23.8	Intersection LOS: C
Intersection Capacity Utilization 65.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 22: South Lexington Avenue & Fisher Avenue/Quarropas Street



Existing Conditions

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

MD Peak Hour

Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  				
Traffic Volume (vph)	123	297	0	0	118	85	97	839	85	0	0	0
Future Volume (vph)	123	297	0	0	118	85	97	839	85	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	12	12	11	11	12	12	12	12	12	12
Grade (%)		3%			-4%			1%			0%	
Storage Length (ft)	240		0	0		90	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1516	2928	0	0	1653	1405	0	4453	0	0	0	0
Flt Permitted	0.599							0.995				
Satd. Flow (perm)	918	2928	0	0	1653	1316	0	4430	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						92		18				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		873			420			280			604	
Travel Time (s)		19.8			9.5			6.4			13.7	
Confl. Peds. (#/hr)	50		50	50		50	50		50			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	134	323	0	0	128	92	0	1109	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Total Split (s)	13.0	54.0			41.0	41.0	40.0	40.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Act Effct Green (s)	52.3	52.3			39.3	39.3		31.7				
Actuated g/C Ratio	0.56	0.56			0.42	0.42		0.34				
v/c Ratio	0.24	0.20			0.19	0.15		0.74				
Control Delay	12.2	11.4			19.5	4.9		44.4				
Queue Delay	0.0	0.0			0.0	0.0		18.6				
Total Delay	12.2	11.4			19.5	4.9		63.0				
LOS	B	B			B	A		E				
Approach Delay		11.6			13.4			63.0				
Approach LOS		B			B			E				
Queue Length 50th (ft)	38	48			50	0		246				
Queue Length 95th (ft)	72	76			91	30		293				
Internal Link Dist (ft)		793			340			200			524	
Turn Bay Length (ft)	240					90						
Base Capacity (vph)	564	1630			690	603		1660				
Starvation Cap Reductn	0	0			0	0		569				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.24	0.20			0.19	0.15		1.02				

Intersection Summary

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

Offset: 13 (14%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 43.7

Intersection LOS: D

Intersection Capacity Utilization 65.2%

ICU Level of Service C

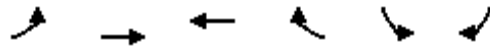
Analysis Period (min) 15

Splits and Phases: 23: Dr. Martin Luther King Jr Boulevard & Quarropas Street



Existing Conditions
27: East Post Road & Winchester Street

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	5	515	273	5	5	5
Future Volume (Veh/h)	5	515	273	5	5	5
Sign Control		Free	Free		Stop	
Grade		2%	-2%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	572	303	6	6	6
Pedestrians		20	20		100	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		2	2		10	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		870	133			
pX, platoon unblocked						
vC, conflicting volume	409				724	274
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	409				724	274
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	99
cM capacity (veh/h)	1037				318	642
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	197	381	202	107	12	
Volume Left	6	0	0	0	6	
Volume Right	0	0	0	6	6	
cSH	1037	1700	1700	1700	425	
Volume to Capacity	0.01	0.22	0.12	0.06	0.03	
Queue Length 95th (ft)	0	0	0	0	2	
Control Delay (s)	0.3	0.0	0.0	0.0	13.7	
Lane LOS	A				B	
Approach Delay (s)	0.1		0.0		13.7	
Approach LOS					B	
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			32.6%		ICU Level of Service	A
Analysis Period (min)			15			

Existing Conditions
2: Roosevelt Street & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	426	4	9	502	7	12
Future Volume (Veh/h)	426	4	9	502	7	12
Sign Control	Free			Free	Stop	
Grade	-2%			-1%	-4%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	490	5	10	577	8	14
Pedestrians	1				16	
Lane Width (ft)	14.0				12.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	0				2	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)				357		
pX, platoon unblocked					0.90	
vC, conflicting volume			511		818	264
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			511		572	264
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		98	98
cM capacity (veh/h)			1048		399	730
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	327	168	202	385	22	
Volume Left	0	0	10	0	8	
Volume Right	0	5	0	0	14	
cSH	1700	1700	1048	1700	561	
Volume to Capacity	0.19	0.10	0.01	0.23	0.04	
Queue Length 95th (ft)	0	0	1	0	3	
Control Delay (s)	0.0	0.0	0.5	0.0	11.7	
Lane LOS			A		B	
Approach Delay (s)	0.0		0.2		11.7	
Approach LOS					B	
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			32.5%		ICU Level of Service	A
Analysis Period (min)			15			

Existing Conditions
3: South Lexington Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑		↖		↖	↖	↖	
Traffic Volume (vph)	0	398	40	39	434	0	29	0	61	281	493	48
Future Volume (vph)	0	398	40	39	434	0	29	0	61	281	493	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	10	12	10	12	10	10	13	12
Grade (%)		0%			-2%			-5%			4%	
Storage Length (ft)	0		0	140		0	85		0	0		0
Storage Lanes	0		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3029	0	1477	3063	0	1554	0	1337	1324	1702	0
Flt Permitted				0.302			0.172			0.950		
Satd. Flow (perm)	0	3029	0	455	3063	0	279	0	1255	1266	1702	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		10									6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		357			354			564			207	
Travel Time (s)		8.1			8.0			12.8			4.7	
Confl. Peds. (#/hr)	31		30	30		31	29		35	35		29
Confl. Bikes (#/hr)			1			1						3
Peak Hour Factor	0.92	0.94	0.94	0.94	0.94	0.92	0.94	0.92	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	11%	0%	0%	0%	0%	0%	4%	1%	0%	0%
Parking (#/hr)										0		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	466	0	41	462	0	31	0	65	299	575	0
Turn Type		NA		pm+pt	NA		pm+pt		Perm	pm+pt	NA	
Protected Phases		2		1	6		3			7	4	
Permitted Phases				6			8		8	4		
Total Split (s)		31.0		9.0	40.0		9.0		37.9	13.1	51.0	
Total Lost Time (s)		5.0		5.0	5.0		5.0		4.9	5.0	5.0	
Act Effect Green (s)		26.0		35.0	35.0		36.9		33.0	46.0	46.0	
Actuated g/C Ratio		0.26		0.35	0.35		0.37		0.33	0.46	0.46	
v/c Ratio		0.59		0.20	0.43		0.20		0.16	0.51	0.73	
Control Delay		35.1		19.3	18.6		20.6		25.0	11.2	14.6	
Queue Delay		0.0		0.0	0.0		0.0		0.0	0.5	1.4	
Total Delay		35.1		19.3	18.6		20.6		25.0	11.8	16.0	
LOS		D		B	B		C		C	B	B	
Approach Delay		35.1			18.7			23.6			14.6	
Approach LOS		D			B			C			B	
Queue Length 50th (ft)		133		9	52		11		29	95	187	
Queue Length 95th (ft)		186		24	82		29		62	165	305	
Internal Link Dist (ft)		277			274			484			127	
Turn Bay Length (ft)				140			85					
Base Capacity (vph)		794		200	1072		153		414	587	786	
Starvation Cap Reductn		0		0	0		0		0	75	80	
Spillback Cap Reductn		0		0	0		0		0	0	0	
Storage Cap Reductn		0		0	0		0		0	0	0	
Reduced v/c Ratio		0.59		0.20	0.43		0.20		0.16	0.58	0.81	
Intersection Summary												

Existing Conditions
3: South Lexington Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 19 (19%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 21.0

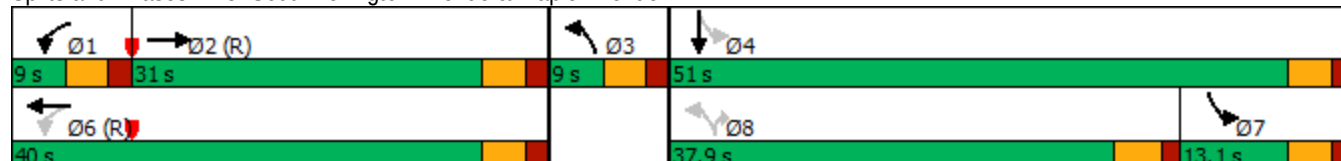
Intersection LOS: C

Intersection Capacity Utilization 62.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: South Lexington Avenue & Maple Avenue



Existing Conditions
4: Davis Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	603	60	32	435	54	19	32	48	38	18	22
Future Volume (vph)	72	603	60	32	435	54	19	32	48	38	18	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	11	11	12	11	12	12	9	12	11	10	12
Grade (%)		1%			0%			-5%			4%	
Storage Length (ft)	100		0	0		0	0		0	90		0
Storage Lanes	1		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1426	3017	0	0	3015	0	0	1240	0	1539	1401	0
Flt Permitted	0.412				0.878			0.952		0.703		
Satd. Flow (perm)	585	3017	0	0	2650	0	0	1184	0	1059	1401	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			18			49			23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		354			356			562			217	
Travel Time (s)		8.0			8.1			12.8			4.9	
Confl. Peds. (#/hr)	45		34	34		45	21		55	55		21
Confl. Bikes (#/hr)			4						1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	1%	1%	0%	0%	7%	0%	3%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	705	0	0	554	0	0	105	0	40	42	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Total Split (s)	58.0	58.0		58.0	58.0		36.0	36.0		36.0	36.0	
Total Lost Time (s)	5.2	5.2			5.2			5.2		5.2	5.2	
Act Effect Green (s)	52.8	52.8			52.8			30.8		30.8	30.8	
Actuated g/C Ratio	0.53	0.53			0.53			0.31		0.31	0.31	
v/c Ratio	0.25	0.44			0.39			0.26		0.12	0.09	
Control Delay	15.5	14.8			15.0			16.7		26.3	14.9	
Queue Delay	0.0	0.4			0.2			0.0		0.0	0.0	
Total Delay	15.5	15.2			15.2			16.7		26.3	14.9	
LOS	B	B			B			B		C	B	
Approach Delay		15.2			15.2			16.7			20.5	
Approach LOS		B			B			B			C	
Queue Length 50th (ft)	24	117			158			26		18	8	
Queue Length 95th (ft)	m45	146			156			68		44	33	
Internal Link Dist (ft)		274			276			482			137	
Turn Bay Length (ft)	100									90		
Base Capacity (vph)	308	1600			1407			398		326	447	
Starvation Cap Reductn	0	408			264			0		0	0	
Spillback Cap Reductn	0	30			0			0		0	0	
Storage Cap Reductn	0	0			0			0		0	0	
Reduced v/c Ratio	0.25	0.59			0.48			0.26		0.12	0.09	
Intersection Summary												

Existing Conditions
4: Davis Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	6.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Existing Conditions
4: Davis Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Area Type:	CBD		
Cycle Length:	100		
Actuated Cycle Length:	100		
Offset:	10 (10%), Referenced to phase 2:EBWB and 6:, Start of Green		
Control Type:	Pretimed		
Maximum v/c Ratio:	0.44		
Intersection Signal Delay:	15.6	Intersection LOS:	B
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		
m	Volume for 95th percentile queue is metered by upstream signal.		

Splits and Phases: 4: Davis Avenue & Maple Avenue



Existing Conditions
5: Oakwood Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	658	36	19	503	17	51
Future Volume (vph)	658	36	19	503	17	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Grade (%)	1%			0%	-5%	
Satd. Flow (prot)	3169	0	0	3212	1568	0
Flt Permitted				0.914	0.987	
Satd. Flow (perm)	3169	0	0	2940	1564	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	14				56	
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			475	444	
Travel Time (s)	8.1			10.8	10.1	
Confl. Peds. (#/hr)		40	40		6	24
Confl. Bikes (#/hr)		3				
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	0%	0%	1%	7%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	763	0	0	574	75	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			2	4	
Permitted Phases			2			
Total Split (s)	77.2		77.2	77.2	22.8	
Total Lost Time (s)	5.2			5.2	5.0	
Act Effect Green (s)	72.0			72.0	17.8	
Actuated g/C Ratio	0.72			0.72	0.18	
v/c Ratio	0.33			0.27	0.23	
Control Delay	7.6			4.6	15.9	
Queue Delay	0.5			0.0	0.0	
Total Delay	8.1			4.6	15.9	
LOS	A			A	B	
Approach Delay	8.1			4.6	15.9	
Approach LOS	A			A	B	
Queue Length 50th (ft)	115			27	10	
Queue Length 95th (ft)	185			85	49	
Internal Link Dist (ft)	276			395	364	
Turn Bay Length (ft)						
Base Capacity (vph)	2285			2116	325	
Starvation Cap Reductn	1002			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.59			0.27	0.23	
Intersection Summary						
Area Type:	CBD					
Cycle Length: 100						
Actuated Cycle Length: 100						
Offset: 31 (31%), Referenced to phase 2:EBWB and 6:, Start of Green						

Existing Conditions
5: Oakwood Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Control Type: Pretimed

Maximum v/c Ratio: 0.33

Intersection Signal Delay: 7.1

Intersection LOS: A

Intersection Capacity Utilization 54.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Oakwood Avenue & Maple Avenue



Existing Conditions
6: Longview Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	534	42	30	511	192	26	319	34	0	0	0
Future Volume (vph)	126	534	42	30	511	192	26	319	34	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	11	10	11	10	10	10	9	12	12	12
Grade (%)		0%			-5%			-2%			0%	
Storage Length (ft)	225		0	60		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1462	2953	0	1509	2986	0	0	2833	0	0	0	0
Flt Permitted	0.253			0.423				0.997				
Satd. Flow (perm)	381	2953	0	653	2986	0	0	2822	0	0	0	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		13			69							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		475			281			824			379	
Travel Time (s)		10.8			6.4			18.7			8.6	
Confl. Peds. (#/hr)	60		24	24		60	44		48	48		44
Confl. Bikes (#/hr)			2			1			2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	3%	0%	1%	4%	0%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	133	606	0	32	740	0	0	399	0	0	0	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2			6			8					
Total Split (s)	13.0	62.0		49.0	49.0		35.0	35.0				
Total Lost Time (s)	5.2	5.2		5.2	5.2			5.2				
Act Effect Green (s)	62.8	62.8		43.8	43.8			23.8				
Actuated g/C Ratio	0.63	0.63		0.44	0.44			0.24				
v/c Ratio	0.34	0.33		0.11	0.55			0.59				
Control Delay	6.9	7.9		4.4	7.1			37.8				
Queue Delay	0.0	0.0		0.0	0.6			0.0				
Total Delay	7.0	8.0		4.4	7.7			37.8				
LOS	A	A		A	A			D				
Approach Delay		7.8			7.5			37.8				
Approach LOS		A			A			D				
Queue Length 50th (ft)	19	141		3	26			120				
Queue Length 95th (ft)	72	240		7	32			162				
Internal Link Dist (ft)		395			201			744			299	
Turn Bay Length (ft)	225			60								
Base Capacity (vph)	388	1859		286	1346			840				
Starvation Cap Reductn	0	0		0	263			0				
Spillback Cap Reductn	6	76		0	24			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.35	0.34		0.11	0.68			0.47				
Intersection Summary												

Existing Conditions
6: Longview Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Existing Conditions
6: Longview Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

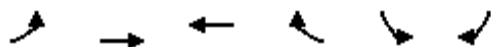
Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	70 (70%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.59
Intersection Signal Delay:	14.0
Intersection LOS:	B
Intersection Capacity Utilization	64.4%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 6: Longview Avenue & Maple Avenue



Existing Conditions
7: Maple Avenue & Cromwell Place

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↘	↗
Traffic Volume (vph)	0	577	646	0	172	87
Future Volume (vph)	0	577	646	0	172	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	11	12
Grade (%)		6%	3%		4%	
Storage Length (ft)	0			0	0	60
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	3016	3094	0	1371	1383
Flt Permitted					0.950	
Satd. Flow (perm)	0	3016	3094	0	1360	1383
Right Turn on Red				Yes		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		281	255		455	
Travel Time (s)		6.4	5.8		10.3	
Confl. Peds. (#/hr)	67			67	6	2
Confl. Bikes (#/hr)						2
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%
Parking (#/hr)					0	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	634	710	0	189	96
Turn Type		NA	NA		Perm	Prot
Protected Phases		2	2			4
Permitted Phases					4	
Total Split (s)		58.0	58.0		42.0	42.0
Total Lost Time (s)		4.7	4.7		4.7	4.7
Act Effct Green (s)		70.9	70.9		19.7	19.7
Actuated g/C Ratio		0.71	0.71		0.20	0.20
v/c Ratio		0.30	0.32		0.71	0.35
Control Delay		5.8	11.3		46.9	33.1
Queue Delay		0.2	0.6		0.0	0.0
Total Delay		6.0	11.9		46.9	33.1
LOS		A	B		D	C
Approach Delay		6.0	11.9		42.3	
Approach LOS		A	B		D	
Queue Length 50th (ft)		77	179		110	48
Queue Length 95th (ft)		249	264		175	89
Internal Link Dist (ft)		201	175		375	
Turn Bay Length (ft)						60
Base Capacity (vph)		2137	2192		507	515
Starvation Cap Reductn		763	1030		0	0
Spillback Cap Reductn		0	51		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.46	0.61		0.37	0.19

Intersection Summary

Existing Conditions
7: Maple Avenue & Cromwell Place

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 78 (78%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 14.9

Intersection LOS: B

Intersection Capacity Utilization 38.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Maple Avenue & Cromwell Place



Existing Conditions

8: Greenridge Avenue/Chester Avenue & Maple Avenue

PM Peak Hour

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	563	95	47	617	69	29	66	64	0	0	0
Future Volume (vph)	91	563	95	47	617	69	29	66	64	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	11
Grade (%)		2%			3%			0%			-4%	
Storage Length (ft)	125		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1752	3353	0	1743	3403	0	0	3203	0	0	0	0
Flt Permitted	0.306			0.332				0.991				
Satd. Flow (perm)	552	3353	0	586	3403	0	0	3168	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			17			70				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		255			453			507			506	
Travel Time (s)		5.8			10.3			11.5			11.5	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	99	715	0	51	746	0	0	174	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA				
Protected Phases	1	6		5	2			8				
Permitted Phases	6			2			8					
Total Split (s)	13.0	56.0		13.0	56.0		31.0	31.0				
Total Lost Time (s)	7.0	5.0		5.0	5.0			5.0				
Act Effct Green (s)	57.1	54.5		59.3	53.9			26.0				
Actuated g/C Ratio	0.57	0.54		0.59	0.54			0.26				
v/c Ratio	0.26	0.39		0.12	0.41			0.20				
Control Delay	6.3	5.0		7.5	14.8			17.7				
Queue Delay	0.0	0.8		0.0	0.2			0.0				
Total Delay	6.3	5.8		7.5	14.9			17.7				
LOS	A	A		A	B			B				
Approach Delay		5.9			14.4			17.7				
Approach LOS		A			B			B				
Queue Length 50th (ft)	8	23		11	145			26				
Queue Length 95th (ft)	34	69		24	192			54				
Internal Link Dist (ft)		175			373			427			426	
Turn Bay Length (ft)	125			75								
Base Capacity (vph)	388	1840		445	1840			875				
Starvation Cap Reductn	0	767		0	0			0				
Spillback Cap Reductn	0	0		0	335			3				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.26	0.67		0.11	0.50			0.20				
Intersection Summary												
Area Type:	Other											
Cycle Length: 100												
Actuated Cycle Length: 100												

Existing Conditions
8: Greenridge Avenue/Chester Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Offset: 42 (42%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 10.9	Intersection LOS: B
Intersection Capacity Utilization 59.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Greenridge Avenue/Chester Avenue & Maple Avenue



Existing Conditions
9: South Lexington Avenue & Lincoln Lot/Davis Garage

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											 	
Traffic Volume (veh/h)	0	0	0	18	0	0	0	0	0	3	804	3
Future Volume (Veh/h)	0	0	0	18	0	0	0	0	0	3	804	3
Sign Control	Stop			Stop			Free			Free		
Grade	0%			-5%			0%			3%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	20	0	0	0	0	0	3	874	3
Pedestrians	54			31			9			13		
Lane Width (ft)	0.0			10.0			0.0			12.0		
Walking Speed (ft/s)	3.5			3.5			3.5			3.5		
Percent Blockage	0			2			0			1		
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)							207			185		
pX, platoon unblocked	0.79	0.79	0.79	0.79	0.79		0.79					
vC, conflicting volume	948	966	502	483	968	44	931	31				
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	396	419	0	0	421	44	374	31				
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1	4.1				
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2	2.2				
p0 queue free %	100	100	100	97	100	100	100	100				
cM capacity (veh/h)	410	402	854	770	401	979	931	1541				
Direction, Lane #	WB 1	SB 1	SB 2									
Volume Total	20	440	440									
Volume Left	20	3	0									
Volume Right	0	0	3									
cSH	770	1541	1700									
Volume to Capacity	0.03	0.00	0.26									
Queue Length 95th (ft)	2	0	0									
Control Delay (s)	9.8	0.1	0.0									
Lane LOS	A	A										
Approach Delay (s)	9.8	0.0										
Approach LOS	A											
Intersection Summary												
Average Delay	0.3											
Intersection Capacity Utilization	43.5%			ICU Level of Service			A					
Analysis Period (min)	15											

Existing Conditions

10: Davis Avenue & Davis Garage/Main Hospital Entrance

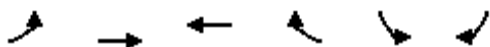
PM Peak Hour

Timing Plan: 5:00 PM – 6:00 PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	14	70	8	3	13	58	90	10	0	0	0
Future Volume (Veh/h)	41	14	70	8	3	13	58	90	10	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			-1%			-4%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	45	15	76	9	3	14	63	98	11	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								217				
pX, platoon unblocked	0.99	0.99		0.99	0.99	0.99				0.99		
vC, conflicting volume	245	235	0	313	230	104	0			109		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	237	227	0	305	221	95	0			100		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	98	93	98	100	99	96			100		
cM capacity (veh/h)	679	642	1085	570	647	956	1623			1483		
Direction, Lane #	EB 1	WB 1	NB 1									
Volume Total	136	26	172									
Volume Left	45	9	63									
Volume Right	76	14	11									
cSH	852	741	1623									
Volume to Capacity	0.16	0.04	0.04									
Queue Length 95th (ft)	14	3	3									
Control Delay (s)	10.0	10.0	2.9									
Lane LOS	B	B	A									
Approach Delay (s)	10.0	10.0	2.9									
Approach LOS	B	B										
Intersection Summary												
Average Delay			6.3									
Intersection Capacity Utilization			26.8%	ICU Level of Service						A		
Analysis Period (min)			15									

Existing Conditions
11: West Post Road & Highland Avenue

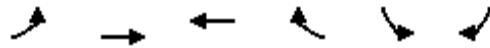
PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	149	226	366	52	43	63
Future Volume (Veh/h)	149	226	366	52	43	63
Sign Control		Free	Free		Stop	
Grade		-4%	3%		-11%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	169	257	416	59	49	72
Pedestrians		22	6		49	
Lane Width (ft)		16.0	16.0		16.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		3	1		6	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			742			
pX, platoon unblocked	0.90				0.90	0.90
vC, conflicting volume	524				1096	516
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	420				1052	412
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	82				72	86
cM capacity (veh/h)	965				177	530
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	426	475	121			
Volume Left	169	0	49			
Volume Right	0	59	72			
cSH	965	1700	293			
Volume to Capacity	0.18	0.28	0.41			
Queue Length 95th (ft)	16	0	48			
Control Delay (s)	5.0	0.0	25.7			
Lane LOS	A		D			
Approach Delay (s)	5.0	0.0	25.7			
Approach LOS			D			
Intersection Summary						
Average Delay			5.1			
Intersection Capacity Utilization			68.6%	ICU Level of Service		C
Analysis Period (min)			15			

Existing Conditions
12: West Post Road & Orawaupum Street

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	26	243	412	108	17	14
Future Volume (Veh/h)	26	243	412	108	17	14
Sign Control		Free	Free		Stop	
Grade		-3%	2%		-10%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	30	283	479	126	20	16
Pedestrians			4		56	
Lane Width (ft)			16.0		11.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			1		5	
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)			361			
pX, platoon unblocked	0.87				0.87	0.87
vC, conflicting volume	661				945	598
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	533				860	460
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				92	97
cM capacity (veh/h)	862				262	500
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	313	605	36			
Volume Left	30	0	20			
Volume Right	0	126	16			
cSH	862	1700	332			
Volume to Capacity	0.03	0.36	0.11			
Queue Length 95th (ft)	3	0	9			
Control Delay (s)	1.2	0.0	17.2			
Lane LOS	A		C			
Approach Delay (s)	1.2	0.0	17.2			
Approach LOS			C			
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			48.3%		ICU Level of Service	
Analysis Period (min)			15		A	

Existing Conditions
13: Lincoln Lot & West Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	260	0	0	515	5	19
Future Volume (Veh/h)	260	0	0	515	5	19
Sign Control	Free			Free	Stop	
Grade	1%			1%	-2%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	283	0	0	560	5	21
Pedestrians	14			1	14	
Lane Width (ft)	16.0			16.0	10.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	2			0	1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)				207		
pX, platoon unblocked					0.87	
vC, conflicting volume			297		871	298
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			297		777	298
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	97
cM capacity (veh/h)			1250		309	732
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	283	560	26			
Volume Left	0	0	5			
Volume Right	0	0	21			
cSH	1700	1700	580			
Volume to Capacity	0.17	0.33	0.04			
Queue Length 95th (ft)	0	0	4			
Control Delay (s)	0.0	0.0	11.5			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	11.5			
Approach LOS			B			
Intersection Summary						
Average Delay		0.3				
Intersection Capacity Utilization		40.4%	ICU Level of Service	A		
Analysis Period (min)		15				

Existing Conditions

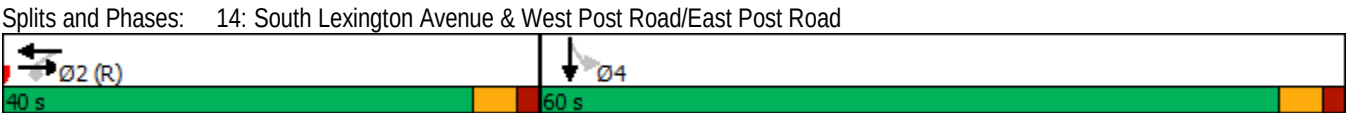
PM Peak Hour

14: South Lexington Avenue & West Post Road/East Post Road

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	228	51	56	309	0	0	0	0	182	703	206
Future Volume (vph)	0	228	51	56	309	0	0	0	0	182	703	206
Ideal Flow (vphpl)	1900	2050	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	12	12	12	12	11	11	11
Grade (%)		-1%			0%			0%			1%	
Storage Length (ft)	0		105	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1589	1294	0	2561	0	0	0	0	1065	2779	0
Flt Permitted					0.840					0.950		
Satd. Flow (perm)	0	1589	1216	0	2159	0	0	0	0	993	2779	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			57								60	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		207			248			185			1032	
Travel Time (s)		4.7			5.6			4.2			23.5	
Confl. Peds. (#/hr)	61		38	38		61	34		54	54		34
Confl. Bikes (#/hr)			2									4
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	5%	0%	2%	5%	0%	0%	0%	0%	2%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0	0		24					41	4	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	256	57	0	410	0	0	0	0	204	1021	0
Turn Type		NA	Perm	Perm	NA					Perm	NA	
Protected Phases		2			2						4	
Permitted Phases			2	2						4		
Total Split (s)		40.0	40.0	40.0	40.0					60.0	60.0	
Total Lost Time (s)		5.0	5.0		5.0					5.0	5.0	
Act Effct Green (s)		35.0	35.0		35.0					55.0	55.0	
Actuated g/C Ratio		0.35	0.35		0.35					0.55	0.55	
v/c Ratio		0.46	0.12		0.54					0.37	0.66	
Control Delay		28.5	6.9		29.8					14.0	13.9	
Queue Delay		0.0	0.0		0.0					0.0	0.1	
Total Delay		28.5	6.9		29.8					14.0	14.0	
LOS		C	A		C					B	B	
Approach Delay		24.6			29.8						14.0	
Approach LOS		C			C						B	
Queue Length 50th (ft)		125	0		103					51	135	
Queue Length 95th (ft)		196	26		155					97	206	
Internal Link Dist (ft)		127			168			105			952	
Turn Bay Length (ft)			105									
Base Capacity (vph)		556	462		755					546	1555	
Starvation Cap Reductn		0	0		0					0	0	
Spillback Cap Reductn		0	1		0					0	59	
Storage Cap Reductn		0	0		0					0	0	
Reduced v/c Ratio		0.46	0.12		0.54					0.37	0.68	

Intersection Summary	
Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	19.1
Intersection LOS:	B
Intersection Capacity Utilization	82.1%
ICU Level of Service	E
Analysis Period (min)	15



Existing Conditions
15: Davis Avenue & East Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Traffic Volume (veh/h)	413	0	0	322	36	106
Future Volume (Veh/h)	413	0	0	322	36	106
Sign Control	Free			Free	Stop	
Grade	-1%			-1%	-7%	
Peak Hour Factor	0.88	0.92	0.92	0.88	0.88	0.88
Hourly flow rate (vph)	469	0	0	366	41	120
Pedestrians	9			23	42	
Lane Width (ft)	10.0			10.0	11.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			2	4	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	248			755		
pX, platoon unblocked						
vC, conflicting volume			511		703	300
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			511		703	300
tC, single (s)			4.1		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			100		88	82
cM capacity (veh/h)			1026		344	654
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	234	234	183	183	41	120
Volume Left	0	0	0	0	41	0
Volume Right	0	0	0	0	0	120
cSH	1700	1700	1700	1700	344	654
Volume to Capacity	0.14	0.14	0.11	0.11	0.12	0.18
Queue Length 95th (ft)	0	0	0	0	10	17
Control Delay (s)	0.0	0.0	0.0	0.0	16.9	11.7
Lane LOS					C	B
Approach Delay (s)	0.0		0.0		13.0	
Approach LOS					B	
Intersection Summary						
Average Delay			2.1			
Intersection Capacity Utilization			31.4%		ICU Level of Service	A
Analysis Period (min)			15			

Existing Conditions
16: Emergency Department Entrance & East Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		
Traffic Volume (veh/h)	507	7	7	317	0	0
Future Volume (Veh/h)	507	7	7	317	0	0
Sign Control	Free			Free	Stop	
Grade	0%			-1%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	563	8	8	352	0	0
Pedestrians					100	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	571			432		
pX, platoon unblocked						
vC, conflicting volume			671		859	386
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			671		859	386
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		100	100
cM capacity (veh/h)			915		293	613
Direction, Lane #	EB 1	EB 2	WB 1	WB 2		
Volume Total	375	196	125	235		
Volume Left	0	0	8	0		
Volume Right	0	8	0	0		
cSH	1700	1700	915	1700		
Volume to Capacity	0.22	0.12	0.01	0.14		
Queue Length 95th (ft)	0	0	1	0		
Control Delay (s)	0.0	0.0	0.7	0.0		
Lane LOS			A			
Approach Delay (s)	0.0		0.2			
Approach LOS						
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			19.2%		ICU Level of Service	A
Analysis Period (min)			15			

Existing Conditions
17: Emergency Department Exit & East Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	512	0	0	320	2	17
Future Volume (Veh/h)	512	0	0	320	2	17
Sign Control	Free			Free	Stop	
Grade	2%			-2%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	569	0	0	356	2	19
Pedestrians	20			20	100	
Lane Width (ft)	9.0			10.0	11.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			2	9	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	741			262		
pX, platoon unblocked						
vC, conflicting volume			669		867	404
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			669		867	404
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	96
cM capacity (veh/h)			837		263	535
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	284	284	178	178	21	
Volume Left	0	0	0	0	2	
Volume Right	0	0	0	0	19	
cSH	1700	1700	1700	1700	487	
Volume to Capacity	0.17	0.17	0.10	0.10	0.04	
Queue Length 95th (ft)	0	0	0	0	3	
Control Delay (s)	0.0	0.0	0.0	0.0	12.7	
Lane LOS					B	
Approach Delay (s)	0.0		0.0		12.7	
Approach LOS					B	
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			30.6%		ICU Level of Service	A
Analysis Period (min)			15			

Existing Conditions

PM Peak Hour

18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road

Time Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	222	293	0	0	249	214	70	580	44	0	0	0
Future Volume (vph)	222	293	0	0	249	214	70	580	44	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	10	10	12	12	12	12	12	12
Grade (%)		2%			-5%			-3%			0%	
Satd. Flow (prot)	0	2696	0	0	2446	0	0	3210	0	0	0	0
Flt Permitted		0.606						0.995				
Satd. Flow (perm)	0	1624	0	0	2446	0	0	3192	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					190			8				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			343			379			494	
Travel Time (s)		3.0			7.8			8.6			11.2	
Confl. Peds. (#/hr)	94		104	104		94	50		23	23		50
Confl. Bikes (#/hr)			2						5			
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.92
Heavy Vehicles (%)	3%	4%	0%	0%	7%	1%	2%	1%	0%	0%	0%	0%
Parking (#/hr)		0			0							
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	554	0	0	498	0	0	746	0	0	0	0
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2						8					
Total Split (s)	17.0	58.0			41.0		42.0	42.0				
Total Lost Time (s)		5.0			5.0			5.0				
Act Effct Green (s)		53.0			36.0			37.0				
Actuated g/C Ratio		0.53			0.36			0.37				
v/c Ratio		0.56			0.50			0.63				
Control Delay		15.5			10.0			26.6				
Queue Delay		0.0			0.2			1.4				
Total Delay		15.5			10.2			28.0				
LOS		B			B			C				
Approach Delay		15.5			10.2			28.0				
Approach LOS		B			B			C				
Queue Length 50th (ft)		76			27			198				
Queue Length 95th (ft)		110			63			272				
Internal Link Dist (ft)		53			263			299			414	
Turn Bay Length (ft)												
Base Capacity (vph)		989			1002			1186				
Starvation Cap Reductn		0			94			250				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.56			0.55			0.80				
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												
Actuated Cycle Length: 100												

Existing Conditions

PM Peak Hour

18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road

Time Plan: 5:00 PM – 6:00 PM

Offset: 7 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 19.2

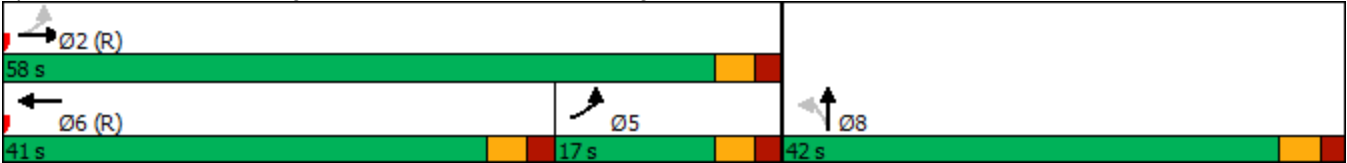
Intersection LOS: B

Intersection Capacity Utilization 71.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road



Existing Conditions

19: Cromwell Place/Grand Street & East Post Road

PM Peak Hour

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	285	52	44	347	0	0	0	0	81	65	123
Future Volume (vph)	0	285	52	44	347	0	0	0	0	81	65	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	10	10	12	12	12	12	9	10	12
Grade (%)		5%			0%			0%			2%	
Satd. Flow (prot)	0	2475	0	0	2722	0	0	0	0	1277	1221	0
Flt Permitted					0.862					0.950		
Satd. Flow (perm)	0	2475	0	0	2317	0	0	0	0	1224	1221	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		39									96	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		343			219			455			494	
Travel Time (s)		7.8			5.0			10.3			11.2	
Confl. Peds. (#/hr)	89		116	116		89	44		32	32		44
Confl. Bikes (#/hr)			1									1
Peak Hour Factor	0.92	0.83	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.83	0.83	0.83
Heavy Vehicles (%)	0%	5%	2%	7%	4%	0%	0%	0%	0%	2%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	4	0	0	0	0	0	0	0
Parking (#/hr)		4			0					0	0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	406	0	0	471	0	0	0	0	98	226	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			2						4	
Permitted Phases				2						4		
Total Split (s)		66.0		66.0	66.0					34.0	34.0	
Total Lost Time (s)		5.0			5.0					5.0	5.0	
Act Effct Green (s)		66.1			66.1					23.9	23.9	
Actuated g/C Ratio		0.66			0.66					0.24	0.24	
v/c Ratio		0.25			0.31					0.34	0.62	
Control Delay		2.4			5.2					34.7	27.1	
Queue Delay		0.0			0.3					0.0	0.0	
Total Delay		2.4			5.5					34.7	27.1	
LOS		A			A					C	C	
Approach Delay		2.4			5.5						29.4	
Approach LOS		A			A						C	
Queue Length 50th (ft)		15			27					53	74	
Queue Length 95th (ft)		21			38					87	127	
Internal Link Dist (ft)		263			139			375			414	
Turn Bay Length (ft)												
Base Capacity (vph)		1649			1531					354	422	
Starvation Cap Reductn		0			488					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.25			0.45					0.28	0.54	
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												

Existing Conditions
19: Cromwell Place/Grand Street & East Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Actuated Cycle Length: 100
Offset: 7 (7%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 10.9 Intersection LOS: B
Intersection Capacity Utilization 65.0% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 19: Cromwell Place/Grand Street & East Post Road



Existing Conditions
20: Chester Avenue & East Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Lane Configurations	↑↑			↑↑	↵	↵	
Traffic Volume (vph)	366	0	0	334	55	81	
Future Volume (vph)	366	0	0	334	55	81	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Grade (%)	4%			1%	0%		
Satd. Flow (prot)	3468	0	0	3522	1770	1583	
Flt Permitted					0.950		
Satd. Flow (perm)	3468	0	0	3522	1567	1387	
Right Turn on Red		No				No	
Satd. Flow (RTOR)							
Link Speed (mph)	30			30	30		
Link Distance (ft)	219			383	506		
Travel Time (s)	5.0			8.7	11.5		
Confl. Peds. (#/hr)		80	80		80	80	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	398	0	0	363	60	88	
Turn Type	NA			NA	Prot	Perm	
Protected Phases	2			2	4		9
Permitted Phases						4	
Total Split (s)	56.0			56.0	39.0	39.0	5.0
Total Lost Time (s)	4.5			4.5	4.5	4.5	
Act Effct Green (s)	51.5			51.5	39.5	39.5	
Actuated g/C Ratio	0.52			0.52	0.40	0.40	
v/c Ratio	0.22			0.20	0.09	0.16	
Control Delay	10.8			13.5	13.9	14.8	
Queue Delay	0.7			0.0	0.0	0.0	
Total Delay	11.5			13.5	13.9	14.8	
LOS	B			B	B	B	
Approach Delay	11.5			13.5	14.5		
Approach LOS	B			B	B		
Queue Length 50th (ft)	52			62	21	31	
Queue Length 95th (ft)	71			89	46	66	
Internal Link Dist (ft)	139			303	426		
Turn Bay Length (ft)							
Base Capacity (vph)	1786			1813	699	547	
Starvation Cap Reductn	1039			0	0	0	
Spillback Cap Reductn	0			0	0	0	
Storage Cap Reductn	0			0	0	0	
Reduced v/c Ratio	0.53			0.20	0.09	0.16	
Intersection Summary							
Area Type:	Other						
Cycle Length: 100							
Actuated Cycle Length: 100							
Offset: 17 (17%), Referenced to phase 2:EBWB and 6:, Start of Green							
Control Type: Actuated-Coordinated							
Maximum v/c Ratio: 0.22							
Intersection Signal Delay: 12.8	Intersection LOS: B						

Existing Conditions
20: Chester Avenue & East Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Intersection Capacity Utilization 37.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 20: Chester Avenue & East Post Road



Existing Conditions

PM Peak Hour

21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	0	0	0	0	5	0	1028	0	0	0	0
Future Volume (vph)	55	0	0	0	0	5	0	1028	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			1%			0%	
Satd. Flow (prot)	1593	1676	0	0	0	1450	0	4554	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1473	1676	0	0	0	1326	0	4554	0	0	0	0
Right Turn on Red	No		No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		403			216			494			280	
Travel Time (s)		9.2			4.9			11.2			6.4	
Confl. Peds. (#/hr)	50		50	50		50	100		100			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	60	0	0	0	0	5	0	1117	0	0	0	0
Turn Type	Perm					Perm		NA				
Protected Phases		4						2				
Permitted Phases	4					4						
Total Split (s)	25.1	25.1				25.1		74.9				
Total Lost Time (s)	5.0	5.0				5.0		4.9				
Act Effct Green (s)	14.7					14.7		78.5				
Actuated g/C Ratio	0.15					0.15		0.78				
v/c Ratio	0.28					0.03		0.31				
Control Delay	38.5					32.6		2.4				
Queue Delay	0.0					0.0		0.0				
Total Delay	38.5					32.6		2.4				
LOS	D					C		A				
Approach Delay		38.5			32.6			2.4				
Approach LOS		D			C			A				
Queue Length 50th (ft)	32					3		24				
Queue Length 95th (ft)	68					13		45				
Internal Link Dist (ft)		323			136			414			200	
Turn Bay Length (ft)												
Base Capacity (vph)	296					266		3575				
Starvation Cap Reductn	0					0		0				
Spillback Cap Reductn	0					0		580				
Storage Cap Reductn	0					0		0				
Reduced v/c Ratio	0.20					0.02		0.37				

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 77 (77%), Referenced to phase 2:NBT and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.31

Intersection Signal Delay: 4.4

Intersection LOS: A

Existing Conditions

PM Peak Hour

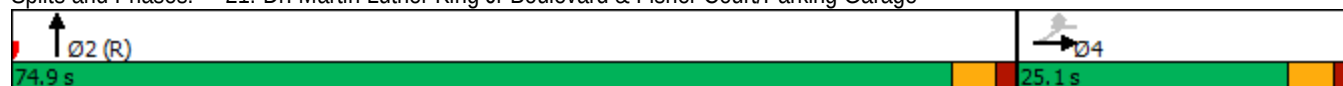
21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage Timing Plan: 5:00 PM – 6:00 PM

Intersection Capacity Utilization 53.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage



Existing Conditions

22: South Lexington Avenue & Fisher Avenue/Quarropas Street

PM Peak Hour

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	229	129	55	105	0	0	0	0	192	865	128
Future Volume (vph)	0	229	129	55	105	0	0	0	0	192	865	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	11	11	12	12	12	12	12	12	13
Grade (%)		-1%			0%			0%			-1%	
Storage Length (ft)	0		0	135		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	2		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	2749	0	1540	3079	0	0	0	0	3105	3201	1480
Flt Permitted				0.427						0.950		
Satd. Flow (perm)	0	2749	0	671	3079	0	0	0	0	2752	3201	1363
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)												139
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		629			873			1032			215	
Travel Time (s)		14.3			19.8			23.5			4.9	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	389	0	60	114	0	0	0	0	209	940	139
Turn Type		NA		pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Total Split (s)		34.0		10.0	44.0					53.0	53.0	53.0
Total Lost Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Act Effct Green (s)		39.5		49.0	49.0					41.0	41.0	41.0
Actuated g/C Ratio		0.40		0.49	0.49					0.41	0.41	0.41
v/c Ratio		0.36		0.16	0.08					0.19	0.72	0.22
Control Delay		25.3		20.5	19.0					17.9	27.4	3.3
Queue Delay		0.0		0.0	0.0					0.0	0.0	0.0
Total Delay		25.3		20.5	19.0					17.9	27.4	3.3
LOS		C		C	B					B	C	A
Approach Delay		25.3			19.5						23.3	
Approach LOS		C			B						C	
Queue Length 50th (ft)		95		24	24					42	257	0
Queue Length 95th (ft)		154		m53	43					55	270	29
Internal Link Dist (ft)		549			793			952			135	
Turn Bay Length (ft)				135								
Base Capacity (vph)		1085		386	1509					1337	1555	733
Starvation Cap Reductn		0		0	0					0	0	0
Spillback Cap Reductn		0		0	0					0	0	0
Storage Cap Reductn		0		0	0					0	0	0
Reduced v/c Ratio		0.36		0.16	0.08					0.16	0.60	0.19

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Existing Conditions
 22: South Lexington Avenue & Fisher Avenue/Quarropas Street

PM Peak Hour
 Timing Plan: 5:00 PM – 6:00 PM

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Existing Conditions

22: South Lexington Avenue & Fisher Avenue/Quarropas Street

PM Peak Hour

Timing Plan: 5:00 PM – 6:00 PM

Offset: 17 (17%), Referenced to phase 2:EBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 23.3

Intersection LOS: C

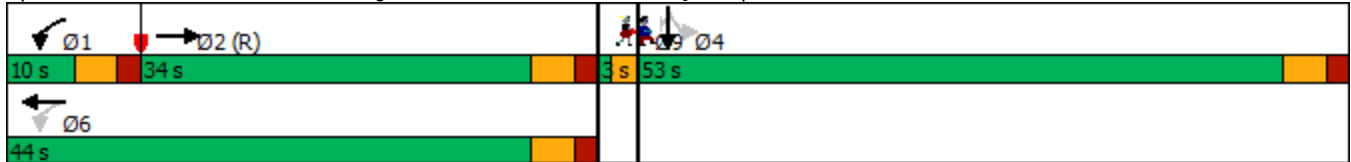
Intersection Capacity Utilization 64.1%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: South Lexington Avenue & Fisher Avenue/Quarropas Street



Existing Conditions

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

PM Peak Hour

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  				
Traffic Volume (vph)	82	284	0	0	55	73	101	906	82	0	0	0
Future Volume (vph)	82	284	0	0	55	73	101	906	82	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	12	12	11	11	12	12	12	12	12	12
Grade (%)		3%			-4%			1%			0%	
Storage Length (ft)	240		0	0		90	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1516	2928	0	0	1653	1405	0	4458	0	0	0	0
Flt Permitted	0.638							0.995				
Satd. Flow (perm)	971	2928	0	0	1653	1312	0	4434	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						79		19				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		873			420			280			604	
Travel Time (s)		19.8			9.5			6.4			13.7	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	309	0	0	60	79	0	1184	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Total Split (s)	12.0	45.0			33.0	33.0	55.0	55.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Act Effct Green (s)	52.3	52.3			40.9	40.9		37.7				
Actuated g/C Ratio	0.52	0.52			0.41	0.41		0.38				
v/c Ratio	0.16	0.20			0.09	0.14		0.70				
Control Delay	12.8	12.7			23.7	6.8		27.9				
Queue Delay	0.0	0.0			0.0	0.0		0.2				
Total Delay	12.8	12.7			23.7	6.8		28.1				
LOS	B	B			C	A		C				
Approach Delay		12.7			14.1			28.1				
Approach LOS		B			B			C				
Queue Length 50th (ft)	30	56			24	0		234				
Queue Length 95th (ft)	68	95			60	34		291				
Internal Link Dist (ft)		793			340			200			524	
Turn Bay Length (ft)	240					90						
Base Capacity (vph)	555	1531			676	583		2226				
Starvation Cap Reductn	0	0			0	0		327				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.16	0.20			0.09	0.14		0.62				

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Existing Conditions

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

PM Peak Hour

Timing Plan: 5:00 PM – 6:00 PM

Offset: 81 (81%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 23.4

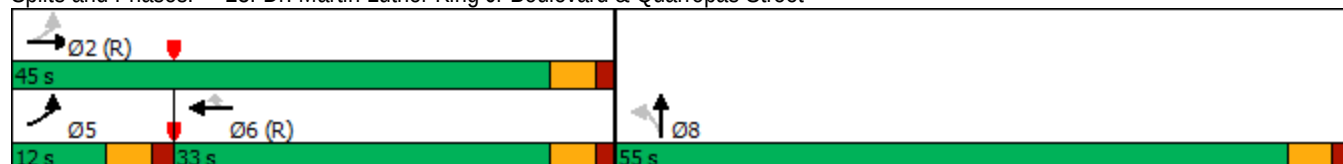
Intersection LOS: C

Intersection Capacity Utilization 64.1%

ICU Level of Service C

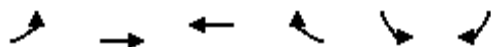
Analysis Period (min) 15

Splits and Phases: 23: Dr. Martin Luther King Jr Boulevard & Quarropas Street



Existing Conditions
27: East Post Road & Winchester Street

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	5	524	314	5	5	5
Future Volume (Veh/h)	5	524	314	5	5	5
Sign Control		Free	Free		Stop	
Grade		2%	-2%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	582	349	6	6	6
Pedestrians		20	20		100	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		2	2		10	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		870	133			
pX, platoon unblocked						
vC, conflicting volume	455				775	298
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	455				775	298
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	99
cM capacity (veh/h)	997				295	620
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	200	388	233	122	12	
Volume Left	6	0	0	0	6	
Volume Right	0	0	0	6	6	
cSH	997	1700	1700	1700	400	
Volume to Capacity	0.01	0.23	0.14	0.07	0.03	
Queue Length 95th (ft)	0	0	0	0	2	
Control Delay (s)	0.3	0.0	0.0	0.0	14.3	
Lane LOS	A				B	
Approach Delay (s)	0.1		0.0		14.3	
Approach LOS					B	
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			32.9%		ICU Level of Service	A
Analysis Period (min)			15			

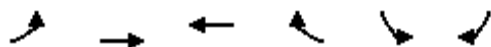
No-Build Conditions

No-Build Conditions

AM Peak Hour

1: Maple Avenue & West Lot Southwest Driveway

Timing Plan: 8:00 AM – 9:00 AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	22	518	320	12	3	5
Future Volume (Veh/h)	22	518	320	12	3	5
Sign Control		Free	Free		Stop	
Grade		-2%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	24	576	356	13	3	6
Pedestrians		5	5		20	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	0		2	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			687			
pX, platoon unblocked						
vC, conflicting volume	389				724	210
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	389				724	210
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				99	99
cM capacity (veh/h)	1144				345	777
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	216	384	237	132	9	
Volume Left	24	0	0	0	3	
Volume Right	0	0	0	13	6	
cSH	1144	1700	1700	1700	548	
Volume to Capacity	0.02	0.23	0.14	0.08	0.02	
Queue Length 95th (ft)	2	0	0	0	1	
Control Delay (s)	1.1	0.0	0.0	0.0	11.7	
Lane LOS	A				B	
Approach Delay (s)	0.4		0.0		11.7	
Approach LOS					B	
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			41.1%		ICU Level of Service	A
Analysis Period (min)			15			

No-Build Conditions

AM Peak Hour

2: Roosevelt Street/West Lot Southeast Driveway & Maple Avenue

Timing Plan: 8:00 AM – 9:00 AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	520	1	13	328	69	4	0	16	15	0	0
Future Volume (Veh/h)	1	520	1	13	328	69	4	0	16	15	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		-2%			-1%			-4%			0%	
Peak Hour Factor	0.92	0.87	0.87	0.87	0.87	0.92	0.87	0.92	0.87	0.92	0.92	0.92
Hourly flow rate (vph)	1	598	1	15	377	75	5	0	18	16	0	0
Pedestrians		1						16				
Lane Width (ft)		14.0						12.0				
Walking Speed (ft/s)		3.5						3.5				
Percent Blockage		0						2				
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					357							
pX, platoon unblocked	0.95						0.95	0.95		0.95	0.95	0.95
vC, conflicting volume	452			615			836	1098	316	764	1062	227
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	329			615			732	1007	316	656	968	94
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			98	100	97	95	100	100
cM capacity (veh/h)	1171			960			287	222	676	318	233	901
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	300	300	204	264	23	16						
Volume Left	1	0	15	0	5	16						
Volume Right	0	1	0	75	18	0						
cSH	1171	1700	960	1700	522	318						
Volume to Capacity	0.00	0.18	0.02	0.15	0.04	0.05						
Queue Length 95th (ft)	0	0	1	0	3	4						
Control Delay (s)	0.0	0.0	0.8	0.0	12.2	16.9						
Lane LOS	A		A		B	C						
Approach Delay (s)	0.0		0.3		12.2	16.9						
Approach LOS					B	C						
Intersection Summary												
Average Delay			0.7									
Intersection Capacity Utilization			33.4%		ICU Level of Service		A					
Analysis Period (min)			15									

No-Build Conditions
3: South Lexington Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	531	19	36	334	0	21	0	62	330	353	53
Future Volume (vph)	0	531	19	36	334	0	21	0	62	330	353	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	10	12	10	12	10	10	13	12
Grade (%)		0%			-2%			-5%			4%	
Storage Length (ft)	0		0	140		0	85		0	0		0
Storage Lanes	0		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3089	0	1477	3063	0	1554	0	1337	1324	1688	0
Flt Permitted				0.322			0.211			0.950		
Satd. Flow (perm)	0	3089	0	487	3063	0	341	0	1255	1266	1688	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		4									8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		357			354			564			393	
Travel Time (s)		8.1			8.0			12.8			8.9	
Confl. Peds. (#/hr)	31		30	30		31	29		35	35		29
Confl. Bikes (#/hr)			1			1						3
Peak Hour Factor	0.92	0.94	0.94	0.94	0.94	0.92	0.94	0.92	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	11%	0%	0%	0%	0%	0%	4%	1%	0%	0%
Parking (#/hr)										0		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	585	0	38	355	0	22	0	66	351	432	0
Turn Type		NA		pm+pt	NA		pm+pt		Perm	pm+pt	NA	
Protected Phases		2		1	6		3			7	4	
Permitted Phases				6			8		8	4		
Total Split (s)		47.0		10.0	57.0		9.0		23.9	10.1	34.0	
Total Lost Time (s)		5.0		5.0	5.0		5.0		4.9	5.0	5.0	
Act Effect Green (s)		42.0		52.0	52.0		22.9		19.0	29.0	29.0	
Actuated g/C Ratio		0.42		0.52	0.52		0.23		0.19	0.29	0.29	
v/c Ratio		0.45		0.13	0.22		0.17		0.28	0.95	0.87	
Control Delay		22.0		11.8	11.2		29.9		38.3	75.6	59.6	
Queue Delay		0.0		0.0	0.0		0.0		0.0	1.2	2.6	
Total Delay		22.0		11.8	11.2		29.9		38.4	76.9	62.2	
LOS		C		B	B		C		D	E	E	
Approach Delay		22.0			11.3			36.2			68.8	
Approach LOS		C			B			D			E	
Queue Length 50th (ft)		136		7	35		10		36	197	237	
Queue Length 95th (ft)		184		24	71		29		76	m#339	m#383	
Internal Link Dist (ft)		277			274			484			313	
Turn Bay Length (ft)				140			85					
Base Capacity (vph)		1299		302	1592		126		238	370	495	
Starvation Cap Reductn		0		0	0		0		0	0	20	
Spillback Cap Reductn		0		0	0		0		3	3	0	
Storage Cap Reductn		0		0	0		0		0	0	0	
Reduced v/c Ratio		0.45		0.13	0.22		0.17		0.28	0.96	0.91	
Intersection Summary												

No-Build Conditions 3: South Lexington Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 86 (86%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 40.2

Intersection LOS: D

Intersection Capacity Utilization 67.3%

ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: South Lexington Avenue & Maple Avenue



No-Build Conditions
4: Davis Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	795	69	24	337	48	12	33	47	8	0	18
Future Volume (vph)	57	795	69	24	337	48	12	33	47	8	0	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	11	11	12	11	12	12	9	12	11	10	12
Grade (%)		1%			0%			-5%			4%	
Storage Length (ft)	100		0	0		0	0		0	90		0
Storage Lanes	1		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1426	3028	0	0	3018	0	0	1234	0	1539	1270	0
Flt Permitted	0.492				0.871			0.971		0.702		
Satd. Flow (perm)	707	3028	0	0	2633	0	0	1201	0	1057	1270	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			25			50			450	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		354			356			562			217	
Travel Time (s)		8.0			8.1			12.8			4.9	
Confl. Peds. (#/hr)	45		34	34		45	21		55	55		21
Confl. Bikes (#/hr)			4						1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	1%	1%	0%	0%	7%	0%	3%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	919	0	0	436	0	0	98	0	9	19	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Total Split (s)	64.0	64.0		64.0	64.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)	5.2	5.2			5.2			5.2		5.2	5.2	
Act Effect Green (s)	58.8	58.8			58.8			24.8		24.8	24.8	
Actuated g/C Ratio	0.59	0.59			0.59			0.25		0.25	0.25	
v/c Ratio	0.15	0.51			0.28			0.29		0.03	0.03	
Control Delay	15.8	19.0			7.1			19.0		29.1	0.1	
Queue Delay	0.0	2.0			0.0			0.0		0.0	0.0	
Total Delay	15.8	21.0			7.1			19.0		29.1	0.1	
LOS	B	C			A			B		C	A	
Approach Delay		20.7			7.1			19.0			9.4	
Approach LOS		C			A			B			A	
Queue Length 50th (ft)	23	190			22			24		4	0	
Queue Length 95th (ft)	m39	m218			61			69		17	0	
Internal Link Dist (ft)		274			276			482			137	
Turn Bay Length (ft)	100									90		
Base Capacity (vph)	415	1787			1558			335		262	653	
Starvation Cap Reductn	0	682			0			0		0	0	
Spillback Cap Reductn	0	0			0			0		0	0	
Storage Cap Reductn	0	0			0			0		0	0	
Reduced v/c Ratio	0.15	0.83			0.28			0.29		0.03	0.03	
Intersection Summary												

No-Build Conditions
4: Davis Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	6.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

No-Build Conditions
4: Davis Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	30 (30%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.51
Intersection Signal Delay:	16.5
Intersection LOS:	B
Intersection Capacity Utilization	72.6%
ICU Level of Service	C
Analysis Period (min)	15
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Davis Avenue & Maple Avenue



No-Build Conditions
5: Oakwood Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	822	28	36	400	6	39
Future Volume (vph)	822	28	36	400	6	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Grade (%)	1%			0%	-5%	
Satd. Flow (prot)	3181	0	0	3207	1554	0
Flt Permitted				0.824	0.993	
Satd. Flow (perm)	3181	0	0	2651	1551	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	9				43	
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			475	444	
Travel Time (s)	8.1			10.8	10.1	
Confl. Peds. (#/hr)		40	40		6	24
Confl. Bikes (#/hr)		3				
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	0%	0%	1%	7%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	934	0	0	480	50	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			2	4	
Permitted Phases			2			
Total Split (s)	77.2		77.2	77.2	22.8	
Total Lost Time (s)	5.2			5.2	5.0	
Act Effect Green (s)	72.0			72.0	17.8	
Actuated g/C Ratio	0.72			0.72	0.18	
v/c Ratio	0.41			0.25	0.16	
Control Delay	1.2			1.2	14.4	
Queue Delay	0.1			0.0	0.0	
Total Delay	1.3			1.2	14.4	
LOS	A			A	B	
Approach Delay	1.3			1.2	14.4	
Approach LOS	A			A	B	
Queue Length 50th (ft)	14			12	4	
Queue Length 95th (ft)	20			12	36	
Internal Link Dist (ft)	276			395	364	
Turn Bay Length (ft)						
Base Capacity (vph)	2292			1908	311	
Starvation Cap Reductn	329			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.48			0.25	0.16	
Intersection Summary						
Area Type:	CBD					
Cycle Length: 100						
Actuated Cycle Length: 100						
Offset: 31 (31%), Referenced to phase 2:EBWB and 6:, Start of Green						

No-Build Conditions
5: Oakwood Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Control Type: Pretimed

Maximum v/c Ratio: 0.41

Intersection Signal Delay: 1.7

Intersection LOS: A

Intersection Capacity Utilization 66.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 5: Oakwood Avenue & Maple Avenue



No-Build Conditions
6: Longview Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	134	646	41	36	440	178	33	408	42	0	0	0
Future Volume (vph)	134	646	41	36	440	178	33	408	42	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	11	10	11	10	10	10	9	12	12	12
Grade (%)		0%			-5%			-2%			0%	
Storage Length (ft)	225		0	60		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1462	2962	0	1509	2974	0	0	2837	0	0	0	0
Flt Permitted	0.287			0.377				0.997				
Satd. Flow (perm)	431	2962	0	584	2974	0	0	2826	0	0	0	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		10			75							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		475			281			824			379	
Travel Time (s)		10.8			6.4			18.7			8.6	
Confl. Peds. (#/hr)	60		24	24		60	44		48	48		44
Confl. Bikes (#/hr)			2			1			2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	3%	0%	1%	4%	0%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	141	723	0	38	650	0	0	508	0	0	0	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2			6			8					
Total Split (s)	13.0	60.0		47.0	47.0		37.0	37.0				
Total Lost Time (s)	5.2	5.2		5.2	5.2			5.2				
Act Effect Green (s)	60.5	60.5		41.8	41.8			26.1				
Actuated g/C Ratio	0.60	0.60		0.42	0.42			0.26				
v/c Ratio	0.35	0.40		0.16	0.51			0.69				
Control Delay	6.3	3.1		16.1	16.5			38.2				
Queue Delay	0.0	0.0		0.0	3.1			0.0				
Total Delay	6.3	3.1		16.1	19.6			38.2				
LOS	A	A		B	B			D				
Approach Delay		3.6			19.4			38.2				
Approach LOS		A			B			D				
Queue Length 50th (ft)	7	16		9	66			156				
Queue Length 95th (ft)	17	28		20	87			194				
Internal Link Dist (ft)		395			201			744			299	
Turn Bay Length (ft)	225			60								
Base Capacity (vph)	399	1794		244	1286			898				
Starvation Cap Reductn	0	0		0	512			0				
Spillback Cap Reductn	0	0		0	0			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.35	0.40		0.16	0.84			0.57				
Intersection Summary												

No-Build Conditions
6: Longview Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

No-Build Conditions
6: Longview Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 52 (52%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 17.4

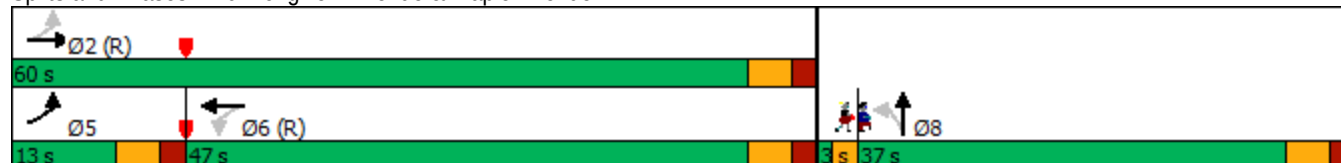
Intersection LOS: B

Intersection Capacity Utilization 67.8%

ICU Level of Service C

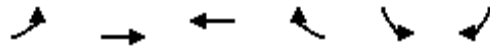
Analysis Period (min) 15

Splits and Phases: 6: Longview Avenue & Maple Avenue



No-Build Conditions
7: Maple Avenue & Cromwell Place

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↗	↗
Traffic Volume (vph)	0	684	563	0	134	99
Future Volume (vph)	0	684	563	0	134	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	11	12
Grade (%)		6%	3%		4%	
Storage Length (ft)	0			0	0	60
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	3016	3094	0	1371	1383
Flt Permitted					0.950	
Satd. Flow (perm)	0	3016	3094	0	1360	1383
Right Turn on Red				Yes		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		281	255		455	
Travel Time (s)		6.4	5.8		10.3	
Confl. Peds. (#/hr)	67			67	6	2
Confl. Bikes (#/hr)						2
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%
Parking (#/hr)					0	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	752	619	0	147	109
Turn Type		NA	NA		Perm	Prot
Protected Phases		2	2			4
Permitted Phases					4	
Total Split (s)		71.0	71.0		29.0	29.0
Total Lost Time (s)		4.7	4.7		4.7	4.7
Act Effct Green (s)		72.6	72.6		18.0	18.0
Actuated g/C Ratio		0.73	0.73		0.18	0.18
v/c Ratio		0.34	0.28		0.60	0.44
Control Delay		11.2	5.3		41.8	35.5
Queue Delay		0.4	0.7		0.0	0.0
Total Delay		11.6	6.0		41.8	35.5
LOS		B	A		D	D
Approach Delay		11.6	6.0		39.1	
Approach LOS		B	A		D	
Queue Length 50th (ft)		141	67		93	68
Queue Length 95th (ft)		186	96		158	121
Internal Link Dist (ft)		201	175		375	
Turn Bay Length (ft)						60
Base Capacity (vph)		2189	2246		330	336
Starvation Cap Reductn		863	1199		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.57	0.59		0.45	0.32
Intersection Summary						

No-Build Conditions
7: Maple Avenue & Cromwell Place

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 13.8

Intersection LOS: B

Intersection Capacity Utilization 39.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Maple Avenue & Cromwell Place



No-Build Conditions

AM Peak Hour

8: Greenridge Avenue/Chester Avenue & Maple Avenue

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	619	101	49	545	73	18	70	68	0	0	0
Future Volume (vph)	98	619	101	49	545	73	18	70	68	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	11
Grade (%)		2%			3%			0%			-4%	
Storage Length (ft)	125		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1752	3358	0	1743	3387	0	0	3188	0	0	0	0
Flt Permitted	0.334			0.306				0.994				
Satd. Flow (perm)	600	3358	0	543	3387	0	0	3165	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27			22			74				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		255			453			507			506	
Travel Time (s)		5.8			10.3			11.5			11.5	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	107	783	0	53	671	0	0	170	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA				
Protected Phases	1	6		5	2			8				
Permitted Phases	6			2			8					
Total Split (s)	12.0	57.0		12.0	57.0		31.0	31.0				
Total Lost Time (s)	7.0	5.0		5.0	5.0			5.0				
Act Effct Green (s)	56.7	54.7		58.6	52.2			26.0				
Actuated g/C Ratio	0.57	0.55		0.59	0.52			0.26				
v/c Ratio	0.27	0.42		0.13	0.38			0.19				
Control Delay	11.5	16.3		7.7	14.5			16.8				
Queue Delay	0.0	1.2		0.0	0.0			0.0				
Total Delay	11.5	17.5		7.7	14.5			16.8				
LOS	B	B		A	B			B				
Approach Delay		16.7			14.0			16.8				
Approach LOS		B			B			B				
Queue Length 50th (ft)	30	151		11	123			24				
Queue Length 95th (ft)	59	158		25	164			51				
Internal Link Dist (ft)		175			373			427			426	
Turn Bay Length (ft)	125			75								
Base Capacity (vph)	397	1847		405	1778			877				
Starvation Cap Reductn	0	783		0	0			0				
Spillback Cap Reductn	0	0		0	0			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.27	0.74		0.13	0.38			0.19				
Intersection Summary												
Area Type:	Other											
Cycle Length: 100												
Actuated Cycle Length: 100												

No-Build Conditions
8: Greenridge Avenue/Chester Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Offset: 43 (43%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 15.6	Intersection LOS: B
Intersection Capacity Utilization 58.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Greenridge Avenue/Chester Avenue & Maple Avenue



No-Build Conditions

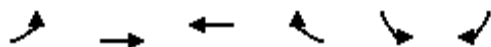
AM Peak Hour

11: West Lot Northwest Driveway/Highland Avenue & West Post Road Timing Plan: 8:00 AM – 9:00 AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	311	0	0	360	27	3	0	0	136	0	86
Future Volume (Veh/h)	84	311	0	0	360	27	3	0	0	136	0	86
Sign Control		Free			Free			Stop			Stop	
Grade		-4%			3%			0%			-11%	
Peak Hour Factor	0.88	0.88	0.92	0.92	0.88	0.88	0.92	0.92	0.92	0.88	0.92	0.88
Hourly flow rate (vph)	95	353	0	0	409	31	3	0	0	155	0	98
Pedestrians		22			6						49	
Lane Width (ft)		16.0			16.0						12.0	
Walking Speed (ft/s)		3.5			3.5						3.5	
Percent Blockage		3			1						5	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					742							
pX, platoon unblocked	0.96						0.96	0.96		0.96	0.96	0.96
vC, conflicting volume	489			353			1088	1032	359	1022	1016	496
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	446			353			1070	1012	359	1002	996	453
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	91			100			98	100	100	15	100	82
cM capacity (veh/h)	1019			1206			136	198	680	182	204	542
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	448	440	3	253								
Volume Left	95	0	3	155								
Volume Right	0	31	0	98								
cSH	1019	1206	136	246								
Volume to Capacity	0.09	0.00	0.02	1.03								
Queue Length 95th (ft)	8	0	2	255								
Control Delay (s)	2.7	0.0	32.1	109.2								
Lane LOS	A		D	F								
Approach Delay (s)	2.7	0.0	32.1	109.2								
Approach LOS			D	F								
Intersection Summary												
Average Delay			25.3									
Intersection Capacity Utilization			70.1%	ICU Level of Service						C		
Analysis Period (min)			15									

No-Build Conditions
12: West Post Road & Orawaupum Street

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	22	424	376	47	14	15
Future Volume (Veh/h)	22	424	376	47	14	15
Sign Control		Free	Free		Stop	
Grade		-3%	2%		-10%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	26	493	437	55	16	17
Pedestrians			4		56	
Lane Width (ft)			16.0		11.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			1		5	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			361			
pX, platoon unblocked	0.93				0.93	0.93
vC, conflicting volume	548				1070	520
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	473				1036	444
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				93	97
cM capacity (veh/h)	969				222	546
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	519	492	33			
Volume Left	26	0	16			
Volume Right	0	55	17			
cSH	969	1700	320			
Volume to Capacity	0.03	0.29	0.10			
Queue Length 95th (ft)	2	0	9			
Control Delay (s)	0.8	0.0	17.5			
Lane LOS	A		C			
Approach Delay (s)	0.8	0.0	17.5			
Approach LOS			C			
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utilization			54.7%	ICU Level of Service	A	
Analysis Period (min)			15			

No-Build Conditions

AM Peak Hour

14: South Lexington Avenue & West Post Road/East Post Road

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖					↖	↗	
Traffic Volume (vph)	0	357	86	59	225	0	0	0	0	231	610	198
Future Volume (vph)	0	357	86	59	225	0	0	0	0	231	610	198
Ideal Flow (vphpl)	1900	2050	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	12	12	12	12	11	11	11
Grade (%)		-1%			0%			0%			1%	
Storage Length (ft)	0		105	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1589	1294	0	2560	0	0	0	0	1065	2765	0
Flt Permitted					0.791					0.950		
Satd. Flow (perm)	0	1589	1217	0	2036	0	0	0	0	993	2765	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			89								52	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		207			229			393			1032	
Travel Time (s)		4.7			5.2			8.9			23.5	
Confl. Peds. (#/hr)	61		38	38		61	34		54	54		34
Confl. Bikes (#/hr)			2									4
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	5%	0%	2%	5%	0%	0%	0%	0%	2%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0	0		24					41	4	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	401	97	0	319	0	0	0	0	260	907	0
Turn Type		NA	Perm	Perm	NA					Perm	NA	
Protected Phases		2			2							4
Permitted Phases			2	2						4		
Total Split (s)		55.0	55.0	55.0	55.0					45.0	45.0	
Total Lost Time (s)		5.0	5.0		5.0					5.0	5.0	
Act Effct Green (s)		50.0	50.0		50.0					40.0	40.0	
Actuated g/C Ratio		0.50	0.50		0.50					0.40	0.40	
v/c Ratio		0.51	0.15		0.31					0.65	0.80	
Control Delay		19.5	4.1		15.9					30.0	26.5	
Queue Delay		0.0	0.0		0.1					0.0	0.2	
Total Delay		19.5	4.1		16.0					30.0	26.7	
LOS		B	A		B					C	C	
Approach Delay		16.5			16.0						27.4	
Approach LOS		B			B						C	
Queue Length 50th (ft)		164	2		61					91	160	
Queue Length 95th (ft)		245	28		90					164	235	
Internal Link Dist (ft)		127			149			313			952	
Turn Bay Length (ft)			105									
Base Capacity (vph)		794	653		1018					397	1137	
Starvation Cap Reductn		0	0		0					0	0	
Spillback Cap Reductn		0	84		139					0	21	
Storage Cap Reductn		0	0		0					0	0	
Reduced v/c Ratio		0.51	0.17		0.36					0.65	0.81	

Intersection Summary	
Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.80
Intersection Signal Delay:	22.9
Intersection LOS:	C
Intersection Capacity Utilization	79.0%
ICU Level of Service	D
Analysis Period (min)	15



No-Build Conditions
15: Davis Avenue & East Post Road

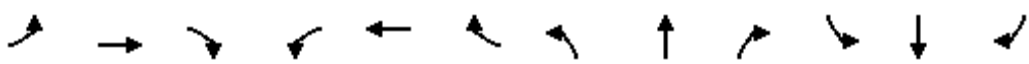
AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Traffic Volume (veh/h)	587	0	0	247	39	74
Future Volume (Veh/h)	587	0	0	247	39	74
Sign Control	Free			Free	Stop	
Grade	-1%			-1%	-7%	
Peak Hour Factor	0.91	0.92	0.92	0.91	0.91	0.91
Hourly flow rate (vph)	645	0	0	271	43	81
Pedestrians	12			51	31	
Lane Width (ft)	10.0			10.0	11.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			4	3	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	229			343		
pX, platoon unblocked						
vC, conflicting volume			676		824	404
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			676		824	404
tC, single (s)			4.1		6.8	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.4
p0 queue free %			100		86	85
cM capacity (veh/h)			900		305	546
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	322	322	136	136	43	81
Volume Left	0	0	0	0	43	0
Volume Right	0	0	0	0	0	81
cSH	1700	1700	1700	1700	305	546
Volume to Capacity	0.19	0.19	0.08	0.08	0.14	0.15
Queue Length 95th (ft)	0	0	0	0	12	13
Control Delay (s)	0.0	0.0	0.0	0.0	18.7	12.7
Lane LOS					C	B
Approach Delay (s)	0.0		0.0		14.8	
Approach LOS					B	
Intersection Summary						
Average Delay			1.8			
Intersection Capacity Utilization			37.3%		ICU Level of Service	A
Analysis Period (min)			15			

No-Build Conditions

AM Peak Hour

16: Public Emergency Department Entrance/East Post Road Garage & East Post Road

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔						↔↔	
Traffic Volume (vph)	42	609	10	5	233	4	0	0	0	21	0	11
Future Volume (vph)	42	609	10	5	233	4	0	0	0	21	0	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	10	10	12	12	12	12	12	12	12
Grade (%)		0%			-1%			0%			0%	
Satd. Flow (prot)	0	2970	0	0	2884	0	0	0	0	0	1498	0
Flt Permitted		0.923			0.941						0.968	
Satd. Flow (perm)	0	2716	0	0	2712	0	0	0	0	0	1416	0
Right Turn on Red			Yes			Yes				Yes		Yes
Satd. Flow (RTOR)		3			3						16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		343			170			167			197	
Travel Time (s)		7.8			3.9			3.8			4.5	
Confl. Peds. (#/hr)	100		100	100		100				50		50
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	735	0	0	269	0	0	0	0	0	35	0
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases	4			8						6		
Total Split (s)	70.0	70.0		70.0	70.0					30.0	30.0	
Total Lost Time (s)		4.5			4.5						4.5	
Act Effct Green (s)		24.1			24.1						13.0	
Actuated g/C Ratio		0.67			0.67						0.36	
v/c Ratio		0.41			0.15						0.07	
Control Delay		8.6			7.0						8.2	
Queue Delay		0.0			0.0						0.0	
Total Delay		8.6			7.0						8.2	
LOS		A			A						A	
Approach Delay		8.6			7.0						8.2	
Approach LOS		A			A						A	
Queue Length 50th (ft)		76			22						3	
Queue Length 95th (ft)		120			40						19	
Internal Link Dist (ft)		263			90			87			117	
Turn Bay Length (ft)												
Base Capacity (vph)		2716			2712						1017	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.27			0.10						0.03	
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												
Actuated Cycle Length: 36.1												
Control Type: Actuated-Uncoordinated												
Maximum v/c Ratio: 0.41												

No-Build Conditions

AM Peak Hour

16: Public Emergency Department Entrance/East Post Road Garage & East Post Road

Time Plan 8:00 AM – 9:00 AM

Intersection Signal Delay: 8.2

Intersection LOS: A

Intersection Capacity Utilization 59.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 16: Public Emergency Department Entrance/East Post Road Garage & East Post Road



No-Build Conditions
17: Public Emergency Department Exit & East Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	630	0	0	240	1	7
Future Volume (Veh/h)	630	0	0	240	1	7
Sign Control	Free			Free	Stop	
Grade	2%			-2%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	700	0	0	267	1	8
Pedestrians	20			20	100	
Lane Width (ft)	9.0			10.0	11.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			2	9	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	170			262		
pX, platoon unblocked			0.88		0.88	0.88
vC, conflicting volume			800		954	470
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			512		686	139
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			847		303	702
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	350	350	134	134	9	
Volume Left	0	0	0	0	1	
Volume Right	0	0	0	0	8	
cSH	1700	1700	1700	1700	613	
Volume to Capacity	0.21	0.21	0.08	0.08	0.01	
Queue Length 95th (ft)	0	0	0	0	1	
Control Delay (s)	0.0	0.0	0.0	0.0	11.0	
Lane LOS					B	
Approach Delay (s)	0.0		0.0		11.0	
Approach LOS					B	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			34.2%		ICU Level of Service	A
Analysis Period (min)			15			

No-Build Conditions

AM Peak Hour

18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road

Timing Plan: 8:00 AM – 9:00 AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑			↑↑				
Traffic Volume (vph)	223	415	0	0	237	99	56	513	56	0	0	0
Future Volume (vph)	223	415	0	0	237	99	56	513	56	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	10	10	12	12	12	12	12	12
Grade (%)		2%			-5%			-3%			0%	
Satd. Flow (prot)	0	2705	0	0	2558	0	0	3198	0	0	0	0
Flt Permitted		0.666						0.996				
Satd. Flow (perm)	0	1785	0	0	2558	0	0	3182	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					84			11				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			343			379			494	
Travel Time (s)		3.0			7.8			8.6			11.2	
Confl. Peds. (#/hr)	94		104	104		94	50		23	23		50
Confl. Bikes (#/hr)			2						5			
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.92
Heavy Vehicles (%)	3%	4%	0%	0%	7%	1%	2%	1%	0%	0%	0%	0%
Parking (#/hr)		0			0							
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	686	0	0	361	0	0	672	0	0	0	0
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2						8					
Total Split (s)	10.0	61.0			51.0		39.0	39.0				
Total Lost Time (s)		5.0			5.0			5.0				
Act Effct Green (s)		56.0			46.0			34.0				
Actuated g/C Ratio		0.56			0.46			0.34				
v/c Ratio		0.66			0.30			0.62				
Control Delay		18.0			27.4			30.0				
Queue Delay		0.0			0.0			1.0				
Total Delay		18.0			27.4			31.1				
LOS		B			C			C				
Approach Delay		18.0			27.4			31.1				
Approach LOS		B			C			C				
Queue Length 50th (ft)		127			75			167				
Queue Length 95th (ft)		172			117			232				
Internal Link Dist (ft)		53			263			299			414	
Turn Bay Length (ft)												
Base Capacity (vph)		1045			1222			1089				
Starvation Cap Reductn		0			0			196				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.66			0.30			0.75				

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

No-Build Conditions

AM Peak Hour

18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road

Timing Plan: 8:00 AM – 9:00 AM

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 25.1

Intersection LOS: C

Intersection Capacity Utilization 71.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road



No-Build Conditions

AM Peak Hour

19: Cromwell Place/Grand Street & East Post Road

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	337	132	65	293	0	0	0	0	57	57	49
Future Volume (vph)	0	337	132	65	293	0	0	0	0	57	57	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	10	10	12	12	12	12	9	10	12
Grade (%)		5%			0%			0%			2%	
Satd. Flow (prot)	0	2337	0	0	2709	0	0	0	0	1277	1275	0
Flt Permitted					0.766					0.950		
Satd. Flow (perm)	0	2337	0	0	2046	0	0	0	0	1224	1275	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		122									41	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		343			219			455			494	
Travel Time (s)		7.8			5.0			10.3			11.2	
Confl. Peds. (#/hr)	89		116	116		89	44		32	32		44
Confl. Bikes (#/hr)			1									1
Peak Hour Factor	0.92	0.83	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.83	0.83	0.83
Heavy Vehicles (%)	0%	5%	2%	7%	4%	0%	0%	0%	0%	2%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	4	0	0	0	0	0	0	0
Parking (#/hr)		4			0					0	0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	565	0	0	431	0	0	0	0	69	128	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			2						4	
Permitted Phases				2						4		
Total Split (s)		71.0		71.0	71.0					29.0	29.0	
Total Lost Time (s)		5.0			5.0					5.0	5.0	
Act Effect Green (s)		67.0			67.0					23.0	23.0	
Actuated g/C Ratio		0.67			0.67					0.23	0.23	
v/c Ratio		0.35			0.31					0.25	0.40	
Control Delay		14.4			17.0					34.3	26.1	
Queue Delay		0.7			1.7					0.0	0.0	
Total Delay		15.2			18.6					34.3	26.1	
LOS		B			B					C	C	
Approach Delay		15.2			18.6						28.9	
Approach LOS		B			B						C	
Queue Length 50th (ft)		116			98					36	46	
Queue Length 95th (ft)		155			126					69	90	
Internal Link Dist (ft)		263			139			375			414	
Turn Bay Length (ft)												
Base Capacity (vph)		1606			1370					293	337	
Starvation Cap Reductn		685			740					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.61			0.68					0.24	0.38	
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												

No-Build Conditions

19: Cromwell Place/Grand Street & East Post Road

AM Peak Hour

Timing Plan: 8:00 AM – 9:00 AM

Actuated Cycle Length: 100

Offset: 35 (35%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 18.7

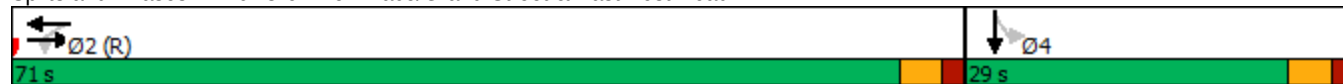
Intersection LOS: B

Intersection Capacity Utilization 65.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 19: Cromwell Place/Grand Street & East Post Road



No-Build Conditions
20: Chester Avenue & East Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

							
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Lane Configurations	↑↑			↑↑	↖	↗	
Traffic Volume (vph)	394	0	0	299	60	86	
Future Volume (vph)	394	0	0	299	60	86	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Grade (%)	4%			1%	0%		
Satd. Flow (prot)	3468	0	0	3522	1770	1583	
Flt Permitted					0.950		
Satd. Flow (perm)	3468	0	0	3522	1567	1387	
Right Turn on Red		No				No	
Satd. Flow (RTOR)							
Link Speed (mph)	30			30	30		
Link Distance (ft)	219			383	506		
Travel Time (s)	5.0			8.7	11.5		
Confl. Peds. (#/hr)		80	80		80	80	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	428	0	0	325	65	93	
Turn Type	NA			NA	Prot	Perm	
Protected Phases	2			2	4		9
Permitted Phases						4	
Total Split (s)	63.0			63.0	32.0	32.0	5.0
Total Lost Time (s)	4.5			4.5	4.5	4.5	
Act Effct Green (s)	58.5			58.5	32.5	32.5	
Actuated g/C Ratio	0.58			0.58	0.32	0.32	
v/c Ratio	0.21			0.16	0.11	0.21	
Control Delay	4.4			9.7	19.7	21.0	
Queue Delay	1.1			0.0	0.0	0.0	
Total Delay	5.6			9.7	19.7	21.0	
LOS	A			A	B	C	
Approach Delay	5.6			9.7	20.5		
Approach LOS	A			A	C		
Queue Length 50th (ft)	19			46	25	39	
Queue Length 95th (ft)	44			67	50	71	
Internal Link Dist (ft)	139			303	426		
Turn Bay Length (ft)							
Base Capacity (vph)	2028			2060	575	450	
Starvation Cap Reductn	1329			0	0	0	
Spillback Cap Reductn	0			140	0	0	
Storage Cap Reductn	0			0	0	0	
Reduced v/c Ratio	0.61			0.17	0.11	0.21	
Intersection Summary							
Area Type:	Other						
Cycle Length: 100							
Actuated Cycle Length: 100							
Offset: 0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green							
Control Type: Actuated-Coordinated							
Maximum v/c Ratio: 0.21							
Intersection Signal Delay: 9.6	Intersection LOS: A						

No-Build Conditions
20: Chester Avenue & East Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Intersection Capacity Utilization 37.5%
Analysis Period (min) 15

ICU Level of Service A

Splits and Phases: 20: Chester Avenue & East Post Road



No-Build Conditions

AM Peak Hour

21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	0	0	0	0	6	0	827	0	0	0	0
Future Volume (vph)	63	0	0	0	0	6	0	827	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			1%			0%	
Satd. Flow (prot)	1593	1676	0	0	0	1450	0	4554	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1473	1676	0	0	0	1326	0	4554	0	0	0	0
Right Turn on Red	No		No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		403			216			494			280	
Travel Time (s)		9.2			4.9			11.2			6.4	
Confl. Peds. (#/hr)	50		50	50		50	100		100			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	0	0	0	0	7	0	899	0	0	0	0
Turn Type	Perm					Perm		NA				
Protected Phases		4						2				
Permitted Phases	4					4						
Total Split (s)	25.1	25.1				25.1		74.9				
Total Lost Time (s)	5.0	5.0				5.0		4.9				
Act Effct Green (s)	14.8					14.8		78.4				
Actuated g/C Ratio	0.15					0.15		0.78				
v/c Ratio	0.31					0.04		0.25				
Control Delay	39.4					32.8		8.5				
Queue Delay	0.0					0.0		0.0				
Total Delay	39.4					32.8		8.5				
LOS	D					C		A				
Approach Delay		39.4			32.8			8.5				
Approach LOS		D			C			A				
Queue Length 50th (ft)	37					4		90				
Queue Length 95th (ft)	76					16		129				
Internal Link Dist (ft)		323			136			414			200	
Turn Bay Length (ft)												
Base Capacity (vph)	296					266		3572				
Starvation Cap Reductn	0					0		0				
Spillback Cap Reductn	0					0		460				
Storage Cap Reductn	0					0		0				
Reduced v/c Ratio	0.23					0.03		0.29				

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.31

Intersection Signal Delay: 10.8

Intersection LOS: B

No-Build Conditions

AM Peak Hour

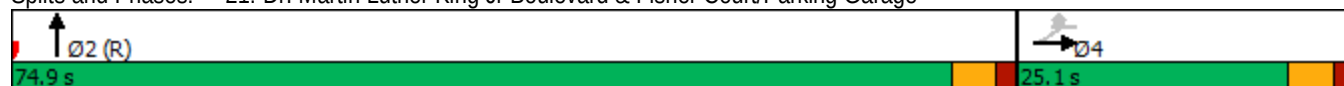
21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage Timing Plan: 8:00 AM – 9:00 AM

Intersection Capacity Utilization 48.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage



No-Build Conditions

AM Peak Hour

22: South Lexington Avenue & Fisher Avenue/Quarropas Street

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↔	↑↑					↔	↑↑	↔
Traffic Volume (vph)	0	417	156	84	72	0	0	0	0	570	788	120
Future Volume (vph)	0	417	156	84	72	0	0	0	0	570	788	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	11	11	12	12	12	12	12	12	13
Grade (%)		-1%			0%			0%			-1%	
Storage Length (ft)	0		0	135		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	2		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	2806	0	1540	3079	0	0	0	0	3105	3201	1480
Flt Permitted				0.307						0.950		
Satd. Flow (perm)	0	2806	0	488	3079	0	0	0	0	2752	3201	1363
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)												130
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		629			873			1032			215	
Travel Time (s)		14.3			19.8			23.5			4.9	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	623	0	91	78	0	0	0	0	620	857	130
Turn Type		NA		pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Total Split (s)		45.0		10.0	55.0					42.0	42.0	42.0
Total Lost Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Act Effct Green (s)		44.3		52.8	52.8					37.2	37.2	37.2
Actuated g/C Ratio		0.44		0.53	0.53					0.37	0.37	0.37
v/c Ratio		0.50		0.29	0.05					0.61	0.72	0.22
Control Delay		23.1		12.5	9.0					27.8	30.5	4.5
Queue Delay		0.0		0.0	0.0					0.0	0.0	0.0
Total Delay		23.1		12.5	9.0					27.8	30.5	4.5
LOS		C		B	A					C	C	A
Approach Delay		23.1			10.9						27.4	
Approach LOS		C			B						C	
Queue Length 50th (ft)		158		32	13					154	231	0
Queue Length 95th (ft)		213		m49	m20					210	300	36
Internal Link Dist (ft)		549			793			952			135	
Turn Bay Length (ft)				135								
Base Capacity (vph)		1242		316	1624					1067	1242	608
Starvation Cap Reductn		0		0	0					0	0	0
Spillback Cap Reductn		0		0	0					0	0	0
Storage Cap Reductn		0		0	0					0	0	0
Reduced v/c Ratio		0.50		0.29	0.05					0.58	0.69	0.21

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

No-Build Conditions
22: South Lexington Avenue & Fisher Avenue/Quarropas Street

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

No-Build Conditions
22: South Lexington Avenue & Fisher Avenue/Quarropas Street

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Offset: 10 (10%), Referenced to phase 2:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 25.1 Intersection LOS: C
Intersection Capacity Utilization 83.3% ICU Level of Service E
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: South Lexington Avenue & Fisher Avenue/Quarropas Street



No-Build Conditions

AM Peak Hour

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  				
Traffic Volume (vph)	455	532	0	0	75	159	75	753	75	0	0	0
Future Volume (vph)	455	532	0	0	75	159	75	753	75	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	12	12	11	11	12	12	12	12	12	12
Grade (%)		3%			-4%			1%			0%	
Storage Length (ft)	240		0	0		90	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1516	2928	0	0	1653	1405	0	4451	0	0	0	0
Flt Permitted	0.629							0.996				
Satd. Flow (perm)	959	2928	0	0	1653	1312	0	4430	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						76		16				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		873			420			280			604	
Travel Time (s)		19.8			9.5			6.4			13.7	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	495	578	0	0	82	173	0	982	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Total Split (s)	15.0	61.0			46.0	46.0	39.0	39.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Act Effct Green (s)	60.4	60.4			41.9	41.9		29.6				
Actuated g/C Ratio	0.60	0.60			0.42	0.42		0.30				
v/c Ratio	0.76	0.33			0.12	0.29		0.74				
Control Delay	22.6	11.5			18.9	12.4		38.9				
Queue Delay	0.0	0.0			0.0	0.0		5.3				
Total Delay	22.6	11.5			18.9	12.4		44.2				
LOS	C	B			B	B		D				
Approach Delay		16.6			14.5			44.2				
Approach LOS		B			B			D				
Queue Length 50th (ft)	210	117			32	39		216				
Queue Length 95th (ft)	#321	162			63	87		273				
Internal Link Dist (ft)		793			340			200			524	
Turn Bay Length (ft)	240					90						
Base Capacity (vph)	655	1769			692	593		1516				
Starvation Cap Reductn	0	0			0	0		463				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.76	0.33			0.12	0.29		0.93				

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

No-Build Conditions

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

AM Peak Hour

Timing Plan: 8:00 AM – 9:00 AM

Offset: 15 (15%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 28.1

Intersection LOS: C

Intersection Capacity Utilization 83.3%

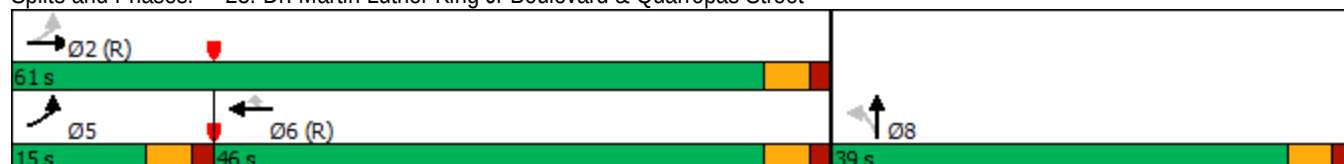
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 23: Dr. Martin Luther King Jr Boulevard & Quarropas Street



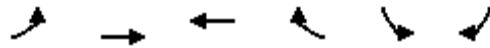
No-Build Conditions
24: West Lot Northeast Driveway & West Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	439	0	0	421	0	5
Future Volume (Veh/h)	439	0	0	421	0	5
Sign Control	Free			Free	Stop	
Grade	-3%			3%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	488	0	0	468	0	6
Pedestrians	20			20	40	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	2			2	4	
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)				207		
pX, platoon unblocked					0.93	
vC, conflicting volume			528		1016	548
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			528		978	548
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			999		243	506
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	488	468	6			
Volume Left	0	0	0			
Volume Right	0	0	6			
cSH	1700	1700	506			
Volume to Capacity	0.29	0.28	0.01			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	0.0	0.0	12.2			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	12.2			
Approach LOS			B			
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization		40.5%		ICU Level of Service		A
Analysis Period (min)		15				

No-Build Conditions
27: East Post Road & Winchester Street

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	5	632	235	53	5	5
Future Volume (Veh/h)	5	632	235	53	5	5
Sign Control		Free	Free		Stop	
Grade		2%	-2%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	702	261	59	6	6
Pedestrians		20	20		100	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		2	2		10	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		299	133			
pX, platoon unblocked					0.91	
vC, conflicting volume	420				774	280
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	420				548	280
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	99
cM capacity (veh/h)	1027				374	636
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	240	468	174	146	12	
Volume Left	6	0	0	0	6	
Volume Right	0	0	0	59	6	
cSH	1027	1700	1700	1700	471	
Volume to Capacity	0.01	0.28	0.10	0.09	0.03	
Queue Length 95th (ft)	0	0	0	0	2	
Control Delay (s)	0.3	0.0	0.0	0.0	12.8	
Lane LOS	A				B	
Approach Delay (s)	0.1		0.0		12.8	
Approach LOS					B	
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			35.8%		ICU Level of Service	A
Analysis Period (min)			15			

No-Build Conditions
28: Winchester Street & East Post Road Garage

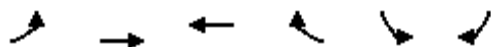
AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	53	5	10	0
Future Volume (Veh/h)	0	0	53	5	10	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	59	6	11	0
Pedestrians	20			100	100	
Lane Width (ft)	0.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	0			10	10	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	255	131	31			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	255	131	31			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	96			
cM capacity (veh/h)	639	831	1582			
Direction, Lane #	NB 1	SB 1				
Volume Total	65	11				
Volume Left	59	0				
Volume Right	0	0				
cSH	1582	1700				
Volume to Capacity	0.04	0.01				
Queue Length 95th (ft)	3	0				
Control Delay (s)	6.7	0.0				
Lane LOS	A					
Approach Delay (s)	6.7	0.0				
Approach LOS						
Intersection Summary						
Average Delay			5.7			
Intersection Capacity Utilization			29.9%	ICU Level of Service		A
Analysis Period (min)			15			

No-Build Conditions
1: Maple Avenue & West Lot Southwest Driveway

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	1	440	432	14	15	3
Future Volume (Veh/h)	1	440	432	14	15	3
Sign Control		Free	Free		Stop	
Grade		-2%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1	489	480	16	17	3
Pedestrians		5	5		20	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	0		2	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			687			
pX, platoon unblocked	0.95				0.95	0.95
vC, conflicting volume	516				760	273
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	389				645	134
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				95	100
cM capacity (veh/h)	1088				376	827
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	164	326	320	176	20	
Volume Left	1	0	0	0	17	
Volume Right	0	0	0	16	3	
cSH	1088	1700	1700	1700	409	
Volume to Capacity	0.00	0.19	0.19	0.10	0.05	
Queue Length 95th (ft)	0	0	0	0	4	
Control Delay (s)	0.1	0.0	0.0	0.0	14.3	
Lane LOS	A				B	
Approach Delay (s)	0.0		0.0		14.3	
Approach LOS					B	
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			24.4%		ICU Level of Service	A
Analysis Period (min)			15			

No-Build Conditions

MD Peak Hour

2: Roosevelt Street/West Lot Southeast Driveway & Maple Avenue

Timing Plan: 3:00 PM – 4:00 PM

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Volume (veh/h)	0	453	2	12	437	62	9	0	11	109	0	0		
Future Volume (Veh/h)	0	453	2	12	437	62	9	0	11	109	0	0		
Sign Control		Free			Free			Stop			Stop			
Grade		-2%			-1%			-4%			0%			
Peak Hour Factor	0.92	0.87	0.87	0.87	0.87	0.92	0.87	0.92	0.87	0.92	0.92	0.92		
Hourly flow rate (vph)	0	521	2	14	502	67	10	0	13	118	0	0		
Pedestrians		1						16						
Lane Width (ft)		14.0						12.0						
Walking Speed (ft/s)		3.5						3.5						
Percent Blockage		0						2						
Right turn flare (veh)														
Median type		None			None									
Median storage (veh)														
Upstream signal (ft)		357												
pX, platoon unblocked	0.90						0.90	0.90				0.90	0.90	0.90
vC, conflicting volume	569				539			818	1135	278	837	1102	286	
vC1, stage 1 conf vol														
vC2, stage 2 conf vol														
vCu, unblocked vol	303				539			580	931	278	601	895	0	
tC, single (s)	4.1				4.1			7.5	6.5	6.9	7.5	6.5	6.9	
tC, 2 stage (s)														
tF (s)	2.2				2.2			3.5	4.0	3.3	3.5	4.0	3.3	
p0 queue free %	100				99			97	100	98	65	100	100	
cM capacity (veh/h)	1131				1024			349	233	715	333	244	976	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1								
Volume Total	260	262	265	318	23	118								
Volume Left	0	0	14	0	10	118								
Volume Right	0	2	0	67	13	0								
cSH	1131	1700	1024	1700	491	333								
Volume to Capacity	0.00	0.15	0.01	0.19	0.05	0.35								
Queue Length 95th (ft)	0	0	1	0	4	39								
Control Delay (s)	0.0	0.0	0.6	0.0	12.7	21.7								
Lane LOS			A		B	C								
Approach Delay (s)	0.0		0.3		12.7	21.7								
Approach LOS					B	C								
Intersection Summary														
Average Delay		2.4												
Intersection Capacity Utilization		45.0%			ICU Level of Service				A					
Analysis Period (min)		15												

No-Build Conditions
3: South Lexington Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑		↖		↖	↖	↖	
Traffic Volume (vph)	0	553	21	38	441	0	27	0	67	280	385	55
Future Volume (vph)	0	553	21	38	441	0	27	0	67	280	385	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	10	12	10	12	10	10	13	12
Grade (%)		0%			-2%			-5%			4%	
Storage Length (ft)	0		0	140		0	85		0	0		0
Storage Lanes	0		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3089	0	1477	3063	0	1554	0	1337	1324	1689	0
Flt Permitted				0.211			0.263			0.950		
Satd. Flow (perm)	0	3089	0	321	3063	0	425	0	1259	1270	1689	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		4									10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		357			354			564			393	
Travel Time (s)		8.1			8.0			12.8			8.9	
Confl. Peds. (#/hr)	31		30	30		31	29		35	35		29
Confl. Bikes (#/hr)			1			1						3
Peak Hour Factor	0.92	0.94	0.94	0.94	0.94	0.92	0.94	0.92	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	11%	0%	0%	0%	0%	0%	4%	1%	0%	0%
Parking (#/hr)										0		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	610	0	40	469	0	29	0	71	298	469	0
Turn Type		NA		pm+pt	NA		pm+pt		Perm	pm+pt	NA	
Protected Phases		2		1	6		3			7	4	
Permitted Phases				6			8		8	4		
Total Split (s)		30.0		10.0	40.0		9.0		34.9	10.1	45.0	
Total Lost Time (s)		5.0		5.0	5.0		5.0		4.9	5.0	5.0	
Act Effect Green (s)		25.0		35.0	35.0		33.9		30.0	40.0	40.0	
Actuated g/C Ratio		0.27		0.37	0.37		0.36		0.32	0.43	0.43	
v/c Ratio		0.74		0.22	0.41		0.14		0.18	0.55	0.65	
Control Delay		37.7		31.2	34.3		18.3		24.6	19.4	19.7	
Queue Delay		0.0		0.0	0.0		0.0		0.0	0.3	0.7	
Total Delay		37.7		31.2	34.3		18.3		24.7	19.6	20.4	
LOS		D		C	C		B		C	B	C	
Approach Delay		37.7			34.1			22.8			20.1	
Approach LOS		D			C			C			C	
Queue Length 50th (ft)		173		20	143		10		30	80	123	
Queue Length 95th (ft)		236		m50	182		27		64	m130	246	
Internal Link Dist (ft)		277			274			484			313	
Turn Bay Length (ft)				140			85					
Base Capacity (vph)		824		181	1140		201		401	543	724	
Starvation Cap Reductn		0		0	0		0		0	32	71	
Spillback Cap Reductn		0		0	0		0		7	7	0	
Storage Cap Reductn		0		0	0		0		0	0	0	
Reduced v/c Ratio		0.74		0.22	0.41		0.14		0.18	0.58	0.72	
Intersection Summary												

No-Build Conditions
3: South Lexington Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 29.2

Intersection LOS: C

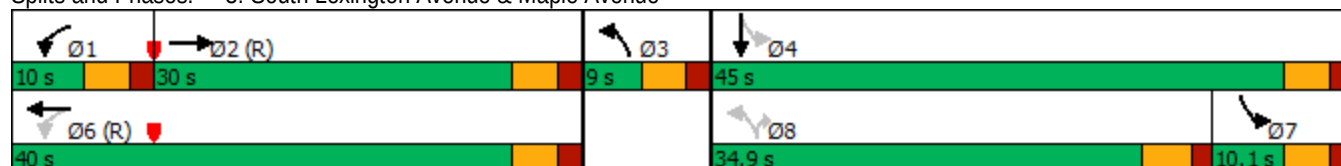
Intersection Capacity Utilization 65.0%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: South Lexington Avenue & Maple Avenue



No-Build Conditions
4: Davis Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	189	678	50	26	383	105	23	32	58	56	10	86
Future Volume (vph)	189	678	50	26	383	105	23	32	58	56	10	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	11	11	12	11	12	12	9	12	11	10	12
Grade (%)		1%			0%			-5%			4%	
Storage Length (ft)	100		0	0		0	0		0	90		0
Storage Lanes	1		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1426	3039	0	0	2939	0	0	1234	0	1539	1303	0
Flt Permitted	0.406				0.889			0.939		0.694		
Satd. Flow (perm)	591	3039	0	0	2618	0	0	1164	0	1051	1303	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			47			62			91	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		354			356			562			217	
Travel Time (s)		8.0			8.1			12.8			4.9	
Confl. Peds. (#/hr)	45		34	34		45	21		55	55		21
Confl. Bikes (#/hr)			4						1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	1%	1%	0%	0%	7%	0%	3%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	201	774	0	0	547	0	0	120	0	60	102	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Total Split (s)	50.0	50.0		50.0	50.0		38.0	38.0		38.0	38.0	
Total Lost Time (s)	5.2	5.2			5.2			5.2		5.2	5.2	
Act Effect Green (s)	44.8	44.8			44.8			32.8		32.8	32.8	
Actuated g/C Ratio	0.48	0.48			0.48			0.35		0.35	0.35	
v/c Ratio	0.72	0.53			0.43			0.27		0.16	0.20	
Control Delay	34.3	18.7			33.1			13.2		22.7	6.9	
Queue Delay	0.0	0.9			0.0			0.0		0.0	0.0	
Total Delay	34.3	19.6			33.1			13.2		22.7	6.9	
LOS	C	B			C			B		C	A	
Approach Delay		22.6			33.1			13.2			12.8	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)	94	187			130			23		24	4	
Queue Length 95th (ft)	m#178	224			181			66		54	39	
Internal Link Dist (ft)		274			276			482			137	
Turn Bay Length (ft)	100									90		
Base Capacity (vph)	281	1454			1272			446		366	513	
Starvation Cap Reductn	0	389			0			0		0	0	
Spillback Cap Reductn	0	0			0			0		0	0	
Storage Cap Reductn	0	0			0			0		0	0	
Reduced v/c Ratio	0.72	0.73			0.43			0.27		0.16	0.20	
Intersection Summary												

No-Build Conditions
4: Davis Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	6.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

No-Build Conditions
4: Davis Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Area Type:	CBD
Cycle Length:	94
Actuated Cycle Length:	94
Offset:	30 (32%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.72
Intersection Signal Delay:	24.3
Intersection LOS:	C
Intersection Capacity Utilization	69.0%
ICU Level of Service	C
Analysis Period (min)	15
#	95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Davis Avenue & Maple Avenue



No-Build Conditions
5: Oakwood Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	761	33	30	483	24	61
Future Volume (vph)	761	33	30	483	24	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Grade (%)	1%			0%	-5%	
Satd. Flow (prot)	3176	0	0	3209	1575	0
Flt Permitted				0.870	0.986	
Satd. Flow (perm)	3176	0	0	2799	1571	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	11				67	
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			475	444	
Travel Time (s)	8.1			10.8	10.1	
Confl. Peds. (#/hr)		40	40		6	24
Confl. Bikes (#/hr)		3				
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	0%	0%	1%	7%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	872	0	0	564	93	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			2	4	
Permitted Phases			2			
Total Split (s)	71.2		71.2	71.2	22.8	
Total Lost Time (s)	5.2			5.2	5.0	
Act Effect Green (s)	66.0			66.0	17.8	
Actuated g/C Ratio	0.70			0.70	0.19	
v/c Ratio	0.39			0.29	0.26	
Control Delay	1.9			0.9	14.8	
Queue Delay	0.2			0.0	0.0	
Total Delay	2.1			0.9	14.8	
LOS	A			A	B	
Approach Delay	2.1			0.9	14.8	
Approach LOS	A			A	B	
Queue Length 50th (ft)	16			7	13	
Queue Length 95th (ft)	35			8	55	
Internal Link Dist (ft)	276			395	364	
Turn Bay Length (ft)						
Base Capacity (vph)	2233			1965	352	
Starvation Cap Reductn	538			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.51			0.29	0.26	
Intersection Summary						
Area Type:	CBD					
Cycle Length: 94						
Actuated Cycle Length: 94						
Offset: 31 (33%), Referenced to phase 2:EBWB and 6:, Start of Green						

No-Build Conditions
5: Oakwood Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Control Type: Pretimed	
Maximum v/c Ratio: 0.39	
Intersection Signal Delay: 2.4	Intersection LOS: A
Intersection Capacity Utilization 63.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: Oakwood Avenue & Maple Avenue



No-Build Conditions
6: Longview Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	156	590	35	31	527	198	34	326	34	0	0	0
Future Volume (vph)	156	590	35	31	527	198	34	326	34	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	11	10	11	10	10	10	9	12	12	12
Grade (%)		0%			-5%			-2%			0%	
Storage Length (ft)	225		0	60		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1462	2966	0	1509	2991	0	0	2833	0	0	0	0
Flt Permitted	0.256			0.402				0.996				
Satd. Flow (perm)	386	2966	0	622	2991	0	0	2820	0	0	0	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		12			77							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		475			281			824			379	
Travel Time (s)		10.8			6.4			18.7			8.6	
Confl. Peds. (#/hr)	60		24	24		60	44		48	48		44
Confl. Bikes (#/hr)			2			1			2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	3%	0%	1%	4%	0%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	164	658	0	33	763	0	0	415	0	0	0	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2			6			8					
Total Split (s)	13.0	62.0		49.0	49.0		29.0	29.0				
Total Lost Time (s)	5.2	5.2		5.2	5.2			5.2				
Act Effect Green (s)	57.4	57.4		43.8	43.8			23.2				
Actuated g/C Ratio	0.61	0.61		0.47	0.47			0.25				
v/c Ratio	0.49	0.36		0.11	0.53			0.60				
Control Delay	11.7	2.6		18.9	24.4			35.4				
Queue Delay	0.1	0.0		0.0	5.3			0.1				
Total Delay	11.8	2.6		18.9	29.7			35.5				
LOS	B	A		B	C			D				
Approach Delay		4.4			29.3			35.5				
Approach LOS		A			C			D				
Queue Length 50th (ft)	11	22		13	226			115				
Queue Length 95th (ft)	39	24		m42	290			163				
Internal Link Dist (ft)		395			201			744			299	
Turn Bay Length (ft)	225			60								
Base Capacity (vph)	332	1817		289	1434			714				
Starvation Cap Reductn	0	0		0	596			0				
Spillback Cap Reductn	6	140		0	25			13				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.50	0.39		0.11	0.91			0.59				
Intersection Summary												

No-Build Conditions
6: Longview Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

No-Build Conditions
6: Longview Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

Offset: 52 (55%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 20.5

Intersection LOS: C

Intersection Capacity Utilization 66.2%

ICU Level of Service C

Analysis Period (min) 15

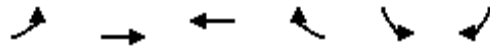
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Longview Avenue & Maple Avenue



No-Build Conditions
7: Maple Avenue & Cromwell Place

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↘	↗
Traffic Volume (vph)	0	615	609	0	187	138
Future Volume (vph)	0	615	609	0	187	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	11	12
Grade (%)		6%	3%		4%	
Storage Length (ft)	0			0	0	60
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	3016	3094	0	1371	1383
Flt Permitted					0.950	
Satd. Flow (perm)	0	3016	3094	0	1360	1383
Right Turn on Red				Yes		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		281	255		455	
Travel Time (s)		6.4	5.8		10.3	
Confl. Peds. (#/hr)	67			67	6	2
Confl. Bikes (#/hr)						2
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%
Parking (#/hr)					0	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	676	669	0	205	152
Turn Type		NA	NA		Perm	Prot
Protected Phases		2	2			4
Permitted Phases					4	
Total Split (s)		55.0	55.0		39.0	39.0
Total Lost Time (s)		4.7	4.7		4.7	4.7
Act Effct Green (s)		50.3	50.3		34.3	34.3
Actuated g/C Ratio		0.54	0.54		0.36	0.36
v/c Ratio		0.42	0.40		0.41	0.30
Control Delay		26.4	12.6		21.4	19.1
Queue Delay		3.6	1.2		0.0	0.5
Total Delay		30.0	13.8		21.4	19.6
LOS		C	B		C	B
Approach Delay		30.0	13.8		20.6	
Approach LOS		C	B		C	
Queue Length 50th (ft)		180	85		100	66
Queue Length 95th (ft)		231	127		170	118
Internal Link Dist (ft)		201	175		375	
Turn Bay Length (ft)						60
Base Capacity (vph)		1613	1655		496	504
Starvation Cap Reductn		823	720		0	0
Spillback Cap Reductn		219	53		0	124
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.86	0.72		0.41	0.40

Intersection Summary

No-Build Conditions
7: Maple Avenue & Cromwell Place

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

Offset: 0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.42

Intersection Signal Delay: 21.7

Intersection LOS: C

Intersection Capacity Utilization 44.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Maple Avenue & Cromwell Place



No-Build Conditions

MD Peak Hour

8: Greenridge Avenue/Chester Avenue & Maple Avenue

Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	612	95	50	589	75	20	71	69	0	0	0
Future Volume (vph)	95	612	95	50	589	75	20	71	69	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	11
Grade (%)		2%			3%			0%			-4%	
Storage Length (ft)	125		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1752	3369	0	1743	3394	0	0	3194	0	0	0	0
Flt Permitted	0.321			0.301				0.994				
Satd. Flow (perm)	579	3369	0	534	3394	0	0	3171	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27			22			75				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		255			453			507			506	
Travel Time (s)		5.8			10.3			11.5			11.5	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	103	768	0	54	722	0	0	174	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA				
Protected Phases	1	6		5	2			8				
Permitted Phases	6			2			8					
Total Split (s)	10.0	53.0		10.0	53.0		31.0	31.0				
Total Lost Time (s)	7.0	5.0		5.0	5.0			5.0				
Act Effct Green (s)	50.4	50.0		54.0	50.0			26.0				
Actuated g/C Ratio	0.54	0.53		0.57	0.53			0.28				
v/c Ratio	0.30	0.43		0.15	0.40			0.19				
Control Delay	10.4	15.3		8.2	13.9			15.3				
Queue Delay	0.0	1.2		0.0	0.0			0.0				
Total Delay	10.4	16.5		8.2	13.9			15.3				
LOS	B	B		A	B			B				
Approach Delay		15.8			13.5			15.3				
Approach LOS		B			B			B				
Queue Length 50th (ft)	28	173		12	129			23				
Queue Length 95th (ft)	51	225		26	173			48				
Internal Link Dist (ft)		175			373			427			426	
Turn Bay Length (ft)	125			75								
Base Capacity (vph)	348	1804		371	1815			931				
Starvation Cap Reductn	0	755		0	0			0				
Spillback Cap Reductn	0	0		0	0			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.30	0.73		0.15	0.40			0.19				

Intersection Summary

Area Type: Other

Cycle Length: 94

Actuated Cycle Length: 94

No-Build Conditions
8: Greenridge Avenue/Chester Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Offset: 30 (32%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.43

Intersection Signal Delay: 14.8

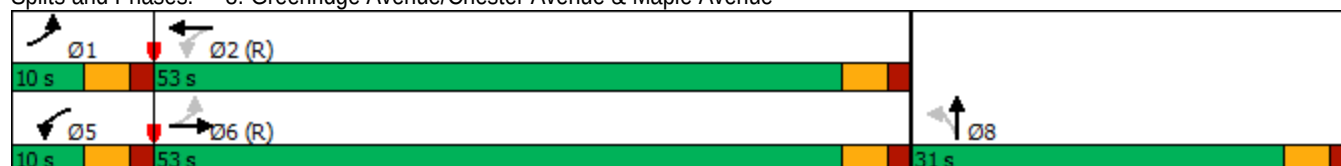
Intersection LOS: B

Intersection Capacity Utilization 59.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 8: Greenridge Avenue/Chester Avenue & Maple Avenue



No-Build Conditions

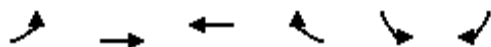
MD Peak Hour

11: West Lot Northwest Driveway/Highland Avenue & West Post Road Timing Plan: 3:00 PM – 4:00 PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	342	0	0	391	53	3	1	2	60	0	61
Future Volume (Veh/h)	119	342	0	0	391	53	3	1	2	60	0	61
Sign Control		Free			Free			Stop			Stop	
Grade		-4%			3%			0%			-11%	
Peak Hour Factor	0.88	0.88	0.92	0.92	0.88	0.88	0.92	0.92	0.92	0.88	0.92	0.88
Hourly flow rate (vph)	135	389	0	0	444	60	3	1	2	68	0	69
Pedestrians		22			6						49	
Lane Width (ft)		16.0			16.0						12.0	
Walking Speed (ft/s)		3.5			3.5						3.5	
Percent Blockage		3			1						5	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					742							
pX, platoon unblocked	0.89						0.89	0.89		0.89	0.89	0.89
vC, conflicting volume	553			389			1224	1212	395	1190	1182	545
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	434			389			1189	1176	395	1152	1142	425
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	86			100			97	99	100	47	100	87
cM capacity (veh/h)	953			1170			106	139	649	127	147	521
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	524	504	6	137								
Volume Left	135	0	3	68								
Volume Right	0	60	2	69								
cSH	953	1170	156	206								
Volume to Capacity	0.14	0.00	0.04	0.67								
Queue Length 95th (ft)	12	0	3	102								
Control Delay (s)	3.7	0.0	29.0	51.8								
Lane LOS	A		D	F								
Approach Delay (s)	3.7	0.0	29.0	51.8								
Approach LOS			D	F								
Intersection Summary												
Average Delay			7.9									
Intersection Capacity Utilization			76.4%		ICU Level of Service				D			
Analysis Period (min)			15									

No-Build Conditions
12: West Post Road & Orawaupum Street

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	28	371	427	56	15	17
Future Volume (Veh/h)	28	371	427	56	15	17
Sign Control		Free	Free		Stop	
Grade		-3%	2%		-10%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	33	431	497	65	17	20
Pedestrians			4		56	
Lane Width (ft)			16.0		11.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			1		5	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			361			
pX, platoon unblocked	0.86				0.86	0.86
vC, conflicting volume	618				1086	586
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	478				1021	441
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				92	96
cM capacity (veh/h)	899				209	510
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	464	562	37			
Volume Left	33	0	17			
Volume Right	0	65	20			
cSH	899	1700	307			
Volume to Capacity	0.04	0.33	0.12			
Queue Length 95th (ft)	3	0	10			
Control Delay (s)	1.1	0.0	18.3			
Lane LOS	A		C			
Approach Delay (s)	1.1	0.0	18.3			
Approach LOS			C			
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			57.3%	ICU Level of Service		B
Analysis Period (min)			15			

No-Build Conditions

MD Peak Hour

14: South Lexington Avenue & West Post Road/East Post Road

Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖					↖	↗	
Traffic Volume (vph)	0	326	76	86	295	0	0	0	0	204	581	188
Future Volume (vph)	0	326	76	86	295	0	0	0	0	204	581	188
Ideal Flow (vphpl)	1900	2050	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	12	12	12	12	11	11	11
Grade (%)		-1%			0%			0%			1%	
Storage Length (ft)	0		105	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1589	1294	0	2559	0	0	0	0	1065	2768	0
Flt Permitted					0.661					0.950		
Satd. Flow (perm)	0	1589	1220	0	1702	0	0	0	0	997	2768	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			70								74	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		207			229			393			1032	
Travel Time (s)		4.7			5.2			8.9			23.5	
Confl. Peds. (#/hr)	61		38	38		61	34		54	54		34
Confl. Bikes (#/hr)			2									4
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	5%	0%	2%	5%	0%	0%	0%	0%	2%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0	0		24					41	4	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	366	85	0	428	0	0	0	0	229	864	0
Turn Type		NA	Perm	Perm	NA					Perm	NA	
Protected Phases		2			2							4
Permitted Phases			2	2						4		
Total Split (s)		37.0	37.0	37.0	37.0					57.0	57.0	
Total Lost Time (s)		5.0	5.0		5.0					5.0	5.0	
Act Effct Green (s)		32.0	32.0		32.0					52.0	52.0	
Actuated g/C Ratio		0.34	0.34		0.34					0.55	0.55	
v/c Ratio		0.68	0.18		0.74					0.42	0.55	
Control Delay		34.1	8.4		36.5					7.8	5.8	
Queue Delay		0.0	0.0		0.0					0.0	0.0	
Total Delay		34.1	8.4		36.5					7.8	5.8	
LOS		C	A		D					A	A	
Approach Delay		29.3			36.5						6.2	
Approach LOS		C			D						A	
Queue Length 50th (ft)		185	6		116					29	47	
Queue Length 95th (ft)		283	37		175					65	92	
Internal Link Dist (ft)		127			149			313			952	
Turn Bay Length (ft)			105									
Base Capacity (vph)		540	461		579					551	1564	
Starvation Cap Reductn		0	0		0					0	0	
Spillback Cap Reductn		0	0		0					0	0	
Storage Cap Reductn		0	0		0					0	0	
Reduced v/c Ratio		0.68	0.18		0.74					0.42	0.55	

No-Build Conditions

14: South Lexington Avenue & West Post Road/East Post Road

MD Peak Hour

Timing Plan: 3:00 PM – 4:00 PM

Intersection Summary

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

Offset: 0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 18.1

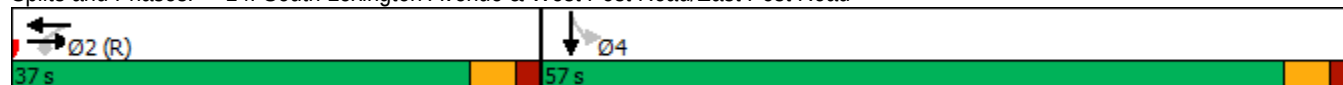
Intersection LOS: B

Intersection Capacity Utilization 77.7%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 14: South Lexington Avenue & West Post Road/East Post Road



No-Build Conditions
15: Davis Avenue & East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Traffic Volume (veh/h)	526	0	0	325	58	109
Future Volume (Veh/h)	526	0	0	325	58	109
Sign Control	Free			Free	Stop	
Grade	-1%			-1%	-7%	
Peak Hour Factor	0.88	0.92	0.92	0.88	0.88	0.88
Hourly flow rate (vph)	598	0	0	369	66	124
Pedestrians	11			37	38	
Lane Width (ft)	10.0			10.0	11.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			3	3	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	229			343		
pX, platoon unblocked						
vC, conflicting volume			636		832	374
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			636		832	374
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		78	79
cM capacity (veh/h)			925		300	588
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	299	299	184	184	66	124
Volume Left	0	0	0	0	66	0
Volume Right	0	0	0	0	0	124
cSH	1700	1700	1700	1700	300	588
Volume to Capacity	0.18	0.18	0.11	0.11	0.22	0.21
Queue Length 95th (ft)	0	0	0	0	21	20
Control Delay (s)	0.0	0.0	0.0	0.0	20.4	12.7
Lane LOS					C	B
Approach Delay (s)	0.0		0.0		15.4	
Approach LOS					C	
Intersection Summary						
Average Delay			2.5			
Intersection Capacity Utilization			35.4%		ICU Level of Service	A
Analysis Period (min)			15			

No-Build Conditions

MD Peak Hour

16: Public Emergency Department Entrance/East Post Road Garage & East Post Road

East Post Road
7:00 AM – 4:00 PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔						↔	
Traffic Volume (vph)	21	596	19	6	294	3	0	0	0	53	0	28
Future Volume (vph)	21	596	19	6	294	3	0	0	0	53	0	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	10	10	12	12	12	12	12	12	12
Grade (%)		0%			-1%			0%			0%	
Satd. Flow (prot)	0	3036	0	0	2975	0	0	0	0	0	1499	0
Flt Permitted		0.939			0.941						0.968	
Satd. Flow (perm)	0	2841	0	0	2797	0	0	0	0	0	1422	0
Right Turn on Red			Yes			Yes				Yes		Yes
Satd. Flow (RTOR)		6			2						29	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		343			170			167			197	
Travel Time (s)		7.8			3.9			3.8			4.5	
Confl. Peds. (#/hr)	100		100	100		100				50		50
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	706	0	0	337	0	0	0	0	0	90	0
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases	4			8						6		
Total Split (s)	61.0	61.0		61.0	61.0					33.0	33.0	
Total Lost Time (s)		4.5			4.5						4.5	
Act Effect Green (s)		20.5			20.5						13.2	
Actuated g/C Ratio		0.56			0.56						0.36	
v/c Ratio		0.45			0.22						0.17	
Control Delay		9.6			8.0						8.5	
Queue Delay		0.0			0.0						0.0	
Total Delay		9.6			8.0						8.5	
LOS		A			A						A	
Approach Delay		9.6			8.0						8.5	
Approach LOS		A			A						A	
Queue Length 50th (ft)		71			29						9	
Queue Length 95th (ft)		111			50						36	
Internal Link Dist (ft)		263			90			87			117	
Turn Bay Length (ft)												
Base Capacity (vph)		2841			2797						1078	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.25			0.12						0.08	

Intersection Summary

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 36.9

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.45

Intersection Signal Delay: 9.0

Intersection LOS: A

No-Build Conditions

MD Peak Hour

16: Public Emergency Department Entrance/East Post Road Garage & East Post Road

16:00 PM - 4:00 PM

Intersection Capacity Utilization 57.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 16: Public Emergency Department Entrance/East Post Road Garage & East Post Road



No-Build Conditions
 17: Public Emergency Department Exit & East Post Road

MD Peak Hour
 Timing Plan: 3:00 PM – 4:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	649	0	0	300	4	12
Future Volume (Veh/h)	649	0	0	300	4	12
Sign Control	Free			Free	Stop	
Grade	2%			-2%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	721	0	0	333	4	13
Pedestrians	20			20	100	
Lane Width (ft)	9.0			10.0	11.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			2	9	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	170			262		
pX, platoon unblocked			0.87		0.87	0.87
vC, conflicting volume			821		1008	480
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			507		720	117
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	98
cM capacity (veh/h)			841		285	717
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	360	360	166	166	17	
Volume Left	0	0	0	0	4	
Volume Right	0	0	0	0	13	
cSH	1700	1700	1700	1700	528	
Volume to Capacity	0.21	0.21	0.10	0.10	0.03	
Queue Length 95th (ft)	0	0	0	0	2	
Control Delay (s)	0.0	0.0	0.0	0.0	12.0	
Lane LOS					B	
Approach Delay (s)	0.0		0.0		12.0	
Approach LOS					B	
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			34.8%		ICU Level of Service	A
Analysis Period (min)			15			

No-Build Conditions

MD Peak Hour

18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road

Timing Plan: 3:00 PM – 4:00 PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔↔				
Traffic Volume (vph)	290	362	0	0	239	209	99	588	89	0	0	0
Future Volume (vph)	290	362	0	0	239	209	99	588	89	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	10	10	12	12	12	12	12	12
Grade (%)		2%			-5%			-3%			0%	
Satd. Flow (prot)	0	2693	0	0	2452	0	0	3176	0	0	0	0
Flt Permitted		0.612						0.994				
Satd. Flow (perm)	0	1639	0	0	2452	0	0	3155	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					152			17				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			343			379			494	
Travel Time (s)		3.0			7.8			8.6			11.2	
Confl. Peds. (#/hr)	94		104	104		94	50		23	23		50
Confl. Bikes (#/hr)			2						5			
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.92
Heavy Vehicles (%)	3%	4%	0%	0%	7%	1%	2%	1%	0%	0%	0%	0%
Parking (#/hr)		0			0							
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	701	0	0	482	0	0	834	0	0	0	0
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2						8					
Total Split (s)	14.0	53.0			39.0		41.0	41.0				
Total Lost Time (s)		5.0			5.0			5.0				
Act Effct Green (s)		48.0			34.0			36.0				
Actuated g/C Ratio		0.51			0.36			0.38				
v/c Ratio		0.87dl			0.49			0.68				
Control Delay		26.0			33.0			23.5				
Queue Delay		0.0			0.0			1.6				
Total Delay		26.0			33.0			25.1				
LOS		C			C			C				
Approach Delay		26.0			33.0			25.1				
Approach LOS		C			C			C				
Queue Length 50th (ft)		138			102			174				
Queue Length 95th (ft)		189			156			259				
Internal Link Dist (ft)		53			263			299			414	
Turn Bay Length (ft)												
Base Capacity (vph)		937			983			1218				
Starvation Cap Reductn		0			0			216				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.75			0.49			0.83				

Intersection Summary

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

No-Build Conditions MD Peak Hour
18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road Time Plan: 3:00 PM – 4:00 PM

Timing Plan: 3:00 PM – 4:00 PM

Timing Plan: 3:00 PM – 4:00 PM

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

  Ø2 (R)			 Ø8
53 s			
 Ø6 (R)	 Ø5		
39 s	14 s	41 s	

No-Build Conditions

MD Peak Hour

19: Cromwell Place/Grand Street & East Post Road

Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 					 	 	
Traffic Volume (vph)	0	376	73	65	359	0	0	0	0	53	57	89
Future Volume (vph)	0	376	73	65	359	0	0	0	0	53	57	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	10	10	12	12	12	12	9	10	12
Grade (%)		5%			0%			0%			2%	
Satd. Flow (prot)	0	2474	0	0	2714	0	0	0	0	1277	1236	0
Flt Permitted					0.792					0.950		
Satd. Flow (perm)	0	2474	0	0	2126	0	0	0	0	1227	1236	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		47									80	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		343			219			455			494	
Travel Time (s)		7.8			5.0			10.3			11.2	
Confl. Peds. (#/hr)	89		116	116		89	44		32	32		44
Confl. Bikes (#/hr)			1									1
Peak Hour Factor	0.92	0.83	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.83	0.83	0.83
Heavy Vehicles (%)	0%	5%	2%	7%	4%	0%	0%	0%	0%	2%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	4	0	0	0	0	0	0	0
Parking (#/hr)		4			0					0	0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	541	0	0	511	0	0	0	0	64	176	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			2						4	
Permitted Phases				2						4		
Total Split (s)		65.0		65.0	65.0					29.0	29.0	
Total Lost Time (s)		5.0			5.0					5.0	5.0	
Act Effect Green (s)		61.0			61.0					23.0	23.0	
Actuated g/C Ratio		0.65			0.65					0.24	0.24	
v/c Ratio		0.33			0.37					0.21	0.49	
Control Delay		10.0			20.0					30.6	21.7	
Queue Delay		0.6			4.4					0.0	0.0	
Total Delay		10.7			24.4					30.6	21.7	
LOS		B			C					C	C	
Approach Delay		10.7			24.4						24.1	
Approach LOS		B			C						C	
Queue Length 50th (ft)		111			126					31	47	
Queue Length 95th (ft)		100			161					60	97	
Internal Link Dist (ft)		263			139			375			414	
Turn Bay Length (ft)												
Base Capacity (vph)		1621			1379					313	375	
Starvation Cap Reductn		693			775					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.58			0.85					0.20	0.47	
Intersection Summary												
Area Type:	CBD											
Cycle Length: 94												

No-Build Conditions

19: Cromwell Place/Grand Street & East Post Road

MD Peak Hour

Timing Plan: 3:00 PM – 4:00 PM

Actuated Cycle Length: 94

Offset: 35 (37%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.49

Intersection Signal Delay: 18.6

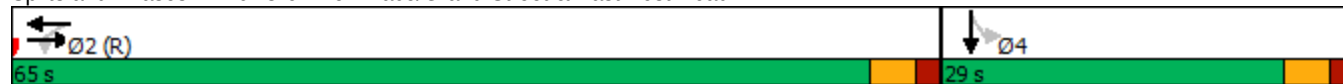
Intersection LOS: B

Intersection Capacity Utilization 65.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 19: Cromwell Place/Grand Street & East Post Road



No-Build Conditions
20: Chester Avenue & East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Lane Configurations	↑↑			↑↑	↵	↵	
Traffic Volume (vph)	428	0	0	361	64	90	
Future Volume (vph)	428	0	0	361	64	90	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Grade (%)	4%			1%	0%		
Satd. Flow (prot)	3468	0	0	3522	1770	1583	
Flt Permitted					0.950		
Satd. Flow (perm)	3468	0	0	3522	1580	1398	
Right Turn on Red		No				No	
Satd. Flow (RTOR)							
Link Speed (mph)	30			30	30		
Link Distance (ft)	219			383	506		
Travel Time (s)	5.0			8.7	11.5		
Confl. Peds. (#/hr)		80	80		80	80	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	465	0	0	392	70	98	
Turn Type	NA			NA	Prot	Perm	
Protected Phases	2			2	4		9
Permitted Phases						4	
Total Split (s)	55.0			55.0	34.0	34.0	5.0
Total Lost Time (s)	4.5			4.5	4.5	4.5	
Act Effect Green (s)	50.5			50.5	29.5	29.5	
Actuated g/C Ratio	0.54			0.54	0.31	0.31	
v/c Ratio	0.25			0.21	0.13	0.22	
Control Delay	12.0			11.7	22.9	24.5	
Queue Delay	2.0			0.1	0.0	0.0	
Total Delay	14.0			11.7	22.9	24.5	
LOS	B			B	C	C	
Approach Delay	14.0			11.7	23.8		
Approach LOS	B			B	C		
Queue Length 50th (ft)	54			60	32	46	
Queue Length 95th (ft)	101			86	70	92	
Internal Link Dist (ft)	139			303	426		
Turn Bay Length (ft)							
Base Capacity (vph)	1863			1892	555	438	
Starvation Cap Reductn	1216			0	0	0	
Spillback Cap Reductn	0			391	0	0	
Storage Cap Reductn	0			0	0	0	
Reduced v/c Ratio	0.72			0.26	0.13	0.22	
Intersection Summary							
Area Type:	Other						
Cycle Length:	94						
Actuated Cycle Length:	94						
Offset:	0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green						
Control Type:	Pretimed						
Maximum v/c Ratio:	0.25						
Intersection Signal Delay:	14.8			Intersection LOS: B			

No-Build Conditions
20: Chester Avenue & East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Intersection Capacity Utilization 37.5%
Analysis Period (min) 15

ICU Level of Service A

Splits and Phases: 20: Chester Avenue & East Post Road



No-Build Conditions

MD Peak Hour

21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  				
Traffic Volume (vph)	69	0	0	0	0	6	0	1077	0	0	0	0
Future Volume (vph)	69	0	0	0	0	6	0	1077	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			1%			0%	
Satd. Flow (prot)	1593	1676	0	0	0	1450	0	4554	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1480	1676	0	0	0	1333	0	4554	0	0	0	0
Right Turn on Red	No		No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		403			216			494			280	
Travel Time (s)		9.2			4.9			11.2			6.4	
Confl. Peds. (#/hr)	50		50	50		50	100		100			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	0	0	0	0	7	0	1171	0	0	0	0
Turn Type	Perm					Perm		NA				
Protected Phases		4						2				
Permitted Phases	4					4						
Total Split (s)	28.1	28.1				28.1		65.9				
Total Lost Time (s)	5.0	5.0				5.0		4.9				
Act Effct Green (s)	14.8					14.8		72.4				
Actuated g/C Ratio	0.16					0.16		0.77				
v/c Ratio	0.32					0.03		0.33				
Control Delay	36.4					29.8		8.5				
Queue Delay	0.0					0.0		0.7				
Total Delay	36.5					29.8		9.2				
LOS	D					C		A				
Approach Delay		36.5			29.8			9.2				
Approach LOS		D			C			A				
Queue Length 50th (ft)	37					3		155				
Queue Length 95th (ft)	77					15		181				
Internal Link Dist (ft)		323			136			414			200	
Turn Bay Length (ft)												
Base Capacity (vph)	363					327		3507				
Starvation Cap Reductn	0					0		0				
Spillback Cap Reductn	17					0		1869				
Storage Cap Reductn	0					0		0				
Reduced v/c Ratio	0.22					0.02		0.71				

Intersection Summary

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.33

Intersection Signal Delay: 11.0

Intersection LOS: B

No-Build Conditions

MD Peak Hour

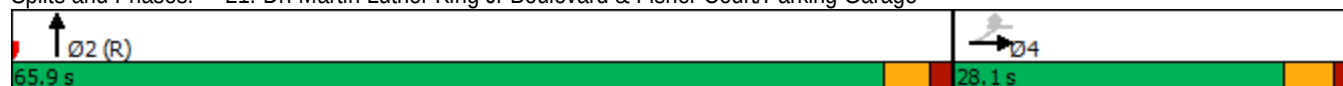
21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage Timing Plan: 3:00 PM – 4:00 PM

Intersection Capacity Utilization 54.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage



No-Build Conditions

MD Peak Hour

22: South Lexington Avenue & Fisher Avenue/Quarropas Street

Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑					↖↗	↑↑	↖
Traffic Volume (vph)	0	202	116	77	89	0	0	0	0	235	771	129
Future Volume (vph)	0	202	116	77	89	0	0	0	0	235	771	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	11	11	12	12	12	12	12	12	13
Grade (%)		-1%			0%			0%			-1%	
Storage Length (ft)	0		0	135		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	2		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	2749	0	1540	3079	0	0	0	0	3105	3201	1480
Flt Permitted				0.459						0.950		
Satd. Flow (perm)	0	2749	0	720	3079	0	0	0	0	2773	3201	1369
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)												140
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		629			873			1032			215	
Travel Time (s)		14.3			19.8			23.5			4.9	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	346	0	84	97	0	0	0	0	255	838	140
Turn Type		NA		pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Total Split (s)		30.0		9.0	39.0					52.0	52.0	52.0
Total Lost Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Act Effct Green (s)		37.3		47.7	47.7					36.3	36.3	36.3
Actuated g/C Ratio		0.40		0.51	0.51					0.39	0.39	0.39
v/c Ratio		0.32		0.19	0.06					0.24	0.68	0.23
Control Delay		23.7		21.5	19.7					18.8	26.3	3.5
Queue Delay		0.0		0.0	0.0					0.0	0.0	0.0
Total Delay		23.7		21.5	19.7					18.8	26.3	3.5
LOS		C		C	B					B	C	A
Approach Delay		23.7			20.5						22.2	
Approach LOS		C			C						C	
Queue Length 50th (ft)		76		30	17					52	215	0
Queue Length 95th (ft)		134		m59	m33					64	226	29
Internal Link Dist (ft)		549			793			952			135	
Turn Bay Length (ft)				135								
Base Capacity (vph)		1091		431	1563					1386	1600	754
Starvation Cap Reductn		0		0	0					0	0	0
Spillback Cap Reductn		0		0	0					0	0	0
Storage Cap Reductn		0		0	0					0	0	0
Reduced v/c Ratio		0.32		0.19	0.06					0.18	0.52	0.19

Intersection Summary

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

No-Build Conditions
22: South Lexington Avenue & Fisher Avenue/Quarropas Street

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

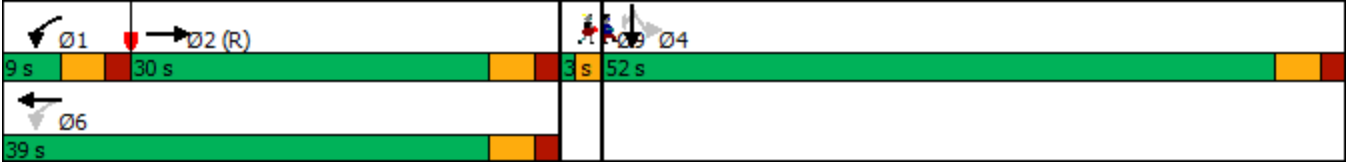
Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

No-Build Conditions
22: South Lexington Avenue & Fisher Avenue/Quarropas Street

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 22.3 Intersection LOS: C
Intersection Capacity Utilization 68.6% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: South Lexington Avenue & Fisher Avenue/Quarropas Street



No-Build Conditions

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

MD Peak Hour

Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	129	309	0	0	125	88	101	966	93	0	0	0
Future Volume (vph)	129	309	0	0	125	88	101	966	93	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	12	12	11	11	12	12	12	12	12	12
Grade (%)		3%			-4%			1%			0%	
Storage Length (ft)	240		0	0		90	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1516	2928	0	0	1653	1405	0	4458	0	0	0	0
Flt Permitted	0.591							0.996				
Satd. Flow (perm)	906	2928	0	0	1653	1316	0	4437	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						96		17				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		873			420			280			604	
Travel Time (s)		19.8			9.5			6.4			13.7	
Confl. Peds. (#/hr)	50		50	50		50	50		50			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	140	336	0	0	136	96	0	1261	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Total Split (s)	13.0	54.0			41.0	41.0	40.0	40.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Act Effct Green (s)	50.5	50.5			37.7	37.7		33.5				
Actuated g/C Ratio	0.54	0.54			0.40	0.40		0.36				
v/c Ratio	0.26	0.21			0.21	0.16		0.79				
Control Delay	20.7	20.2			20.2	4.9		43.8				
Queue Delay	0.0	0.0			0.0	0.0		49.1				
Total Delay	20.7	20.2			20.2	4.9		92.9				
LOS	C	C			C	A		F				
Approach Delay		20.3			13.9			92.9				
Approach LOS		C			B			F				
Queue Length 50th (ft)	49	0			54	0		284				
Queue Length 95th (ft)	81	0			97	31		339				
Internal Link Dist (ft)		793			340			200			524	
Turn Bay Length (ft)	240					90						
Base Capacity (vph)	539	1574			662	585		1662				
Starvation Cap Reductn	0	0			0	0		626				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.26	0.21			0.21	0.16		1.22				

Intersection Summary

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

No-Build Conditions

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

MD Peak Hour

Timing Plan: 3:00 PM – 4:00 PM

Offset: 13 (14%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 66.1

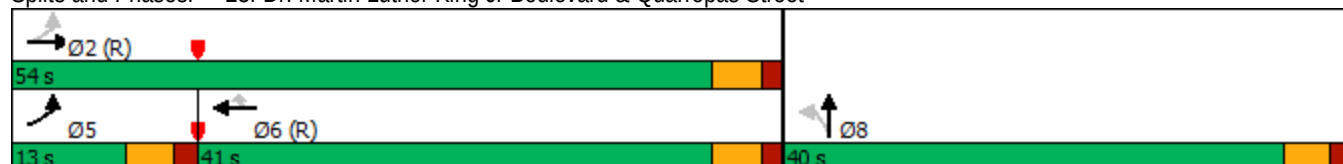
Intersection LOS: E

Intersection Capacity Utilization 68.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 23: Dr. Martin Luther King Jr Boulevard & Quarropas Street



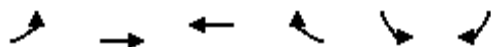
No-Build Conditions
24: West Lot Northeast Driveway & West Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	387	0	0	480	0	15
Future Volume (Veh/h)	387	0	0	480	0	15
Sign Control	Free			Free	Stop	
Grade	-3%			3%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	430	0	0	533	0	17
Pedestrians	20			20	40	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	2			2	4	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)				207		
pX, platoon unblocked					0.86	
vC, conflicting volume			470		1023	490
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			470		948	490
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	97
cM capacity (veh/h)			1050		236	546
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	430	533	17			
Volume Left	0	0	0			
Volume Right	0	0	17			
cSH	1700	1700	546			
Volume to Capacity	0.25	0.31	0.03			
Queue Length 95th (ft)	0	0	2			
Control Delay (s)	0.0	0.0	11.8			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	11.8			
Approach LOS			B			
Intersection Summary						
Average Delay		0.2				
Intersection Capacity Utilization		42.9%	ICU Level of Service	A		
Analysis Period (min)		15				

No-Build Conditions
27: East Post Road & Winchester Street

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	5	656	295	35	5	5
Future Volume (Veh/h)	5	656	295	35	5	5
Sign Control		Free	Free		Stop	
Grade		2%	-2%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	729	328	39	6	6
Pedestrians		20	20		100	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		2	2		10	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		299	133			
pX, platoon unblocked					0.89	
vC, conflicting volume	467				844	304
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	467				589	304
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	99
cM capacity (veh/h)	987				346	615
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	249	486	219	148	12	
Volume Left	6	0	0	0	6	
Volume Right	0	0	0	39	6	
cSH	987	1700	1700	1700	443	
Volume to Capacity	0.01	0.29	0.13	0.09	0.03	
Queue Length 95th (ft)	0	0	0	0	2	
Control Delay (s)	0.3	0.0	0.0	0.0	13.4	
Lane LOS	A				B	
Approach Delay (s)	0.1		0.0		13.4	
Approach LOS					B	
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			36.5%		ICU Level of Service	A
Analysis Period (min)			15			

No-Build Conditions
28: Winchester Street & East Post Road Garage

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM



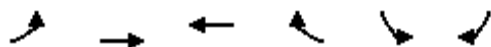
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	35	5	10	0
Future Volume (Veh/h)	0	0	35	5	10	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	39	6	11	0
Pedestrians	20			100	100	
Lane Width (ft)	0.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	0			10	10	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	215	131	31			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	215	131	31			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	98			
cM capacity (veh/h)	682	831	1582			
Direction, Lane #	NB 1	SB 1				
Volume Total	45	11				
Volume Left	39	0				
Volume Right	0	0				
cSH	1582	1700				
Volume to Capacity	0.02	0.01				
Queue Length 95th (ft)	2	0				
Control Delay (s)	6.4	0.0				
Lane LOS	A					
Approach Delay (s)	6.4	0.0				
Approach LOS						
Intersection Summary						
Average Delay			5.1			
Intersection Capacity Utilization			28.8%	ICU Level of Service		A
Analysis Period (min)			15			

No-Build Conditions

PM Peak Hour

1: Maple Avenue & West Lot Southwest Driveway

Timing Plan: 5:00 PM – 6:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	12	447	534	6	9	21
Future Volume (Veh/h)	12	447	534	6	9	21
Sign Control		Free	Free		Stop	
Grade		-2%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	13	497	593	7	10	23
Pedestrians		5	5		20	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	0		2	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			687			
pX, platoon unblocked	0.91				0.91	0.91
vC, conflicting volume	620				896	325
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	385				688	61
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				97	97
cM capacity (veh/h)	1045				333	881
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	179	331	395	205	33	
Volume Left	13	0	0	0	10	
Volume Right	0	0	0	7	23	
cSH	1045	1700	1700	1700	588	
Volume to Capacity	0.01	0.19	0.23	0.12	0.06	
Queue Length 95th (ft)	1	0	0	0	4	
Control Delay (s)	0.7	0.0	0.0	0.0	11.5	
Lane LOS	A				B	
Approach Delay (s)	0.3		0.0		11.5	
Approach LOS					B	
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			32.5%		ICU Level of Service	A
Analysis Period (min)			15			

No-Build Conditions

PM Peak Hour

2: Roosevelt Street/West Lot Southeast Driveway & Maple Avenue

Timing Plan: 5:00 PM – 6:00 PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	449	5	9	532	28	7	0	13	63	0	1
Future Volume (Veh/h)	2	449	5	9	532	28	7	0	13	63	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		-2%			-1%			-4%			0%	
Peak Hour Factor	0.92	0.87	0.87	0.87	0.87	0.92	0.87	0.92	0.87	0.92	0.92	0.92
Hourly flow rate (vph)	2	516	6	10	611	30	8	0	15	68	0	1
Pedestrians		1						16				
Lane Width (ft)		14.0						12.0				
Walking Speed (ft/s)		3.5						3.5				
Percent Blockage		0						2				
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					357							
pX, platoon unblocked	0.88						0.88	0.88		0.88	0.88	0.88
vC, conflicting volume	641			538			866	1200	277	923	1188	322
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	325			538			581	959	277	645	945	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			98	100	98	78	100	100
cM capacity (veh/h)	1086			1025			341	220	716	302	223	955
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	260	264	316	336	23	69						
Volume Left	2	0	10	0	8	68						
Volume Right	0	6	0	30	15	1						
cSH	1086	1700	1025	1700	518	305						
Volume to Capacity	0.00	0.16	0.01	0.20	0.04	0.23						
Queue Length 95th (ft)	0	0	1	0	3	21						
Control Delay (s)	0.1	0.0	0.4	0.0	12.3	20.2						
Lane LOS	A		A		B	C						
Approach Delay (s)	0.0		0.2		12.3	20.2						
Approach LOS					B	C						
Intersection Summary												
Average Delay			1.4									
Intersection Capacity Utilization			40.5%		ICU Level of Service		A					
Analysis Period (min)			15									

No-Build Conditions
3: South Lexington Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	481	44	41	485	0	30	0	65	279	519	53
Future Volume (vph)	0	481	44	41	485	0	30	0	65	279	519	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	10	12	10	12	10	10	13	12
Grade (%)		0%			-2%			-5%			4%	
Storage Length (ft)	0		0	140		0	85		0	0		0
Storage Lanes	0		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3037	0	1477	3063	0	1554	0	1337	1324	1700	0
Flt Permitted				0.236			0.138			0.950		
Satd. Flow (perm)	0	3037	0	358	3063	0	224	0	1255	1266	1700	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		9									7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		357			354			564			393	
Travel Time (s)		8.1			8.0			12.8			8.9	
Confl. Peds. (#/hr)	31		30	30		31	29		35	35		29
Confl. Bikes (#/hr)			1			1						3
Peak Hour Factor	0.92	0.94	0.94	0.94	0.94	0.92	0.94	0.92	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	11%	0%	0%	0%	0%	0%	4%	1%	0%	0%
Parking (#/hr)										0		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	559	0	44	516	0	32	0	69	297	608	0
Turn Type		NA		pm+pt	NA		pm+pt		Perm	pm+pt	NA	
Protected Phases		2		1	6		3			7	4	
Permitted Phases				6			8		8	4		
Total Split (s)		31.0		9.0	40.0		9.0		37.9	13.1	51.0	
Total Lost Time (s)		5.0		5.0	5.0		5.0		4.9	5.0	5.0	
Act Effect Green (s)		26.0		35.0	35.0		36.9		33.0	46.0	46.0	
Actuated g/C Ratio		0.26		0.35	0.35		0.37		0.33	0.46	0.46	
v/c Ratio		0.70		0.26	0.48		0.24		0.17	0.51	0.77	
Control Delay		38.5		21.9	19.6		21.8		25.2	10.8	16.0	
Queue Delay		0.0		0.0	0.2		0.0		0.0	0.6	3.3	
Total Delay		38.5		21.9	19.8		21.8		25.2	11.5	19.3	
LOS		D		C	B		C		C	B	B	
Approach Delay		38.5			20.0			24.1			16.7	
Approach LOS		D			C			C			B	
Queue Length 50th (ft)		167		9	54		12		31	86	231	
Queue Length 95th (ft)		228		27	98		30		65	m117	345	
Internal Link Dist (ft)		277			274			484			313	
Turn Bay Length (ft)				140			85					
Base Capacity (vph)		796		170	1072		135		414	587	785	
Starvation Cap Reductn		0		0	140		0		0	86	100	
Spillback Cap Reductn		0		0	0		0		0	0	0	
Storage Cap Reductn		0		0	0		0		0	0	0	
Reduced v/c Ratio		0.70		0.26	0.55		0.24		0.17	0.59	0.89	
Intersection Summary												

No-Build Conditions
3: South Lexington Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 19 (19%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 23.7

Intersection LOS: C

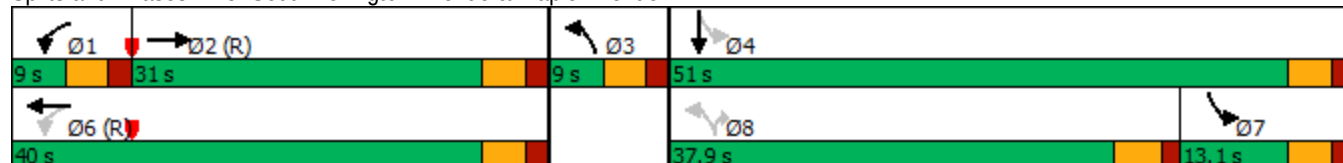
Intersection Capacity Utilization 66.6%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: South Lexington Avenue & Maple Avenue



No-Build Conditions
4: Davis Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	691	76	39	495	41	28	29	51	5	1	6
Future Volume (vph)	52	691	76	39	495	41	28	29	51	5	1	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	11	11	12	11	12	12	9	12	11	10	12
Grade (%)		1%			0%			-5%			4%	
Storage Length (ft)	100		0	0		0	0		0	90		0
Storage Lanes	1		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1426	3011	0	0	3061	0	0	1243	0	1539	1310	0
Flt Permitted	0.380				0.850			0.936		0.688		
Satd. Flow (perm)	554	3011	0	0	2606	0	0	1168	0	1038	1310	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			12			46			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		354			356			562			217	
Travel Time (s)		8.0			8.1			12.8			4.9	
Confl. Peds. (#/hr)	45		34	34		45	21		55	55		21
Confl. Bikes (#/hr)			4						1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	1%	1%	0%	0%	7%	0%	3%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	55	816	0	0	612	0	0	115	0	5	7	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Total Split (s)	58.0	58.0		58.0	58.0		36.0	36.0		36.0	36.0	
Total Lost Time (s)	5.2	5.2			5.2			5.2		5.2	5.2	
Act Effect Green (s)	52.8	52.8			52.8			30.8		30.8	30.8	
Actuated g/C Ratio	0.53	0.53			0.53			0.31		0.31	0.31	
v/c Ratio	0.19	0.51			0.44			0.29		0.02	0.02	
Control Delay	13.6	14.1			14.7			18.4		24.4	15.4	
Queue Delay	0.0	0.6			0.2			0.0		0.0	0.0	
Total Delay	13.6	14.6			14.9			18.4		24.4	15.4	
LOS	B	B			B			B		C	B	
Approach Delay		14.6			14.9			18.4			19.2	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	15	123			174			32		2	0	
Queue Length 95th (ft)	m27	148			150			79		11	11	
Internal Link Dist (ft)		274			276			482			137	
Turn Bay Length (ft)	100									90		
Base Capacity (vph)	292	1598			1381			391		319	407	
Starvation Cap Reductn	0	383			212			0		0	0	
Spillback Cap Reductn	0	41			0			0		0	0	
Storage Cap Reductn	0	0			0			0		0	0	
Reduced v/c Ratio	0.19	0.67			0.52			0.29		0.02	0.02	
Intersection Summary												

No-Build Conditions
4: Davis Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	6.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

No-Build Conditions
4: Davis Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 10 (10%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.51

Intersection Signal Delay: 15.0

Intersection LOS: B

Intersection Capacity Utilization 71.2%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Davis Avenue & Maple Avenue



No-Build Conditions
5: Oakwood Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	689	58	20	557	18	54
Future Volume (vph)	689	58	20	557	18	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Grade (%)	1%			0%	-5%	
Satd. Flow (prot)	3153	0	0	3212	1569	0
Flt Permitted				0.912	0.988	
Satd. Flow (perm)	3153	0	0	2934	1565	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	22				59	
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			475	444	
Travel Time (s)	8.1			10.8	10.1	
Confl. Peds. (#/hr)		40	40		6	24
Confl. Bikes (#/hr)		3				
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	0%	0%	1%	7%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	821	0	0	634	79	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			2	4	
Permitted Phases			2			
Total Split (s)	77.2		77.2	77.2	22.8	
Total Lost Time (s)	5.2			5.2	5.0	
Act Effect Green (s)	72.0			72.0	17.8	
Actuated g/C Ratio	0.72			0.72	0.18	
v/c Ratio	0.36			0.30	0.24	
Control Delay	7.5			5.8	15.7	
Queue Delay	0.6			0.0	0.0	
Total Delay	8.1			5.8	15.7	
LOS	A			A	B	
Approach Delay	8.1			5.8	15.7	
Approach LOS	A			A	B	
Queue Length 50th (ft)	121			34	11	
Queue Length 95th (ft)	199			120	51	
Internal Link Dist (ft)	276			395	364	
Turn Bay Length (ft)						
Base Capacity (vph)	2276			2112	327	
Starvation Cap Reductn	991			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.64			0.30	0.24	
Intersection Summary						
Area Type:	CBD					
Cycle Length: 100						
Actuated Cycle Length: 100						
Offset: 31 (31%), Referenced to phase 2:EBWB and 6:, Start of Green						

No-Build Conditions
5: Oakwood Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Control Type: Pretimed

Maximum v/c Ratio: 0.36

Intersection Signal Delay: 7.5

Intersection LOS: A

Intersection Capacity Utilization 56.8%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5: Oakwood Avenue & Maple Avenue



No-Build Conditions
6: Longview Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	536	44	34	568	212	28	365	36	0	0	0
Future Volume (vph)	154	536	44	34	568	212	28	365	36	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	11	10	11	10	10	10	9	12	12	12
Grade (%)		0%			-5%			-2%			0%	
Storage Length (ft)	225		0	60		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1462	2952	0	1509	2987	0	0	2838	0	0	0	0
Flt Permitted	0.218			0.421				0.997				
Satd. Flow (perm)	330	2952	0	650	2987	0	0	2827	0	0	0	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		14			68							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		475			281			824			379	
Travel Time (s)		10.8			6.4			18.7			8.6	
Confl. Peds. (#/hr)	60		24	24		60	44		48	48		44
Confl. Bikes (#/hr)			2			1			2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	3%	0%	1%	4%	0%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	162	610	0	36	821	0	0	451	0	0	0	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2			6			8					
Total Split (s)	13.0	62.0		49.0	49.0		35.0	35.0				
Total Lost Time (s)	5.2	5.2		5.2	5.2			5.2				
Act Effect Green (s)	62.0	62.0		43.8	43.8			24.6				
Actuated g/C Ratio	0.62	0.62		0.44	0.44			0.25				
v/c Ratio	0.46	0.33		0.13	0.61			0.65				
Control Delay	11.6	8.5		4.7	7.7			38.4				
Queue Delay	0.4	0.0		0.0	0.6			0.0				
Total Delay	12.0	8.5		4.7	8.3			38.4				
LOS	B	A		A	A			D				
Approach Delay		9.3			8.2			38.4				
Approach LOS		A			A			D				
Queue Length 50th (ft)	24	106		4	35			139				
Queue Length 95th (ft)	108	256		9	41			178				
Internal Link Dist (ft)		395			201			744			299	
Turn Bay Length (ft)	225			60								
Base Capacity (vph)	351	1834		284	1346			842				
Starvation Cap Reductn	0	0		0	215			0				
Spillback Cap Reductn	31	80		0	57			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.51	0.35		0.13	0.73			0.54				
Intersection Summary												

No-Build Conditions
6: Longview Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

No-Build Conditions
6: Longview Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 70 (70%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 15.1

Intersection LOS: B

Intersection Capacity Utilization 67.8%

ICU Level of Service C

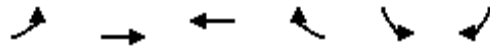
Analysis Period (min) 15

Splits and Phases: 6: Longview Avenue & Maple Avenue



No-Build Conditions
7: Maple Avenue & Cromwell Place

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↱	↱
Traffic Volume (vph)	0	582	702	0	194	111
Future Volume (vph)	0	582	702	0	194	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	11	12
Grade (%)		6%	3%		4%	
Storage Length (ft)	0			0	0	60
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	3016	3094	0	1371	1383
Flt Permitted					0.950	
Satd. Flow (perm)	0	3016	3094	0	1360	1383
Right Turn on Red				Yes		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		281	255		455	
Travel Time (s)		6.4	5.8		10.3	
Confl. Peds. (#/hr)	67			67	6	2
Confl. Bikes (#/hr)						2
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%
Parking (#/hr)					0	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	640	771	0	213	122
Turn Type		NA	NA		Perm	Prot
Protected Phases		2	2			4
Permitted Phases					4	
Total Split (s)		58.0	58.0		42.0	42.0
Total Lost Time (s)		4.7	4.7		4.7	4.7
Act Effct Green (s)		69.4	69.4		21.2	21.2
Actuated g/C Ratio		0.69	0.69		0.21	0.21
v/c Ratio		0.31	0.36		0.74	0.42
Control Delay		6.6	12.9		49.8	35.5
Queue Delay		0.2	0.8		0.0	0.0
Total Delay		6.8	13.7		49.8	35.5
LOS		A	B		D	D
Approach Delay		6.8	13.7		44.6	
Approach LOS		A	B		D	
Queue Length 50th (ft)		121	201		128	64
Queue Length 95th (ft)		264	303		193	110
Internal Link Dist (ft)		201	175		375	
Turn Bay Length (ft)						60
Base Capacity (vph)		2094	2148		507	515
Starvation Cap Reductn		744	981		0	0
Spillback Cap Reductn		0	82		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.47	0.66		0.42	0.24

Intersection Summary

No-Build Conditions
7: Maple Avenue & Cromwell Place

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 78 (78%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 17.1

Intersection LOS: B

Intersection Capacity Utilization 41.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Maple Avenue & Cromwell Place



No-Build Conditions

PM Peak Hour

8: Greenridge Avenue/Chester Avenue & Maple Avenue

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	97	580	99	49	672	75	30	69	67	0	0	0
Future Volume (vph)	97	580	99	49	672	75	30	69	67	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	11
Grade (%)		2%			3%			0%			-4%	
Storage Length (ft)	125		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1752	3352	0	1743	3403	0	0	3203	0	0	0	0
Flt Permitted	0.276			0.321				0.991				
Satd. Flow (perm)	499	3352	0	567	3403	0	0	3168	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			17			73				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		255			453			507			506	
Travel Time (s)		5.8			10.3			11.5			11.5	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	738	0	53	812	0	0	181	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA				
Protected Phases	1	6		5	2			8				
Permitted Phases	6			2			8					
Total Split (s)	13.0	56.0		13.0	56.0		31.0	31.0				
Total Lost Time (s)	7.0	5.0		5.0	5.0			5.0				
Act Effct Green (s)	57.1	54.5		59.3	53.8			26.0				
Actuated g/C Ratio	0.57	0.54		0.59	0.54			0.26				
v/c Ratio	0.30	0.40		0.13	0.44			0.21				
Control Delay	7.4	5.3		7.6	15.3			17.7				
Queue Delay	0.0	0.9		0.0	0.4			0.0				
Total Delay	7.4	6.2		7.6	15.7			17.7				
LOS	A	A		A	B			B				
Approach Delay		6.3			15.2			17.7				
Approach LOS		A			B			B				
Queue Length 50th (ft)	6	16		11	163			27				
Queue Length 95th (ft)	43	91		25	213			55				
Internal Link Dist (ft)		175			373			427			426	
Turn Bay Length (ft)	125			75								
Base Capacity (vph)	361	1838		435	1838			877				
Starvation Cap Reductn	0	764		0	0			0				
Spillback Cap Reductn	0	0		0	499			4				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.29	0.69		0.12	0.61			0.21				

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

No-Build Conditions
8: Greenridge Avenue/Chester Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Offset: 42 (42%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.44

Intersection Signal Delay: 11.5

Intersection LOS: B

Intersection Capacity Utilization 61.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 8: Greenridge Avenue/Chester Avenue & Maple Avenue



No-Build Conditions

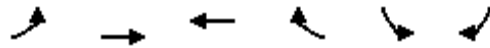
PM Peak Hour

11: West Lot Northwest Driveway/Highland Avenue & West Post Road Timing Plan: 5:00 PM – 6:00 PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	346	0	0	466	56	12	2	6	47	0	66
Future Volume (Veh/h)	157	346	0	0	466	56	12	2	6	47	0	66
Sign Control		Free			Free			Stop			Stop	
Grade		-4%			3%			0%			-11%	
Peak Hour Factor	0.88	0.88	0.92	0.92	0.88	0.88	0.92	0.92	0.92	0.88	0.92	0.88
Hourly flow rate (vph)	178	393	0	0	530	64	13	2	7	53	0	75
Pedestrians		22			6						49	
Lane Width (ft)		16.0			16.0						12.0	
Walking Speed (ft/s)		3.5			3.5						3.5	
Percent Blockage		3			1						5	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					742							
pX, platoon unblocked	0.87						0.87	0.87		0.87	0.87	0.87
vC, conflicting volume	643			393			1408	1392	399	1374	1360	633
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	517			393			1395	1376	399	1356	1339	506
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	80			100			81	98	99	37	100	84
cM capacity (veh/h)	872			1166			69	96	646	84	102	460
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	571	594	22	128								
Volume Left	178	0	13	53								
Volume Right	0	64	7	75								
cSH	872	1166	100	162								
Volume to Capacity	0.20	0.00	0.22	0.79								
Queue Length 95th (ft)	19	0	20	128								
Control Delay (s)	5.0	0.0	51.2	81.1								
Lane LOS	A		F	F								
Approach Delay (s)	5.0	0.0	51.2	81.1								
Approach LOS			F	F								
Intersection Summary												
Average Delay			10.9									
Intersection Capacity Utilization			82.7%		ICU Level of Service				E			
Analysis Period (min)			15									

No-Build Conditions
12: West Post Road & Orawaupum Street

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	27	371	515	112	18	15
Future Volume (Veh/h)	27	371	515	112	18	15
Sign Control		Free	Free		Stop	
Grade		-3%	2%		-10%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	31	431	599	130	21	17
Pedestrians			4		56	
Lane Width (ft)			16.0		11.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			1		5	
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)			361			
pX, platoon unblocked	0.84				0.84	0.84
vC, conflicting volume	785				1217	720
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	653				1165	576
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				87	96
cM capacity (veh/h)	758				167	419
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	462	729	38			
Volume Left	31	0	21			
Volume Right	0	130	17			
cSH	758	1700	229			
Volume to Capacity	0.04	0.43	0.17			
Queue Length 95th (ft)	3	0	15			
Control Delay (s)	1.2	0.0	23.9			
Lane LOS	A		C			
Approach Delay (s)	1.2	0.0	23.9			
Approach LOS			C			
Intersection Summary						
Average Delay			1.2			
Intersection Capacity Utilization			56.4%	ICU Level of Service	B	
Analysis Period (min)			15			

No-Build Conditions

PM Peak Hour

14: South Lexington Avenue & West Post Road/East Post Road

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖					↖	↗	
Traffic Volume (vph)	0	376	51	66	349	0	0	0	0	207	764	279
Future Volume (vph)	0	376	51	66	349	0	0	0	0	207	764	279
Ideal Flow (vphpl)	1900	2050	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	12	12	12	12	11	11	11
Grade (%)		-1%			0%			0%			1%	
Storage Length (ft)	0		105	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1589	1294	0	2561	0	0	0	0	1065	2751	0
Flt Permitted					0.682					0.950		
Satd. Flow (perm)	0	1589	1216	0	1756	0	0	0	0	993	2751	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			39								83	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		207			229			393			1032	
Travel Time (s)		4.7			5.2			8.9			23.5	
Confl. Peds. (#/hr)	61		38	38		61	34		54	54		34
Confl. Bikes (#/hr)			2									4
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	5%	0%	2%	5%	0%	0%	0%	0%	2%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0	0		24					41	4	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	422	57	0	466	0	0	0	0	233	1171	0
Turn Type		NA	Perm	Perm	NA					Perm	NA	
Protected Phases		2			2						4	
Permitted Phases			2	2						4		
Total Split (s)		40.0	40.0	40.0	40.0					60.0	60.0	
Total Lost Time (s)		5.0	5.0		5.0					5.0	5.0	
Act Effct Green (s)		35.0	35.0		35.0					55.0	55.0	
Actuated g/C Ratio		0.35	0.35		0.35					0.55	0.55	
v/c Ratio		0.76	0.13		0.76					0.43	0.76	
Control Delay		39.2	11.1		38.2					17.2	18.5	
Queue Delay		0.0	0.0		0.0					0.0	0.2	
Total Delay		39.2	11.1		38.2					17.2	18.7	
LOS		D	B		D					B	B	
Approach Delay		35.8			38.2						18.4	
Approach LOS		D			D						B	
Queue Length 50th (ft)		236	8		136					66	189	
Queue Length 95th (ft)		350	34		198					m125	271	
Internal Link Dist (ft)		127			149			313			952	
Turn Bay Length (ft)			105									
Base Capacity (vph)		556	450		614					546	1550	
Starvation Cap Reductn		0	0		0					0	0	
Spillback Cap Reductn		0	0		0					0	53	
Storage Cap Reductn		0	0		0					0	0	
Reduced v/c Ratio		0.76	0.13		0.76					0.43	0.78	

No-Build Conditions
14: South Lexington Avenue & West Post Road/East Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Intersection Summary

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.76
Intersection Signal Delay:	25.9
Intersection LOS:	C
Intersection Capacity Utilization	87.1%
ICU Level of Service	E
Analysis Period (min)	15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: South Lexington Avenue & West Post Road/East Post Road



No-Build Conditions
15: Davis Avenue & East Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Traffic Volume (veh/h)	583	0	0	385	24	87
Future Volume (Veh/h)	583	0	0	385	24	87
Sign Control	Free			Free	Stop	
Grade	-1%			-1%	-7%	
Peak Hour Factor	0.88	0.92	0.92	0.88	0.88	0.88
Hourly flow rate (vph)	662	0	0	438	27	99
Pedestrians	9			23	42	
Lane Width (ft)	10.0			10.0	11.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			2	4	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	229			343		
pX, platoon unblocked					1.00	
vC, conflicting volume			704		932	396
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			704		926	396
tC, single (s)			4.1		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			100		89	82
cM capacity (veh/h)			870		246	566
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	331	331	219	219	27	99
Volume Left	0	0	0	0	27	0
Volume Right	0	0	0	0	0	99
cSH	1700	1700	1700	1700	246	566
Volume to Capacity	0.19	0.19	0.13	0.13	0.11	0.18
Queue Length 95th (ft)	0	0	0	0	9	16
Control Delay (s)	0.0	0.0	0.0	0.0	21.5	12.7
Lane LOS					C	B
Approach Delay (s)	0.0		0.0		14.6	
Approach LOS					B	
Intersection Summary						
Average Delay			1.5			
Intersection Capacity Utilization			35.5%		ICU Level of Service	A
Analysis Period (min)			15			

No-Build Conditions

PM Peak Hour

16: Public Emergency Department Entrance/East Post Road Garage & East Post Road

5:00 PM – 6:00 PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔						↔	
Traffic Volume (vph)	21	641	9	9	354	3	0	0	0	53	0	28
Future Volume (vph)	21	641	9	9	354	3	0	0	0	53	0	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	10	10	12	12	12	12	12	12	12
Grade (%)		0%			-1%			0%			0%	
Satd. Flow (prot)	0	3055	0	0	2975	0	0	0	0	0	1497	0
Flt Permitted		0.938			0.937						0.968	
Satd. Flow (perm)	0	2857	0	0	2785	0	0	0	0	0	1415	0
Right Turn on Red			Yes			Yes				Yes		Yes
Satd. Flow (RTOR)		3			2						23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		343			170			167			197	
Travel Time (s)		7.8			3.9			3.8			4.5	
Confl. Peds. (#/hr)	100		100	100		100				50		50
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	745	0	0	406	0	0	0	0	0	90	0
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases	4			8						6		
Total Split (s)	77.0	77.0		77.0	77.0					23.0	23.0	
Total Lost Time (s)		4.5			4.5						4.5	
Act Effect Green (s)		21.5			21.5						12.9	
Actuated g/C Ratio		0.56			0.56						0.34	
v/c Ratio		0.46			0.26						0.18	
Control Delay		9.6			8.1						9.4	
Queue Delay		0.0			0.0						0.0	
Total Delay		9.6			8.1						9.4	
LOS		A			A						A	
Approach Delay		9.6			8.1						9.4	
Approach LOS		A			A						A	
Queue Length 50th (ft)		76			36						10	
Queue Length 95th (ft)		119			60						38	
Internal Link Dist (ft)		263			90			87			117	
Turn Bay Length (ft)												
Base Capacity (vph)		2857			2785						788	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.26			0.15						0.11	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 38.1

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.46

Intersection Signal Delay: 9.1

Intersection LOS: A

No-Build Conditions

PM Peak Hour

16: Public Emergency Department Entrance/East Post Road Garage & East Post Road

5:00 PM – 6:00 PM

Intersection Capacity Utilization 57.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 16: Public Emergency Department Entrance/East Post Road Garage & East Post Road



No-Build Conditions

PM Peak Hour

17: Public Emergency Department Exit & East Post Road

Timing Plan: 5:00 PM – 6:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	694	0	0	363	2	21
Future Volume (Veh/h)	694	0	0	363	2	21
Sign Control	Free			Free	Stop	
Grade	2%			-2%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	771	0	0	403	2	23
Pedestrians	20			20	100	
Lane Width (ft)	9.0			10.0	11.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			2	9	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	170			262		
pX, platoon unblocked			0.86		0.86	0.86
vC, conflicting volume			871		1092	506
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			534		790	111
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	97
cM capacity (veh/h)			812		254	715
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	386	386	202	202	25	
Volume Left	0	0	0	0	2	
Volume Right	0	0	0	0	23	
cSH	1700	1700	1700	1700	624	
Volume to Capacity	0.23	0.23	0.12	0.12	0.04	
Queue Length 95th (ft)	0	0	0	0	3	
Control Delay (s)	0.0	0.0	0.0	0.0	11.0	
Lane LOS					B	
Approach Delay (s)	0.0		0.0		11.0	
Approach LOS					B	
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			36.2%		ICU Level of Service	A
Analysis Period (min)			15			

No-Build Conditions

PM Peak Hour

18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road

Time Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	350	360	0	0	300	227	92	660	69	0	0	0
Future Volume (vph)	350	360	0	0	300	227	92	660	69	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	10	10	12	12	12	12	12	12
Grade (%)		2%			-5%			-3%			0%	
Satd. Flow (prot)	0	2689	0	0	2465	0	0	3192	0	0	0	0
Flt Permitted		0.570						0.994				
Satd. Flow (perm)	0	1529	0	0	2465	0	0	3172	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					121			11				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			343			379			494	
Travel Time (s)		3.0			7.8			8.6			11.2	
Confl. Peds. (#/hr)	94		104	104		94	50		23	23		50
Confl. Bikes (#/hr)			2						5			
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.92
Heavy Vehicles (%)	3%	4%	0%	0%	7%	1%	2%	1%	0%	0%	0%	0%
Parking (#/hr)		0			0							
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	763	0	0	567	0	0	883	0	0	0	0
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2						8					
Total Split (s)	17.0	58.0			41.0		42.0	42.0				
Total Lost Time (s)		5.0			5.0			5.0				
Act Effct Green (s)		53.0			36.0			37.0				
Actuated g/C Ratio		0.53			0.36			0.37				
v/c Ratio		1.07dl			0.59			0.75				
Control Delay		29.9			15.9			29.7				
Queue Delay		0.0			0.3			5.3				
Total Delay		29.9			16.2			35.0				
LOS		C			B			C				
Approach Delay		29.9			16.2			35.0				
Approach LOS		C			B			C				
Queue Length 50th (ft)		160			61			245				
Queue Length 95th (ft)		214			104			323				
Internal Link Dist (ft)		53			263			299			414	
Turn Bay Length (ft)												
Base Capacity (vph)		949			964			1180				
Starvation Cap Reductn		0			80			235				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.80			0.64			0.93				
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												
Actuated Cycle Length: 100												

No-Build Conditions

PM Peak Hour

18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road

Time Plan: 5:00 PM – 6:00 PM

Offset: 7 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 28.4

Intersection LOS: C

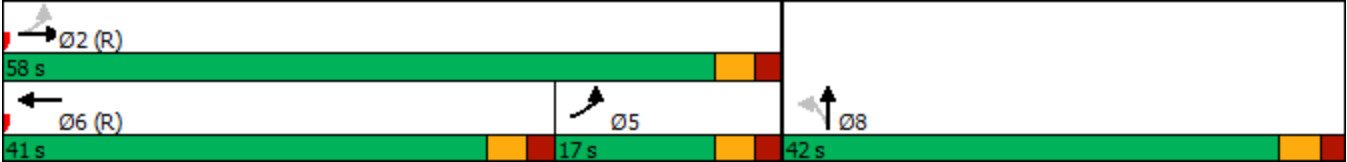
Intersection Capacity Utilization 83.8%

ICU Level of Service E

Analysis Period (min) 15

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road



No-Build Conditions

PM Peak Hour

19: Cromwell Place/Grand Street & East Post Road

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	357	71	49	399	0	0	0	0	84	67	130
Future Volume (vph)	0	357	71	49	399	0	0	0	0	84	67	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	10	10	12	12	12	12	9	10	12
Grade (%)		5%			0%			0%			2%	
Satd. Flow (prot)	0	2461	0	0	2725	0	0	0	0	1277	1219	0
Flt Permitted					0.841					0.950		
Satd. Flow (perm)	0	2461	0	0	2270	0	0	0	0	1224	1219	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		43									98	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		343			219			455			494	
Travel Time (s)		7.8			5.0			10.3			11.2	
Confl. Peds. (#/hr)	89		116	116		89	44		32	32		44
Confl. Bikes (#/hr)			1									1
Peak Hour Factor	0.92	0.83	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.83	0.83	0.83
Heavy Vehicles (%)	0%	5%	2%	7%	4%	0%	0%	0%	0%	2%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	4	0	0	0	0	0	0	0
Parking (#/hr)		4			0					0	0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	516	0	0	540	0	0	0	0	101	238	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			2						4	
Permitted Phases				2						4		
Total Split (s)		66.0		66.0	66.0					34.0	34.0	
Total Lost Time (s)		5.0			5.0					5.0	5.0	
Act Effct Green (s)		65.9			65.9					24.1	24.1	
Actuated g/C Ratio		0.66			0.66					0.24	0.24	
v/c Ratio		0.32			0.36					0.34	0.65	
Control Delay		2.9			5.9					34.6	28.4	
Queue Delay		0.2			0.2					0.0	0.0	
Total Delay		3.1			6.1					34.6	28.4	
LOS		A			A					C	C	
Approach Delay		3.1			6.1						30.2	
Approach LOS		A			A						C	
Queue Length 50th (ft)		24			30					54	81	
Queue Length 95th (ft)		31			43					87	134	
Internal Link Dist (ft)		263			139			375			414	
Turn Bay Length (ft)												
Base Capacity (vph)		1635			1494					354	423	
Starvation Cap Reductn		507			345					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.46			0.47					0.29	0.56	
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												

No-Build Conditions

19: Cromwell Place/Grand Street & East Post Road

PM Peak Hour

Timing Plan: 5:00 PM – 6:00 PM

Actuated Cycle Length: 100

Offset: 7 (7%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 10.9

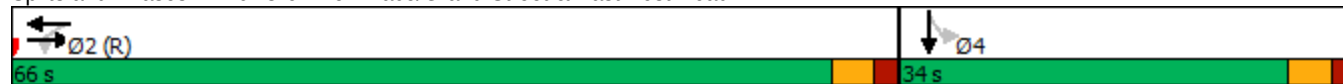
Intersection LOS: B

Intersection Capacity Utilization 65.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 19: Cromwell Place/Grand Street & East Post Road



No-Build Conditions
20: Chester Avenue & East Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

							
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Lane Configurations	↑↑			↑↑	↱	↲	
Traffic Volume (vph)	441	0	0	387	61	87	
Future Volume (vph)	441	0	0	387	61	87	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Grade (%)	4%			1%	0%		
Satd. Flow (prot)	3468	0	0	3522	1770	1583	
Flt Permitted					0.950		
Satd. Flow (perm)	3468	0	0	3522	1567	1387	
Right Turn on Red		No				No	
Satd. Flow (RTOR)							
Link Speed (mph)	30			30	30		
Link Distance (ft)	219			383	506		
Travel Time (s)	5.0			8.7	11.5		
Confl. Peds. (#/hr)		80	80		80	80	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	479	0	0	421	66	95	
Turn Type	NA			NA	Prot	Perm	
Protected Phases	2			2	4		9
Permitted Phases						4	
Total Split (s)	56.0			56.0	39.0	39.0	5.0
Total Lost Time (s)	4.5			4.5	4.5	4.5	
Act Effect Green (s)	51.5			51.5	39.5	39.5	
Actuated g/C Ratio	0.52			0.52	0.40	0.40	
v/c Ratio	0.27			0.23	0.09	0.17	
Control Delay	11.4			13.8	14.2	15.2	
Queue Delay	0.7			0.0	0.0	0.0	
Total Delay	12.1			13.8	14.2	15.2	
LOS	B			B	B	B	
Approach Delay	12.1			13.8	14.8		
Approach LOS	B			B	B		
Queue Length 50th (ft)	65			74	23	34	
Queue Length 95th (ft)	96			104	52	73	
Internal Link Dist (ft)	139			303	426		
Turn Bay Length (ft)							
Base Capacity (vph)	1786			1813	699	547	
Starvation Cap Reductn	938			0	0	0	
Spillback Cap Reductn	0			0	0	0	
Storage Cap Reductn	0			0	0	0	
Reduced v/c Ratio	0.56			0.23	0.09	0.17	
Intersection Summary							
Area Type:	Other						
Cycle Length: 100							
Actuated Cycle Length: 100							
Offset: 17 (17%), Referenced to phase 2:EBWB and 6:, Start of Green							
Control Type: Actuated-Coordinated							
Maximum v/c Ratio: 0.27							
Intersection Signal Delay: 13.2	Intersection LOS: B						

No-Build Conditions
20: Chester Avenue & East Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Intersection Capacity Utilization 37.5%
Analysis Period (min) 15

ICU Level of Service A

Splits and Phases: 20: Chester Avenue & East Post Road



No-Build Conditions

PM Peak Hour

21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	0	0	0	0	6	0	1219	0	0	0	0
Future Volume (vph)	57	0	0	0	0	6	0	1219	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			1%			0%	
Satd. Flow (prot)	1593	1676	0	0	0	1450	0	4554	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1473	1676	0	0	0	1326	0	4554	0	0	0	0
Right Turn on Red	No		No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		403			216			494			280	
Travel Time (s)		9.2			4.9			11.2			6.4	
Confl. Peds. (#/hr)	50		50	50		50	100		100			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	62	0	0	0	0	7	0	1325	0	0	0	0
Turn Type	Perm					Perm		NA				
Protected Phases		4						2				
Permitted Phases	4					4						
Total Split (s)	25.1	25.1				25.1		74.9				
Total Lost Time (s)	5.0	5.0				5.0		4.9				
Act Effct Green (s)	14.7					14.7		78.5				
Actuated g/C Ratio	0.15					0.15		0.78				
v/c Ratio	0.29					0.04		0.37				
Control Delay	38.7					32.8		3.7				
Queue Delay	0.0					0.0		0.2				
Total Delay	38.7					32.8		3.9				
LOS	D					C		A				
Approach Delay		38.7			32.8			3.9				
Approach LOS		D			C			A				
Queue Length 50th (ft)	33					4		55				
Queue Length 95th (ft)	71					16		87				
Internal Link Dist (ft)		323			136			414			200	
Turn Bay Length (ft)												
Base Capacity (vph)	296					266		3575				
Starvation Cap Reductn	0					0		0				
Spillback Cap Reductn	0					0		1246				
Storage Cap Reductn	0					0		0				
Reduced v/c Ratio	0.21					0.03		0.57				

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 77 (77%), Referenced to phase 2:NBT and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.37

Intersection Signal Delay: 5.6

Intersection LOS: A

No-Build Conditions

PM Peak Hour

21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage Timing Plan: 5:00 PM – 6:00 PM

Intersection Capacity Utilization 57.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage



No-Build Conditions

PM Peak Hour

22: South Lexington Avenue & Fisher Avenue/Quarropas Street

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑					↖↗	↑↑	↖
Traffic Volume (vph)	0	240	137	59	110	0	0	0	0	200	1001	146
Future Volume (vph)	0	240	137	59	110	0	0	0	0	200	1001	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	11	11	12	12	12	12	12	12	13
Grade (%)		-1%			0%			0%			-1%	
Storage Length (ft)	0		0	135		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	2		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	2746	0	1540	3079	0	0	0	0	3105	3201	1480
Flt Permitted				0.397						0.950		
Satd. Flow (perm)	0	2746	0	625	3079	0	0	0	0	2752	3201	1363
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)												159
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		629			873			1032			215	
Travel Time (s)		14.3			19.8			23.5			4.9	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	410	0	64	120	0	0	0	0	217	1088	159
Turn Type		NA		pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Total Split (s)		34.0		10.0	44.0					53.0	53.0	53.0
Total Lost Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Act Effct Green (s)		35.7		44.7	44.7					45.3	45.3	45.3
Actuated g/C Ratio		0.36		0.45	0.45					0.45	0.45	0.45
v/c Ratio		0.42		0.19	0.09					0.17	0.75	0.23
Control Delay		28.2		23.1	21.0					15.6	25.8	3.0
Queue Delay		0.0		0.0	0.0					0.0	0.0	0.0
Total Delay		28.2		23.1	21.0					15.6	25.8	3.0
LOS		C		C	C					B	C	A
Approach Delay		28.2			21.8						21.8	
Approach LOS		C			C						C	
Queue Length 50th (ft)		111		22	20					40	287	0
Queue Length 95th (ft)		163		m53	m45					56	332	31
Internal Link Dist (ft)		549			793			952			135	
Turn Bay Length (ft)				135								
Base Capacity (vph)		980		334	1374					1353	1574	751
Starvation Cap Reductn		0		0	0					0	0	0
Spillback Cap Reductn		0		0	0					0	0	0
Storage Cap Reductn		0		0	0					0	0	0
Reduced v/c Ratio		0.42		0.19	0.09					0.16	0.69	0.21

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

No-Build Conditions
22: South Lexington Avenue & Fisher Avenue/Quarropas Street

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

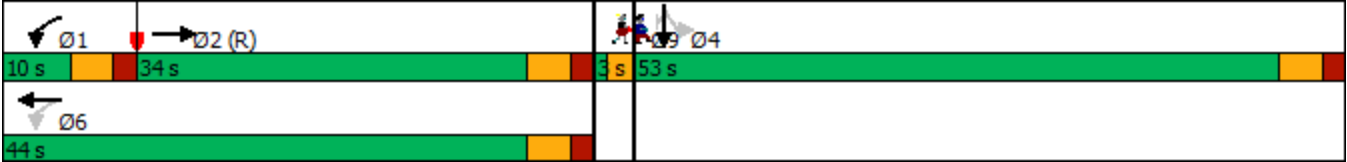
Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

No-Build Conditions
22: South Lexington Avenue & Fisher Avenue/Quarropas Street

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Offset: 17 (17%), Referenced to phase 2:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 23.1 Intersection LOS: C
Intersection Capacity Utilization 69.0% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: South Lexington Avenue & Fisher Avenue/Quarropas Street



No-Build Conditions

PM Peak Hour

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	295	0	0	59	76	105	1104	91	0	0	0
Future Volume (vph)	88	295	0	0	59	76	105	1104	91	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	12	12	11	11	12	12	12	12	12	12
Grade (%)		3%			-4%			1%			0%	
Storage Length (ft)	240		0	0		90	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1516	2928	0	0	1653	1405	0	4464	0	0	0	0
Flt Permitted	0.625							0.996				
Satd. Flow (perm)	952	2928	0	0	1653	1312	0	4443	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						83		17				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		873			420			280			604	
Travel Time (s)		19.8			9.5			6.4			13.7	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	321	0	0	64	83	0	1413	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Total Split (s)	12.0	45.0			33.0	33.0	55.0	55.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Act Effct Green (s)	46.1	46.1			35.6	35.6		43.9				
Actuated g/C Ratio	0.46	0.46			0.36	0.36		0.44				
v/c Ratio	0.20	0.24			0.11	0.16		0.72				
Control Delay	16.6	17.0			26.5	7.1		26.3				
Queue Delay	0.0	0.0			0.0	0.0		0.6				
Total Delay	16.6	17.0			26.5	7.1		26.9				
LOS	B	B			C	A		C				
Approach Delay		16.9			15.6			26.9				
Approach LOS		B			B			C				
Queue Length 50th (ft)	37	67			29	0		305				
Queue Length 95th (ft)	73	120			64	35		349				
Internal Link Dist (ft)		793			340			200			524	
Turn Bay Length (ft)	240					90						
Base Capacity (vph)	484	1351			587	520		2230				
Starvation Cap Reductn	0	0			0	0		424				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.20	0.24			0.11	0.16		0.78				

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

No-Build Conditions

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

PM Peak Hour

Timing Plan: 5:00 PM – 6:00 PM

Offset: 81 (81%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 24.0

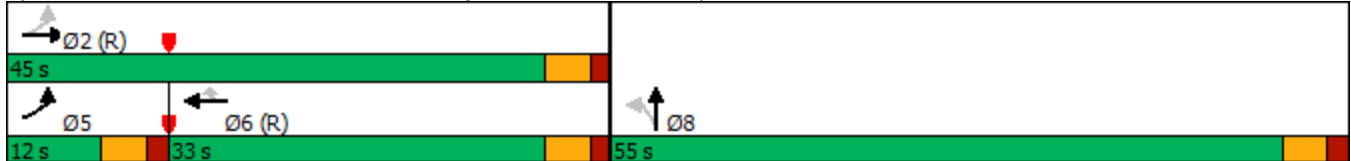
Intersection LOS: C

Intersection Capacity Utilization 69.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 23: Dr. Martin Luther King Jr Boulevard & Quarropas Street



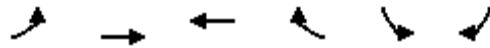
No-Build Conditions
24: West Lot Northeast Driveway & West Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑		↗
Traffic Volume (veh/h)	389	0	0	623	0	38
Future Volume (Veh/h)	389	0	0	623	0	38
Sign Control	Free			Free	Stop	
Grade	-3%			3%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	432	0	0	692	0	42
Pedestrians	20			20	40	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	2			2	4	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)				207		
pX, platoon unblocked					0.85	
vC, conflicting volume			472		1184	492
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			472		1128	492
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	92
cM capacity (veh/h)			1048		181	544
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	432	692	42			
Volume Left	0	0	0			
Volume Right	0	0	42			
cSH	1700	1700	544			
Volume to Capacity	0.25	0.41	0.08			
Queue Length 95th (ft)	0	0	6			
Control Delay (s)	0.0	0.0	12.2			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	12.2			
Approach LOS			B			
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			51.3%	ICU Level of Service	A	
Analysis Period (min)			15			

No-Build Conditions
27: East Post Road & Winchester Street

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	5	710	358	35	5	5
Future Volume (Veh/h)	5	710	358	35	5	5
Sign Control		Free	Free		Stop	
Grade		2%	-2%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	789	398	39	6	6
Pedestrians		20	20		100	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		2	2		10	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		299	133			
pX, platoon unblocked					0.88	
vC, conflicting volume	537				944	338
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	537				664	338
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	99
cM capacity (veh/h)	929				306	583
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	269	526	265	172	12	
Volume Left	6	0	0	0	6	
Volume Right	0	0	0	39	6	
cSH	929	1700	1700	1700	401	
Volume to Capacity	0.01	0.31	0.16	0.10	0.03	
Queue Length 95th (ft)	0	0	0	0	2	
Control Delay (s)	0.3	0.0	0.0	0.0	14.2	
Lane LOS	A				B	
Approach Delay (s)	0.1		0.0		14.2	
Approach LOS					B	
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			38.0%		ICU Level of Service	A
Analysis Period (min)			15			

No-Build Conditions
28: Winchester Street & East Post Road Garage

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM



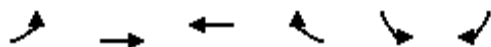
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	35	5	10	0
Future Volume (Veh/h)	0	0	35	5	10	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	39	6	11	0
Pedestrians	20			100	100	
Lane Width (ft)	0.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	0			10	10	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	215	131	31			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	215	131	31			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	98			
cM capacity (veh/h)	682	831	1582			
Direction, Lane #	NB 1	SB 1				
Volume Total	45	11				
Volume Left	39	0				
Volume Right	0	0				
cSH	1582	1700				
Volume to Capacity	0.02	0.01				
Queue Length 95th (ft)	2	0				
Control Delay (s)	6.4	0.0				
Lane LOS	A					
Approach Delay (s)	6.4	0.0				
Approach LOS						
Intersection Summary						
Average Delay			5.1			
Intersection Capacity Utilization			28.8%	ICU Level of Service		A
Analysis Period (min)			15			

Build Conditions

Build Conditions

1: Maple Avenue & West Lot Southwest Driveway

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↕↕		↕↕	
Traffic Volume (veh/h)	11	505	347	6	0	11
Future Volume (Veh/h)	11	505	347	6	0	11
Sign Control		Free	Free		Stop	
Grade		-2%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	12	561	386	7	0	12
Pedestrians		5	5		20	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	0		2	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			687			
pX, platoon unblocked						
vC, conflicting volume	413				719	222
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	413				719	222
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	98
cM capacity (veh/h)	1121				351	764
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	199	374	257	136	12	
Volume Left	12	0	0	0	0	
Volume Right	0	0	0	7	12	
cSH	1121	1700	1700	1700	764	
Volume to Capacity	0.01	0.22	0.15	0.08	0.02	
Queue Length 95th (ft)	1	0	0	0	1	
Control Delay (s)	0.6	0.0	0.0	0.0	9.8	
Lane LOS	A				A	
Approach Delay (s)	0.2		0.0		9.8	
Approach LOS					A	
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			33.4%		ICU Level of Service	A
Analysis Period (min)			15			

Build Conditions

AM Peak Hour

2: Roosevelt Street/West Lot Southeast Driveway & Maple Avenue

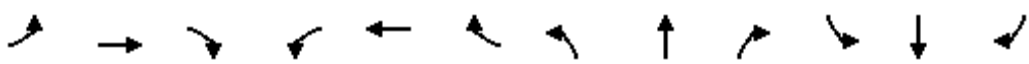
Timing Plan: 8:00 AM – 9:00 AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	504	1	13	349	41	4	0	16	21	0	0
Future Volume (Veh/h)	0	504	1	13	349	41	4	0	16	21	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		-2%			-1%			-4%			0%	
Peak Hour Factor	0.92	0.87	0.87	0.87	0.87	0.92	0.87	0.92	0.87	0.92	0.92	0.92
Hourly flow rate (vph)	0	579	1	15	401	45	5	0	18	23	0	0
Pedestrians		1						16				
Lane Width (ft)		14.0						12.0				
Walking Speed (ft/s)		3.5						3.5				
Percent Blockage		0						2				
Right turn flare (veh)												
Median type		None				None						
Median storage (veh)												
Upstream signal (ft)					357							
pX, platoon unblocked	0.95						0.95	0.95		0.95	0.95	0.95
vC, conflicting volume	446			596			827	1072	306	761	1050	224
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	322			596			722	978	306	653	955	90
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			98	100	97	93	100	100
cM capacity (veh/h)	1177			975			292	231	686	320	238	906
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	290	290	216	246	23	23						
Volume Left	0	0	15	0	5	23						
Volume Right	0	1	0	45	18	0						
cSH	1177	1700	975	1700	530	320						
Volume to Capacity	0.00	0.17	0.02	0.14	0.04	0.07						
Queue Length 95th (ft)	0	0	1	0	3	6						
Control Delay (s)	0.0	0.0	0.8	0.0	12.1	17.1						
Lane LOS			A		B	C						
Approach Delay (s)	0.0		0.4		12.1	17.1						
Approach LOS					B	C						
Intersection Summary												
Average Delay			0.8									
Intersection Capacity Utilization			34.3%		ICU Level of Service		A					
Analysis Period (min)			15									

Build Conditions

3: South Lexington Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↕	↕↕		↕	↕		↕	↕	
Traffic Volume (vph)	40	481	19	34	335	2	15	26	60	326	362	51
Future Volume (vph)	40	481	19	34	335	2	15	26	60	326	362	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	10	12	10	12	10	10	13	12
Grade (%)		0%			-2%			-5%			4%	
Storage Length (ft)	0		0	140		0	85		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3086	0	1477	3058	0	1554	1463	0	1324	1690	0
Flt Permitted		0.896		0.327			0.211			0.697		
Satd. Flow (perm)	0	2763	0	495	3058	0	341	1463	0	929	1690	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		4			1						7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		357			354			564			393	
Travel Time (s)		8.1			8.0			12.8			8.9	
Confl. Peds. (#/hr)	31		30	30		31	29		35	35		29
Confl. Bikes (#/hr)			1			1						3
Peak Hour Factor	0.92	0.94	0.94	0.94	0.94	0.92	0.94	0.92	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	11%	0%	0%	0%	0%	0%	4%	1%	0%	0%
Parking (#/hr)										0		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	575	0	36	358	0	16	92	0	347	439	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Total Split (s)	47.0	47.0		10.0	57.0		9.0	23.9		10.1	34.0	
Total Lost Time (s)		5.0		5.0	5.0		5.0	4.9		5.0	5.0	
Act Effect Green (s)		42.0		52.0	52.0		22.9	19.0		29.0	29.0	
Actuated g/C Ratio		0.42		0.52	0.52		0.23	0.19		0.29	0.29	
v/c Ratio		0.49		0.12	0.23		0.13	0.33		1.20	0.89	
Control Delay		22.9		11.5	11.2		28.8	38.9		153.0	60.9	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	2.9	
Total Delay		22.9		11.5	11.2		28.8	38.9		153.0	63.8	
LOS		C		B	B		C	D		F	E	
Approach Delay		22.9			11.2			37.4			103.2	
Approach LOS		C			B			D			F	
Queue Length 50th (ft)		136		7	37		7	51		~237	243	
Queue Length 95th (ft)		187		23	70		24	99		m#396	m#405	
Internal Link Dist (ft)		277			274			484			313	
Turn Bay Length (ft)				140			85					
Base Capacity (vph)		1162		306	1590		126	277		289	495	
Starvation Cap Reductn		0		0	0		0	0		0	19	
Spillback Cap Reductn		0		0	0		0	0		0	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.49		0.12	0.23		0.13	0.33		1.20	0.92	
Intersection Summary												

Build Conditions
3: South Lexington Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 86 (86%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 1.20

Intersection Signal Delay: 55.1

Intersection LOS: E

Intersection Capacity Utilization 69.4%

ICU Level of Service C

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

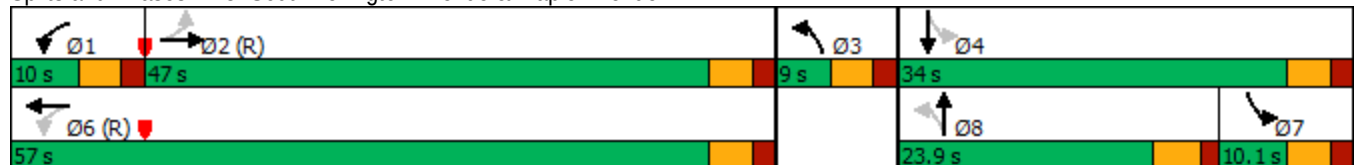
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: South Lexington Avenue & Maple Avenue



Build Conditions

AM Peak Hour

4: Davis Avenue/Main Hospital Entrance & Maple Avenue

Timing Plan: 8:00 AM – 9:00 AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	776	61	20	332	18	18	2	56	17	12	18
Future Volume (vph)	27	776	61	20	332	18	18	2	56	17	12	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	11	11	12	11	12	12	9	12	11	10	12
Grade (%)		1%			0%			-5%			4%	
Storage Length (ft)	100		0	0		0	0		0	90		0
Storage Lanes	1		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1426	3033	0	0	3076	0	0	1170	0	0	1520	1424
Flt Permitted	0.519				0.888			0.942			0.857	
Satd. Flow (perm)	720	3033	0	0	2737	0	0	1107	0	0	1283	1361
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			9			60				46
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		354			356			562			217	
Travel Time (s)		8.0			8.1			12.8			4.9	
Confl. Peds. (#/hr)	45		34	34		45	21		55	55		21
Confl. Bikes (#/hr)			4						1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	1%	1%	0%	0%	7%	0%	3%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	29	891	0	0	393	0	0	81	0	0	31	19
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		4
Total Split (s)	64.0	64.0		64.0	64.0		30.0	30.0		30.0	30.0	30.0
Total Lost Time (s)	5.2	5.2			5.2			5.2			5.2	5.2
Act Effect Green (s)	58.8	58.8			58.8			24.8			24.8	24.8
Actuated g/C Ratio	0.59	0.59			0.59			0.25			0.25	0.25
v/c Ratio	0.07	0.50			0.24			0.25			0.10	0.05
Control Delay	13.4	17.5			6.8			13.9			30.1	2.1
Queue Delay	0.0	2.4			0.0			0.0			0.0	0.0
Total Delay	13.4	19.9			6.8			13.9			30.1	2.1
LOS	B	B			A			B			C	A
Approach Delay		19.7			6.8			13.9			19.4	
Approach LOS		B			A			B			B	
Queue Length 50th (ft)	10	178			19			10			15	0
Queue Length 95th (ft)	m17	m189			54			49			39	5
Internal Link Dist (ft)		274			276			482			137	
Turn Bay Length (ft)	100											
Base Capacity (vph)	423	1789			1613			319			318	372
Starvation Cap Reductn	0	737			0			0			0	0
Spillback Cap Reductn	0	0			0			0			0	0
Storage Cap Reductn	0	0			0			0			0	0
Reduced v/c Ratio	0.07	0.85			0.24			0.25			0.10	0.05
Intersection Summary												

Build Conditions

AM Peak Hour

4: Davis Avenue/Main Hospital Entrance & Maple Avenue

Timing Plan: 8:00 AM – 9:00 AM

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	6.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Area Type:	CBD		
Cycle Length:	100		
Actuated Cycle Length:	100		
Offset:	30 (30%), Referenced to phase 2:EBWB and 6:, Start of Green		
Control Type:	Pretimed		
Maximum v/c Ratio:	0.50		
Intersection Signal Delay:	15.9	Intersection LOS:	B
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		
m	Volume for 95th percentile queue is metered by upstream signal.		

Splits and Phases: 4: Davis Avenue/Main Hospital Entrance & Maple Avenue



Build Conditions
5: Oakwood Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	 			 	 	
Traffic Volume (vph)	821	28	36	361	6	39
Future Volume (vph)	821	28	36	361	6	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Grade (%)	1%			0%	-5%	
Satd. Flow (prot)	3181	0	0	3204	1554	0
Flt Permitted				0.816	0.993	
Satd. Flow (perm)	3181	0	0	2626	1551	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	9				43	
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			475	444	
Travel Time (s)	8.1			10.8	10.1	
Confl. Peds. (#/hr)		40	40		6	24
Confl. Bikes (#/hr)		3				
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	0%	0%	1%	7%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	933	0	0	437	50	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			2	4	
Permitted Phases			2			
Total Split (s)	77.2		77.2	77.2	22.8	
Total Lost Time (s)	5.2			5.2	5.0	
Act Effect Green (s)	72.0			72.0	17.8	
Actuated g/C Ratio	0.72			0.72	0.18	
v/c Ratio	0.41			0.23	0.16	
Control Delay	1.5			1.2	14.4	
Queue Delay	0.1			0.0	0.0	
Total Delay	1.6			1.2	14.4	
LOS	A			A	B	
Approach Delay	1.6			1.2	14.4	
Approach LOS	A			A	B	
Queue Length 50th (ft)	18			10	4	
Queue Length 95th (ft)	28			10	36	
Internal Link Dist (ft)	276			395	364	
Turn Bay Length (ft)						
Base Capacity (vph)	2292			1890	311	
Starvation Cap Reductn	326			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.47			0.23	0.16	
Intersection Summary						
Area Type:	CBD					
Cycle Length: 100						
Actuated Cycle Length: 100						
Offset: 31 (31%), Referenced to phase 2:EBWB and 6:, Start of Green						

Build Conditions
5: Oakwood Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Control Type: Pretimed	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 1.9	Intersection LOS: A
Intersection Capacity Utilization 65.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 5: Oakwood Avenue & Maple Avenue



Build Conditions
6: Longview Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	143	633	39	36	404	198	25	422	40	0	0	0
Future Volume (vph)	143	633	39	36	404	198	25	422	40	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	11	10	11	10	10	10	9	12	12	12
Grade (%)		0%			-5%			-2%			0%	
Storage Length (ft)	225		0	60		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1462	2962	0	1509	2941	0	0	2843	0	0	0	0
Flt Permitted	0.296			0.383				0.997				
Satd. Flow (perm)	444	2962	0	593	2941	0	0	2834	0	0	0	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		10			103							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		475			281			824			379	
Travel Time (s)		10.8			6.4			18.7			8.6	
Confl. Peds. (#/hr)	60		24	24		60	44		48	48		44
Confl. Bikes (#/hr)			2			1			2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	3%	0%	1%	4%	0%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	151	707	0	38	633	0	0	512	0	0	0	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2			6			8					
Total Split (s)	13.0	60.0		47.0	47.0		37.0	37.0				
Total Lost Time (s)	5.2	5.2		5.2	5.2			5.2				
Act Effect Green (s)	60.4	60.4		41.8	41.8			26.2				
Actuated g/C Ratio	0.60	0.60		0.42	0.42			0.26				
v/c Ratio	0.37	0.39		0.15	0.49			0.69				
Control Delay	7.0	3.7		16.5	15.9			38.2				
Queue Delay	0.0	0.0		0.0	2.7			0.0				
Total Delay	7.0	3.7		16.5	18.6			38.2				
LOS	A	A		B	B			D				
Approach Delay		4.3			18.5			38.2				
Approach LOS		A			B			D				
Queue Length 50th (ft)	10	23		9	65			157				
Queue Length 95th (ft)	18	32		21	85			196				
Internal Link Dist (ft)		395			201			744			299	
Turn Bay Length (ft)	225			60								
Base Capacity (vph)	404	1793		247	1289			901				
Starvation Cap Reductn	0	0		0	520			0				
Spillback Cap Reductn	8	0		0	26			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.38	0.39		0.15	0.82			0.57				
Intersection Summary												

Build Conditions
6: Longview Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Build Conditions
6: Longview Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 52 (52%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 17.5

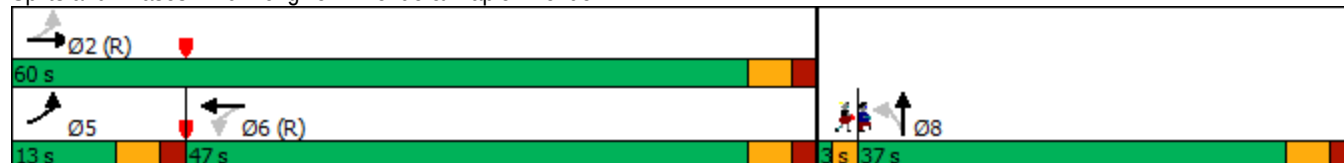
Intersection LOS: B

Intersection Capacity Utilization 67.3%

ICU Level of Service C

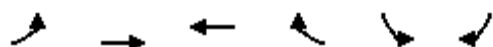
Analysis Period (min) 15

Splits and Phases: 6: Longview Avenue & Maple Avenue



Build Conditions
7: Maple Avenue & Cromwell Place

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↗	↗
Traffic Volume (vph)	0	669	560	0	121	86
Future Volume (vph)	0	669	560	0	121	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	11	12
Grade (%)		6%	3%		4%	
Storage Length (ft)	0			0	0	60
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	3016	3094	0	1371	1383
Flt Permitted					0.950	
Satd. Flow (perm)	0	3016	3094	0	1360	1383
Right Turn on Red				Yes		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		281	255		455	
Travel Time (s)		6.4	5.8		10.3	
Confl. Peds. (#/hr)	67			67	6	2
Confl. Bikes (#/hr)						2
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%
Parking (#/hr)					0	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	735	615	0	133	95
Turn Type		NA	NA		Perm	Prot
Protected Phases		2	2			4
Permitted Phases					4	
Total Split (s)		71.0	71.0		29.0	29.0
Total Lost Time (s)		4.7	4.7		4.7	4.7
Act Effct Green (s)		73.1	73.1		17.5	17.5
Actuated g/C Ratio		0.73	0.73		0.18	0.18
v/c Ratio		0.33	0.27		0.56	0.39
Control Delay		9.5	5.1		41.1	35.2
Queue Delay		0.4	0.6		0.0	0.0
Total Delay		9.9	5.8		41.1	35.2
LOS		A	A		D	D
Approach Delay		9.9	5.8		38.6	
Approach LOS		A	A		D	
Queue Length 50th (ft)		126	67		84	59
Queue Length 95th (ft)		171	91		146	111
Internal Link Dist (ft)		201	175		375	
Turn Bay Length (ft)						60
Base Capacity (vph)		2203	2260		330	336
Starvation Cap Reductn		891	1214		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.56	0.59		0.40	0.28
Intersection Summary						

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 12.4Intersection LOS: B

Intersection Capacity Utilization 38.9%ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Maple Avenue & Cromwell Place



Build Conditions

AM Peak Hour

8: Greenridge Avenue/Chester Avenue & Maple Avenue

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	588	104	49	542	85	18	70	68	0	0	0
Future Volume (vph)	98	588	104	49	542	85	18	70	68	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	11
Grade (%)		2%			3%			0%			-4%	
Storage Length (ft)	125		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1752	3347	0	1743	3375	0	0	3188	0	0	0	0
Flt Permitted	0.329			0.320				0.994				
Satd. Flow (perm)	592	3347	0	566	3375	0	0	3165	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			26			74				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		255			453			507			506	
Travel Time (s)		5.8			10.3			11.5			11.5	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	107	752	0	53	681	0	0	170	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA				
Protected Phases	1	6		5	2			8				
Permitted Phases	6			2			8					
Total Split (s)	12.0	57.0		12.0	57.0		31.0	31.0				
Total Lost Time (s)	7.0	5.0		5.0	5.0			5.0				
Act Effct Green (s)	56.7	54.7		58.6	52.2			26.0				
Actuated g/C Ratio	0.57	0.55		0.59	0.52			0.26				
v/c Ratio	0.27	0.41		0.13	0.38			0.19				
Control Delay	11.6	15.6		7.6	14.5			16.8				
Queue Delay	0.0	1.1		0.0	0.0			0.0				
Total Delay	11.6	16.7		7.6	14.5			16.8				
LOS	B	B		A	B			B				
Approach Delay		16.1			14.0			16.8				
Approach LOS		B			B			B				
Queue Length 50th (ft)	30	142		11	125			24				
Queue Length 95th (ft)	57	149		25	166			51				
Internal Link Dist (ft)		175			373			427			426	
Turn Bay Length (ft)	125			75								
Base Capacity (vph)	393	1842		417	1774			877				
Starvation Cap Reductn	0	800		0	0			0				
Spillback Cap Reductn	0	0		0	0			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.27	0.72		0.13	0.38			0.19				

Intersection Summary

Area Type: Other

Cycle Length: 100

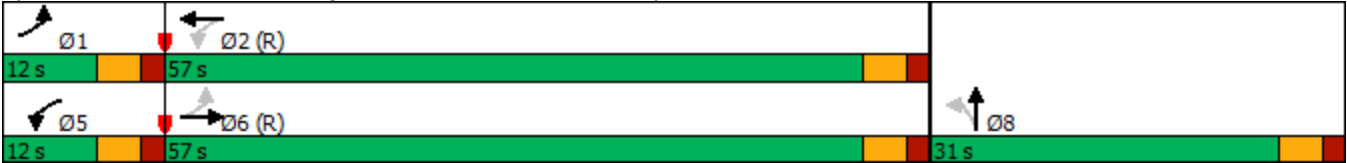
Actuated Cycle Length: 100

Build Conditions
8: Greenridge Avenue/Chester Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Offset: 43 (43%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 15.3	Intersection LOS: B
Intersection Capacity Utilization 58.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Greenridge Avenue/Chester Avenue & Maple Avenue



Build Conditions

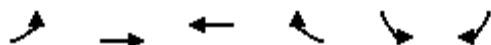
AM Peak Hour

11: West Lot Northwest Driveway/Highland Avenue & West Post Road Timing Plan: 8:00 AM – 9:00 AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	369	8	5	362	27	0	0	0	139	0	86
Future Volume (Veh/h)	84	369	8	5	362	27	0	0	0	139	0	86
Sign Control		Free			Free			Stop			Stop	
Grade		-4%			3%			0%			-11%	
Peak Hour Factor	0.88	0.88	0.92	0.92	0.88	0.88	0.92	0.92	0.92	0.88	0.92	0.88
Hourly flow rate (vph)	95	419	9	5	411	31	0	0	0	158	0	98
Pedestrians		22			6						49	
Lane Width (ft)		16.0			16.0						12.0	
Walking Speed (ft/s)		3.5			3.5						3.5	
Percent Blockage		3			1						5	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					742							
pX, platoon unblocked	0.96						0.96	0.96		0.96	0.96	0.96
vC, conflicting volume	491			428			1170	1114	430	1105	1104	498
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	445			428			1155	1097	430	1087	1085	452
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	91			100			100	100	100	1	100	82
cM capacity (veh/h)	1017			1131			118	175	621	159	179	541
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	523	447	0	256								
Volume Left	95	5	0	158								
Volume Right	9	31	0	98								
cSH	1017	1131	1700	218								
Volume to Capacity	0.09	0.00	0.04	1.18								
Queue Length 95th (ft)	8	0	0	312								
Control Delay (s)	2.5	0.1	0.0	162.7								
Lane LOS	A	A	A	F								
Approach Delay (s)	2.5	0.1	0.0	162.7								
Approach LOS			A	F								
Intersection Summary												
Average Delay			35.1									
Intersection Capacity Utilization			76.0%		ICU Level of Service				D			
Analysis Period (min)			15									

Build Conditions
12: West Post Road & Orawaupum Street

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	22	485	379	47	14	15
Future Volume (Veh/h)	22	485	379	47	14	15
Sign Control		Free	Free		Stop	
Grade		-3%	2%		-10%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	26	564	441	55	16	17
Pedestrians			4		56	
Lane Width (ft)			16.0		11.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			1		5	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			361			
pX, platoon unblocked	0.92				0.92	0.92
vC, conflicting volume	552				1144	524
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	474				1115	444
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				92	97
cM capacity (veh/h)	965				199	544
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	590	496	33			
Volume Left	26	0	16			
Volume Right	0	55	17			
cSH	965	1700	295			
Volume to Capacity	0.03	0.29	0.11			
Queue Length 95th (ft)	2	0	9			
Control Delay (s)	0.7	0.0	18.7			
Lane LOS	A		C			
Approach Delay (s)	0.7	0.0	18.7			
Approach LOS			C			
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utilization			58.2%		ICU Level of Service	
Analysis Period (min)			15		B	

Build Conditions

14: South Lexington Avenue & West Post Road/East Post Road

AM Peak Hour

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖				↗	↖	↖↗	
Traffic Volume (vph)	0	430	86	70	231	0	0	0	68	255	601	195
Future Volume (vph)	0	430	86	70	231	0	0	0	68	255	601	195
Ideal Flow (vphpl)	1900	2050	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	12	12	12	12	11	11	11
Grade (%)		-1%			0%			0%			1%	
Storage Length (ft)	0		105	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1589	1294	0	2556	0	0	0	1479	1065	2764	0
Flt Permitted					0.709					0.950		
Satd. Flow (perm)	0	1589	1217	0	1827	0	0	0	1331	993	2764	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			75						254		52	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		207			173			393			1032	
Travel Time (s)		4.7			3.9			8.9			23.5	
Confl. Peds. (#/hr)	61		38	38		61	34		54	54		34
Confl. Bikes (#/hr)			2									4
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	5%	0%	2%	5%	0%	0%	0%	0%	2%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0	0		24					41	4	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	483	97	0	339	0	0	0	74	287	894	0
Turn Type		NA	Perm	Perm	NA				Perm	Perm	NA	
Protected Phases		2			2							4
Permitted Phases			2	2					8	4		
Total Split (s)		55.0	55.0	55.0	55.0				45.0	45.0	45.0	
Total Lost Time (s)		5.0	5.0		5.0				5.0	5.0	5.0	
Act Effect Green (s)		50.0	50.0		50.0				40.0	40.0	40.0	
Actuated g/C Ratio		0.50	0.50		0.50				0.40	0.40	0.40	
v/c Ratio		0.61	0.15		0.37				0.11	0.72	0.79	
Control Delay		22.1	5.3		16.8				1.0	33.2	26.4	
Queue Delay		0.0	0.1		0.2				0.0	0.0	0.2	
Total Delay		22.1	5.3		17.0				1.0	33.2	26.6	
LOS		C	A		B				A	C	C	
Approach Delay		19.3			17.0			1.0			28.2	
Approach LOS		B			B			A			C	
Queue Length 50th (ft)		212	7		66				0	104	160	
Queue Length 95th (ft)		313	33		100				7	#182	233	
Internal Link Dist (ft)		127			93			313			952	
Turn Bay Length (ft)			105									
Base Capacity (vph)		794	646		913				684	397	1136	
Starvation Cap Reductn		0	0		0				0	0	0	
Spillback Cap Reductn		0	84		125				0	0	21	
Storage Cap Reductn		0	0		0				0	0	0	
Reduced v/c Ratio		0.61	0.17		0.43				0.11	0.72	0.80	

Build Conditions

14: South Lexington Avenue & West Post Road/East Post Road

AM Peak Hour

Timing Plan: 8:00 AM – 9:00 AM

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 23.2

Intersection LOS: C

Intersection Capacity Utilization 81.9%

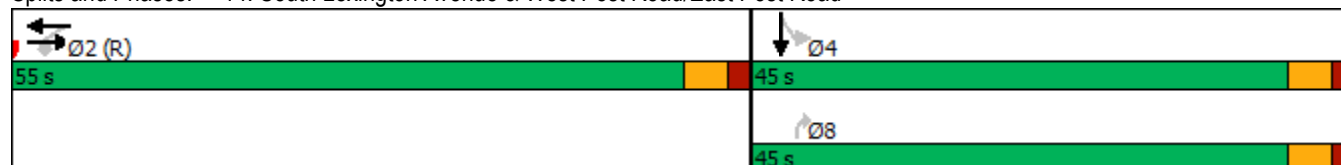
ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

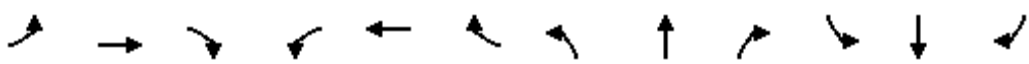
Splits and Phases: 14: South Lexington Avenue & West Post Road/East Post Road



Build Conditions

AM Peak Hour

16: Public Emergency Department Entrance/East Post Road Garage & East Post Road

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔						↔	
Traffic Volume (vph)	178	568	5	3	258	4	0	0	0	75	0	41
Future Volume (vph)	178	568	5	3	258	4	0	0	0	75	0	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	10	10	12	12	12	12	12	12	12
Grade (%)		0%			-1%			0%			0%	
Satd. Flow (prot)	0	2967	0	0	2884	0	0	0	0	0	1495	0
Flt Permitted		0.785			0.949						0.969	
Satd. Flow (perm)	0	2254	0	0	2738	0	0	0	0	0	1415	0
Right Turn on Red			Yes			Yes				Yes		Yes
Satd. Flow (RTOR)		1			3						27	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		234			170			167			197	
Travel Time (s)		5.3			3.9			3.8			4.5	
Confl. Peds. (#/hr)	100		100	100		100				50		50
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	835	0	0	294	0	0	0	0	0	129	0
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases	4			8						6		
Total Split (s)	70.0	70.0		70.0	70.0					30.0	30.0	
Total Lost Time (s)		4.5			4.5						4.5	
Act Effct Green (s)		29.4			29.4						13.4	
Actuated g/C Ratio		0.64			0.64						0.29	
v/c Ratio		0.58			0.17						0.30	
Control Delay		10.4			6.4						15.2	
Queue Delay		0.0			0.0						0.0	
Total Delay		10.4			6.4						15.2	
LOS		B			A						B	
Approach Delay		10.4			6.4						15.2	
Approach LOS		B			A						B	
Queue Length 50th (ft)		101			25						22	
Queue Length 95th (ft)		156			41						71	
Internal Link Dist (ft)		154			90			87			117	
Turn Bay Length (ft)												
Base Capacity (vph)		2254			2738						854	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.37			0.11						0.15	
Intersection Summary												
Area Type:	CBD											
Cycle Length:	100											
Actuated Cycle Length:	46.2											
Control Type:	Actuated-Uncoordinated											
Maximum v/c Ratio:	0.58											

Build Conditions

AM Peak Hour

16: Public Emergency Department Entrance/East Post Road Garage & East Post Road

Time Plan 8:00 AM – 9:00 AM

Intersection Signal Delay: 10.0

Intersection LOS: A

Intersection Capacity Utilization 63.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 16: Public Emergency Department Entrance/East Post Road Garage & East Post Road



Build Conditions

AM Peak Hour

17: Public Emergency Department Exit & East Post Road

Timing Plan: 8:00 AM – 9:00 AM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	643	0	0	265	0	4
Future Volume (Veh/h)	643	0	0	265	0	4
Sign Control	Free			Free	Stop	
Grade	2%			-2%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	714	0	0	294	0	4
Pedestrians	20			20	100	
Lane Width (ft)	9.0			10.0	11.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			2	9	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	170			262		
pX, platoon unblocked			0.90		0.90	0.90
vC, conflicting volume			814		981	477
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			575		760	201
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			818		277	653
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	357	357	147	147	4	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	4	
cSH	1700	1700	1700	1700	653	
Volume to Capacity	0.21	0.21	0.09	0.09	0.01	
Queue Length 95th (ft)	0	0	0	0	0	
Control Delay (s)	0.0	0.0	0.0	0.0	10.5	
Lane LOS					B	
Approach Delay (s)	0.0		0.0		10.5	
Approach LOS					B	
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			34.6%		ICU Level of Service	A
Analysis Period (min)			15			

Build Conditions

AM Peak Hour

18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	234	415	0	0	300	98	150	506	35	0	0	0
Future Volume (vph)	234	415	0	0	300	98	150	506	35	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	10	10	12	12	12	12	12	12
Grade (%)		2%			-5%			-3%			0%	
Satd. Flow (prot)	0	2702	0	0	2591	0	0	3192	0	0	0	0
Flt Permitted		0.636						0.989				
Satd. Flow (perm)	0	1709	0	0	2591	0	0	3153	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					58			6				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			343			379			494	
Travel Time (s)		3.0			7.8			8.6			11.2	
Confl. Peds. (#/hr)	94		104	104		94	50		23	23		50
Confl. Bikes (#/hr)			2						5			
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.92
Heavy Vehicles (%)	3%	4%	0%	0%	7%	1%	2%	1%	0%	0%	0%	0%
Parking (#/hr)		0			0							
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	698	0	0	428	0	0	743	0	0	0	0
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2						8					
Total Split (s)	10.0	61.0			51.0		39.0	39.0				
Total Lost Time (s)		5.0			5.0			5.0				
Act Effct Green (s)		56.0			46.0			34.0				
Actuated g/C Ratio		0.56			0.46			0.34				
v/c Ratio		0.69			0.35			0.69				
Control Delay		19.2			31.1			31.8				
Queue Delay		0.0			0.0			1.6				
Total Delay		19.2			31.1			33.4				
LOS		B			C			C				
Approach Delay		19.2			31.1			33.4				
Approach LOS		B			C			C				
Queue Length 50th (ft)		130			103			193				
Queue Length 95th (ft)		176			148			266				
Internal Link Dist (ft)		53			263			299			414	
Turn Bay Length (ft)												
Base Capacity (vph)		1006			1223			1075				
Starvation Cap Reductn		0			0			176				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.69			0.35			0.83				
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												
Actuated Cycle Length: 100												

Build Conditions

AM Peak Hour

18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road

Timing Plan: 8:00 AM – 9:00 AM

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 27.6

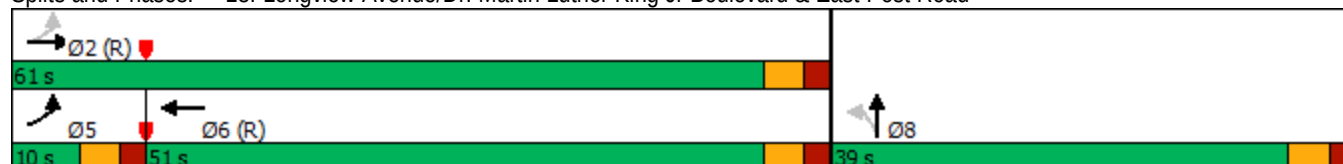
Intersection LOS: C

Intersection Capacity Utilization 73.7%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road



Build Conditions

AM Peak Hour

19: Cromwell Place/Grand Street & East Post Road

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 					 	 	
Traffic Volume (vph)	0	347	103	54	355	0	0	0	0	57	57	49
Future Volume (vph)	0	347	103	54	355	0	0	0	0	57	57	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	10	10	12	12	12	12	9	10	12
Grade (%)		5%			0%			0%			2%	
Satd. Flow (prot)	0	2394	0	0	2718	0	0	0	0	1277	1275	0
Flt Permitted					0.814					0.950		
Satd. Flow (perm)	0	2394	0	0	2190	0	0	0	0	1224	1275	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		82									41	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		343			219			455			494	
Travel Time (s)		7.8			5.0			10.3			11.2	
Confl. Peds. (#/hr)	89		116	116		89	44		32	32		44
Confl. Bikes (#/hr)			1									1
Peak Hour Factor	0.92	0.83	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.83	0.83	0.83
Heavy Vehicles (%)	0%	5%	2%	7%	4%	0%	0%	0%	0%	2%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	4	0	0	0	0	0	0	0
Parking (#/hr)		4			0					0	0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	542	0	0	493	0	0	0	0	69	128	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			2						4	
Permitted Phases				2						4		
Total Split (s)		71.0		71.0	71.0					29.0	29.0	
Total Lost Time (s)		5.0			5.0					5.0	5.0	
Act Effct Green (s)		67.0			67.0					23.0	23.0	
Actuated g/C Ratio		0.67			0.67					0.23	0.23	
v/c Ratio		0.33			0.34					0.25	0.40	
Control Delay		15.3			17.0					34.3	26.1	
Queue Delay		0.8			1.7					0.0	0.0	
Total Delay		16.1			18.8					34.3	26.1	
LOS		B			B					C	C	
Approach Delay		16.1			18.8						28.9	
Approach LOS		B			B						C	
Queue Length 50th (ft)		122			112					36	46	
Queue Length 95th (ft)		162			141					69	90	
Internal Link Dist (ft)		263			139			375			414	
Turn Bay Length (ft)												
Base Capacity (vph)		1631			1467					293	337	
Starvation Cap Reductn		757			777					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.62			0.71					0.24	0.38	
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												

Build Conditions

19: Cromwell Place/Grand Street & East Post Road

AM Peak Hour

Timing Plan: 8:00 AM – 9:00 AM

Actuated Cycle Length: 100

Offset: 35 (35%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 19.2

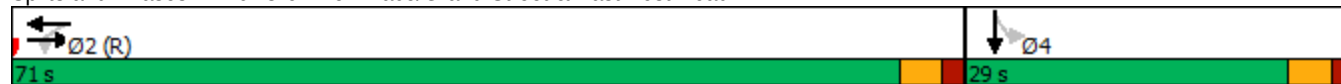
Intersection LOS: B

Intersection Capacity Utilization 65.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 19: Cromwell Place/Grand Street & East Post Road



Build Conditions
20: Chester Avenue & East Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Lane Configurations	↑↑			↑↑	↵	↵	
Traffic Volume (vph)	404	0	0	337	72	86	
Future Volume (vph)	404	0	0	337	72	86	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Grade (%)	4%			1%	0%		
Satd. Flow (prot)	3468	0	0	3522	1770	1583	
Flt Permitted					0.950		
Satd. Flow (perm)	3468	0	0	3522	1567	1387	
Right Turn on Red		No				No	
Satd. Flow (RTOR)							
Link Speed (mph)	30			30	30		
Link Distance (ft)	219			383	506		
Travel Time (s)	5.0			8.7	11.5		
Confl. Peds. (#/hr)		80	80		80	80	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	439	0	0	366	78	93	
Turn Type	NA			NA	Prot	Perm	
Protected Phases	2			2	4		9
Permitted Phases						4	
Total Split (s)	63.0			63.0	32.0	32.0	5.0
Total Lost Time (s)	4.5			4.5	4.5	4.5	
Act Effct Green (s)	58.5			58.5	32.5	32.5	
Actuated g/C Ratio	0.58			0.58	0.32	0.32	
v/c Ratio	0.22			0.18	0.14	0.21	
Control Delay	3.7			9.9	19.1	20.3	
Queue Delay	1.2			0.0	0.0	0.0	
Total Delay	4.9			9.9	19.1	20.3	
LOS	A			A	B	C	
Approach Delay	4.9			9.9	19.8		
Approach LOS	A			A	B		
Queue Length 50th (ft)	15			53	30	38	
Queue Length 95th (ft)	41			75	56	71	
Internal Link Dist (ft)	139			303	426		
Turn Bay Length (ft)							
Base Capacity (vph)	2028			2060	575	450	
Starvation Cap Reductn	1327			0	0	0	
Spillback Cap Reductn	0			211	0	0	
Storage Cap Reductn	0			0	0	0	
Reduced v/c Ratio	0.63			0.20	0.14	0.21	

Intersection Summary

Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.22	
Intersection Signal Delay: 9.4	Intersection LOS: A

Build Conditions
20: Chester Avenue & East Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Intersection Capacity Utilization 37.5%
Analysis Period (min) 15

ICU Level of Service A

Splits and Phases: 20: Chester Avenue & East Post Road



Build Conditions

AM Peak Hour

21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	0	0	0	0	6	0	829	0	0	0	0
Future Volume (vph)	63	0	0	0	0	6	0	829	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			1%			0%	
Satd. Flow (prot)	1593	1676	0	0	0	1450	0	4554	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1473	1676	0	0	0	1326	0	4554	0	0	0	0
Right Turn on Red	No		No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		403			216			494			280	
Travel Time (s)		9.2			4.9			11.2			6.4	
Confl. Peds. (#/hr)	50		50	50		50	100		100			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	0	0	0	0	7	0	901	0	0	0	0
Turn Type	Perm					Perm		NA				
Protected Phases		4						2				
Permitted Phases	4					4						
Total Split (s)	25.1	25.1				25.1		74.9				
Total Lost Time (s)	5.0	5.0				5.0		4.9				
Act Effct Green (s)	14.8					14.8		78.4				
Actuated g/C Ratio	0.15					0.15		0.78				
v/c Ratio	0.31					0.04		0.25				
Control Delay	39.4					32.8		8.5				
Queue Delay	0.0					0.0		0.0				
Total Delay	39.4					32.8		8.6				
LOS	D					C		A				
Approach Delay		39.4			32.8			8.6				
Approach LOS		D			C			A				
Queue Length 50th (ft)	37					4		95				
Queue Length 95th (ft)	76					16		132				
Internal Link Dist (ft)		323			136			414			200	
Turn Bay Length (ft)												
Base Capacity (vph)	296					266		3572				
Starvation Cap Reductn	0					0		0				
Spillback Cap Reductn	0					0		516				
Storage Cap Reductn	0					0		0				
Reduced v/c Ratio	0.23					0.03		0.29				

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.31

Intersection Signal Delay: 10.9

Intersection LOS: B

Intersection Capacity Utilization 48.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage



Build Conditions

AM Peak Hour

22: South Lexington Avenue & Fisher Avenue/Quarropas Street

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑					↖↖	↑↑	↖
Traffic Volume (vph)	0	417	157	85	72	0	0	0	0	570	798	120
Future Volume (vph)	0	417	157	85	72	0	0	0	0	570	798	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	11	11	12	12	12	12	12	12	13
Grade (%)		-1%			0%			0%			-1%	
Storage Length (ft)	0		0	135		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	2		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	2806	0	1540	3079	0	0	0	0	3105	3201	1480
Flt Permitted				0.306						0.950		
Satd. Flow (perm)	0	2806	0	486	3079	0	0	0	0	2752	3201	1363
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)												130
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		629			873			1032			215	
Travel Time (s)		14.3			19.8			23.5			4.9	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	624	0	92	78	0	0	0	0	620	867	130
Turn Type		NA		pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Total Split (s)		45.0		10.0	55.0					42.0	42.0	42.0
Total Lost Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Act Effct Green (s)		44.2		52.7	52.7					37.3	37.3	37.3
Actuated g/C Ratio		0.44		0.53	0.53					0.37	0.37	0.37
v/c Ratio		0.50		0.29	0.05					0.60	0.73	0.22
Control Delay		23.2		12.6	9.1					27.7	30.6	4.5
Queue Delay		0.0		0.0	0.0					0.0	0.0	0.0
Total Delay		23.2		12.6	9.1					27.7	30.6	4.5
LOS		C		B	A					C	C	A
Approach Delay		23.2			11.0						27.4	
Approach LOS		C			B						C	
Queue Length 50th (ft)		158		32	13					154	234	0
Queue Length 95th (ft)		214		m49	m20					210	304	36
Internal Link Dist (ft)		549			793			952			135	
Turn Bay Length (ft)				135								
Base Capacity (vph)		1239		315	1621					1067	1242	608
Starvation Cap Reductn		0		0	0					0	0	0
Spillback Cap Reductn		0		0	0					0	0	0
Storage Cap Reductn		0		0	0					0	0	0
Reduced v/c Ratio		0.50		0.29	0.05					0.58	0.70	0.21

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Build Conditions
22: South Lexington Avenue & Fisher Avenue/Quarropas Street

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Build Conditions
22: South Lexington Avenue & Fisher Avenue/Quarropas Street

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Offset: 10 (10%), Referenced to phase 2:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 25.2 Intersection LOS: C
Intersection Capacity Utilization 83.3% ICU Level of Service E
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: South Lexington Avenue & Fisher Avenue/Quarropas Street



Build Conditions

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

AM Peak Hour

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  				
Traffic Volume (vph)	455	532	0	0	75	159	75	755	75	0	0	0
Future Volume (vph)	455	532	0	0	75	159	75	755	75	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	12	12	11	11	12	12	12	12	12	12
Grade (%)		3%			-4%			1%			0%	
Storage Length (ft)	240		0	0		90	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1516	2928	0	0	1653	1405	0	4456	0	0	0	0
Flt Permitted	0.629							0.996				
Satd. Flow (perm)	959	2928	0	0	1653	1312	0	4434	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						76		16				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		873			420			280			604	
Travel Time (s)		19.8			9.5			6.4			13.7	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	495	578	0	0	82	173	0	985	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Total Split (s)	15.0	61.0			46.0	46.0	39.0	39.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Act Effct Green (s)	60.4	60.4			41.9	41.9		29.6				
Actuated g/C Ratio	0.60	0.60			0.42	0.42		0.30				
v/c Ratio	0.76	0.33			0.12	0.29		0.74				
Control Delay	22.7	11.5			18.9	12.4		39.9				
Queue Delay	0.0	0.0			0.0	0.0		5.3				
Total Delay	22.7	11.5			18.9	12.4		45.3				
LOS	C	B			B	B		D				
Approach Delay		16.6			14.5			45.3				
Approach LOS		B			B			D				
Queue Length 50th (ft)	210	117			32	39		220				
Queue Length 95th (ft)	#321	162			63	87		274				
Internal Link Dist (ft)		793			340			200			524	
Turn Bay Length (ft)	240					90						
Base Capacity (vph)	654	1768			692	593		1518				
Starvation Cap Reductn	0	0			0	0		463				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.76	0.33			0.12	0.29		0.93				

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Build Conditions

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

AM Peak Hour

Timing Plan: 8:00 AM – 9:00 AM

Offset: 15 (15%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 28.6

Intersection LOS: C

Intersection Capacity Utilization 83.3%

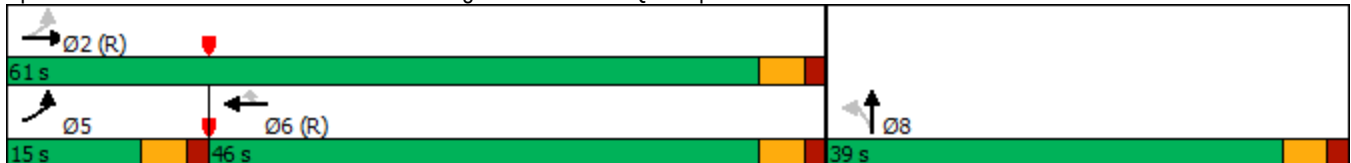
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 23: Dr. Martin Luther King Jr Boulevard & Quarropas Street



Build Conditions
24: West Lot Northeast Driveway & West Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

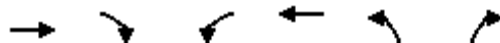
	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑		↗
Traffic Volume (veh/h)	500	0	0	423	0	17
Future Volume (Veh/h)	500	0	0	423	0	17
Sign Control	Free			Free	Stop	
Grade	-3%			3%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	556	0	0	470	0	19
Pedestrians	20			20	40	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	2			2	4	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)				207		
pX, platoon unblocked					0.92	
vC, conflicting volume			596		1086	616
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			596		1051	616
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	96
cM capacity (veh/h)			943		219	463
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	556	470	19			
Volume Left	0	0	0			
Volume Right	0	0	19			
cSH	1700	1700	463			
Volume to Capacity	0.33	0.28	0.04			
Queue Length 95th (ft)	0	0	3			
Control Delay (s)	0.0	0.0	13.1			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	13.1			
Approach LOS			B			
Intersection Summary						
Average Delay		0.2				
Intersection Capacity Utilization		44.1%	ICU Level of Service	A		
Analysis Period (min)		15				

Build Conditions

AM Peak Hour

25: Ambulance Emergency Department Entrance & East Post Road

Timing Plan: 8:00 AM – 9:00 AM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		
Traffic Volume (veh/h)	748	5	2	297	0	0
Future Volume (Veh/h)	748	5	2	297	0	0
Sign Control	Free			Free	Stop	
Grade	-1%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	831	6	2	330	0	0
Pedestrians	20			20	100	
Lane Width (ft)	12.0			12.0	0.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	2			2	0	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	173			398		
pX, platoon unblocked						
vC, conflicting volume			937		1123	538
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			937		1123	538
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			727		195	478
Direction, Lane #	EB 1	EB 2	WB 1	WB 2		
Volume Total	554	283	112	220		
Volume Left	0	0	2	0		
Volume Right	0	6	0	0		
cSH	1700	1700	727	1700		
Volume to Capacity	0.33	0.17	0.00	0.13		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.2	0.0		
Lane LOS			A			
Approach Delay (s)	0.0		0.1			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			38.1%		ICU Level of Service	A
Analysis Period (min)			15			

Build Conditions

26: Ambulance Emergency Department Exit & East Post Road

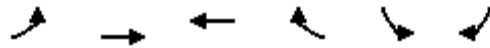
AM Peak Hour

Timing Plan: 8:00 AM – 9:00 AM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	748	0	0	299	1	3
Future Volume (Veh/h)	748	0	0	299	1	3
Sign Control	Free			Free	Stop	
Grade	0%			-1%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	831	0	0	332	1	3
Pedestrians	20			20	100	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	2			2	10	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	337			234		
pX, platoon unblocked						
vC, conflicting volume			931		1117	536
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			931		1117	536
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			661		179	434
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	416	416	166	166	4	
Volume Left	0	0	0	0	1	
Volume Right	0	0	0	0	3	
cSH	1700	1700	1700	1700	320	
Volume to Capacity	0.24	0.24	0.10	0.10	0.01	
Queue Length 95th (ft)	0	0	0	0	1	
Control Delay (s)	0.0	0.0	0.0	0.0	16.4	
Lane LOS					C	
Approach Delay (s)	0.0		0.0		16.4	
Approach LOS					C	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			37.8%		ICU Level of Service	A
Analysis Period (min)			15			

Build Conditions
27: East Post Road & Winchester Street

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	5	642	260	186	5	5
Future Volume (Veh/h)	5	642	260	186	5	5
Sign Control		Free	Free		Stop	
Grade		2%	-2%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	713	289	207	6	6
Pedestrians		20	20		100	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		2	2		10	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		299	133			
pX, platoon unblocked					0.94	
vC, conflicting volume	596				881	368
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	596				740	368
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	99
cM capacity (veh/h)	883				291	558
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	244	475	193	303	12	
Volume Left	6	0	0	0	6	
Volume Right	0	0	0	207	6	
cSH	883	1700	1700	1700	383	
Volume to Capacity	0.01	0.28	0.11	0.18	0.03	
Queue Length 95th (ft)	1	0	0	0	2	
Control Delay (s)	0.3	0.0	0.0	0.0	14.7	
Lane LOS	A				B	
Approach Delay (s)	0.1		0.0		14.7	
Approach LOS					B	
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			36.1%		ICU Level of Service	A
Analysis Period (min)			15			

Build Conditions
28: Winchester Street & East Post Road Garage

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

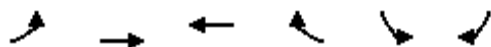


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	186	5	10	0
Future Volume (Veh/h)	0	0	186	5	10	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	207	6	11	0
Pedestrians	20			100	100	
Lane Width (ft)	0.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	0			10	10	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	551	131	31			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	551	131	31			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	87			
cM capacity (veh/h)	390	831	1582			
Direction, Lane #	NB 1	SB 1				
Volume Total	213	11				
Volume Left	207	0				
Volume Right	0	0				
cSH	1582	1700				
Volume to Capacity	0.13	0.01				
Queue Length 95th (ft)	11	0				
Control Delay (s)	7.4	0.0				
Lane LOS	A					
Approach Delay (s)	7.4	0.0				
Approach LOS						
Intersection Summary						
Average Delay			7.1			
Intersection Capacity Utilization			38.1%	ICU Level of Service		A
Analysis Period (min)			15			

Build Conditions

1: Maple Avenue & West Lot Southwest Driveway

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	6	432	468	6	17	15
Future Volume (Veh/h)	6	432	468	6	17	15
Sign Control		Free	Free		Stop	
Grade		-2%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	7	480	520	7	19	17
Pedestrians		5	5		20	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	0		2	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			687			
pX, platoon unblocked	0.94				0.94	0.94
vC, conflicting volume	547				802	288
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	391				663	116
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				95	98
cM capacity (veh/h)	1074				360	839
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	167	320	347	180	36	
Volume Left	7	0	0	0	19	
Volume Right	0	0	0	7	17	
cSH	1074	1700	1700	1700	493	
Volume to Capacity	0.01	0.19	0.20	0.11	0.07	
Queue Length 95th (ft)	0	0	0	0	6	
Control Delay (s)	0.4	0.0	0.0	0.0	12.9	
Lane LOS	A				B	
Approach Delay (s)	0.1		0.0		12.9	
Approach LOS					B	
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			27.7%		ICU Level of Service	A
Analysis Period (min)			15			

Build Conditions

MD Peak Hour

2: Roosevelt Street/West Lot Southeast Driveway & Maple Avenue

Timing Plan: 3:00 PM – 4:00 PM

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Volume (veh/h)	0	447	2	12	466	48	9	0	11	98	0	0		
Future Volume (Veh/h)	0	447	2	12	466	48	9	0	11	98	0	0		
Sign Control		Free			Free			Stop			Stop			
Grade		-2%			-1%			-4%			0%			
Peak Hour Factor	0.92	0.87	0.87	0.87	0.87	0.92	0.87	0.92	0.87	0.92	0.92	0.92		
Hourly flow rate (vph)	0	514	2	14	536	52	10	0	13	107	0	0		
Pedestrians		1						16						
Lane Width (ft)		14.0						12.0						
Walking Speed (ft/s)		3.5						3.5						
Percent Blockage		0						2						
Right turn flare (veh)														
Median type		None			None									
Median storage (veh)														
Upstream signal (ft)	357													
pX, platoon unblocked	0.90							0.90	0.90	0.90			0.90	0.90
vC, conflicting volume	588				532				828	1147	274	860	1122	295
vC1, stage 1 conf vol														
vC2, stage 2 conf vol														
vCu, unblocked vol	312				532				580	935	274	615	907	0
tC, single (s)	4.1				4.1				7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)														
tF (s)	2.2				2.2				3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100				99				97	100	98	67	100	100
cM capacity (veh/h)	1117				1030				348	231	719	323	239	972
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1								
Volume Total	257	259	282	320	23	107								
Volume Left	0	0	14	0	10	107								
Volume Right	0	2	0	52	13	0								
cSH	1117	1700	1030	1700	491	323								
Volume to Capacity	0.00	0.15	0.01	0.19	0.05	0.33								
Queue Length 95th (ft)	0	0	1	0	4	35								
Control Delay (s)	0.0	0.0	0.6	0.0	12.7	21.5								
Lane LOS			A		B	C								
Approach Delay (s)	0.0		0.3		12.7	21.5								
Approach LOS					B	C								
Intersection Summary														
Average Delay	2.2													
Intersection Capacity Utilization	44.0%			ICU Level of Service					A					
Analysis Period (min)	15													

Build Conditions

3: South Lexington Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↕	↕↕		↕	↕		↕	↕	
Traffic Volume (vph)	54	481	21	36	454	0	29	12	65	283	391	55
Future Volume (vph)	54	481	21	36	454	0	29	12	65	283	391	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	10	12	10	12	10	10	13	12
Grade (%)		0%			-2%			-5%			4%	
Storage Length (ft)	0		0	140		0	85		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3082	0	1477	3063	0	1554	1410	0	1324	1689	0
Flt Permitted		0.843		0.222			0.256			0.704		
Satd. Flow (perm)	0	2599	0	338	3063	0	414	1410	0	940	1689	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		4									9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		357			354			564			393	
Travel Time (s)		8.1			8.0			12.8			8.9	
Confl. Peds. (#/hr)	31		30	30		31	29		35	35		29
Confl. Bikes (#/hr)			1			1						3
Peak Hour Factor	0.92	0.94	0.94	0.94	0.94	0.92	0.94	0.92	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	11%	0%	0%	0%	0%	0%	4%	1%	0%	0%
Parking (#/hr)										0		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	593	0	38	483	0	31	82	0	301	475	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Total Split (s)	30.0	30.0		10.0	40.0		9.0	34.9		10.1	45.0	
Total Lost Time (s)		5.0		5.0	5.0		5.0	4.9		5.0	5.0	
Act Effect Green (s)		25.0		35.0	35.0		33.9	30.0		40.0	40.0	
Actuated g/C Ratio		0.27		0.37	0.37		0.36	0.32		0.43	0.43	
v/c Ratio		0.85		0.20	0.42		0.16	0.18		0.72	0.66	
Control Delay		46.2		31.8	35.6		18.6	24.5		27.2	20.3	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.2	0.8	
Total Delay		46.2		31.8	35.6		18.6	24.6		27.4	21.1	
LOS		D		C	D		B	C		C	C	
Approach Delay		46.2			35.3			22.9			23.6	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)		175		20	151		11	35		83	129	
Queue Length 95th (ft)		#269		50	196		28	71		m#159	268	
Internal Link Dist (ft)		277			274			484			313	
Turn Bay Length (ft)				140			85					
Base Capacity (vph)		694		186	1140		197	450		420	723	
Starvation Cap Reductn		0		0	0		0	0		0	75	
Spillback Cap Reductn		0		0	0		0	11		7	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.85		0.20	0.42		0.16	0.19		0.73	0.73	
Intersection Summary												

Build Conditions

3: South Lexington Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 33.3

Intersection LOS: C

Intersection Capacity Utilization 70.7%

ICU Level of Service C

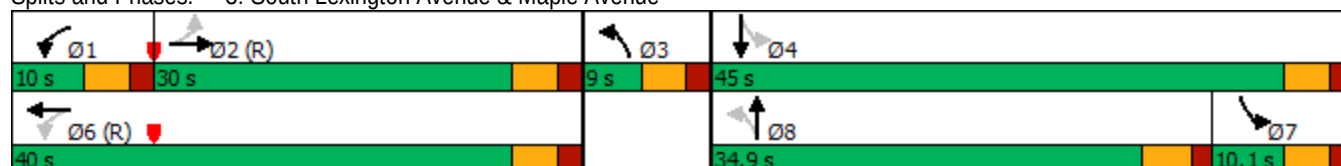
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: South Lexington Avenue & Maple Avenue



Build Conditions

MD Peak Hour

4: Davis Avenue/Main Hospital Entrance & Maple Avenue

Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	107	692	47	16	406	74	24	41	59	118	36	74
Future Volume (vph)	107	692	47	16	406	74	24	41	59	118	36	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	11	11	12	11	12	12	9	12	11	10	12
Grade (%)		1%			0%			-5%			4%	
Storage Length (ft)	100		0	0		0	0		0	90		0
Storage Lanes	1		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1426	3041	0	0	2969	0	0	1246	0	0	1506	1424
Flt Permitted	0.418				0.920			0.928			0.700	
Satd. Flow (perm)	594	3041	0	0	2735	0	0	1162	0	0	1042	1364
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			29			53				79
Link Speed (mph)		30			30			30				30
Link Distance (ft)		354			356			562				217
Travel Time (s)		8.0			8.1			12.8				4.9
Confl. Peds. (#/hr)	45		34	34		45	21		55	55		21
Confl. Bikes (#/hr)			4						1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	1%	1%	0%	0%	7%	0%	3%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	114	786	0	0	528	0	0	133	0	0	164	79
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		4
Total Split (s)	50.0	50.0		50.0	50.0		38.0	38.0		38.0	38.0	38.0
Total Lost Time (s)	5.2	5.2			5.2			5.2			5.2	5.2
Act Effect Green (s)	44.8	44.8			44.8			32.8			32.8	32.8
Actuated g/C Ratio	0.48	0.48			0.48			0.35			0.35	0.35
v/c Ratio	0.40	0.54			0.40			0.30			0.45	0.15
Control Delay	19.3	18.1			32.2			15.7			28.6	5.9
Queue Delay	0.0	1.2			0.0			0.0			0.0	0.0
Total Delay	19.3	19.4			32.2			15.7			28.6	5.9
LOS	B	B			C			B			C	A
Approach Delay		19.4			32.2			15.7			21.2	
Approach LOS		B			C			B			C	
Queue Length 50th (ft)	51	183			121			33			75	0
Queue Length 95th (ft)	m67	m223			191			79			136	30
Internal Link Dist (ft)		274			276			482			137	
Turn Bay Length (ft)	100											
Base Capacity (vph)	283	1454			1318			439			363	527
Starvation Cap Reductn	0	425			0			0			0	0
Spillback Cap Reductn	0	0			0			0			0	0
Storage Cap Reductn	0	0			0			0			0	0
Reduced v/c Ratio	0.40	0.76			0.40			0.30			0.45	0.15
Intersection Summary												

Build Conditions

4: Davis Avenue/Main Hospital Entrance & Maple Avenue

MD Peak Hour

Timing Plan: 3:00 PM – 4:00 PM

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	6.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

Offset: 30 (32%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Pretimed

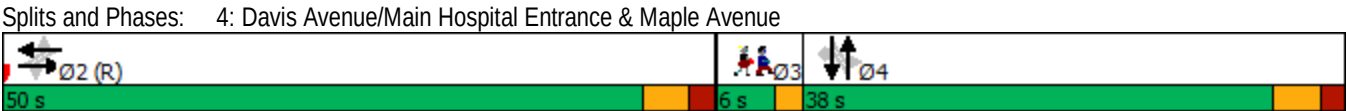
Maximum v/c Ratio: 0.54

Intersection Signal Delay: 23.1Intersection LOS: C

Intersection Capacity Utilization 69.3%ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.



Build Conditions
5: Oakwood Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	840	33	30	464	24	61
Future Volume (vph)	840	33	30	464	24	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Grade (%)	1%			0%	-5%	
Satd. Flow (prot)	3177	0	0	3209	1575	0
Flt Permitted				0.858	0.986	
Satd. Flow (perm)	3177	0	0	2760	1571	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	10				67	
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			475	444	
Travel Time (s)	8.1			10.8	10.1	
Confl. Peds. (#/hr)		40	40		6	24
Confl. Bikes (#/hr)		3				
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	0%	0%	1%	7%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	959	0	0	543	93	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			2	4	
Permitted Phases			2			
Total Split (s)	71.2		71.2	71.2	22.8	
Total Lost Time (s)	5.2			5.2	5.0	
Act Effect Green (s)	66.0			66.0	17.8	
Actuated g/C Ratio	0.70			0.70	0.19	
v/c Ratio	0.43			0.28	0.26	
Control Delay	3.5			1.0	14.8	
Queue Delay	0.2			0.0	0.0	
Total Delay	3.7			1.0	14.8	
LOS	A			A	B	
Approach Delay	3.7			1.0	14.8	
Approach LOS	A			A	B	
Queue Length 50th (ft)	45			8	13	
Queue Length 95th (ft)	65			8	55	
Internal Link Dist (ft)	276			395	364	
Turn Bay Length (ft)						
Base Capacity (vph)	2233			1937	352	
Starvation Cap Reductn	524			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.56			0.28	0.26	
Intersection Summary						
Area Type:	CBD					
Cycle Length: 94						
Actuated Cycle Length: 94						
Offset: 31 (33%), Referenced to phase 2:EBWB and 6:, Start of Green						

Build Conditions
5: Oakwood Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Control Type: Pretimed

Maximum v/c Ratio: 0.43

Intersection Signal Delay: 3.4

Intersection LOS: A

Intersection Capacity Utilization 62.8%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5: Oakwood Avenue & Maple Avenue



Build Conditions
6: Longview Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	182	618	34	30	479	196	37	326	33	0	0	0
Future Volume (vph)	182	618	34	30	479	196	37	326	33	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	11	10	11	10	10	10	9	12	12	12
Grade (%)		0%			-5%			-2%			0%	
Storage Length (ft)	225		0	60		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1462	2967	0	1509	2976	0	0	2830	0	0	0	0
Flt Permitted	0.279			0.390				0.995				
Satd. Flow (perm)	420	2967	0	604	2976	0	0	2815	0	0	0	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		11			88							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		475			281			824			379	
Travel Time (s)		10.8			6.4			18.7			8.6	
Confl. Peds. (#/hr)	60		24	24		60	44		48	48		44
Confl. Bikes (#/hr)			2			1			2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	3%	0%	1%	4%	0%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	192	687	0	32	710	0	0	417	0	0	0	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2			6			8					
Total Split (s)	13.0	62.0		49.0	49.0		29.0	29.0				
Total Lost Time (s)	5.2	5.2		5.2	5.2			5.2				
Act Effect Green (s)	57.4	57.4		43.8	43.8			23.2				
Actuated g/C Ratio	0.61	0.61		0.47	0.47			0.25				
v/c Ratio	0.55	0.38		0.11	0.50			0.60				
Control Delay	11.4	2.5		19.3	23.7			35.6				
Queue Delay	0.1	0.1		0.0	3.7			0.1				
Total Delay	11.5	2.6		19.3	27.4			35.6				
LOS	B	A		B	C			D				
Approach Delay		4.5			27.1			35.6				
Approach LOS		A			C			D				
Queue Length 50th (ft)	11	18		13	202			116				
Queue Length 95th (ft)	42	23		43	268			165				
Internal Link Dist (ft)		395			201			744			299	
Turn Bay Length (ft)	225			60								
Base Capacity (vph)	350	1817		281	1433			712				
Starvation Cap Reductn	0	0		0	616			0				
Spillback Cap Reductn	5	203		0	21			13				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.56	0.43		0.11	0.87			0.60				
Intersection Summary												

Build Conditions
6: Longview Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Build Conditions
6: Longview Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

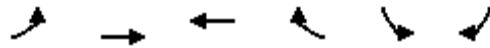
Area Type:	CBD
Cycle Length:	94
Actuated Cycle Length:	94
Offset:	52 (55%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.60
Intersection Signal Delay:	19.1
Intersection LOS:	B
Intersection Capacity Utilization	66.6%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 6: Longview Avenue & Maple Avenue



Build Conditions
7: Maple Avenue & Cromwell Place

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↗	↗
Traffic Volume (vph)	0	641	575	0	184	120
Future Volume (vph)	0	641	575	0	184	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	11	12
Grade (%)		6%	3%		4%	
Storage Length (ft)	0			0	0	60
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	3016	3094	0	1371	1383
Flt Permitted					0.950	
Satd. Flow (perm)	0	3016	3094	0	1360	1383
Right Turn on Red				Yes		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		281	255		455	
Travel Time (s)		6.4	5.8		10.3	
Confl. Peds. (#/hr)	67			67	6	2
Confl. Bikes (#/hr)						2
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%
Parking (#/hr)					0	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	704	632	0	202	132
Turn Type		NA	NA		Perm	Prot
Protected Phases		2	2			4
Permitted Phases					4	
Total Split (s)		55.0	55.0		39.0	39.0
Total Lost Time (s)		4.7	4.7		4.7	4.7
Act Effct Green (s)		50.3	50.3		34.3	34.3
Actuated g/C Ratio		0.54	0.54		0.36	0.36
v/c Ratio		0.44	0.38		0.41	0.26
Control Delay		27.4	12.2		21.4	18.5
Queue Delay		4.6	1.1		0.0	0.3
Total Delay		32.0	13.3		21.4	18.7
LOS		C	B		C	B
Approach Delay		32.0	13.3		20.3	
Approach LOS		C	B		C	
Queue Length 50th (ft)		191	81		99	54
Queue Length 95th (ft)		245	115		168	100
Internal Link Dist (ft)		201	175		375	
Turn Bay Length (ft)						60
Base Capacity (vph)		1613	1655		496	504
Starvation Cap Reductn		819	742		0	0
Spillback Cap Reductn		220	39		0	97
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.89	0.69		0.41	0.32

Intersection Summary

Build Conditions
7: Maple Avenue & Cromwell Place

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

Offset: 0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.44

Intersection Signal Delay: 22.6

Intersection LOS: C

Intersection Capacity Utilization 45.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Maple Avenue & Cromwell Place



Build Conditions

8: Greenridge Avenue/Chester Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	634	97	50	555	78	20	71	69	0	0	0
Future Volume (vph)	95	634	97	50	555	78	20	71	69	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	11
Grade (%)		2%			3%			0%			-4%	
Storage Length (ft)	125		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1752	3370	0	1743	3384	0	0	3194	0	0	0	0
Flt Permitted	0.337			0.290				0.994				
Satd. Flow (perm)	607	3370	0	515	3384	0	0	3171	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			24			75				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		255			453			507			506	
Travel Time (s)		5.8			10.3			11.5			11.5	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	103	794	0	54	688	0	0	174	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA				
Protected Phases	1	6		5	2			8				
Permitted Phases	6			2			8					
Total Split (s)	10.0	53.0		10.0	53.0		31.0	31.0				
Total Lost Time (s)	7.0	5.0		5.0	5.0			5.0				
Act Effct Green (s)	50.4	50.0		54.0	50.0			26.0				
Actuated g/C Ratio	0.54	0.53		0.57	0.53			0.28				
v/c Ratio	0.29	0.44		0.15	0.38			0.19				
Control Delay	10.0	15.4		8.3	13.7			15.3				
Queue Delay	0.0	1.3		0.0	0.0			0.0				
Total Delay	10.0	16.7		8.3	13.7			15.3				
LOS	B	B		A	B			B				
Approach Delay		15.9			13.3			15.3				
Approach LOS		B			B			B				
Queue Length 50th (ft)	27	183		12	121			23				
Queue Length 95th (ft)	49	237		26	163			48				
Internal Link Dist (ft)		175			373			427			426	
Turn Bay Length (ft)	125			75								
Base Capacity (vph)	361	1804		361	1811			931				
Starvation Cap Reductn	0	745		0	0			0				
Spillback Cap Reductn	0	0		0	0			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.29	0.75		0.15	0.38			0.19				
Intersection Summary												
Area Type:	Other											
Cycle Length: 94												
Actuated Cycle Length: 94												

Build Conditions
8: Greenridge Avenue/Chester Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Offset: 30 (32%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 14.8	Intersection LOS: B
Intersection Capacity Utilization 58.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Greenridge Avenue/Chester Avenue & Maple Avenue



Build Conditions

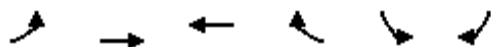
MD Peak Hour

11: West Lot Northwest Driveway/Highland Avenue & West Post Road Timing Plan: 3:00 PM – 4:00 PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	347	11	0	381	55	2	0	0	60	0	61
Future Volume (Veh/h)	119	347	11	0	381	55	2	0	0	60	0	61
Sign Control		Free			Free			Stop			Stop	
Grade		-4%			3%			0%			-11%	
Peak Hour Factor	0.88	0.88	0.92	0.92	0.88	0.88	0.92	0.92	0.92	0.88	0.92	0.88
Hourly flow rate (vph)	135	394	12	0	433	62	2	0	0	68	0	69
Pedestrians		22			6						49	
Lane Width (ft)		16.0			16.0						12.0	
Walking Speed (ft/s)		3.5			3.5						3.5	
Percent Blockage		3			1						5	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					742							
pX, platoon unblocked	0.90						0.90	0.90		0.90	0.90	0.90
vC, conflicting volume	544			406			1225	1214	406	1189	1189	535
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	438			406			1195	1182	406	1155	1155	428
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	86			100			98	100	100	48	100	87
cM capacity (veh/h)	963			1153			107	140	640	130	146	525
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	541	495	2	137								
Volume Left	135	0	2	68								
Volume Right	12	62	0	69								
cSH	963	1153	107	209								
Volume to Capacity	0.14	0.00	0.02	0.66								
Queue Length 95th (ft)	12	0	1	99								
Control Delay (s)	3.6	0.0	39.3	50.0								
Lane LOS	A		E	F								
Approach Delay (s)	3.6	0.0	39.3	50.0								
Approach LOS			E	F								
Intersection Summary												
Average Delay			7.6									
Intersection Capacity Utilization			75.6%		ICU Level of Service				D			
Analysis Period (min)			15									

Build Conditions
12: West Post Road & Orawaupum Street

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	28	373	420	56	15	17
Future Volume (Veh/h)	28	373	420	56	15	17
Sign Control		Free	Free		Stop	
Grade		-3%	2%		-10%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	33	434	488	65	17	20
Pedestrians			4		56	
Lane Width (ft)			16.0		11.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			1		5	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			361			
pX, platoon unblocked	0.87				0.87	0.87
vC, conflicting volume	609				1080	576
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	478				1019	441
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				92	96
cM capacity (veh/h)	908				212	515
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	467	553	37			
Volume Left	33	0	17			
Volume Right	0	65	20			
cSH	908	1700	311			
Volume to Capacity	0.04	0.33	0.12			
Queue Length 95th (ft)	3	0	10			
Control Delay (s)	1.1	0.0	18.1			
Lane LOS	A		C			
Approach Delay (s)	1.1	0.0	18.1			
Approach LOS			C			
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			57.4%	ICU Level of Service		B
Analysis Period (min)			15			

Build Conditions

14: South Lexington Avenue & West Post Road/East Post Road

MD Peak Hour

Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖				↗	↖	↑↗	
Traffic Volume (vph)	0	338	85	92	274	0	0	0	66	207	575	200
Future Volume (vph)	0	338	85	92	274	0	0	0	66	207	575	200
Ideal Flow (vphpl)	1900	2050	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	12	12	12	12	11	11	11
Grade (%)		-1%			0%			0%			1%	
Storage Length (ft)	0		105	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1589	1294	0	2558	0	0	0	1479	1065	2759	0
Flt Permitted					0.634					0.950		
Satd. Flow (perm)	0	1589	1220	0	1633	0	0	0	1339	997	2759	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			76						188		83	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		207			173			393			1032	
Travel Time (s)		4.7			3.9			8.9			23.5	
Confl. Peds. (#/hr)	61		38	38		61	34		54	54		34
Confl. Bikes (#/hr)			2									4
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	5%	0%	2%	5%	0%	0%	0%	0%	2%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0	0		24					41	4	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	380	96	0	411	0	0	0	72	233	871	0
Turn Type		NA	Perm	Perm	NA				Perm	Perm	NA	
Protected Phases		2			2							4
Permitted Phases			2	2					8	4		
Total Split (s)		37.0	37.0	37.0	37.0				57.0	57.0	57.0	
Total Lost Time (s)		5.0	5.0		5.0				5.0	5.0	5.0	
Act Effect Green (s)		32.0	32.0		32.0				52.0	52.0	52.0	
Actuated g/C Ratio		0.34	0.34		0.34				0.55	0.55	0.55	
v/c Ratio		0.70	0.21		0.74				0.09	0.42	0.56	
Control Delay		35.2	8.8		36.9				5.4	7.9	5.8	
Queue Delay		0.0	0.0		0.0				0.0	0.0	0.0	
Total Delay		35.2	8.8		36.9				5.4	7.9	5.8	
LOS		D	A		D				A	A	A	
Approach Delay		29.9			36.9			5.4			6.3	
Approach LOS		C			D			A			A	
Queue Length 50th (ft)		194	8		112				7	31	48	
Queue Length 95th (ft)		296	41		169				m15	67	93	
Internal Link Dist (ft)		127			93			313			952	
Turn Bay Length (ft)			105									
Base Capacity (vph)		540	465		555				824	551	1563	
Starvation Cap Reductn		0	0		0				0	0	0	
Spillback Cap Reductn		0	0		0				0	0	0	
Storage Cap Reductn		0	0		0				0	0	0	
Reduced v/c Ratio		0.70	0.21		0.74				0.09	0.42	0.56	

Build Conditions
14: South Lexington Avenue & West Post Road/East Post Road

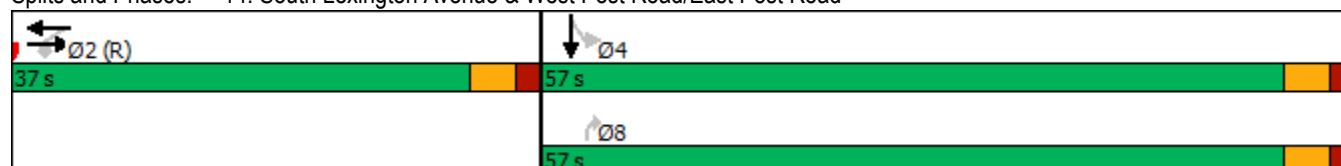
MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Intersection Summary

Area Type:	CBD
Cycle Length:	94
Actuated Cycle Length:	94
Offset:	0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.74
Intersection Signal Delay:	17.8
Intersection LOS:	B
Intersection Capacity Utilization	78.0%
ICU Level of Service	D
Analysis Period (min)	15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: South Lexington Avenue & West Post Road/East Post Road



Build Conditions

MD Peak Hour

16: Public Emergency Department Entrance/East Post Road Garage & East Post Road

East Post Road - 3:00 PM - 4:00 PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔						↔	
Traffic Volume (vph)	64	532	10	3	294	3	0	0	0	199	0	72
Future Volume (vph)	64	532	10	3	294	3	0	0	0	199	0	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	10	10	12	12	12	12	12	12	12
Grade (%)		0%			-1%			0%			0%	
Satd. Flow (prot)	0	3044	0	0	2977	0	0	0	0	0	1523	0
Flt Permitted		0.883			0.950						0.965	
Satd. Flow (perm)	0	2654	0	0	2826	0	0	0	0	0	1435	0
Right Turn on Red			Yes			Yes				Yes		Yes
Satd. Flow (RTOR)		3			2						20	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		234			170			167			197	
Travel Time (s)		5.3			3.9			3.8			4.5	
Confl. Peds. (#/hr)	100		100	100		100				50		50
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	673	0	0	333	0	0	0	0	0	301	0
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases	4			8						6		
Total Split (s)	61.0	61.0		61.0	61.0					33.0	33.0	
Total Lost Time (s)		4.5			4.5						4.5	
Act Effect Green (s)		19.0			19.0						15.2	
Actuated g/C Ratio		0.43			0.43						0.35	
v/c Ratio		0.58			0.27						0.59	
Control Delay		12.2			9.0						17.4	
Queue Delay		0.0			0.0						0.0	
Total Delay		12.2			9.0						17.4	
LOS		B			A						B	
Approach Delay		12.2			9.0						17.4	
Approach LOS		B			A						B	
Queue Length 50th (ft)		68			28						54	
Queue Length 95th (ft)		126			57						146	
Internal Link Dist (ft)		154			90			87			117	
Turn Bay Length (ft)												
Base Capacity (vph)		2624			2794						1003	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.26			0.12						0.30	

Intersection Summary

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 43.8

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 12.6

Intersection LOS: B

Build Conditions

MD Peak Hour

16: Public Emergency Department Entrance/East Post Road Garage & East Post Road

Analysis Period: 3:00 PM – 4:00 PM

Intersection Capacity Utilization 63.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 16: Public Emergency Department Entrance/East Post Road Garage & East Post Road



Build Conditions
17: Public Emergency Department Exit & East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	731	0	0	298	2	6
Future Volume (Veh/h)	731	0	0	298	2	6
Sign Control	Free			Free	Stop	
Grade	2%			-2%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	812	0	0	331	2	7
Pedestrians	20			20	100	
Lane Width (ft)	9.0			10.0	11.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			2	9	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	170			262		
pX, platoon unblocked			0.87		0.87	0.87
vC, conflicting volume			912		1098	526
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			613		825	171
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			768		245	662
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	406	406	166	166	9	
Volume Left	0	0	0	0	2	
Volume Right	0	0	0	0	7	
cSH	1700	1700	1700	1700	480	
Volume to Capacity	0.24	0.24	0.10	0.10	0.02	
Queue Length 95th (ft)	0	0	0	0	1	
Control Delay (s)	0.0	0.0	0.0	0.0	12.6	
Lane LOS					B	
Approach Delay (s)	0.0		0.0		12.6	
Approach LOS					B	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			37.3%		ICU Level of Service	A
Analysis Period (min)			15			

Build Conditions

MD Peak Hour

18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road

Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	324	405	0	0	275	203	121	568	69	0	0	0
Future Volume (vph)	324	405	0	0	275	203	121	568	69	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	10	10	12	12	12	12	12	12
Grade (%)		2%			-5%			-3%			0%	
Satd. Flow (prot)	0	2693	0	0	2479	0	0	3180	0	0	0	0
Flt Permitted		0.600						0.992				
Satd. Flow (perm)	0	1610	0	0	2479	0	0	3154	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					149			13				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			343			379			494	
Travel Time (s)		3.0			7.8			8.6			11.2	
Confl. Peds. (#/hr)	94		104	104		94	50		23	23		50
Confl. Bikes (#/hr)			2						5			
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.92
Heavy Vehicles (%)	3%	4%	0%	0%	7%	1%	2%	1%	0%	0%	0%	0%
Parking (#/hr)		0			0							
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	783	0	0	514	0	0	815	0	0	0	0
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2						8					
Total Split (s)	14.0	53.0			39.0		41.0	41.0				
Total Lost Time (s)		5.0			5.0			5.0				
Act Effct Green (s)		48.0			34.0			36.0				
Actuated g/C Ratio		0.51			0.36			0.38				
v/c Ratio		1.01dl			0.52			0.67				
Control Delay		32.3			34.6			23.0				
Queue Delay		0.0			0.2			1.4				
Total Delay		32.3			34.9			24.3				
LOS		C			C			C				
Approach Delay		32.3			34.9			24.3				
Approach LOS		C			C			C				
Queue Length 50th (ft)		161			112			175				
Queue Length 95th (ft)		#234			170			252				
Internal Link Dist (ft)		53			263			299			414	
Turn Bay Length (ft)												
Base Capacity (vph)		925			991			1215				
Starvation Cap Reductn		0			104			211				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.85			0.58			0.81				
Intersection Summary												
Area Type:	CBD											
Cycle Length: 94												
Actuated Cycle Length: 94												

MD Peak Hour

Timing Plan: 3:00 PM – 4:00 PM

Control Type: Pretimed

Intersection Signal Delay: 29.8

Intersection LOS: C

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

 Ø2 (R) 53 s	 Ø6 (R)	 Ø5	 Ø8
39 s	14 s	41 s	

Build Conditions

MD Peak Hour

19: Cromwell Place/Grand Street & East Post Road

Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	403	69	55	389	0	0	0	0	53	57	89
Future Volume (vph)	0	403	69	55	389	0	0	0	0	53	57	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	10	10	12	12	12	12	9	10	12
Grade (%)		5%			0%			0%			2%	
Satd. Flow (prot)	0	2490	0	0	2722	0	0	0	0	1277	1236	0
Flt Permitted					0.817					0.950		
Satd. Flow (perm)	0	2490	0	0	2204	0	0	0	0	1227	1236	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		41									80	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		343			219			455			494	
Travel Time (s)		7.8			5.0			10.3			11.2	
Confl. Peds. (#/hr)	89		116	116		89	44		32	32		44
Confl. Bikes (#/hr)			1									1
Peak Hour Factor	0.92	0.83	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.83	0.83	0.83
Heavy Vehicles (%)	0%	5%	2%	7%	4%	0%	0%	0%	0%	2%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	4	0	0	0	0	0	0	0
Parking (#/hr)		4			0					0	0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	569	0	0	535	0	0	0	0	64	176	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			2						4	
Permitted Phases				2						4		
Total Split (s)		65.0		65.0	65.0					29.0	29.0	
Total Lost Time (s)		5.0			5.0					5.0	5.0	
Act Effect Green (s)		61.0			61.0					23.0	23.0	
Actuated g/C Ratio		0.65			0.65					0.24	0.24	
v/c Ratio		0.35			0.37					0.21	0.49	
Control Delay		10.1			19.9					30.6	21.7	
Queue Delay		0.8			4.6					0.0	0.0	
Total Delay		10.9			24.6					30.6	21.7	
LOS		B			C					C	C	
Approach Delay		10.9			24.6						24.1	
Approach LOS		B			C						C	
Queue Length 50th (ft)		110			132					31	47	
Queue Length 95th (ft)		m112			167					60	97	
Internal Link Dist (ft)		263			139			375			414	
Turn Bay Length (ft)												
Base Capacity (vph)		1630			1430					313	375	
Starvation Cap Reductn		728			806					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.63			0.86					0.20	0.47	
Intersection Summary												
Area Type:	CBD											
Cycle Length: 94												

Build Conditions
19: Cromwell Place/Grand Street & East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Actuated Cycle Length: 94

Offset: 35 (37%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.49

Intersection Signal Delay: 18.7

Intersection LOS: B

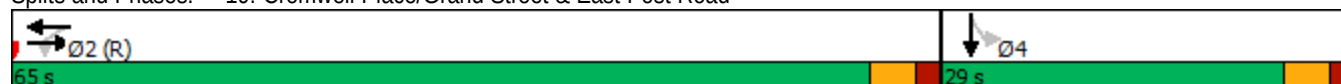
Intersection Capacity Utilization 65.0%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 19: Cromwell Place/Grand Street & East Post Road



Build Conditions
20: Chester Avenue & East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

							
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Lane Configurations	↑↑			↑↑	↗	↘	
Traffic Volume (vph)	456	0	0	377	67	89	
Future Volume (vph)	456	0	0	377	67	89	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Grade (%)	4%			1%	0%		
Satd. Flow (prot)	3468	0	0	3522	1770	1583	
Flt Permitted					0.950		
Satd. Flow (perm)	3468	0	0	3522	1580	1398	
Right Turn on Red		No				No	
Satd. Flow (RTOR)							
Link Speed (mph)	30			30	30		
Link Distance (ft)	219			383	506		
Travel Time (s)	5.0			8.7	11.5		
Confl. Peds. (#/hr)		80	80		80	80	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	496	0	0	410	73	97	
Turn Type	NA			NA	Prot	Perm	
Protected Phases	2			2	4		9
Permitted Phases						4	
Total Split (s)	55.0			55.0	34.0	34.0	5.0
Total Lost Time (s)	4.5			4.5	4.5	4.5	
Act Effect Green (s)	50.5			50.5	29.5	29.5	
Actuated g/C Ratio	0.54			0.54	0.31	0.31	
v/c Ratio	0.27			0.22	0.13	0.22	
Control Delay	13.8			11.8	23.0	24.5	
Queue Delay	2.3			0.1	0.0	0.0	
Total Delay	16.2			11.9	23.0	24.5	
LOS	B			B	C	C	
Approach Delay	16.2			11.9	23.8		
Approach LOS	B			B	C		
Queue Length 50th (ft)	64			63	33	45	
Queue Length 95th (ft)	112			90	72	91	
Internal Link Dist (ft)	139			303	426		
Turn Bay Length (ft)							
Base Capacity (vph)	1863			1892	555	438	
Starvation Cap Reductn	1204			0	0	0	
Spillback Cap Reductn	0			494	0	0	
Storage Cap Reductn	0			0	0	0	
Reduced v/c Ratio	0.75			0.29	0.13	0.22	
Intersection Summary							
Area Type:	Other						
Cycle Length:	94						
Actuated Cycle Length:	94						
Offset:	0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green						
Control Type:	Pretimed						
Maximum v/c Ratio:	0.27						
Intersection Signal Delay:	15.7			Intersection LOS: B			

Build Conditions
20: Chester Avenue & East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Intersection Capacity Utilization 37.6%
Analysis Period (min) 15

ICU Level of Service A

Splits and Phases: 20: Chester Avenue & East Post Road



Build Conditions

MD Peak Hour

21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	0	0	0	0	6	0	1085	0	0	0	0
Future Volume (vph)	69	0	0	0	0	6	0	1085	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			1%			0%	
Satd. Flow (prot)	1593	1676	0	0	0	1450	0	4554	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1480	1676	0	0	0	1333	0	4554	0	0	0	0
Right Turn on Red	No		No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		403			216			494			280	
Travel Time (s)		9.2			4.9			11.2			6.4	
Confl. Peds. (#/hr)	50		50	50		50	100		100			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	0	0	0	0	7	0	1179	0	0	0	0
Turn Type	Perm					Perm		NA				
Protected Phases		4						2				
Permitted Phases	4					4						
Total Split (s)	28.1	28.1				28.1		65.9				
Total Lost Time (s)	5.0	5.0				5.0		4.9				
Act Effct Green (s)	14.8					14.8		72.4				
Actuated g/C Ratio	0.16					0.16		0.77				
v/c Ratio	0.32					0.03		0.34				
Control Delay	36.4					29.8		8.1				
Queue Delay	0.0					0.0		0.6				
Total Delay	36.5					29.8		8.7				
LOS	D					C		A				
Approach Delay		36.5			29.8			8.7				
Approach LOS		D			C			A				
Queue Length 50th (ft)	37					3		149				
Queue Length 95th (ft)	77					15		174				
Internal Link Dist (ft)		323			136			414			200	
Turn Bay Length (ft)												
Base Capacity (vph)	363					327		3507				
Starvation Cap Reductn	0					0		0				
Spillback Cap Reductn	17					0		1768				
Storage Cap Reductn	0					0		0				
Reduced v/c Ratio	0.22					0.02		0.68				

Intersection Summary

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.34

Intersection Signal Delay: 10.5

Intersection LOS: B

Build Conditions

MD Peak Hour

21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage Timing Plan: 3:00 PM – 4:00 PM

Intersection Capacity Utilization 54.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage

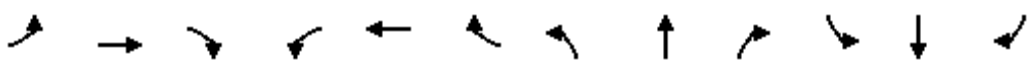


Build Conditions

MD Peak Hour

22: South Lexington Avenue & Fisher Avenue/Quarropas Street

Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑					↖↖	↑↑	↖
Traffic Volume (vph)	0	202	117	77	89	0	0	0	0	235	780	129
Future Volume (vph)	0	202	117	77	89	0	0	0	0	235	780	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	11	11	12	12	12	12	12	12	13
Grade (%)		-1%			0%			0%			-1%	
Storage Length (ft)	0		0	135		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	2		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	2749	0	1540	3079	0	0	0	0	3105	3201	1480
Flt Permitted				0.456						0.950		
Satd. Flow (perm)	0	2749	0	716	3079	0	0	0	0	2773	3201	1369
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)												140
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		629			873			1032			215	
Travel Time (s)		14.3			19.8			23.5			4.9	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	347	0	84	97	0	0	0	0	255	848	140
Turn Type		NA		pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Total Split (s)		30.0		9.0	39.0					52.0	52.0	52.0
Total Lost Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Act Effct Green (s)		36.8		47.1	47.1					36.9	36.9	36.9
Actuated g/C Ratio		0.39		0.50	0.50					0.39	0.39	0.39
v/c Ratio		0.32		0.20	0.06					0.23	0.68	0.23
Control Delay		24.1		22.0	20.2					18.4	25.8	3.3
Queue Delay		0.0		0.0	0.0					0.0	0.0	0.0
Total Delay		24.1		22.0	20.2					18.4	25.8	3.3
LOS		C		C	C					B	C	A
Approach Delay		24.1			21.0						21.8	
Approach LOS		C			C						C	
Queue Length 50th (ft)		78		31	18					51	215	0
Queue Length 95th (ft)		134		m60	m33					63	226	29
Internal Link Dist (ft)		549			793			952			135	
Turn Bay Length (ft)				135								
Base Capacity (vph)		1077		424	1544					1388	1602	755
Starvation Cap Reductn		0		0	0					0	0	0
Spillback Cap Reductn		0		0	0					0	0	0
Storage Cap Reductn		0		0	0					0	0	0
Reduced v/c Ratio		0.32		0.20	0.06					0.18	0.53	0.19

Intersection Summary

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

Build Conditions
22: South Lexington Avenue & Fisher Avenue/Quarropas Street

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

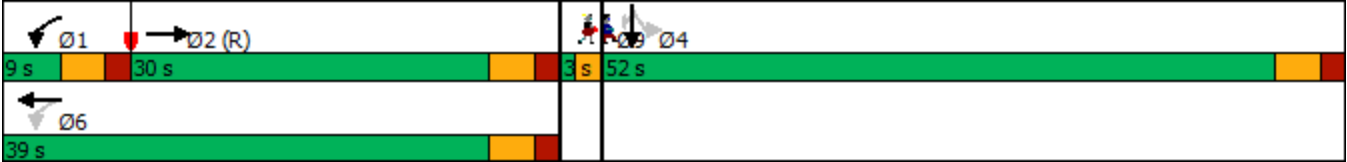
Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Build Conditions
22: South Lexington Avenue & Fisher Avenue/Quarropas Street

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 22.1 Intersection LOS: C
Intersection Capacity Utilization 68.8% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: South Lexington Avenue & Fisher Avenue/Quarropas Street



Build Conditions

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

MD Peak Hour

Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  				
Traffic Volume (vph)	129	309	0	0	125	88	101	973	94	0	0	0
Future Volume (vph)	129	309	0	0	125	88	101	973	94	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	12	12	11	11	12	12	12	12	12	12
Grade (%)		3%			-4%			1%			0%	
Storage Length (ft)	240		0	0		90	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1516	2928	0	0	1653	1405	0	4458	0	0	0	0
Flt Permitted	0.591							0.996				
Satd. Flow (perm)	906	2928	0	0	1653	1316	0	4437	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						96		17				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		873			420			280			604	
Travel Time (s)		19.8			9.5			6.4			13.7	
Confl. Peds. (#/hr)	50		50	50		50	50		50			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	140	336	0	0	136	96	0	1270	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Total Split (s)	13.0	54.0			41.0	41.0	40.0	40.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Act Effct Green (s)	50.5	50.5			37.6	37.6		33.5				
Actuated g/C Ratio	0.54	0.54			0.40	0.40		0.36				
v/c Ratio	0.26	0.21			0.21	0.16		0.80				
Control Delay	20.6	20.1			20.2	4.9		42.8				
Queue Delay	0.0	0.0			0.0	0.0		49.1				
Total Delay	20.6	20.1			20.2	4.9		91.9				
LOS	C	C			C	A		F				
Approach Delay		20.2			13.9			91.9				
Approach LOS		C			B			F				
Queue Length 50th (ft)	49	0			54	0		288				
Queue Length 95th (ft)	80	0			97	31		342				
Internal Link Dist (ft)		793			340			200			524	
Turn Bay Length (ft)	240					90						
Base Capacity (vph)	539	1572			661	584		1662				
Starvation Cap Reductn	0	0			0	0		626				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.26	0.21			0.21	0.16		1.23				

Intersection Summary

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

Offset: 13 (14%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 65.5Intersection LOS: E

Intersection Capacity Utilization 68.8%ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 23: Dr. Martin Luther King Jr Boulevard & Quarropas Street



Build Conditions
24: West Lot Northeast Driveway & West Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

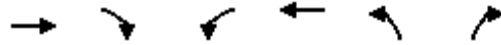
						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	389	0	0	473	0	35
Future Volume (Veh/h)	389	0	0	473	0	35
Sign Control	Free			Free	Stop	
Grade	-3%			3%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	432	0	0	526	0	39
Pedestrians	20			20	40	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	2			2	4	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)				207		
pX, platoon unblocked					0.87	
vC, conflicting volume			472		1018	492
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			472		947	492
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	93
cM capacity (veh/h)			1048		238	544
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	432	526	39			
Volume Left	0	0	0			
Volume Right	0	0	39			
cSH	1700	1700	544			
Volume to Capacity	0.25	0.31	0.07			
Queue Length 95th (ft)	0	0	6			
Control Delay (s)	0.0	0.0	12.1			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	12.1			
Approach LOS			B			
Intersection Summary						
Average Delay		0.5				
Intersection Capacity Utilization		42.5%	ICU Level of Service	A		
Analysis Period (min)		15				

Build Conditions

MD Peak Hour

25: Ambulance Emergency Department Entrance & East Post Road

Timing Plan: 3:00 PM – 4:00 PM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		
Traffic Volume (veh/h)	599	9	3	365	0	0
Future Volume (Veh/h)	599	9	3	365	0	0
Sign Control	Free			Free	Stop	
Grade	-1%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	666	10	3	406	0	0
Pedestrians	20			20	100	
Lane Width (ft)	12.0			12.0	0.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	2			2	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)	173			398		
pX, platoon unblocked						
vC, conflicting volume			776		1000	458
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			776		1000	458
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			836		234	539
Direction, Lane #	EB 1	EB 2	WB 1	WB 2		
Volume Total	444	232	138	271		
Volume Left	0	0	3	0		
Volume Right	0	10	0	0		
cSH	1700	1700	836	1700		
Volume to Capacity	0.26	0.14	0.00	0.16		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s)	0.0	0.0	0.2	0.0		
Lane LOS			A			
Approach Delay (s)	0.0		0.1			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			33.7%	ICU Level of Service		A
Analysis Period (min)			15			

Build Conditions

26: Ambulance Emergency Department Exit & East Post Road

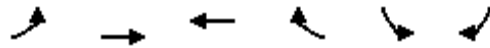
MD Peak Hour

Timing Plan: 3:00 PM – 4:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	599	0	0	366	2	6
Future Volume (Veh/h)	599	0	0	366	2	6
Sign Control	Free			Free	Stop	
Grade	0%			-1%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	666	0	0	407	2	7
Pedestrians	20			20	100	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	2			2	10	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	337			234		
pX, platoon unblocked					0.97	
vC, conflicting volume			766		990	453
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			766		927	453
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			763		230	492
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	333	333	204	204	9	
Volume Left	0	0	0	0	2	
Volume Right	0	0	0	0	7	
cSH	1700	1700	1700	1700	392	
Volume to Capacity	0.20	0.20	0.12	0.12	0.02	
Queue Length 95th (ft)	0	0	0	0	2	
Control Delay (s)	0.0	0.0	0.0	0.0	14.4	
Lane LOS					B	
Approach Delay (s)	0.0		0.0		14.4	
Approach LOS					B	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			33.3%		ICU Level of Service	A
Analysis Period (min)			15			

Build Conditions
27: East Post Road & Winchester Street

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	5	732	293	93	5	5
Future Volume (Veh/h)	5	732	293	93	5	5
Sign Control		Free	Free		Stop	
Grade		2%	-2%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	813	326	103	6	6
Pedestrians		20	20		100	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		2	2		10	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		299	133			
pX, platoon unblocked					0.90	
vC, conflicting volume	529				916	334
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	529				672	334
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	99
cM capacity (veh/h)	936				307	587
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	277	542	217	212	12	
Volume Left	6	0	0	0	6	
Volume Right	0	0	0	103	6	
cSH	936	1700	1700	1700	403	
Volume to Capacity	0.01	0.32	0.13	0.12	0.03	
Queue Length 95th (ft)	0	0	0	0	2	
Control Delay (s)	0.3	0.0	0.0	0.0	14.2	
Lane LOS	A				B	
Approach Delay (s)	0.1		0.0		14.2	
Approach LOS					B	
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			38.6%		ICU Level of Service	A
Analysis Period (min)			15			

Build Conditions
28: Winchester Street & East Post Road Garage

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

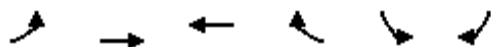


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	93	5	10	0
Future Volume (Veh/h)	0	0	93	5	10	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	103	6	11	0
Pedestrians	20			100	100	
Lane Width (ft)	0.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	0			10	10	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	343	131	31			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	343	131	31			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	93			
cM capacity (veh/h)	553	831	1582			
Direction, Lane #	NB 1	SB 1				
Volume Total	109	11				
Volume Left	103	0				
Volume Right	0	0				
cSH	1582	1700				
Volume to Capacity	0.07	0.01				
Queue Length 95th (ft)	5	0				
Control Delay (s)	7.1	0.0				
Lane LOS	A					
Approach Delay (s)	7.1	0.0				
Approach LOS						
Intersection Summary						
Average Delay			6.4			
Intersection Capacity Utilization			32.3%	ICU Level of Service		A
Analysis Period (min)			15			

Build Conditions

1: Maple Avenue & West Lot Southwest Driveway

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	3	435	538	0	4	21
Future Volume (Veh/h)	3	435	538	0	4	21
Sign Control		Free	Free		Stop	
Grade		-2%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	3	483	598	0	4	23
Pedestrians		5	5		20	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	0		2	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			687			
pX, platoon unblocked	0.91				0.91	0.91
vC, conflicting volume	618				870	324
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	386				663	63
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	97
cM capacity (veh/h)	1045				350	879
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	164	322	399	199	27	
Volume Left	3	0	0	0	4	
Volume Right	0	0	0	0	23	
cSH	1045	1700	1700	1700	718	
Volume to Capacity	0.00	0.19	0.23	0.12	0.04	
Queue Length 95th (ft)	0	0	0	0	3	
Control Delay (s)	0.2	0.0	0.0	0.0	10.2	
Lane LOS	A				B	
Approach Delay (s)	0.1		0.0		10.2	
Approach LOS					B	
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			26.4%		ICU Level of Service	A
Analysis Period (min)			15			

Build Conditions

PM Peak Hour

2: Roosevelt Street/West Lot Southeast Driveway & Maple Avenue

Timing Plan: 5:00 PM – 6:00 PM

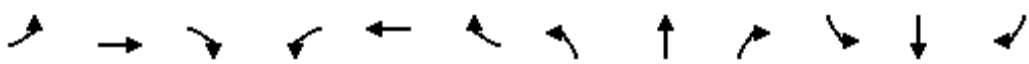
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	435	5	9	531	15	7	0	13	66	0	0
Future Volume (Veh/h)	0	435	5	9	531	15	7	0	13	66	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		-2%			-1%			-4%			0%	
Peak Hour Factor	0.92	0.87	0.87	0.87	0.87	0.92	0.87	0.92	0.87	0.92	0.92	0.92
Hourly flow rate (vph)	0	500	6	10	610	16	8	0	15	72	0	0
Pedestrians		1						16				
Lane Width (ft)		14.0						12.0				
Walking Speed (ft/s)		3.5						3.5				
Percent Blockage		0						2				
Right turn flare (veh)												
Median type		None				None						
Median storage (veh)												
Upstream signal (ft)					357							
pX, platoon unblocked	0.88						0.88	0.88		0.88	0.88	0.88
vC, conflicting volume	626			522			845	1165	269	903	1160	314
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	315			522			563	925	269	628	919	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			98	100	98	77	100	100
cM capacity (veh/h)	1098			1039			353	231	724	312	233	958
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	250	256	315	321	23	72						
Volume Left	0	0	10	0	8	72						
Volume Right	0	6	0	16	15	0						
cSH	1098	1700	1039	1700	530	312						
Volume to Capacity	0.00	0.15	0.01	0.19	0.04	0.23						
Queue Length 95th (ft)	0	0	1	0	3	22						
Control Delay (s)	0.0	0.0	0.4	0.0	12.1	20.0						
Lane LOS			A		B	C						
Approach Delay (s)	0.0		0.2		12.1	20.0						
Approach LOS					B	C						
Intersection Summary												
Average Delay			1.5									
Intersection Capacity Utilization			40.4%		ICU Level of Service					A		
Analysis Period (min)			15									

Build Conditions

3: South Lexington Avenue & Maple Avenue

PM Peak Hour

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↕↕		↖	↖		↖	↖	
Traffic Volume (vph)	44	427	42	38	472	10	30	15	62	272	543	53
Future Volume (vph)	44	427	42	38	472	10	30	15	62	272	543	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	10	12	10	12	10	10	13	12
Grade (%)		0%			-2%			-5%			4%	
Storage Length (ft)	0		0	140		0	85		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3039	0	1477	3046	0	1554	1419	0	1324	1702	0
Flt Permitted		0.855		0.244			0.121			0.704		
Satd. Flow (perm)	0	2598	0	370	3046	0	198	1419	0	937	1702	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		9			2						6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		357			354			564			393	
Travel Time (s)		8.1			8.0			12.8			8.9	
Confl. Peds. (#/hr)	31		30	30		31	29		35	35		29
Confl. Bikes (#/hr)			1			1						3
Peak Hour Factor	0.92	0.94	0.94	0.94	0.94	0.92	0.94	0.92	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	11%	0%	0%	0%	0%	0%	4%	1%	0%	0%
Parking (#/hr)										0		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	547	0	40	513	0	32	82	0	289	634	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Total Split (s)	31.0	31.0		9.0	40.0		9.0	37.9		13.1	51.0	
Total Lost Time (s)		5.0		5.0	5.0		5.0	4.9		5.0	5.0	
Act Effect Green (s)		26.0		35.0	35.0		36.9	33.0		46.0	46.0	
Actuated g/C Ratio		0.26		0.35	0.35		0.37	0.33		0.46	0.46	
v/c Ratio		0.80		0.23	0.48		0.25	0.18		0.63	0.81	
Control Delay		44.4		20.4	19.0		22.4	25.2		15.6	18.3	
Queue Delay		0.0		0.0	0.3		0.0	0.0		0.0	4.8	
Total Delay		44.4		20.4	19.3		22.4	25.2		15.6	23.1	
LOS		D		C	B		C	C		B	C	
Approach Delay		44.4			19.3			24.4			20.8	
Approach LOS		D			B			C			C	
Queue Length 50th (ft)		169		8	55		12	37		88	248	
Queue Length 95th (ft)		#250		22	86		30	73		m115	m359	
Internal Link Dist (ft)		277			274			484			313	
Turn Bay Length (ft)				140			85					
Base Capacity (vph)		682		173	1067		127	468		462	786	
Starvation Cap Reductn		0		0	140		0	0		0	98	
Spillback Cap Reductn		0		0	0		0	0		0	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.80		0.23	0.55		0.25	0.18		0.63	0.92	
Intersection Summary												

Build Conditions

3: South Lexington Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 19 (19%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 26.6

Intersection LOS: C

Intersection Capacity Utilization 79.2%

ICU Level of Service D

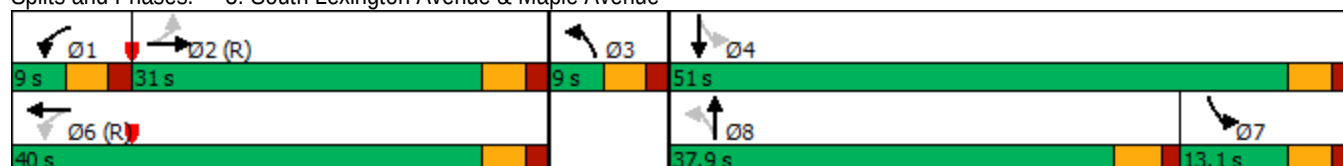
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: South Lexington Avenue & Maple Avenue



Build Conditions

PM Peak Hour

4: Davis Avenue/Main Hospital Entrance & Maple Avenue

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	665	69	31	484	9	25	5	63	20	3	14
Future Volume (vph)	21	665	69	31	484	9	25	5	63	20	3	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	11	11	12	11	12	12	9	12	11	10	12
Grade (%)		1%			0%			-5%			4%	
Storage Length (ft)	100		0	0		0	0		0	90		0
Storage Lanes	1		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1426	3016	0	0	3110	0	0	1188	0	0	1498	1424
Flt Permitted	0.409				0.873			0.931			0.802	
Satd. Flow (perm)	581	3016	0	0	2719	0	0	1111	0	0	1176	1361
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			3			67				46
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		354			356			562			217	
Travel Time (s)		8.0			8.1			12.8			4.9	
Confl. Peds. (#/hr)	45		34	34		45	21		55	55		21
Confl. Bikes (#/hr)			4						1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	1%	1%	0%	0%	7%	0%	3%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	780	0	0	558	0	0	99	0	0	24	15
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		4
Total Split (s)	58.0	58.0		58.0	58.0		36.0	36.0		36.0	36.0	36.0
Total Lost Time (s)	5.2	5.2			5.2			5.2			5.2	5.2
Act Effect Green (s)	52.8	52.8			52.8			30.8			30.8	30.8
Actuated g/C Ratio	0.53	0.53			0.53			0.31			0.31	0.31
v/c Ratio	0.07	0.49			0.39			0.26			0.07	0.03
Control Delay	12.0	14.2			14.1			12.3			25.2	0.1
Queue Delay	0.0	0.8			0.2			0.0			0.0	0.0
Total Delay	12.0	14.9			14.3			12.3			25.2	0.1
LOS	B	B			B			B			C	A
Approach Delay		14.9			14.3			12.3			15.6	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	6	124			161			15			11	0
Queue Length 95th (ft)	m9	151			128			54			30	1
Internal Link Dist (ft)		274			276			482			137	
Turn Bay Length (ft)	100											
Base Capacity (vph)	306	1600			1437			388			362	451
Starvation Cap Reductn	0	480			287			0			0	0
Spillback Cap Reductn	0	23			0			0			0	0
Storage Cap Reductn	0	0			0			0			0	0
Reduced v/c Ratio	0.07	0.70			0.49			0.26			0.07	0.03
Intersection Summary												

Build Conditions

PM Peak Hour

4: Davis Avenue/Main Hospital Entrance & Maple Avenue

Timing Plan: 5:00 PM – 6:00 PM

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	6.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	10 (10%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.49
Intersection Signal Delay:	14.5
Intersection LOS:	B
Intersection Capacity Utilization	65.7%
ICU Level of Service	C
Analysis Period (min)	15
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: Davis Avenue/Main Hospital Entrance & Maple Avenue



Build Conditions
5: Oakwood Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	 			 	 	
Traffic Volume (vph)	716	37	20	506	18	54
Future Volume (vph)	716	37	20	506	18	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Grade (%)	1%			0%	-5%	
Satd. Flow (prot)	3172	0	0	3212	1569	0
Flt Permitted				0.908	0.988	
Satd. Flow (perm)	3172	0	0	2921	1565	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	13				59	
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			475	444	
Travel Time (s)	8.1			10.8	10.1	
Confl. Peds. (#/hr)		40	40		6	24
Confl. Bikes (#/hr)		3				
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	0%	0%	1%	7%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	828	0	0	578	79	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			2	4	
Permitted Phases			2			
Total Split (s)	77.2		77.2	77.2	22.8	
Total Lost Time (s)	5.2			5.2	5.0	
Act Effect Green (s)	72.0			72.0	17.8	
Actuated g/C Ratio	0.72			0.72	0.18	
v/c Ratio	0.36			0.27	0.24	
Control Delay	7.2			5.8	15.7	
Queue Delay	0.6			0.0	0.0	
Total Delay	7.8			5.8	15.7	
LOS	A			A	B	
Approach Delay	7.8			5.8	15.7	
Approach LOS	A			A	B	
Queue Length 50th (ft)	131			28	11	
Queue Length 95th (ft)	192			118	51	
Internal Link Dist (ft)	276			395	364	
Turn Bay Length (ft)						
Base Capacity (vph)	2287			2103	327	
Starvation Cap Reductn	971			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.63			0.27	0.24	
Intersection Summary						
Area Type:	CBD					
Cycle Length: 100						
Actuated Cycle Length: 100						
Offset: 31 (31%), Referenced to phase 2:EBWB and 6:, Start of Green						

Build Conditions
5: Oakwood Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Control Type: Pretimed

Maximum v/c Ratio: 0.36

Intersection Signal Delay: 7.4

Intersection LOS: A

Intersection Capacity Utilization 55.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5: Oakwood Avenue & Maple Avenue



Build Conditions
6: Longview Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	539	38	31	507	212	24	370	35	0	0	0
Future Volume (vph)	170	539	38	31	507	212	24	370	35	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	11	10	11	10	10	10	9	12	12	12
Grade (%)		0%			-5%			-2%			0%	
Storage Length (ft)	225		0	60		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1462	2957	0	1509	2969	0	0	2842	0	0	0	0
Flt Permitted	0.246			0.422				0.997				
Satd. Flow (perm)	371	2957	0	651	2969	0	0	2833	0	0	0	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		12			82							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		475			281			824			379	
Travel Time (s)		10.8			6.4			18.7			8.6	
Confl. Peds. (#/hr)	60		24	24		60	44		48	48		44
Confl. Bikes (#/hr)			2			1			2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	3%	0%	1%	4%	0%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	607	0	33	757	0	0	451	0	0	0	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2			6			8					
Total Split (s)	13.0	62.0		49.0	49.0		35.0	35.0				
Total Lost Time (s)	5.2	5.2		5.2	5.2			5.2				
Act Effect Green (s)	62.0	62.0		43.8	43.8			24.6				
Actuated g/C Ratio	0.62	0.62		0.44	0.44			0.25				
v/c Ratio	0.48	0.33		0.12	0.56			0.65				
Control Delay	11.8	8.2		4.1	5.7			38.4				
Queue Delay	0.4	0.0		0.0	0.5			0.0				
Total Delay	12.2	8.2		4.1	6.2			38.4				
LOS	B	A		A	A			D				
Approach Delay		9.1			6.1			38.4				
Approach LOS		A			A			D				
Queue Length 50th (ft)	28	101		3	23			139				
Queue Length 95th (ft)	124	248		7	27			179				
Internal Link Dist (ft)		395			201			744			299	
Turn Bay Length (ft)	225			60								
Base Capacity (vph)	371	1838		285	1346			844				
Starvation Cap Reductn	0	0		0	226			0				
Spillback Cap Reductn	31	95		0	56			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.53	0.35		0.12	0.68			0.53				
Intersection Summary												

Build Conditions
6: Longview Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Build Conditions
6: Longview Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 70 (70%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 14.5

Intersection LOS: B

Intersection Capacity Utilization 67.1%

ICU Level of Service C

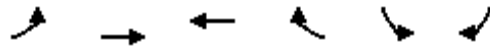
Analysis Period (min) 15

Splits and Phases: 6: Longview Avenue & Maple Avenue



Build Conditions
7: Maple Avenue & Cromwell Place

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↘	↗
Traffic Volume (vph)	0	584	668	0	207	82
Future Volume (vph)	0	584	668	0	207	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	11	12
Grade (%)		6%	3%		4%	
Storage Length (ft)	0			0	0	60
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	3016	3094	0	1371	1383
Flt Permitted					0.950	
Satd. Flow (perm)	0	3016	3094	0	1360	1383
Right Turn on Red				Yes		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		281	255		455	
Travel Time (s)		6.4	5.8		10.3	
Confl. Peds. (#/hr)	67			67	6	2
Confl. Bikes (#/hr)						2
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%
Parking (#/hr)					0	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	642	734	0	227	90
Turn Type		NA	NA		Perm	Prot
Protected Phases		2	2			4
Permitted Phases					4	
Total Split (s)		58.0	58.0		42.0	42.0
Total Lost Time (s)		4.7	4.7		4.7	4.7
Act Effct Green (s)		68.4	68.4		22.2	22.2
Actuated g/C Ratio		0.68	0.68		0.22	0.22
v/c Ratio		0.31	0.35		0.75	0.29
Control Delay		7.4	13.5		50.8	33.0
Queue Delay		0.3	0.8		0.0	0.0
Total Delay		7.6	14.2		50.8	33.0
LOS		A	B		D	C
Approach Delay		7.6	14.2		45.7	
Approach LOS		A	B		D	
Queue Length 50th (ft)		197	191		136	46
Queue Length 95th (ft)		258	289		199	m80
Internal Link Dist (ft)		201	175		375	
Turn Bay Length (ft)						60
Base Capacity (vph)		2062	2115		507	515
Starvation Cap Reductn		727	1001		0	0
Spillback Cap Reductn		0	36		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.48	0.66		0.45	0.17

Intersection Summary

Area Type:	CBD		
Cycle Length:	100		
Actuated Cycle Length:	100		
Offset:	78 (78%), Referenced to phase 2:EBWB and 6:, Start of Green		
Control Type:	Actuated-Coordinated		
Maximum v/c Ratio:	0.75		
Intersection Signal Delay:	17.6	Intersection LOS:	B
Intersection Capacity Utilization	41.4%	ICU Level of Service	A
Analysis Period (min)	15		
m	Volume for 95th percentile queue is metered by upstream signal.		

Splits and Phases: 7: Maple Avenue & Cromwell Place



Build Conditions

PM Peak Hour

8: Greenridge Avenue/Chester Avenue & Maple Avenue

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	590	107	49	638	92	30	69	67	0	0	0
Future Volume (vph)	94	590	107	49	638	92	30	69	67	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	11
Grade (%)		2%			3%			0%			-4%	
Storage Length (ft)	125		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1752	3345	0	1743	3381	0	0	3203	0	0	0	0
Flt Permitted	0.284			0.313				0.991				
Satd. Flow (perm)	514	3345	0	554	3381	0	0	3168	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			23			73				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		255			453			507			506	
Travel Time (s)		5.8			10.3			11.5			11.5	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	757	0	53	793	0	0	181	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA				
Protected Phases	1	6		5	2			8				
Permitted Phases	6			2			8					
Total Split (s)	13.0	56.0		13.0	56.0		31.0	31.0				
Total Lost Time (s)	7.0	5.0		5.0	5.0			5.0				
Act Effct Green (s)	57.0	54.5		59.4	53.8			26.0				
Actuated g/C Ratio	0.57	0.54		0.59	0.54			0.26				
v/c Ratio	0.28	0.41		0.13	0.43			0.21				
Control Delay	7.9	5.9		7.6	15.0			17.7				
Queue Delay	0.0	1.0		0.0	0.3			0.0				
Total Delay	7.9	6.9		7.6	15.3			17.7				
LOS	A	A		A	B			B				
Approach Delay		7.0			14.8			17.7				
Approach LOS		A			B			B				
Queue Length 50th (ft)	6	19		11	156			27				
Queue Length 95th (ft)	46	103		25	206			55				
Internal Link Dist (ft)		175			373			427			426	
Turn Bay Length (ft)	125			75								
Base Capacity (vph)	368	1835		428	1831			877				
Starvation Cap Reductn	0	754		0	0			0				
Spillback Cap Reductn	0	0		0	446			4				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.28	0.70		0.12	0.57			0.21				

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Build Conditions
8: Greenridge Avenue/Chester Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Offset: 42 (42%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.43

Intersection Signal Delay: 11.6

Intersection LOS: B

Intersection Capacity Utilization 61.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 8: Greenridge Avenue/Chester Avenue & Maple Avenue



Build Conditions

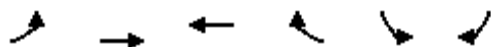
PM Peak Hour

11: West Lot Northwest Driveway/Highland Avenue & West Post Road Timing Plan: 5:00 PM – 6:00 PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	386	6	0	500	59	2	0	2	47	0	66
Future Volume (Veh/h)	157	386	6	0	500	59	2	0	2	47	0	66
Sign Control		Free			Free			Stop			Stop	
Grade		-4%			3%			0%			-11%	
Peak Hour Factor	0.88	0.88	0.92	0.92	0.88	0.88	0.92	0.92	0.92	0.88	0.92	0.88
Hourly flow rate (vph)	178	439	7	0	568	67	2	0	2	53	0	75
Pedestrians		22			6						49	
Lane Width (ft)		16.0			16.0						12.0	
Walking Speed (ft/s)		3.5			3.5						3.5	
Percent Blockage		3			1						5	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					742							
pX, platoon unblocked	0.85						0.85	0.85		0.85	0.85	0.85
vC, conflicting volume	684			446			1497	1482	448	1457	1452	672
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	538			446			1496	1479	448	1449	1444	525
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	79			100			96	100	100	26	100	83
cM capacity (veh/h)	833			1114			56	80	606	72	85	437
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	624	635	4	128								
Volume Left	178	0	2	53								
Volume Right	7	67	2	75								
cSH	833	1114	102	140								
Volume to Capacity	0.21	0.00	0.04	0.91								
Queue Length 95th (ft)	20	0	3	155								
Control Delay (s)	5.2	0.0	41.8	115.1								
Lane LOS	A		E	F								
Approach Delay (s)	5.2	0.0	41.8	115.1								
Approach LOS			E	F								
Intersection Summary												
Average Delay			13.0									
Intersection Capacity Utilization			88.0%		ICU Level of Service				E			
Analysis Period (min)			15									

Build Conditions
12: West Post Road & Orawaupum Street

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	27	408	553	112	18	15
Future Volume (Veh/h)	27	408	553	112	18	15
Sign Control		Free	Free		Stop	
Grade		-3%	2%		-10%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	31	474	643	130	21	17
Pedestrians			4		56	
Lane Width (ft)			16.0		11.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			1		5	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			361			
pX, platoon unblocked	0.82				0.82	0.82
vC, conflicting volume	829				1304	764
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	682				1261	603
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				85	96
cM capacity (veh/h)	718				142	393
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	505	773	38			
Volume Left	31	0	21			
Volume Right	0	130	17			
cSH	718	1700	199			
Volume to Capacity	0.04	0.45	0.19			
Queue Length 95th (ft)	3	0	17			
Control Delay (s)	1.2	0.0	27.4			
Lane LOS	A		D			
Approach Delay (s)	1.2	0.0	27.4			
Approach LOS			D			
Intersection Summary						
Average Delay			1.3			
Intersection Capacity Utilization			58.5%	ICU Level of Service		B
Analysis Period (min)			15			

Build Conditions

14: South Lexington Avenue & West Post Road/East Post Road

PM Peak Hour

Timing Plan: 5:00 PM – 6:00 PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖				↗	↖	↖↗	
Traffic Volume (vph)	0	409	51	90	382	0	0	0	70	211	757	284
Future Volume (vph)	0	409	51	90	382	0	0	0	70	211	757	284
Ideal Flow (vphpl)	1900	2050	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	12	12	12	12	11	11	11
Grade (%)		-1%			0%			0%			1%	
Storage Length (ft)	0		105	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1589	1294	0	2561	0	0	0	1479	1065	2746	0
Flt Permitted					0.598					0.950		
Satd. Flow (perm)	0	1589	1216	0	1541	0	0	0	1331	993	2746	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			36						145		86	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		207			173			393			1032	
Travel Time (s)		4.7			3.9			8.9			23.5	
Confl. Peds. (#/hr)	61		38	38		61	34		54	54		34
Confl. Bikes (#/hr)			2									4
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	5%	0%	2%	5%	0%	0%	0%	0%	2%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0	0		24					41	4	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	460	57	0	530	0	0	0	76	237	1170	0
Turn Type		NA	Perm	Perm	NA				Perm	Perm	NA	
Protected Phases		2			2							4
Permitted Phases			2	2					8	4		
Total Split (s)		40.0	40.0	40.0	40.0				60.0	60.0	60.0	
Total Lost Time (s)		5.0	5.0		5.0				5.0	5.0	5.0	
Act Effect Green (s)		35.0	35.0		35.0				55.0	55.0	55.0	
Actuated g/C Ratio		0.35	0.35		0.35				0.55	0.55	0.55	
v/c Ratio		0.83	0.13		0.98				0.10	0.43	0.76	
Control Delay		44.2	11.9		68.6				1.7	17.3	18.4	
Queue Delay		0.0	0.0		0.0				0.0	0.0	0.3	
Total Delay		44.2	11.9		68.6				1.7	17.3	18.7	
LOS		D	B		E				A	B	B	
Approach Delay		40.6			68.6			1.7			18.5	
Approach LOS		D			E			A			B	
Queue Length 50th (ft)		265	9		174				6	68	188	
Queue Length 95th (ft)		#427	36		#283				m9	m128	271	
Internal Link Dist (ft)		127			93			313			952	
Turn Bay Length (ft)			105									
Base Capacity (vph)		556	449		539				797	546	1549	
Starvation Cap Reductn		0	0		0				0	0	0	
Spillback Cap Reductn		0	0		0				0	0	62	
Storage Cap Reductn		0	0		0				0	0	0	
Reduced v/c Ratio		0.83	0.13		0.98				0.10	0.43	0.79	

Build Conditions

14: South Lexington Avenue & West Post Road/East Post Road

PM Peak Hour

Timing Plan: 5:00 PM – 6:00 PM

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 33.0

Intersection LOS: C

Intersection Capacity Utilization 88.8%

ICU Level of Service E

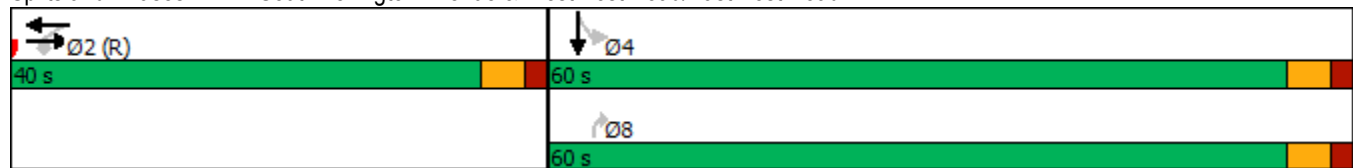
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: South Lexington Avenue & West Post Road/East Post Road



Build Conditions

PM Peak Hour

16: Public Emergency Department Entrance/East Post Road Garage & East Post Road

East Post Road - 5:00 PM - 6:00 PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔						↔	
Traffic Volume (vph)	104	586	4	4	337	3	0	0	0	296	0	126
Future Volume (vph)	104	586	4	4	337	3	0	0	0	296	0	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	10	10	12	12	12	12	12	12	12
Grade (%)		0%			-1%			0%			0%	
Satd. Flow (prot)	0	3050	0	0	2975	0	0	0	0	0	1511	0
Flt Permitted		0.825			0.948						0.966	
Satd. Flow (perm)	0	2472	0	0	2821	0	0	0	0	0	1423	0
Right Turn on Red			Yes			Yes				Yes		Yes
Satd. Flow (RTOR)		1			2						19	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		234			170			167			197	
Travel Time (s)		5.3			3.9			3.8			4.5	
Confl. Peds. (#/hr)	100		100	100		100				50		50
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	771	0	0	381	0	0	0	0	0	469	0
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases	4			8						6		
Total Split (s)	75.0	75.0		75.0	75.0					25.0	25.0	
Total Lost Time (s)		4.5			4.5						4.5	
Act Effect Green (s)		22.8			22.8						20.7	
Actuated g/C Ratio		0.43			0.43						0.39	
v/c Ratio		0.72			0.31						0.82	
Control Delay		16.3			10.1						31.2	
Queue Delay		0.0			0.0						0.0	
Total Delay		16.3			10.1						31.2	
LOS		B			B						C	
Approach Delay		16.3			10.1						31.2	
Approach LOS		B			B						C	
Queue Length 50th (ft)		96			37						117	
Queue Length 95th (ft)		146			60						#332	
Internal Link Dist (ft)		154			90			87			117	
Turn Bay Length (ft)												
Base Capacity (vph)		2472			2821						571	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.31			0.14						0.82	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 52.6

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 19.2

Intersection LOS: B

Build Conditions

PM Peak Hour

16: Public Emergency Department Entrance/East Post Road Garage & East Post Road

5:00 AM – 6:00 PM

Intersection Capacity Utilization 75.6%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 16: Public Emergency Department Entrance/East Post Road Garage & East Post Road



Build Conditions

PM Peak Hour

17: Public Emergency Department Exit & East Post Road

Timing Plan: 5:00 PM – 6:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	882	0	0	343	1	10
Future Volume (Veh/h)	882	0	0	343	1	10
Sign Control	Free			Free	Stop	
Grade	2%			-2%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	980	0	0	381	1	11
Pedestrians	20			20	100	
Lane Width (ft)	9.0			10.0	11.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			2	9	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	170			262		
pX, platoon unblocked			0.84		0.84	0.84
vC, conflicting volume			1080		1290	610
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			715		966	156
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	98
cM capacity (veh/h)			676		191	651
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	490	490	190	190	12	
Volume Left	0	0	0	0	1	
Volume Right	0	0	0	0	11	
cSH	1700	1700	1700	1700	542	
Volume to Capacity	0.29	0.29	0.11	0.11	0.02	
Queue Length 95th (ft)	0	0	0	0	2	
Control Delay (s)	0.0	0.0	0.0	0.0	11.8	
Lane LOS					B	
Approach Delay (s)	0.0		0.0		11.8	
Approach LOS					B	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			42.0%		ICU Level of Service	A
Analysis Period (min)			15			

Build Conditions

PM Peak Hour

18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road Time Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	388	500	0	0	356	223	118	637	47	0	0	0
Future Volume (vph)	388	500	0	0	356	223	118	637	47	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	10	10	12	12	12	12	12	12
Grade (%)		2%			-5%			-3%			0%	
Satd. Flow (prot)	0	2696	0	0	2496	0	0	3203	0	0	0	0
Flt Permitted		0.562						0.993				
Satd. Flow (perm)	0	1516	0	0	2496	0	0	3176	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					116			7				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			343			379			494	
Travel Time (s)		3.0			7.8			8.6			11.2	
Confl. Peds. (#/hr)	94		104	104		94	50		23	23		50
Confl. Bikes (#/hr)			2						5			
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.92
Heavy Vehicles (%)	3%	4%	0%	0%	7%	1%	2%	1%	0%	0%	0%	0%
Parking (#/hr)		0			0							
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	955	0	0	623	0	0	863	0	0	0	0
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2						8					
Total Split (s)	17.0	58.0			41.0		42.0	42.0				
Total Lost Time (s)		5.0			5.0			5.0				
Act Effct Green (s)		53.0			36.0			37.0				
Actuated g/C Ratio		0.53			0.36			0.37				
v/c Ratio		1.24dl			0.64			0.73				
Control Delay		59.5			17.1			29.3				
Queue Delay		0.0			0.4			3.8				
Total Delay		59.5			17.5			33.1				
LOS		E			B			C				
Approach Delay		59.5			17.5			33.1				
Approach LOS		E			B			C				
Queue Length 50th (ft)		~226			67			241				
Queue Length 95th (ft)		#397			111			311				
Internal Link Dist (ft)		53			263			299			414	
Turn Bay Length (ft)												
Base Capacity (vph)		945			972			1179				
Starvation Cap Reductn		0			72			230				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		1.01			0.69			0.91				
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												
Actuated Cycle Length: 100												

Offset: 7 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 39.4 Intersection LOS: D

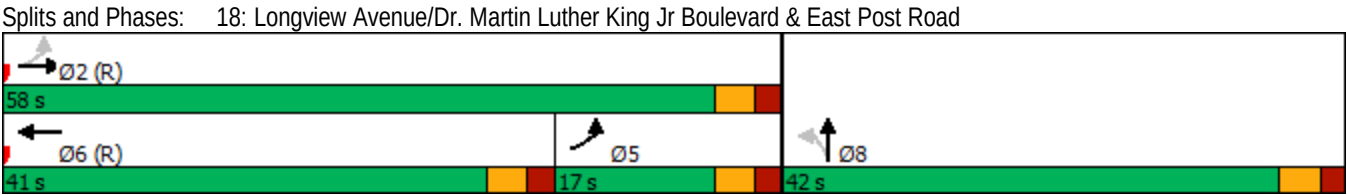
Intersection Capacity Utilization 90.0% ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.



Build Conditions

PM Peak Hour

19: Cromwell Place/Grand Street & East Post Road

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	456	90	37	449	0	0	0	0	84	67	130
Future Volume (vph)	0	456	90	37	449	0	0	0	0	84	67	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	10	10	12	12	12	12	9	10	12
Grade (%)		5%			0%			0%			2%	
Satd. Flow (prot)	0	2463	0	0	2731	0	0	0	0	1277	1219	0
Flt Permitted					0.859					0.950		
Satd. Flow (perm)	0	2463	0	0	2336	0	0	0	0	1224	1219	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		42									98	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		343			219			455			494	
Travel Time (s)		7.8			5.0			10.3			11.2	
Confl. Peds. (#/hr)	89		116	116		89	44		32	32		44
Confl. Bikes (#/hr)			1									1
Peak Hour Factor	0.92	0.83	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.83	0.83	0.83
Heavy Vehicles (%)	0%	5%	2%	7%	4%	0%	0%	0%	0%	2%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	4	0	0	0	0	0	0	0
Parking (#/hr)		4			0					0	0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	657	0	0	586	0	0	0	0	101	238	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			2						4	
Permitted Phases				2						4		
Total Split (s)		66.0		66.0	66.0					34.0	34.0	
Total Lost Time (s)		5.0			5.0					5.0	5.0	
Act Effct Green (s)		65.9			65.9					24.1	24.1	
Actuated g/C Ratio		0.66			0.66					0.24	0.24	
v/c Ratio		0.40			0.38					0.34	0.65	
Control Delay		1.9			6.3					34.6	28.4	
Queue Delay		0.4			0.2					0.0	0.0	
Total Delay		2.2			6.5					34.6	28.4	
LOS		A			A					C	C	
Approach Delay		2.2			6.5						30.2	
Approach LOS		A			A						C	
Queue Length 50th (ft)		18			37					54	81	
Queue Length 95th (ft)		m20			52					87	134	
Internal Link Dist (ft)		263			139			375			414	
Turn Bay Length (ft)												
Base Capacity (vph)		1636			1538					354	423	
Starvation Cap Reductn		467			344					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.56			0.49					0.29	0.56	
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												

Build Conditions
19: Cromwell Place/Grand Street & East Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Actuated Cycle Length: 100	
Offset: 7 (7%), Referenced to phase 2:EBWB and 6:, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 9.8	Intersection LOS: A
Intersection Capacity Utilization 66.6%	ICU Level of Service C
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 19: Cromwell Place/Grand Street & East Post Road



Build Conditions
20: Chester Avenue & East Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Lane Configurations	↑↑			↑↑	↵	↵	
Traffic Volume (vph)	541	0	0	408	78	84	
Future Volume (vph)	541	0	0	408	78	84	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Grade (%)	4%			1%	0%		
Satd. Flow (prot)	3468	0	0	3522	1770	1583	
Flt Permitted					0.950		
Satd. Flow (perm)	3468	0	0	3522	1567	1387	
Right Turn on Red		No				No	
Satd. Flow (RTOR)							
Link Speed (mph)	30			30	30		
Link Distance (ft)	219			383	506		
Travel Time (s)	5.0			8.7	11.5		
Confl. Peds. (#/hr)		80	80		80	80	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	588	0	0	443	85	91	
Turn Type	NA			NA	Prot	Perm	
Protected Phases	2			2	4		9
Permitted Phases						4	
Total Split (s)	56.0			56.0	39.0	39.0	5.0
Total Lost Time (s)	4.5			4.5	4.5	4.5	
Act Effct Green (s)	51.5			51.5	39.5	39.5	
Actuated g/C Ratio	0.52			0.52	0.40	0.40	
v/c Ratio	0.33			0.24	0.12	0.17	
Control Delay	11.2			13.9	14.3	15.0	
Queue Delay	0.7			0.0	0.0	0.0	
Total Delay	11.8			13.9	14.3	15.0	
LOS	B			B	B	B	
Approach Delay	11.8			13.9	14.6		
Approach LOS	B			B	B		
Queue Length 50th (ft)	74			78	30	33	
Queue Length 95th (ft)	94			108	66	72	
Internal Link Dist (ft)	139			303	426		
Turn Bay Length (ft)							
Base Capacity (vph)	1786			1813	699	547	
Starvation Cap Reductn	799			0	0	0	
Spillback Cap Reductn	0			0	0	0	
Storage Cap Reductn	0			0	0	0	
Reduced v/c Ratio	0.60			0.24	0.12	0.17	
Intersection Summary							
Area Type:	Other						
Cycle Length: 100							
Actuated Cycle Length: 100							
Offset: 17 (17%), Referenced to phase 2:EBWB and 6:, Start of Green							
Control Type: Actuated-Coordinated							
Maximum v/c Ratio: 0.33							
Intersection Signal Delay: 13.0	Intersection LOS: B						

Build Conditions
20: Chester Avenue & East Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Intersection Capacity Utilization 40.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 20: Chester Avenue & East Post Road



Build Conditions

PM Peak Hour

21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	0	0	0	0	6	0	1231	0	0	0	0
Future Volume (vph)	57	0	0	0	0	6	0	1231	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			1%			0%	
Satd. Flow (prot)	1593	1676	0	0	0	1450	0	4554	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1473	1676	0	0	0	1326	0	4554	0	0	0	0
Right Turn on Red	No		No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		403			216			494			280	
Travel Time (s)		9.2			4.9			11.2			6.4	
Confl. Peds. (#/hr)	50		50	50		50	100		100			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	62	0	0	0	0	7	0	1338	0	0	0	0
Turn Type	Perm					Perm		NA				
Protected Phases		4						2				
Permitted Phases	4					4						
Total Split (s)	25.1	25.1				25.1		74.9				
Total Lost Time (s)	5.0	5.0				5.0		4.9				
Act Effct Green (s)	14.7					14.7		78.5				
Actuated g/C Ratio	0.15					0.15		0.78				
v/c Ratio	0.29					0.04		0.37				
Control Delay	38.7					32.8		4.1				
Queue Delay	0.0					0.0		0.3				
Total Delay	38.7					32.8		4.3				
LOS	D					C		A				
Approach Delay		38.7			32.8			4.3				
Approach LOS		D			C			A				
Queue Length 50th (ft)	33					4		84				
Queue Length 95th (ft)	71					16		m90				
Internal Link Dist (ft)		323			136			414			200	
Turn Bay Length (ft)												
Base Capacity (vph)	296					266		3575				
Starvation Cap Reductn	0					0		0				
Spillback Cap Reductn	0					0		1306				
Storage Cap Reductn	0					0		0				
Reduced v/c Ratio	0.21					0.03		0.59				

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 77 (77%), Referenced to phase 2:NBT and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.37

Intersection Signal Delay: 6.0

Intersection LOS: A

Build Conditions

PM Peak Hour

21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage Timing Plan: 5:00 PM – 6:00 PM

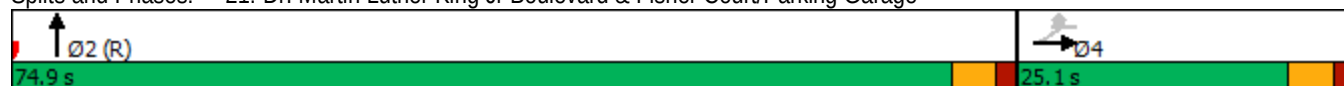
Intersection Capacity Utilization 57.4%

ICU Level of Service B

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage

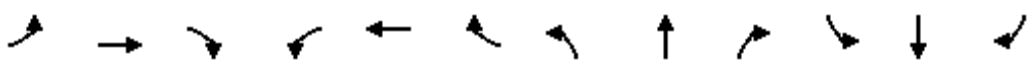


Build Conditions

PM Peak Hour

22: South Lexington Avenue & Fisher Avenue/Quarropas Street

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑					↖↗	↑↑	↖
Traffic Volume (vph)	0	240	137	59	110	0	0	0	0	200	1004	146
Future Volume (vph)	0	240	137	59	110	0	0	0	0	200	1004	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	11	11	12	12	12	12	12	12	13
Grade (%)		-1%			0%			0%			-1%	
Storage Length (ft)	0		0	135		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	2		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	2746	0	1540	3079	0	0	0	0	3105	3201	1480
Flt Permitted				0.397						0.950		
Satd. Flow (perm)	0	2746	0	625	3079	0	0	0	0	2752	3201	1363
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)												159
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		629			873			1032			215	
Travel Time (s)		14.3			19.8			23.5			4.9	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	410	0	64	120	0	0	0	0	217	1091	159
Turn Type		NA		pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Total Split (s)		34.0		10.0	44.0					53.0	53.0	53.0
Total Lost Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Act Effct Green (s)		35.7		44.6	44.6					45.4	45.4	45.4
Actuated g/C Ratio		0.36		0.45	0.45					0.45	0.45	0.45
v/c Ratio		0.42		0.19	0.09					0.17	0.75	0.23
Control Delay		28.2		23.1	21.0					15.6	25.9	3.0
Queue Delay		0.0		0.0	0.0					0.0	0.0	0.0
Total Delay		28.2		23.1	21.0					15.6	25.9	3.0
LOS		C		C	C					B	C	A
Approach Delay		28.2			21.8						21.9	
Approach LOS		C			C						C	
Queue Length 50th (ft)		111		18	17					40	287	0
Queue Length 95th (ft)		163		m52	m45					56	333	31
Internal Link Dist (ft)		549			793			952			135	
Turn Bay Length (ft)				135								
Base Capacity (vph)		979		334	1373					1353	1574	751
Starvation Cap Reductn		0		0	0					0	0	0
Spillback Cap Reductn		0		0	0					0	0	0
Storage Cap Reductn		0		0	0					0	0	0
Reduced v/c Ratio		0.42		0.19	0.09					0.16	0.69	0.21

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Build Conditions
22: South Lexington Avenue & Fisher Avenue/Quarropas Street

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

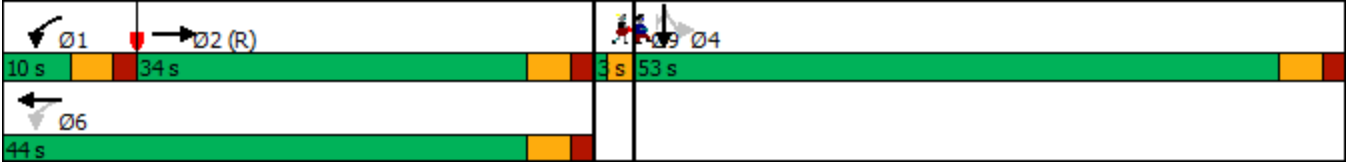
Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Build Conditions
22: South Lexington Avenue & Fisher Avenue/Quarropas Street

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Offset: 17 (17%), Referenced to phase 2:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 23.1 Intersection LOS: C
Intersection Capacity Utilization 69.3% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: South Lexington Avenue & Fisher Avenue/Quarropas Street



Build Conditions

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

PM Peak Hour

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  				
Traffic Volume (vph)	88	295	0	0	59	76	105	1114	93	0	0	0
Future Volume (vph)	88	295	0	0	59	76	105	1114	93	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	12	12	11	11	12	12	12	12	12	12
Grade (%)		3%			-4%			1%			0%	
Storage Length (ft)	240		0	0		90	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1516	2928	0	0	1653	1405	0	4464	0	0	0	0
Flt Permitted	0.624							0.996				
Satd. Flow (perm)	950	2928	0	0	1653	1312	0	4443	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						83		17				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		873			420			280			604	
Travel Time (s)		19.8			9.5			6.4			13.7	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	321	0	0	64	83	0	1426	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Total Split (s)	12.0	45.0			33.0	33.0	55.0	55.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Act Effct Green (s)	45.8	45.8			35.3	35.3		44.2				
Actuated g/C Ratio	0.46	0.46			0.35	0.35		0.44				
v/c Ratio	0.20	0.24			0.11	0.16		0.72				
Control Delay	16.8	17.2			26.6	7.2		27.3				
Queue Delay	0.0	0.0			0.0	0.0		0.7				
Total Delay	16.8	17.2			26.6	7.2		28.0				
LOS	B	B			C	A		C				
Approach Delay		17.1			15.6			28.0				
Approach LOS		B			B			C				
Queue Length 50th (ft)	38	67			29	0		308				
Queue Length 95th (ft)	73	120			64	35		345				
Internal Link Dist (ft)		793			340			200			524	
Turn Bay Length (ft)	240					90						
Base Capacity (vph)	480	1341			582	516		2230				
Starvation Cap Reductn	0	0			0	0		436				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.20	0.24			0.11	0.16		0.79				

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Build Conditions

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

PM Peak Hour

Timing Plan: 5:00 PM – 6:00 PM

Offset: 81 (81%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 24.8

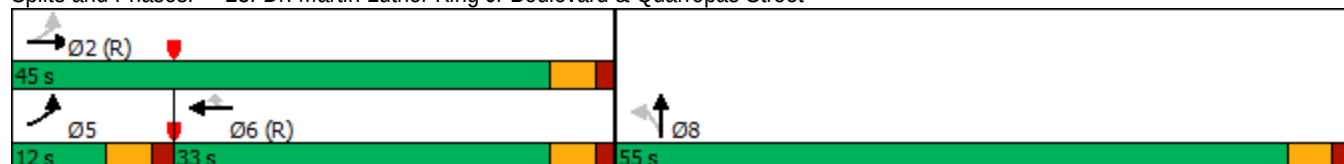
Intersection LOS: C

Intersection Capacity Utilization 69.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 23: Dr. Martin Luther King Jr Boulevard & Quarropas Street



Build Conditions
24: West Lot Northeast Driveway & West Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

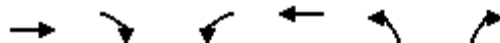
						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	426	0	0	661	0	35
Future Volume (Veh/h)	426	0	0	661	0	35
Sign Control	Free			Free	Stop	
Grade	-3%			3%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	473	0	0	734	0	39
Pedestrians	20			20	40	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	2			2	4	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)				207		
pX, platoon unblocked					0.82	
vC, conflicting volume			513		1267	533
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			513		1217	533
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	92
cM capacity (veh/h)			1012		155	516
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	473	734	39			
Volume Left	0	0	0			
Volume Right	0	0	39			
cSH	1700	1700	516			
Volume to Capacity	0.28	0.43	0.08			
Queue Length 95th (ft)	0	0	6			
Control Delay (s)	0.0	0.0	12.5			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	12.5			
Approach LOS			B			
Intersection Summary						
Average Delay		0.4				
Intersection Capacity Utilization		53.5%	ICU Level of Service	A		
Analysis Period (min)		15				

Build Conditions

PM Peak Hour

25: Ambulance Emergency Department Entrance & East Post Road

Timing Plan: 5:00 PM – 6:00 PM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		
Traffic Volume (veh/h)	683	5	5	459	0	0
Future Volume (Veh/h)	683	5	5	459	0	0
Sign Control	Free			Free	Stop	
Grade	-1%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	759	6	6	510	0	0
Pedestrians	20			20	100	
Lane Width (ft)	12.0			12.0	0.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	2			2	0	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	173			398		
pX, platoon unblocked					0.97	
vC, conflicting volume			865		1149	502
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			865		1092	502
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		100	100
cM capacity (veh/h)			774		197	504
Direction, Lane #	EB 1	EB 2	WB 1	WB 2		
Volume Total	506	259	176	340		
Volume Left	0	0	6	0		
Volume Right	0	6	0	0		
cSH	1700	1700	774	1700		
Volume to Capacity	0.30	0.15	0.01	0.20		
Queue Length 95th (ft)	0	0	1	0		
Control Delay (s)	0.0	0.0	0.4	0.0		
Lane LOS			A			
Approach Delay (s)	0.0		0.1			
Approach LOS						
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			36.1%		ICU Level of Service	A
Analysis Period (min)			15			

Build Conditions

26: Ambulance Emergency Department Exit & East Post Road

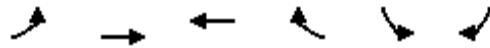
PM Peak Hour

Timing Plan: 5:00 PM – 6:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↓	
Traffic Volume (veh/h)	683	0	0	463	1	11
Future Volume (Veh/h)	683	0	0	463	1	11
Sign Control	Free			Free	Stop	
Grade	0%			-1%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	759	0	0	514	1	12
Pedestrians	20			20	100	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	2			2	10	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	337			234		
pX, platoon unblocked					0.95	
vC, conflicting volume			859		1136	500
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			859		1028	500
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	97
cM capacity (veh/h)			704		193	459
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	380	380	257	257	13	
Volume Left	0	0	0	0	1	
Volume Right	0	0	0	0	12	
cSH	1700	1700	1700	1700	415	
Volume to Capacity	0.22	0.22	0.15	0.15	0.03	
Queue Length 95th (ft)	0	0	0	0	2	
Control Delay (s)	0.0	0.0	0.0	0.0	14.0	
Lane LOS					B	
Approach Delay (s)	0.0		0.0		14.0	
Approach LOS					B	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			35.8%		ICU Level of Service	A
Analysis Period (min)			15			

Build Conditions
27: East Post Road & Winchester Street

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	5	887	338	131	5	5
Future Volume (Veh/h)	5	887	338	131	5	5
Sign Control		Free	Free		Stop	
Grade		2%	-2%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	986	376	146	6	6
Pedestrians		20	20		100	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		2	2		10	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		299	133			
pX, platoon unblocked					0.86	
vC, conflicting volume	622				1074	381
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	622				755	381
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	99
cM capacity (veh/h)	864				261	548
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	335	657	251	271	12	
Volume Left	6	0	0	0	6	
Volume Right	0	0	0	146	6	
cSH	864	1700	1700	1700	353	
Volume to Capacity	0.01	0.39	0.15	0.16	0.03	
Queue Length 95th (ft)	1	0	0	0	3	
Control Delay (s)	0.2	0.0	0.0	0.0	15.6	
Lane LOS	A				C	
Approach Delay (s)	0.1		0.0		15.6	
Approach LOS					C	
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			42.9%		ICU Level of Service	A
Analysis Period (min)			15			

Build Conditions
28: Winchester Street & East Post Road Garage

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	131	5	10	0
Future Volume (Veh/h)	0	0	131	5	10	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	146	6	11	0
Pedestrians	20			100	100	
Lane Width (ft)	0.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	0			10	10	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	429	131	31			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	429	131	31			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	91			
cM capacity (veh/h)	479	831	1582			
Direction, Lane #	NB 1	SB 1				
Volume Total	152	11				
Volume Left	146	0				
Volume Right	0	0				
cSH	1582	1700				
Volume to Capacity	0.09	0.01				
Queue Length 95th (ft)	8	0				
Control Delay (s)	7.2	0.0				
Lane LOS	A					
Approach Delay (s)	7.2	0.0				
Approach LOS						
Intersection Summary						
Average Delay			6.8			
Intersection Capacity Utilization			34.7%	ICU Level of Service		A
Analysis Period (min)			15			

Build with Improvements Conditions

Build Improved Conditions
1: Maple Avenue & West Lot Southwest Driveway

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	11	505	347	6	0	11
Future Volume (Veh/h)	11	505	347	6	0	11
Sign Control		Free	Free		Stop	
Grade		-2%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	12	561	386	7	0	12
Pedestrians		5	5		20	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	0		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			687			
pX, platoon unblocked	0.97				0.97	0.97
vC, conflicting volume	413				719	222
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	338				653	141
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	99
cM capacity (veh/h)	1161				376	836
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	199	374	257	136	12	
Volume Left	12	0	0	0	0	
Volume Right	0	0	0	7	12	
cSH	1161	1700	1700	1700	836	
Volume to Capacity	0.01	0.22	0.15	0.08	0.01	
Queue Length 95th (ft)	1	0	0	0	1	
Control Delay (s/veh)	0.6	0.0	0.0	0.0	9.4	
Lane LOS	A				A	
Approach Delay (s/veh)	0.2		0.0		9.4	
Approach LOS					A	
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			33.4%		ICU Level of Service	A
Analysis Period (min)			15			

Build Improved Conditions

2: Roosevelt Street/West Lot Southeast Driveway & Maple Avenue

AM Peak Hour

Timing Plan: 8:00 AM – 9:00 AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	504	1	13	349	41	4	0	16	21	0	0
Future Volume (Veh/h)	0	504	1	13	349	41	4	0	16	21	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		-2%			-1%			-4%			0%	
Peak Hour Factor	0.92	0.87	0.87	0.87	0.87	0.92	0.87	0.92	0.87	0.92	0.92	0.92
Hourly flow rate (vph)	0	579	1	15	401	45	5	0	18	23	0	0
Pedestrians		1						16				
Lane Width (ft)		14.0						12.0				
Walking Speed (ft/s)		3.5						3.5				
Percent Blockage		0						1				
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					357							
pX, platoon unblocked	0.92						0.92	0.92		0.92	0.92	0.92
vC, conflicting volume	446			596			827	1072	306	761	1050	224
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	237			596			649	913	306	578	890	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			98	100	97	93	100	100
cM capacity (veh/h)	1227			975			319	244	686	351	252	1001
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	290	291	216	246	23	23						
Volume Left	0	0	15	0	5	23						
Volume Right	0	1	0	45	18	0						
cSH	1227	1700	975	1700	549	351						
Volume to Capacity	0.00	0.17	0.02	0.14	0.04	0.07						
Queue Length 95th (ft)	0	0	1	0	3	5						
Control Delay (s/veh)	0.0	0.0	0.8	0.0	11.8	16.0						
Lane LOS			A		B	C						
Approach Delay (s/veh)	0.0		0.4		11.8	16.0						
Approach LOS					B	C						
Intersection Summary												
Average Delay			0.7									
Intersection Capacity Utilization			34.3%		ICU Level of Service		A					
Analysis Period (min)			15									

Build Improved Conditions

3: South Lexington Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

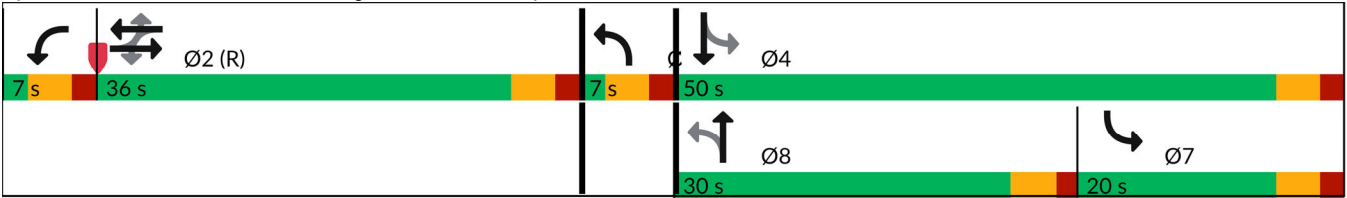
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	481	19	34	335	2	15	26	60	326	362	51
Future Volume (vph)	40	481	19	34	335	2	15	26	60	326	362	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	10	12	10	12	10	10	13	12
Grade (%)		0%			-2%			-5%			4%	
Storage Length (ft)	0		0	140		0	85		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3085	0	1477	3058	0	1554	1463	0	1324	1690	0
Flt Permitted		0.894		0.310			0.250			0.697		
Satd. Flow (perm)	0	2758	0	467	3058	0	403	1463	0	929	1690	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		4			1						9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		357			354			564			393	
Travel Time (s)		8.1			8.0			12.8			8.9	
Confl. Peds. (#/hr)	31		30	30		31	29		35	35		29
Confl. Bikes (#/hr)			1			1						3
Peak Hour Factor	0.92	0.94	0.94	0.94	0.94	0.92	0.94	0.92	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	11%	0%	0%	0%	0%	0%	4%	1%	0%	0%
Parking (#/hr)										0		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	575	0	36	358	0	16	92	0	347	439	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		2		1	2		3	8		7	4	
Permitted Phases	2			2			8			4		
Total Split (s)	36.0	36.0		7.0	36.0		7.0	30.0		20.0	50.0	
Total Lost Time (s)		5.0		5.0	5.0		5.0	4.9		5.0	5.0	
Act Effct Green (s)		31.0		33.0	31.0		27.0	25.1		45.0	45.0	
Actuated g/C Ratio		0.31		0.33	0.31		0.27	0.25		0.45	0.45	
v/c Ratio		0.67		0.20	0.37		0.12	0.25		0.72	0.57	
Control Delay (s/veh)		34.4		6.5	6.1		25.8	32.1		23.8	13.5	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	2.9	
Total Delay (s/veh)		34.4		6.5	6.1		25.8	32.1		23.8	16.4	
LOS		C		A	A		C	C		C	B	
Approach Delay (s/veh)		34.5			6.2			31.2			19.7	
Approach LOS		C			A			C			B	
Queue Length 50th (ft)		165		3	16		7	47		100	123	
Queue Length 95th (ft)		227		7	22		22	91		#231	248	
Internal Link Dist (ft)		277			274			484			313	
Turn Bay Length (ft)				140			85					
Base Capacity (vph)		857		174	948		131	367		477	765	
Starvation Cap Reductn		0		0	0		0	0		0	218	
Spillback Cap Reductn		0		0	0		0	0		0	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.67		0.21	0.38		0.12	0.25		0.73	0.80	
Intersection Summary												

Build Improved Conditions
3: South Lexington Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	24 (24%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.73
Intersection Signal Delay (s/veh):	22.1
Intersection LOS:	C
Intersection Capacity Utilization	69.4%
ICU Level of Service	C
Analysis Period (min)	15
#	95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

Splits and Phases: 3: South Lexington Avenue & Maple Avenue



Build Improved Conditions

AM Peak Hour

4: Davis Avenue/Main Hospital Entrance & Maple Avenue

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	776	61	20	332	18	18	2	56	17	12	18
Future Volume (vph)	27	776	61	20	332	18	18	2	56	17	12	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	11	11	12	11	12	12	9	12	11	10	12
Grade (%)		1%			0%			-5%			4%	
Storage Length (ft)	100		0	0		0	0		0	90		0
Storage Lanes	1		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1426	3033	0	0	3076	0	0	1170	0	0	1520	1424
Flt Permitted	0.519				0.888			0.942			0.857	
Satd. Flow (perm)	720	3033	0	0	2737	0	0	1107	0	0	1283	1361
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			9			60				46
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		354			356			562			217	
Travel Time (s)		8.0			8.1			12.8			4.9	
Confl. Peds. (#/hr)	45		34	34		45	21		55	55		21
Confl. Bikes (#/hr)			4						1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	1%	1%	0%	0%	7%	0%	3%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	29	891	0	0	393	0	0	81	0	0	31	19
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		4
Total Split (s)	64.0	64.0		64.0	64.0		30.0	30.0		30.0	30.0	30.0
Total Lost Time (s)	5.2	5.2			5.2			5.2			5.2	5.2
Act Effct Green (s)	58.8	58.8			58.8			24.8			24.8	24.8
Actuated g/C Ratio	0.59	0.59			0.59			0.25			0.25	0.25
v/c Ratio	0.06	0.49			0.24			0.25			0.09	0.05
Control Delay (s/veh)	8.3	10.0			29.2			13.8			30.1	2.0
Queue Delay	0.0	1.1			0.0			0.0			0.0	0.0
Total Delay (s/veh)	8.3	11.1			29.2			13.8			30.1	2.0
LOS	A	B			C			B			C	A
Approach Delay (s/veh)		11.1			29.2			13.9			19.4	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)	6	95			114			10			15	0
Queue Length 95th (ft)	m10	126			160			49			39	5
Internal Link Dist (ft)		274			276			482			137	
Turn Bay Length (ft)	100											
Base Capacity (vph)	423	1789			1613			319			318	372
Starvation Cap Reductn	0	615			0			0			0	0
Spillback Cap Reductn	0	0			0			0			0	0
Storage Cap Reductn	0	0			0			0			0	0
Reduced v/c Ratio	0.07	0.76			0.24			0.25			0.10	0.05
Intersection Summary												

05/07/2024

4: Davis Avenue/Main Hospital Entrance & Maple Avenue

Synchro 11 Report
Kimley-Horn

Build Improved Conditions
4: Davis Avenue/Main Hospital Entrance & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	6.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	25 (25%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.50
Intersection Signal Delay (s/veh):	16.5
Intersection LOS:	B
Intersection Capacity Utilization	61.3%
ICU Level of Service	B
Analysis Period (min)	15
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Davis Avenue/Main Hospital Entrance & Maple Avenue



Build Improved Conditions
5: Oakwood Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	821	28	36	361	6	39
Future Volume (vph)	821	28	36	361	6	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Grade (%)	1%			0%	-5%	
Satd. Flow (prot)	3181	0	0	3204	1554	0
Flt Permitted				0.816	0.993	
Satd. Flow (perm)	3181	0	0	2626	1551	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	9				43	
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			475	444	
Travel Time (s)	8.1			10.8	10.1	
Confl. Peds. (#/hr)		40	40		6	24
Confl. Bikes (#/hr)		3				
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	0%	0%	1%	7%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	933	0	0	437	50	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			2	4	
Permitted Phases			2			
Total Split (s)	77.2		77.2	77.2	22.8	
Total Lost Time (s)	5.2			5.2	5.0	
Act Effect Green (s)	72.0			72.0	17.8	
Actuated g/C Ratio	0.72			0.72	0.18	
v/c Ratio	0.40			0.23	0.16	
Control Delay (s/veh)	1.7			2.1	14.4	
Queue Delay	0.1			0.0	0.0	
Total Delay (s/veh)	1.8			2.1	14.4	
LOS	A			A	B	
Approach Delay (s/veh)	1.9			2.1	14.4	
Approach LOS	A			A	B	
Queue Length 50th (ft)	18			15	4	
Queue Length 95th (ft)	29			18	36	
Internal Link Dist (ft)	276			395	364	
Turn Bay Length (ft)						
Base Capacity (vph)	2292			1890	311	
Starvation Cap Reductn	465			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.51			0.23	0.16	
Intersection Summary						
Area Type:	CBD					
Cycle Length: 100						
Actuated Cycle Length: 100						
Offset: 31 (31%), Referenced to phase 2:EBWB and 6:, Start of Green						

Build Improved Conditions
5: Oakwood Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Control Type: Pretimed	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay (s/veh): 2.4	Intersection LOS: A
Intersection Capacity Utilization 65.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 5: Oakwood Avenue & Maple Avenue



Build Improved Conditions
6: Longview Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	143	633	39	36	404	198	25	422	40	0	0	0
Future Volume (vph)	143	633	39	36	404	198	25	422	40	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	11	10	11	10	10	10	9	12	12	12
Grade (%)		0%			-5%			-2%			0%	
Storage Length (ft)	225		0	60		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1462	2962	0	1509	2941	0	0	2843	0	0	0	0
Flt Permitted	0.239			0.383				0.997				
Satd. Flow (perm)	359	2962	0	594	2941	0	0	2835	0	0	0	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		8			88							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		475			281			824			379	
Travel Time (s)		10.8			6.4			18.7			8.6	
Confl. Peds. (#/hr)	60		24	24		60	44		48	48		44
Confl. Bikes (#/hr)			2			1			2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	3%	0%	1%	4%	0%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	151	707	0	38	633	0	0	512	0	0	0	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2			6			8					
Total Split (s)	9.0	46.0		37.0	37.0		51.0	51.0				
Total Lost Time (s)	5.2	5.2		5.2	5.2			5.2				
Act Effect Green (s)	59.9	59.9		31.8	31.8			26.7				
Actuated g/C Ratio	0.60	0.60		0.32	0.32			0.27				
v/c Ratio	0.32	0.39		0.20	0.63			0.67				
Control Delay (s/veh)	5.7	4.3		18.5	19.0			37.2				
Queue Delay	0.1	0.0		0.0	1.2			0.0				
Total Delay (s/veh)	5.9	4.3		18.5	20.2			37.2				
LOS	A	A		B	C			D				
Approach Delay (s/veh)		4.6			20.2			37.2				
Approach LOS		A			C			D				
Queue Length 50th (ft)	9	22		10	165			157				
Queue Length 95th (ft)	18	31		35	226			191				
Internal Link Dist (ft)		395			201			744			299	
Turn Bay Length (ft)	225			60								
Base Capacity (vph)	467	1777		188	995			1298				
Starvation Cap Reductn	0	0		0	174			0				
Spillback Cap Reductn	43	0		0	1			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.36	0.40		0.20	0.77			0.39				
Intersection Summary												

Build Improved Conditions
6: Longview Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

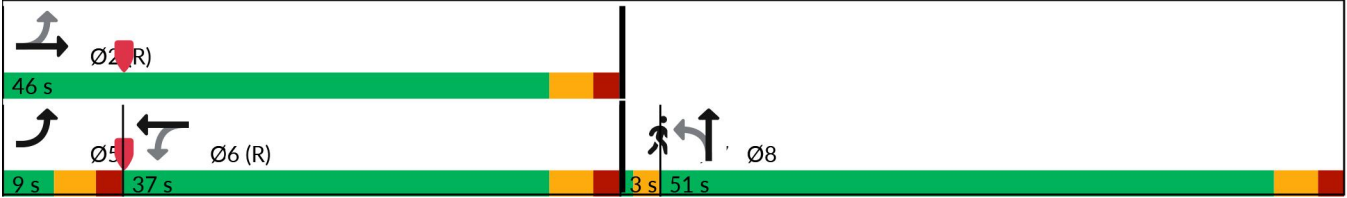
Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Build Improved Conditions
6: Longview Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	66 (66%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.68
Intersection Signal Delay (s/veh):	17.9
Intersection LOS:	B
Intersection Capacity Utilization	67.3%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 6: Longview Avenue & Maple Avenue



Build Improved Conditions

7: Maple Avenue & Cromwell Place

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	↑
Traffic Volume (vph)	0	669	560	0	121	86
Future Volume (vph)	0	669	560	0	121	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	11	12
Grade (%)		6%	3%		4%	
Storage Length (ft)	0			0	0	60
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	3016	3094	0	1371	1383
Flt Permitted					0.950	
Satd. Flow (perm)	0	3016	3094	0	1360	1383
Right Turn on Red				Yes		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		281	255		455	
Travel Time (s)		6.4	5.8		10.3	
Confl. Peds. (#/hr)	67			67	6	2
Confl. Bikes (#/hr)						2
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%
Parking (#/hr)					0	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	735	615	0	133	95
Turn Type		NA	NA		Perm	Prot
Protected Phases		2	2			4
Permitted Phases					4	
Total Split (s)		56.0	56.0		44.0	44.0
Total Lost Time (s)		4.7	4.7		4.7	4.7
Act Effect Green (s)		73.1	73.1		17.5	17.5
Actuated g/C Ratio		0.73	0.73		0.18	0.18
v/c Ratio		0.33	0.27		0.55	0.39
Control Delay (s/veh)		1.6	0.6		39.5	33.9
Queue Delay		0.1	0.1		0.0	0.0
Total Delay (s/veh)		1.7	0.7		39.5	33.9
LOS		A	A		D	C
Approach Delay (s/veh)		1.8	0.7		37.2	
Approach LOS		A	A		D	
Queue Length 50th (ft)		16	4		71	48
Queue Length 95th (ft)		20	6		132	98
Internal Link Dist (ft)		201	175		375	
Turn Bay Length (ft)						60
Base Capacity (vph)		2203	2260		534	543
Starvation Cap Reductn		586	625		0	0
Spillback Cap Reductn		0	109		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.45	0.38		0.25	0.17
Intersection Summary						

Build Improved Conditions
7: Maple Avenue & Cromwell Place

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 63 (63%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.56

Intersection Signal Delay (s/veh): 6.5

Intersection LOS: A

Intersection Capacity Utilization 38.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Maple Avenue & Cromwell Place



Build Improved Conditions

8: Greenridge Avenue/Chester Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	588	104	49	542	85	18	70	68	0	0	0
Future Volume (vph)	98	588	104	49	542	85	18	70	68	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	11
Grade (%)		2%			3%			0%			-4%	
Storage Length (ft)	125		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1752	3347	0	1743	3375	0	0	3188	0	0	0	0
Flt Permitted	0.329			0.320				0.994				
Satd. Flow (perm)	592	3347	0	566	3375	0	0	3165	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			26			74				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		255			453			507			506	
Travel Time (s)		5.8			10.3			11.5			11.5	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	107	752	0	53	681	0	0	170	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA				
Protected Phases	1	6		5	2			8				
Permitted Phases	6			2			8					
Total Split (s)	12.0	57.0		12.0	57.0		31.0	31.0				
Total Lost Time (s)	7.0	5.0		5.0	5.0			5.0				
Act Effect Green (s)	56.7	54.7		58.6	52.2			26.0				
Actuated g/C Ratio	0.57	0.55		0.59	0.52			0.26				
v/c Ratio	0.27	0.40		0.13	0.38			0.19				
Control Delay (s/veh)	5.8	6.9		7.5	14.5			16.8				
Queue Delay	0.0	0.4		0.0	0.0			0.0				
Total Delay (s/veh)	5.8	7.3		7.5	14.5			16.8				
LOS	A	A		A	B			B				
Approach Delay (s/veh)		7.1			14.0			16.8				
Approach LOS		A			B			B				
Queue Length 50th (ft)	15	61		11	125			24				
Queue Length 95th (ft)	21	73		25	166			51				
Internal Link Dist (ft)		175			373			427			426	
Turn Bay Length (ft)	125			75								
Base Capacity (vph)	393	1842		417	1774			877				
Starvation Cap Reductn	0	565		0	0			0				
Spillback Cap Reductn	0	0		0	0			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.27	0.59		0.13	0.38			0.19				
Intersection Summary												
Area Type:	Other											
Cycle Length: 100												
Actuated Cycle Length: 100												

Build Improved Conditions
8: Greenridge Avenue/Chester Avenue & Maple Avenue

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Offset: 48 (48%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay (s/veh): 10.9	Intersection LOS: B
Intersection Capacity Utilization 58.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Greenridge Avenue/Chester Avenue & Maple Avenue



Build Improved Conditions

AM Peak Hour

11: West Lot Northwest Driveway/Highland Avenue & West Post Road

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	369	8	5	362	27	0	0	0	139	0	86
Future Volume (vph)	84	369	8	5	362	27	0	0	0	139	0	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	16	12	12	12	12	16	12	12
Grade (%)		-4%			3%			0%			-11%	
Satd. Flow (prot)	0	1661	0	0	1593	0	0	1676	0	0	1602	0
Flt Permitted		0.848			0.996						0.811	
Satd. Flow (perm)	0	1407	0	0	1588	0	0	1676	0	0	1326	0
Right Turn on Red		Yes				Yes				Yes		Yes
Satd. Flow (RTOR)		1			6						35	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		598			381			186			322	
Travel Time (s)		13.6			8.7			4.2			7.3	
Confl. Peds. (#/hr)	49					49				6		22
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.88	0.88	0.92	0.92	0.88	0.88	0.92	0.92	0.92	0.88	0.92	0.88
Heavy Vehicles (%)	2%	4%	2%	2%	3%	7%	2%	2%	2%	0%	2%	1%
Parking (#/hr)		4			4					4		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	523	0	0	447	0	0	0	0	0	256	0
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		2			6			8			8	
Permitted Phases	2			6			8			8		
Total Split (s)	60.0	60.0		60.0	60.0		40.0	40.0		40.0	40.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Act Effct Green (s)		68.5			68.5						22.5	
Actuated g/C Ratio		0.69			0.69						0.23	
v/c Ratio		0.54			0.41						0.78	
Control Delay (s/veh)		12.0			6.1						47.4	
Queue Delay		0.0			0.0						0.0	
Total Delay (s/veh)		12.0			6.1						47.4	
LOS		B			A						D	
Approach Delay (s/veh)		12.1			6.2						47.5	
Approach LOS		B			A						D	
Queue Length 50th (ft)		148			74						134	
Queue Length 95th (ft)		300			167						201	
Internal Link Dist (ft)		518			301			106			242	
Turn Bay Length (ft)												
Base Capacity (vph)		963			1088						493	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.54			0.41						0.52	
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												
Actuated Cycle Length: 100												

Build Improved Conditions

AM Peak Hour

11: West Lot Northwest Driveway/Highland Avenue & West Post Road

Timing Plan: 8:00 AM – 9:00 AM

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay (s/veh): 17.3

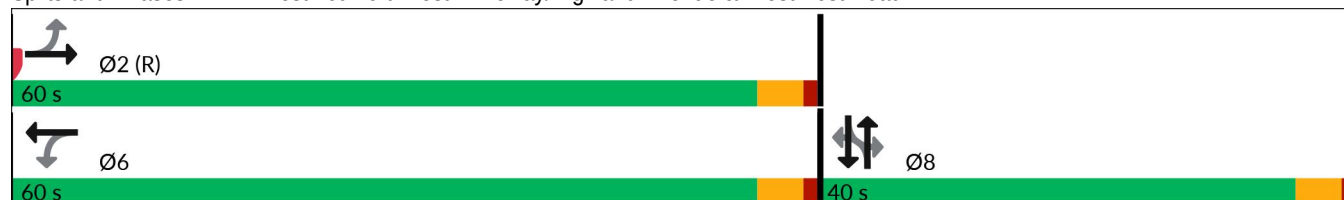
Intersection LOS: B

Intersection Capacity Utilization 77.3%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 11: West Lot Northwest Driveway/Highland Avenue & West Post Road



Build Improved Conditions
12: West Post Road & Orawaupum Street

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	22	485	379	47	14	15
Future Volume (Veh/h)	22	485	379	47	14	15
Sign Control		Free	Free		Stop	
Grade		-3%	2%		-10%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	26	564	441	55	16	17
Pedestrians			4		56	
Lane Width (ft)			16.0		11.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			0		4	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		381	361			
pX, platoon unblocked	0.90				0.93	0.90
vC, conflicting volume	552				1145	525
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	452				887	421
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				94	97
cM capacity (veh/h)	963				273	548
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	590	496	33			
Volume Left	26	0	16			
Volume Right	0	55	17			
cSH	963	1700	368			
Volume to Capacity	0.03	0.29	0.09			
Queue Length 95th (ft)	2	0	7			
Control Delay (s/veh)	0.7	0.0	15.7			
Lane LOS	A		C			
Approach Delay (s/veh)	0.7	0.0	15.7			
Approach LOS			C			
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			58.2%	ICU Level of Service	B	
Analysis Period (min)			15			

Build Improved Conditions

AM Peak Hour

14: South Lexington Avenue & West Post Road/East Post Road

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	430	86	70	231	0	0	0	68	255	601	195
Future Volume (vph)	0	430	86	70	231	0	0	0	68	255	601	195
Ideal Flow (vphpl)	1900	2050	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	12	12	12	12	11	11	11
Grade (%)		-1%			0%			0%			1%	
Storage Length (ft)	0		105	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1589	1294	0	2556	0	0	0	1479	1065	2765	0
Flt Permitted					0.630					0.950		
Satd. Flow (perm)	0	1589	1217	0	1624	0	0	0	1331	993	2765	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			65						204		58	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		207			179			393			1032	
Travel Time (s)		4.7			4.1			8.9			23.5	
Confl. Peds. (#/hr)	61		38	38		61	34		54	54		34
Confl. Bikes (#/hr)			2									4
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	5%	0%	2%	5%	0%	0%	0%	0%	2%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0	0		24					41	4	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	483	97	0	339	0	0	0	74	287	894	0
Turn Type		NA	Perm	Perm	NA				Perm	Perm	NA	
Protected Phases		2			2							4
Permitted Phases			2	2					8	4		
Total Split (s)		43.0	43.0	43.0	43.0				51.0	51.0	51.0	
Total Lost Time (s)		5.0	5.0		5.0				5.0	5.0	5.0	
Act Effect Green (s)		38.0	38.0		38.0				46.0	46.0	46.0	
Actuated g/C Ratio		0.38	0.38		0.38				0.46	0.46	0.46	
v/c Ratio		0.80	0.19		0.54				0.10	0.62	0.68	
Control Delay (s/veh)		34.9	8.0		28.4				0.6	15.9	11.6	
Queue Delay		0.0	0.0		0.0				0.0	0.0	0.0	
Total Delay (s/veh)		34.9	8.0		28.4				0.6	15.9	11.7	
LOS		C	A		C				A	B	B	
Approach Delay (s/veh)		30.4			28.4			0.7			12.8	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)		268	6		87				0	60	86	
Queue Length 95th (ft)		#422	42		133				m4	99	124	
Internal Link Dist (ft)		127			99			313			952	
Turn Bay Length (ft)			105									
Base Capacity (vph)		603	502		617				722	456	1303	
Starvation Cap Reductn		0	0		0				0	0	0	
Spillback Cap Reductn		0	0		0				0	0	20	
Storage Cap Reductn		0	0		0				0	0	0	
Reduced v/c Ratio		0.80	0.19		0.55				0.10	0.63	0.70	

05/07/2024

14: South Lexington Avenue & West Post Road/East Post Road

Synchro 11 Report

Kimley-Horn

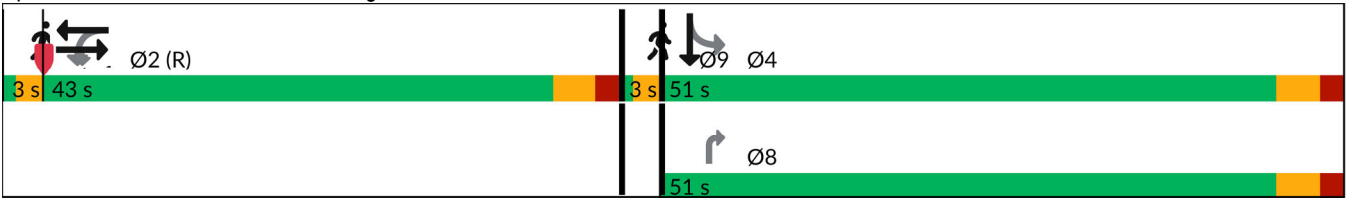
Build Improved Conditions
14: South Lexington Avenue & West Post Road/East Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Intersection Summary

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.80
Intersection Signal Delay (s/veh):	19.5
Intersection LOS:	B
Intersection Capacity Utilization	81.9%
ICU Level of Service	D
Analysis Period (min)	15
#	95th percentile volume exceeds capacity, queue may be longer.
	Queue shown is maximum after two cycles.
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: South Lexington Avenue & West Post Road/East Post Road



Build Improved Conditions
14: South Lexington Avenue & West Post Road/East Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Lane Group	Ø1	Ø9
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Bus Blockages (#/hr)		
Parking (#/hr)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	1	9
Permitted Phases		
Total Split (s)	3.0	3.0
Total Lost Time (s)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay (s/veh)		
Queue Delay		
Total Delay (s/veh)		
LOS		
Approach Delay (s/veh)		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Build Improved Conditions

AM Peak Hour

14: South Lexington Avenue & West Post Road/East Post Road

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	430	86	70	231	0	0	0	68	255	601	195
Future Volume (vph)	0	430	86	70	231	0	0	0	68	255	601	195
Ideal Flow (vphpl)	1900	2050	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	12	12	12	12	11	11	11
Grade (%)		-1%			0%			0%			1%	
Storage Length (ft)	0		105	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1589	1294	0	2556	0	0	1331	0	1065	2765	0
Flt Permitted					0.630					0.709		
Satd. Flow (perm)	0	1589	1217	0	1624	0	0	1331	0	730	2765	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			65					204			58	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		207			179			393			1032	
Travel Time (s)		4.7			4.1			8.9			23.5	
Confl. Peds. (#/hr)	61		38	38		61	34		54	54		34
Confl. Bikes (#/hr)			2									4
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	5%	0%	2%	5%	0%	0%	0%	0%	2%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0	0		24					41	4	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	483	97	0	339	0	0	74	0	287	894	0
Turn Type		NA	Perm	Perm	NA			NA		Perm	NA	
Protected Phases		2			2			8			4	
Permitted Phases			2	2			8			4		
Total Split (s)		43.0	43.0	43.0	43.0		51.0	51.0		51.0	51.0	
Total Lost Time (s)		5.0	5.0		5.0			5.0		5.0	5.0	
Act Effect Green (s)		38.0	38.0		38.0			46.0		46.0	46.0	
Actuated g/C Ratio		0.38	0.38		0.38			0.46		0.46	0.46	
v/c Ratio		0.80	0.19		0.54			0.10		0.85	0.68	
Control Delay (s/veh)		34.9	8.0		28.4			0.6		34.7	11.6	
Queue Delay		0.0	0.0		0.0			0.0		0.0	0.0	
Total Delay (s/veh)		34.9	8.0		28.4			0.6		34.7	11.7	
LOS		C	A		C			A		C	B	
Approach Delay (s/veh)		30.4			28.4			0.7			17.4	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)		268	6		87			0		61	86	
Queue Length 95th (ft)		#422	42		133			m4		#302	124	
Internal Link Dist (ft)		127			99			313			952	
Turn Bay Length (ft)			105									
Base Capacity (vph)		603	502		617			722		335	1303	
Starvation Cap Reductn		0	0		0			0		0	0	
Spillback Cap Reductn		0	0		0			0		0	20	
Storage Cap Reductn		0	0		0			0		0	0	
Reduced v/c Ratio		0.80	0.19		0.55			0.10		0.86	0.70	

Build Improved Conditions
14: South Lexington Avenue & West Post Road/East Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

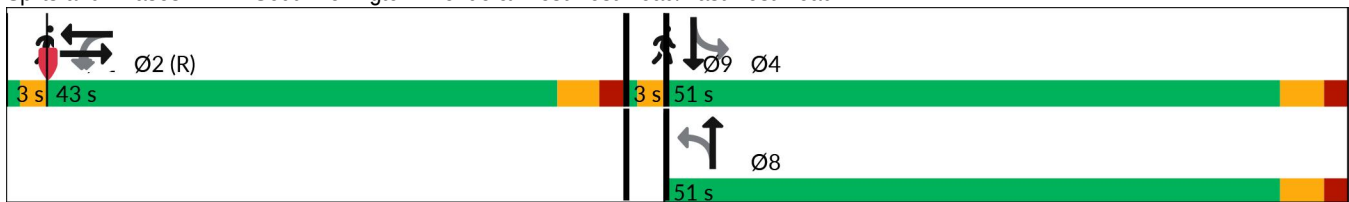
Intersection Summary

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.86
Intersection Signal Delay (s/veh):	22.0
Intersection LOS:	C
Intersection Capacity Utilization	81.9%
ICU Level of Service	D
Analysis Period (min)	15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: South Lexington Avenue & West Post Road/East Post Road



Build Improved Conditions

AM Peak Hour

14: South Lexington Avenue & West Post Road/East Post Road

Timing Plan: 8:00 AM – 9:00 AM

Lane Group	Ø1	Ø9
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Bus Blockages (#/hr)		
Parking (#/hr)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	1	9
Permitted Phases		
Total Split (s)	3.0	3.0
Total Lost Time (s)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay (s/veh)		
Queue Delay		
Total Delay (s/veh)		
LOS		
Approach Delay (s/veh)		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Build Improved Conditions

AM Peak Hour

16: Public Emergency Department Entrance/East Post Road Garage & East Post Road

Time Plan: 7:00 AM – 9:00 AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇄			⇄						⇄	
Traffic Volume (vph)	178	568	5	3	258	4	0	0	0	75	0	41
Future Volume (vph)	178	568	5	3	258	4	0	0	0	75	0	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	10	10	12	12	12	12	12	12	12
Grade (%)		0%			-1%			0%			0%	
Satd. Flow (prot)	0	2967	0	0	2884	0	0	0	0	0	1495	0
Flt Permitted		0.785			0.949						0.969	
Satd. Flow (perm)	0	2254	0	0	2738	0	0	0	0	0	1415	0
Right Turn on Red			Yes			Yes				Yes		Yes
Satd. Flow (RTOR)		1			3						27	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		214			170			167			197	
Travel Time (s)		4.9			3.9			3.8			4.5	
Confl. Peds. (#/hr)	100		100	100		100				50		50
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	835	0	0	294	0	0	0	0	0	129	0
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases	4			8						6		
Total Split (s)	70.0	70.0		70.0	70.0					30.0	30.0	
Total Lost Time (s)		4.5			4.5						4.5	
Act Effct Green (s)		29.4			29.4						13.4	
Actuated g/C Ratio		0.64			0.64						0.29	
v/c Ratio		0.58			0.16						0.30	
Control Delay (s/veh)		10.4			6.4						15.2	
Queue Delay		0.0			0.0						0.0	
Total Delay (s/veh)		10.4			6.4						15.2	
LOS		B			A						B	
Approach Delay (s/veh)		10.4			6.4						15.2	
Approach LOS		B			A						B	
Queue Length 50th (ft)		101			25						22	
Queue Length 95th (ft)		156			41						71	
Internal Link Dist (ft)		134			90			87			117	
Turn Bay Length (ft)												
Base Capacity (vph)		2254			2738						854	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.37			0.11						0.15	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 46.2

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.58

Build Improved Conditions

AM Peak Hour

16: Public Emergency Department Entrance/East Post Road Garage & East Post Road

Time Plan: 8:00 AM – 9:00 AM

Intersection Signal Delay (s/veh): 10.0	Intersection LOS: A
Intersection Capacity Utilization 63.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: Public Emergency Department Entrance/East Post Road Garage & East Post Road



Build Improved Conditions
17: Public Emergency Department Exit & East Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	643	0	0	265	0	4
Future Volume (Veh/h)	643	0	0	265	0	4
Sign Control	Free			Free	Stop	
Grade	2%			-2%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	714	0	0	294	0	4
Pedestrians	20			20	100	
Lane Width (ft)	9.0			10.0	11.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			1	8	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	170			262		
pX, platoon unblocked			0.90		0.90	0.90
vC, conflicting volume			814		981	477
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			575		760	201
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			818		277	653
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	357	357	147	147	4	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	4	
cSH	1700	1700	1700	1700	653	
Volume to Capacity	0.21	0.21	0.09	0.09	0.01	
Queue Length 95th (ft)	0	0	0	0	0	
Control Delay (s/veh)	0.0	0.0	0.0	0.0	10.5	
Lane LOS					B	
Approach Delay (s/veh)	0.0		0.0		10.5	
Approach LOS					B	
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			34.6%		ICU Level of Service	A
Analysis Period (min)			15			

Build Improved Conditions

AM Peak Hour

18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	234	415	0	0	300	98	150	506	35	0	0	0
Future Volume (vph)	234	415	0	0	300	98	150	506	35	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	10	10	12	12	12	12	12	12
Grade (%)		2%			-5%			-3%			0%	
Satd. Flow (prot)	0	2702	0	0	2591	0	0	3192	0	0	0	0
Flt Permitted		0.635						0.989				
Satd. Flow (perm)	0	1706	0	0	2591	0	0	3153	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					57			6				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			343			379			494	
Travel Time (s)		3.0			7.8			8.6			11.2	
Confl. Peds. (#/hr)	94		104	104		94	50		23	23		50
Confl. Bikes (#/hr)			2						5			
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.92
Heavy Vehicles (%)	3%	4%	0%	0%	7%	1%	2%	1%	0%	0%	0%	0%
Parking (#/hr)		0			0							
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	698	0	0	428	0	0	743	0	0	0	0
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2						8					
Total Split (s)	9.0	59.0			50.0		41.0	41.0				
Total Lost Time (s)		5.0			5.0			5.0				
Act Effct Green (s)		54.0			45.0			36.0				
Actuated g/C Ratio		0.54			0.45			0.36				
v/c Ratio		0.72			0.35			0.65				
Control Delay (s/veh)		21.8			9.1			31.6				
Queue Delay		0.0			0.0			1.8				
Total Delay (s/veh)		21.8			9.1			33.4				
LOS		C			A			C				
Approach Delay (s/veh)		21.9			9.2			33.5				
Approach LOS		C			A			C				
Queue Length 50th (ft)		137			17			213				
Queue Length 95th (ft)		185			46			284				
Internal Link Dist (ft)		53			263			299			414	
Turn Bay Length (ft)												
Base Capacity (vph)		961			1197			1138				
Starvation Cap Reductn		0			0			237				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.73			0.36			0.82				
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												
Actuated Cycle Length: 100												

Build Improved Conditions

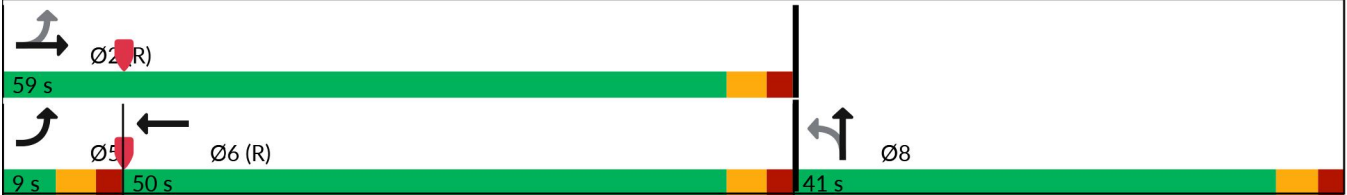
AM Peak Hour

18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road

Timing Plan: 8:00 AM – 9:00 AM

Offset: 98 (98%), Referenced to phase 2:EBTL and 6:WBT, Start of Green	
Control Type: Pretimed	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay (s/veh): 23.6	Intersection LOS: C
Intersection Capacity Utilization 73.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road



Build Improved Conditions
19: Cromwell Place/Grand Street & East Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	347	103	54	355	0	0	0	0	57	57	49
Future Volume (vph)	0	347	103	54	355	0	0	0	0	57	57	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	10	10	12	12	12	12	9	10	12
Grade (%)		5%			0%			0%			2%	
Satd. Flow (prot)	0	2394	0	0	2718	0	0	0	0	1277	1275	0
Flt Permitted					0.814					0.950		
Satd. Flow (perm)	0	2394	0	0	2190	0	0	0	0	1224	1275	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		82									41	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		343			219			455			494	
Travel Time (s)		7.8			5.0			10.3			11.2	
Confl. Peds. (#/hr)	89		116	116		89	44		32	32		44
Confl. Bikes (#/hr)			1									1
Peak Hour Factor	0.92	0.83	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.83	0.83	0.83
Heavy Vehicles (%)	0%	5%	2%	7%	4%	0%	0%	0%	0%	2%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	4	0	0	0	0	0	0	0
Parking (#/hr)		4			0					0	0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	542	0	0	493	0	0	0	0	69	128	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			2							4
Permitted Phases				2						4		
Total Split (s)		71.0		71.0	71.0					29.0	29.0	
Total Lost Time (s)		5.0			5.0					5.0	5.0	
Act Effct Green (s)		67.0			67.0					23.0	23.0	
Actuated g/C Ratio		0.67			0.67					0.23	0.23	
v/c Ratio		0.33			0.33					0.24	0.39	
Control Delay (s/veh)		1.5			5.8					34.2	26.0	
Queue Delay		0.2			0.3					0.0	0.0	
Total Delay (s/veh)		1.8			6.1					34.2	26.0	
LOS		A			A					C	C	
Approach Delay (s/veh)		1.8			6.1						28.9	
Approach LOS		A			A						C	
Queue Length 50th (ft)		6			34					36	46	
Queue Length 95th (ft)		13			41					69	90	
Internal Link Dist (ft)		263			139			375			414	
Turn Bay Length (ft)												
Base Capacity (vph)		1631			1467					293	337	
Starvation Cap Reductn		519			455					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.49			0.49					0.24	0.38	
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												

Build Improved Conditions
19: Cromwell Place/Grand Street & East Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Actuated Cycle Length: 100	
Offset: 91 (91%), Referenced to phase 2:EBWB and 6:, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay (s/veh): 7.9	Intersection LOS: A
Intersection Capacity Utilization 65.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 19: Cromwell Place/Grand Street & East Post Road



Build Improved Conditions
20: Chester Avenue & East Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

							
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Lane Configurations	↑↑			↑↑	↑	↑	
Traffic Volume (vph)	404	0	0	337	72	86	
Future Volume (vph)	404	0	0	337	72	86	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Grade (%)	4%			1%	0%		
Satd. Flow (prot)	3468	0	0	3522	1770	1583	
Flt Permitted					0.950		
Satd. Flow (perm)	3468	0	0	3522	1567	1387	
Right Turn on Red		No				No	
Satd. Flow (RTOR)							
Link Speed (mph)	30			30	30		
Link Distance (ft)	219			383	506		
Travel Time (s)	5.0			8.7	11.5		
Confl. Peds. (#/hr)		80	80		80	80	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	439	0	0	366	78	93	
Turn Type	NA			NA	Prot	Perm	
Protected Phases	2			2	4		9
Permitted Phases						4	
Total Split (s)	63.0			63.0	32.0	32.0	5.0
Total Lost Time (s)	4.5			4.5	4.5	4.5	
Act Effect Green (s)	58.5			58.5	32.5	32.5	
Actuated g/C Ratio	0.59			0.59	0.33	0.33	
v/c Ratio	0.21			0.17	0.13	0.20	
Control Delay (s/veh)	5.7			9.8	18.3	19.2	
Queue Delay	0.5			0.0	0.0	0.0	
Total Delay (s/veh)	6.2			9.8	18.3	19.2	
LOS	A			A	B	B	
Approach Delay (s/veh)	6.3			9.9	18.9		
Approach LOS	A			A	B		
Queue Length 50th (ft)	33			53	25	30	
Queue Length 95th (ft)	42			75	49	57	
Internal Link Dist (ft)	139			303	426		
Turn Bay Length (ft)							
Base Capacity (vph)	2028			2060	575	450	
Starvation Cap Reductn	1132			0	0	0	
Spillback Cap Reductn	0			0	0	0	
Storage Cap Reductn	0			0	0	0	
Reduced v/c Ratio	0.49			0.18	0.14	0.21	
Intersection Summary							
Area Type:	Other						
Cycle Length: 100							
Actuated Cycle Length: 100							
Offset: 95 (95%), Referenced to phase 2:EBWB and 6:, Start of Green							
Control Type: Actuated-Coordinated							
Maximum v/c Ratio: 0.22							
Intersection Signal Delay (s/veh): 9.8	Intersection LOS: A						

Build Improved Conditions
20: Chester Avenue & East Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Intersection Capacity Utilization 37.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 20: Chester Avenue & East Post Road



Build Improved Conditions

AM Peak Hour

21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	0	0	0	0	6	0	829	0	0	0	0
Future Volume (vph)	63	0	0	0	0	6	0	829	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			1%			0%	
Satd. Flow (prot)	1593	1676	0	0	0	1450	0	4554	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1473	1676	0	0	0	1326	0	4554	0	0	0	0
Right Turn on Red	No		No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		403			216			494			280	
Travel Time (s)		9.2			4.9			11.2			6.4	
Confl. Peds. (#/hr)	50		50	50		50	100		100			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	0	0	0	0	7	0	901	0	0	0	0
Turn Type	Perm					Perm		NA				
Protected Phases		4						2				
Permitted Phases	4					4						
Total Split (s)	25.1	25.1				25.1		74.9				
Total Lost Time (s)	5.0	5.0				5.0		4.9				
Act Effct Green (s)	14.8					14.8		78.4				
Actuated g/C Ratio	0.15					0.15		0.78				
v/c Ratio	0.31					0.03		0.25				
Control Delay (s/veh)	39.4					32.8		3.9				
Queue Delay	0.0					0.0		0.0				
Total Delay (s/veh)	39.4					32.8		3.9				
LOS	D					C		A				
Approach Delay (s/veh)		39.4			32.8			3.9				
Approach LOS		D			C			A				
Queue Length 50th (ft)	37					4		64				
Queue Length 95th (ft)	76					16		69				
Internal Link Dist (ft)		323			136			414			200	
Turn Bay Length (ft)												
Base Capacity (vph)	296					266		3572				
Starvation Cap Reductn	0					0		0				
Spillback Cap Reductn	0					0		0				
Storage Cap Reductn	0					0		0				
Reduced v/c Ratio	0.23					0.03		0.25				
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												
Actuated Cycle Length: 100												
Offset: 33 (33%), Referenced to phase 2:NBT and 6:, Start of Green												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.31												
Intersection Signal Delay (s/veh): 6.6	Intersection LOS: A											

Build Improved Conditions

AM Peak Hour

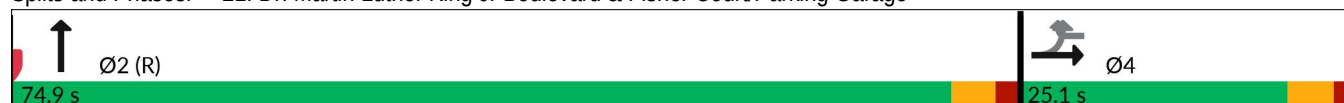
21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage Timing Plan: 8:00 AM – 9:00 AM

Intersection Capacity Utilization 48.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage



Build Improved Conditions

22: South Lexington Avenue & Fisher Avenue/Quarropas Street

AM Peak Hour

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	417	157	85	72	0	0	0	0	570	798	120
Future Volume (vph)	0	417	157	85	72	0	0	0	0	570	798	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	11	11	12	12	12	12	12	12	13
Grade (%)		-1%			0%			0%			-1%	
Storage Length (ft)	0		0	135		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	2		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	2806	0	1540	3079	0	0	0	0	3105	3201	1480
Flt Permitted				0.306						0.950		
Satd. Flow (perm)	0	2806	0	486	3079	0	0	0	0	2752	3201	1363
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)												130
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		629			873			1032			215	
Travel Time (s)		14.3			19.8			23.5			4.9	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	624	0	92	78	0	0	0	0	620	867	130
Turn Type		NA		pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Total Split (s)		45.0		10.0	55.0					42.0	42.0	42.0
Total Lost Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Act Effct Green (s)		44.2		52.7	52.7					37.3	37.3	37.3
Actuated g/C Ratio		0.44		0.53	0.53					0.37	0.37	0.37
v/c Ratio		0.50		0.29	0.04					0.60	0.72	0.22
Control Delay (s/veh)		23.2		22.8	13.1					27.7	30.6	4.5
Queue Delay		0.0		0.0	0.0					0.0	0.0	0.0
Total Delay (s/veh)		23.2		22.8	13.1					27.7	30.6	4.5
LOS		C		C	B					C	C	A
Approach Delay (s/veh)		23.2			18.4						27.4	
Approach LOS		C			B						C	
Queue Length 50th (ft)		158		41	14					154	234	0
Queue Length 95th (ft)		214		84	32					210	304	36
Internal Link Dist (ft)		549			793			952			135	
Turn Bay Length (ft)				135								
Base Capacity (vph)		1239		315	1621					1067	1242	608
Starvation Cap Reductn		0		0	0					0	0	0
Spillback Cap Reductn		0		0	0					0	0	0
Storage Cap Reductn		0		0	0					0	0	0
Reduced v/c Ratio		0.50		0.29	0.05					0.58	0.70	0.21
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												
Actuated Cycle Length: 100												

Build Improved Conditions
22: South Lexington Avenue & Fisher Avenue/Quarropas Street

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Build Improved Conditions

22: South Lexington Avenue & Fisher Avenue/Quarropas Street

AM Peak Hour

Timing Plan: 8:00 AM – 9:00 AM

Offset: 95 (95%), Referenced to phase 2:EBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay (s/veh): 25.7

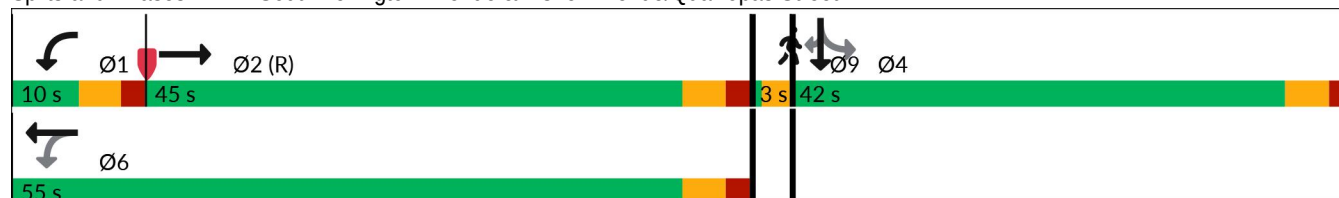
Intersection LOS: C

Intersection Capacity Utilization 83.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 22: South Lexington Avenue & Fisher Avenue/Quarropas Street



Build Improved Conditions

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

AM Peak Hour

Timing Plan: 8:00 AM – 9:00 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  				
Traffic Volume (vph)	455	532	0	0	75	159	75	755	75	0	0	0
Future Volume (vph)	455	532	0	0	75	159	75	755	75	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	12	12	11	11	12	12	12	12	12	12
Grade (%)		3%			-4%			1%			0%	
Storage Length (ft)	240		0	0		90	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1516	2928	0	0	1653	1405	0	4456	0	0	0	0
Flt Permitted	0.597							0.996				
Satd. Flow (perm)	910	2928	0	0	1653	1312	0	4434	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						88		20				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		873			420			280			604	
Travel Time (s)		19.8			9.5			6.4			13.7	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	495	578	0	0	82	173	0	985	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Total Split (s)	15.0	48.0			33.0	33.0	52.0	52.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Act Effct Green (s)	58.8	58.8			28.0	28.0		31.2				
Actuated g/C Ratio	0.59	0.59			0.28	0.28		0.31				
v/c Ratio	0.71	0.33			0.17	0.40		0.70				
Control Delay (s/veh)	21.0	11.9			28.6	17.6		33.2				
Queue Delay	0.0	0.0			0.0	0.0		0.1				
Total Delay (s/veh)	21.0	11.9			28.6	17.6		33.4				
LOS	C	B			C	B		C				
Approach Delay (s/veh)		16.2			21.2			33.4				
Approach LOS		B			C			C				
Queue Length 50th (ft)	211	118			40	42		107				
Queue Length 95th (ft)	#335	170			78	102		99				
Internal Link Dist (ft)		793			340			200			524	
Turn Bay Length (ft)	240					90						
Base Capacity (vph)	691	1722			462	430		2094				
Starvation Cap Reductn	0	0			0	0		261				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.72	0.34			0.18	0.40		0.54				
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												
Actuated Cycle Length: 100												

Build Improved Conditions

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

AM Peak Hour

Timing Plan: 8:00 AM – 9:00 AM

Offset: 11 (11%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay (s/veh): 24.1

Intersection LOS: C

Intersection Capacity Utilization 83.3%

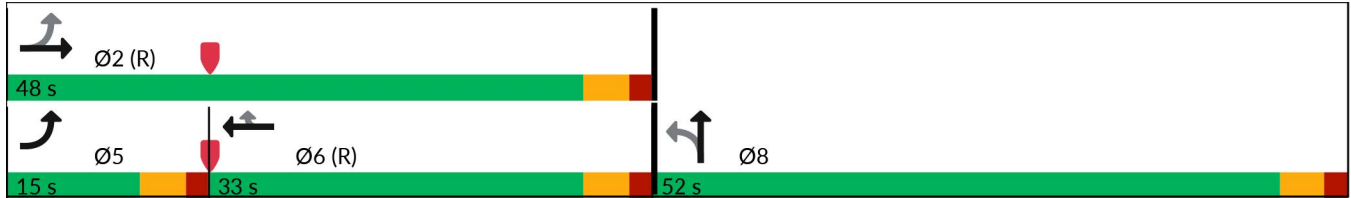
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 23: Dr. Martin Luther King Jr Boulevard & Quarropas Street



Build Improved Conditions
24: West Lot Northeast Driveway & West Post Road

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	500	0	0	423	0	17
Future Volume (Veh/h)	500	0	0	423	0	17
Sign Control	Free			Free	Stop	
Grade	-3%			3%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	556	0	0	470	0	19
Pedestrians	20			20	40	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			1	3	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	535			207		
pX, platoon unblocked			0.91		0.95	0.91
vC, conflicting volume			596		1086	616
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			510		856	531
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	96
cM capacity (veh/h)			927		294	472
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	556	470	19			
Volume Left	0	0	0			
Volume Right	0	0	19			
cSH	1700	1700	472			
Volume to Capacity	0.33	0.28	0.04			
Queue Length 95th (ft)	0	0	3			
Control Delay (s/veh)	0.0	0.0	12.9			
Lane LOS			B			
Approach Delay (s/veh)	0.0	0.0	12.9			
Approach LOS			B			
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			44.1%	ICU Level of Service		A
Analysis Period (min)			15			

Build Improved Conditions

25: Ambulance Emergency Department Entrance & East Post Road

AM Peak Hour

Timing Plan: 8:00 AM – 9:00 AM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		
Traffic Volume (veh/h)	748	5	2	297	0	0
Future Volume (Veh/h)	748	5	2	297	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	831	6	2	330	0	0
Pedestrians	20			20	100	
Lane Width (ft)	12.0			12.0	0.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			1	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	179			392		
pX, platoon unblocked						
vC, conflicting volume			937		1123	539
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			937		1123	539
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			727		195	478
Direction, Lane #	EB 1	EB 2	WB 1	WB 2		
Volume Total	554	283	112	220		
Volume Left	0	0	2	0		
Volume Right	0	6	0	0		
cSH	1700	1700	727	1700		
Volume to Capacity	0.33	0.17	0.00	0.13		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s/veh)	0.0	0.0	0.2	0.0		
Lane LOS			A			
Approach Delay (s/veh)	0.0		0.1			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			38.1%	ICU Level of Service		A
Analysis Period (min)			15			

Build Improved Conditions
 26: Ambulance Emergency Department Exit & East Post Road

AM Peak Hour
 Timing Plan: 8:00 AM – 9:00 AM

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	748	0	0	299	1	3
Future Volume (Veh/h)	748	0	0	299	1	3
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	831	0	0	332	1	3
Pedestrians	20			20	100	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			1	9	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	357			214		
pX, platoon unblocked					1.00	
vC, conflicting volume			931		1117	536
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			931		1114	536
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			661		179	434
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	416	416	166	166	4	
Volume Left	0	0	0	0	1	
Volume Right	0	0	0	0	3	
cSH	1700	1700	1700	1700	320	
Volume to Capacity	0.24	0.24	0.10	0.10	0.01	
Queue Length 95th (ft)	0	0	0	0	1	
Control Delay (s/veh)	0.0	0.0	0.0	0.0	16.4	
Lane LOS					C	
Approach Delay (s/veh)	0.0		0.0		16.4	
Approach LOS					C	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			37.8%		ICU Level of Service	A
Analysis Period (min)			15			

Build Improved Conditions
27: East Post Road & Winchester Street

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	5	642	260	186	5	5
Future Volume (Veh/h)	5	642	260	186	5	5
Sign Control		Free	Free		Stop	
Grade		2%	-2%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	713	289	207	6	6
Pedestrians		20	20		100	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		1	1		9	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		299	133			
pX, platoon unblocked					0.94	
vC, conflicting volume	596				881	368
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	596				740	368
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	99
cM capacity (veh/h)	883				291	558
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	244	475	193	303	12	
Volume Left	6	0	0	0	6	
Volume Right	0	0	0	207	6	
cSH	883	1700	1700	1700	383	
Volume to Capacity	0.01	0.28	0.11	0.18	0.03	
Queue Length 95th (ft)	1	0	0	0	2	
Control Delay (s/veh)	0.3	0.0	0.0	0.0	14.7	
Lane LOS	A				B	
Approach Delay (s/veh)	0.1		0.0		14.7	
Approach LOS					B	
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			36.1%		ICU Level of Service	A
Analysis Period (min)			15			

Build Improved Conditions
28: Winchester Street & East Post Road Garage

AM Peak Hour
Timing Plan: 8:00 AM – 9:00 AM



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	186	5	10	0
Future Volume (Veh/h)	0	0	186	5	10	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	207	6	11	0
Pedestrians	20			100	100	
Lane Width (ft)	0.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	0			9	9	
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	551	131	31			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	551	131	31			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	87			
cM capacity (veh/h)	390	831	1582			
Direction, Lane #	NB 1	SB 1				
Volume Total	213	11				
Volume Left	207	0				
Volume Right	0	0				
cSH	1582	1700				
Volume to Capacity	0.13	0.01				
Queue Length 95th (ft)	11	0				
Control Delay (s/veh)	7.4	0.0				
Lane LOS	A					
Approach Delay (s/veh)	7.4	0.0				
Approach LOS						
Intersection Summary						
Average Delay			7.1			
Intersection Capacity Utilization			38.1%	ICU Level of Service		A
Analysis Period (min)			15			

Build Improved Conditions
1: Maple Avenue & West Lot Southwest Driveway

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	6	432	468	6	17	15
Future Volume (Veh/h)	6	432	468	6	17	15
Sign Control		Free	Free		Stop	
Grade		-2%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	7	480	520	7	19	17
Pedestrians		5	5		20	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	0		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			687			
pX, platoon unblocked	0.93				0.93	0.93
vC, conflicting volume	547				803	289
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	360				635	82
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				95	98
cM capacity (veh/h)	1089				370	872
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	167	320	347	180	36	
Volume Left	7	0	0	0	19	
Volume Right	0	0	0	7	17	
cSH	1089	1700	1700	1700	508	
Volume to Capacity	0.01	0.19	0.20	0.11	0.07	
Queue Length 95th (ft)	0	0	0	0	6	
Control Delay (s/veh)	0.4	0.0	0.0	0.0	12.6	
Lane LOS	A				B	
Approach Delay (s/veh)	0.1		0.0		12.6	
Approach LOS					B	
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			27.7%		ICU Level of Service	A
Analysis Period (min)			15			

Build Improved Conditions

2: Roosevelt Street/West Lot Southeast Driveway & Maple Avenue

MD Peak Hour

Timing Plan: 3:00 PM – 4:00 PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	447	2	12	466	48	9	0	11	98	0	0
Future Volume (Veh/h)	0	447	2	12	466	48	9	0	11	98	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		-2%			-1%			-4%			0%	
Peak Hour Factor	0.92	0.87	0.87	0.87	0.87	0.92	0.87	0.92	0.87	0.92	0.92	0.92
Hourly flow rate (vph)	0	514	2	14	536	52	10	0	13	107	0	0
Pedestrians		1						16				
Lane Width (ft)		14.0						12.0				
Walking Speed (ft/s)		3.5						3.5				
Percent Blockage		0						1				
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					357							
pX, platoon unblocked	0.89						0.89	0.89		0.89	0.89	0.89
vC, conflicting volume	588			532			828	1147	274	860	1122	295
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	281			532			552	912	274	588	883	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			97	100	98	68	100	100
cM capacity (veh/h)	1134			1030			360	235	719	334	244	961
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	257	259	282	320	23	107						
Volume Left	0	0	14	0	10	107						
Volume Right	0	2	0	52	13	0						
cSH	1134	1700	1030	1700	501	334						
Volume to Capacity	0.00	0.15	0.01	0.19	0.05	0.32						
Queue Length 95th (ft)	0	0	1	0	4	34						
Control Delay (s/veh)	0.0	0.0	0.6	0.0	12.5	20.7						
Lane LOS			A		B	C						
Approach Delay (s/veh)	0.0		0.3		12.5	20.7						
Approach LOS					B	C						
Intersection Summary												
Average Delay			2.1									
Intersection Capacity Utilization			44.0%		ICU Level of Service		A					
Analysis Period (min)			15									

Build Improved Conditions

3: South Lexington Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

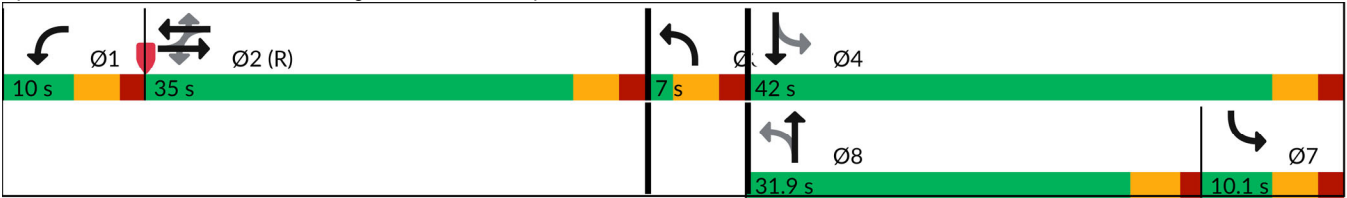
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	481	21	36	454	0	29	12	65	283	391	55
Future Volume (vph)	54	481	21	36	454	0	29	12	65	283	391	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	10	12	10	12	10	10	13	12
Grade (%)		0%			-2%			-5%			4%	
Storage Length (ft)	0		0	140		0	85		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3082	0	1477	3063	0	1554	1410	0	1324	1689	0
Flt Permitted		0.826		0.308			0.210			0.704		
Satd. Flow (perm)	0	2548	0	465	3063	0	339	1410	0	940	1689	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		4									9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		357			354			564			393	
Travel Time (s)		8.1			8.0			12.8			8.9	
Confl. Peds. (#/hr)	31		30	30		31	29		35	35		29
Confl. Bikes (#/hr)			1			1						3
Peak Hour Factor	0.92	0.94	0.94	0.94	0.94	0.92	0.94	0.92	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	11%	0%	0%	0%	0%	0%	4%	1%	0%	0%
Parking (#/hr)										0		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	593	0	38	483	0	31	82	0	301	475	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		2		1	2		3	8		7	4	
Permitted Phases	2			2			8			4		
Total Split (s)	35.0	35.0		10.0	35.0		7.0	31.9		10.1	42.0	
Total Lost Time (s)		5.0		5.0	5.0		5.0	4.9		5.0	5.0	
Act Effct Green (s)		30.0		35.0	30.0		28.9	27.0		37.0	37.0	
Actuated g/C Ratio		0.32		0.37	0.32		0.31	0.29		0.39	0.39	
v/c Ratio		0.72		0.16	0.49		0.23	0.20		0.77	0.70	
Control Delay (s/veh)		34.3		16.5	25.2		25.2	27.0		31.0	21.4	
Queue Delay		0.3		0.0	0.0		0.0	0.0		0.0	3.9	
Total Delay (s/veh)		34.6		16.5	25.2		25.2	27.0		31.0	25.3	
LOS		C		B	C		C	C		C	C	
Approach Delay (s/veh)		34.6			24.6			26.6			27.6	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)		162		14	100		12	37		109	225	
Queue Length 95th (ft)		227		32	131		31	75		#294	389	
Internal Link Dist (ft)		277			274			484			313	
Turn Bay Length (ft)				140			85					
Base Capacity (vph)		815		226	977		130	405		390	670	
Starvation Cap Reductn		0		0	0		0	0		0	122	
Spillback Cap Reductn		27		0	0		0	0		0	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.75		0.17	0.49		0.24	0.20		0.77	0.87	
Intersection Summary												

Build Improved Conditions
3: South Lexington Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Area Type:	CBD
Cycle Length:	94
Actuated Cycle Length:	94
Offset:	21 (22%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.77
Intersection Signal Delay (s/veh):	28.8
Intersection LOS:	C
Intersection Capacity Utilization	70.7%
ICU Level of Service	C
Analysis Period (min)	15
#	95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

Splits and Phases: 3: South Lexington Avenue & Maple Avenue



Build Improved Conditions

4: Davis Avenue/Main Hospital Entrance & Maple Avenue

MD Peak Hour

Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	107	692	47	16	406	74	24	41	59	118	36	74
Future Volume (vph)	107	692	47	16	406	74	24	41	59	118	36	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	11	11	12	11	12	12	9	12	11	10	12
Grade (%)		1%			0%			-5%			4%	
Storage Length (ft)	100		0	0		0	0		0	90		0
Storage Lanes	1		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1426	3041	0	0	2969	0	0	1246	0	0	1506	1424
Flt Permitted	0.423				0.920			0.927			0.694	
Satd. Flow (perm)	601	3041	0	0	2735	0	0	1161	0	0	1034	1364
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			30			51				79
Link Speed (mph)		30			30			30				30
Link Distance (ft)		354			356			562				217
Travel Time (s)		8.0			8.1			12.8				4.9
Confl. Peds. (#/hr)	45		34	34		45	21		55	55		21
Confl. Bikes (#/hr)			4						1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	1%	1%	0%	0%	7%	0%	3%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	114	786	0	0	528	0	0	133	0	0	164	79
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		4
Total Split (s)	52.0	52.0		52.0	52.0		36.0	36.0		36.0	36.0	36.0
Total Lost Time (s)	5.2	5.2			5.2			5.2			5.2	5.2
Act Effct Green (s)	46.8	46.8			46.8			30.8			30.8	30.8
Actuated g/C Ratio	0.50	0.50			0.50			0.33			0.33	0.33
v/c Ratio	0.38	0.51			0.38			0.32			0.48	0.15
Control Delay (s/veh)	15.5	14.1			20.1			17.1			31.1	6.3
Queue Delay	0.0	2.4			0.0			0.0			0.0	0.0
Total Delay (s/veh)	15.5	16.6			20.1			17.1			31.1	6.3
LOS	B	B			C			B			C	A
Approach Delay (s/veh)		16.5			20.1			17.2			23.1	
Approach LOS		B			C			B			C	
Queue Length 50th (ft)	27	142			91			35			78	0
Queue Length 95th (ft)	m47	188			124			83			142	31
Internal Link Dist (ft)		274			276			482			137	
Turn Bay Length (ft)	100											
Base Capacity (vph)	299	1519			1376			414			338	500
Starvation Cap Reductn	0	579			0			0			0	0
Spillback Cap Reductn	0	0			0			0			0	0
Storage Cap Reductn	0	0			0			0			0	0
Reduced v/c Ratio	0.38	0.84			0.38			0.32			0.49	0.16
Intersection Summary												

Build Improved Conditions
4: Davis Avenue/Main Hospital Entrance & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	6.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Build Improved Conditions
4: Davis Avenue/Main Hospital Entrance & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

Offset: 32 (34%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.52

Intersection Signal Delay (s/veh): 18.5

Intersection LOS: B

Intersection Capacity Utilization 69.3%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Davis Avenue/Main Hospital Entrance & Maple Avenue



Build Improved Conditions
5: Oakwood Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	840	33	30	464	24	61
Future Volume (vph)	840	33	30	464	24	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Grade (%)	1%			0%	-5%	
Satd. Flow (prot)	3177	0	0	3209	1575	0
Flt Permitted				0.858	0.986	
Satd. Flow (perm)	3177	0	0	2760	1571	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	10				67	
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			475	444	
Travel Time (s)	8.1			10.8	10.1	
Confl. Peds. (#/hr)		40	40		6	24
Confl. Bikes (#/hr)		3				
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	0%	0%	1%	7%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	959	0	0	543	93	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			2	4	
Permitted Phases			2			
Total Split (s)	71.2		71.2	71.2	22.8	
Total Lost Time (s)	5.2			5.2	5.0	
Act Effect Green (s)	66.0			66.0	17.8	
Actuated g/C Ratio	0.70			0.70	0.19	
v/c Ratio	0.42			0.28	0.26	
Control Delay (s/veh)	4.4			2.0	14.8	
Queue Delay	0.1			0.0	0.0	
Total Delay (s/veh)	4.6			2.0	14.8	
LOS	A			A	B	
Approach Delay (s/veh)	4.6			2.1	14.8	
Approach LOS	A			A	B	
Queue Length 50th (ft)	59			20	13	
Queue Length 95th (ft)	75			21	55	
Internal Link Dist (ft)	276			395	364	
Turn Bay Length (ft)						
Base Capacity (vph)	2233			1937	352	
Starvation Cap Reductn	433			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.53			0.28	0.26	
Intersection Summary						
Area Type:	CBD					
Cycle Length: 94						
Actuated Cycle Length: 94						
Offset: 31 (33%), Referenced to phase 2:EBWB and 6:, Start of Green						

Build Improved Conditions
5: Oakwood Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Control Type: Pretimed

Maximum v/c Ratio: 0.43

Intersection Signal Delay (s/veh): 4.4

Intersection LOS: A

Intersection Capacity Utilization 62.8%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5: Oakwood Avenue & Maple Avenue



Build Improved Conditions
6: Longview Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	182	618	34	30	479	196	37	326	33	0	0	0
Future Volume (vph)	182	618	34	30	479	196	37	326	33	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	11	10	11	10	10	10	9	12	12	12
Grade (%)		0%			-5%			-2%			0%	
Storage Length (ft)	225		0	60		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1462	2967	0	1509	2976	0	0	2830	0	0	0	0
Flt Permitted	0.271			0.390				0.995				
Satd. Flow (perm)	408	2967	0	604	2976	0	0	2815	0	0	0	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		10			85							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		475			281			824			379	
Travel Time (s)		10.8			6.4			18.7			8.6	
Confl. Peds. (#/hr)	60		24	24		60	44		48	48		44
Confl. Bikes (#/hr)			2			1			2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	3%	0%	1%	4%	0%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	192	687	0	32	710	0	0	417	0	0	0	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2			6			8					
Total Split (s)	13.0	60.0		47.0	47.0		31.0	31.0				
Total Lost Time (s)	5.2	5.2		5.2	5.2			5.2				
Act Effect Green (s)	57.0	57.0		41.8	41.8			23.6				
Actuated g/C Ratio	0.61	0.61		0.44	0.44			0.25				
v/c Ratio	0.53	0.38		0.11	0.51			0.59				
Control Delay (s/veh)	16.4	5.3		10.7	9.9			34.8				
Queue Delay	0.0	0.0		0.0	0.2			0.0				
Total Delay (s/veh)	16.4	5.3		10.7	10.2			34.8				
LOS	B	A		B	B			C				
Approach Delay (s/veh)		7.7			10.3			34.8				
Approach LOS		A			B			C				
Queue Length 50th (ft)	19	35		6	52			116				
Queue Length 95th (ft)	62	43		15	67			160				
Internal Link Dist (ft)		395			201			744			299	
Turn Bay Length (ft)	225			60								
Base Capacity (vph)	359	1803		268	1370			772				
Starvation Cap Reductn	0	0		0	193			0				
Spillback Cap Reductn	0	0		0	0			6				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.53	0.38		0.12	0.60			0.54				
Intersection Summary												

Build Improved Conditions
6: Longview Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Build Improved Conditions
6: Longview Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

Offset: 47 (50%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.59

Intersection Signal Delay (s/veh): 14.2

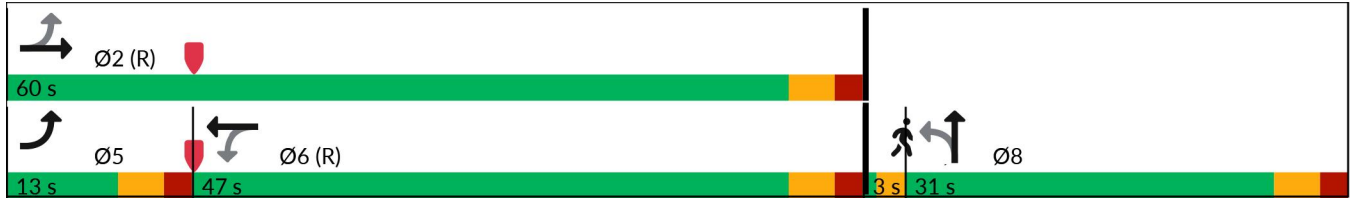
Intersection LOS: B

Intersection Capacity Utilization 66.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: Longview Avenue & Maple Avenue



Build Improved Conditions

7: Maple Avenue & Cromwell Place

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	↑
Traffic Volume (vph)	0	641	575	0	184	120
Future Volume (vph)	0	641	575	0	184	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	11	12
Grade (%)		6%	3%		4%	
Storage Length (ft)	0			0	0	60
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	3016	3094	0	1371	1383
Flt Permitted					0.950	
Satd. Flow (perm)	0	3016	3094	0	1360	1383
Right Turn on Red				Yes		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		281	255		455	
Travel Time (s)		6.4	5.8		10.3	
Confl. Peds. (#/hr)	67			67	6	2
Confl. Bikes (#/hr)						2
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%
Parking (#/hr)					0	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	704	632	0	202	132
Turn Type		NA	NA		Perm	Prot
Protected Phases		2	2			4
Permitted Phases					4	
Total Split (s)		55.0	55.0		39.0	39.0
Total Lost Time (s)		4.7	4.7		4.7	4.7
Act Effect Green (s)		50.3	50.3		34.3	34.3
Actuated g/C Ratio		0.54	0.54		0.36	0.36
v/c Ratio		0.43	0.38		0.40	0.26
Control Delay (s/veh)		3.7	5.8		27.2	24.4
Queue Delay		0.1	0.1		0.0	0.0
Total Delay (s/veh)		3.9	5.9		27.2	24.4
LOS		A	A		C	C
Approach Delay (s/veh)		3.9	6.0		26.1	
Approach LOS		A	A		C	
Queue Length 50th (ft)		51	32		97	60
Queue Length 95th (ft)		19	41		151	104
Internal Link Dist (ft)		201	175		375	
Turn Bay Length (ft)						60
Base Capacity (vph)		1613	1655		496	504
Starvation Cap Reductn		279	264		0	0
Spillback Cap Reductn		48	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.53	0.45		0.41	0.26
Intersection Summary						

Build Improved Conditions
7: Maple Avenue & Cromwell Place

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

Offset: 44 (47%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.44

Intersection Signal Delay (s/veh): 9.2

Intersection LOS: A

Intersection Capacity Utilization 45.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Maple Avenue & Cromwell Place



Build Improved Conditions
8: Greenridge Avenue/Chester Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	634	97	50	555	78	20	71	69	0	0	0
Future Volume (vph)	95	634	97	50	555	78	20	71	69	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	11
Grade (%)		2%			3%			0%			-4%	
Storage Length (ft)	125		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1752	3370	0	1743	3384	0	0	3194	0	0	0	0
Flt Permitted	0.337			0.290				0.994				
Satd. Flow (perm)	607	3370	0	515	3384	0	0	3171	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			24			75				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		255			453			507			506	
Travel Time (s)		5.8			10.3			11.5			11.5	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	103	794	0	54	688	0	0	174	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA				
Protected Phases	1	6		5	2			8				
Permitted Phases	6			2			8					
Total Split (s)	10.0	53.0		10.0	53.0		31.0	31.0				
Total Lost Time (s)	7.0	5.0		5.0	5.0			5.0				
Act Effect Green (s)	50.4	50.0		54.0	50.0			26.0				
Actuated g/C Ratio	0.54	0.53		0.57	0.53			0.28				
v/c Ratio	0.28	0.44		0.14	0.37			0.18				
Control Delay (s/veh)	7.4	9.1		8.2	13.6			15.3				
Queue Delay	0.0	0.2		0.0	0.0			0.0				
Total Delay (s/veh)	7.4	9.3		8.2	13.6			15.3				
LOS	A	A		A	B			B				
Approach Delay (s/veh)		9.1			13.3			15.3				
Approach LOS		A			B			B				
Queue Length 50th (ft)	16	58		12	121			23				
Queue Length 95th (ft)	28	73		26	163			48				
Internal Link Dist (ft)		175			373			427			426	
Turn Bay Length (ft)	125			75								
Base Capacity (vph)	361	1804		361	1811			931				
Starvation Cap Reductn	0	378		0	0			0				
Spillback Cap Reductn	0	0		0	0			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.29	0.56		0.15	0.38			0.19				
Intersection Summary												
Area Type:	Other											
Cycle Length: 94												
Actuated Cycle Length: 94												

Build Improved Conditions
8: Greenridge Avenue/Chester Avenue & Maple Avenue

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Offset: 51 (54%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.44

Intersection Signal Delay (s/veh): 11.4

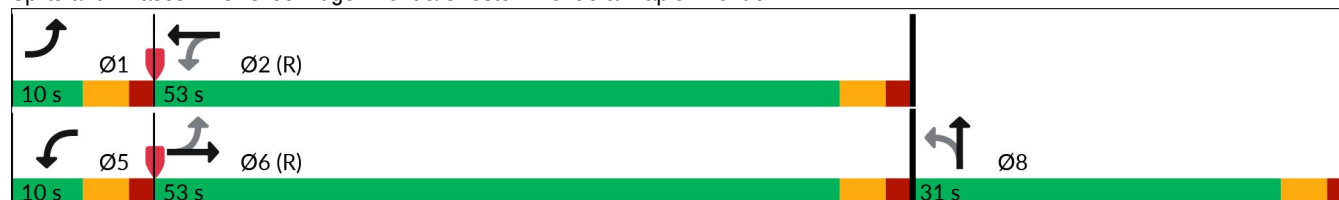
Intersection LOS: B

Intersection Capacity Utilization 58.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 8: Greenridge Avenue/Chester Avenue & Maple Avenue



Build Improved Conditions

MD Peak Hour

11: West Lot Northwest Driveway/Highland Avenue & West Post Road

Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	347	11	0	381	55	2	0	0	60	0	61
Future Volume (vph)	119	347	11	0	381	55	2	0	0	60	0	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	16	12	12	12	12	16	12	12
Grade (%)		-4%			3%			0%			-11%	
Satd. Flow (prot)	0	1656	0	0	1566	0	0	1593	0	0	1570	0
Flt Permitted		0.778						0.593			0.842	
Satd. Flow (perm)	0	1291	0	0	1566	0	0	994	0	0	1344	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			12						64	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		598			381			186			322	
Travel Time (s)		13.6			8.7			4.2			7.3	
Confl. Peds. (#/hr)	49					49				6		22
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.88	0.88	0.92	0.92	0.88	0.88	0.92	0.92	0.92	0.88	0.92	0.88
Heavy Vehicles (%)	2%	4%	2%	2%	3%	7%	2%	2%	2%	0%	2%	1%
Parking (#/hr)		4			4					4		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	541	0	0	496	0	0	2	0	0	137	0
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			8	
Permitted Phases	2			6			8			8		
Total Split (s)	53.0	53.0		53.0	53.0		41.0	41.0		41.0	41.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Act Effct Green (s)		73.9			73.9			11.1			11.1	
Actuated g/C Ratio		0.79			0.79			0.12			0.12	
v/c Ratio		0.53			0.40			0.01			0.64	
Control Delay (s/veh)		6.8			2.5			29.5			34.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		6.8			2.5			29.5			34.6	
LOS		A			A			C			C	
Approach Delay (s/veh)		6.8			2.6			29.5			34.7	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)		88			33			0			42	
Queue Length 95th (ft)		213			98			m3			94	
Internal Link Dist (ft)		518			301			106			242	
Turn Bay Length (ft)												
Base Capacity (vph)		1016			1234			385			561	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.53			0.40			0.01			0.24	
Intersection Summary												
Area Type:	CBD											
Cycle Length: 94												
Actuated Cycle Length: 94												

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.64

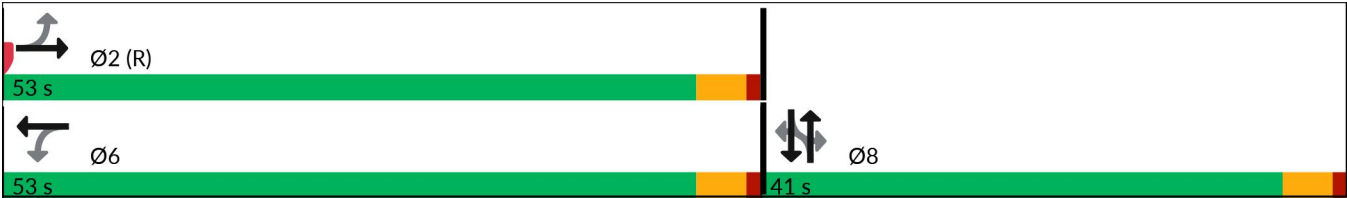
Intersection Signal Delay (s/veh): 8.3 Intersection LOS: A

Intersection Capacity Utilization 77.7% ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: West Lot Northwest Driveway/Highland Avenue & West Post Road



Build Improved Conditions
12: West Post Road & Orawaupum Street

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	28	373	420	56	15	17
Future Volume (Veh/h)	28	373	420	56	15	17
Sign Control		Free	Free		Stop	
Grade		-3%	2%		-10%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	33	434	488	65	17	20
Pedestrians			4		56	
Lane Width (ft)			16.0		11.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			0		4	
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)		381	361			
pX, platoon unblocked	0.88				0.91	0.88
vC, conflicting volume	609				1081	577
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	486				899	449
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				93	96
cM capacity (veh/h)	909				259	514
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	467	553	37			
Volume Left	33	0	17			
Volume Right	0	65	20			
cSH	909	1700	354			
Volume to Capacity	0.04	0.33	0.10			
Queue Length 95th (ft)	3	0	9			
Control Delay (s/veh)	1.1	0.0	16.4			
Lane LOS	A		C			
Approach Delay (s/veh)	1.1	0.0	16.4			
Approach LOS			C			
Intersection Summary						
Average Delay			1.0			
Intersection Capacity Utilization			57.4%	ICU Level of Service		B
Analysis Period (min)			15			

Build Improved Conditions

14: South Lexington Avenue & West Post Road/East Post Road

MD Peak Hour

Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖				↗	↖	↑↗	
Traffic Volume (vph)	0	338	85	92	274	0	0	0	66	207	575	200
Future Volume (vph)	0	338	85	92	274	0	0	0	66	207	575	200
Ideal Flow (vphpl)	1900	2050	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	12	12	12	12	11	11	11
Grade (%)		-1%			0%			0%			1%	
Storage Length (ft)	0		105	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1589	1294	0	2558	0	0	0	1479	1065	2759	0
Flt Permitted					0.659					0.950		
Satd. Flow (perm)	0	1589	1220	0	1697	0	0	0	1339	997	2759	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			80						267		68	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		207			179			393			1032	
Travel Time (s)		4.7			4.1			8.9			23.5	
Confl. Peds. (#/hr)	61		38	38		61	34		54	54		34
Confl. Bikes (#/hr)			2									4
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	5%	0%	2%	5%	0%	0%	0%	0%	2%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0	0		24					41	4	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	380	96	0	411	0	0	0	72	233	871	0
Turn Type		NA	Perm	Perm	NA				Perm	Perm	NA	
Protected Phases		2			2							4
Permitted Phases			2	2					8	4		
Total Split (s)		40.0	40.0	40.0	40.0				48.0	48.0	48.0	
Total Lost Time (s)		5.0	5.0		5.0				5.0	5.0	5.0	
Act Effect Green (s)		35.0	35.0		35.0				43.0	43.0	43.0	
Actuated g/C Ratio		0.37	0.37		0.37				0.46	0.46	0.46	
v/c Ratio		0.64	0.19		0.65				0.09	0.51	0.67	
Control Delay (s/veh)		26.9	4.8		30.3				0.6	11.9	9.3	
Queue Delay		0.0	0.0		0.0				0.0	0.0	0.2	
Total Delay (s/veh)		26.9	4.8		30.3				0.6	11.9	9.5	
LOS		C	A		C				A	B	A	
Approach Delay (s/veh)		22.5			30.3			0.6			10.1	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)		190	3		105				0	37	59	
Queue Length 95th (ft)		237	14		157				m1	76	107	
Internal Link Dist (ft)		127			99			313			952	
Turn Bay Length (ft)			105									
Base Capacity (vph)		591	504		631				757	456	1298	
Starvation Cap Reductn		0	0		0				0	0	0	
Spillback Cap Reductn		0	1		0				0	0	65	
Storage Cap Reductn		0	0		0				0	0	0	
Reduced v/c Ratio		0.64	0.19		0.65				0.10	0.51	0.71	

Build Improved Conditions
14: South Lexington Avenue & West Post Road/East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Intersection Summary

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

Offset: 0 (0%), Referenced to phase 2:EBWB and 6:, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.67

Intersection Signal Delay (s/veh): 16.6

Intersection LOS: B

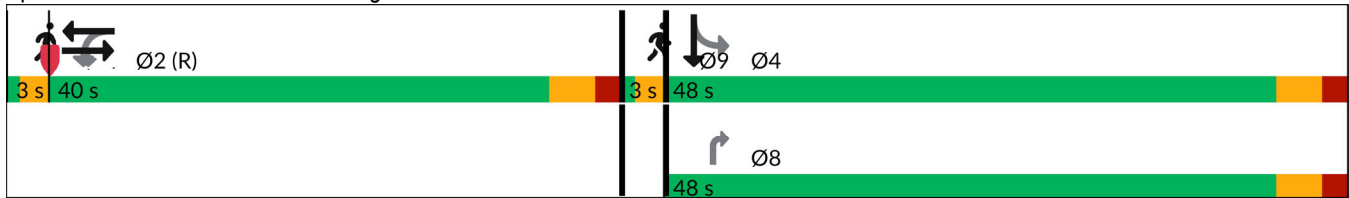
Intersection Capacity Utilization 78.0%

ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 14: South Lexington Avenue & West Post Road/East Post Road



Build Improved Conditions
 14: South Lexington Avenue & West Post Road/East Post Road

MD Peak Hour
 Timing Plan: 3:00 PM – 4:00 PM

Lane Group	Ø1	Ø9
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Bus Blockages (#/hr)		
Parking (#/hr)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	1	9
Permitted Phases		
Total Split (s)	3.0	3.0
Total Lost Time (s)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay (s/veh)		
Queue Delay		
Total Delay (s/veh)		
LOS		
Approach Delay (s/veh)		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Build Improved Conditions

MD Peak Hour

16: Public Emergency Department Entrance/East Post Road Garage & East Post Road

Time Plan: 3:00 PM – 4:00 PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		LT			LT						LT	
Traffic Volume (vph)	64	532	10	3	294	3	0	0	0	199	0	72
Future Volume (vph)	64	532	10	3	294	3	0	0	0	199	0	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	10	10	12	12	12	12	12	12	12
Grade (%)		0%			-1%			0%			0%	
Satd. Flow (prot)	0	3044	0	0	2977	0	0	0	0	0	1523	0
Flt Permitted		0.883			0.950						0.965	
Satd. Flow (perm)	0	2654	0	0	2826	0	0	0	0	0	1435	0
Right Turn on Red			Yes			Yes				Yes		Yes
Satd. Flow (RTOR)		3			2						20	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		214			170			167			197	
Travel Time (s)		4.9			3.9			3.8			4.5	
Confl. Peds. (#/hr)	100		100	100		100				50		50
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	673	0	0	333	0	0	0	0	0	301	0
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases	4			8						6		
Total Split (s)	61.0	61.0		61.0	61.0					33.0	33.0	
Total Lost Time (s)		4.5			4.5						4.5	
Act Effct Green (s)		19.0			19.0						15.2	
Actuated g/C Ratio		0.43			0.43						0.35	
v/c Ratio		0.58			0.27						0.59	
Control Delay (s/veh)		12.1			9.0						17.4	
Queue Delay		0.0			0.0						0.0	
Total Delay (s/veh)		12.1			9.0						17.4	
LOS		B			A						B	
Approach Delay (s/veh)		12.2			9.0						17.4	
Approach LOS		B			A						B	
Queue Length 50th (ft)		68			28						54	
Queue Length 95th (ft)		126			57						146	
Internal Link Dist (ft)		134			90			87			117	
Turn Bay Length (ft)												
Base Capacity (vph)		2624			2794						1003	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.26			0.12						0.30	

Intersection Summary

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 43.8

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.59

Intersection Signal Delay (s/veh): 12.6

Intersection LOS: B

Synchro 11 Report

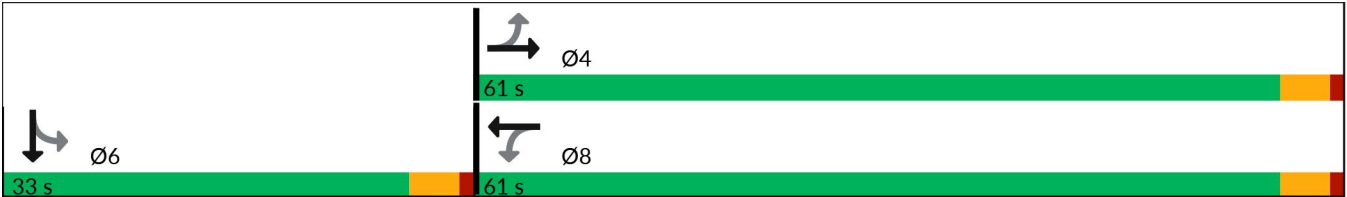
Kimley-Horn

Intersection Capacity Utilization 63.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 16: Public Emergency Department Entrance/East Post Road Garage & East Post Road



Build Improved Conditions
17: Public Emergency Department Exit & East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (veh/h)	731	0	0	298	2	6
Future Volume (Veh/h)	731	0	0	298	2	6
Sign Control	Free			Free	Stop	
Grade	2%			-2%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	812	0	0	331	2	7
Pedestrians	20			20	100	
Lane Width (ft)	9.0			10.0	11.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			1	8	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	170			262		
pX, platoon unblocked			0.87		0.87	0.87
vC, conflicting volume			912		1098	526
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			613		825	171
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			768		245	662
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	406	406	166	166	9	
Volume Left	0	0	0	0	2	
Volume Right	0	0	0	0	7	
cSH	1700	1700	1700	1700	480	
Volume to Capacity	0.24	0.24	0.10	0.10	0.02	
Queue Length 95th (ft)	0	0	0	0	1	
Control Delay (s/veh)	0.0	0.0	0.0	0.0	12.6	
Lane LOS					B	
Approach Delay (s/veh)	0.0		0.0		12.6	
Approach LOS					B	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			37.3%		ICU Level of Service	A
Analysis Period (min)			15			

Build Improved Conditions

MD Peak Hour

18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	324	405	0	0	275	203	121	568	69	0	0	0
Future Volume (vph)	324	405	0	0	275	203	121	568	69	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	10	10	12	12	12	12	12	12
Grade (%)		2%			-5%			-3%			0%	
Satd. Flow (prot)	0	2693	0	0	2479	0	0	3180	0	0	0	0
Flt Permitted		0.600						0.992				
Satd. Flow (perm)	0	1610	0	0	2479	0	0	3154	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					149			13				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			343			379			494	
Travel Time (s)		3.0			7.8			8.6			11.2	
Confl. Peds. (#/hr)	94		104	104		94	50		23	23		50
Confl. Bikes (#/hr)			2						5			
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.92
Heavy Vehicles (%)	3%	4%	0%	0%	7%	1%	2%	1%	0%	0%	0%	0%
Parking (#/hr)		0			0							
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	783	0	0	514	0	0	815	0	0	0	0
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2						8					
Total Split (s)	14.0	53.0			39.0		41.0	41.0				
Total Lost Time (s)		5.0			5.0			5.0				
Act Effct Green (s)		48.0			34.0			36.0				
Actuated g/C Ratio		0.51			0.36			0.38				
v/c Ratio		1.01dl			0.51			0.67				
Control Delay (s/veh)		32.2			10.5			19.6				
Queue Delay		0.0			0.1			0.3				
Total Delay (s/veh)		32.2			10.7			19.9				
LOS		C			B			B				
Approach Delay (s/veh)		32.3			10.7			20.0				
Approach LOS		C			B			B				
Queue Length 50th (ft)		161			25			150				
Queue Length 95th (ft)		#234			59			190				
Internal Link Dist (ft)		53			263			299			414	
Turn Bay Length (ft)												
Base Capacity (vph)		925			991			1215				
Starvation Cap Reductn		0			69			91				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.85			0.56			0.73				
Intersection Summary												
Area Type:	CBD											
Cycle Length: 94												
Actuated Cycle Length: 94												

Offset: 39 (41%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.85

Intersection Signal Delay (s/veh): 22.3

Intersection LOS: C

Intersection Capacity Utilization 80.8%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road



Build Improved Conditions
19: Cromwell Place/Grand Street & East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	403	69	55	389	0	0	0	0	53	57	89
Future Volume (vph)	0	403	69	55	389	0	0	0	0	53	57	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	10	10	12	12	12	12	9	10	12
Grade (%)		5%			0%			0%			2%	
Satd. Flow (prot)	0	2490	0	0	2722	0	0	0	0	1277	1236	0
Flt Permitted					0.817					0.950		
Satd. Flow (perm)	0	2490	0	0	2204	0	0	0	0	1227	1236	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		41									80	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		343			219			455			494	
Travel Time (s)		7.8			5.0			10.3			11.2	
Confl. Peds. (#/hr)	89		116	116		89	44		32	32		44
Confl. Bikes (#/hr)			1									1
Peak Hour Factor	0.92	0.83	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.83	0.83	0.83
Heavy Vehicles (%)	0%	5%	2%	7%	4%	0%	0%	0%	0%	2%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	4	0	0	0	0	0	0	0
Parking (#/hr)		4			0					0	0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	569	0	0	535	0	0	0	0	64	176	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			2							4
Permitted Phases				2						4		
Total Split (s)		65.0		65.0	65.0					29.0	29.0	
Total Lost Time (s)		5.0			5.0					5.0	5.0	
Act Effect Green (s)		61.0			61.0					23.0	23.0	
Actuated g/C Ratio		0.65			0.65					0.24	0.24	
v/c Ratio		0.34			0.37					0.21	0.48	
Control Delay (s/veh)		2.7			5.5					30.6	21.7	
Queue Delay		0.2			0.2					0.0	0.0	
Total Delay (s/veh)		2.9			5.7					30.6	21.7	
LOS		A			A					C	C	
Approach Delay (s/veh)		3.0			5.8						24.1	
Approach LOS		A			A						C	
Queue Length 50th (ft)		25			34					31	47	
Queue Length 95th (ft)		m27			41					60	97	
Internal Link Dist (ft)		263			139			375			414	
Turn Bay Length (ft)												
Base Capacity (vph)		1630			1430					313	375	
Starvation Cap Reductn		461			303					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.49			0.47					0.20	0.47	
Intersection Summary												
Area Type:	CBD											
Cycle Length: 94												

Build Improved Conditions
19: Cromwell Place/Grand Street & East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Actuated Cycle Length: 94	
Offset: 35 (37%), Referenced to phase 2:EBWB and 6:, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay (s/veh): 7.9	Intersection LOS: A
Intersection Capacity Utilization 65.0%	ICU Level of Service C
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 19: Cromwell Place/Grand Street & East Post Road



Build Improved Conditions
20: Chester Avenue & East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

							
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Lane Configurations	↑↑			↑↑	↑	↑	
Traffic Volume (vph)	456	0	0	377	67	89	
Future Volume (vph)	456	0	0	377	67	89	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Grade (%)	4%			1%	0%		
Satd. Flow (prot)	3468	0	0	3522	1770	1583	
Flt Permitted					0.950		
Satd. Flow (perm)	3468	0	0	3522	1580	1398	
Right Turn on Red		No				No	
Satd. Flow (RTOR)							
Link Speed (mph)	30			30	30		
Link Distance (ft)	219			383	506		
Travel Time (s)	5.0			8.7	11.5		
Confl. Peds. (#/hr)		80	80		80	80	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	496	0	0	410	73	97	
Turn Type	NA			NA	Prot	Perm	
Protected Phases	2			2	4		9
Permitted Phases						4	
Total Split (s)	55.0			55.0	34.0	34.0	5.0
Total Lost Time (s)	4.5			4.5	4.5	4.5	
Act Effect Green (s)	50.5			50.5	29.5	29.5	
Actuated g/C Ratio	0.54			0.54	0.31	0.31	
v/c Ratio	0.26			0.21	0.13	0.22	
Control Delay (s/veh)	8.9			11.7	25.5	27.2	
Queue Delay	0.4			0.0	0.0	0.0	
Total Delay (s/veh)	9.4			11.7	25.5	27.2	
LOS	A			B	C	C	
Approach Delay (s/veh)	9.4			11.8	26.5		
Approach LOS	A			B	C		
Queue Length 50th (ft)	34			63	35	48	
Queue Length 95th (ft)	95			90	69	88	
Internal Link Dist (ft)	139			303	426		
Turn Bay Length (ft)							
Base Capacity (vph)	1863			1892	555	438	
Starvation Cap Reductn	904			0	0	0	
Spillback Cap Reductn	0			0	0	0	
Storage Cap Reductn	0			0	0	0	
Reduced v/c Ratio	0.52			0.22	0.13	0.22	
Intersection Summary							
Area Type:	Other						
Cycle Length: 94							
Actuated Cycle Length: 94							
Offset: 42 (45%), Referenced to phase 2:EBWB and 6:, Start of Green							
Control Type: Pretimed							
Maximum v/c Ratio: 0.27							
Intersection Signal Delay (s/veh): 13.0	Intersection LOS: B						

Build Improved Conditions
20: Chester Avenue & East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Intersection Capacity Utilization 37.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 20: Chester Avenue & East Post Road



Build Improved Conditions

MD Peak Hour

21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage

Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	0	0	0	0	6	0	1085	0	0	0	0
Future Volume (vph)	69	0	0	0	0	6	0	1085	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			1%			0%	
Satd. Flow (prot)	1593	1676	0	0	0	1450	0	4554	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1480	1676	0	0	0	1333	0	4554	0	0	0	0
Right Turn on Red	No		No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		403			216			494			280	
Travel Time (s)		9.2			4.9			11.2			6.4	
Confl. Peds. (#/hr)	50		50	50		50	100		100			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	0	0	0	0	7	0	1179	0	0	0	0
Turn Type	Perm					Perm		NA				
Protected Phases		4						2				
Permitted Phases	4					4						
Total Split (s)	28.1	28.1				28.1		65.9				
Total Lost Time (s)	5.0	5.0				5.0		4.9				
Act Effct Green (s)	14.8					14.8		72.4				
Actuated g/C Ratio	0.16					0.16		0.77				
v/c Ratio	0.32					0.03		0.33				
Control Delay (s/veh)	36.4					29.8		4.2				
Queue Delay	0.0					0.0		0.0				
Total Delay (s/veh)	36.4					29.8		4.2				
LOS	D					C		A				
Approach Delay (s/veh)		36.4			29.8			4.3				
Approach LOS		D			C			A				
Queue Length 50th (ft)	37					3		83				
Queue Length 95th (ft)	77					15		90				
Internal Link Dist (ft)		323			136			414			200	
Turn Bay Length (ft)												
Base Capacity (vph)	363					327		3507				
Starvation Cap Reductn	0					0		0				
Spillback Cap Reductn	0					0		28				
Storage Cap Reductn	0					0		0				
Reduced v/c Ratio	0.21					0.02		0.34				
Intersection Summary												
Area Type:	CBD											
Cycle Length: 94												
Actuated Cycle Length: 94												
Offset: 0 (0%), Referenced to phase 2:NBT and 6:, Start of Green												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.34												
Intersection Signal Delay (s/veh): 6.3	Intersection LOS: A											

Build Improved Conditions

MD Peak Hour

21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage Timing Plan: 3:00 PM – 4:00 PM

Intersection Capacity Utilization 54.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage



Build Improved Conditions

22: South Lexington Avenue & Fisher Avenue/Quarropas Street

MD Peak Hour

Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	202	117	77	89	0	0	0	0	235	780	129
Future Volume (vph)	0	202	117	77	89	0	0	0	0	235	780	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	11	11	12	12	12	12	12	12	13
Grade (%)		-1%			0%			0%			-1%	
Storage Length (ft)	0		0	135		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	2		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	2749	0	1540	3079	0	0	0	0	3105	3201	1480
Flt Permitted				0.456						0.950		
Satd. Flow (perm)	0	2749	0	716	3079	0	0	0	0	2773	3201	1369
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)												140
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		629			873			1032			215	
Travel Time (s)		14.3			19.8			23.5			4.9	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	347	0	84	97	0	0	0	0	255	848	140
Turn Type		NA		pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Total Split (s)		30.0		9.0	39.0					52.0	52.0	52.0
Total Lost Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Act Effect Green (s)		36.8		47.1	47.1					36.9	36.9	36.9
Actuated g/C Ratio		0.39		0.50	0.50					0.39	0.39	0.39
v/c Ratio		0.32		0.19	0.06					0.23	0.67	0.22
Control Delay (s/veh)		24.1		16.3	14.9					18.3	25.8	3.3
Queue Delay		0.0		0.0	0.0					0.0	0.0	0.0
Total Delay (s/veh)		24.1		16.3	14.9					18.3	25.8	3.3
LOS		C		B	B					B	C	A
Approach Delay (s/veh)		24.1			15.6						21.8	
Approach LOS		C			B						C	
Queue Length 50th (ft)		78		24	14					51	215	0
Queue Length 95th (ft)		134		m46	26					63	226	29
Internal Link Dist (ft)		549			793			952			135	
Turn Bay Length (ft)				135								
Base Capacity (vph)		1077		424	1544					1388	1602	755
Starvation Cap Reductn		0		0	0					0	0	0
Spillback Cap Reductn		0		0	0					0	0	0
Storage Cap Reductn		0		0	0					0	0	0
Reduced v/c Ratio		0.32		0.20	0.06					0.18	0.53	0.19
Intersection Summary												
Area Type:	CBD											
Cycle Length: 94												
Actuated Cycle Length: 94												

Build Improved Conditions
22: South Lexington Avenue & Fisher Avenue/Quarropas Street

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Build Improved Conditions
22: South Lexington Avenue & Fisher Avenue/Quarropas Street

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay (s/veh): 21.6

Intersection LOS: C

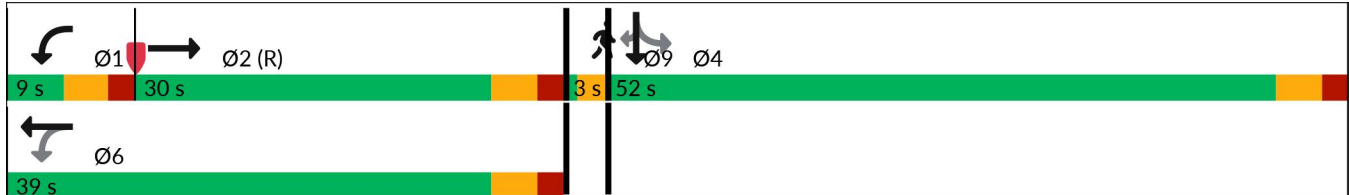
Intersection Capacity Utilization 68.8%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: South Lexington Avenue & Fisher Avenue/Quarropas Street



Build Improved Conditions

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

MD Peak Hour

Timing Plan: 3:00 PM – 4:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  				
Traffic Volume (vph)	129	309	0	0	125	88	101	973	94	0	0	0
Future Volume (vph)	129	309	0	0	125	88	101	973	94	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	12	12	11	11	12	12	12	12	12	12
Grade (%)		3%			-4%			1%			0%	
Storage Length (ft)	240		0	0		90	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1516	2928	0	0	1653	1405	0	4458	0	0	0	0
Flt Permitted	0.572							0.996				
Satd. Flow (perm)	878	2928	0	0	1653	1316	0	4437	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						96		23				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		873			420			280			604	
Travel Time (s)		19.8			9.5			6.4			13.7	
Confl. Peds. (#/hr)	50		50	50		50	50		50			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	140	336	0	0	136	96	0	1270	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Total Split (s)	13.0	39.0			26.0	26.0	55.0	55.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Act Effct Green (s)	45.3	45.3			30.4	30.4		38.7				
Actuated g/C Ratio	0.48	0.48			0.32	0.32		0.41				
v/c Ratio	0.28	0.23			0.25	0.19		0.69				
Control Delay (s/veh)	19.4	18.0			28.1	7.5		15.7				
Queue Delay	0.0	0.0			0.0	0.0		0.1				
Total Delay (s/veh)	19.4	18.0			28.1	7.5		15.8				
LOS	B	B			C	A		B				
Approach Delay (s/veh)		18.5			19.7			15.8				
Approach LOS		B			B			B				
Queue Length 50th (ft)	44	79			60	0		61				
Queue Length 95th (ft)	125	133			124	40		65				
Internal Link Dist (ft)		793			340			200			524	
Turn Bay Length (ft)	240					90						
Base Capacity (vph)	491	1410			535	490		2370				
Starvation Cap Reductn	0	0			0	0		228				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.29	0.24			0.25	0.20		0.59				

Intersection Summary

Area Type: CBD

Cycle Length: 94

Actuated Cycle Length: 94

Build Improved Conditions

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

MD Peak Hour

Timing Plan: 3:00 PM – 4:00 PM

Offset: 76 (81%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay (s/veh): 16.9

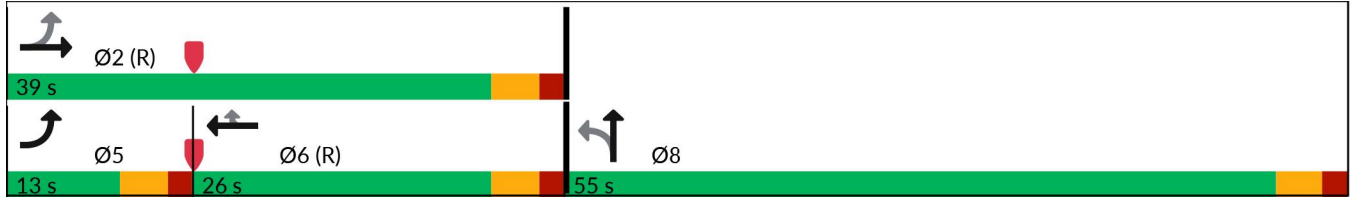
Intersection LOS: B

Intersection Capacity Utilization 68.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 23: Dr. Martin Luther King Jr Boulevard & Quarropas Street



Build Improved Conditions
24: West Lot Northeast Driveway & West Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	389	0	0	473	0	35
Future Volume (Veh/h)	389	0	0	473	0	35
Sign Control	Free			Free	Stop	
Grade	-3%			3%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	432	0	0	526	0	39
Pedestrians	20			20	40	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			1	3	
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)	535			207		
pX, platoon unblocked					0.88	
vC, conflicting volume			472		1018	492
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			472		951	492
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	93
cM capacity (veh/h)			1048		239	544
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	432	526	39			
Volume Left	0	0	0			
Volume Right	0	0	39			
cSH	1700	1700	544			
Volume to Capacity	0.25	0.31	0.07			
Queue Length 95th (ft)	0	0	6			
Control Delay (s/veh)	0.0	0.0	12.1			
Lane LOS			B			
Approach Delay (s/veh)	0.0	0.0	12.1			
Approach LOS			B			
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			42.5%	ICU Level of Service		A
Analysis Period (min)			15			

Build Improved Conditions

25: Ambulance Emergency Department Entrance & East Post Road

MD Peak Hour

Timing Plan: 3:00 PM – 4:00 PM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		
Traffic Volume (veh/h)	599	9	3	365	0	0
Future Volume (Veh/h)	599	9	3	365	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	666	10	3	406	0	0
Pedestrians	20			20	100	
Lane Width (ft)	12.0			12.0	0.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			1	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	179			392		
pX, platoon unblocked						
vC, conflicting volume			776		1000	458
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			776		1000	458
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			836		234	539
Direction, Lane #	EB 1	EB 2	WB 1	WB 2		
Volume Total	444	232	138	271		
Volume Left	0	0	3	0		
Volume Right	0	10	0	0		
cSH	1700	1700	836	1700		
Volume to Capacity	0.26	0.14	0.00	0.16		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s/veh)	0.0	0.0	0.2	0.0		
Lane LOS			A			
Approach Delay (s/veh)	0.0		0.1			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			33.7%	ICU Level of Service		A
Analysis Period (min)			15			

Build Improved Conditions
26: Ambulance Emergency Department Exit & East Post Road

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	599	0	0	366	2	6
Future Volume (Veh/h)	599	0	0	366	2	6
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	666	0	0	407	2	7
Pedestrians	20			20	100	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			1	9	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	357			214		
pX, platoon unblocked					0.97	
vC, conflicting volume			766		990	453
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			766		920	453
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			763		232	492
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	333	333	204	204	9	
Volume Left	0	0	0	0	2	
Volume Right	0	0	0	0	7	
cSH	1700	1700	1700	1700	394	
Volume to Capacity	0.20	0.20	0.12	0.12	0.02	
Queue Length 95th (ft)	0	0	0	0	2	
Control Delay (s/veh)	0.0	0.0	0.0	0.0	14.4	
Lane LOS					B	
Approach Delay (s/veh)	0.0		0.0		14.4	
Approach LOS					B	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			33.3%	ICU Level of Service		A
Analysis Period (min)			15			

Build Improved Conditions
27: East Post Road & Winchester Street

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	5	732	293	93	5	5
Future Volume (Veh/h)	5	732	293	93	5	5
Sign Control		Free	Free		Stop	
Grade		2%	-2%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	813	326	103	6	6
Pedestrians		20	20		100	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		1	1		9	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		299	133			
pX, platoon unblocked					0.90	
vC, conflicting volume	529				916	335
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	529				672	335
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	99
cM capacity (veh/h)	936				307	587
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	277	542	217	212	12	
Volume Left	6	0	0	0	6	
Volume Right	0	0	0	103	6	
cSH	936	1700	1700	1700	403	
Volume to Capacity	0.01	0.32	0.13	0.12	0.03	
Queue Length 95th (ft)	0	0	0	0	2	
Control Delay (s/veh)	0.3	0.0	0.0	0.0	14.2	
Lane LOS	A				B	
Approach Delay (s/veh)	0.1		0.0		14.2	
Approach LOS					B	
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			38.6%		ICU Level of Service	A
Analysis Period (min)			15			

Build Improved Conditions
28: Winchester Street & East Post Road Garage

MD Peak Hour
Timing Plan: 3:00 PM – 4:00 PM



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	93	5	10	0
Future Volume (Veh/h)	0	0	93	5	10	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	103	6	11	0
Pedestrians	20			100	100	
Lane Width (ft)	0.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	0			9	9	
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	343	131	31			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	343	131	31			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	93			
cM capacity (veh/h)	553	831	1582			
Direction, Lane #	NB 1	SB 1				
Volume Total	109	11				
Volume Left	103	0				
Volume Right	0	0				
cSH	1582	1700				
Volume to Capacity	0.07	0.01				
Queue Length 95th (ft)	5	0				
Control Delay (s/veh)	7.1	0.0				
Lane LOS	A					
Approach Delay (s/veh)	7.1	0.0				
Approach LOS						
Intersection Summary						
Average Delay			6.4			
Intersection Capacity Utilization			32.3%	ICU Level of Service		A
Analysis Period (min)			15			

Build Improved Conditions
1: Maple Avenue & West Lot Southwest Driveway

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	3	435	538	0	4	21
Future Volume (Veh/h)	3	435	538	0	4	21
Sign Control		Free	Free		Stop	
Grade		-2%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	3	483	598	0	4	23
Pedestrians		5	5		20	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	0		1	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			687			
pX, platoon unblocked	0.90				0.90	0.90
vC, conflicting volume	618				871	324
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	367				646	42
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	97
cM capacity (veh/h)	1054				356	900
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	164	322	399	199	27	
Volume Left	3	0	0	0	4	
Volume Right	0	0	0	0	23	
cSH	1054	1700	1700	1700	734	
Volume to Capacity	0.00	0.19	0.23	0.12	0.04	
Queue Length 95th (ft)	0	0	0	0	3	
Control Delay (s/veh)	0.2	0.0	0.0	0.0	10.1	
Lane LOS	A				B	
Approach Delay (s/veh)	0.1		0.0		10.1	
Approach LOS					B	
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			26.4%		ICU Level of Service	A
Analysis Period (min)			15			

Build Improved Conditions

PM Peak Hour

2: Roosevelt Street/West Lot Southeast Driveway & Maple Avenue

Timing Plan: 5:00 PM – 6:00 PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	435	5	9	531	15	7	0	13	66	0	0
Future Volume (Veh/h)	0	435	5	9	531	15	7	0	13	66	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		-2%			-1%			-4%			0%	
Peak Hour Factor	0.92	0.87	0.87	0.87	0.87	0.92	0.87	0.92	0.87	0.92	0.92	0.92
Hourly flow rate (vph)	0	500	6	10	610	16	8	0	15	72	0	0
Pedestrians		1						16				
Lane Width (ft)		14.0						12.0				
Walking Speed (ft/s)		3.5						3.5				
Percent Blockage		0						1				
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					357							
pX, platoon unblocked	0.88						0.88	0.88		0.88	0.88	0.88
vC, conflicting volume	626			522			845	1165	269	903	1160	314
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	296			522			546	910	269	612	904	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			98	100	98	77	100	100
cM capacity (veh/h)	1108			1039			361	234	724	318	236	951
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	250	256	315	321	23	72						
Volume Left	0	0	10	0	8	72						
Volume Right	0	6	0	16	15	0						
cSH	1108	1700	1039	1700	536	318						
Volume to Capacity	0.00	0.15	0.01	0.19	0.04	0.23						
Queue Length 95th (ft)	0	0	1	0	3	21						
Control Delay (s/veh)	0.0	0.0	0.4	0.0	12.0	19.6						
Lane LOS			A		B	C						
Approach Delay (s/veh)	0.0		0.2		12.0	19.6						
Approach LOS					B	C						
Intersection Summary												
Average Delay			1.5									
Intersection Capacity Utilization			40.4%		ICU Level of Service		A					
Analysis Period (min)			15									

Build Improved Conditions

3: South Lexington Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

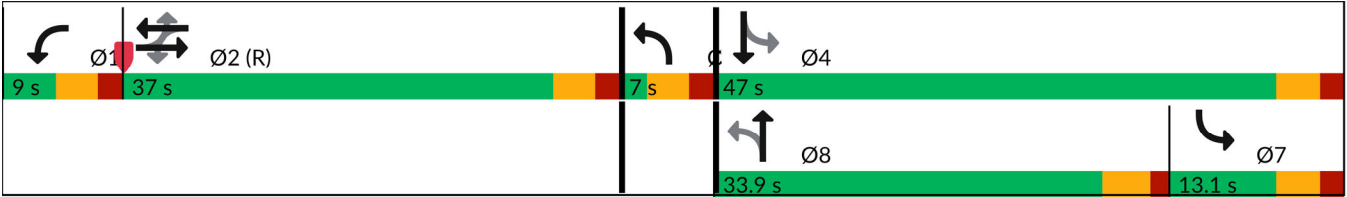
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	427	42	38	472	10	30	15	62	272	543	53
Future Volume (vph)	44	427	42	38	472	10	30	15	62	272	543	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	9	10	12	10	12	10	10	13	12
Grade (%)		0%			-2%			-5%			4%	
Storage Length (ft)	0		0	140		0	85		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3039	0	1477	3046	0	1554	1419	0	1324	1702	0
Flt Permitted		0.844		0.337			0.138			0.704		
Satd. Flow (perm)	0	2567	0	507	3046	0	226	1419	0	937	1702	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		10			2						6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		357			354			564			393	
Travel Time (s)		8.1			8.0			12.8			8.9	
Confl. Peds. (#/hr)	31		30	30		31	29		35	35		29
Confl. Bikes (#/hr)			1			1						3
Peak Hour Factor	0.92	0.94	0.94	0.94	0.94	0.92	0.94	0.92	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	11%	0%	0%	0%	0%	0%	4%	1%	0%	0%
Parking (#/hr)										0		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	547	0	40	513	0	32	82	0	289	634	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		2		1	2		3	8		7	4	
Permitted Phases	2			2			8			4		
Total Split (s)	37.0	37.0		9.0	37.0		7.0	33.9		13.1	47.0	
Total Lost Time (s)		5.0		5.0	5.0		5.0	4.9		5.0	5.0	
Act Effct Green (s)		32.0		36.0	32.0		30.9	29.0		42.0	42.0	
Actuated g/C Ratio		0.32		0.36	0.32		0.31	0.29		0.42	0.42	
v/c Ratio		0.66		0.18	0.52		0.33	0.19		0.68	0.88	
Control Delay (s/veh)		33.3		9.2	10.0		32.1	28.4		12.0	17.1	
Queue Delay		0.0		0.0	0.2		0.0	0.0		0.0	9.1	
Total Delay (s/veh)		33.3		9.2	10.3		32.1	28.4		12.0	26.3	
LOS		C		A	B		C	C		B	C	
Approach Delay (s/veh)		33.3			10.2			29.5			21.9	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)		154		2	15		13	39		35	91	
Queue Length 95th (ft)		214		13	53		34	78		m41	m146	
Internal Link Dist (ft)		277			274			484			313	
Turn Bay Length (ft)				140			85					
Base Capacity (vph)		828		221	976		96	411		424	718	
Starvation Cap Reductn		0		0	103		0	0		0	68	
Spillback Cap Reductn		0		0	0		0	0		0	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.66		0.18	0.59		0.33	0.20		0.68	0.98	
Intersection Summary												

Build Improved Conditions
3: South Lexington Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	18 (18%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.88
Intersection Signal Delay (s/veh):	22.2
Intersection LOS:	C
Intersection Capacity Utilization	79.2%
ICU Level of Service	D
Analysis Period (min)	15
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 3: South Lexington Avenue & Maple Avenue



Build Improved Conditions

PM Peak Hour

4: Davis Avenue/Main Hospital Entrance & Maple Avenue

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	665	69	31	484	9	25	5	63	20	3	14
Future Volume (vph)	21	665	69	31	484	9	25	5	63	20	3	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	11	11	12	11	12	12	9	12	11	10	12
Grade (%)		1%			0%			-5%			4%	
Storage Length (ft)	100		0	0		0	0		0	90		0
Storage Lanes	1		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1426	3016	0	0	3110	0	0	1188	0	0	1498	1424
Flt Permitted	0.409				0.873			0.931			0.802	
Satd. Flow (perm)	581	3016	0	0	2719	0	0	1111	0	0	1176	1361
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			3			67				46
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		354			356			562			217	
Travel Time (s)		8.0			8.1			12.8			4.9	
Confl. Peds. (#/hr)	45		34	34		45	21		55	55		21
Confl. Bikes (#/hr)			4						1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	1%	1%	0%	0%	7%	0%	3%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	780	0	0	558	0	0	99	0	0	24	15
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		4
Total Split (s)	58.0	58.0		58.0	58.0		36.0	36.0		36.0	36.0	36.0
Total Lost Time (s)	5.2	5.2			5.2			5.2			5.2	5.2
Act Effct Green (s)	52.8	52.8			52.8			30.8			30.8	30.8
Actuated g/C Ratio	0.53	0.53			0.53			0.31			0.31	0.31
v/c Ratio	0.07	0.48			0.38			0.25			0.06	0.03
Control Delay (s/veh)	11.0	13.4			16.1			12.3			25.2	0.1
Queue Delay	0.0	0.4			0.2			0.0			0.0	0.0
Total Delay (s/veh)	11.0	13.8			16.3			12.3			25.2	0.1
LOS	B	B			B			B			C	A
Approach Delay (s/veh)		13.8			16.3			12.3			15.6	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	6	124			170			15			11	0
Queue Length 95th (ft)	m10	151			185			54			30	1
Internal Link Dist (ft)		274			276			482			137	
Turn Bay Length (ft)	100											
Base Capacity (vph)	306	1600			1437			388			362	451
Starvation Cap Reductn	0	383			287			0			0	0
Spillback Cap Reductn	0	19			0			0			0	0
Storage Cap Reductn	0	0			0			0			0	0
Reduced v/c Ratio	0.07	0.64			0.49			0.26			0.07	0.03
Intersection Summary												

05/07/2024

4: Davis Avenue/Main Hospital Entrance & Maple Avenue

Synchro 11 Report
Kimley-Horn

Build Improved Conditions
4: Davis Avenue/Main Hospital Entrance & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	6.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	10 (10%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type:	Pretimed
Maximum v/c Ratio:	0.49
Intersection Signal Delay (s/veh):	14.7
Intersection LOS:	B
Intersection Capacity Utilization	65.7%
ICU Level of Service	C
Analysis Period (min)	15
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: Davis Avenue/Main Hospital Entrance & Maple Avenue



Build Improved Conditions
5: Oakwood Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	716	37	20	506	18	54
Future Volume (vph)	716	37	20	506	18	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Grade (%)	1%			0%	-5%	
Satd. Flow (prot)	3172	0	0	3212	1569	0
Flt Permitted				0.908	0.988	
Satd. Flow (perm)	3172	0	0	2921	1565	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	13				59	
Link Speed (mph)	30			30	30	
Link Distance (ft)	356			475	444	
Travel Time (s)	8.1			10.8	10.1	
Confl. Peds. (#/hr)		40	40		6	24
Confl. Bikes (#/hr)		3				
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	0%	0%	1%	7%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	828	0	0	578	79	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			2	4	
Permitted Phases			2			
Total Split (s)	77.2		77.2	77.2	22.8	
Total Lost Time (s)	5.2			5.2	5.0	
Act Effect Green (s)	72.0			72.0	17.8	
Actuated g/C Ratio	0.72			0.72	0.18	
v/c Ratio	0.36			0.27	0.24	
Control Delay (s/veh)	7.5			4.0	15.6	
Queue Delay	0.5			0.0	0.0	
Total Delay (s/veh)	8.0			4.0	15.6	
LOS	A			A	B	
Approach Delay (s/veh)	8.1			4.1	15.7	
Approach LOS	A			A	B	
Queue Length 50th (ft)	150			23	11	
Queue Length 95th (ft)	199			m63	51	
Internal Link Dist (ft)	276			395	364	
Turn Bay Length (ft)						
Base Capacity (vph)	2287			2103	327	
Starvation Cap Reductn	971			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.63			0.27	0.24	
Intersection Summary						
Area Type:	CBD					
Cycle Length: 100						
Actuated Cycle Length: 100						
Offset: 31 (31%), Referenced to phase 2:EBWB and 6:, Start of Green						

Build Improved Conditions
5: Oakwood Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Control Type: Pretimed	
Maximum v/c Ratio: 0.36	
Intersection Signal Delay (s/veh): 6.9	Intersection LOS: A
Intersection Capacity Utilization 55.3%	ICU Level of Service B
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 5: Oakwood Avenue & Maple Avenue



Build Improved Conditions
6: Longview Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	539	38	31	507	212	24	370	35	0	0	0
Future Volume (vph)	170	539	38	31	507	212	24	370	35	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	10	11	10	11	10	10	10	9	12	12	12
Grade (%)		0%			-5%			-2%			0%	
Storage Length (ft)	225		0	60		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1462	2957	0	1509	2969	0	0	2842	0	0	0	0
Flt Permitted	0.148			0.422				0.997				
Satd. Flow (perm)	228	2957	0	651	2969	0	0	2833	0	0	0	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		9			64							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		475			281			824			379	
Travel Time (s)		10.8			6.4			18.7			8.6	
Confl. Peds. (#/hr)	60		24	24		60	44		48	48		44
Confl. Bikes (#/hr)			2			1			2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	3%	0%	1%	4%	0%	0%	0%	0%	0%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	607	0	33	757	0	0	451	0	0	0	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2			6			8					
Total Split (s)	13.0	47.0		34.0	34.0		50.0	50.0				
Total Lost Time (s)	5.2	5.2		5.2	5.2			5.2				
Act Effect Green (s)	61.7	61.7		28.8	28.8			24.9				
Actuated g/C Ratio	0.62	0.62		0.29	0.29			0.25				
v/c Ratio	0.37	0.33		0.17	0.84			0.64				
Control Delay (s/veh)	4.4	2.1		15.5	27.5			37.8				
Queue Delay	0.0	0.0		0.0	4.1			0.0				
Total Delay (s/veh)	4.4	2.1		15.5	31.7			37.9				
LOS	A	A		B	C			D				
Approach Delay (s/veh)		2.7			31.0			37.9				
Approach LOS		A			C			D				
Queue Length 50th (ft)	7	12		11	226			139				
Queue Length 95th (ft)	17	23		14	#77			175				
Internal Link Dist (ft)		395			201			744			299	
Turn Bay Length (ft)	225			60								
Base Capacity (vph)	483	1828		187	900			1269				
Starvation Cap Reductn	0	0		0	86			0				
Spillback Cap Reductn	0	124		0	0			99				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.37	0.36		0.18	0.93			0.39				
Intersection Summary												

Build Improved Conditions
6: Longview Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Build Improved Conditions
6: Longview Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 70 (70%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay (s/veh): 21.6

Intersection LOS: C

Intersection Capacity Utilization 67.1%

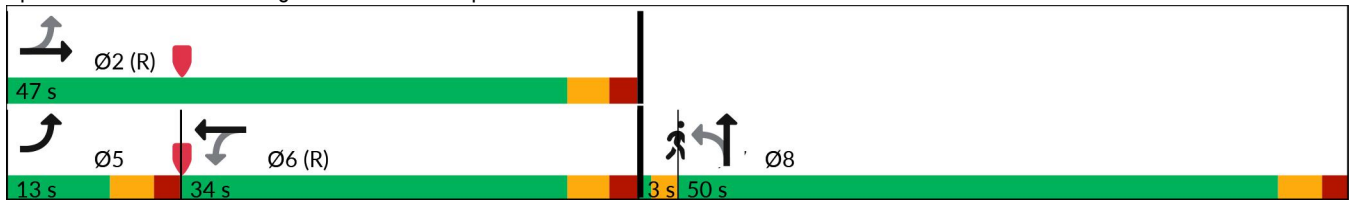
ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

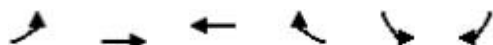
Splits and Phases: 6: Longview Avenue & Maple Avenue



Build Improved Conditions

7: Maple Avenue & Cromwell Place

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	↑
Traffic Volume (vph)	0	584	668	0	207	82
Future Volume (vph)	0	584	668	0	207	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	11	12
Grade (%)		6%	3%		4%	
Storage Length (ft)	0			0	0	60
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	3016	3094	0	1371	1383
Flt Permitted					0.950	
Satd. Flow (perm)	0	3016	3094	0	1360	1383
Right Turn on Red				Yes		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		281	255		455	
Travel Time (s)		6.4	5.8		10.3	
Confl. Peds. (#/hr)	67			67	6	2
Confl. Bikes (#/hr)						2
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91
Heavy Vehicles (%)	0%	1%	0%	0%	1%	3%
Parking (#/hr)					0	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	642	734	0	227	90
Turn Type		NA	NA		Perm	Prot
Protected Phases		2	2			4
Permitted Phases					4	
Total Split (s)		38.0	38.0		62.0	62.0
Total Lost Time (s)		4.7	4.7		4.7	4.7
Act Effect Green (s)		67.5	67.5		23.1	23.1
Actuated g/C Ratio		0.68	0.68		0.23	0.23
v/c Ratio		0.31	0.35		0.72	0.28
Control Delay (s/veh)		7.3	3.5		48.1	32.0
Queue Delay		0.3	0.2		0.0	0.0
Total Delay (s/veh)		7.6	3.7		48.1	32.0
LOS		A	A		D	C
Approach Delay (s/veh)		7.7	3.8		43.6	
Approach LOS		A	A		D	
Queue Length 50th (ft)		69	5		142	50
Queue Length 95th (ft)		260	233		197	m80
Internal Link Dist (ft)		201	175		375	
Turn Bay Length (ft)						60
Base Capacity (vph)		2034	2087		779	792
Starvation Cap Reductn		791	600		0	0
Spillback Cap Reductn		0	247		0	110
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.52	0.49		0.29	0.13
Intersection Summary						

Build Improved Conditions
7: Maple Avenue & Cromwell Place

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Area Type:	CBD
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	88 (88%), Referenced to phase 2:EBWB and 6:, Start of Green
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.72
Intersection Signal Delay (s/veh):	12.7
Intersection LOS:	B
Intersection Capacity Utilization	41.4%
ICU Level of Service	A
Analysis Period (min)	15
m	Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Maple Avenue & Cromwell Place



Build Improved Conditions

8: Greenridge Avenue/Chester Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	590	107	49	638	92	30	69	67	0	0	0
Future Volume (vph)	94	590	107	49	638	92	30	69	67	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	11
Grade (%)		2%			3%			0%			-4%	
Storage Length (ft)	125		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1752	3345	0	1743	3381	0	0	3203	0	0	0	0
Flt Permitted	0.284			0.313				0.991				
Satd. Flow (perm)	514	3345	0	554	3381	0	0	3168	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			23			73				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		255			453			507			506	
Travel Time (s)		5.8			10.3			11.5			11.5	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	757	0	53	793	0	0	181	0	0	0	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA				
Protected Phases	1	6		5	2			8				
Permitted Phases	6			2			8					
Total Split (s)	13.0	56.0		13.0	56.0		31.0	31.0				
Total Lost Time (s)	7.0	5.0		5.0	5.0			5.0				
Act Effect Green (s)	57.0	54.5		59.4	53.8			26.0				
Actuated g/C Ratio	0.57	0.55		0.59	0.54			0.26				
v/c Ratio	0.28	0.41		0.13	0.43			0.20				
Control Delay (s/veh)	4.0	4.7		7.6	15.0			17.7				
Queue Delay	0.0	0.5		0.0	0.0			0.0				
Total Delay (s/veh)	4.0	5.2		7.6	15.0			17.7				
LOS	A	A		A	B			B				
Approach Delay (s/veh)		5.1			14.6			17.7				
Approach LOS		A			B			B				
Queue Length 50th (ft)	5	81		11	156			27				
Queue Length 95th (ft)	9	74		25	206			55				
Internal Link Dist (ft)		175			373			427			426	
Turn Bay Length (ft)	125			75								
Base Capacity (vph)	368	1835		428	1831			877				
Starvation Cap Reductn	0	628		0	0			0				
Spillback Cap Reductn	0	0		0	111			1				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.28	0.63		0.12	0.46			0.21				
Intersection Summary												
Area Type:	Other											
Cycle Length: 100												
Actuated Cycle Length: 100												

Build Improved Conditions
8: Greenridge Avenue/Chester Avenue & Maple Avenue

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Offset: 48 (48%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay (s/veh): 10.6	Intersection LOS: B
Intersection Capacity Utilization 61.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Greenridge Avenue/Chester Avenue & Maple Avenue



Build Improved Conditions

PM Peak Hour

11: West Lot Northwest Driveway/Highland Avenue & West Post Road Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	157	386	6	0	500	59	2	0	2	47	0	66
Future Volume (vph)	157	386	6	0	500	59	2	0	2	47	0	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	16	12	12	12	12	16	12	12
Grade (%)		-4%			3%			0%			-11%	
Satd. Flow (prot)	0	1655	0	0	1576	0	0	1525	0	0	1543	0
Flt Permitted		0.669						0.917			0.864	
Satd. Flow (perm)	0	1111	0	0	1576	0	0	1433	0	0	1351	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			13			16			66	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		598			381			186			322	
Travel Time (s)		13.6			8.7			4.2			7.3	
Confl. Peds. (#/hr)	49					49				6		22
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.88	0.88	0.92	0.92	0.88	0.88	0.92	0.92	0.92	0.88	0.92	0.88
Heavy Vehicles (%)	2%	4%	2%	2%	3%	7%	2%	2%	2%	0%	2%	1%
Parking (#/hr)		4			4					4		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	624	0	0	635	0	0	4	0	0	128	0
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			8	
Permitted Phases	2			6			8			8		
Total Split (s)	73.0	73.0		73.0	73.0		27.0	27.0		27.0	27.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Act Effct Green (s)		80.2			80.2			10.8			10.8	
Actuated g/C Ratio		0.80			0.80			0.11			0.11	
v/c Ratio		0.70			0.50			0.02			0.62	
Control Delay (s/veh)		11.1			3.9			3.2			34.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay (s/veh)		11.1			3.9			3.2			34.8	
LOS		B			A			A			C	
Approach Delay (s/veh)		11.1			4.0			3.3			34.8	
Approach LOS		B			A			A			C	
Queue Length 50th (ft)		130			39			0			38	
Queue Length 95th (ft)		360			m171			3			91	
Internal Link Dist (ft)		518			301			106			242	
Turn Bay Length (ft)												
Base Capacity (vph)		891			1267			334			355	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.70			0.50			0.01			0.36	
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												
Actuated Cycle Length: 100												

Build Improved Conditions

PM Peak Hour

11: West Lot Northwest Driveway/Highland Avenue & West Post Road Timing Plan: 5:00 PM – 6:00 PM

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.70

Intersection Signal Delay (s/veh): 10.0

Intersection LOS: B

Intersection Capacity Utilization 90.1%

ICU Level of Service E

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: West Lot Northwest Driveway/Highland Avenue & West Post Road



Build Improved Conditions
12: West Post Road & Orawaupum Street

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	27	408	553	112	18	15
Future Volume (Veh/h)	27	408	553	112	18	15
Sign Control		Free	Free		Stop	
Grade		-3%	2%		-10%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	31	474	643	130	21	17
Pedestrians			4		56	
Lane Width (ft)			16.0		11.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			0		4	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		381	361			
pX, platoon unblocked	0.84				0.87	0.84
vC, conflicting volume	829				1304	764
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	698				1097	620
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				89	96
cM capacity (veh/h)	722				189	392
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	505	773	38			
Volume Left	31	0	21			
Volume Right	0	130	17			
cSH	722	1700	246			
Volume to Capacity	0.04	0.45	0.15			
Queue Length 95th (ft)	3	0	13			
Control Delay (s/veh)	1.2	0.0	22.3			
Lane LOS	A		C			
Approach Delay (s/veh)	1.2	0.0	22.3			
Approach LOS			C			
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			58.5%	ICU Level of Service		B
Analysis Period (min)			15			

Build Improved Conditions

PM Peak Hour

14: South Lexington Avenue & West Post Road/East Post Road

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	409	51	90	382	0	0	0	70	211	757	284
Future Volume (vph)	0	409	51	90	382	0	0	0	70	211	757	284
Ideal Flow (vphpl)	1900	2050	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	12	12	12	12	11	11	11
Grade (%)		-1%			0%			0%			1%	
Storage Length (ft)	0		105	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1589	1294	0	2561	0	0	0	1479	1065	2746	0
Flt Permitted					0.650					0.950		
Satd. Flow (perm)	0	1589	1217	0	1674	0	0	0	1331	993	2746	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			65						238		68	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		207			179			393			1032	
Travel Time (s)		4.7			4.1			8.9			23.5	
Confl. Peds. (#/hr)	61		38	38		61	34		54	54		34
Confl. Bikes (#/hr)			2									4
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	5%	0%	2%	5%	0%	0%	0%	0%	2%	0%	0%
Bus Blockages (#/hr)	0	0	4	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0	0		24					41	4	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	460	57	0	530	0	0	0	76	237	1170	0
Turn Type		NA	Perm	Perm	NA				Perm	Perm	NA	
Protected Phases		2			2							4
Permitted Phases			2	2					8	4		
Total Split (s)		46.0	46.0	46.0	46.0				48.0	48.0	48.0	
Total Lost Time (s)		5.0	5.0		5.0				5.0	5.0	5.0	
Act Effect Green (s)		41.0	41.0		41.0				43.0	43.0	43.0	
Actuated g/C Ratio		0.41	0.41		0.41				0.43	0.43	0.43	
v/c Ratio		0.70	0.10		0.77				0.10	0.55	0.95	
Control Delay (s/veh)		29.0	5.0		34.6				3.0	18.0	30.4	
Queue Delay		0.0	0.0		0.0				0.0	0.0	4.5	
Total Delay (s/veh)		29.0	5.0		34.6				3.0	18.0	34.9	
LOS		C	A		C				A	B	C	
Approach Delay (s/veh)		26.4			34.7			3.1			32.1	
Approach LOS		C			C			A			C	
Queue Length 50th (ft)		240	0		150				4	53	127	
Queue Length 95th (ft)		329	m11		218				m19	m107	#484	
Internal Link Dist (ft)		127			99			313			952	
Turn Bay Length (ft)			105									
Base Capacity (vph)		651	537		686				707	426	1219	
Starvation Cap Reductn		0	0		0				0	0	0	
Spillback Cap Reductn		0	0		0				0	0	36	
Storage Cap Reductn		0	0		0				0	0	0	
Reduced v/c Ratio		0.71	0.11		0.77				0.11	0.56	0.99	

05/07/2024

14: South Lexington Avenue & West Post Road/East Post Road

Synchro 11 Report

Kimley-Horn

Build Improved Conditions
14: South Lexington Avenue & West Post Road/East Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Intersection Summary

Area Type:	CBD		
Cycle Length:	100		
Actuated Cycle Length:	100		
Offset:	4 (4%), Referenced to phase 2:EBWB and 6:, Start of Green		
Control Type:	Pretimed		
Maximum v/c Ratio:	0.96		
Intersection Signal Delay (s/veh):	30.6	Intersection LOS:	C
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		
#	95th percentile volume exceeds capacity, queue may be longer.		
	Queue shown is maximum after two cycles.		
m	Volume for 95th percentile queue is metered by upstream signal.		

Splits and Phases: 14: South Lexington Avenue & West Post Road/East Post Road



Build Improved Conditions

PM Peak Hour

14: South Lexington Avenue & West Post Road/East Post Road

Timing Plan: 5:00 PM – 6:00 PM

Lane Group	Ø1	Ø9
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Bus Blockages (#/hr)		
Parking (#/hr)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	1	9
Permitted Phases		
Total Split (s)	3.0	3.0
Total Lost Time (s)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay (s/veh)		
Queue Delay		
Total Delay (s/veh)		
LOS		
Approach Delay (s/veh)		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

05/07/2024

14: South Lexington Avenue & West Post Road/East Post Road

Synchro 11 Report

Kimley-Horn

Build Improved Conditions

PM Peak Hour

16: Public Emergency Department Entrance/East Post Road Garage & East Post Road

Time Period: 4:00 PM – 6:00 PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔						↔	
Traffic Volume (vph)	104	586	4	4	337	3	0	0	0	296	0	126
Future Volume (vph)	104	586	4	4	337	3	0	0	0	296	0	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	10	10	12	12	12	12	12	12	12
Grade (%)		0%			-1%			0%			0%	
Satd. Flow (prot)	0	3050	0	0	2975	0	0	0	0	0	1511	0
Flt Permitted		0.825			0.948						0.966	
Satd. Flow (perm)	0	2472	0	0	2821	0	0	0	0	0	1423	0
Right Turn on Red			Yes			Yes				Yes		Yes
Satd. Flow (RTOR)		1			2						19	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		214			170			167			197	
Travel Time (s)		4.9			3.9			3.8			4.5	
Confl. Peds. (#/hr)	100		100	100		100				50		50
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	771	0	0	381	0	0	0	0	0	469	0
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases	4			8						6		
Total Split (s)	75.0	75.0		75.0	75.0					25.0	25.0	
Total Lost Time (s)		4.5			4.5						4.5	
Act Effct Green (s)		22.8			22.8						20.7	
Actuated g/C Ratio		0.43			0.43						0.39	
v/c Ratio		0.71			0.31						0.82	
Control Delay (s/veh)		16.3			10.0						31.2	
Queue Delay		0.0			0.0						0.0	
Total Delay (s/veh)		16.3			10.0						31.2	
LOS		B			B						C	
Approach Delay (s/veh)		16.3			10.1						31.2	
Approach LOS		B			B						C	
Queue Length 50th (ft)		96			37						117	
Queue Length 95th (ft)		146			60						#332	
Internal Link Dist (ft)		134			90			87			117	
Turn Bay Length (ft)												
Base Capacity (vph)		2472			2821						571	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.31			0.14						0.82	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 52.6

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay (s/veh): 19.2

Intersection LOS: B

Build Improved Conditions

PM Peak Hour

16: Public Emergency Department Entrance/East Post Road Garage & East Post Road

East Post Road – 6:00 PM

Intersection Capacity Utilization 75.6%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 16: Public Emergency Department Entrance/East Post Road Garage & East Post Road



Build Improved Conditions
 17: Public Emergency Department Exit & East Post Road

PM Peak Hour
 Timing Plan: 5:00 PM – 6:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (veh/h)	882	0	0	343	1	10
Future Volume (Veh/h)	882	0	0	343	1	10
Sign Control	Free			Free	Stop	
Grade	2%			-2%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	980	0	0	381	1	11
Pedestrians	20			20	100	
Lane Width (ft)	9.0			10.0	11.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			1	8	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	170			262		
pX, platoon unblocked			0.84		0.84	0.84
vC, conflicting volume			1080		1291	610
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			715		966	156
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	98
cM capacity (veh/h)			676		191	651
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	490	490	191	191	12	
Volume Left	0	0	0	0	1	
Volume Right	0	0	0	0	11	
cSH	1700	1700	1700	1700	542	
Volume to Capacity	0.29	0.29	0.11	0.11	0.02	
Queue Length 95th (ft)	0	0	0	0	2	
Control Delay (s/veh)	0.0	0.0	0.0	0.0	11.8	
Lane LOS					B	
Approach Delay (s/veh)	0.0		0.0		11.8	
Approach LOS					B	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			42.0%	ICU Level of Service		A
Analysis Period (min)			15			

Build Improved Conditions

PM Peak Hour

18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	388	500	0	0	356	223	118	637	47	0	0	0
Future Volume (vph)	388	500	0	0	356	223	118	637	47	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	10	10	12	12	12	12	12	12
Grade (%)		2%			-5%			-3%			0%	
Satd. Flow (prot)	0	2696	0	0	2496	0	0	3203	0	0	0	0
Flt Permitted		0.550						0.993				
Satd. Flow (perm)	0	1485	0	0	2496	0	0	3176	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					140			7				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			343			379			494	
Travel Time (s)		3.0			7.8			8.6			11.2	
Confl. Peds. (#/hr)	94		104	104		94	50		23	23		50
Confl. Bikes (#/hr)			2						5			
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.92
Heavy Vehicles (%)	3%	4%	0%	0%	7%	1%	2%	1%	0%	0%	0%	0%
Parking (#/hr)		0			0							
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	955	0	0	623	0	0	863	0	0	0	0
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2						8					
Total Split (s)	26.0	61.0			35.0		39.0	39.0				
Total Lost Time (s)		5.0			5.0			5.0				
Act Effct Green (s)		56.0			30.0			34.0				
Actuated g/C Ratio		0.56			0.30			0.34				
v/c Ratio		1.01dl			0.73			0.79				
Control Delay (s/veh)		34.4			18.5			25.6				
Queue Delay		0.0			0.1			1.3				
Total Delay (s/veh)		34.4			18.7			27.0				
LOS		C			B			C				
Approach Delay (s/veh)		34.4			18.8			27.0				
Approach LOS		C			B			C				
Queue Length 50th (ft)		205			62			163				
Queue Length 95th (ft)		#298			88			m270				
Internal Link Dist (ft)		53			263			299			414	
Turn Bay Length (ft)												
Base Capacity (vph)		1085			846			1084				
Starvation Cap Reductn		0			18			85				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.88			0.75			0.86				
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												
Actuated Cycle Length: 100												

18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road

PM Peak Hour

Timing Plan: 5:00 PM – 6:00 PM

Offset: 45 (45%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.88

Intersection Signal Delay (s/veh): 27.8

Intersection LOS: C

Intersection Capacity Utilization 90.0%

ICU Level of Service E

Analysis Period (min) 15

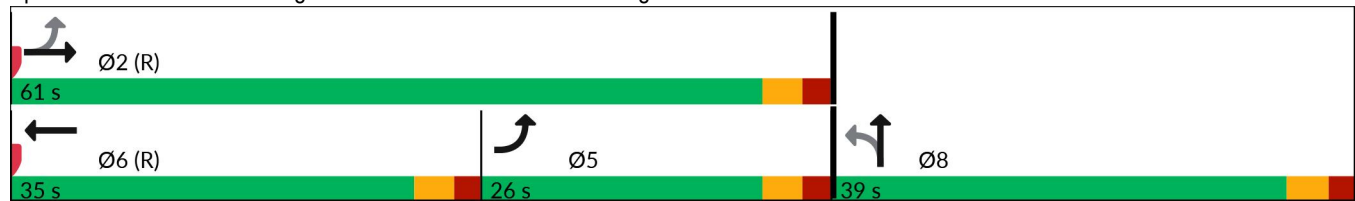
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 18: Longview Avenue/Dr. Martin Luther King Jr Boulevard & East Post Road



Build Improved Conditions
19: Cromwell Place/Grand Street & East Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	456	90	37	449	0	0	0	0	84	67	130
Future Volume (vph)	0	456	90	37	449	0	0	0	0	84	67	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	10	10	12	12	12	12	9	10	12
Grade (%)		5%			0%			0%			2%	
Satd. Flow (prot)	0	2463	0	0	2731	0	0	0	0	1277	1219	0
Flt Permitted					0.859					0.950		
Satd. Flow (perm)	0	2463	0	0	2336	0	0	0	0	1224	1219	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		42									98	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		343			219			455			494	
Travel Time (s)		7.8			5.0			10.3			11.2	
Confl. Peds. (#/hr)	89		116	116		89	44		32	32		44
Confl. Bikes (#/hr)			1									1
Peak Hour Factor	0.92	0.83	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.83	0.83	0.83
Heavy Vehicles (%)	0%	5%	2%	7%	4%	0%	0%	0%	0%	2%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	4	0	0	0	0	0	0	0
Parking (#/hr)		4			0					0	0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	657	0	0	586	0	0	0	0	101	238	0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		2			2							4
Permitted Phases				2						4		
Total Split (s)		66.0		66.0	66.0					34.0	34.0	
Total Lost Time (s)		5.0			5.0					5.0	5.0	
Act Effct Green (s)		65.9			65.9					24.1	24.1	
Actuated g/C Ratio		0.66			0.66					0.24	0.24	
v/c Ratio		0.40			0.38					0.34	0.64	
Control Delay (s/veh)		3.9			6.6					34.5	28.3	
Queue Delay		0.3			0.2					0.0	0.0	
Total Delay (s/veh)		4.2			6.9					34.5	28.3	
LOS		A			A					C	C	
Approach Delay (s/veh)		4.3			6.9						30.2	
Approach LOS		A			A						C	
Queue Length 50th (ft)		26			37					54	81	
Queue Length 95th (ft)		m49			45					87	134	
Internal Link Dist (ft)		263			139			375			414	
Turn Bay Length (ft)												
Base Capacity (vph)		1636			1538					354	423	
Starvation Cap Reductn		441			343					0	0	
Spillback Cap Reductn		37			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.55			0.49					0.29	0.56	
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												

Build Improved Conditions
19: Cromwell Place/Grand Street & East Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Actuated Cycle Length: 100	
Offset: 43 (43%), Referenced to phase 2:EBWB and 6:, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay (s/veh): 10.8	Intersection LOS: B
Intersection Capacity Utilization 66.6%	ICU Level of Service C
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 19: Cromwell Place/Grand Street & East Post Road



Build Improved Conditions
20: Chester Avenue & East Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

							
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø9
Lane Configurations	↑↑			↑↑	↑	↑	
Traffic Volume (vph)	541	0	0	408	78	84	
Future Volume (vph)	541	0	0	408	78	84	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Grade (%)	4%			1%	0%		
Satd. Flow (prot)	3468	0	0	3522	1770	1583	
Flt Permitted					0.950		
Satd. Flow (perm)	3468	0	0	3522	1567	1387	
Right Turn on Red		No				No	
Satd. Flow (RTOR)							
Link Speed (mph)	30			30	30		
Link Distance (ft)	219			383	506		
Travel Time (s)	5.0			8.7	11.5		
Confl. Peds. (#/hr)		80	80		80	80	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	588	0	0	443	85	91	
Turn Type	NA			NA	Prot	Perm	
Protected Phases	2			2	4		9
Permitted Phases						4	
Total Split (s)	56.0			56.0	39.0	39.0	5.0
Total Lost Time (s)	4.5			4.5	4.5	4.5	
Act Effect Green (s)	51.5			51.5	39.5	39.5	
Actuated g/C Ratio	0.52			0.52	0.40	0.40	
v/c Ratio	0.32			0.24	0.12	0.16	
Control Delay (s/veh)	16.0			13.8	22.6	23.6	
Queue Delay	0.6			0.0	0.0	0.0	
Total Delay (s/veh)	16.6			13.8	22.6	23.6	
LOS	B			B	C	C	
Approach Delay (s/veh)	16.7			13.9	23.1		
Approach LOS	B			B	C		
Queue Length 50th (ft)	113			78	42	46	
Queue Length 95th (ft)	113			108	77	85	
Internal Link Dist (ft)	139			303	426		
Turn Bay Length (ft)							
Base Capacity (vph)	1786			1813	699	547	
Starvation Cap Reductn	799			0	0	0	
Spillback Cap Reductn	0			0	0	0	
Storage Cap Reductn	0			0	0	0	
Reduced v/c Ratio	0.60			0.24	0.12	0.17	
Intersection Summary							
Area Type:	Other						
Cycle Length: 100							
Actuated Cycle Length: 100							
Offset: 44 (44%), Referenced to phase 2:EBWB and 6:, Start of Green							
Control Type: Actuated-Coordinated							
Maximum v/c Ratio: 0.33							
Intersection Signal Delay (s/veh): 16.6	Intersection LOS: B						

Build Improved Conditions
20: Chester Avenue & East Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Intersection Capacity Utilization 40.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 20: Chester Avenue & East Post Road



Build Improved Conditions

PM Peak Hour

21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  				
Traffic Volume (vph)	57	0	0	0	0	6	0	1231	0	0	0	0
Future Volume (vph)	57	0	0	0	0	6	0	1231	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			1%			0%	
Satd. Flow (prot)	1593	1676	0	0	0	1450	0	4554	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1473	1676	0	0	0	1326	0	4554	0	0	0	0
Right Turn on Red	No		No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		403			216			494			280	
Travel Time (s)		9.2			4.9			11.2			6.4	
Confl. Peds. (#/hr)	50		50	50		50	100		100			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	62	0	0	0	0	7	0	1338	0	0	0	0
Turn Type	Perm					Perm		NA				
Protected Phases		4						2				
Permitted Phases	4					4						
Total Split (s)	25.1	25.1				25.1		74.9				
Total Lost Time (s)	5.0	5.0				5.0		4.9				
Act Effct Green (s)	14.7					14.7		78.5				
Actuated g/C Ratio	0.15					0.15		0.79				
v/c Ratio	0.28					0.03		0.37				
Control Delay (s/veh)	38.7					32.8		3.3				
Queue Delay	0.0					0.0		0.0				
Total Delay (s/veh)	38.7					32.8		3.3				
LOS	D					C		A				
Approach Delay (s/veh)		38.7			32.8			3.4				
Approach LOS		D			C			A				
Queue Length 50th (ft)	33					4		87				
Queue Length 95th (ft)	71					16		m120				
Internal Link Dist (ft)		323			136			414			200	
Turn Bay Length (ft)												
Base Capacity (vph)	296					266		3575				
Starvation Cap Reductn	0					0		0				
Spillback Cap Reductn	0					0		388				
Storage Cap Reductn	0					0		0				
Reduced v/c Ratio	0.21					0.03		0.42				
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												
Actuated Cycle Length: 100												
Offset: 77 (77%), Referenced to phase 2:NBT and 6:, Start of Green												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.37												
Intersection Signal Delay (s/veh): 5.1	Intersection LOS: A											

Intersection Capacity Utilization 57.4%

ICU Level of Service B

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: Dr. Martin Luther King Jr Boulevard & Fisher Court/Parking Garage



Build Improved Conditions

22: South Lexington Avenue & Fisher Avenue/Quarropas Street

PM Peak Hour

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑					↖↖	↑↑	↖
Traffic Volume (vph)	0	240	137	59	110	0	0	0	0	200	1004	146
Future Volume (vph)	0	240	137	59	110	0	0	0	0	200	1004	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	11	11	12	12	12	12	12	12	13
Grade (%)		-1%			0%			0%			-1%	
Storage Length (ft)	0		0	135		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	2		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	2746	0	1540	3079	0	0	0	0	3105	3201	1480
Flt Permitted				0.397						0.950		
Satd. Flow (perm)	0	2746	0	625	3079	0	0	0	0	2752	3201	1363
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)												159
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		629			873			1032			215	
Travel Time (s)		14.3			19.8			23.5			4.9	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	410	0	64	120	0	0	0	0	217	1091	159
Turn Type		NA		pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases				6						4		4
Total Split (s)		34.0		10.0	44.0					53.0	53.0	53.0
Total Lost Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Act Effect Green (s)		35.7		44.6	44.6					45.4	45.4	45.4
Actuated g/C Ratio		0.36		0.45	0.45					0.45	0.45	0.45
v/c Ratio		0.41		0.19	0.08					0.17	0.75	0.22
Control Delay (s/veh)		28.1		25.9	23.8					15.5	25.8	2.9
Queue Delay		0.0		0.0	0.0					0.0	0.0	0.0
Total Delay (s/veh)		28.1		25.9	23.8					15.5	25.8	2.9
LOS		C		C	C					B	C	A
Approach Delay (s/veh)		28.2			24.6						21.9	
Approach LOS		C			C						C	
Queue Length 50th (ft)		111		24	23					40	287	0
Queue Length 95th (ft)		163		m43	m38					56	333	31
Internal Link Dist (ft)		549			793			952			135	
Turn Bay Length (ft)				135								
Base Capacity (vph)		979		334	1373					1353	1574	751
Starvation Cap Reductn		0		0	0					0	0	0
Spillback Cap Reductn		0		0	0					0	0	0
Storage Cap Reductn		0		0	0					0	0	0
Reduced v/c Ratio		0.42		0.19	0.09					0.16	0.69	0.21

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Build Improved Conditions
22: South Lexington Avenue & Fisher Avenue/Quarropas Street

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	3.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Build Improved Conditions
22: South Lexington Avenue & Fisher Avenue/Quarropas Street

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

Offset: 10 (10%), Referenced to phase 2:EBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay (s/veh): 23.4

Intersection LOS: C

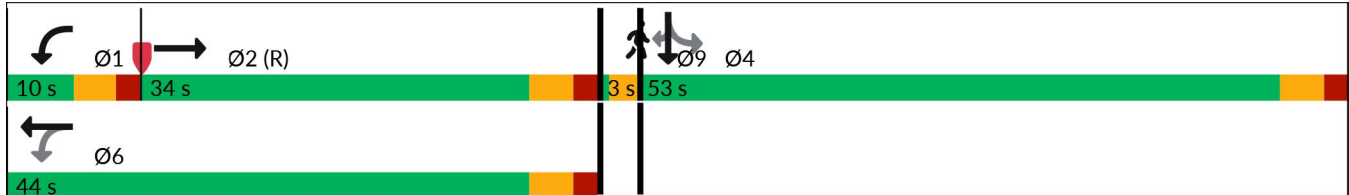
Intersection Capacity Utilization 69.3%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: South Lexington Avenue & Fisher Avenue/Quarropas Street



Build Improved Conditions

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

PM Peak Hour

Timing Plan: 5:00 PM – 6:00 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  				
Traffic Volume (vph)	88	295	0	0	59	76	105	1114	93	0	0	0
Future Volume (vph)	88	295	0	0	59	76	105	1114	93	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	12	12	11	11	12	12	12	12	12	12
Grade (%)		3%			-4%			1%			0%	
Storage Length (ft)	240		0	0		90	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1516	2928	0	0	1653	1405	0	4464	0	0	0	0
Flt Permitted	0.624							0.996				
Satd. Flow (perm)	950	2928	0	0	1653	1312	0	4443	0	0	0	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						83		17				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		873			420			280			604	
Travel Time (s)		19.8			9.5			6.4			13.7	
Confl. Peds. (#/hr)	50		50	50		50	50		50	50		50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	321	0	0	64	83	0	1426	0	0	0	0
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8					
Total Split (s)	12.0	45.0			33.0	33.0	55.0	55.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0				
Act Effct Green (s)	45.8	45.8			35.3	35.3		44.2				
Actuated g/C Ratio	0.46	0.46			0.35	0.35		0.44				
v/c Ratio	0.20	0.23			0.10	0.16		0.72				
Control Delay (s/veh)	19.7	19.4			26.6	7.1		19.3				
Queue Delay	0.0	0.0			0.0	0.0		0.7				
Total Delay (s/veh)	19.7	19.4			26.6	7.1		20.0				
LOS	B	B			C	A		C				
Approach Delay (s/veh)		19.5			15.6			20.1				
Approach LOS		B			B			C				
Queue Length 50th (ft)	37	72			29	0		187				
Queue Length 95th (ft)	101	138			64	35		264				
Internal Link Dist (ft)		793			340			200			524	
Turn Bay Length (ft)	240					90						
Base Capacity (vph)	480	1341			582	516		2230				
Starvation Cap Reductn	0	0			0	0		436				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.20	0.24			0.11	0.16		0.79				
Intersection Summary												
Area Type:	CBD											
Cycle Length: 100												
Actuated Cycle Length: 100												

Build Improved Conditions

23: Dr. Martin Luther King Jr Boulevard & Quarropas Street

PM Peak Hour

Timing Plan: 5:00 PM – 6:00 PM

Offset: 81 (81%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay (s/veh): 19.6

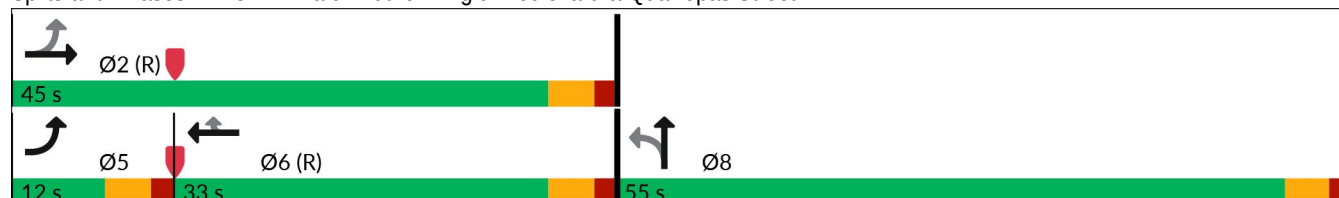
Intersection LOS: B

Intersection Capacity Utilization 69.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 23: Dr. Martin Luther King Jr Boulevard & Quarropas Street



Build Improved Conditions
24: West Lot Northeast Driveway & West Post Road

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	426	0	0	661	0	35
Future Volume (Veh/h)	426	0	0	661	0	35
Sign Control	Free			Free	Stop	
Grade	-3%			3%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	473	0	0	734	0	39
Pedestrians	20			20	40	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			1	3	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	535			207		
pX, platoon unblocked					0.84	
vC, conflicting volume			513		1267	533
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			513		1223	533
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	92
cM capacity (veh/h)			1012		157	516
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	473	734	39			
Volume Left	0	0	0			
Volume Right	0	0	39			
cSH	1700	1700	516			
Volume to Capacity	0.28	0.43	0.08			
Queue Length 95th (ft)	0	0	6			
Control Delay (s/veh)	0.0	0.0	12.5			
Lane LOS			B			
Approach Delay (s/veh)	0.0	0.0	12.5			
Approach LOS			B			
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			53.5%	ICU Level of Service		A
Analysis Period (min)			15			

Build Improved Conditions

PM Peak Hour

25: Ambulance Emergency Department Entrance & East Post Road

Timing Plan: 5:00 PM – 6:00 PM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		
Traffic Volume (veh/h)	683	5	5	459	0	0
Future Volume (Veh/h)	683	5	5	459	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	759	6	6	510	0	0
Pedestrians	20			20	100	
Lane Width (ft)	12.0			12.0	0.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			1	0	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	179			392		
pX, platoon unblocked					0.97	
vC, conflicting volume			865		1149	503
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			865		1089	503
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		100	100
cM capacity (veh/h)			774		198	504
Direction, Lane #	EB 1	EB 2	WB 1	WB 2		
Volume Total	506	259	176	340		
Volume Left	0	0	6	0		
Volume Right	0	6	0	0		
cSH	1700	1700	774	1700		
Volume to Capacity	0.30	0.15	0.01	0.20		
Queue Length 95th (ft)	0	0	1	0		
Control Delay (s/veh)	0.0	0.0	0.4	0.0		
Lane LOS			A			
Approach Delay (s/veh)	0.0		0.1			
Approach LOS						
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			36.1%		ICU Level of Service	A
Analysis Period (min)			15			

Build Improved Conditions
 26: Ambulance Emergency Department Exit & East Post Road

PM Peak Hour
 Timing Plan: 5:00 PM – 6:00 PM

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Volume (veh/h)	683	0	0	463	1	11
Future Volume (Veh/h)	683	0	0	463	1	11
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	759	0	0	514	1	12
Pedestrians	20			20	100	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	1			1	9	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	357			214		
pX, platoon unblocked					0.94	
vC, conflicting volume			859		1136	500
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			859		1024	500
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	97
cM capacity (veh/h)			704		194	459
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	380	380	257	257	13	
Volume Left	0	0	0	0	1	
Volume Right	0	0	0	0	12	
cSH	1700	1700	1700	1700	415	
Volume to Capacity	0.22	0.22	0.15	0.15	0.03	
Queue Length 95th (ft)	0	0	0	0	2	
Control Delay (s/veh)	0.0	0.0	0.0	0.0	14.0	
Lane LOS					B	
Approach Delay (s/veh)	0.0		0.0		14.0	
Approach LOS					B	
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			35.8%		ICU Level of Service	A
Analysis Period (min)			15			

Build Improved Conditions
27: East Post Road & Winchester Street

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	5	887	338	131	5	5
Future Volume (Veh/h)	5	887	338	131	5	5
Sign Control		Free	Free		Stop	
Grade		2%	-2%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	986	376	146	6	6
Pedestrians		20	20		100	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		1	1		9	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		299	133			
pX, platoon unblocked					0.86	
vC, conflicting volume	622				1074	381
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	622				755	381
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	99
cM capacity (veh/h)	864				261	548
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	335	657	251	271	12	
Volume Left	6	0	0	0	6	
Volume Right	0	0	0	146	6	
cSH	864	1700	1700	1700	353	
Volume to Capacity	0.01	0.39	0.15	0.16	0.03	
Queue Length 95th (ft)	1	0	0	0	3	
Control Delay (s/veh)	0.2	0.0	0.0	0.0	15.6	
Lane LOS	A				C	
Approach Delay (s/veh)	0.1		0.0		15.6	
Approach LOS					C	
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			42.9%		ICU Level of Service	A
Analysis Period (min)			15			

Build Improved Conditions
28: Winchester Street & East Post Road Garage

PM Peak Hour
Timing Plan: 5:00 PM – 6:00 PM



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	131	5	10	0
Future Volume (Veh/h)	0	0	131	5	10	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	146	6	11	0
Pedestrians	20			100	100	
Lane Width (ft)	0.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	0			9	9	
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	429	131	31			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	429	131	31			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	91			
cM capacity (veh/h)	479	831	1582			
Direction, Lane #	NB 1	SB 1				
Volume Total	152	11				
Volume Left	146	0				
Volume Right	0	0				
cSH	1582	1700				
Volume to Capacity	0.09	0.01				
Queue Length 95th (ft)	8	0				
Control Delay (s/veh)	7.2	0.0				
Lane LOS	A					
Approach Delay (s/veh)	7.2	0.0				
Approach LOS						
Intersection Summary						
Average Delay			6.8			
Intersection Capacity Utilization			34.7%	ICU Level of Service		A
Analysis Period (min)			15			

TABLE NO. 1

LEVEL OF SERVICE SUMMARY TABLE

	LOCATION	2020 EXISTING CONDITIONS			NO-BUILD CONDITIONS			BUILD CONDITIONS		
		WEEKDAY AM	WEEKDAY PM (3:00 - 4:00)	WEEKDAY PM (5:00 - 6:00)	WEEKDAY AM	WEEKDAY PM (3:00 - 4:00)	WEEKDAY PM (5:00 - 6:00)	WEEKDAY AM	WEEKDAY PM (3:00 - 4:00)	WEEKDAY PM (5:00 - 6:00)
1	QUARROPAS STREET & S. LEXINGTON AVENUE									
	SIGNALIZED									
	EASTBOUND THROUGH / RIGHT	B [13.8] (0.42)	B [11.3] (0.23)	B [13.6] (0.29)	B [14.5] (0.43)	B [11.7] (0.24)	B [14.1] (0.30)	B [15.6] (0.45)	B [12.2] (0.24)	B [14.3] (0.30)
	EASTBOUND APPROACH	B [13.8]	B [11.3]	B [13.6]	B [14.5]	B [11.7]	B [14.1]	B [15.6]	B [12.2]	B [14.3]
	WESTBOUND LEFT	B [16.8] (0.32)	B [12.0] (0.12)	B [14.2] (0.16)	B [16.2] (0.35)	B [12.3] (0.13)	B [14.5] (0.17)	B [19.4] (0.36)	B [12.8] (0.13)	B [14.6] (0.18)
	WESTBOUND THROUGH	B [11.1] (0.05)	B [10.5] (0.06)	B [12.0] (0.08)	B [11.1] (0.05)	B [10.7] (0.06)	B [12.3] (0.08)	B [12.1] (0.05)	B [11.2] (0.06)	B [12.4] (0.08)
	WESTBOUND APPROACH	B [14.1]	B [11.1]	B [12.0]	B [15.1]	B [11.3]	B [13.0]	B [16.0]	B [11.8]	B [13.2]
	SOUTHBOUND LEFT	C [29.6] (0.67)	C [23.3] (0.30)	C [21.6] (0.23)	C [29.5] (0.67)	C [23.2] (0.30)	C [21.5] (0.23)	C [28.3] (0.64)	C [22.8] (0.29)	C [21.4] (0.23)
	SOUTHBOUND THROUGH	C [31.6] (0.74)	C [33.3] (0.78)	D [36.5] (0.86)	C [31.5] (0.74)	C [33.4] (0.79)	D [37.3] (0.87)	C [33.2] (0.80)	C [33.9] (0.80)	D [39.2] (0.89)
	SOUTHBOUND RIGHT	A [5.0] (0.22)	A [5.0] (0.27)	A [4.6] (0.27)	A [4.9] (0.22)	A [4.9] (0.27)	A [4.5] (0.27)	A [4.8] (0.22)	A [4.8] (0.26)	A [4.5] (0.27)
	SOUTHBOUND APPROACH	C [28.7]	C [27.7]	C [30.3]	C [28.6]	C [27.8]	C [30.8]	C [29.2]	C [28.2]	C [32.4]
	OVERALL INTERSECTION	C [23.6]	C [22.8]	C [25.0]	C [23.8]	C [23.0]	C [25.5]	C [24.7]	C [23.6]	C [26.8]
2	QUARROPAS STREET & DR. MARTIN LUTHER KING JR. BOULEVARD									
	SIGNALIZED									
	EASTBOUND LEFT	B [19.6] (0.76)	B [14.0] (0.38)	B [13.8] (0.28)	C [21.6] (0.79)	B [14.9] (0.40)	B [14.6] (0.30)	C [22.2] (0.80)	B [15.3] (0.41)	B [15.2] (0.31)
	EASTBOUND THROUGH	A [9.3] (0.36)	B [11.9] (0.29)	B [13.4] (0.32)	A [9.7] (0.38)	B [12.6] (0.30)	B [14.4] (0.35)	A [9.9] (0.38)	B [13.0] (0.31)	B [15.1] (0.35)
	EASTBOUND APPROACH	B [14.1]	B [12.5]	B [13.5]	B [15.2]	B [13.3]	B [14.4]	B [15.5]	B [13.7]	B [15.1]
	WESTBOUND THROUGH	C [28.0] (0.29)	C [20.4] (0.36)	B [19.3] (0.18)	C [28.4] (0.30)	C [21.2] (0.37)	B [19.9] (0.19)	C [28.5] (0.30)	C [21.6] (0.38)	C [20.3] (0.19)
	WESTBOUND RIGHT	B [18.0] (0.57)	A [6.1] (0.28)	A [6.5] (0.26)	C [20.5] (0.60)	A [6.4] (0.29)	A [6.6] (0.27)	C [20.8] (0.60)	A [6.6] (0.29)	A [6.6] (0.27)
	WESTBOUND APPROACH	C [21.1]	B [14.4]	B [12.0]	C [23.0]	B [15.0]	B [12.3]	C [23.2]	B [15.3]	B [12.5]
	NORTHBOUND THROUGH / RIGHT	C [30.8] (0.77)	C [21.2] (0.65)	B [17.8] (0.66)	C [32.0] (0.78)	D [52.5] (0.64)	C [26.2] (0.64)	D [36.3] (0.79)	E [67.7] (0.71)	E [66.0] (0.69)
	NORTHBOUND APPROACH	C [30.8]	C [21.2]	B [17.8]	C [32.0]	D [52.5]	C [26.2]	C [36.3]	E [67.7]	E [66.0]
	OVERALL INTERSECTION	C [21.7]	B [18.1]	B [16.4]	C [22.9]	D [37.9]	C [22.3]	C [25.1]	D [48.9]	D [51.1]
3	FISHER COURT / PARKING GARAGE & DR. MARTIN LUTHER KING JR. BOULEVARD									
	SIGNALIZED									
	EASTBOUND LEFT	D [47.5] (0.42)	D [51.1] (0.42)	D [50.2] (0.37)	D [47.8] (0.43)	D [51.4] (0.43)	D [50.4] (0.38)	D [47.8] (0.43)	D [51.4] (0.43)	D [50.4] (0.38)
	EASTBOUND APPROACH	D [47.5]	D [51.1]	D [50.3]	D [47.8]	D [51.4]	D [50.4]	D [47.8]	D [51.4]	D [50.4]
	WESTBOUND RIGHT	D [36.5] (0.04)	D [40.2] (0.04)	D [41.0] (0.04)	D [36.3] (0.04)	D [40.0] (0.04)	D [40.9] (0.04)	D [36.3] (0.04)	D [40.0] (0.04)	D [40.8] (0.04)
	WESTBOUND APPROACH	D [36.5]	D [40.2]	D [41.0]	D [36.3]	D [40.0]	D [40.8]	D [36.3]	D [40.0]	D [40.8]
	NORTHBOUND THROUGH / RIGHT	A [3.8] (0.25)	A [3.5] (0.30)	A [3.7] (0.34)	A [3.6] (0.26)	A [3.6] (0.31)	A [3.7] (0.35)	A [3.7] (0.27)	A [3.8] (0.35)	A [3.9] (0.39)
	NORTHBOUND APPROACH	A [3.6]	A [3.5]	A [3.7]	A [3.6]	A [3.6]	A [3.7]	A [3.7]	A [3.8]	A [3.9]
	OVERALL INTERSECTION	A [7.2]	A [6.8]	A [6.2]	A [7.2]	A [6.9]	A [6.2]	A [7.1]	A [6.7]	A [6.2]
4	E. POST ROAD & S. LEXINGTON AVENUE									
	SIGNALIZED									
	SOUTHBOUND LEFT	B [14.4] (0.41)	C [32.3] (0.52)	C [27.8] (0.41)	B [14.8] (0.42)	C [32.1] (0.53)	C [28.0] (0.42)	B [19.2] (0.59)	D [35.5] (0.63)	C [30.0] (0.50)
	SOUTHBOUND THROUGH / RIGHT	B [16.9] (0.71)	D [37.4] (0.82)	D [52.4] (0.97)	B [17.6] (0.73)	D [37.7] (0.82)	E [57.4] (0.99)	B [18.7] (0.73)	D [37.3] (0.82)	E [57.4] (0.99)
	SOUTHBOUND APPROACH	B [16.3]	D [36.2]	D [48.3]	B [16.9]	D [36.4]	D [52.4]	B [18.8]	D [36.8]	D [52.0]
	EASTBOUND THROUGH	C [21.0] (0.63)	B [11.0] (0.32)	B [13.3] (0.30)	C [21.9] (0.65)	B [11.3] (0.33)	B [13.5] (0.31)	C [23.2] (0.68)	B [11.6] (0.35)	B [13.8] (0.33)
	EASTBOUND RIGHT	A [4.7] (0.13)	A [3.1] (0.06)	A [3.3] (0.07)	A [4.8] (0.13)	A [3.2] (0.06)	A [3.4] (0.07)	A [5.3] (0.13)	A [3.2] (0.06)	A [3.4] (0.07)
	EASTBOUND APPROACH	B [18.3]	A [9.9]	B [11.7]	B [19.1]	B [10.2]	C [20.4]	C [20.4]	B [10.5]	B [12.2]
	WESTBOUND LEFT / THROUGH	B [14.7] (0.36)	B [14.2] (0.24)	C [21.3] (0.32)	B [15.4] (0.38)	B [14.7] (0.25)	C [21.9] (0.33)	B [16.9] (0.47)	A [8.8] (0.41)	B [12.7] (0.50)
	WESTBOUND APPROACH	B [14.7]	B [14.2]	C [21.3]	B [15.8]	B [14.7]	C [21.9]	B [16.9]	A [8.8]	C [12.7]
	OVERALL INTERSECTION	B [16.5]	C [25.6]	D [36.4]	B [17.2]	C [25.9]	D [39.1]	B [18.9]	C [23.7]	D [35.4]
5	E. POST ROAD & DAVIS AVENUE									
	UNSIGNALIZED									
	NORTHBOUND LEFT	C [15.4] (0.06)	C [15.3] (0.09)	C [15.3] (0.09)	C [15.8] (0.06)	C [15.7] (0.10)	C [15.7] (0.10)	C [18.7] (0.08)	C [18.1] (0.11)	C [18.2] (0.12)
	NORTHBOUND RIGHT	B [10.9] (0.10)	B [10.9] (0.13)	B [11.0] (0.16)	B [11.0] (0.10)	B [11.0] (0.14)	B [11.1] (0.17)	B [12.1] (0.17)	B [11.5] (0.17)	B [11.6] (0.20)
6	E. POST ROAD & W.P.H. EMERGENCY ENTRY DRIVEWAY/ BROOKFIELD STREET (SITE ACCESS)									
	UNSIGNALIZED									
	WESTBOUND LEFT / THROUGH / RIGHT	A (9.7) (0.01)	A (9.3) (0.01)	A (9.3) (0.01)	A (9.8) (0.01)	A (9.4) (0.01)	A (9.4) (0.01)	-	-	-
	SIGNALIZED									
	SOUTHBOUND LEFT	-	-	-	-	-	-	D [47.9] (0.51)	D [54.0] (0.87)	E [56.1] (0.87)
	SOUTHBOUND RIGHT	-	-	-	-	-	-	B [14.7] (0.15)	A [6.4] (0.24)	A [6.4] (0.24)
	SOUTHBOUND APPROACH	-	-	-	-	-	-	D [40.5]	D [43.4]	D [45.0]
	EASTBOUND LEFT / THROUGH / RIGHT	-	-	-	-	-	-	A [6.0] (0.47)	B [11.6] (0.45)	B [12.6] (0.45)
	EASTBOUND APPROACH	-	-	-	-	-	-	A [6.0]	B [11.6]	B [12.6]
	WESTBOUND LEFT / THROUGH / RIGHT	-	-	-	-	-	-	A [2.0] (0.16)	B [12.5] (0.25)	B [15.6] (0.28)
	WESTBOUND APPROACH	-	-	-	-	-	-	A [2.0]	B [12.5]	B [15.6]
	OVERALL INTERSECTION	-	-	-	-	-	-	A [8.4]	C [20.9]	C [22.4]

TABLE NO. 1

LEVEL OF SERVICE SUMMARY TABLE

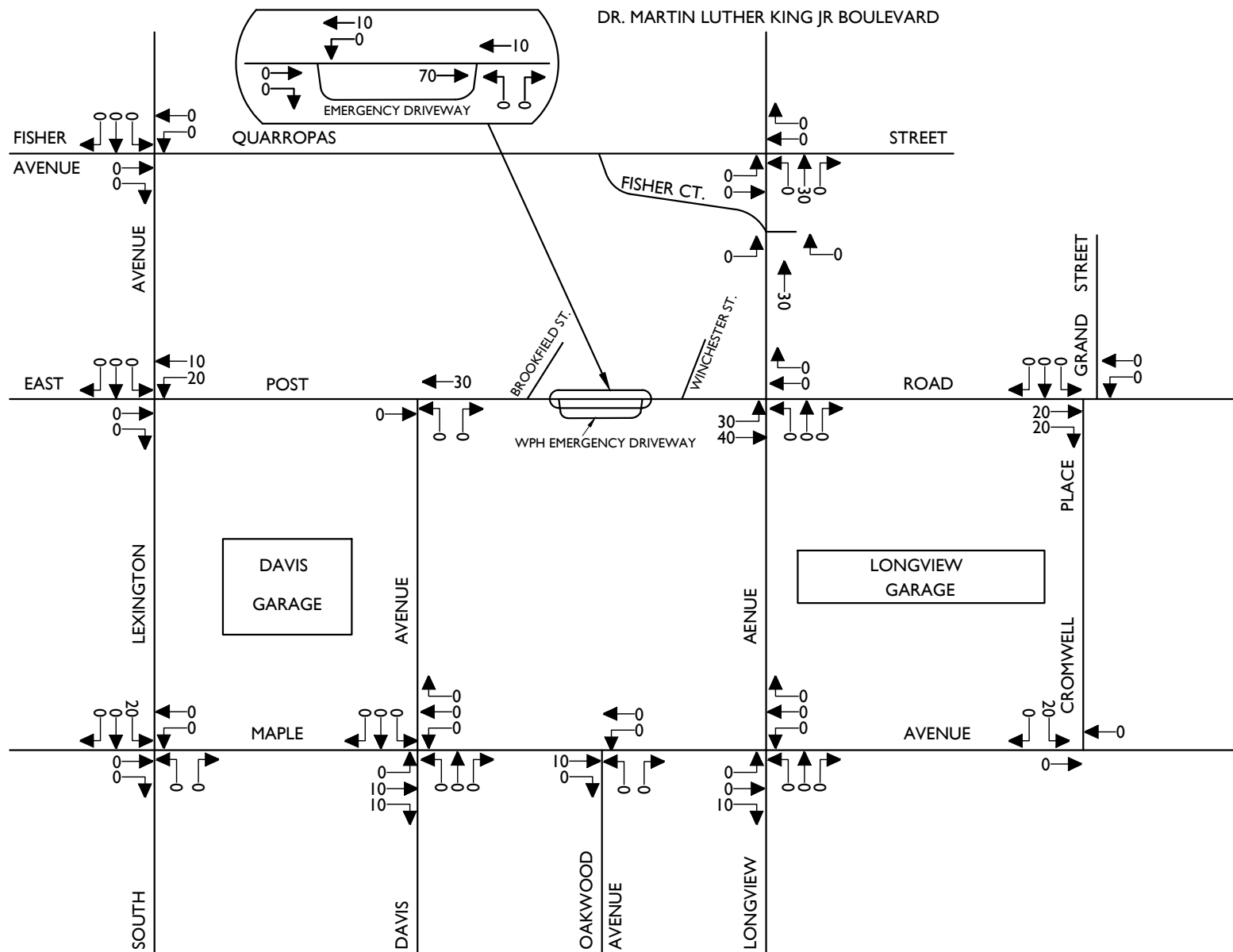
	LOCATION	2020 EXISTING CONDITIONS			NO-BUILD CONDITIONS			BUILD CONDITIONS		
		WEEKDAY AM	WEEKDAY PM (3:00 - 4:00)	WEEKDAY PM (5:00 - 6:00)	WEEKDAY AM	WEEKDAY PM (3:00 - 4:00)	WEEKDAY PM (5:00 - 6:00)	WEEKDAY AM	WEEKDAY PM (3:00 - 4:00)	WEEKDAY PM (5:00 - 6:00)
7	E. POST ROAD & W.P.H. EMERGENCY EXIT DRIVEWAY UN SIGNALIZED NORTHBOUND LEFT / RIGHT	B (13.8) (0.02)	B (13.1) (0.03)	B (12.5) (0.04)	B (14.0) (0.02)	B (13.3) (0.03)	B (12.6) (0.05)	C (15.3) (0.02)	C (17.8) (0.05)	B (16.1) (0.06)
8	E. POST ROAD & DR. MARTIN LUTHER KING JR. BOULEVARD / LONGVIEW AVENUE SIGNALIZED NORTHBOUND LEFT / THROUGH / RIGHT NORTHBOUND APPROACH EASTBOUND LEFT EASTBOUND THROUGH EASTBOUND APPROACH WESTBOUND THROUGH / RIGHT WESTBOUND APPROACH OVERALL INTERSECTION	E [59.8] (0.83) E [59.8] B [12.7] (0.42) B [12.2] (0.41) B [12.4] A [9.5] (0.22) A [9.5] C [32.2]	C [33.1] (0.81) C [33.1] B [19.1] (0.49) B [13.5] (0.38) B [15.8] B [11.7] (0.34) B [11.7] C [22.0]	D [37.8] (0.83) D [37.8] B [19.6] (0.51) B [11.7] (0.34) B [15.1] C [21.3] (0.45) C [21.3] C [26.1]	E [59.5] (0.84) E [59.4] B [13.3] (0.44) B [12.6] (0.42) B [12.9] A [9.8] (0.23) A [9.6] C [32.3]	C [33.2] (0.82) C [33.2] C [20.6] (0.52) B [14.1] (0.39) B [16.8] B [12.7] (0.35) B [12.7] C [22.6]	D [38.4] (0.84) D [38.4] C [21.2] (0.54) B [12.3] (0.35) B [16.1] C [22.5] (0.47) C [22.5] C [27.0]	E [58.8] (0.89) E [58.8] B [19.4] (0.59) B [16.3] (0.50) B [17.5] B [11.3] (0.28) B [11.3] C [33.8]	C [34.3] (0.83) C [34.3] D [43.2] (0.86) C [23.3] (0.62) C [31.7] B [15.5] (0.39) B [15.5] C [29.2]	D [39.8] (0.86) D [39.8] D [52.9] (0.90) C [22.6] (0.57) D [35.7] C [25.9] (0.52) C [25.9] C [34.6]
9	E. POST ROAD & GRAND STREET / CROMWELL PLACE SIGNALIZED SOUTHBOUND LEFT SOUTHBOUND THROUGH / RIGHT SOUTHBOUND APPROACH EASTBOUND THROUGH / RIGHT EASTBOUND APPROACH WESTBOUND LEFT / THROUGH WESTBOUND APPROACH OVERALL INTERSECTION	C [34.1] (0.17) C [21.2] (0.38) C [24.7] A [2.8] (0.22) A [2.8] A [5.6] (0.18) A [5.6] A [7.1]	D [36.4] (0.28) B [19.6] (0.44) C [25.2] A [4.9] (0.20) A [4.9] A [6.5] (0.27) A [6.5] A [9.2]	D [38.4] (0.37) D [35.4] (0.69) D [36.3] A [8.0] (0.18) A [8.0] A [6.9] (0.29) A [6.9] B [14.6]	C [34.1] (0.18) C [21.0] (0.39) C [24.6] A [2.9] (0.24) A [2.9] A [5.9] (0.20) A [5.9] A [7.3]	D [36.6] (0.28) B [19.6] (0.45) C [25.3] A [5.0] (0.20) A [5.0] A [6.6] (0.28) A [6.6] A [9.3]	D [38.4] (0.37) D [36.2] (0.70) D [36.9] A [8.7] (0.19) A [8.7] A [7.1] (0.30) A [6.2] B [15.0]	C [34.1] (0.18) C [21.0] (0.39) C [24.6] A [2.3] (0.27) A [2.3] A [6.2] (0.24) A [6.2] A [6.8]	D [36.6] (0.28) B [19.7] (0.45) C [25.4] A [5.6] (0.31) A [5.6] A [7.0] (0.31) A [7.0] A [9.0]	D [38.4] (0.37) D [36.4] (0.70) D [37.0] B [13.0] (0.30) B [13.0] A [7.4] (0.33) A [7.4] B [15.8]
10	MAPLE AVENUE & S. LEXINGTON AVENUE SIGNALIZED EASTBOUND THROUGH / RIGHT EASTBOUND APPROACH WESTBOUND LEFT WESTBOUND THROUGH WESTBOUND APPROACH NORTHBOUND LEFT NORTHBOUND RIGHT NORTHBOUND APPROACH SOUTHBOUND LEFT SOUTHBOUND THROUGH / RIGHT SOUTHBOUND APPROACH OVERALL INTERSECTION	D [50.1] (0.89) D [50.1] C [27.7] (0.30) C [24.7] (0.27) C [25.2] E [56.6] (0.26) A [1.0] (0.11) B [11.1] B [19.4] (0.47) B [19.6] (0.49) B [19.5] C [30.9]	C [21.0] (0.30) C [21.0] B [15.6] (0.11) B [14.7] (0.24) B [14.7] E [72.9] (0.51) A [3.3] (0.28) C [23.6] D [48.0] (0.65) E [56.5] (0.83) D [52.9] C [32.8]	D [35.4] (0.50) D [35.4] C [26.9] (0.20) C [33.5] (0.62) C [33.0] F [97.0] (0.67) A [0.2] (0.06) D [47.4] B [17.5] (0.38) C [24.9] (0.63) C [22.2] C [29.0]	D [51.3] (0.90) D [51.3] C [28.2] (0.31) C [24.7] (0.27) C [25.2] E [56.8] (0.26) A [1.1] (0.12) B [11.0] C [20.0] (0.49) C [20.3] (0.51) C [20.3] C [31.7]	C [21.4] (0.31) C [21.4] B [16.0] (0.12) B [15.1] (0.25) B [15.2] E [74.6] (0.52) A [3.6] (0.29) C [24.4] D [47.2] (0.66) E [55.6] (0.84) D [52.0] C [32.7]	D [35.7] (0.52) D [35.7] C [27.1] (0.20) C [33.8] (0.64) C [33.4] F [100.1] (0.68) A [0.2] (0.06) D [48.9] B [17.8] (0.40) C [26.3] (0.65) C [23.2] C [29.7]	D [51.3] (0.90) D [51.3] C [28.2] (0.31) C [24.7] (0.27) C [25.2] E [56.8] (0.26) A [1.1] (0.12) B [11.0] C [21.1] (0.52) C [20.3] (0.51) C [20.7] C [31.7]	E [58.3] (0.87) E [58.3] B [16.0] (0.12) B [15.1] (0.25) B [15.2] F [100.1] (0.68) A [3.8] (0.29) C [24.4] D [48.9] E [58.3] (0.87) D [53.0] (0.84) E [55.7] D [35.4]	D [35.7] (0.52) D [35.7] C [27.1] (0.20) C [33.8] (0.64) C [33.4] F [100.1] (0.68) A [0.2] (0.06) D [48.9] C [20.6] (0.52) C [26.3] (0.65) C [23.9] C [29.7]
11	MAPLE AVENUE & DAVIS AVENUE / HOSPITAL ACCESS SIGNALIZED EASTBOUND LEFT EASTBOUND THROUGH / RIGHT EASTBOUND APPROACH WESTBOUND LEFT / THROUGH / RIGHT WESTBOUND APPROACH NORTHBOUND LEFT / THROUGH / RIGHT NORTHBOUND APPROACH SOUTHBOUND LEFT SOUTHBOUND THROUGH / RIGHT SOUTHBOUND APPROACH OVERALL INTERSECTION	A [5.0] (0.20) A [5.5] (0.41) A [5.5] A [3.2] (0.20) A [3.2] C [27.7] (0.45) C [27.7] D [40.0] (0.21) C [22.2] (0.09) C [33.2] A [7.0]	A [7.5] (0.13) A [6.8] (0.32) A [6.9] A [6.1] (0.25) A [6.1] B [13.7] (0.29) B [13.7] C [26.3] (0.30) B [13.6] (0.16) C [21.0] A [8.1]	A [5.4] (0.13) A [4.6] (0.26) A [4.7] A [4.8] (0.28) A [4.8] C [22.6] (0.48) C [22.6] C [34.5] (0.34) B [18.0] (0.20) C [26.6] A [7.5]	A [5.1] (0.21) A [5.6] (0.42) A [5.6] A [3.3] (0.21) A [3.3] C [28.0] (0.46) C [28.0] D [40.5] (0.22) C [22.2] (0.09) C [33.7] A [7.1]	A [7.6] (0.13) A [6.9] (0.33) A [7.0] A [6.2] (0.26) A [6.2] B [13.8] (0.30) B [13.8] C [26.6] (0.31) B [13.6] (0.17) C [21.1] A [8.2]	A [5.5] (0.13) A [4.7] (0.27) A [4.8] A [4.8] (0.29) A [4.8] C [22.8] (0.50) C [22.8] D [35.1] (0.36) B [17.8] (0.22) C [26.7] A [7.6]	A [5.3] (0.22) A [6.5] (0.45) A [6.3] A [3.5] (0.22) A [3.5] D [42.2] (0.61) D [42.2] D [41.8] (0.25) C [22.1] (0.08) C [34.5] A [9.1]	A [7.6] (0.13) A [7.3] (0.38) A [7.3] A [6.2] (0.26) A [6.2] B [15.8] (0.34) B [15.8] C [27.1] (0.33) B [13.6] (0.17) C [21.5] A [8.5]	A [5.6] (0.14) A [5.2] (0.33) A [5.3] A [5.2] (0.29) A [5.2] C [27.4] (0.56) C [27.4] D [36.0] (0.38) B [17.8] (0.21) C [27.1] A [8.1]

TABLE NO. 1

LEVEL OF SERVICE SUMMARY TABLE

	LOCATION	2020 EXISTING CONDITIONS			NO-BUILD CONDITIONS			BUILD CONDITIONS		
		WEEKDAY AM	WEEKDAY PM (3:00 - 4:00)	WEEKDAY PM (5:00 - 6:00)	WEEKDAY AM	WEEKDAY PM (3:00 - 4:00)	WEEKDAY PM (5:00 - 6:00)	WEEKDAY AM	WEEKDAY PM (3:00 - 4:00)	WEEKDAY PM (5:00 - 6:00)
12	E. POST ROAD & CHESTER AVENUE									
	SIGNALIZED									
	EASTBOUND THROUGH	A [5.4] (0.42)	A [4.8] (0.34)	A [4.5] (0.29)	A [5.5] (0.43)	A [4.9] (0.35)	A [4.6] (0.30)	A [5.6] (0.44)	A [5.1] (0.38)	A [4.8] (0.32)
	EASTBOUND APPROACH	A [5.4]	A [4.8]	A [4.5]	A [5.5]	A [4.9]	A [4.6]	A [5.6]	A [5.1]	A [4.8]
	WESTBOUND THROUGH	A [3.6] (0.19)	A [3.9] (0.23)	A [4.1] (0.27)	A [3.7] (0.20)	A [3.9] (0.24)	A [4.2] (0.28)	A [3.7] (0.20)	A [3.9] (0.24)	A [4.2] (0.28)
	WESTBOUND APPROACH	A [3.6]	A [3.9]	A [4.1]	A [3.7]	A [3.9]	A [4.2]	A [3.7]	A [3.9]	A [4.2]
	NORTHBOUND LEFT / RIGHT	B [19.0] (0.26)	C [20.8] (0.35)	B [19.1] (0.39)	B [19.0] (0.26)	C [20.9] (0.35)	B [18.9] (0.40)	B [19.0] (0.26)	C [20.9] (0.35)	B [19.1] (0.40)
	NORTHBOUND APPROACH	B [19.0]	C [20.8]	B [19.1]	B [19.0]	C [20.9]	B [18.9]	B [19.0]	C [20.9]	B [19.1]
	OVERALL INTERSECTION	A [5.4]	A [5.4]	A [5.3]	A [5.5]	A [5.4]	A [5.4]	A [5.5]	A [5.5]	A [5.4]
13	MAPLE AVENUE & LONGVIEW AVENUE									
	SIGNALIZED									
	EASTBOUND LEFT	A [9.0] (0.27)	A [7.6] (0.36)	A [7.6] (0.35)	A [9.4] (0.29)	A [8.0] (0.38)	A [8.0] (0.37)	B [10.3] (0.31)	A [8.4] (0.39)	A [8.4] (0.39)
	EASTBOUND THROUGH / RIGHT	A [9.1] (0.38)	A [5.9] (0.29)	A [5.4] (0.25)	A [9.6] (0.39)	A [6.1] (0.30)	A [5.6] (0.26)	B [10.2] (0.41)	A [6.3] (0.33)	A [5.7] (0.29)
	EASTBOUND APPROACH	A [9.1]	A [6.3]	A [5.9]	A [9.5]	A [6.5]	A [6.1]	B [10.2]	A [6.7]	A [6.3]
	WESTBOUND LEFT	C [20.9] (0.08)	B [12.6] (0.05)	B [15.3] (0.06)	C [21.4] (0.09)	B [12.7] (0.06)	B [15.2] (0.07)	C [21.2] (0.09)	B [12.8] (0.06)	B [14.0] (0.07)
	WESTBOUND THROUGH / RIGHT	B [18.9] (0.36)	B [12.8] (0.41)	B [18.4] (0.46)	B [19.4] (0.38)	B [13.2] (0.42)	B [18.8] (0.48)	B [19.1] (0.42)	B [13.1] (0.44)	B [17.8] (0.50)
	WESTBOUND APPROACH	B [19.0]	B [12.8]	B [18.3]	B [19.5]	B [13.1]	B [18.6]	B [19.2]	B [13.1]	B [17.7]
14	MAPLE AVENUE & CROMWELL PLACE									
	SIGNALIZED									
	EASTBOUND THROUGH	A [5.6] (0.35)	A [8.3] (0.30)	A [7.0] (0.28)	A [5.8] (0.36)	A [8.6] (0.32)	A [7.2] (0.29)	A [6.3] (0.37)	B [10.9] (0.34)	A [8.6] (0.31)
	EASTBOUND APPROACH	A [5.6]	A [8.3]	A [7.0]	A [5.8]	A [8.6]	A [7.2]	A [6.3]	B [10.9]	A [8.6]
	WESTBOUND THROUGH	A [6.9] (0.25)	A [9.2] (0.29)	B [11.4] (0.35)	A [7.2] (0.25)	A [9.6] (0.30)	B [12.2] (0.37)	A [8.4] (0.29)	B [12.7] (0.33)	B [17.2] (0.41)
	WESTBOUND APPROACH	A [6.9]	A [9.2]	B [11.4]	A [7.2]	A [9.6]	B [12.2]	A [8.4]	B [12.7]	B [17.2]
	SOUTHBOUND LEFT / RIGHT	E [55.3] (0.73)	E [56.7] (0.79)	D [51.2] (0.80)	E [56.0] (0.74)	E [56.8] (0.79)	D [51.3] (0.80)	D [54.5] (0.76)	E [61.2] (0.86)	E [59.0] (0.87)
	SOUTHBOUND APPROACH	E [55.3]	E [56.7]	D [51.2]	E [56.0]	E [56.8]	D [51.3]	D [54.5]	E [61.2]	E [59.0]
	OVERALL INTERSECTION	B [13.3]	B [17.9]	B [17.6]	B [13.6]	B [18.2]	B [18.0]	B [14.5]	C [23.4]	C [24.3]
15	E. POST ROAD & WINCHESTER STREET (SITE ACCESS)									
	UNSIGNALIZED									
	EASTBOUND LEFT / THROUGH	-	-	-	-	-	-	A [9.4] (0.04)	A [8.7] (0.01)	A [8.8] (0.02)
	SOUTHBOUND LEFT / RIGHT	-	-	-	-	-	-	C [15.7] (0.04)	B [12.3] (0.09)	B [12.7] (0.10)

THE ABOVE REPRESENTS THE LEVELS OF SERVICE, VEHICLE DELAY IN SECONDS AND VOLUME-TO-CAPACITY (V/C) RATIO



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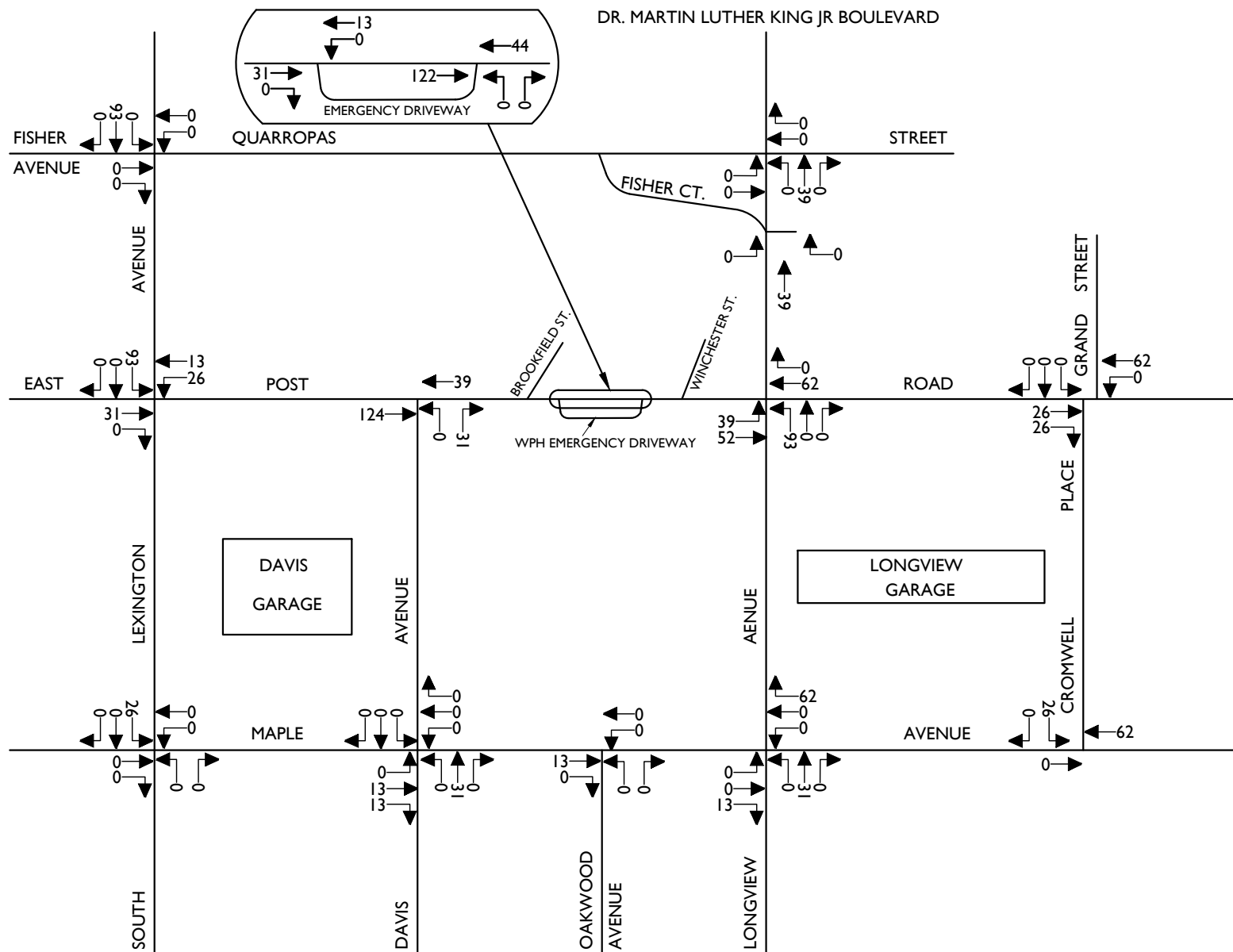
WESTCHESTER OFFICE
400 Columbus Avenue
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Valhalla, NY 10595
Phone: 914.347.7500
Fax: 914.347.7266

TRAFFIC IMPACT STUDY

SCALE	DATE	DRAWN BY	CHECKED BY
AS SHOWN	3/26/20	R.H.	J.C.E.
PROJECT NUMBER	DRAWING NAME		
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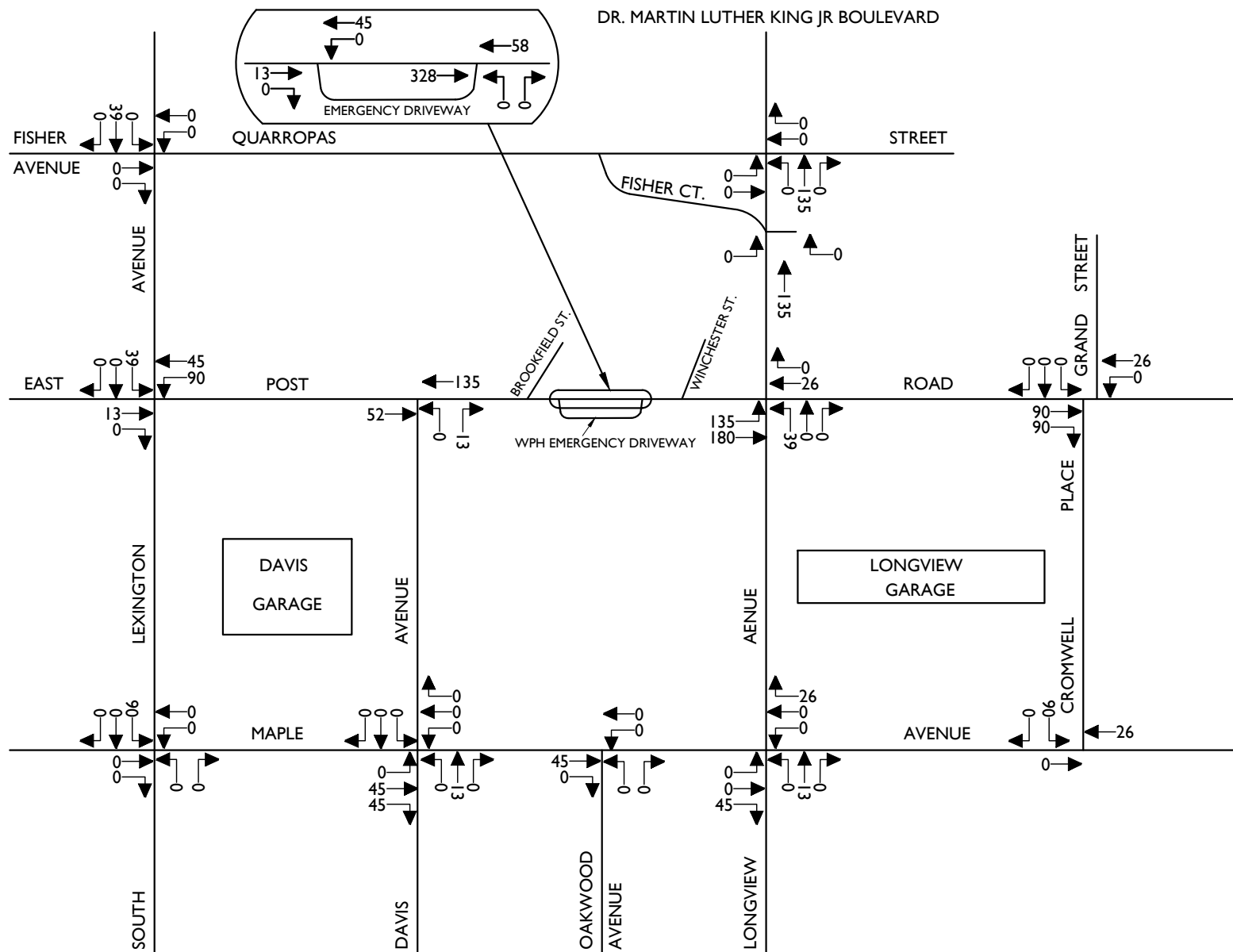
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TRAFFIC IMPACT STUDY

SCALE	DATE	DRAWN BY	CHECKED BY
AS SHOWN	3/26/20	R.H.	J.C.E.
PROJECT NUMBER	DRAWING NAME		
20000443A	200326RH FIGURE		

SHEET TITLE:
SITE GENERATED TRAFFIC
VOLUMES
WEEKDAY PEAK AM HOUR

SHEET NUMBER:
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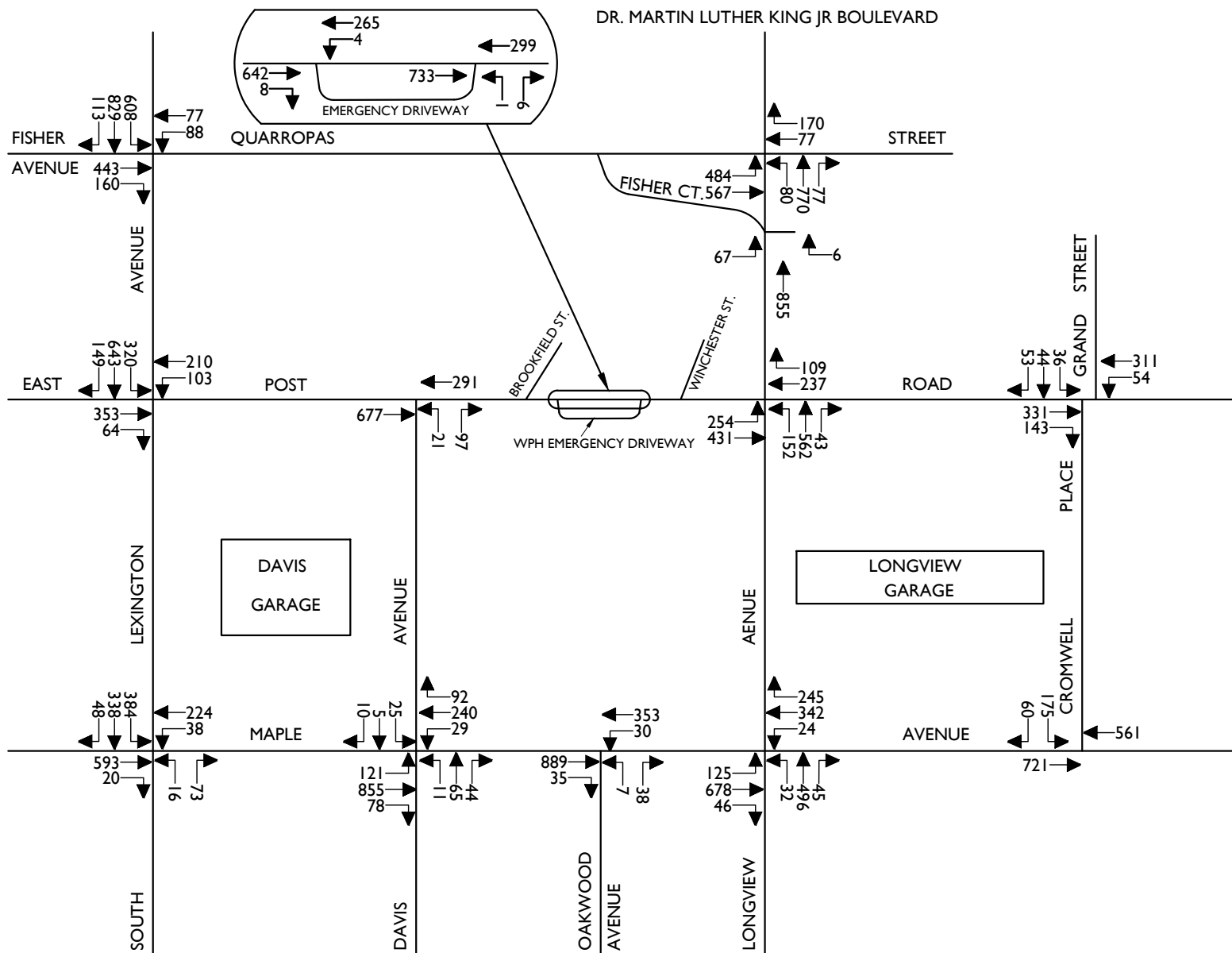
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SCALE	DATE	DRAWN BY	CHECKED BY
AS SHOWN	3/26/20	R.H.	J.C.E.
PROJECT NUMBER	DRAWING NAME		
20000443A	200326RH FIGURE		

SHEET TITLE:
SITE GENERATED TRAFFIC
VOLUMES
WEEKDAY PEAK PM HOUR
(3:00PM - 4:00PM)

SHEET NUMBER:

11



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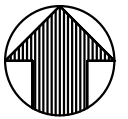
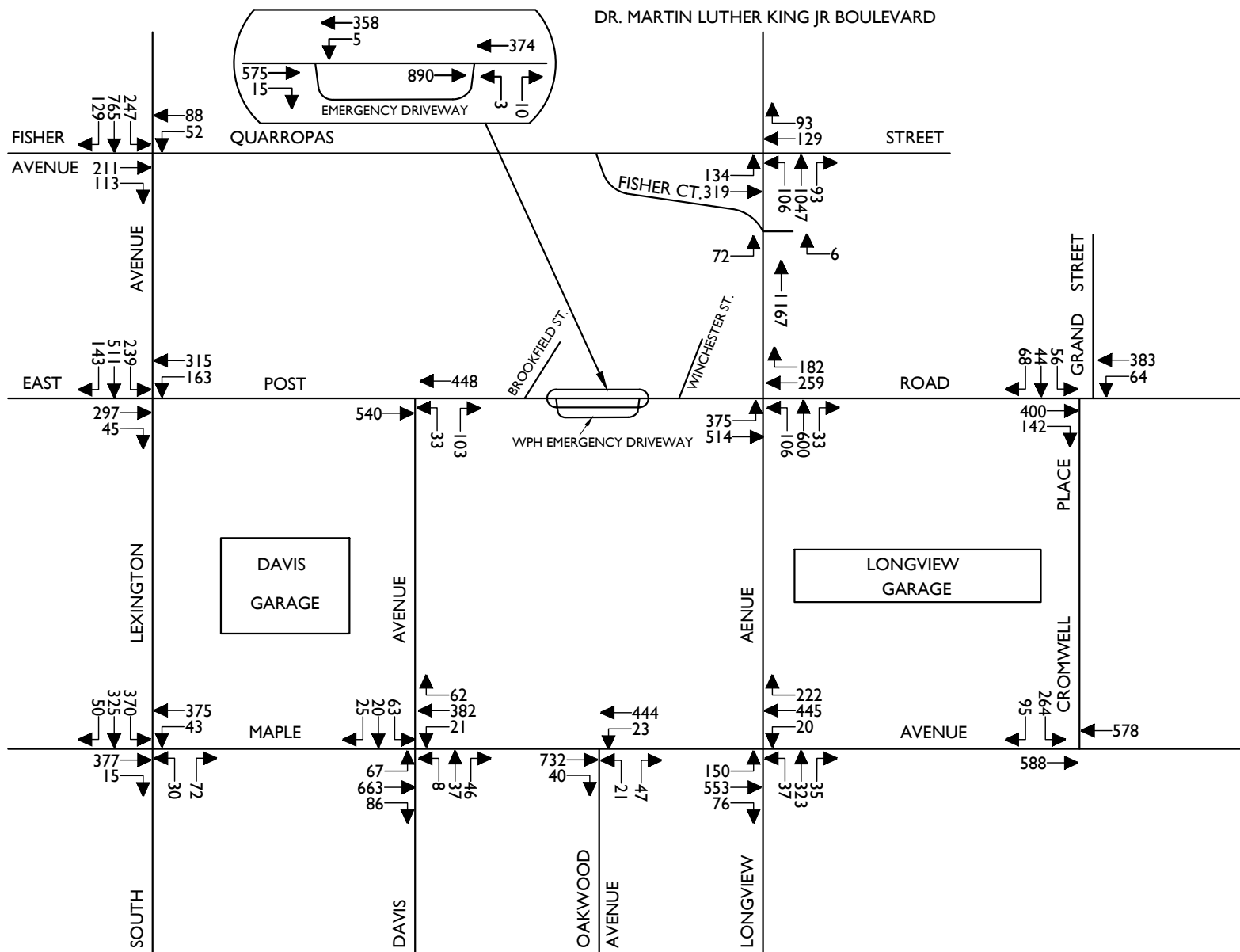
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SCALE	DATE	DRAWN BY	CHECKED BY
AS SHOWN	3/26/20	R.H.	J.C.E.
PROJECT NUMBER	DRAWING NAME		
20000443A	200326RH FIGURE		

SHEET TITLE:
**BUILD TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR**

SHEET NUMBER:
13



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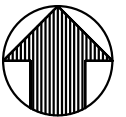
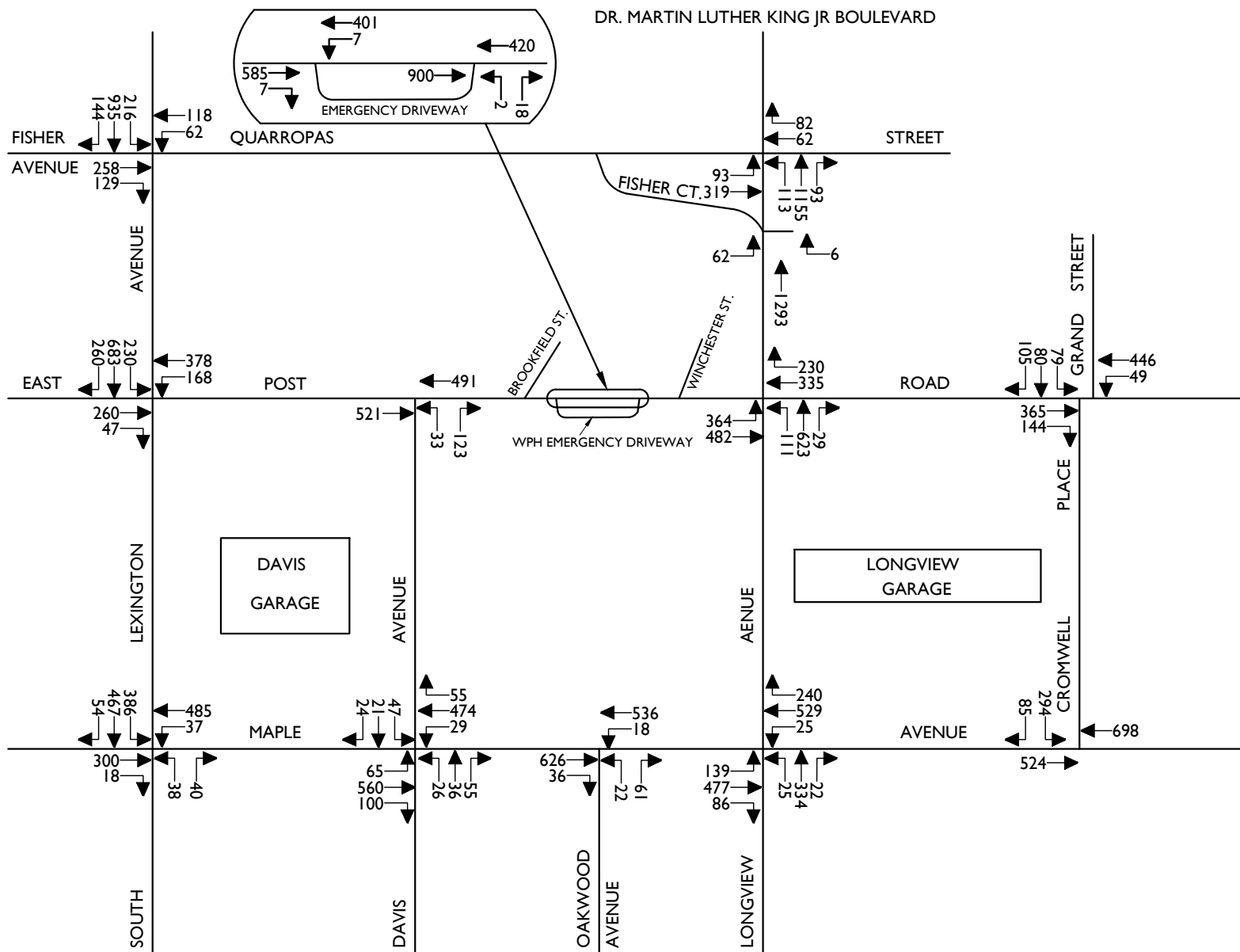
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SCALE	DATE	DRAWN BY	CHECKED BY
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PROJECT NUMBER	DRAWING NAME		
20000443A	200326RH FIGURE		

SHEET TITLE:
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WEEKDAY PEAK PM HOUR
(3:00PM - 4:00PM)

SHEET NUMBER:
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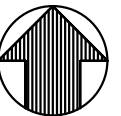
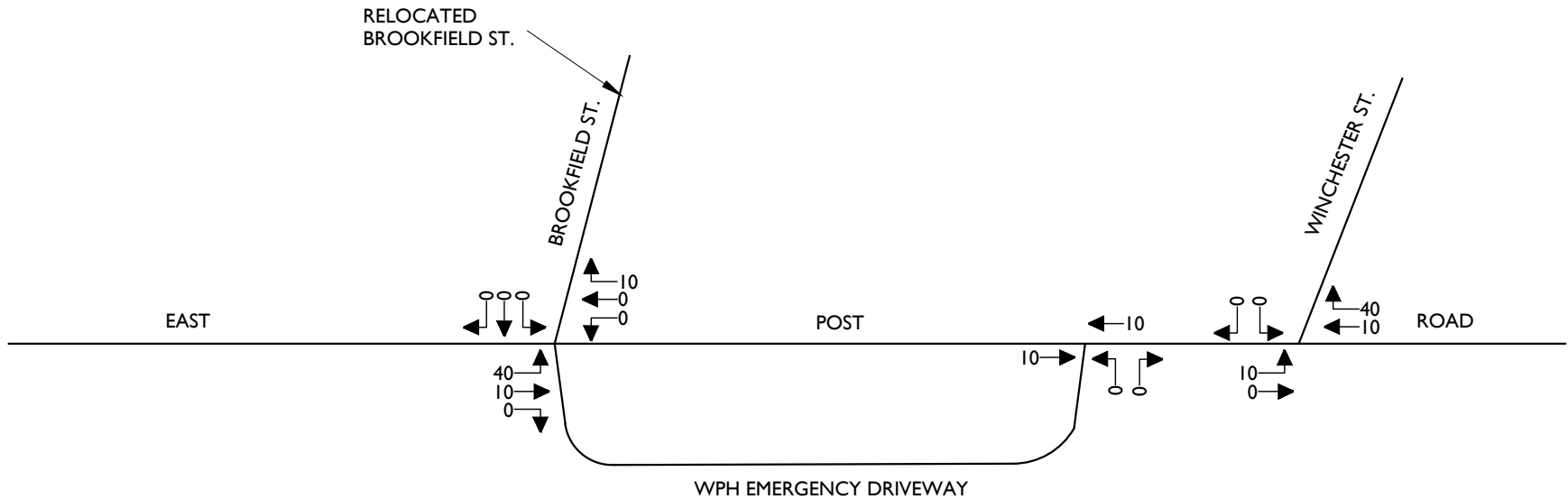
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SCALE	DATE	DRAWN BY	CHECKED BY
AS SHOWN	3/26/20	R.H.	J.C.E.
PROJECT NUMBER	DRAWING NAME		
20000443A	200326RH FIGURE		

SHEET TITLE:
**BUILD TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR
(5:00PM - 6:00PM)**

SHEET NUMBER:

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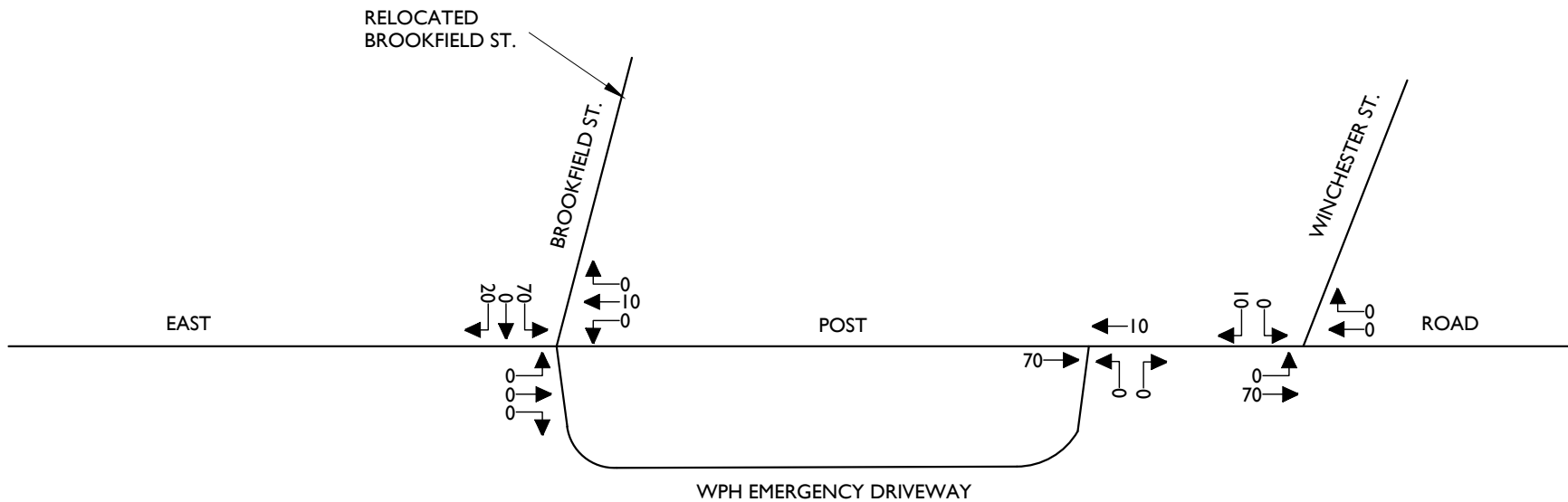
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PROJECT NUMBER	DRAWING NAME		
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SHEET TITLE:
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(ALL VALUES ARE EXPRESSED AS %)

SHEET NUMBER:
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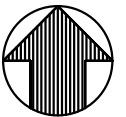
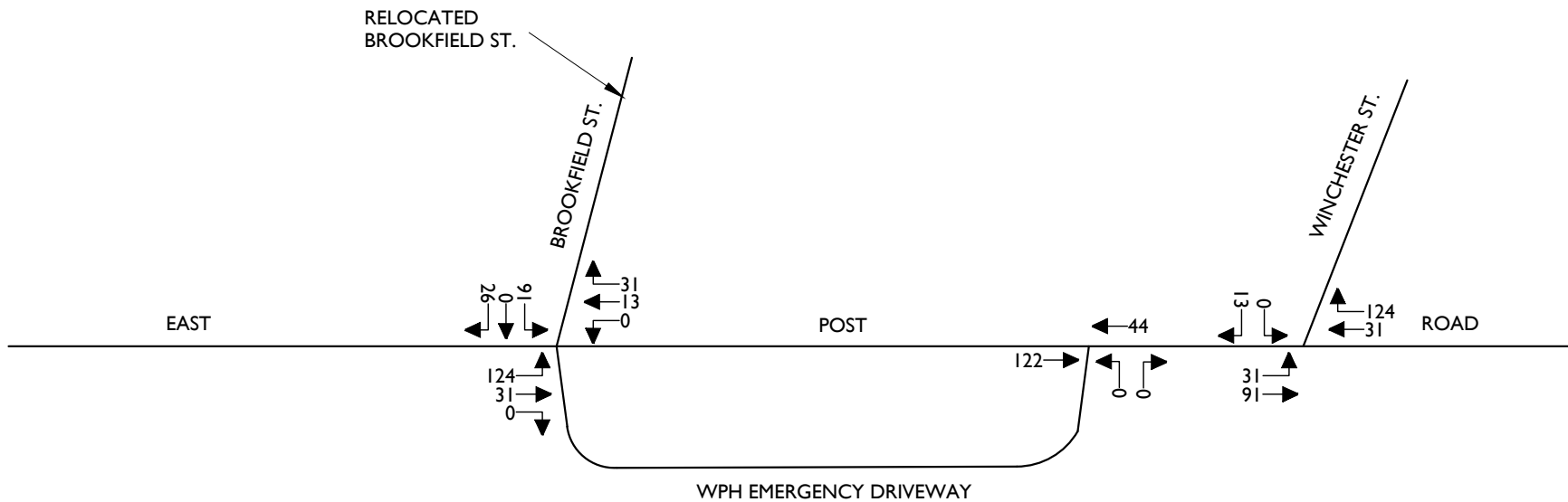
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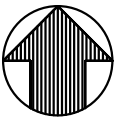
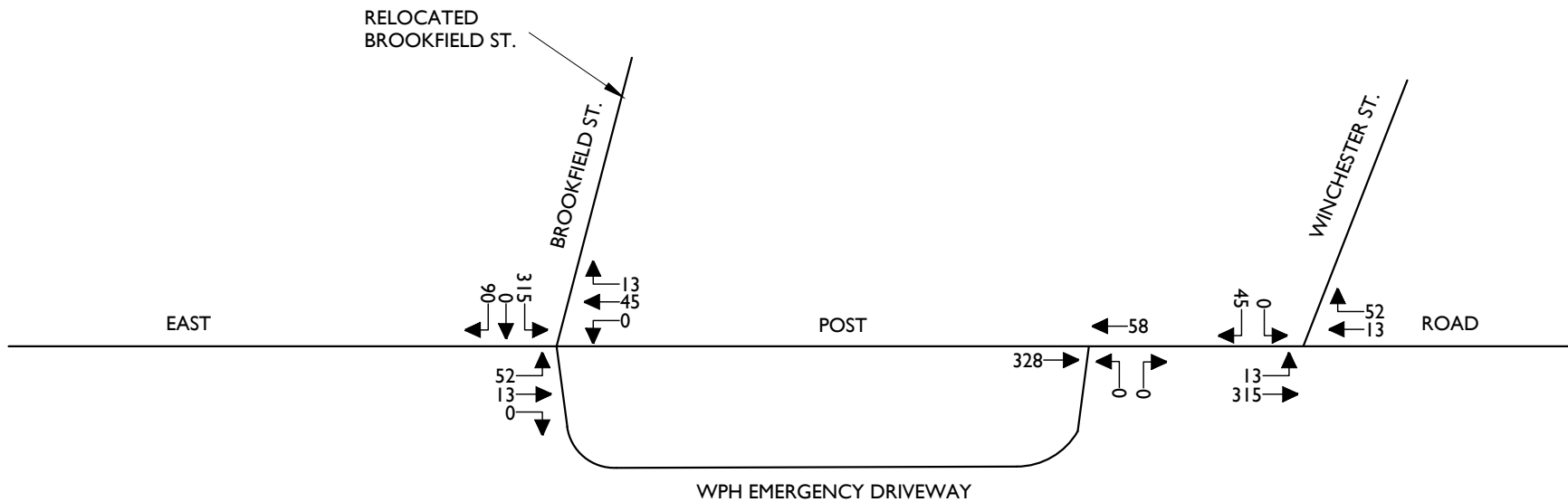
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PROJECT NUMBER	DRAWING NAME		
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SHEET TITLE:
**SITE GENERATED TRAFFIC
VOLUMES
WEEKDAY PEAK AM HOUR**

SHEET NUMBER:
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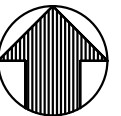
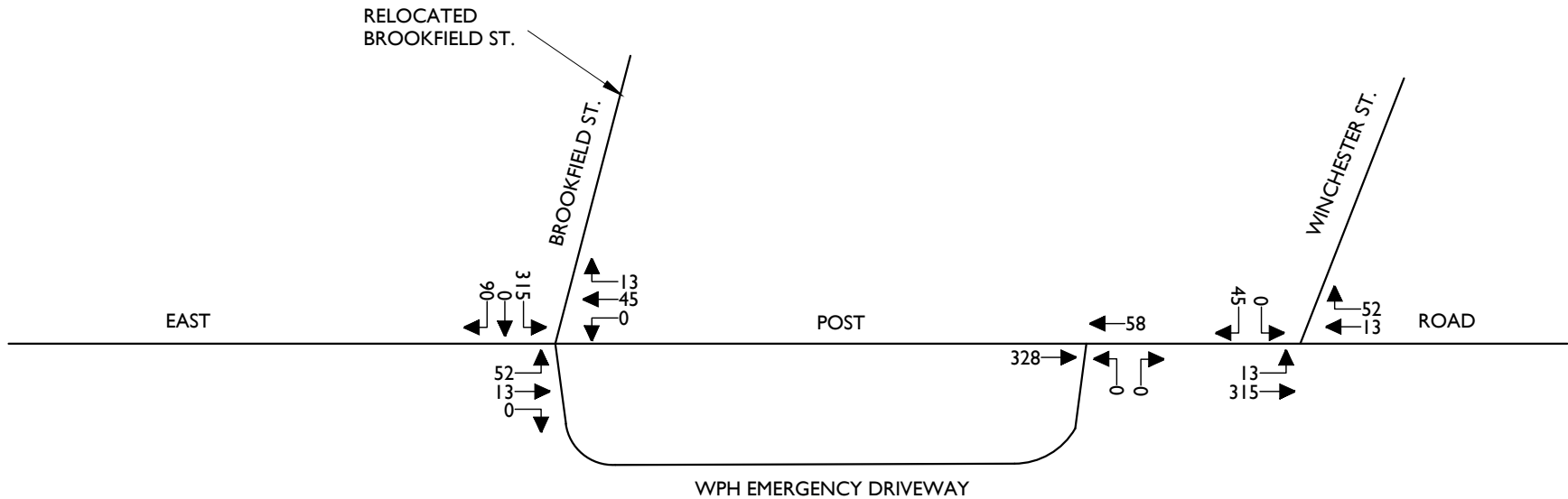
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PROJECT NUMBER	DRAWING NAME		
20000443A	200326RH FIGURE		

SHEET TITLE
SITE GENERATED TRAFFIC
VOLUMES
WEEKDAY PEAK PM HOUR
(3:00PM - 4:00PM)

SHEET NUMBER:

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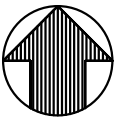
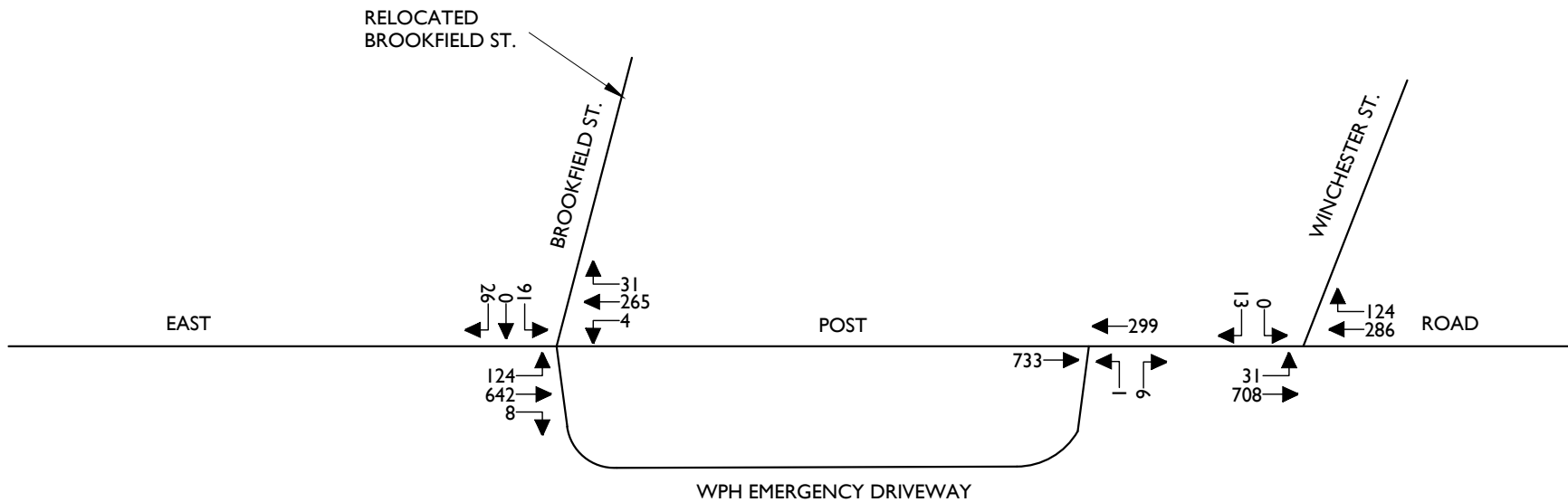
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PROJECT NUMBER	DRAWING NAME		
20000443A	200326RH FIGURE		

SHEET TITLE
SITE GENERATED TRAFFIC
VOLUMES
WEEKDAY PEAK PM HOUR
(4:00PM - 5:00PM)

SHEET NUMBER:

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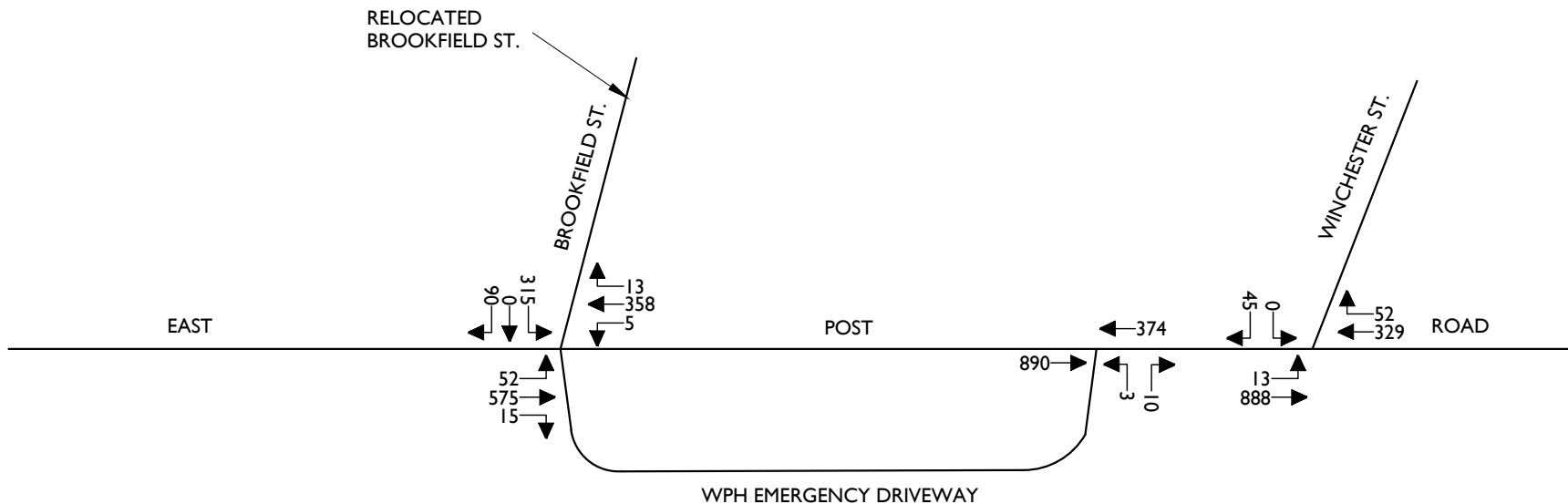
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PROJECT NUMBER	DRAWING NAME		
20000443A	200326RH FIGURE		

SHEET TITLE:
**BUILD TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR**

SHEET NUMBER:
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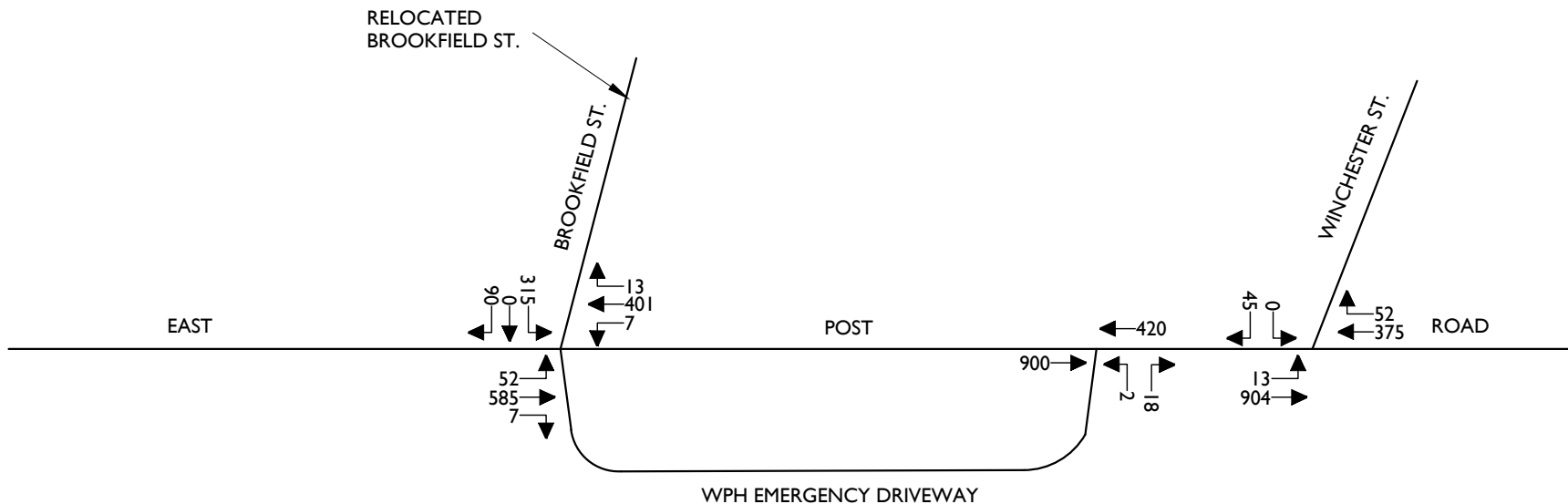
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SHEET TITLE:
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WEEKDAY PEAK PM HOUR
(3:00PM - 4:00PM)**

SHEET NUMBER:
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NEW YORK



Know what's below.
Call before you dig.

FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION
OF EXCAVATORS, DESIGNERS, OR
ANY PERSON PREPARING TO
DISTURB THE EARTH'S SURFACE
ANYWHERE IN ANY STATE



WESTCHESTER OFFICE
400 Columbus Avenue
Suite 180E
Valhalla, NY 10595
Phone: 914.347.7500
Fax: 914.347.7266

TRAFFIC IMPACT STUDY

SCALE	DATE	DRAWN BY	CHECKED BY
AS SHOWN	3/26/20	R.H.	J.C.E.
PROJECT NUMBER	DRAWING NAME		
20000443A	200326RH FIGURE		

SHEET TITLE:
**BUILD TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR
(4:00PM - 5:00PM)**

SHEET NUMBER:
23