# GOLD COAST PARKLANDS REDEVELOPMENT

## Traffic Impact Assessment Report

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# ECONOMIC DEVELOPMENT QUEENSLAND

# GOLD COAST PARKLANDS REDEVELOPMENT

## Traffic Impact Assessment

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|---|---|---|
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# EXECUTIVE SUMMARY

The Parklands Early Works package will provide the basis for the Parklands Redevelopment for the Gold Coast Commonwealth Games and Legacy Development.

As part of the Early Works package, a Traffic Impact Assessment (TIA) has been undertaken for the major intersections both internal and external to the site. While the Early Works package is intending to provide the initial infrastructure for the Games Village, this TIA considers the Legacy Development scenario to ensure that no major works will be required to accommodate the ultimate development anticipated for the Parklands site. The Legacy Development layout used in the analysis is presented in **Figure E-1**.

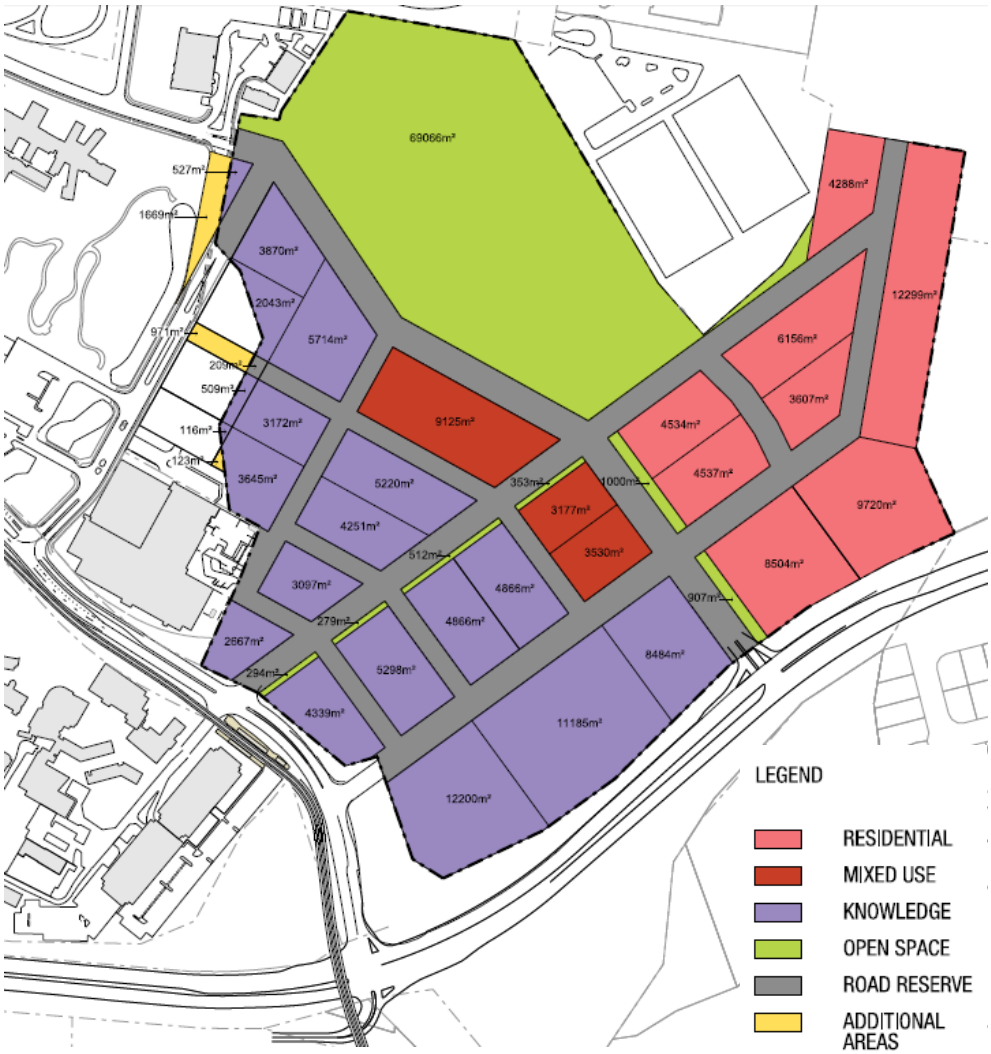



**Figure E-1 Legacy Development Layout**

The development of the Parklands site was modelled in Paramics by Bitzios Consulting to produce the intersection turning volumes.

# ANALYSIS SCENARIOS

The Parklands site has been modelled and analysed under three different scenarios:

- Smith Street – Worst Case scenario. Current Smith Street lanes;
- Smith Street – Best Case scenario. Additional lanes on Smith Street; and

- Additional Connections scenario. Additional connections from the Parklands site into the surrounding road network.

These three scenarios resulted from consultation with the Department of Transport and Main Roads (TMR) and Gold Coast City Council (GCCC). Due to a level of uncertainty regarding the funding TMR would receive to upgrade Smith Street as part of the Olsen Avenue interchange upgrade, TMR requested that the modelling and analysis of the Parklands site consider the best and worst case scenarios. GCCC also requested that a scenario be considered where the Parklands site has further connections into the surrounding road network.

The Worst Case scenario assumes that no upgrades will be undertaken on Smith Street adjacent to the Parklands site by the time that the Legacy Development is completed. Smith Street will remain with two lanes in each direction between Parklands Drive and the Pacific Motorway with the third lane for Southport-bound traffic starting from the Parklands Drive intersection.

The Best Case scenario will extend the existing six lane arrangement from Kumbari Avenue to the Olsen Avenue interchange. The existing acceleration lane from Parklands Drive will form the third through lane for traffic coming from the Pacific Motorway with the third lane coming from Southport being newly constructed.

The Additional Connections scenario uses the Smith Street Best Case scenario as a base and provides network connections from the Parklands site onto Musgrave Avenue via Shark Lane and on Kumbari Avenue via Nakina Street. It also removes the car park access from the Smith Street / Parklands Drive intersection.

Each of the three scenarios was modelled by Bitzios using Paramics and the intersection turning volumes extracted from the model. These turning movements have been used in the intersection analysis.

The Bitzios Paramics model had vehicles follow a ‘shortest path’ route with some exceptions. This caused the intersections with Smith Street to experience significantly dominant turning movements. The Smith Street / Parklands Drive intersection has a dominant movement to and from the Pacific Motorway and the Hospital Boulevard intersection has a heavy movement to and from Southport. In order to provide a less biased analysis, an adjusted scenario was undertaken for each of the three base scenarios. In the adjusted scenario, 30% of the dominant traffic movement was shifted to the alternative intersection. This is shown in **Figure E-2**.

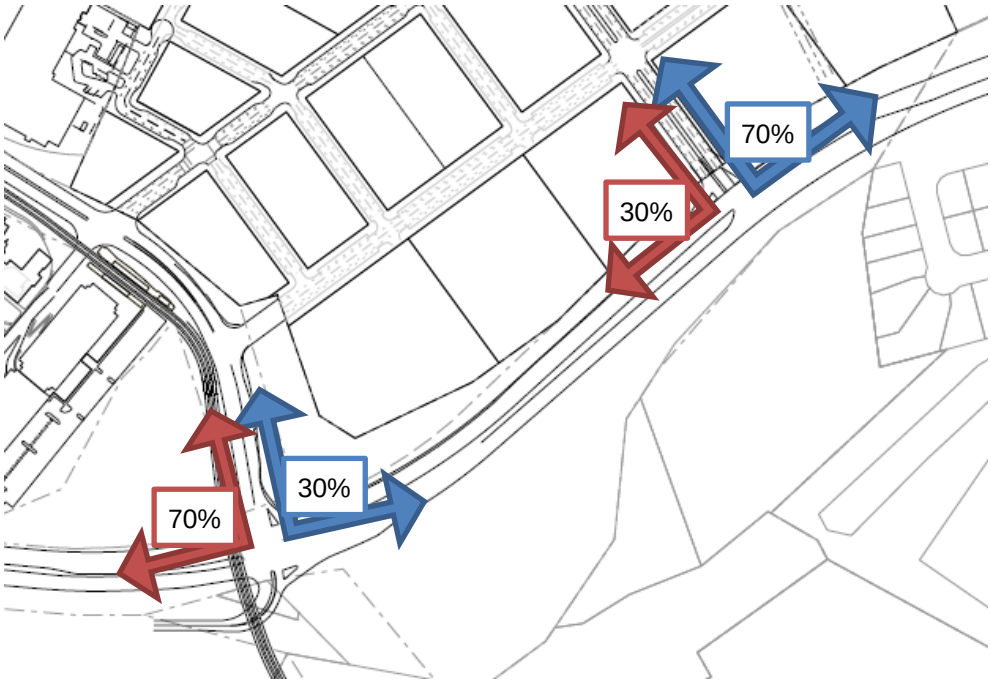



**Figure E-2 Volume Split**

# INTERSECTION ANALYSIS RESULTS

## Smith Street / Parklands Drive

The Smith Street / Parklands Drive intersection operates over capacity in the Worst Case scenario as the volumes on Smith Street cannot be accommodated with the four lane arrangement. The queuing on the Smith Street West approach is extensive and may extend back to the Olsen Avenue interchange.

The Best Case scenario provides the required capacity for the intersection to operate under capacity and it reduces the queuing to an acceptable level. The same applies for the Additional Connections scenario with the removal of the car park access leg further improving the intersection operation.

## Smith Street / Hospital Boulevard

The removal of the acceleration lane onto Smith Street from Hospital Boulevard meant that the high left turn movement onto Smith Street now must compete with the through traffic. Because of this change, the intersection fails to meet the required DOS parameters in all of the Base scenarios.

The Adjusted scenario shifts some of the left turning traffic to the Parklands Drive intersection and allows the Smith Street / Hospital Boulevard intersection to operate under capacity except for the Best Case scenario. In this scenario, the high through volumes do not allow vehicles to exit the left turn slip lane onto Smith Street.

## Hospital Boulevard / First Street

This intersection operates with an acceptable DOS and experiences very small changes in operation between each of the scenarios. The queuing at the intersection is expected to be limited and is not anticipated to impact on any of the adjacent intersections.

## Main Street / Hospital Boulevard

The Main Street / Hospital Boulevard intersection operates within the DOS threshold of 0.9 for signalised intersections in all scenarios. There is some queuing anticipated however no adjacent intersections are expected to be impacted.

## Hospital Boulevard / Second Street

The Hospital Boulevard / Second Street intersection operates within the DOS threshold of 0.8 for unsignalised intersections in all scenarios. It experiences minor queuing with small variations in each scenario.

## Hospital Boulevard / Innovation Drive

The intersection of Hospital Boulevard / Innovation Drive fails in the AM peak for the Worst Case scenario. The traffic on Hospital Boulevard does not allow vehicles to exit Innovation Drive with a priority controlled intersection. The Innovation Drive approach is improved in the Adjusted scenario however it still fails to meet the DOS criteria of 0.8.

The Best Case scenario reduces the traffic on Hospital Boulevard and allows the intersection to operate adequately as a priority controlled intersection. This also applies to the Additional Connections scenario.

## Parklands Drive / Main Street / Engineering Drive

The Parklands Drive / Main Street / Engineering Drive intersection has been updated to utilise the Gold Coast Rapid Transit (GCRT) signal phasing arrangement. This results in the intersection operation being governed by the northern approach on Parklands Drive. The phasing arrangement has a separate phase for the right turn movements from Parklands Drive however, as the northern approach does not have a separate lane for right turning vehicles they are restricted by vehicles continuing through the intersection. This causes the Parklands Drive North approach to reach capacity and results in extensive queuing and delays.

The southern approach on Parklands Drive experiences a high right turn movement in the AM peak for all scenarios. In the Worst Case scenario this approach is still under capacity. However, once Smith Street is upgraded to six lanes and has additional capacity, this approach cannot accommodate the right turn volume with the available green time. The right turn movement is worse in the Best Case scenario as some traffic is diverted from the intersection in the Additional Connections scenario.

The Adjusted scenario decreases the intersection performance in all of the modelled scenarios. The shifting of 30% of the dominant turning movement traffic between Parklands Drive and Hospital Boulevard in the Adjusted scenario increases the volumes on Parklands Drive. This occurs as the turning volumes on Hospital Boulevard are higher in all of the Base scenarios.

## Parklands Drive / First Street

The intersection of Parklands Drive and First Street operates with spare capacity in all peaks and scenarios with the right turn restrictions in place. The through volumes on Parklands Drive allows for both the general left turn movement and the right turn movement for buses.

# 1 INTRODUCTION

## 1.1 BACKGROUND

Economic Development Queensland (EDQ) has commissioned Hyder Consulting (Hyder) to undertake the Early Works package for the Gold Coast Parklands Redevelopment in Southport. As part of the Early Works package, Hyder has prepared this Traffic Impact Assessment (TIA) to quantify the likely impacts on the surrounding road network arising from the development of the site.

The Gold Coast Parklands site currently hosts major outdoor events on the Gold Coast and also provides function rooms for smaller events. It has an Indoor Sports Centre and it also hosts harness racing events. A site locality map is shown in **Figure 1-1**.


**Figure 1-3 Site Locality Map**

## 1.2 PURPOSE

The purpose of this study was to investigate the traffic impacts of the development and inform the intersection design for the Early Works package. This includes:

- Identifying any existing and potential operational issues on the surrounding road network;
- Assessing the performance of the proposed intersection designs; and
- Recommendations on the intersection layouts based on the analysis undertaken.

Following a meeting with the Department of Transport and Main Roads (TMR) and Gold Coast City Council (GCCC) on 22 August 2013, the analysis has been expanded to include three scenarios:

- Smith Street worst case – with and without redistribution of traffic;
- Smith Street best case – with and without redistribution: and
- Smith Street worst case with additional connections into the Parklands site – with and without redistribution.

Each of these scenarios is discussed further in **Section 4**.

## 1.3 REPORT STRUCTURE

This report is composed of the following sections:

**Executive Summary** – Summarises the report and highlights the differences between the analysis scenarios.

**Section 1** – Introduction – Sets out the background and structure of this report.

**Section 2** – Existing Situation – Outlines the road network and land uses surrounding the site.

**Section 3** – Development Details – Details the anticipated traffic generation and distribution arising from the development.

**Section 4** – Analysis Background – Outlines the analysis scenarios and details the assessment performance criteria.

**Section 5** – Smith Street Worst Case Scenario – Presents the analysis results from the Smith Street worst case scenario.

**Section 6** – Smith Street Best Case Scenario – Presents the analysis results from the Smith Street best case scenario.

**Section 7** – Additional Connections Scenario – Presents the analysis results from the Smith Street worst case scenario with the additional network connections into the Parklands site from the surrounding road network.

**Section 8** – Conclusions and Recommendations – Provides a summary of the results and conclusions.

# 2 EXISTING SITUATION

The existing site is a large open area which is used to host large scale events on the Gold Coast. It also has function room facilities to cater for smaller events. There is also an Indoor Sports Centre and other associated facilities on-site. The main car park area is currently used by Griffith University during regular university semesters, outside of special events.

## 2.1 SURROUNDING ROAD NETWORK

The road network surrounding the Parklands site is comprised of two major arterial roads, Smith Street Motorway and Olsen Avenue, with distributor roads Parklands Drive and Innovation Drive servicing the surrounding land uses. The surrounding road network is illustrated in **Figure 2-1**.

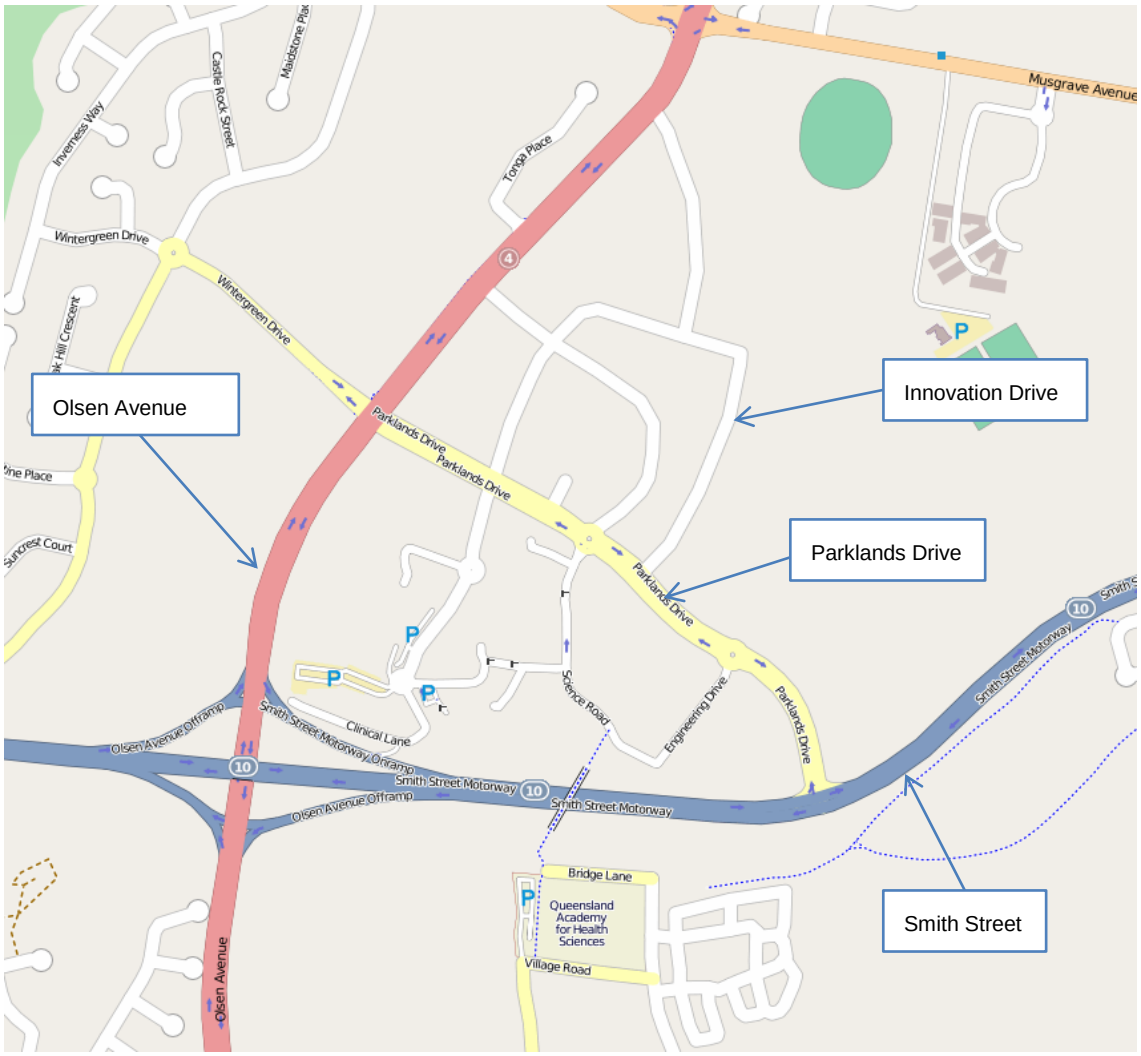



**Figure 2-1 Surrounding Road Network**

The Smith Street Motorway is a state controlled, major arterial road which links the Pacific Motorway and Southport. It currently has a posted speed limit of 80km/h adjacent to the Parklands site. It provides three lanes for traffic travelling east of the Parklands site (eastbound direction) and two lanes for traffic travelling towards the Pacific Motorway (westbound direction).

Olsen Avenue is a major arterial road which runs parallel to the Pacific Motorway between Hope Island and Benowa. It is a state controlled road and has a posted speed of 60 km/h along the section adjacent to the Parklands site. It provides three lanes in each direction which then

narrows to two lanes between the Smith Street interchange (to the south) and north of the new intersection with Hollows Way.

Parklands Drive provides a connection between Olsen Avenue and the Smith Street Motorway and also provides access to the Griffith University Gold Coast Campus (Griffith University) and into the Gold Coast Health and Knowledge Precinct (GCHKP). It provides two lanes in each direction and has a posted speed of 60km/h. The Gold Coast Rapid Transit (GCRT) light rail system will run adjacent to Parklands Drive in the near future (2014), with two stations spaced along the length of the road.

In the future, Hospital Boulevard will form part of the surrounding major road network. It will provide an alternative to Parklands Drive for vehicles travelling between Smith Street and Olsen Avenue. It is intended to be two lanes in each direction until Main Street with the potential for them to continue up to Olsen Avenue. The design speed limit will be 60km/h with provision of a cycle lane along the length of the road. Depending on the lane configuration north of Main Street, on-street parking may be provided.

## 2.2 SURROUNDING LAND USE

The Parklands site is situated adjacent to the Gold Coast University Hospital (GCUH) and Griffith University. The Southport Sharks AFL club is located directly north of the site and there are residential areas to the south and east. It is anticipated that the GCHKP will form a major part of the Parklands site area following the 2018 Commonwealth Games. The surrounding land uses are highlighted in **Figure 2-2**.

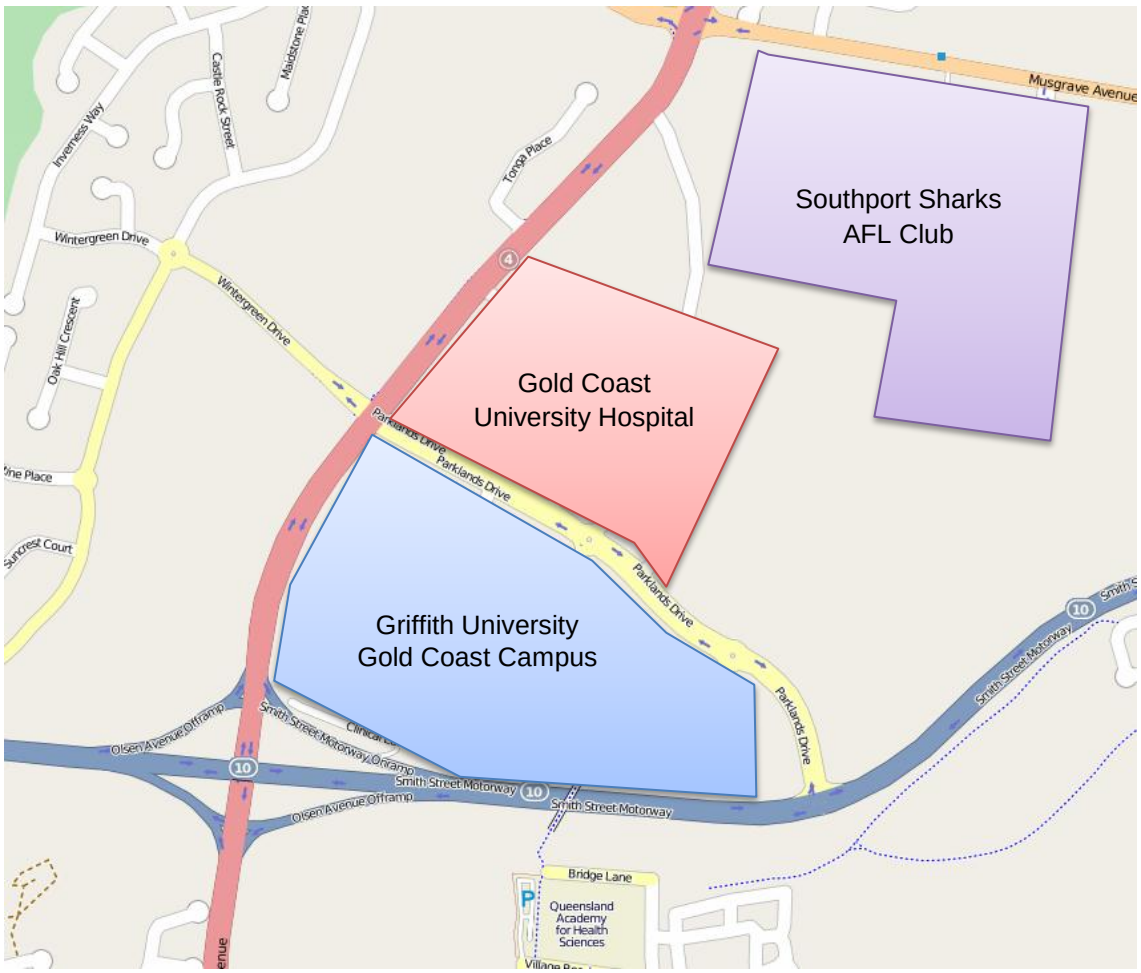



**Figure 2-2 Surrounding Land Uses**

The GCUH is scheduled to open on the 28 September 2013. It is proposed to provide 750 beds and multi-story car park with 2,200 spaces. The Gold Coast Private Hospital (GCPH) is scheduled to open in 2015 and is proposed to have 230 beds and is to be located adjacent to the GCUH.

# 3 DEVELOPMENT DETAILS

The development of the Gold Coast Parklands is proposed to occur in three stages. The Early Works, which will consist of the construction of two core internal streets (Hospital Boulevard and Main Street), are scheduled to be complete in 2016. The site will then be used as the Athletes Village for the 2018 Gold Coast Commonwealth Games before becoming a mixed use precinct encompassing residential, commercial, retail and health and knowledge uses (Legacy Development) by 2026.

The Early Works will provide access to the GCUH and GCPH via Olsen Avenue and Smith Street. It will form the core road network for both the Athletes Village and the Legacy Development. The proposed road network for the Parklands site is shown in **Figure 3-1**.

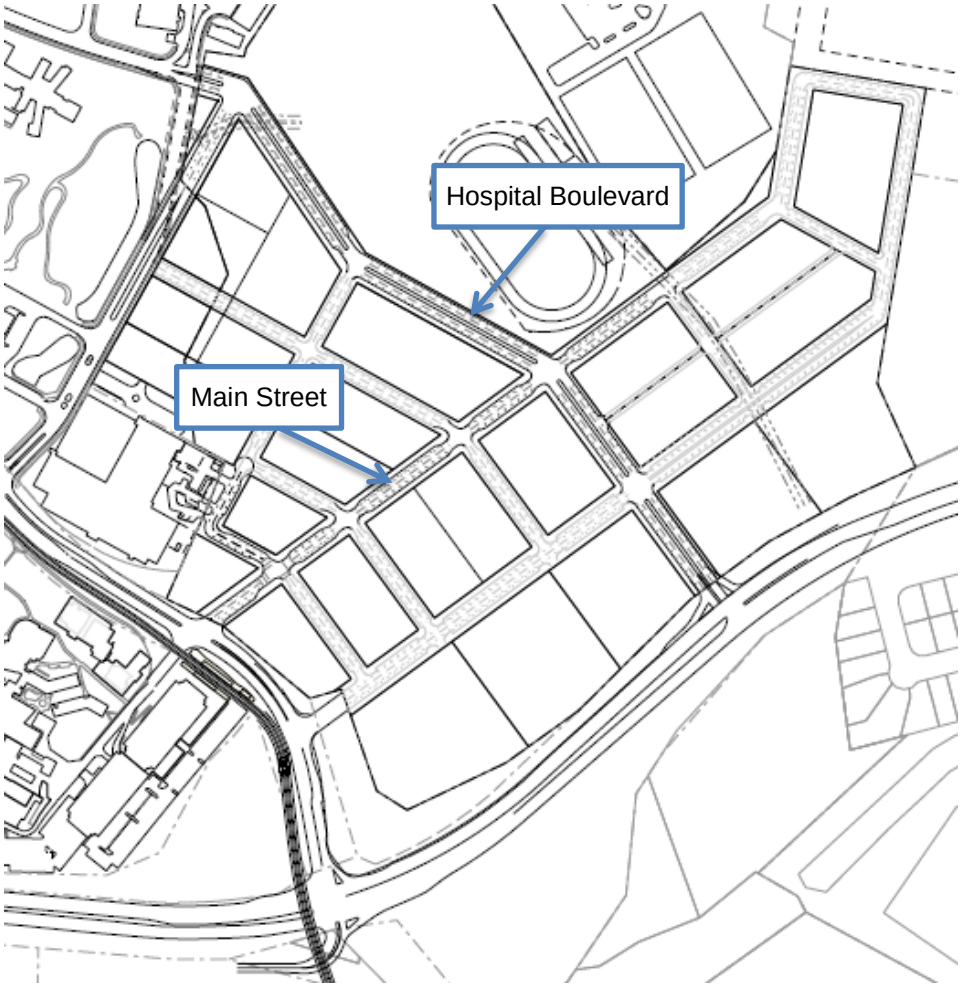



**Figure 3-1 Future Proposed Road Network**

## 3.1 LEGACY DEVELOPMENT

The Legacy Development is scheduled to be completed in 2026 and will consist of several different land uses. It is anticipated that the Legacy Development will consist of residential areas to the east of Hospital Boulevard with commercial and health and knowledge being the predominant land uses in the remaining area. Some retail mixed use areas will be interspersed around the site. A map outlining the anticipated land use areas for the Legacy Development is shown in **Figure 3-2**.

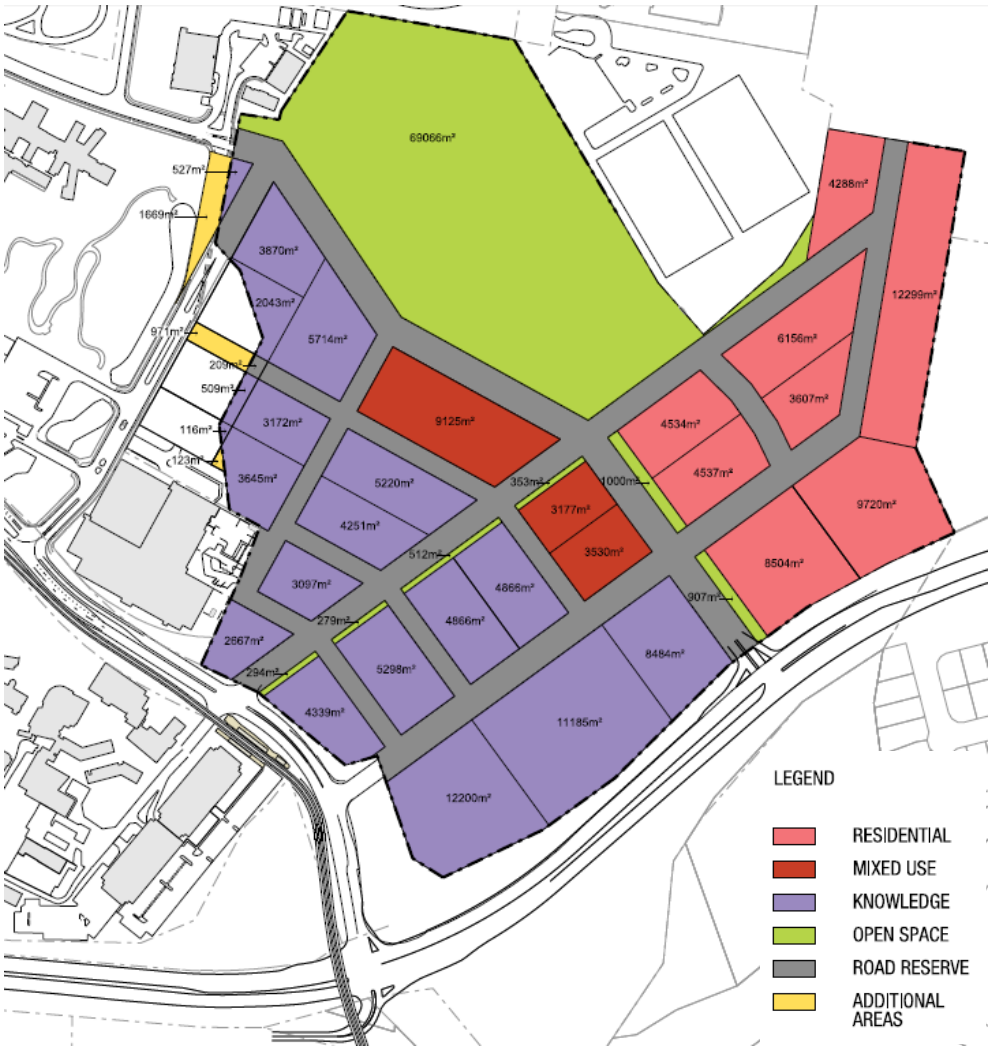



**Figure 3-2 Legacy Development Map**

# 3.2 TRAFFIC GENERATION

The traffic generation for each of the land uses has been adopted from the Parklands Redevelopment Business Case, Road and Transport Network Services Design Review Report dated July 2012. These traffic generation rates were adopted from the Institute of Transportation Engineers Trip Generation Guide (ITE Guide). The traffic generation rate for each land use type is presented in **Table 3-1.**

**Table 3-1 Traffic Generation Rates**

| Land Use | Units | AM Peak Rate | PM Peak Rate |
|---|---|---|---|
| Residential | Per dwelling | 0.35 | 0.44 |
| Commercial | Per 100m$^2$ Gross Floor Area (GFA) | 1.70 | 1.60 |
| Health and Knowledge | Per 100m$^2$ GFA | 1.30 | 1.20 |
| Retail | Included in Commercial and Health and Knowledge | | |
| Manufacturing | Per 100m$^2$ GFA | 0.80 | 0.80 |
| Hotel | Per room | 0.56 | 0.59 |

These generation rates have been applied to the expected land use GFAs and dwelling numbers to generate the anticipated traffic volumes arising from the Parklands Legacy Development. The expected land uses, size of these developments and the corresponding traffic generation numbers are summarised in **Table 3-2**. As the final land use areas are not known at this stage, a 'worst case' scenario has been adopted for this traffic analysis.

**Table 3-2 Anticipated Traffic Generation Volumes**

| Land Use | Total GFA / Dwellings / Rooms | Peak Traffic Generation (veh/h) | |
|---|---|---|---|
| | | AM Peak | PM Peak |
| Residential | 1,391 | 487 | 612 |
| Commercial | 80,000m$^2$ | 1,335 | 1,283 |
| Health and Knowledge | 113,400m$^2$ | 1,489 | 1,306 |
| Retail | Included in Commercial and Health and Knowledge | | |
| Manufacturing | 44,150m$^2$ | 371 | 356 |
| Hotel | 100 | 56 | 59 |

### 3.2.1 TRAFFIC DISTRIBUTION

Bitzios Consulting have prepared a Paramics traffic model for the Parklands site, for TMR which has been used to determine the traffic distribution for the anticipated traffic generated by the development. The traffic generation calculated in **Table 3-2** for the Parklands site was used as an input into the Paramics model to provide an understanding of the anticipated operational performance of the study road network. It will also provide a more accurate representation of the anticipated vehicle movements from the Parklands site.

The modelled periods for which the traffic volumes were provided are:

- AM Period: 0730 – 0830
- PM Period: 1630 – 1730

The turning volumes at each of the eight critical intersections expected to be impacted by the development traffic were extracted from the model and used as inputs for the SIDRA (intersection) models.

# 4 ANALYSIS BACKGROUND

The analysis was undertaken to ensure that the intersection design from the Early Works is able to accommodate the anticipated Legacy Development traffic volumes. The analysis has been conducted for eight critical intersections which are expected to be impacted by the future development traffic. These are:

- Smith Street / Parklands Drive;
- Smith Street / Hospital Boulevard;
- Hospital Boulevard / First Street;
- Main Street / Hospital Boulevard;
- Hospital Boulevard / Second Street;
- Hospital Boulevard / Innovation Drive;
- Parklands Drive / Main Street / Engineering Drive; and
- Parklands Drive / First Street.

The traffic volumes for each of these intersections were taken from the Bitzios Paramics traffic model as outlined in **Section 3.2.1**. The heavy vehicle percentage (HV%) has been assumed to be 5% for all approaches and movements. This is considered to be appropriate as the Parklands site is surrounded by Griffith University and the GCHKP, neither of which are anticipated to generate large heavy vehicle volumes.

## 4.1 ANALYSIS SCENARIOS

As mentioned in **Section 1.2**, the analysis will be undertaken for three scenarios:

- Smith Street worst case – with and without redistribution of traffic;
- Smith Street best case – with and without redistribution: and
- Smith Street worst case with additional connections into the Parklands site – with and without redistribution.

The Smith Street scenarios are based around the configuration of Smith Street following the upgrades to the Olsen Avenue interchange. The worst case scenario has Smith Street remaining unchanged from its current configuration with two lanes for the westbound direction of travel and two lanes up to the intersection with Parklands Drive and three lanes continuing from the intersection into Southport for the eastbound direction. The best case scenario has three lanes running in both directions between the Olsen Avenue interchange and Southport.

The ‘Additional Connections’ scenario looks at the impacts of providing additional connections into the Parklands site from the surrounding road network and how the modelled traffic patterns change.

### 4.1.1 TRAFFIC REDISTRIBUTION

The Paramics model chooses routes based on the shortest path and associated cost factors applied to a road within the model to make it more or less attractive for drivers. Hence, the route choice for the majority of vehicles in the model entering and exiting the site from the east along Smith Street was via the Smith Street / Hospital Boulevard intersection. For most of the vehicles coming from or going to the west on Smith Street, the chosen route was via the Parklands Drive intersection. This therefore created higher right turn and left turn traffic volumes from/to

Parklands Drive and Hospital Boulevard than would be expected in reality and represents the ‘worst case’ scenario for these two Smith Street intersections.

Therefore, to provide a realistic scenario, an adjustment was made to the Paramics model traffic volumes by assuming that 70% of vehicles would use the closest intersection along their direct route whilst the other 30% would use the intersection that is located further away. The 70/30 split is considered to be appropriate as a larger portion of drivers would use the shortest route when entering or leaving the Parklands site. However, not all drivers would use the shortest route as some origins/destinations within the site may be better serviced by the further intersection, depending on the direction of travel.

In reality, vehicles would be influenced by the intersection queue lengths and delays and therefore re-route to intersections that may reduce their travel and wait times on a road network. Considering all of the above, the 70/30 split assumption is considered to be appropriate.

**Figure 4-1** shows the dominant turning movements at each of the Smith Street intersections and **Figure 4-2** summarises the assumed volume split at the two intersections.

**Figure 4-1 Original Movements**

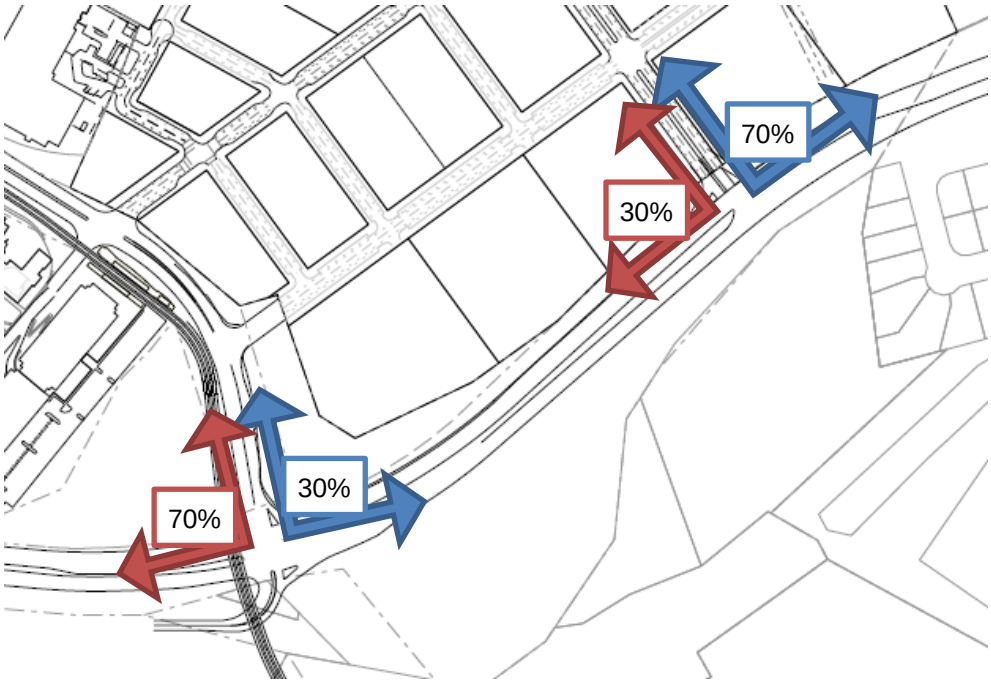



**Figure 4-2 Volume Split**

It is noted that as the turning volumes at each of the Smith Street intersections are not identical, the redistribution is considered to impact on the adjacent intersections through the increase or reduction in the traffic volumes at these intersections. This difference has been pro-rated across the impacted movements at these intersections.

## 4.2 INTERSECTION PERFORMANCE CRITERIA

The performance of the individual intersections was evaluated based on the following performance measures:

- Degree of Saturation (DOS);
- Level of Service (LOS) based on Average Vehicle Delay (seconds); and
- 95$^{th}$ Percentile Queue Lengths (m);

### 4.2.1 DEGREE OF SATURATION

The DOS defines the ratio between the traffic volume entering the intersection and the ultimate capacity, also known as the volume to capacity ratio. According to the Department of Transport and Main Roads (TMR) guidelines, the desirable upper limits prescribed for each intersection type are as follows:

- 0.80 for unsignalised (priority controlled) intersections;
- 0.85 for roundabouts; and
- 0.90 for signalised intersections.

### 4.2.2 LEVEL OF SERVICE

LOS is an index of the operational performance of the intersection based on the service measures such as delay, degree of saturation and density during a given flow period. LOS ‘A’ is the highest level with LOS ’F’ occurring when traffic volumes are at or close to capacity with

drivers experiencing significant delays. The intersection LOS determined in SIDRA has been set in accordance with NSW Roads and Traffic Authority (RTA) delay criteria (while it is noted that the RTA has been replaced with Roads and Maritime Services (RMS), SIDRA still refers to the RTA), which is based on average controlled delay per vehicle, as outlined in **Table 4-1** below.

**Table 4-1 RTA Levels of Service Criteria (All Intersection Types)**

| Level of Service | Controlled Delay per Vehicle (s) | | | | |
|---|---|---|---|---|---|
| A | | | D | ≤ | 14.5 |
| B | 14.5 | ≤ | D | ≤ | 28.5 |
| C | 28.5 | ≤ | D | ≤ | 42.5 |
| D | 42.5 | ≤ | D | ≤ | 56.5 |
| E | 56.5 | ≤ | D | ≤ | 70.5 |
| F | 70.5 | ≤ | D | | |

For the intersection analysis conducted, the RTA level of service criteria has been adopted as it is considered to be more appropriate than the Highway Capacity Manual values.

### 4.2.3 95TH PERCENTILE BACK OF QUEUE

The back of queue defines the number of vehicles that are queued and depends on the arrival pattern of vehicles along with the number of vehicles that do not clear the intersection during a given green phase. The 95th percentile queue length is the value in which 95% of all observed cycle queue lengths fall. Queue build-ups at the intersection will be checked to ensure that they can be fully contained within any short lanes and that potential queuing does not adversely affect the operation of adjacent intersections and does not substantially hinder property access.

# 5 SMITH STREET – WORST CASE SCENARIO

This section details the analysis results based on the Smith Street Worst Case scenario. In this scenario, Smith Street has four lanes between Olsen Avenue and Parklands Drive and five lanes from Parklands Drive to Kumbari Avenue. The intersection analysis has been undertaken in accordance with the information detailed in **Section 4.1** and has been analysed for two scenarios:

- 2026 Legacy Base Model; and
- 2026 Legacy Adjusted Model.

The results for each of the intersections are presented below. The modelled intersection volumes are included in **Appendix A** under Option 1.

## 5.1 INTERSECTION ANALYSIS

### 5.1.1 SMITH STREET / PARKLANDS DRIVE

The Smith Street / Parklands Drive intersection is a major access point for the GCHKP and Griffith University. It is currently a signalised 'T' intersection with the intention that it provides access to a car park via a fourth leg by 2026. It has multi-lane approaches for all existing legs with a left turn slip lane and dual right turn auxiliary lanes from Smith Street.

The layout used for the SIDRA analysis is shown in **Figure 5-1** with the analysis summary presented in **Table 5-1**. Detailed SIDRA results can be found in **Appendix B**.

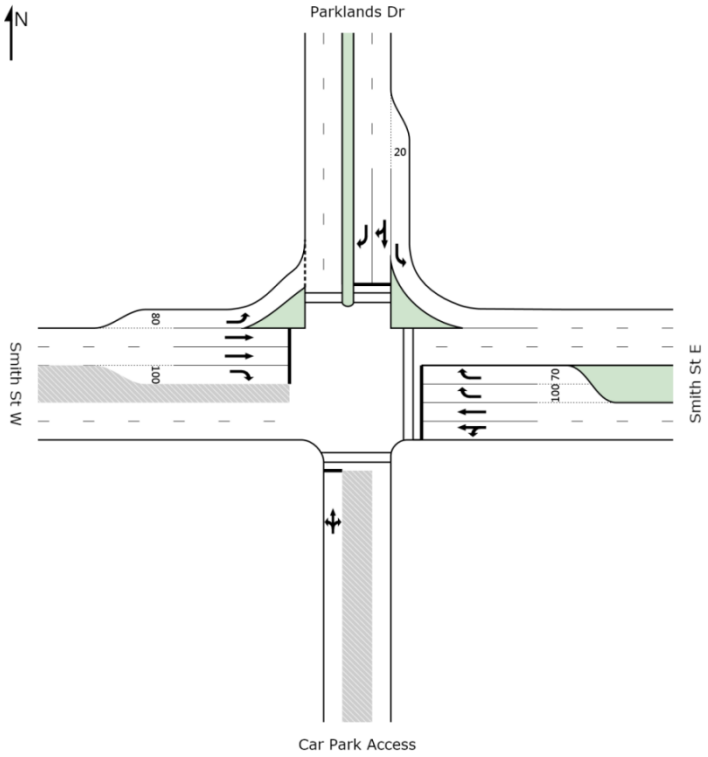



**Figure 5-1 Smith Street / Parklands Drive – SIDRA Analysis Layout**

**Table 5-1 Smith Street / Parklands Drive – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | | 2026 Legacy Adjusted Model | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | Cycle Time | DOS | Delay | 95% Queue Length | Cycle Time |
| AM Peak | Car Park Access | 0.09 | 48.2s | 18.2m | 160s | 0.13 | 59.5s | 20.5m | 160s |
| | Smith Street East | 0.76 | 39.5s | 259m | | 0.91 | 39.8s | 257m | |
| | Parklands Drive | 0.91 | 79.7s | 226m | | 0.95 | 65.2s | 181m | |
| | Smith Street West | 0.91 | 36.6s | 530m | | 0.95 | 49.1s | 661m | |
| PM Peak | Car Park Access | 0.28 | 29.4s | 58.9m | 120s | 0.34 | 37.6s | 68.7m | 120s |
| | Smith Street East | 0.81 | 33.0s | 220m | | 0.82 | 29.4s | 230m | |
| | Parklands Drive | 0.89 | 55.0s | 194m | | 0.83 | 43.4s | 130m | |
| | Smith Street West | 0.89 | 39.7s | 312m | | 0.85 | 33.9s | 303m | |

The SIDRA results from the Base Model indicate that the Smith Street / Parklands Drive intersection will operate over capacity in the AM peak. Both Parklands Drive and Smith Street are likely to experience long queues during the peak hour period. Smith Street West experiences the highest queuing and may extend back to the Smith Street / Olsen Avenue interchange. During the PM peak, the intersection is expected to operate below capacity with the expected queuing on Smith Street and Parklands Drive to be less than the AM peak.

The Adjusted Model reduces the overall performance of the Smith Street / Parklands Drive intersection during the AM peak. The queuing on Smith Street West increases as some of the left turning vehicles now access the Hospital Boulevard intersection and are added to the through movement. During the PM peak, the change in traffic distribution reduces the traffic on Parklands Drive which improves the intersection operation as more green time can be allocated to the Smith Street through movement.

Potential mitigation measures to improve the intersection operation during the AM peak are increasing the number of through lanes in both directions on Smith Street from two to three lanes or increasing the right turn capacity from Parklands Drive.

### 5.1.2 SMITH STREET / HOSPITAL BOULEVARD

The new Smith Street / Hospital Boulevard intersection will be constructed as part of this Early Works phase. It is proposed to be an all movements, signalised ‘T’ intersection with a left turn slip lane and dual right turn lanes from Smith Street. Previously, Hospital Boulevard had a left turn acceleration lane onto Smith Street. TMR have stated that this is unlikely to occur and it has been converted to a left turn slip lane.

The SIDRA layout is displayed in **Figure 5-2** with the analysis summary shown in **Table 5-2**. Detailed SIDRA results can be found in **Appendix B**.

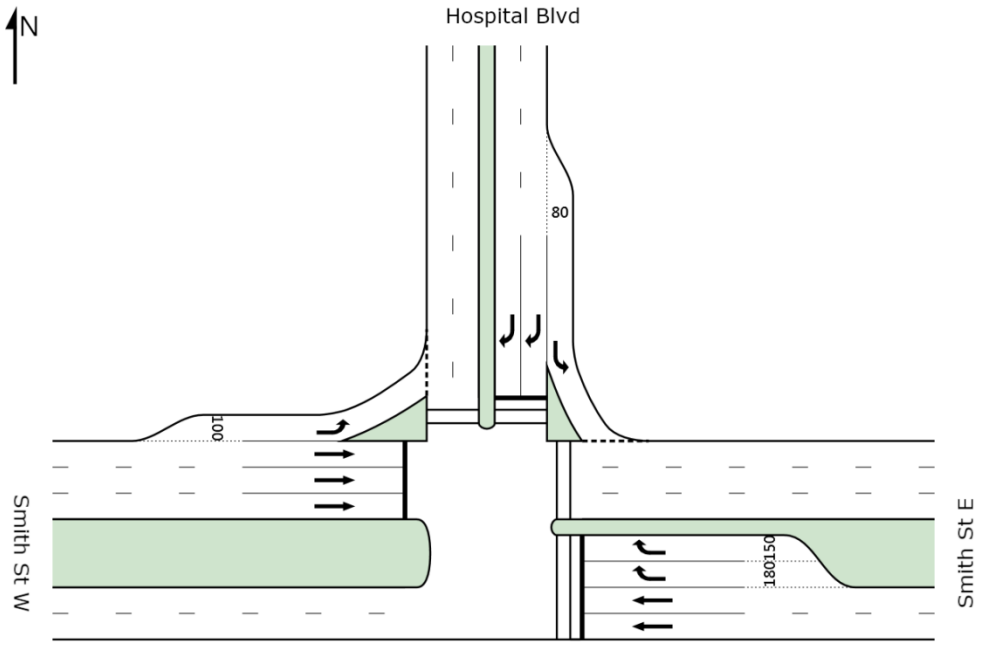



**Figure 5-2 Smith Street / Hospital Boulevard – SIDRA Analysis Layout**

**Table 5-2 Smith Street / Hospital Boulevard – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | | 2026 Legacy Adjusted Model | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | Cycle Time | DOS | Delay | 95% Queue Length | Cycle Time |
| AM Peak | Smith Street East | 0.84 | 27.7s | 209m | 140s | 0.80 | 21.8s | 148m | 140s |
| | Hospital Boulevard | 1.00 | 30.5s | 131m | | 0.88 | 38.2s | 131m | |
| | Smith Street West | 0.83 | 36.9s | 267m | | 0.79 | 24.6s | 258m | |
| PM Peak | Smith Street East | 0.73 | 21.9s | 135m | 120s | 0.69 | 16.1s | 99.5m | 120s |
| | Hospital Boulevard | 0.77 | 10.7s | 47.9m | | 0.64 | 22.8s | 49.8m | |
| | Smith Street West | 0.73 | 36.7s | 155m | | 0.68 | 25.5s | 159m | |

The new intersection of Parklands Drive and Hospital Boulevard will operate outside of the required DOS threshold (DOS < 0.9) in the 2026 Base Model AM peak. The change from a left turn acceleration lane from Hospital Boulevard onto Smith Street east to a left slip lane with a give way control does not provide for the anticipated left turn volumes. The lane length provided cannot accommodate the anticipated volumes and the queuing would extend back into the right turn lanes. The PM peak operates under capacity with the expected queuing on Smith Street less than the AM peak.

The Adjusted Model improves the intersection operation in the AM peak as the redistribution of traffic shifts some of the traffic turning left from Hospital Boulevard onto Parklands Drive. This allows the AM peak to operate within the DOS limits. The intersection operation during the PM peak also improves.

Smith Street east includes seven lanes at this intersection and hence requires a longer crossing time period for pedestrians. Therefore, the modelled crossing time for pedestrians was found to be the determining factor for the intersection operation. Should a staged pedestrian crossing be provided, the intersection operation could be improved.

## 5.1.3 HOSPITAL BOULEVARD / FIRST STREET

The Hospital Boulevard / First Street intersection will be an all movements, signalised intersection. It will provide access to the residential area to the east and to the commercial and health and knowledge precinct to the west of Hospital Boulevard. No turning lanes are provided at the intersection.

The SIDRA intersection layout is shown in **Figure 5-3** with a summary of the results located in **Table 5-3**. The detailed results are in **Appendix B**.

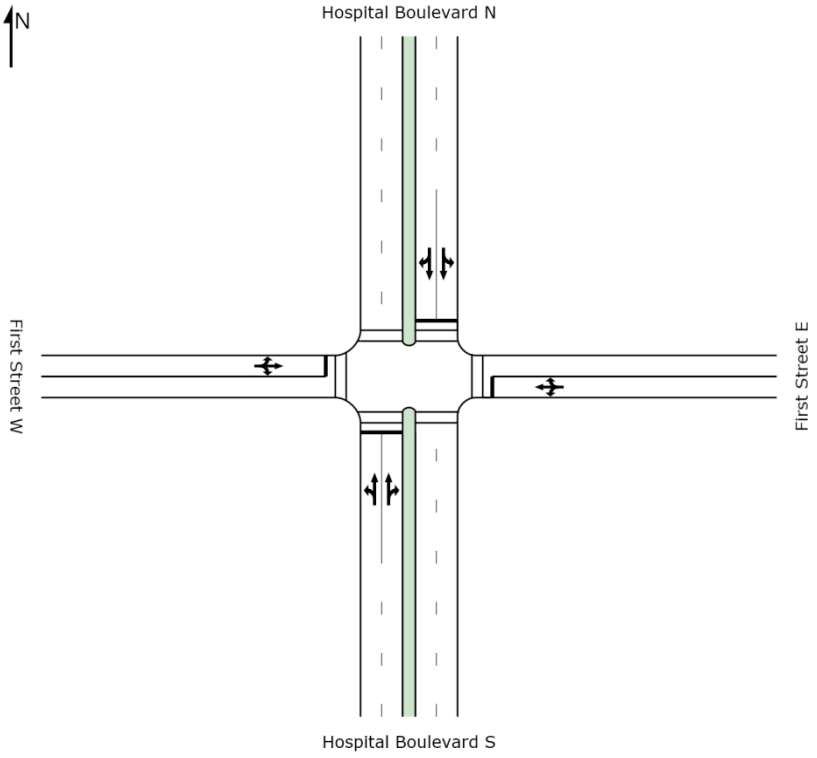



**Figure 5-3 Hospital Boulevard / First Street – SIDRA Intersection Layout**

**Table 5-3 Hospital Boulevard / First Street – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | | 2026 Legacy Adjusted Model | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | Cycle Time | DOS | Delay | 95% Queue Length | Cycle Time |
| AM Peak | Hospital Blvd South | 0.48 | 6.2s | 35.5m | 90s | 0.41 | 6.4s | 30.5m | 90s |
| | First Street East | 0.16 | 39.5s | 14.8m | | 0.16 | 38.6s | 14.1m | |
| | Hospital Blvd North | 0.59 | 4.7s | 55.9m | | 0.53 | 4.9s | 48.7m | |
| | First Street West | 0.60 | 44.6s | 52.8m | | 0.52 | 42.9s | 48.5m | |
| PM Peak | Hospital Blvd South | 0.65 | 19.4s | 75.1m | 60s | 0.57 | 18.7s | 61.0m | 60s |
| | First Street East | 0.09 | 18.9s | 7.3m | | 0.08 | 18.2s | 7.1m | |
| | Hospital Blvd North | 0.52 | 16.8s | 55.6m | | 0.46 | 15.8s | 46.5m | |
| | First Street West | 0.64 | 24.3s | 66.6m | | 0.61 | 23.3s | 64.1m | |

The intersection will operate well within the DOS threshold of 0.9 for signalised intersections in both the AM and PM peaks in the Base Model. The queuing on Hospital Boulevard is highest in the PM peak however it is not expected to impact on the adjacent intersections.

The Adjusted Model improves the intersection operation with both the intersection DOS and queuing decreasing in the AM and PM peaks.

### 5.1.4 MAIN STREET / HOSPITAL BOULEVARD

The Main Street / Hospital Boulevard intersection is the intersection between the two major roads within the Parklands site. It is proposed to be a four leg intersection with turn bays provided for the left turn movements on all approaches with the exception of Hospital Boulevard south which would have a full lane for vehicles turning left.

The layout used in the SIDRA analysis is shown in **Figure 5-4** with the analysis summary in **Table 5-4**. Detailed SIDRA results can be found in **Appendix B**.

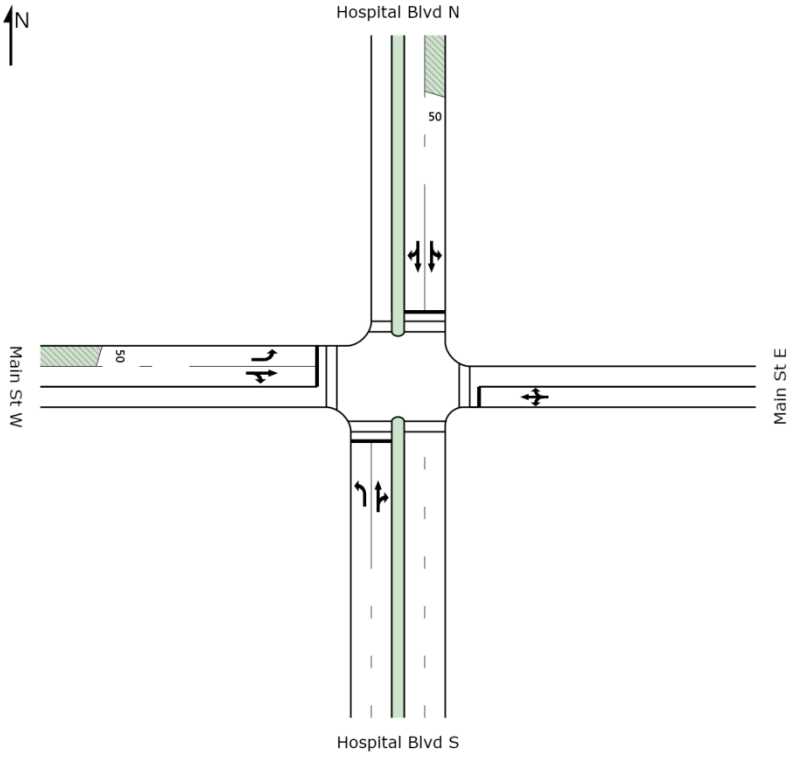



**Figure 5-4 Main Street / Hospital Boulevard – SIDRA Analysis Intersection**

**Table 5-4 Main Street / Hospital Boulevard – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | | 2026 Legacy Adjusted Model | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | Cycle Time | DOS | Delay | 95% Queue Length | Cycle Time |
| AM Peak | Hospital Blvd South | 0.66 | 10.3s | 77.5m | 60s | 0.62 | 10.8s | 70.6m | 60s |
| | Main Street East | 0.19 | 23.7s | 15.7m | | 0.18 | 22.8s | 15.3m | |
| | Hospital Blvd North | 0.63 | 14.1s | 68.3m | | 0.59 | 14.6s | 63.1m | |
| | Main Street West | 0.67 | 28.5s | 71.7m | | 0.60 | 26.8s | 63.8m | |
| PM Peak | Hospital Blvd South | 0.54 | 11.4s | 58.3m | 60s | 0.51 | 12.0s | 54.0m | 60s |
| | Main Street East | 0.11 | 21.2s | 8.6m | | 0.10 | 20.4s | 8.3m | |
| | Hospital Blvd North | 0.27 | 12.0s | 27.2m | | 0.27 | 12.6s | 27.7m | |
| | Main Street West | 0.54 | 25.5s | 58.4m | | 0.51 | 24.6s | 56.4m | |

The intersection analysis results indicate that the Main Street / Hospital Boulevard intersection will operate within the DOS threshold for signalised intersections in the Base Model. The queuing is highest on Main Street west and Hospital Boulevard south with the AM peak experiencing higher queues than the PM.

The PM peak operates within the acceptable DOS threshold with some queuing anticipated on Hospital Boulevard. However, the queuing is less than the queues expected in the AM peak. The Adjusted scenario improves the performance and slightly reduces the queue lengths for both the AM and PM peak.

### 5.1.5 HOSPITAL BOULEVARD / SECOND STREET

The intersection of Hospital Boulevard / Second Street is intended to be a priority controlled intersection with turn lanes for all turning movements. It links back to Main Street and the GCPH and is intended to provide for service vehicles as an alternative to Main Street.

The layout used in SIDRA is shown in **Figure 5-5**. The analysis summary is presented in **Table 5-5** with the detailed results provided in **Appendix B**.

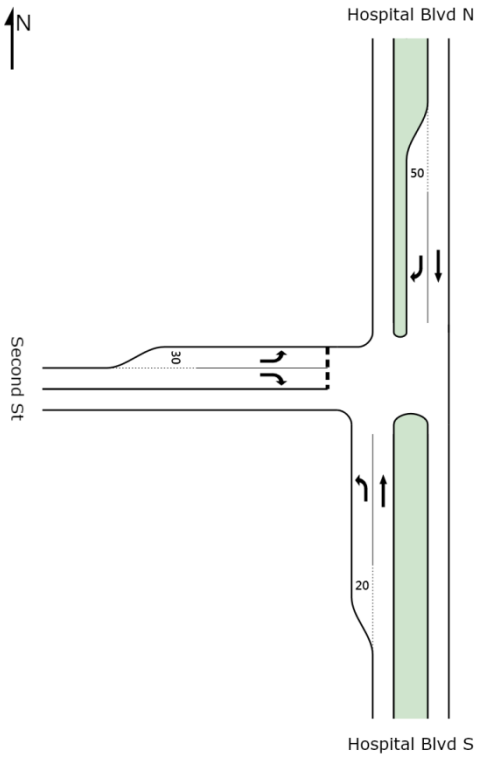



**Figure 5-5 Hospital Boulevard / Second Street – SIDRA Intersection Layout**

**Table 5-5 Hospital Boulevard / Second Street – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | 2026 Legacy Adjusted Model | | |
|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | DOS | Delay | 95% Queue Length |
| AM Peak | Hospital Blvd South | 0.25 | 2.9s | 0.0m | 0.25 | 2.5s | 0.0m |
| | Hospital Blvd North | 0.34 | 3.4s | 10.2m | 0.32 | 3.5s | 9.5m |
| | Second Street | 0.52 | 21.0s | 14.2m | 0.43 | 18.9s | 12.2m |
| PM Peak | Hospital Blvd South | 0.24 | 2.4s | 0.0m | 0.24 | 2.1s | 0.0m |
| | Hospital Blvd North | 0.23 | 5.2s | 7.7m | 0.23 | 5.1s | 7.5m |
| | Second Street | 0.55 | 15.7s | 26.4m | 0.54 | 15.4s | 25.7m |

The intersection will operate with spare capacity in both the Base and Adjusted Models with limited queuing and delays. The turn lane lengths indicated in **Figure 5-5** are sufficient to accommodate the expected queues.

## 5.1.6 HOSPITAL BOULEVARD / INNOVATION DRIVE

The Hospital Boulevard / Innovation Drive intersection connects the Parklands Redevelopment with the GCUH and links back to Parklands Drive. It is anticipated that it will be a priority controlled 'T' intersection with provision for turn bays from Hospital Boulevard. A turn warrant assessment has not been undertaken for this intersection as all turning movements have channelised turn bays provided.

The SIDRA layout used is shown in **Figure 5-6** with the analysis summary presented in **Table 5-6**. Detailed SIDRA results can be found in **Appendix B**.

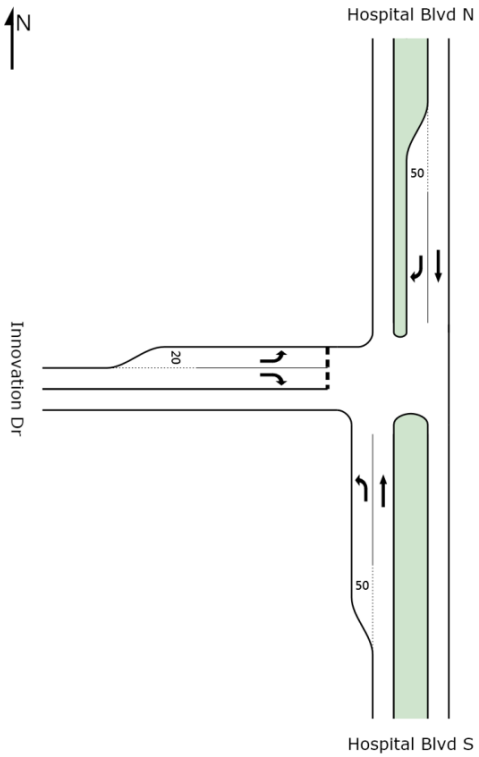



**Figure 5-6 Hospital Boulevard / Innovation Drive – SIDRA Analysis Layout**

**Table 5-6 Hospital Boulevard / Innovation Drive – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | 2026 Legacy Adjusted Model | | |
|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | DOS | Delay | 95% Queue Length |
| AM Peak | Hospital Blvd South | 0.32 | 1.1s | 0.0m | 0.32 | 0.9s | 0.0m |
| | Hospital Blvd North | 0.54 | 5.2s | 29.9m | 0.53 | 5.3s | 29.3m |
| | Innovation Drive | 0.99 | 82.5s | 42.8m | 0.84 | 53.8s | 25.6m |
| PM Peak | Hospital Blvd South | 0.37 | 1.0s | 0.0m | 0.37 | 0.8s | 0.0m |
| | Hospital Blvd North | 0.67 | 8.9s | 43.5m | 0.65 | 8.8s | 42.3m |
| | Innovation Drive | 0.30 | 20.2s | 8.9m | 0.29 | 20.0s | 8.8m |

The Hospital Boulevard / Innovation Drive intersection is expected to exceed the required performance criteria for priority controlled intersections (DOS < 0.8) in the AM peak. Right turning vehicles cannot exit Innovation Drive due to the high volumes on Hospital Boulevard. Some queuing is expected on Innovation Drive however it is not expected to impact on the surrounding infrastructure.

The Adjusted Model is anticipated to improve the intersection operation in the AM peak when compared to the Base Model. However, it still exceeds the DOS threshold for unsignalised intersections. The PM peak experiences a minor improvement in overall operation.

### 5.1.7 PARKLANDS DRIVE / MAIN STREET / ENGINEERING DRIVE

The existing Parklands Drive / Main Street / Engineering Drive intersection will be reconfigured following the completion of the Early Works package. The current intersection is a four leg

signalised intersection which provides access to University service roads via Engineering Drive and the existing Parklands car park from Parklands Drive. The reconfigured intersection will be realigned for the provision of Main Street.

The signal phasing has been provided by TMR and is the phasing that will be used once the GCRT comes online. This phasing has been adopted for the SIDRA analysis with the phase times determined through SIDRA optimisation. The overall signal time has been maintained at 125s as used in the Paramics model.

**Figure 5-7** shows the intersection layout used for the SIDRA analysis. The analysis summary is presented in **Table 5-7** with more detailed results located in **Appendix B**.

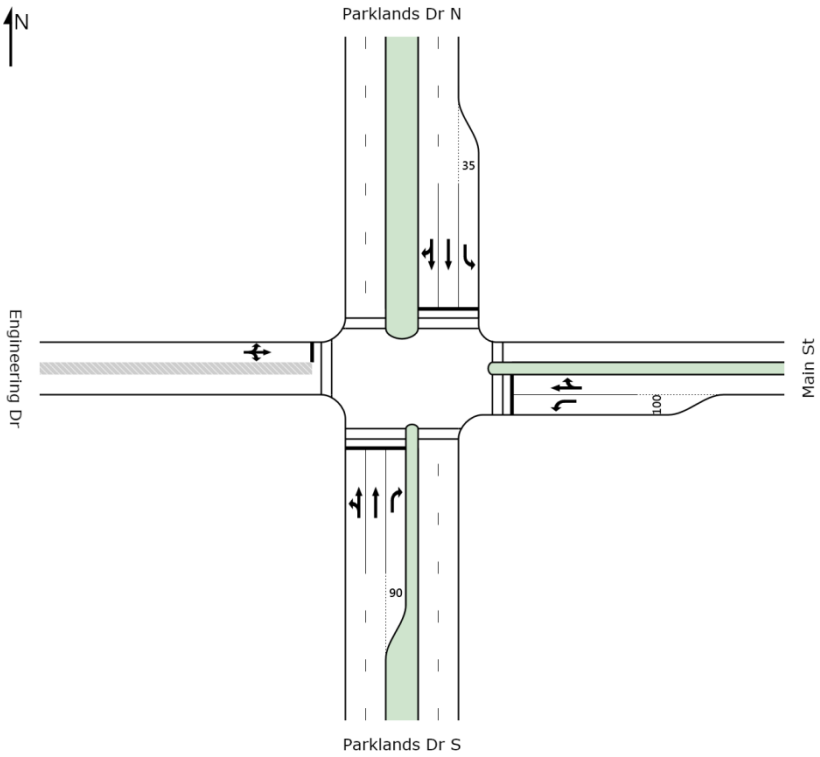



**Figure 5-7 Parklands Drive / Main Street / Engineering Drive – SIDRA Analysis Layout**

**Table 5-7 Parklands Drive / Main Street / Engineering Drive – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | | 2026 Legacy Adjusted Model | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | Cycle Time | DOS | Delay | 95% Queue Length | Cycle Time |
| AM Peak | Parklands Dr South | 0.75 | 43.4s | 102m | 125s | 0.81 | 41.7s | 123m | 125s |
| | Main Street | 0.72 | 41.3s | 89.3m | | 0.81 | 41.8s | 94.6m | |
| | Parklands Dr North | 0.85 | 59.9s | 93.4m | | 1.08 | 205s | 191m | |
| | Engineering Drive | 0.74 | 69.9s | 64.8m | | 0.84 | 75.5s | 71.5m | |
| PM Peak | Parklands Dr South | 0.61 | 31.2s | 76.0m | 125s | 0.73 | 32.6s | 95.1m | 125s |
| | Main Street | 0.80 | 45.1s | 81.6m | | 0.81 | 46.2s | 81.6m | |
| | Parklands Dr North | 0.81 | 59.6s | 56.3m | | 0.81 | 59.6s | 56.5m | |
| | Engineering Drive | 0.81 | 73.2s | 66.9m | | 0.81 | 73.2s | 66.9m | |

The intersection of Parklands Drive / Main Street / Engineering Drive will operate within the industry standard design threshold (DOS < 0.9 for signalised intersections) in the 2026 Legacy Base Model. The analysis shows some queuing on Parklands Drive South during the AM peak and on Main Street during the PM peak. However, neither of these queues is expected to impact on any adjacent intersections. The queuing in the AM peak on Parklands Drive South is reflected in the Paramics model which can be seen in **Appendix A**.

The Adjusted Model increases the queuing on Parklands Drive south during AM peak and also causes the Parklands Drive North approach to exceed the DOS threshold of 0.9. This is due to right turning vehicles having to queue with the through movement and are unable to utilise the right turn signal phase. To mitigate this, a short right turn lane should be considered to allow vehicles turning right into Engineering Drive to queue clear of the through movement.

### 5.1.8 PARKLANDS DRIVE / FIRST STREET INTERSECTION

The Parklands Drive / First Street intersection was modelled with a banned right turn movement from Parklands Drive into First Street during the AM peak. This resulted from the original Paramics model run as it was experiencing significant queuing which was extending back onto Smith Street from the intersection. It allows for right turn movements from First Street for buses only with general traffic utilising the intersection as a left in / left out arrangement. It has been analysed with stop control for safety reasons as Parklands Drive has two lanes in each direction.

The intersection layout adopted from the Paramics model is shown in **Figure 5-8** with the SIDRA analysis summary located in **Table 5-8**. Detailed results are included in **Appendix B**.

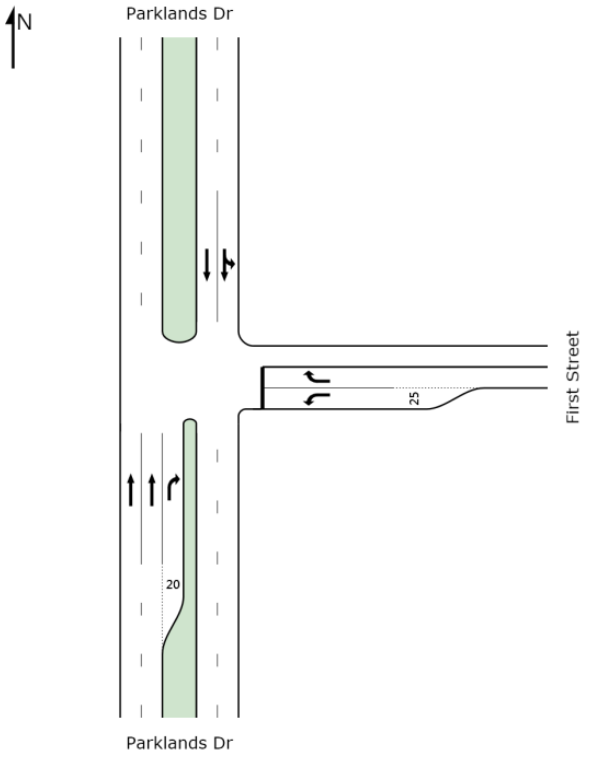



**Figure 5-8 Parklands Drive / First Street – SIDRA Intersection Layout**

**Table 5-8 Parklands Drive / First Street – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | 2026 Legacy Adjusted Model | | |
|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | DOS | Delay | 95% Queue Length |
| AM Peak | Parklands Dr South | 0.15 | 0.0s | 0.0m | 0.18 | 0.0s | 0.0m |
| | First Street | 0.39 | 15.4s | 18.4m | 0.44 | 17.0s | 24.4m |
| | Parklands Dr North | 0.12 | 0.9s | 0.0m | 0.13 | 0.8s | 0.0m |
| PM Peak | Parklands Dr South | 0.13 | 0.0s | 0.0m | 0.15 | 0.0s | 0.0m |
| | First Street | 0.39 | 17.1s | 19.7m | 0.36 | 17.2s | 19.2m |
| | Parklands Dr North | 0.15 | 0.5s | 0.0m | 0.15 | 0.5s | 0.0m |

The Parklands Drive / First Street intersection operates within the required DOS threshold for unsignalised intersections (DOS < 0.8) with the banning of the right turn movement from Parklands Drive into First Street. There are minimal changes in the intersection operation between the Base Model and the Adjusted Model.

# 6 SMITH STREET – BEST CASE SCENARIO

The Best Case scenario for Smith Street will involve upgrading the section between Olsen Avenue and Kumbari Avenue to six lanes. The intersections have been analysed in accordance with the information detailed in **Section 4.1** and they been analysed for two scenarios:

- 2026 Legacy Base Model; and
- 2026 Legacy Adjusted Model.

The intersection analysis for the Smith Street best case scenario is presented below in **Section 6.1**. The modelled intersection volumes are located in **Appendix A** under Option 2.

## 6.1 INTERSECTION ANALYSIS

### 6.1.1 SMITH STREET / PARKLANDS DRIVE

The Smith Street / Parklands Drive intersection will change following the upgrade to six lanes. The acceleration lane from Parklands Drive onto Smith Street East will become a through lane and the continuous left turn lane from Parklands Drive will become a left turn slip lane.

The intersection layout used for the SIDRA analysis is shown in **Figure 6-1** with the analysis summary in **Table 6-1**. The detailed SIDRA results are located in **Appendix C**.

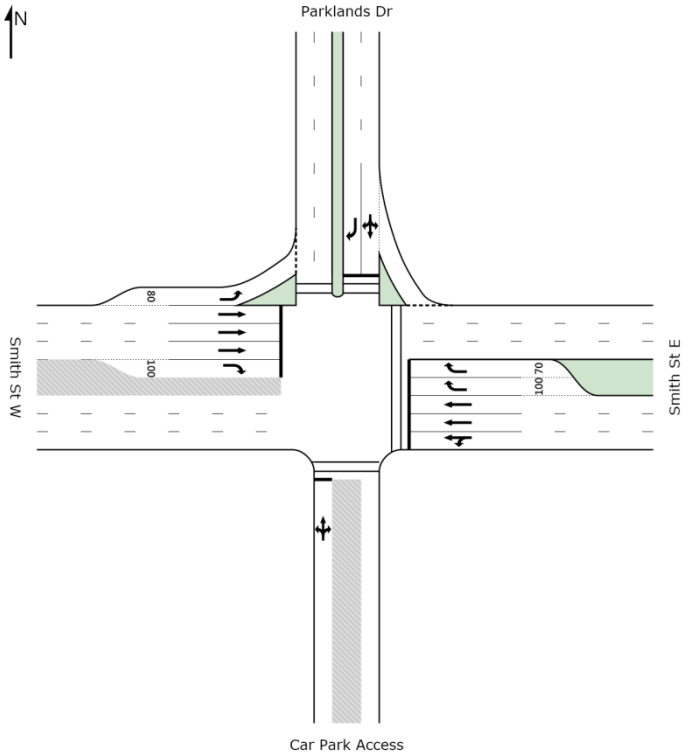



**Figure 6-1 Smith Street / Parklands Drive – SIDRA Intersection Layout**

**Table 6-1 Smith Street / Parklands Drive – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | | 2026 Legacy Adjusted Model | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | Cycle Time | DOS | Delay | 95% Queue Length | Cycle Time |
| AM Peak | Car Park Access | 0.08 | 35.3s | 13.3m | 120s | 0.09 | 36.9s | 13.6m | 120s |
| | Smith Street East | 0.75 | 44.6s | 151m | | 0.80 | 40.1s | 155m | |
| | Parklands Drive | 0.78 | 39.3s | 125m | | 0.83 | 41.6s | 135m | |
| | Smith Street West | 0.72 | 22.8s | 225m | | 0.85 | 32.9s | 305m | |
| PM Peak | Car Park Access | 0.32 | 33.1s | 66.9m | 120s | 0.36 | 37.7s | 72.6m | 120s |
| | Smith Street East | 0.58 | 24.5s | 127m | | 0.60 | 25.0s | 133m | |
| | Parklands Drive | 0.58 | 22.0s | 80.1m | | 0.60 | 23.6s | 76.6m | |
| | Smith Street West | 0.57 | 24.1s | 144m | | 0.60 | 26.4s | 161m | |

The addition of the extra through lanes on Smith Street provides the additional capacity required to allow the intersection to operate effectively. The intersection operates within the DOS threshold of 0.9 for signalised intersections in the AM and PM peak for both scenarios. The queuing on Smith Street not expected to impact on any adjacent intersections with the maximum expected queuing in any scenario being 305m on Smith Street West.

## 6.1.2 SMITH STREET / HOSPITAL BOULEVARD

The intersection of Hospital Boulevard with Smith Street will have an additional lane for westbound traffic on Smith Street following the upgrade to six lanes. The layout used in SIDRA is shown in **Figure 6-2** with the analysis summary located in **Table 6-2**. Detailed SIDRA results can be found in **Appendix C**.

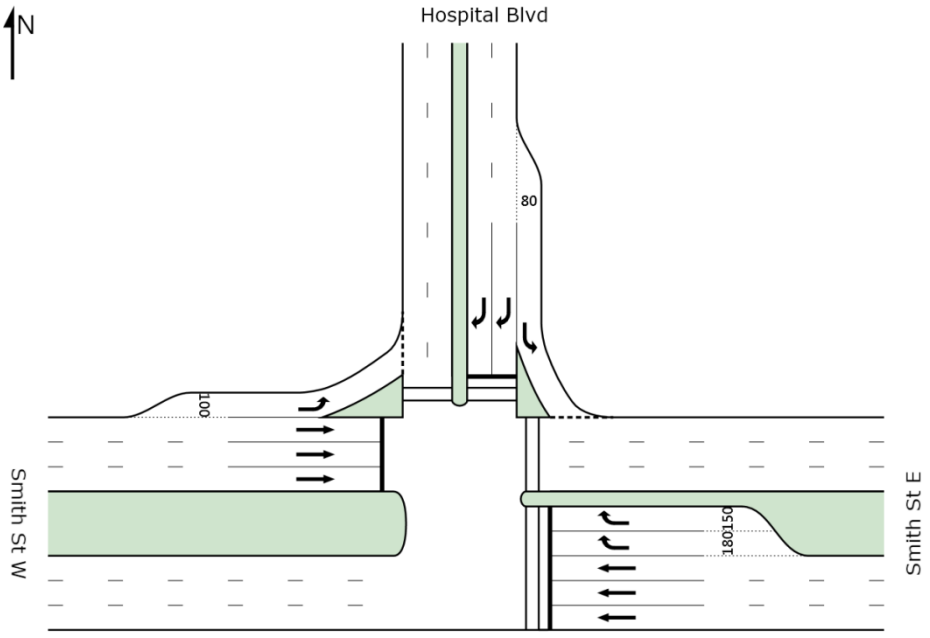



**Figure 6-2 Smith Street / Hospital Boulevard – SIDRA Intersection Layout**

**Table 6-2 Smith Street / Hospital Boulevard – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | | 2026 Legacy Adjusted Model | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | Cycle Time | DOS | Delay | 95% Queue Length | Cycle Time |
| AM Peak | Smith Street East | 0.85 | 30.7s | 236m | 150s | 0.81 | 24.1s | 159m | 150s |
| | Hospital Boulevard | 1.00 | 35.9s | 131m | | 0.96 | 39.3s | 131m | |
| | Smith Street West | 0.86 | 42.6s | 309m | | 0.81 | 26.0s | 286m | |
| PM Peak | Smith Street East | 0.76 | 21.8s | 143m | 120s | 0.66 | 14.9s | 104m | 130s |
| | Hospital Boulevard | 0.77 | 13.0s | 50.1m | | 0.64 | 25.7s | 58.6m | |
| | Smith Street West | 0.76 | 37.8s | 161m | | 0.62 | 23.0s | 153m | |

The AM peak operation exceeds the DOS threshold (0.9 for signalised intersections) as left turning vehicles cannot exit Hospital Boulevard due to the high through volume on Smith Street. There is also reasonable queuing on Smith Street experienced in the AM peak however it is not expected to impact on any adjacent intersections. The PM peak operates with an acceptable DOS and the expected queuing is less than the AM peak.

The Legacy Adjusted scenario improves the intersection performance in both peaks. The AM peak still operates outside of the DOS threshold however the queuing is reduced. The PM peak operation improves markedly.

### 6.1.3 HOSPITAL BOULEVARD / FIRST STREET

The Hospital Boulevard / Main Street intersection does not change from the layout presented in the previous scenario and is shown in **Figure 6-3**. The analysis summary for the best case scenario is shown in **Table 6-3** with the detailed results included in **Appendix C**.

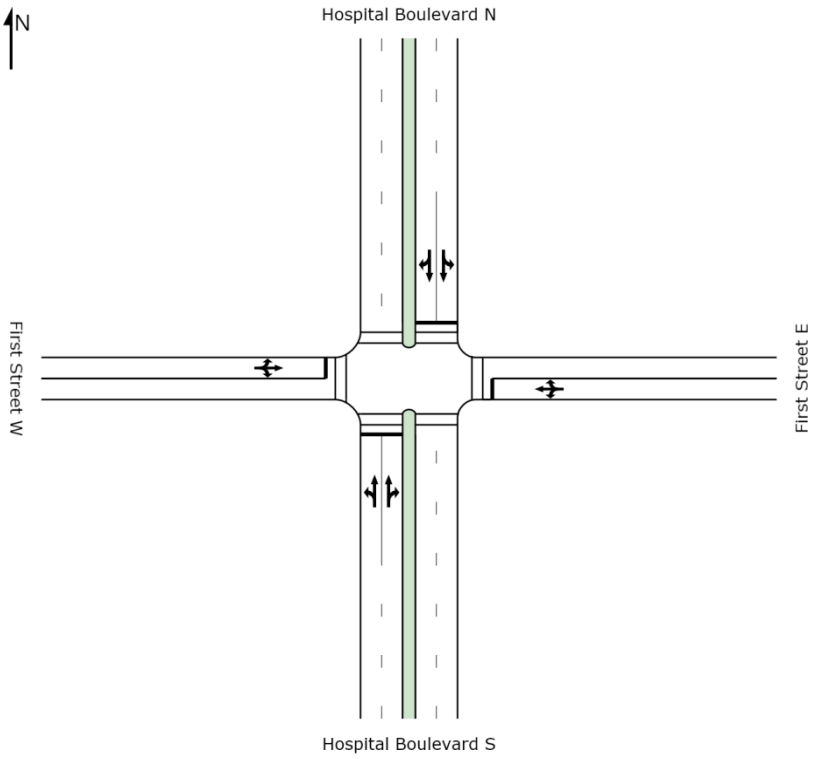



**Figure 6-3 Hospital Boulevard / First Street – SIDRA Intersection Layout**

**Table 6-3 Hospital Boulevard / First Street – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | | 2026 Legacy Adjusted Model | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | Cycle Time | DOS | Delay | 95% Queue Length | Cycle Time |
| AM Peak | Hospital Blvd South | 0.58 | 11.2s | 65.7m | 70s | 0.54 | 11.6s | 60.4m | 70s |
| | First Street East | 0.16 | 28.4s | 14.0m | | 0.14 | 27.5s | 13.1m | |
| | Hospital Blvd North | 0.62 | 9.7s | 77.5m | | 0.59 | 10.0s | 73.0m | |
| | First Street West | 0.64 | 33.6s | 56.4m | | 0.57 | 31.9s | 51.2m | |
| PM Peak | Hospital Blvd South | 0.68 | 20.2s | 80.9m | 60s | 0.60 | 19.8s | 65.4m | 60s |
| | First Street East | 0.10 | 19.2s | 8.6m | | 0.09 | 18.5s | 8.2m | |
| | Hospital Blvd North | 0.55 | 16.9s | 59.6m | | 0.53 | 17.2s | 56.0m | |
| | First Street West | 0.68 | 25.4s | 73.5m | | 0.64 | 23.6s | 67.6m | |

The intersection will operate within the required DOS threshold for signalised intersections in both the AM and PM peaks for the Legacy Base and Legacy Adjusted models. There is some queuing expected on Hospital Boulevard however it is not expected to impact on any adjacent intersections.

## 6.1.4 MAIN STREET / HOSPITAL BOULEVARD

The intersection of Main Street / Hospital Boulevard does not change from Worst Case scenario and is shown in **Figure 6-4**. The SIDRA results summary is located in **Table 6-4** with the detailed results in **Appendix C**.

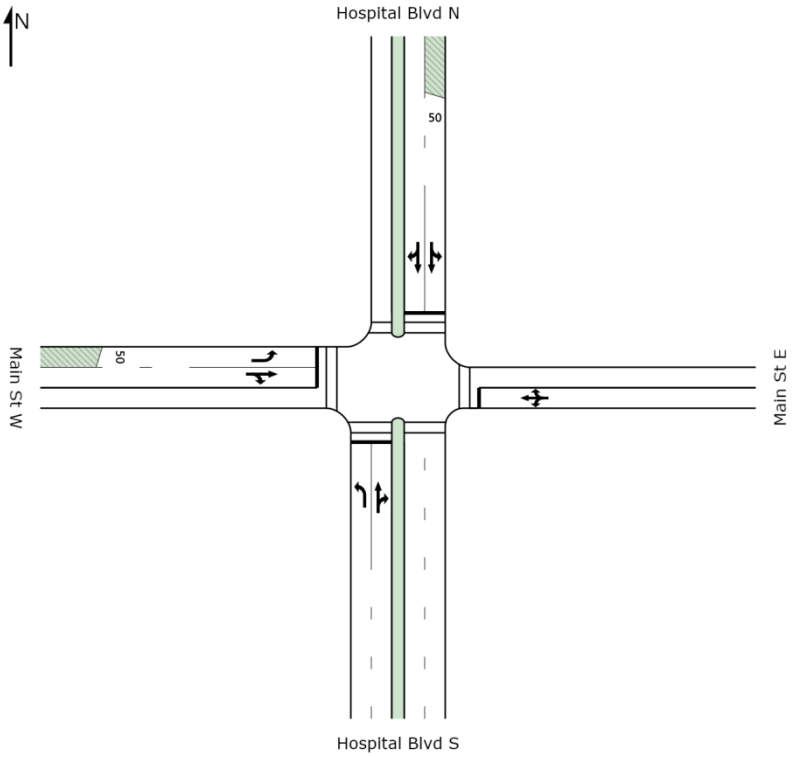



**Figure 6-4 Main Street / Hospital Boulevard – SIDRA Analysis Intersection**

**Table 6-4 Main Street / Hospital Boulevard – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | | 2026 Legacy Adjusted Model | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | Cycle Time | DOS | Delay | 95% Queue Length | Cycle Time |
| AM Peak | Hospital Blvd South | 0.67 | 11.0s | 79.6m | 60s | 0.63 | 10.7s | 72.4m | 60s |
| | Main Street East | 0.18 | 23.0s | 14.8m | | 0.18 | 23.0s | 14.8m | |
| | Hospital Blvd North | 0.54 | 13.2s | 61.8m | | 0.44 | 11.5s | 52.5m | |
| | Main Street West | 0.63 | 27.0s | 68.4m | | 0.60 | 26.7s | 63.9m | |
| PM Peak | Hospital Blvd South | 0.56 | 12.2s | 62.0m | 60 | 0.51 | 12.8s | 53.0m | 60s |
| | Main Street East | 0.16 | 21.5s | 14.1m | | 0.16 | 20.7s | 13.7m | |
| | Hospital Blvd North | 0.28 | 12.4s | 27.9m | | 0.26 | 13.0s | 27.2m | |
| | Main Street West | 0.54 | 24.8s | 60.1m | | 0.50 | 23.9s | 56.9m | |

The intersection will operate within the DOS limits for signalised intersections in both peaks in both scenarios. There is limited queuing expected with no queues extend back to the nearby intersections.

## 6.1.5 HOSPITAL BOULEVARD / SECOND STREET

The intersection layout for Hospital Boulevard / Second Street does not change from the previous scenario and is shown in **Figure 6-5**. The SIDRA analysis summary is shown in **Table 6-5** with the detailed results included in **Appendix C**.

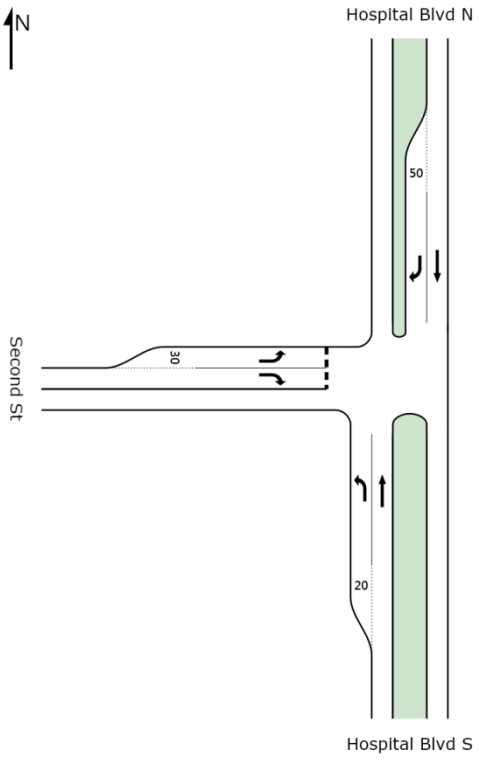



**Figure 6-5 Hospital Boulevard / Second Street – SIDRA Intersection Layout**

**Table 6-5 Hospital Boulevard / Second Street – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | 2026 Legacy Adjusted Model | | |
|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | DOS | Delay | 95% Queue Length |
| AM Peak | Hospital Blvd South | 0.22 | 3.5s | 0.0m | 0.22 | 3.3s | 0.0m |
| | Hospital Blvd North | 0.32 | 3.2s | 8.4m | 0.31 | 3.2s | 7.9m |
| | Second Street | 0.32 | 17.1s | 9.8m | 0.27 | 15.6s | 8.7m |
| PM Peak | Hospital Blvd South | 0.22 | 2.6s | 0.0m | 0.21 | 2.4s | 0.0m |
| | Hospital Blvd North | 0.23 | 5.1s | 7.6m | 0.22 | 5.1s | 7.3m |
| | Second Street | 0.55 | 15.1s | 27.2m | 0.53 | 14.4s | 25.7m |

The intersection will operate within the DOS threshold of 0.8 for unsignalised intersections in all peaks and scenarios and there is limited queuing and delays expected for all approaches.

### 6.1.6 HOSPITAL BOULEVARD / INNOVATION DRIVE

The Hospital Boulevard / Innovation Drive intersection remains unchanged from the previous scenario and is shown in **Figure 6-6**. A summary of the SIDRA results is included in **Table 6-6** with more detailed results in **Appendix C**.

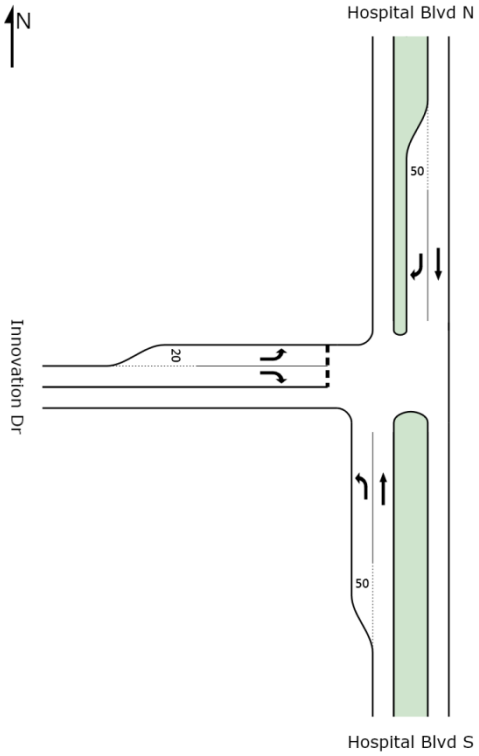



**Figure 6-6 Hospital Boulevard / Innovation Drive – SIDRA Intersection Layout**

**Table 6-6 Hospital Boulevard / Innovation Drive – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | 2026 Legacy Adjusted Model | | |
|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | DOS | Delay | 95% Queue Length |
| AM Peak | Hospital Blvd South | 0.32 | 0.1s | 0.0m | 0.32 | 0.1s | 0.0m |
| | Hospital Blvd North | 0.44 | 4.6s | 21.8m | 0.44 | 4.6s | 21.8m |
| | Innovation Drive | 0.60 | 29.7s | 15.3m | 0.53 | 26.7s | 13.0m |
| PM Peak | Hospital Blvd South | 0.34 | 1.3s | 0.0m | 0.34 | 1.1s | 0.0m |
| | Hospital Blvd North | 0.61 | 8.4s | 37.1m | 0.60 | 8.3s | 36.0m |
| | Innovation Drive | 0.40 | 21.3s | 14.0m | 0.40 | 20.5s | 13.8m |

The intersection will operate within the DOS limits for unsignalised intersections of 0.8 in both the AM and PM peaks. The expected queues are able to be contained within the turn lanes and the average delays are low.

The Legacy Adjusted scenario results in minor improvements of the intersection performance.

## 6.1.7 PARKLANDS DRIVE / MAIN STREET / ENGINEERING DRIVE

The Parklands Drive / Main Street / Engineering Drive intersection is unchanged from the Worst Case scenario and the GCRT phasing is still applied. The layout used for the SIDRA analysis is shown in **Figure 6-7** with the results summary in **Table 6-7**. The detailed results are in **Appendix C**.

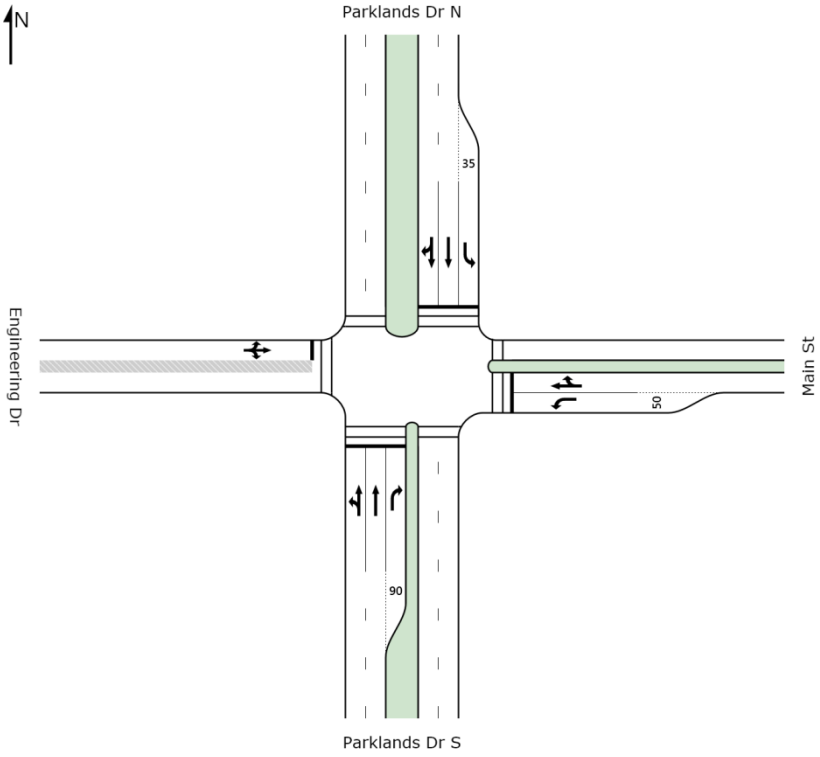



**Figure 6-7 Parklands Drive / Main Street / Engineering Drive – SIDRA Intersection Layout**

**Table 6-7 Parklands Drive / Main Street / Engineering Drive – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | | 2026 Legacy Adjusted Model | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | Cycle Time | DOS | Delay | 95% Queue Length | Cycle Time |
| AM Peak | Parklands Dr South | 0.91 | 46.3s | 147m | 125s | 1.00 | 43.1s | 147m | 125s |
| | Main Street | 0.86 | 40.5s | 98.3m | | 0.92 | 43.1s | 106m | |
| | Parklands Dr North | 1.04 | 144s | 195m | | 1.14 | 267s | 324m | |
| | Engineering Drive | 0.88 | 77.8s | 76.7m | | 0.91 | 82.1s | 82.3m | |
| PM Peak | Parklands Dr South | 0.69 | 38.7s | 91.5m | 125s | 0.78 | 38.1s | 111m | 125s |
| | Main Street | 0.64 | 40.7s | 54.2m | | 0.76 | 40.4s | 56.9m | |
| | Parklands Dr North | 0.63 | 61.7s | 57.4m | | 0.63 | 61.8s | 59.3m | |
| | Engineering Drive | 0.67 | 54.8s | 105m | | 0.76 | 60.6s | 114m | |

The AM peak does not operate within the DOS limits with both Parklands Drive approaches exceeding a DOS of 0.9. The southern approach has a high right turn movement which cannot get enough green time with the GCRT phasing. The northern approach does not have a turn bay for right turning vehicles and they cannot make the right turn movement at the light as they are forced to queue with the through traffic. These two restrictions on Parklands Drive cause the intersection to fail. The queuing on these approaches is extensive however they are not expected to impact on any adjacent intersections.

The PM peak operates within the DOS threshold for signalised intersections. There is some queuing expected on Engineering Drive and Parklands Drive South but to a lesser extent then the AM peak.

The Legacy Adjusted scenario has a detrimental effect on the intersection performance. The scenario increases the traffic volumes at the intersection which is already at capacity. This causes a significant increase in queuing on Parklands Drive North in the AM peak. The PM peak operation decreases but still operates within the DOS limit of 0.9.

### 6.1.8 PARKLANDS DRIVE / FIRST STREET

The Parklands Drive / First Street intersection layout will remain the same as the Worst Case scenario. The layout used for the SIDRA analysis is shown in **Figure 6-8** with the results summary in **Table 6-8**. The detailed results are located in **Appendix C**.

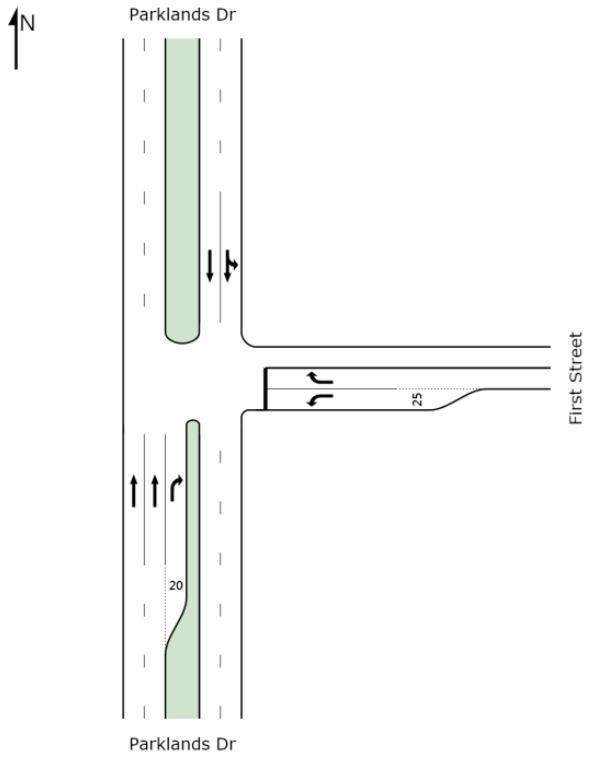



**Figure 6-8 Parklands Drive / First Street – SIDRA Intersection Layout**

**Table 6-8 Parklands Drive / First Street – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | 2026 Legacy Adjusted Model | | |
|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | DOS | Delay | 95% Queue Length |
| AM Peak | Parklands Dr South | 0.18 | 0.0s | 0.0m | 0.20 | 0.0s | 0.0m |
| | First Street | 0.28 | 17.9s | 11.7m | 0.32 | 20.1s | 15.2m |
| | Parklands Dr North | 0.16 | 0.7s | 0.0m | 0.17 | 0.7s | 0.0m |
| PM Peak | Parklands Dr South | 0.11 | 0.0s | 0.0m | 0.21 | 0.0s | 0.0m |
| | First Street | 0.36 | 15.0s | 15.6m | 0.38 | 16.8s | 17.7m |
| | Parklands Dr North | 0.12 | 0.8s | 0.0m | 0.13 | 0.7s | 0.0m |

The intersection operates well within the DOS threshold for unsignalised intersections in all scenarios. The queuing is expected to be minimal in both the Legacy Base and Legacy Adjusted scenario.

# 7 ADDITIONAL CONNECTIONS SCENARIO

The Additional Connections scenario provides connections from the Parklands site onto Musgrave Avenue to the north via Shark Lane and to Kumbari Avenue to the east via Nakina Street. The connections will link Hospital Boulevard (near the intersection with Innovation Drive) and the residential area east of Hospital Boulevard to the north and west while bypassing Olsen Avenue and Smith Street. This is shown in **Figure 7-1** below.


**Figure 7-1 Proposed Additional Connections**

It was decided by TMR that the Best Case scenario should be used for Smith Street. As part of the modelling for the Additional Connections scenario, TMR stated that the Smith Street / Parklands Drive intersection should have the car park access removed as this is unlikely to occur. The modelled intersection volumes have been included in **Appendix D**.

## 7.1 INTERSECTION ANALYSIS

### 7.1.1 SMITH STREET / PARKLANDS DRIVE

The Smith Street / Parklands Drive intersection form has been altered from the best case scenario with the car park access being removed. This has been done based on comments from TMR.

The layout used for the SIDRA analysis is shown in **Figure 7-2**. The analysis summary is located in **Table 7-1** with the detailed results attached in **Appendix E**.

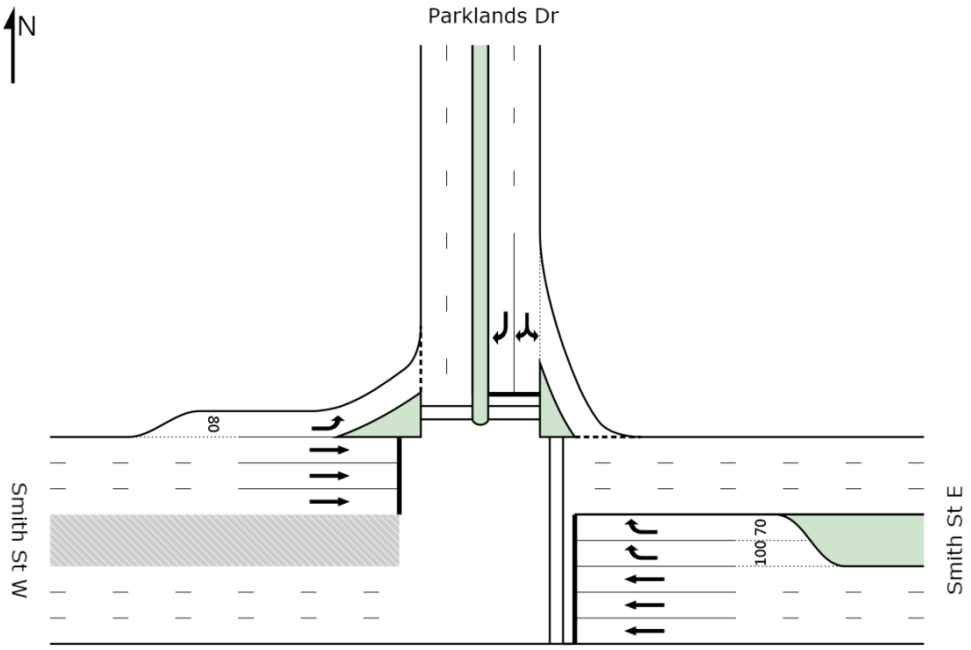



**Figure 7-2 Smith Street / Parklands Drive – SIDRA Intersection Layout**

**Table 7-1 Smith Street / Parklands Drive – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | | 2026 Legacy Adjusted Model | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | Cycle Time | DOS | Delay | 95% Queue Length | Cycle Time |
| AM Peak | Smith Street East | 0.34 | 7.7s | 40.5m | 110s | 0.81 | 16.2s | 60.5m | 120s |
| | Parklands Drive | 0.80 | 52.7s | 154m | | 0.84 | 54.0s | 170m | |
| | Smith Street West | 0.79 | 21.6s | 238m | | 0.85 | 29.3s | 315m | |
| PM Peak | Smith Street East | 0.28 | 8.3s | 30.3m | 100s | 0.77 | 15.8s | 51.3m | 110s |
| | Parklands Drive | 0.74 | 45.9s | 123m | | 0.78 | 45.4s | 136m | |
| | Smith Street West | 0.74 | 19.7s | 189m | | 0.79 | 23.1s | 234m | |

The removal of the car park access allows additional green time for the other approaches and markedly improves the intersection operation. The queuing on Smith Street West still remains reasonably long however the eastern approach has significantly reduced queuing.

The adjusted scenario results in a slightly decreased intersection performance for both the AM and PM peaks however it will still operate within the DOS threshold of 0.9 for signalised intersections. The AM peak queue on Smith St West is larger than the Base model queue however it will not impact on Olsen Avenue interchange.

## 7.1.2 SMITH STREET / HOSPITAL BOULEVARD

The Smith Street / Hospital Boulevard intersection is unchanged form the Best Case scenario layout. The layout is shown in **Figure 7-3** with the analysis summary in **Table 7-2**. Detailed results can be found in **Appendix E**.

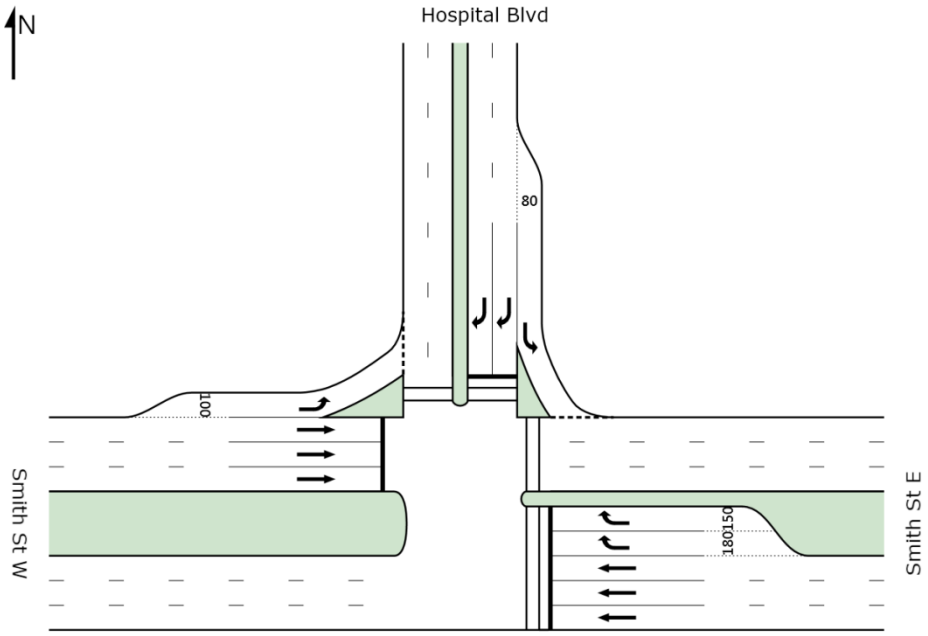



**Figure 7-3 Smith Street / Hospital Boulevard – SIDRA Intersection Layout**

**Table 7-2 Smith Street / Hospital Boulevard – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | | 2026 Legacy Adjusted Model | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | Cycle Time | DOS | Delay | 95% Queue Length | Cycle Time |
| AM Peak | Smith Street East | 0.84 | 30.3s | 216m | 150s | 0.78 | 23.1s | 147m | 150s |
| | Hospital Boulevard | 1.00 | 29.3s | 131m | | 0.89 | 39.7s | 131m | |
| | Smith Street West | 0.83 | 36.9s | 289m | | 0.80 | 25.2s | 282m | |
| PM Peak | Smith Street East | 0.77 | 27.6s | 163m | 140s | 0.75 | 21.9s | 119m | 140s |
| | Hospital Boulevard | 1.00 | 18.3s | 131m | | 0.75 | 27.9s | 67.1m | |
| | Smith Street West | 0.78 | 32.9s | 235m | | 0.75 | 23.3s | 234m | |

The Legacy Base model has a very high left turn movement onto Smith Street from Hospital Boulevard. As this movement is competing with a high through volume it is causing the intersection to fail and exceed the DOS threshold. This also leads to a reasonable level of queuing on Smith Street however it is not expected to impact on either of the adjacent intersections. This occurs in both the AM and PM peaks.

The Legacy Adjusted model shifts some of the left turning traffic to the Smith Street / Parklands Drive intersection and allows the intersection to operate under capacity and meet the required DOS parameters. It also results in some minor reductions in queuing.

### 7.1.3 HOSPITAL BOULEVARD / FIRST STREET

The intersection layout does not change in any of the scenarios. The SIDRA layout is presented in **Figure 7-4** and the analysis summary in **Table 7-3**. Detailed SIDRA results can be found in **Appendix E**.

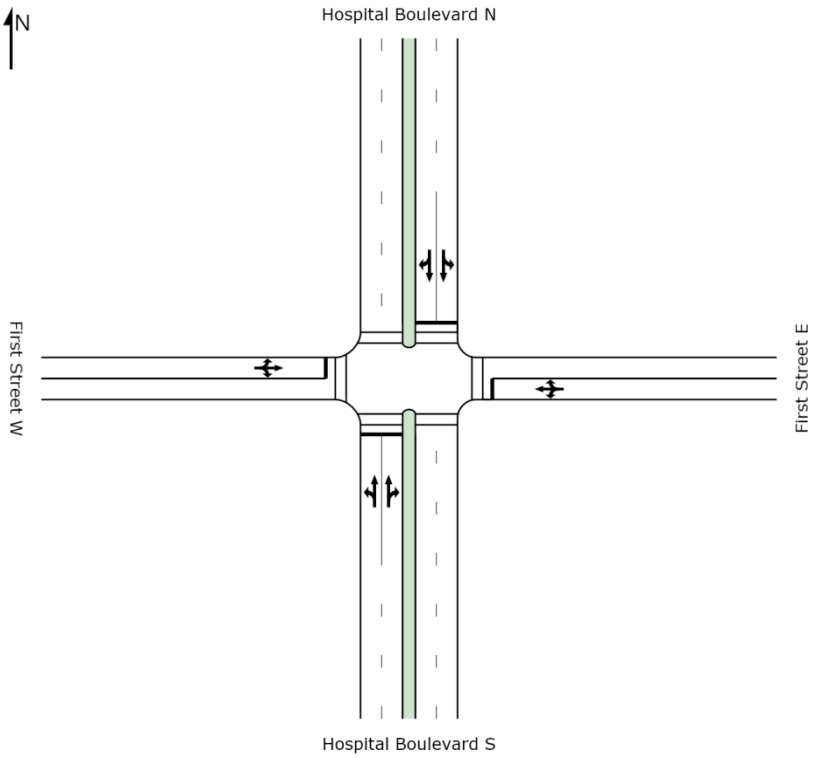



**Figure 7-4 Hospital Boulevard / First Street – SIDRA Intersection Layout**

**Table 7-3 Hospital Boulevard / First Street – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | | 2026 Legacy Adjusted Model | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | Cycle Time | DOS | Delay | 95% Queue Length | Cycle Time |
| AM Peak | Hospital Blvd South | 0.53 | 10.9s | 57.6m | 70s | 0.51 | 11.7s | 54.5m | 70s |
| | First Street East | 0.18 | 28.7s | 15.8m | | 0.16 | 27.8s | 15.0m | |
| | Hospital Blvd North | 0.46 | 7.4s | 46.4m | | 0.45 | 8.0s | 47.5m | |
| | First Street West | 0.54 | 32.3s | 45.4m | | 0.49 | 31.2s | 43.0m | |
| PM Peak | Hospital Blvd South | 0.47 | 12.3s | 45.2m | 60s | 0.45 | 12.2s | 41.8m | 60s |
| | First Street East | 0.19 | 24.7s | 16.3m | | 0.19 | 24.6s | 15.9m | |
| | Hospital Blvd North | 0.48 | 9.8s | 47.6m | | 0.46 | 9.8s | 45.3m | |
| | First Street West | 0.47 | 27.2s | 34.9m | | 0.45 | 27.1s | 33.7m | |

The intersection will operate within the DOS threshold of 0.9 in the Legacy Base scenario. In both the AM and PM peak the queuing is expected to be acceptable and would not impact on Smith Street.

The Legacy Adjusted scenario improves the intersection performance slightly with both the DOS and queuing reducing for most approaches.

### 7.1.4 MAIN STREET / HOSPITAL BOULEVARD

The Main Street / Hospital Boulevard intersection remains unchanged and is shown in **Figure 7-5**. The detailed SIDRA results are included in **Appendix E** with a summary located in **Table 7-4**.

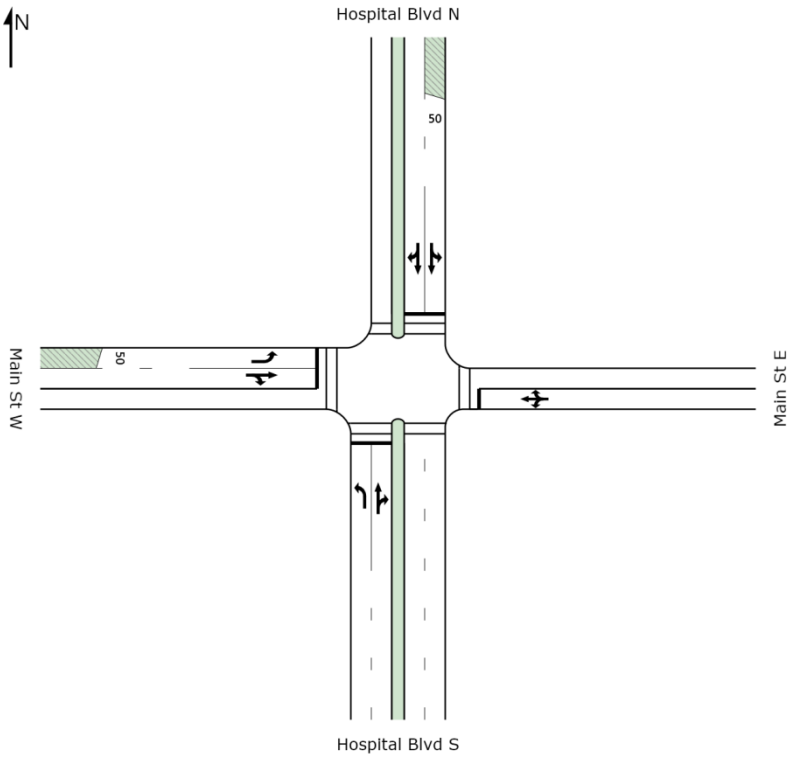



**Figure 7-5 Main Street / Hospital Boulevard – SIDRA Intersection Layout**

**Table 7-4 Main Street / Hospital Boulevard – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | | 2026 Legacy Adjusted Model | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | Cycle Time | DOS | Delay | 95% Queue Length | Cycle Time |
| AM Peak | Hospital Blvd South | 0.55 | 9.6s | 58.4m | 60s | 0.53 | 9.4s | 54.3m | 60s |
| | Main Street East | 0.10 | 22.3s | 8.1m | | 0.10 | 22.3s | 8.1m | |
| | Hospital Blvd North | 0.43 | 10.9s | 50.3m | | 0.42 | 10.9s | 49.0m | |
| | Main Street West | 0.51 | 26.9s | 51.0m | | 0.50 | 26.8s | 49.4m | |
| PM Peak | Hospital Blvd South | 0.43 | 12.1s | 41.5m | 60s | 0.42 | 12.0s | 39.8m | 60s |
| | Main Street East | 0.09 | 19.9s | 8.1m | | 0.09 | 19.9s | 8.1m | |
| | Hospital Blvd North | 0.41 | 13.5s | 45.8m | | 0.40 | 13.5s | 44.2m | |
| | Main Street West | 0.43 | 24.4s | 46.0m | | 0.42 | 24.3s | 44.3m | |

The additional connection from the residential area onto Musgrave Avenue and Kumbari Avenue significantly reduces the traffic entering the intersection along Main Street East. The overall intersection operation is well below the DOS limit of 0.9 for signalised intersections with the intersection queues not expected to impact on any adjacent intersections.

The adjusted scenario results in a small improvement in intersection performance.

### 7.1.5 HOSPITAL BOULEVARD / SECOND STREET

The Hospital Boulevard / Second Street intersection remains as a priority controlled T-intersection. The intersection layout is shown in **Figure 7-6** with the analysis summary in **Table 7-5**. **Appendix E** contains the detailed SIDRA results.

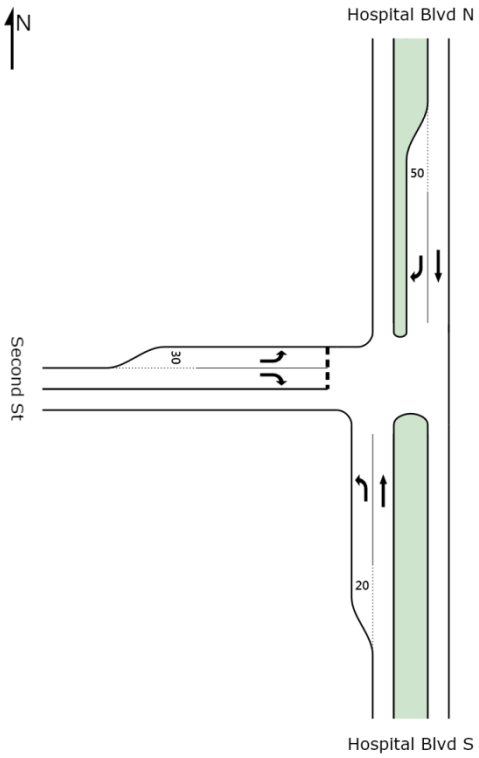



**Figure 7-6 Hospital Boulevard / Second Street – SIDRA Intersection Layout**

**Table 7-5 Hospital Boulevard / Second Street – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | 2026 Legacy Adjusted Model | | |
|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | DOS | Delay | 95% Queue Length |
| AM Peak | Hospital Blvd South | 0.18 | 3.6s | 0.0m | 0.18 | 3.4s | 0.0m |
| | Hospital Blvd North | 0.38 | 4.8s | 16.9m | 0.37 | 4.8s | 16.3m |
| | Second Street | 0.28 | 16.3s | 6.9m | 0.27 | 15.9s | 6.6m |
| PM Peak | Hospital Blvd South | 0.12 | 3.3s | 0.0m | 0.12 | 3.2s | 0.0m |
| | Hospital Blvd North | 0.23 | 3.8s | 7.6m | 0.23 | 3.8s | 7.5m |
| | Second Street | 0.34 | 14.4s | 9.8m | 0.32 | 14.1s | 9.1m |

The intersection operates well within the DOS limit of 0.8 for unsignalised intersections in all scenarios. The adjusted scenario results in a minor improvement to intersection performance.

### 7.1.6 HOSPITAL BOULEVARD / INNOVATION DRIVE

The priority controlled intersection of Hospital Boulevard / Innovation Drive will not change from the previous scenarios. The layout is reiterated in **Figure 7-7** with the analysis summary for the Additional Connections scenario in **Table 7-6**. The detailed results are included in **Appendix E**.

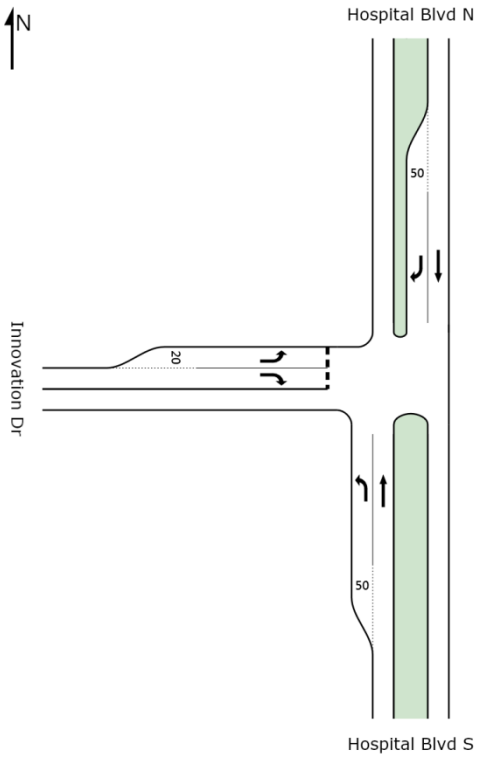



**Figure 7-7 Hospital Boulevard / Innovation Drive – SIDRA Intersection Layout**

**Table 7-6 Hospital Boulevard / Innovation Drive – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | 2026 Legacy Adjusted Model | | |
|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | DOS | Delay | 95% Queue Length |
| AM Peak | Hospital Blvd South | 0.24 | 0.2s | 0.0m | 0.24 | 0.2s | 0.0m |
| | Hospital Blvd North | 0.45 | 1.4s | 3.9m | 0.44 | 1.4s | 3.9m |
| | Innovation Drive | 0.66 | 27.1s | 21.0m | 0.63 | 25.7s | 19.5m |
| PM Peak | Hospital Blvd South | 0.19 | 0.5s | 0.0m | 0.19 | 0.4s | 0.0m |
| | Hospital Blvd North | 0.44 | 5.1s | 23.9m | 0.44 | 5.1s | 23.9m |
| | Innovation Drive | 0.51 | 24.3s | 13.6m | 0.49 | 23.4s | 12.8m |

The intersection will operate with space capacity in both the AM and PM peak in the Legacy Base and Legacy Adjusted scenarios. The average delays and queuing for each of the approaches are expected to be small.

### 7.1.7 PARKLANDS DRIVE / MAIN STREET / ENGINEERING DRIVE

The major Parklands Drive / Main Street / Engineering Drive intersection will not change from the previous scenarios. The intersection layout is shown in **Figure 7-8** with the SIDRA analysis summary in **Table 7-7**. The detailed SIDRA results are included in **Appendix E**.

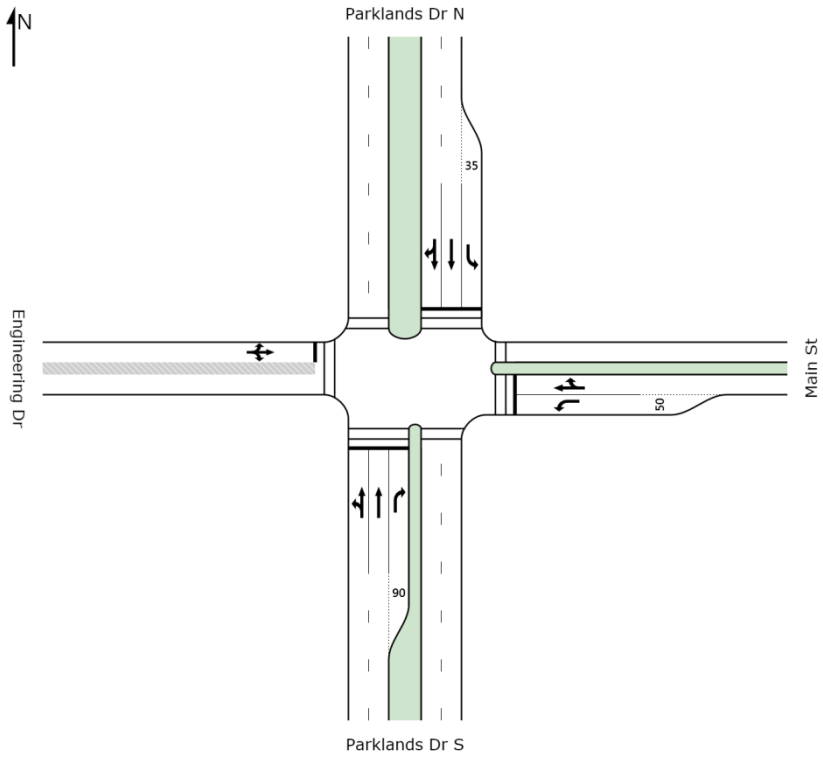



**Figure 7-8 Parklands Drive / Main Street / Engineering Drive – SIDRA Intersection Summary**

**Table 7-7 Parklands Drive / Main Street / Engineering Drive – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | | 2026 Legacy Adjusted Model | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | Cycle Time | DOS | Delay | 95% Queue Length | Cycle Time |
| AM Peak | Parklands Dr South | 0.91 | 46.5s | 147m | 125s | 0.98 | 43.4s | 147m | 125s |
| | Main Street | 0.89 | 43.9s | 118m | | 0.94 | 49.2s | 131m | |
| | Parklands Dr North | 1.03 | 133s | 183m | | 1.04 | 144s | 193m | |
| | Engineering Drive | 0.86 | 76.9s | 74.1m | | 0.95 | 95.2s | 86.3m | |
| PM Peak | Parklands Dr South | 0.82 | 43.1s | 125m | 125s | 0.84 | 42.4s | 136m | 125s |
| | Main Street | 0.76 | 43.9s | 67.7m | | 0.83 | 45.1s | 70.2m | |
| | Parklands Dr North | 1.01 | 114s | 162m | | 1.05 | 151s | 200m | |
| | Engineering Drive | 0.78 | 68.3s | 84.6m | | 0.85 | 73.0s | 89.6m | |

The Parklands Drive North approach dominates the intersection performance due the right turn issues discussed in **Section 5.1.7** and **Section 6.1.7**. There is also an increase in the right turn movement from Parklands Drive South into Main Street in the AM peak. These two issues cause the intersection to fail and exceed the DOS threshold of 0.9 in the AM and PM peaks. It also results in extensive queuing on all approaches.

The Legacy Adjusted scenario has a negative impact on the intersection operation. It increases the traffic on Parklands Drive South which pushed all of the approaches above DOS 0.9 in the AM peak in order to minimise the modelled delays. The PM peak also experiences a decrease in intersection performance.

## 7.1.8 PARKLANDS DRIVE / FIRST STREET

The Parklands Drive / First Street intersection will retain its layout from the previous scenarios. The intersection layout is shown in **Figure 7-9** with the analysis summary presented in **Table 7-8**. The detailed results are in **Appendix E**.

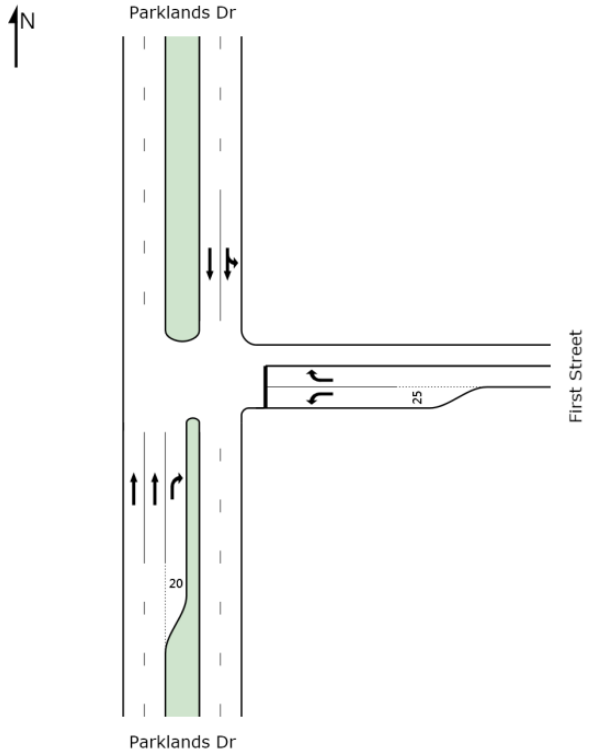



**Figure 7-9 Parklands Drive / First Street – SIDRA Intersection Layout**

**Table 7-8 Parklands Drive / First Street – SIDRA Analysis Summary**

| Peak | Approach | 2026 Legacy Base Model | | | 2026 Legacy Adjusted Model | | |
|---|---|---|---|---|---|---|---|
| | | DOS | Delay | 95% Queue Length | DOS | Delay | 95% Queue Length |
| AM Peak | Parklands Dr South | 0.16 | 0.0s | 0.0m | 0.18 | 0.0s | 0.0m |
| | First Street | 0.37 | 17.5s | 20.0m | 0.39 | 18.2s | 21.4m |
| | Parklands Dr North | 0.15 | 0.7s | 0.0m | 0.16 | 0.6s | 0.0m |
| PM Peak | Parklands Dr South | 0.16 | 0.0s | 0.0m | 0.17 | 0.0s | 0.0m |
| | First Street | 0.41 | 16.0s | 20.4m | 0.42 | 16.5s | 22.2m |
| | Parklands Dr North | 0.12 | 0.8s | 0.0m | 0.13 | 0.8s | 0.0m |

The intersection will operate under the DOS threshold for unsignalised intersections in all peaks with the queuing and average delays expected to be acceptable.

# 8 CONCLUSIONS AND RECOMMENDATIONS

The findings and recommendations from the traffic analysis of the Gold Coast Parklands Redevelopment are outlined below.

## 8.1 ANALYSIS SCENARIOS

### 8.1.1 SMITH STREET WORST CASE SCENARIO

The Smith Street Worst Case scenario results in low performance for the Smith Street / Parklands Drive intersection and the Hospital Boulevard / Innovation Drive intersection. The Smith Street / Parklands Drive intersection exhibits poor performance due to the through lanes being at capacity. The Innovation Drive leg of the Hospital Boulevard / Innovation Drive intersection operates over capacity in the AM peak due to the high volumes on Hospital Boulevard. At the Smith Street / Hospital Boulevard intersection, the left turn slip lane from Hospital Boulevard is unable to accommodate the modelled turning volumes.

The other intersections all operate with space capacity. The restriction on traffic movements due to lane capacity on Smith Street reduces the traffic within the Parklands site and allows the internal intersections to operate more effectively in servicing the traffic movements within the site. The Parklands Drive / Main Street / Engineering Drive intersection reaches capacity in the Legacy Adjusted scenario as the right turning vehicles from Parklands Drive North into Engineering Drive do not have a separate lane and are queuing with the through traffic.

### 8.1.2 SMITH STREET BEST CASE SCENARIO

In the Best Case scenario for Smith Street, the additional lanes allow the Smith Street / Parklands Drive intersection to operate under capacity. It also draws traffic towards Smith Street and as a result, the Hospital Boulevard / Innovation Drive intersection can operate as a priority controlled intersection. The Smith Street / Hospital Boulevard intersection still has the left turn slip lane operating over capacity.

The upgrades to Smith Street mean that it can accommodate more traffic. As a result, the traffic volumes along Parklands Drive and Hospital Boulevard between Smith Street and Main Street increase. This does not impact the Hospital Boulevard intersections as they all operate with spare capacity.

The Parklands Drive / Main Street / Engineering Drive intersection is at capacity in the AM peak on both Parklands Drive approaches. The northern approach experiences the same issues with the right turning vehicles as encountered in the Worst Case scenario. The southern approach experiences an increased right turn volume which cannot clear the intersection with the green time provided with the GCRT phasing arrangement.

### 8.1.3 ADDITIONAL CONNECTIONS SCENARIO

The Additional Connections scenario is based on the Best Case scenario and the results indicate that most of the intersections will operate in a very similar manner.

The major change to the Smith Street / Parklands Drive intersection in removing the car park access does improve the intersection operation. However this has adverse effects on the Smith Street / Hospital Boulevard and Parklands Drive / Main Street / Engineering Drive intersections. The Smith Street / Hospital Boulevard intersection fails in both the AM and PM peaks in the Base scenario however this is mitigated in the Adjusted scenario. The Parklands Drive

intersection fails in all peaks and scenarios due to the right turn issue on Parklands Drive North. It also operates over capacity on Parklands Drive South in the AM peak due to the heavy right turn movement into Main Street.

## 8.2 SUMMARY

The following conclusions can be drawn from the intersection analysis of the new and impacted intersections arising from the Gold Coast Parklands Redevelopment:

- The intersections with Smith Street are anticipated to be operating at or near capacity in 2026 due to the high through volumes on Smith Street and the high turning volumes into and out of the Parklands site in all scenarios;
- The removal of the car park access improves the operation of the Smith Street / Parklands Drive intersection;
- The introduction of the GCRT signal phasing to the Parklands Drive / Main Street / Engineering Drive intersection causes the intersection to fail during the AM peak for most scenarios. The right turn from Parklands Drive into Engineering Drive is restricted by the through movement and the provision of a short right turn bay should be considered;
- The queuing expected on Smith Street and Parklands Drive is reflected in the Paramics model outputs; and
- The intersections along Hospital Boulevard all operate within the DOS threshold and queuing does not cause any issues.

There are long queues expected on Smith Street and Parklands Drive, however most of the intersections can operate within the required performance thresholds in the 2026 Legacy Development scenarios. The adjusted scenario does negatively impact the Parklands Drive / Main Street / Engineering Drive intersection as it is already at or near capacity and cannot accommodate the change in traffic volumes. The Smith Street / Hospital Boulevard intersection operation improves in the adjusted scenario as some of the left turning vehicles are shifted away reducing the pressure on the left slip lane. All of the other intersections experience minimal changes in operation between the two scenarios.

APPENDIX A

# PARAMICS MODEL OUTPUTS – 2026 LEGACY DEVELOPMENT – SMITH STREET SCENARIOS

Figure 3.1: 2026AM C1 Model - Peak Operations

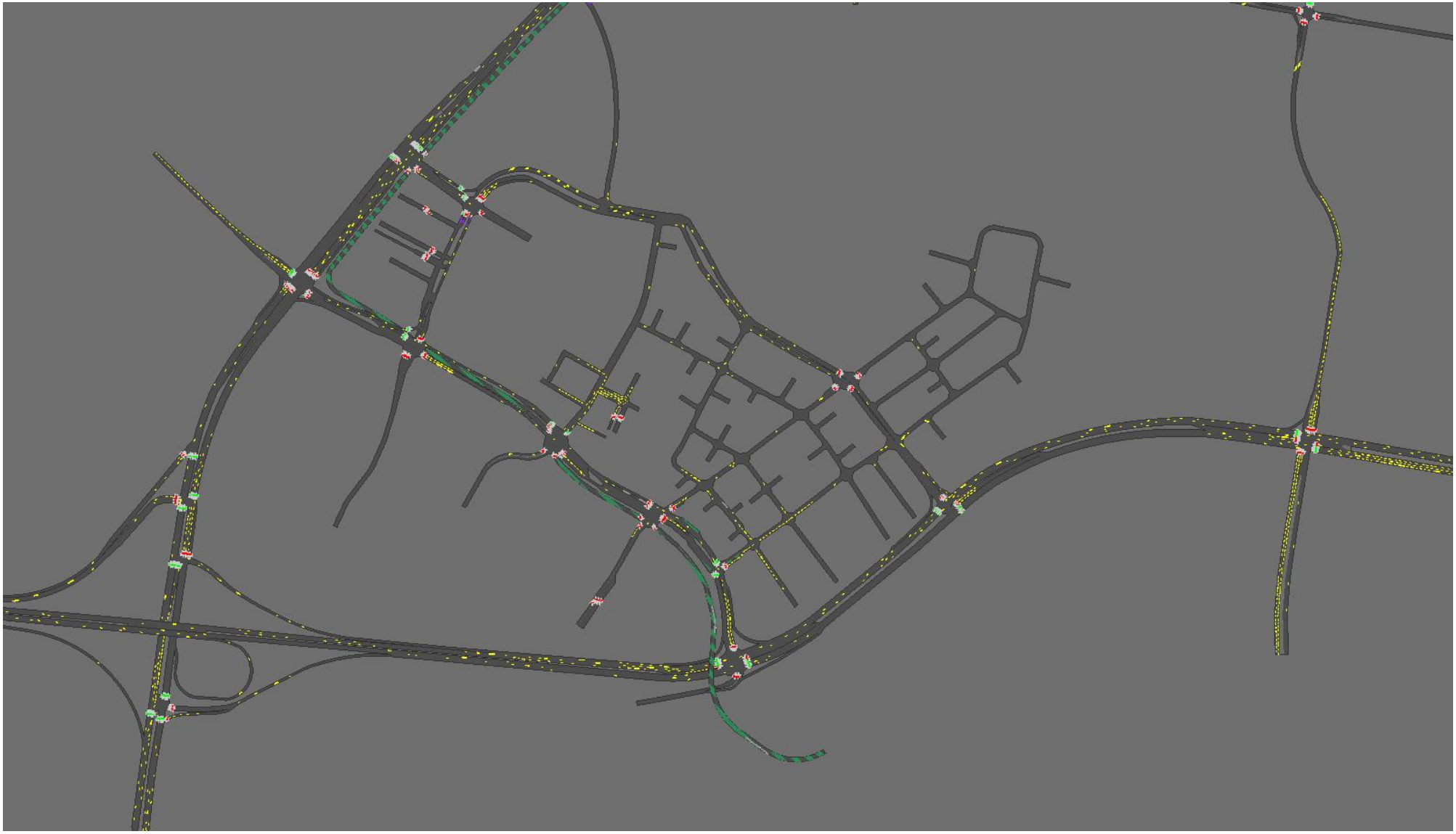


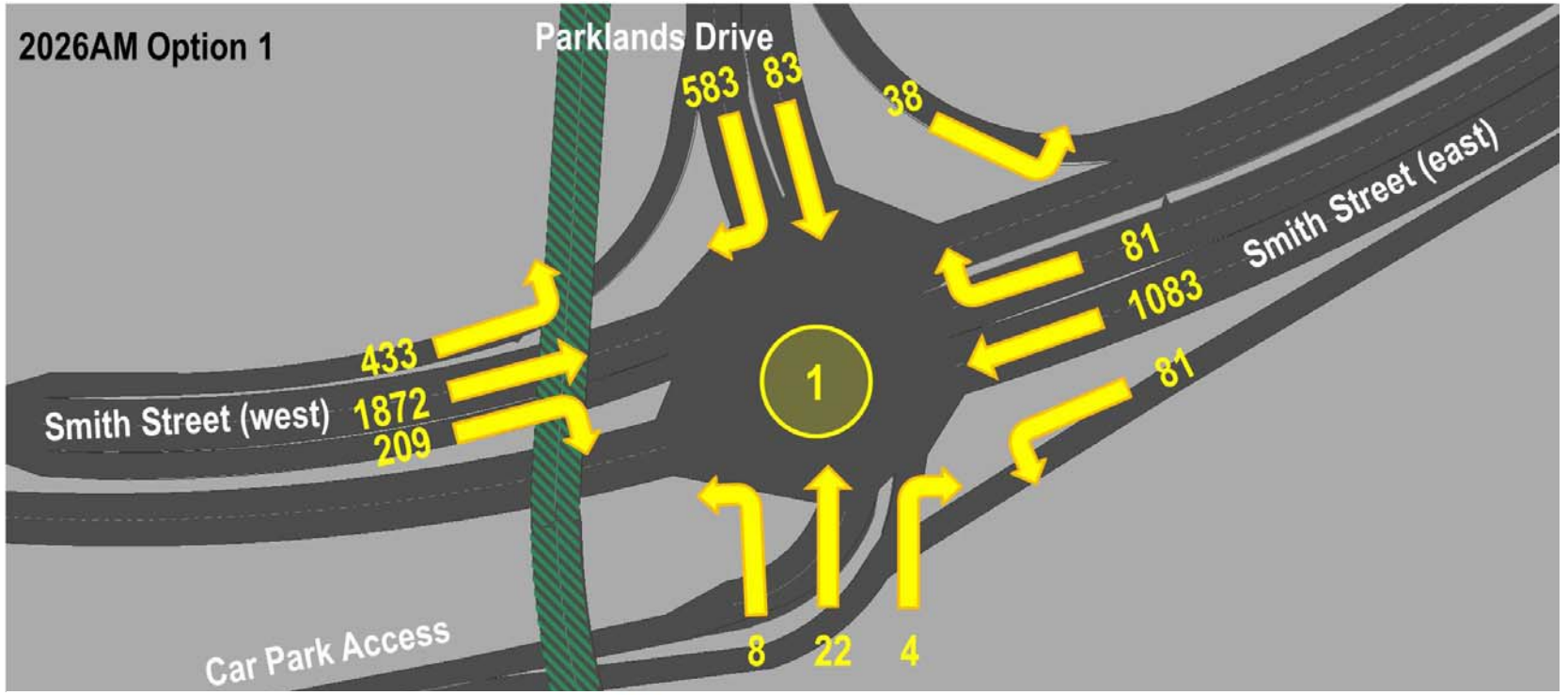
Figure 3.2: 2026AM C2 Model - Peak Operations

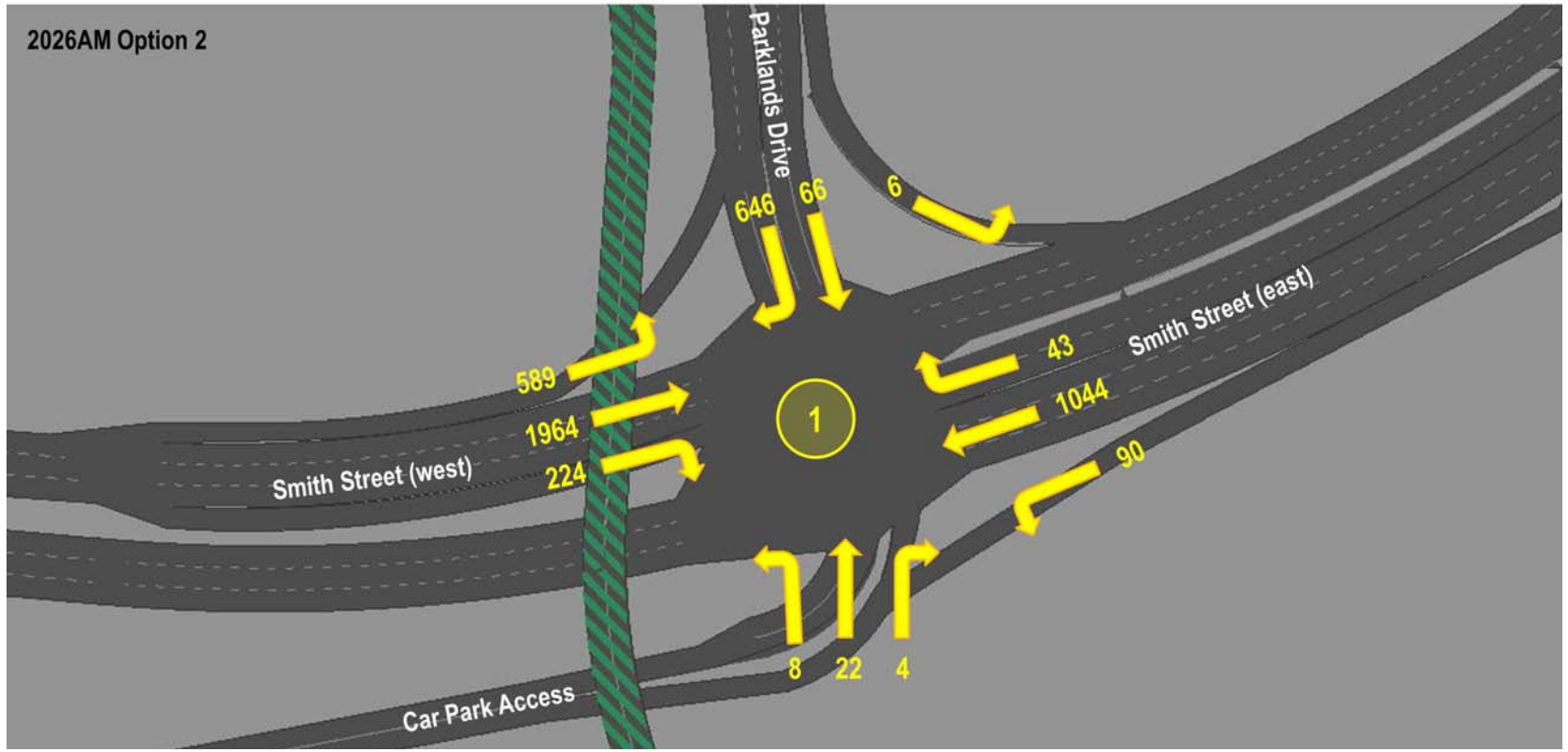
Figure 3.3: 2026PM C1 Model - Peak Operations

Figure 3.4: 2026PM C2 Model - Peak Operations

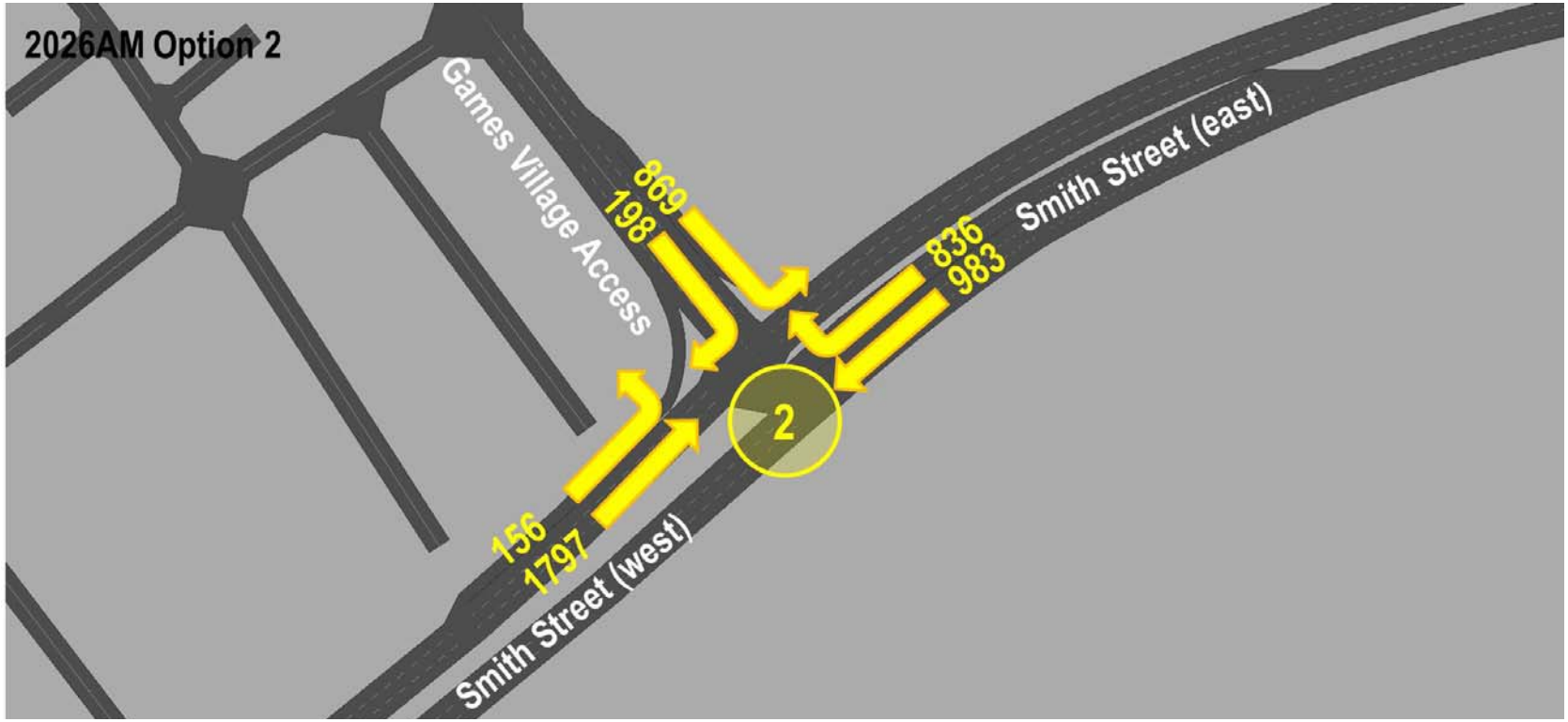
# 2026 AM PEAK

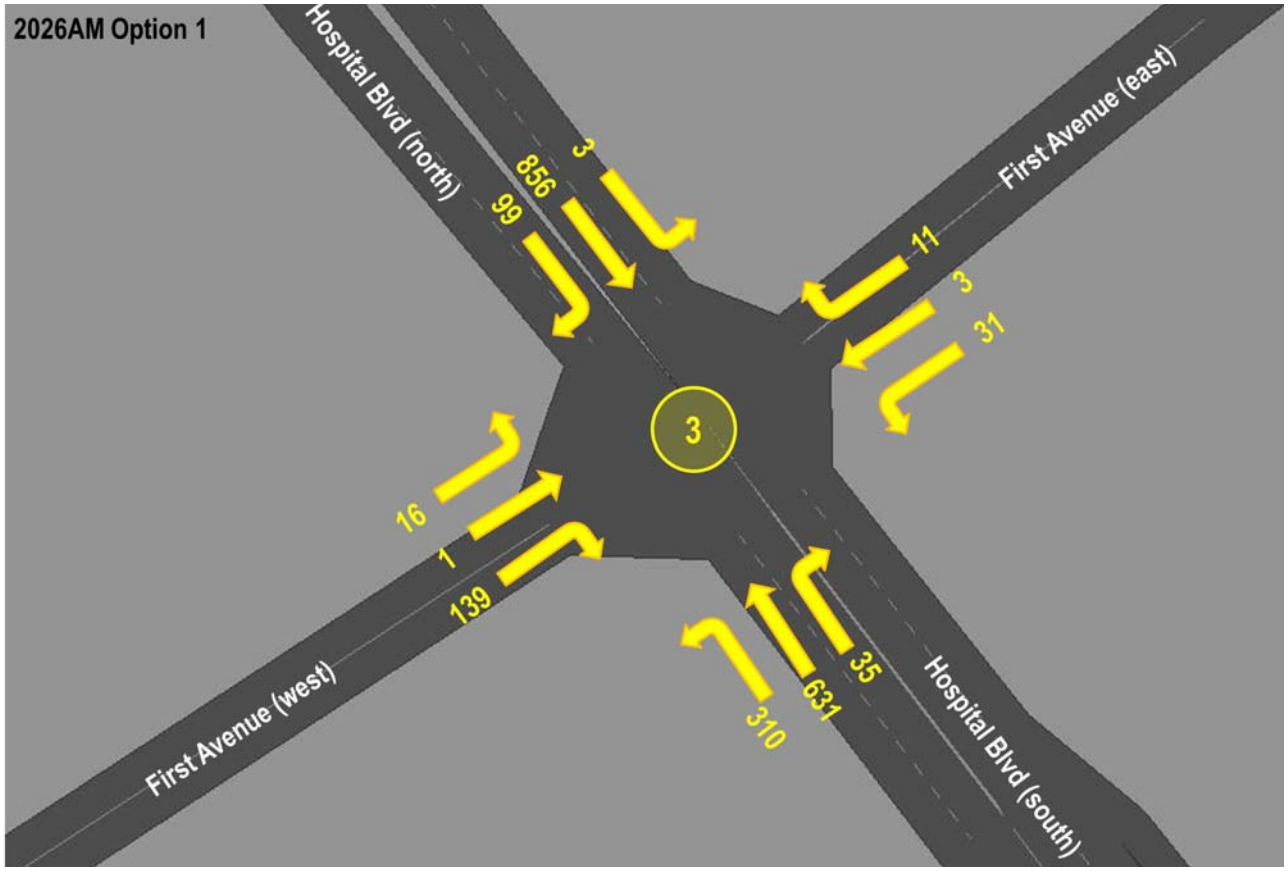

6
5
4
3
2
7
8
1

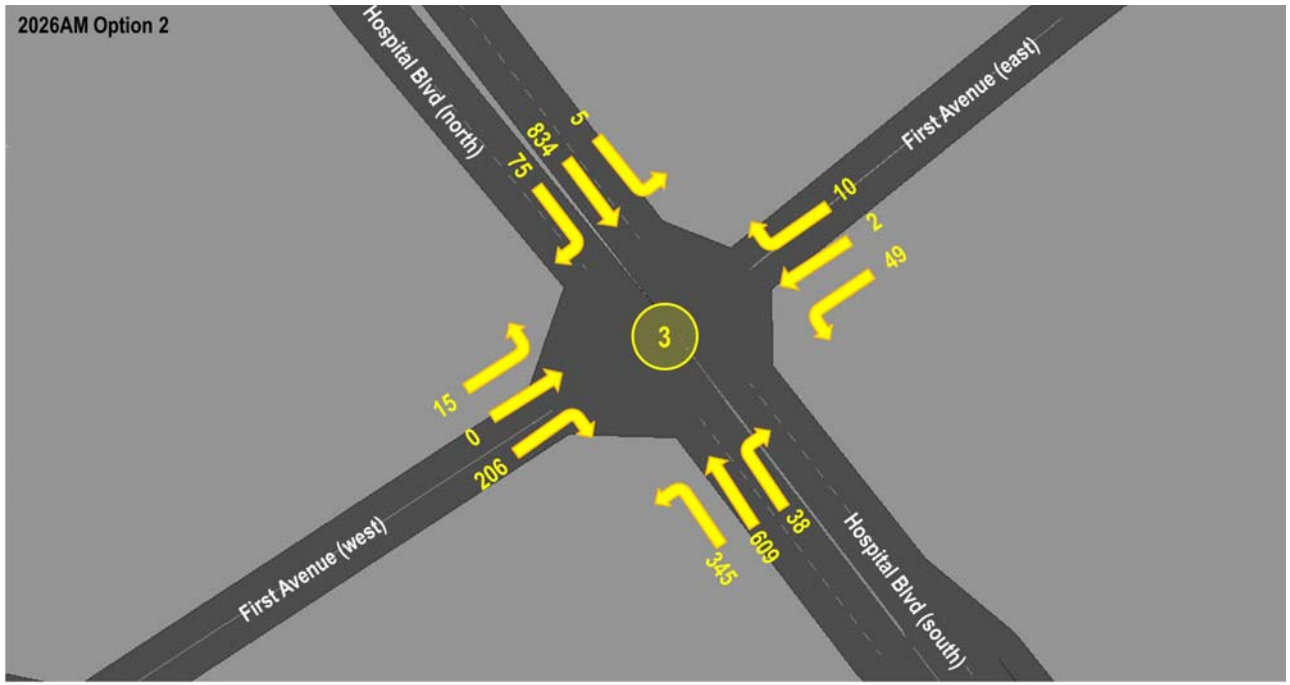

2026AM Option 1
Parklands Drive
583
83
38
81
1083
81
Smith Street (east)
433
Smith Street (west)
1872
209
1
8
22
4
Car Park Access

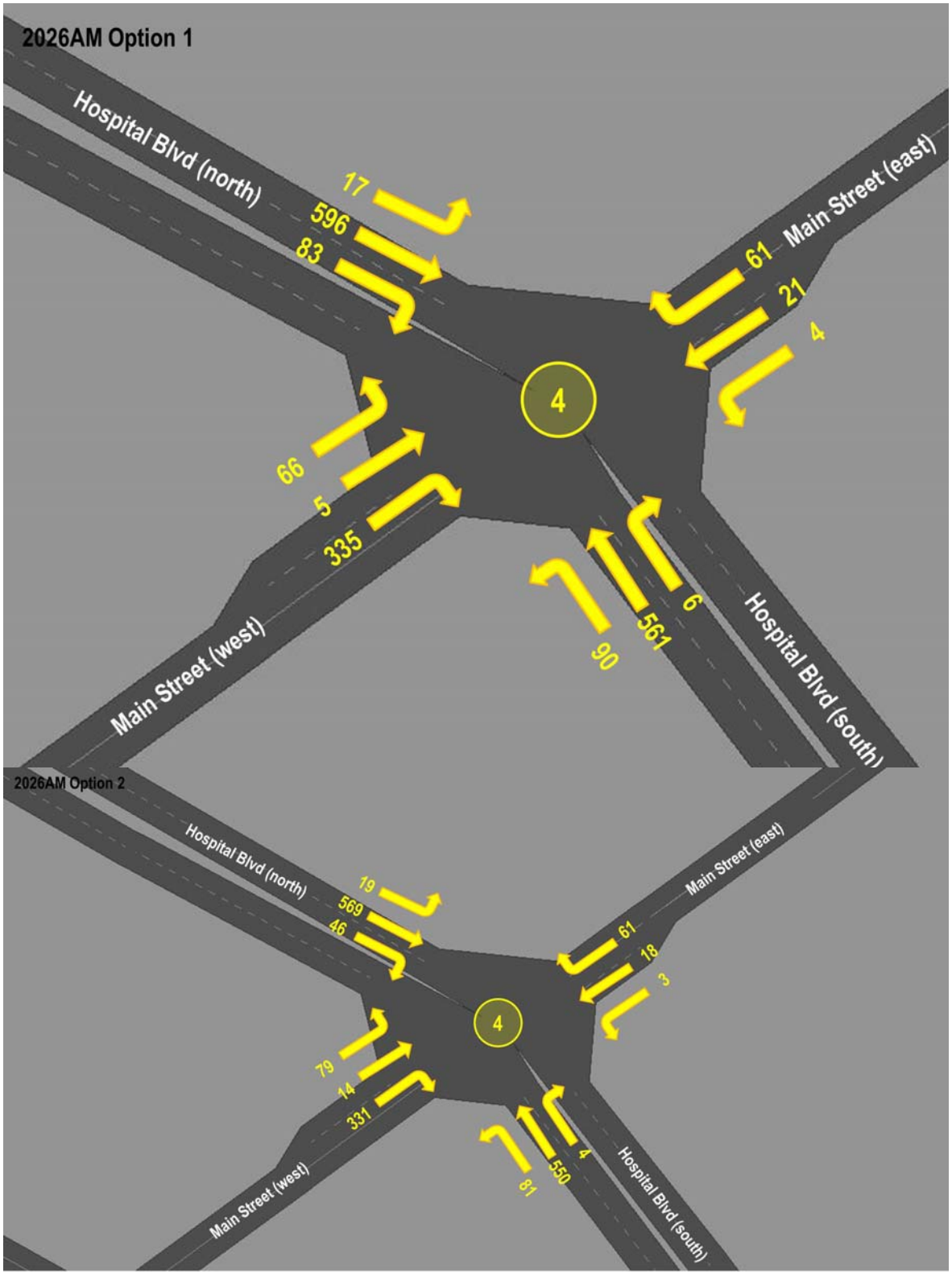

2026AM Option 2
Parklands Drive
646
66
6
43
1044
90
Smith Street (east)
589
1964
224
Smith Street (west)
1
8
22
4
Car Park Access

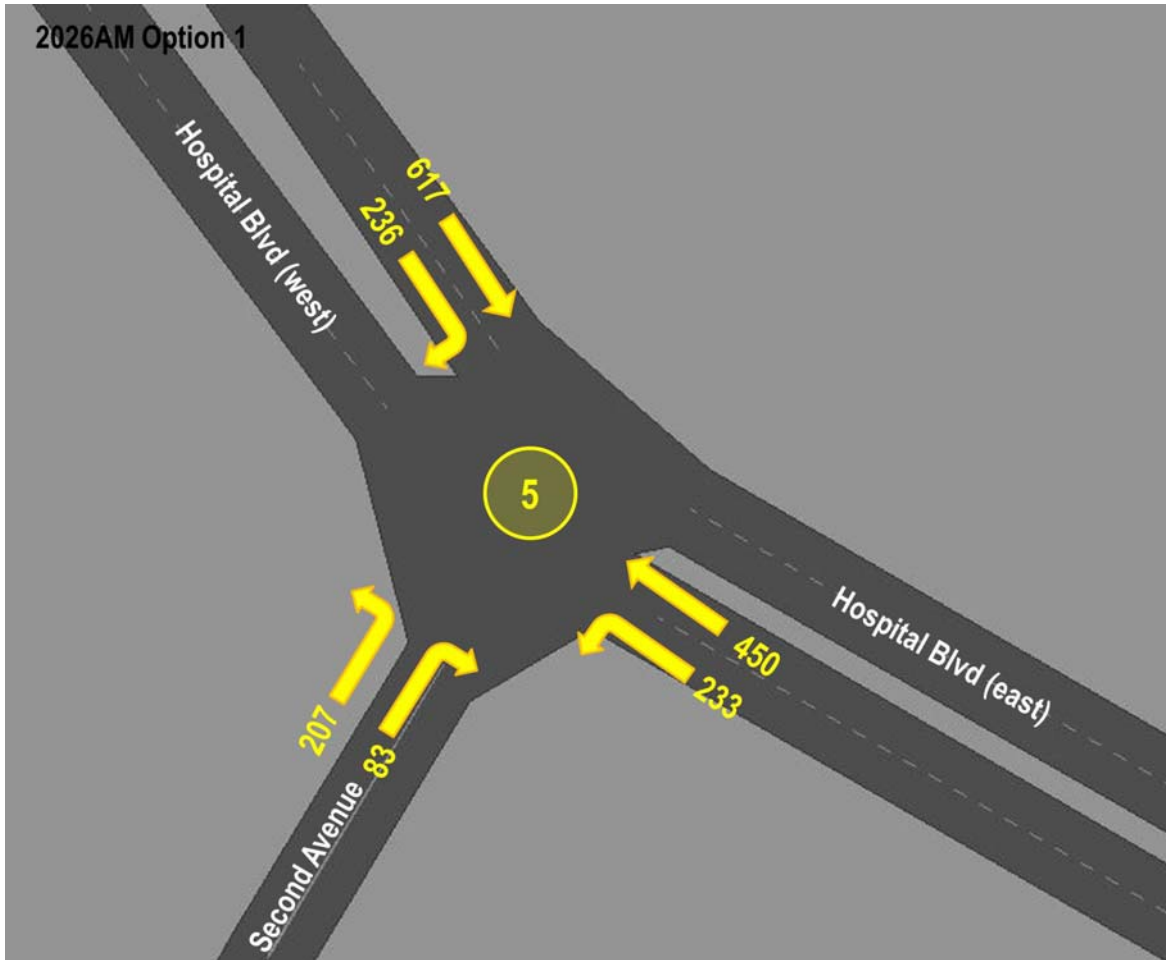

2026AM Option 1
Games Village Access
854
171
Smith Street (east)
833
1086
2
145
1759
Smith Street (west)

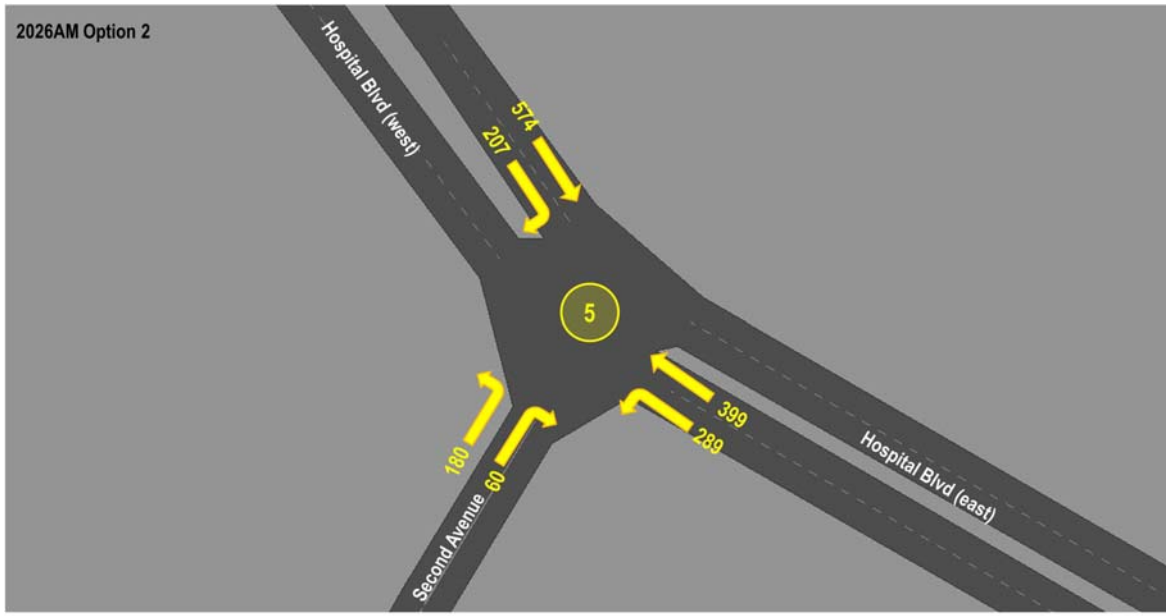

2026AM Option 2
Games Village Access
869
198
836
983
Smith Street (east)
2
156
1797
Smith Street (west)

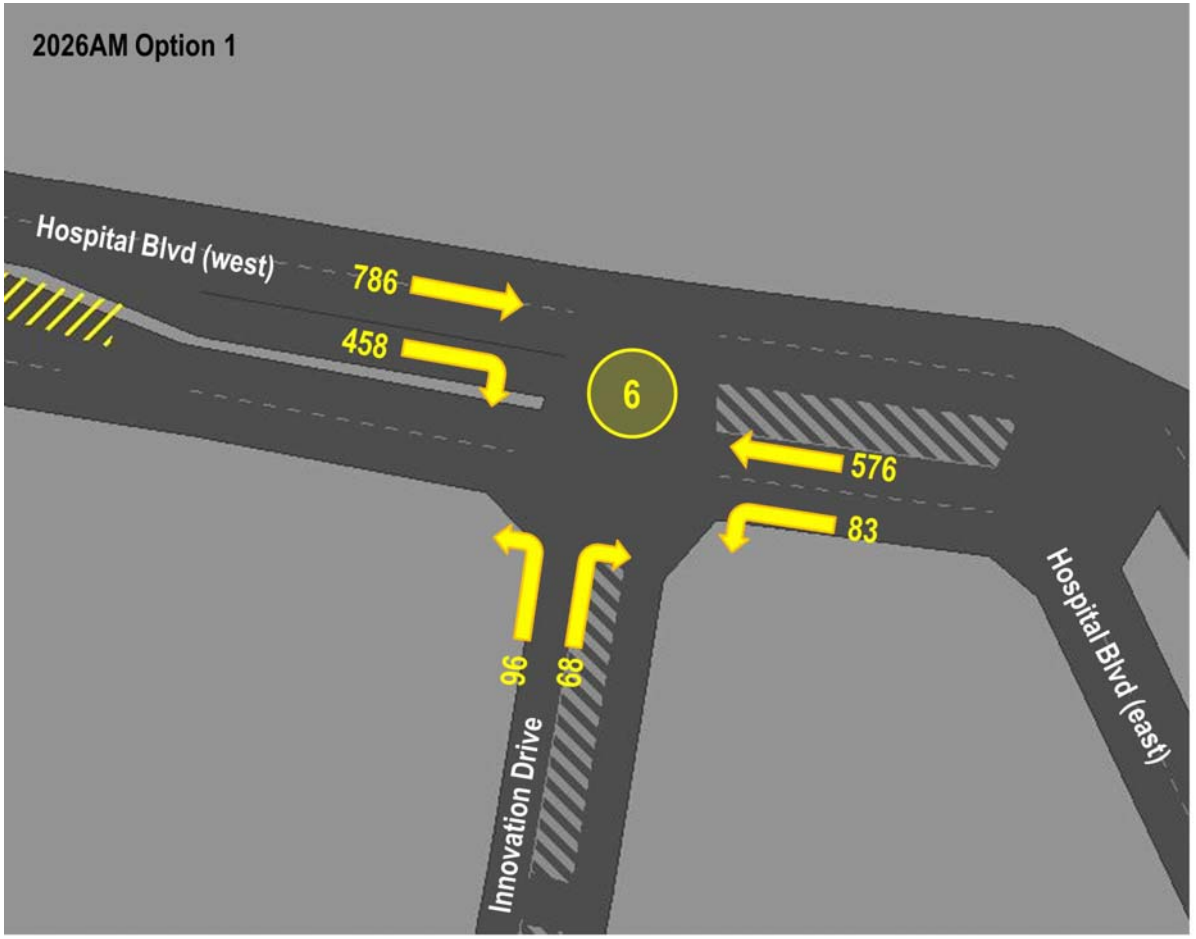

2026AM Option 1
Hospital Blvd (north)
First Avenue (east)
First Avenue (west)
Hospital Blvd (south)
3
856
99
11
3
31
16
1
139
35
631
310
3

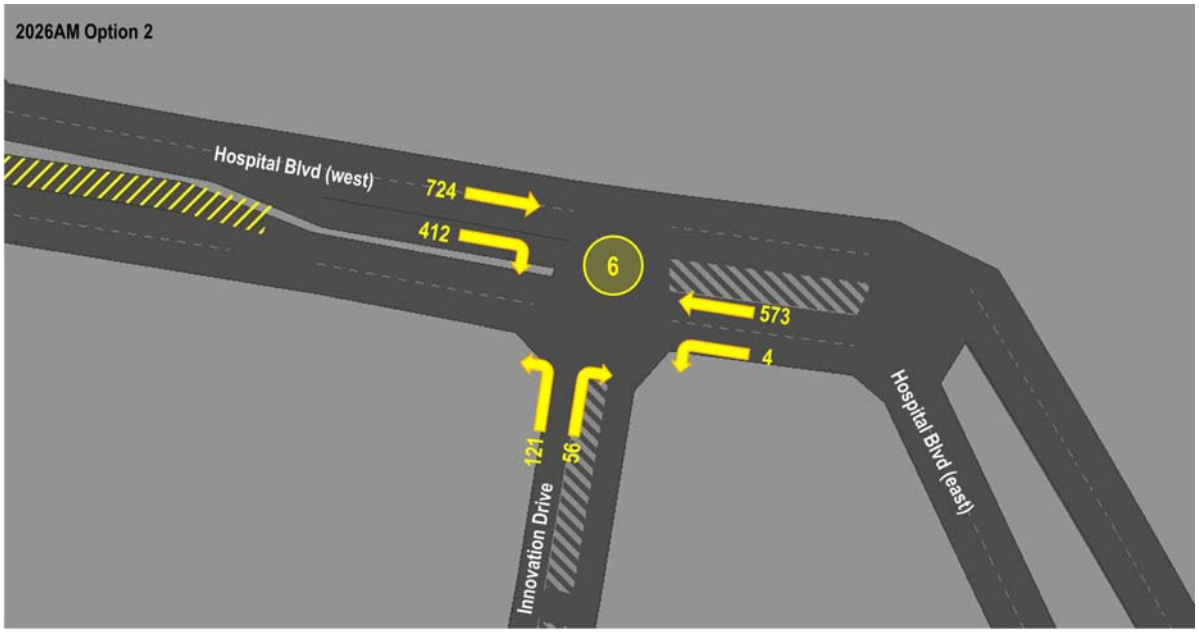

2026AM Option 2
Hospital Blvd (north)
First Avenue (east)
First Avenue (west)
Hospital Blvd (south)
5
834
75
10
2
49
15
0
206
38
609
345
3

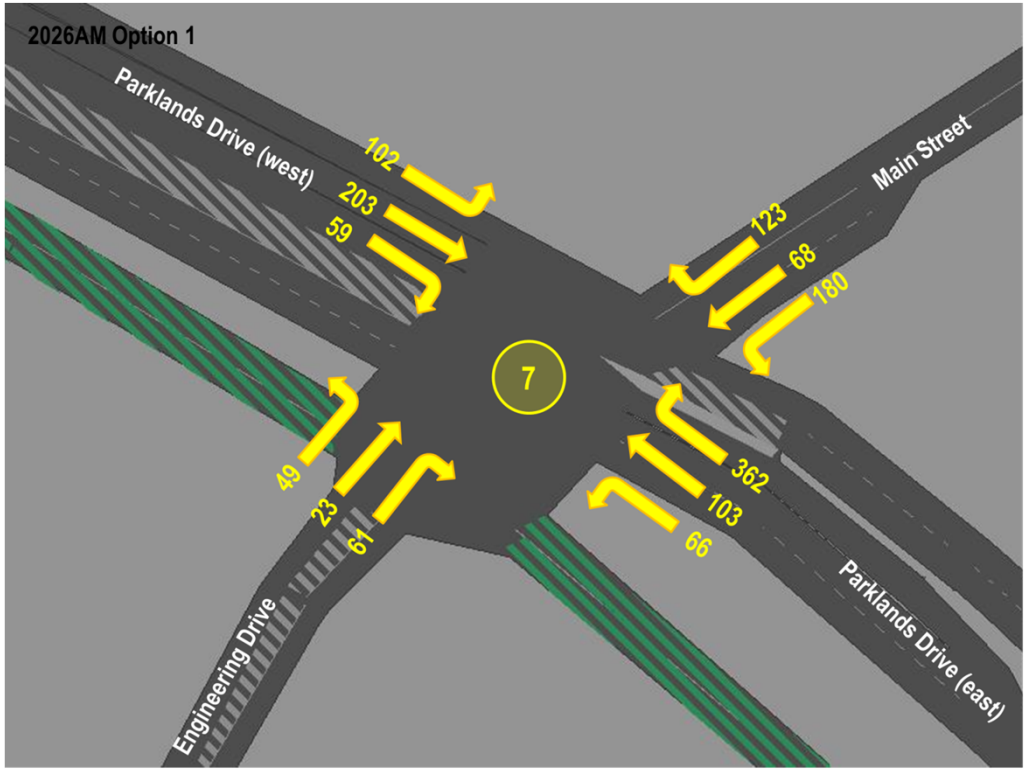

2026AM Option 1
Hospital Blvd (north)
17
596
83
Main Street (east)
61
21
4
4
66
5
335
Main Street (west)
90
561
6
Hospital Blvd (south)
2026AM Option 2
Hospital Blvd (north)
19
569
46
Main Street (east)
61
18
3
4
79
14
331
Main Street (west)
81
550
4
Hospital Blvd (south)

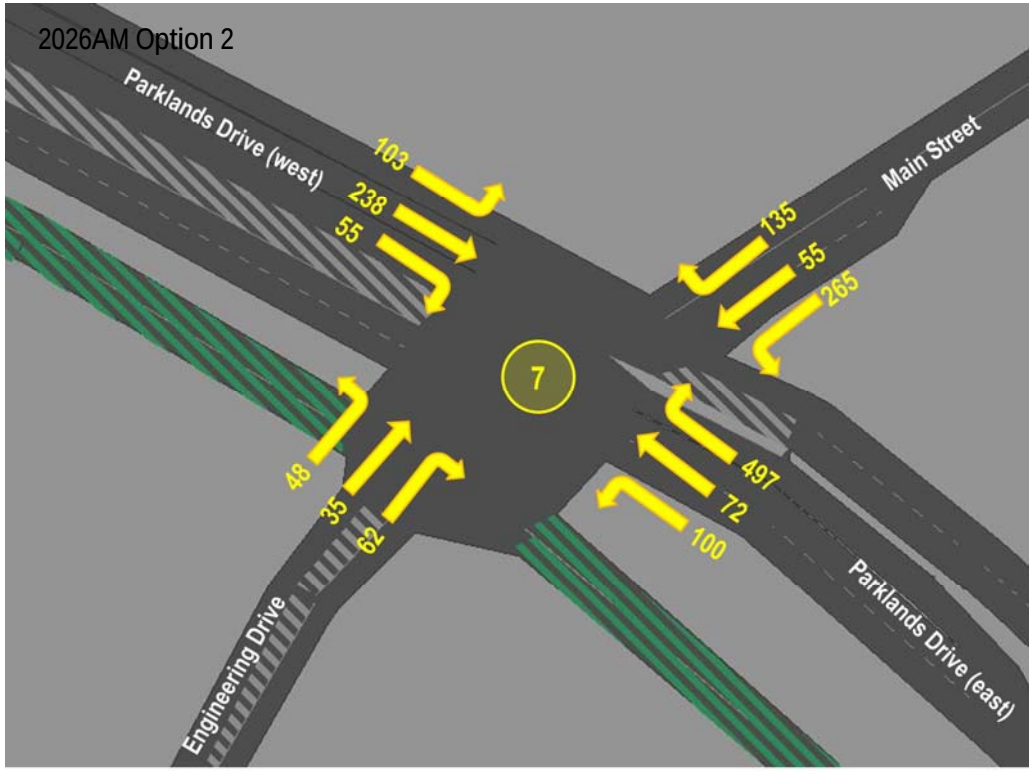

2026AM Option 1
Hospital Blvd (west)
617
236
5
Hospital Blvd (east)
450
233
207
83
Second Avenue

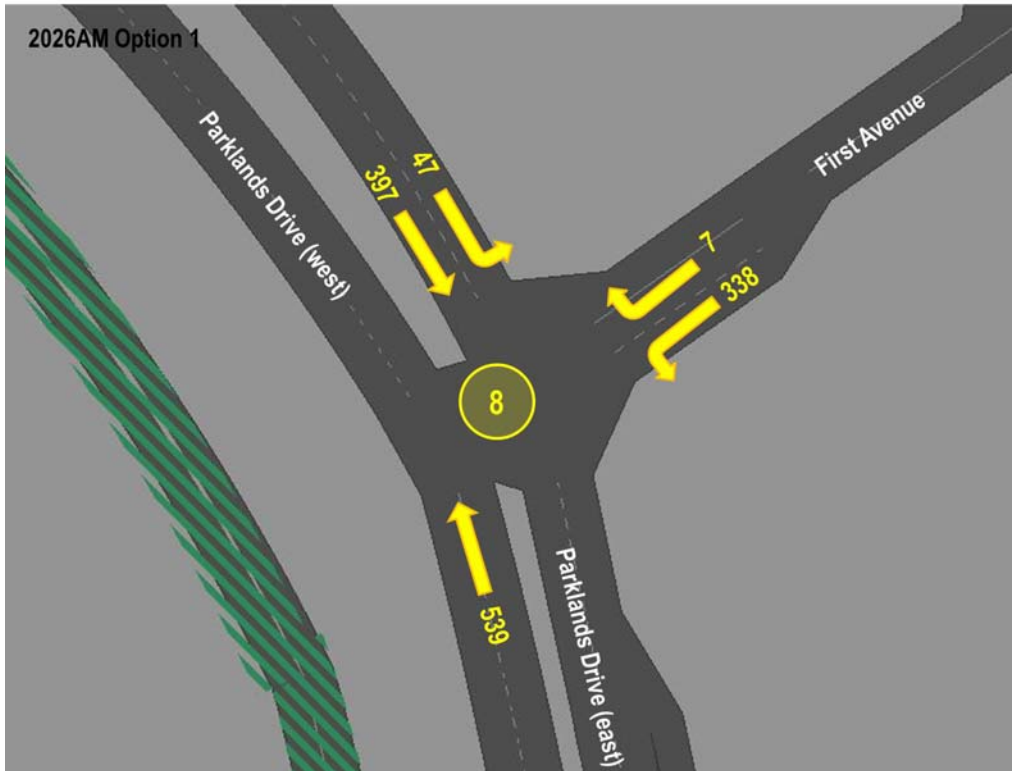

2026AM Option 2
Hospital Blvd (west)
574
207
5
399
289
Hospital Blvd (east)
180
60
Second Avenue


2026AM Option 1
Hospital Blvd (west)
786
458
6
576
83
96
68
Innovation Drive
Hospital Blvd (east)


2026AM Option 2
Hospital Blvd (west)
724
412
6
573
4
121
56
Innovation Drive
Hospital Blvd (east)


2026AM Option 1
Parklands Drive (west)
Main Street
Engineering Drive
Parklands Drive (east)
7
102
203
59
123
68
180
49
23
61
362
103
66


2026AM Option 2
Parklands Drive (west)
Main Street
Engineering Drive
Parklands Drive (east)
7
103
238
55
135
55
265
48
35
62
497
72
100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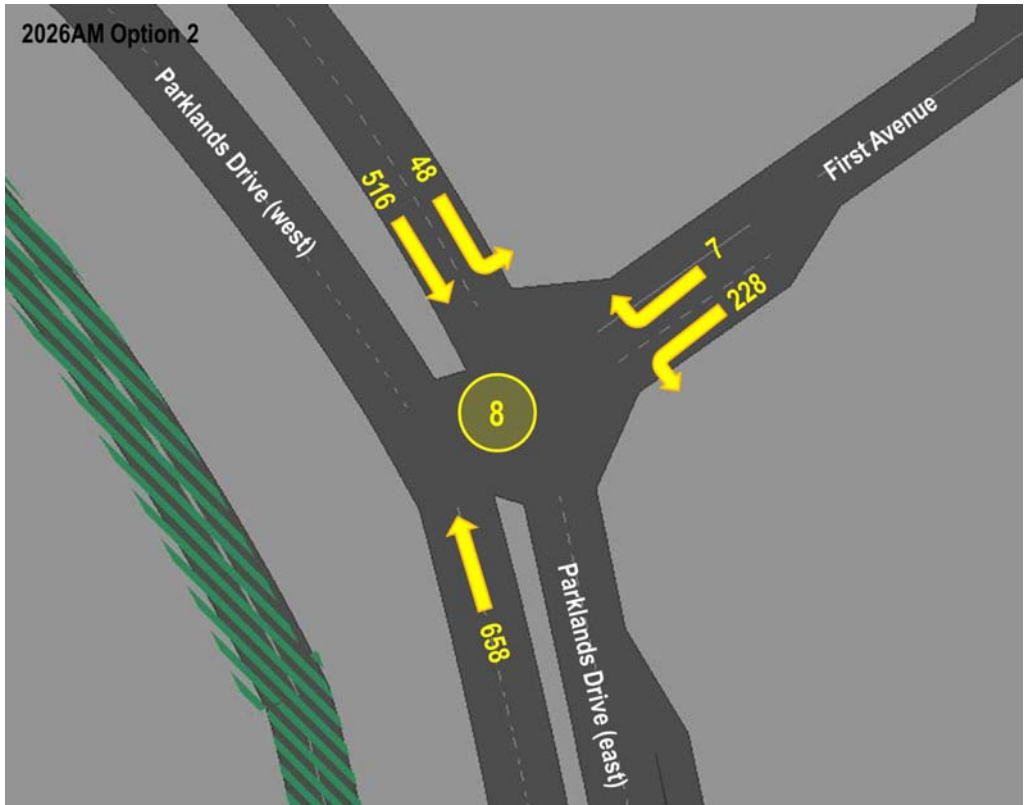
Parklands Drive (west)
First Avenue
Parklands Drive (east)
47
397
7
338
539
8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Parklands Drive (west)
First Avenue
Parklands Drive (east)
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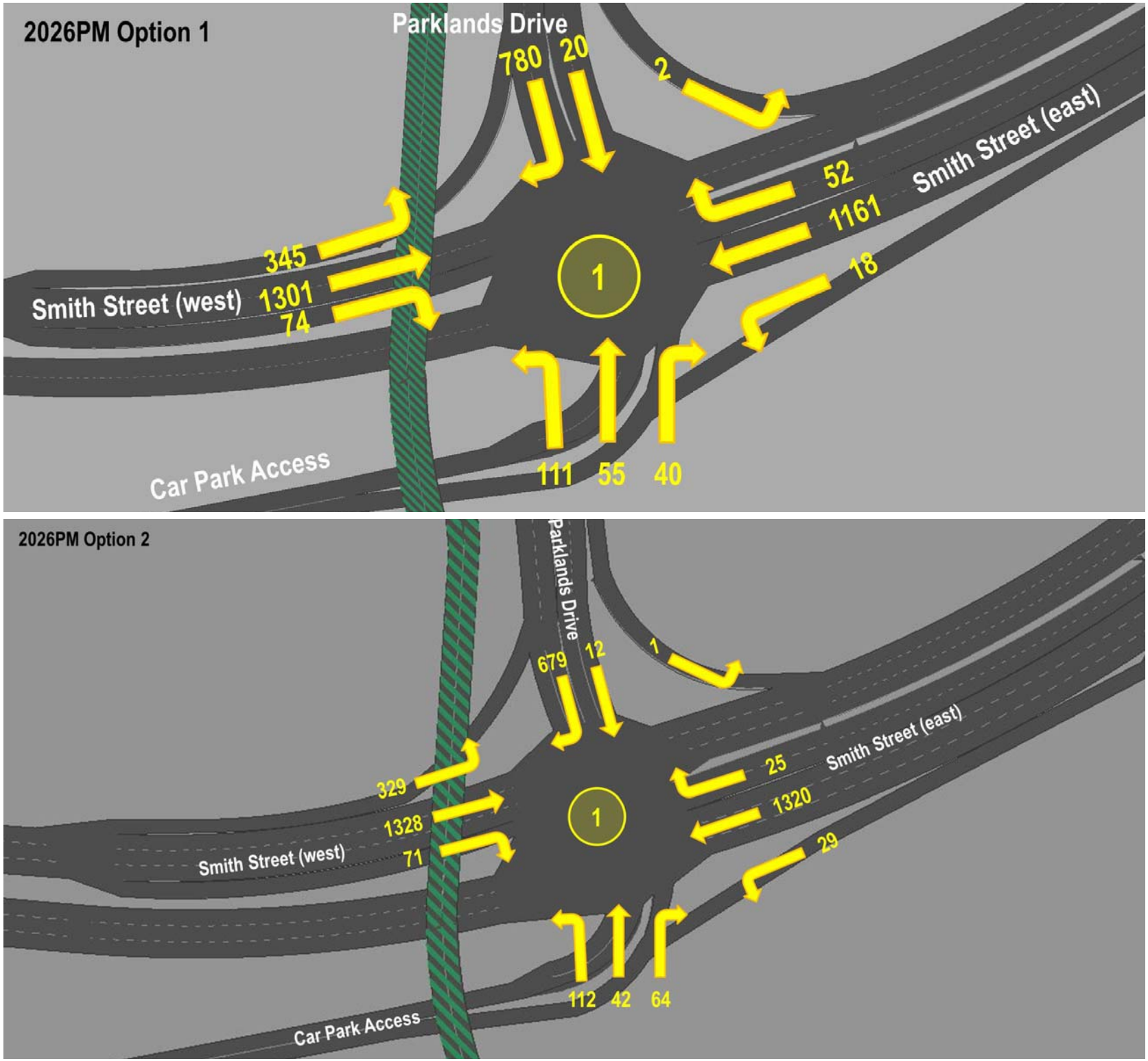
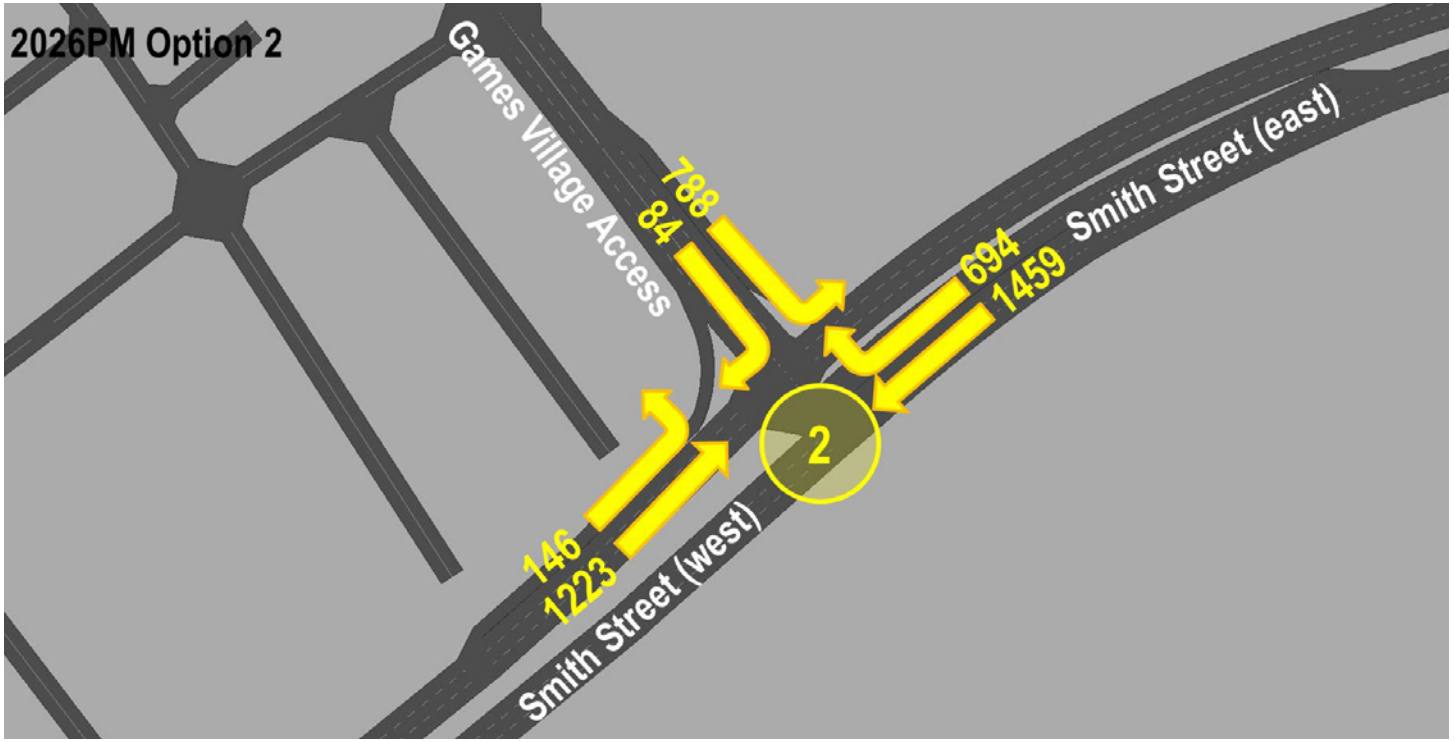
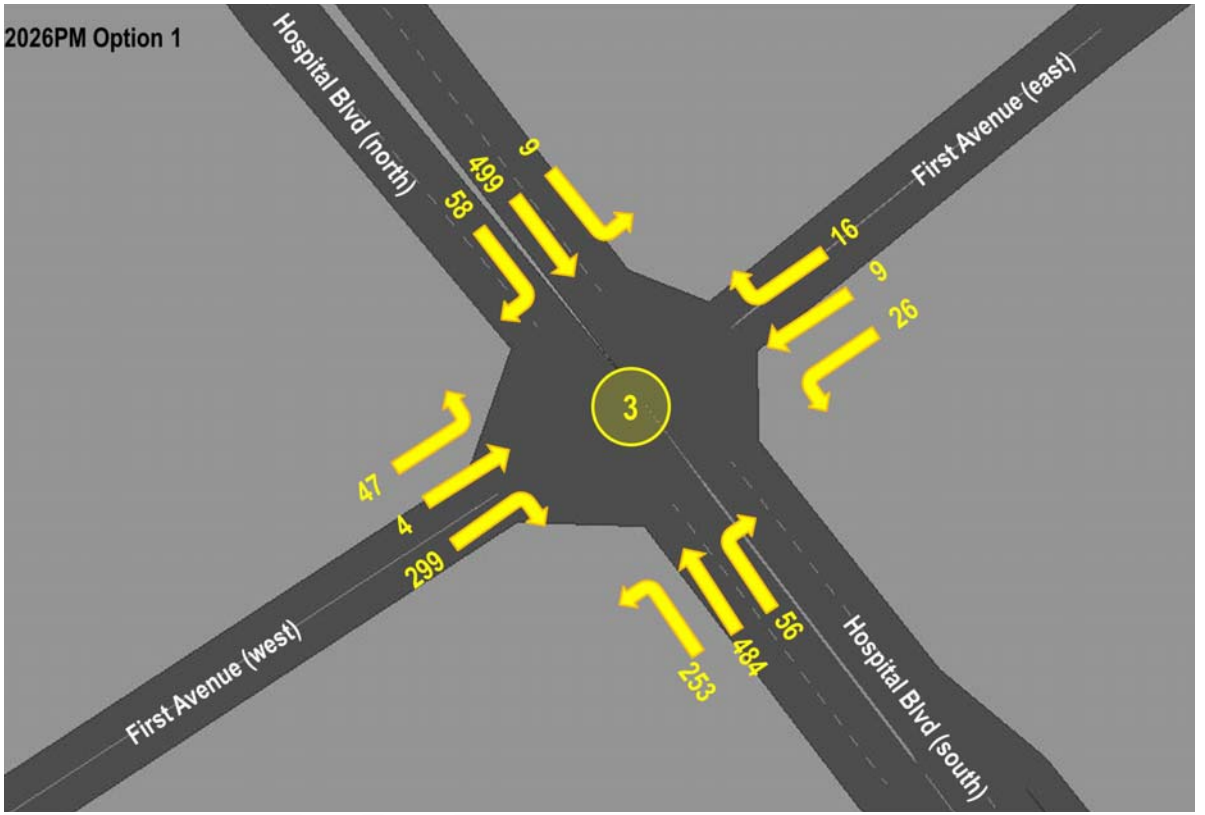
516
7
228
658
8

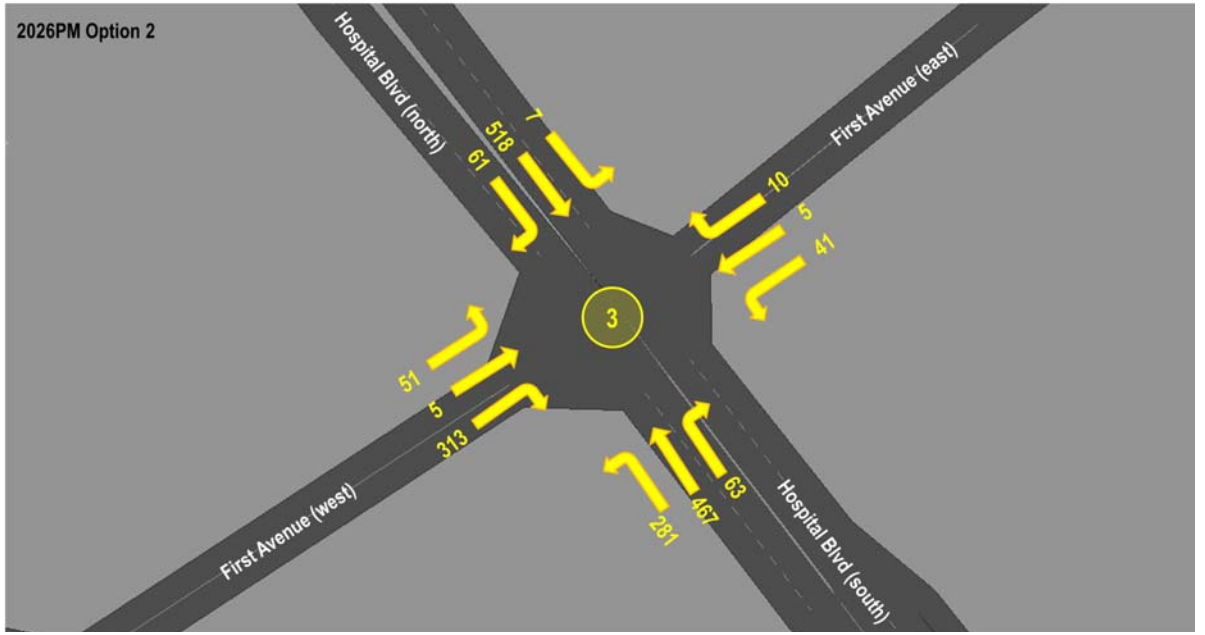
# 2026 PM PEAK

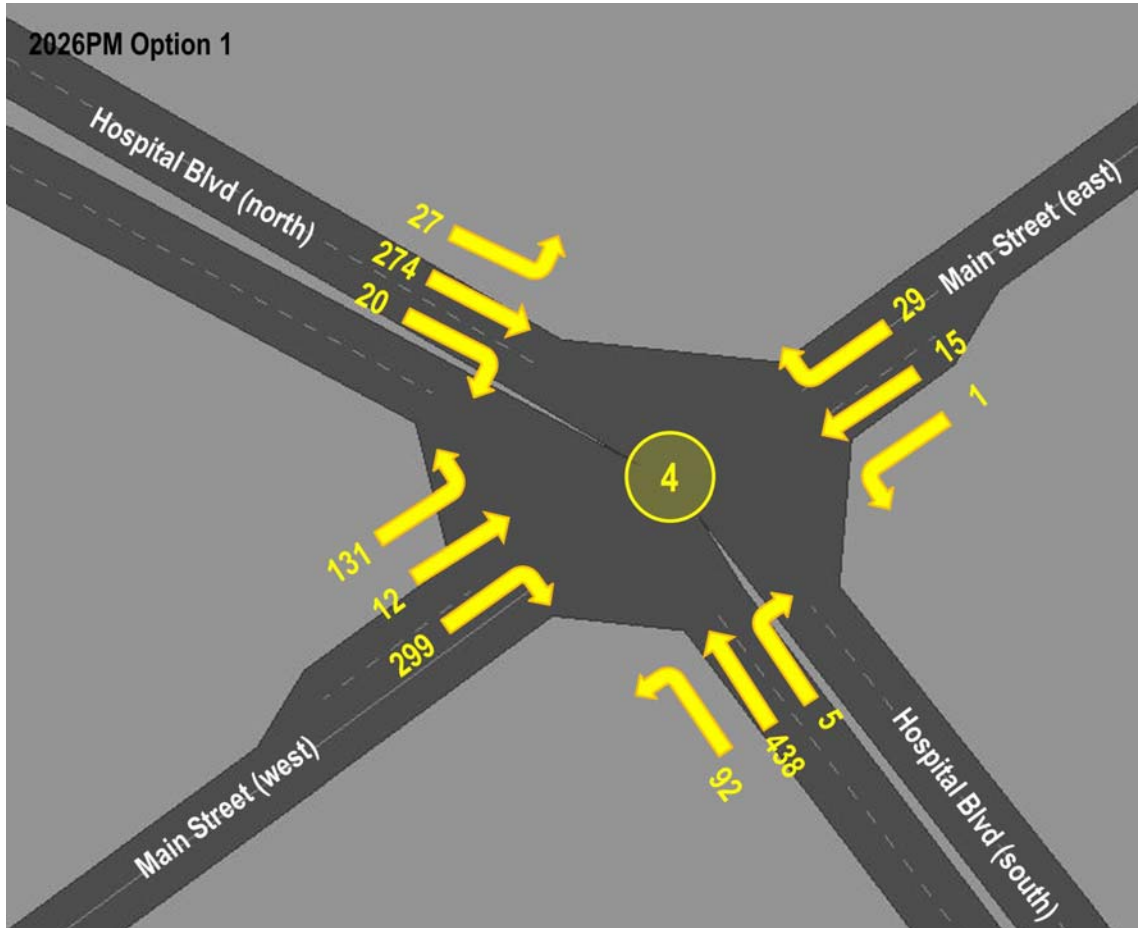

2026PM Option 1
Parklands Drive
780
20
2
52
1161
18
Smith Street (east)
345
1301
74
Smith Street (west)
1
111
55
40
Car Park Access
2026PM Option 2
Parklands Drive
679
12
1
25
1320
29
Smith Street (east)
329
1328
71
Smith Street (west)
1
112
42
64
Car Park Access


2026PM Option 1
Games Village Access
801
24
683
1315
Smith Street (east)
2
114
1216
Smith Street (west)


2026PM Option 2
Games Village Access
788
84
694
1459
Smith Street (east)
2
146
1223
Smith Street (west)


2026PM Option 1
Hospital Blvd (north)
First Avenue (east)
First Avenue (west)
Hospital Blvd (south)
3
9
499
58
16
9
26
47
4
299
253
484
56


2026PM Option 2
Hospital Blvd (north)
First Avenue (east)
First Avenue (west)
Hospital Blvd (south)
3
7
518
61
10
5
41
51
5
313
281
467
63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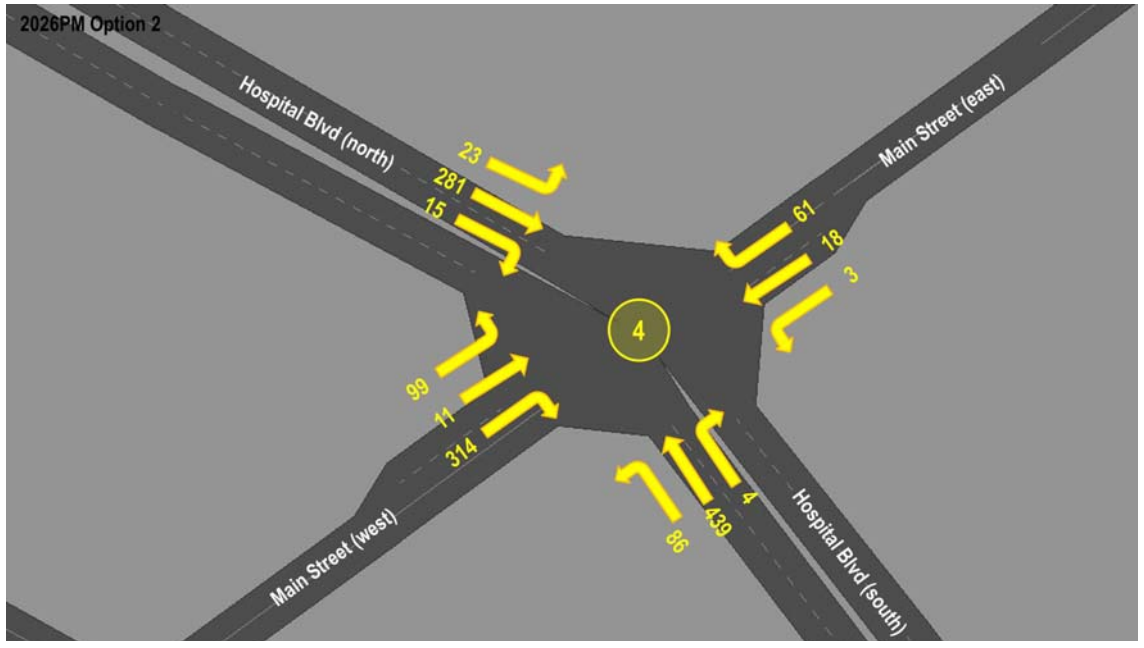
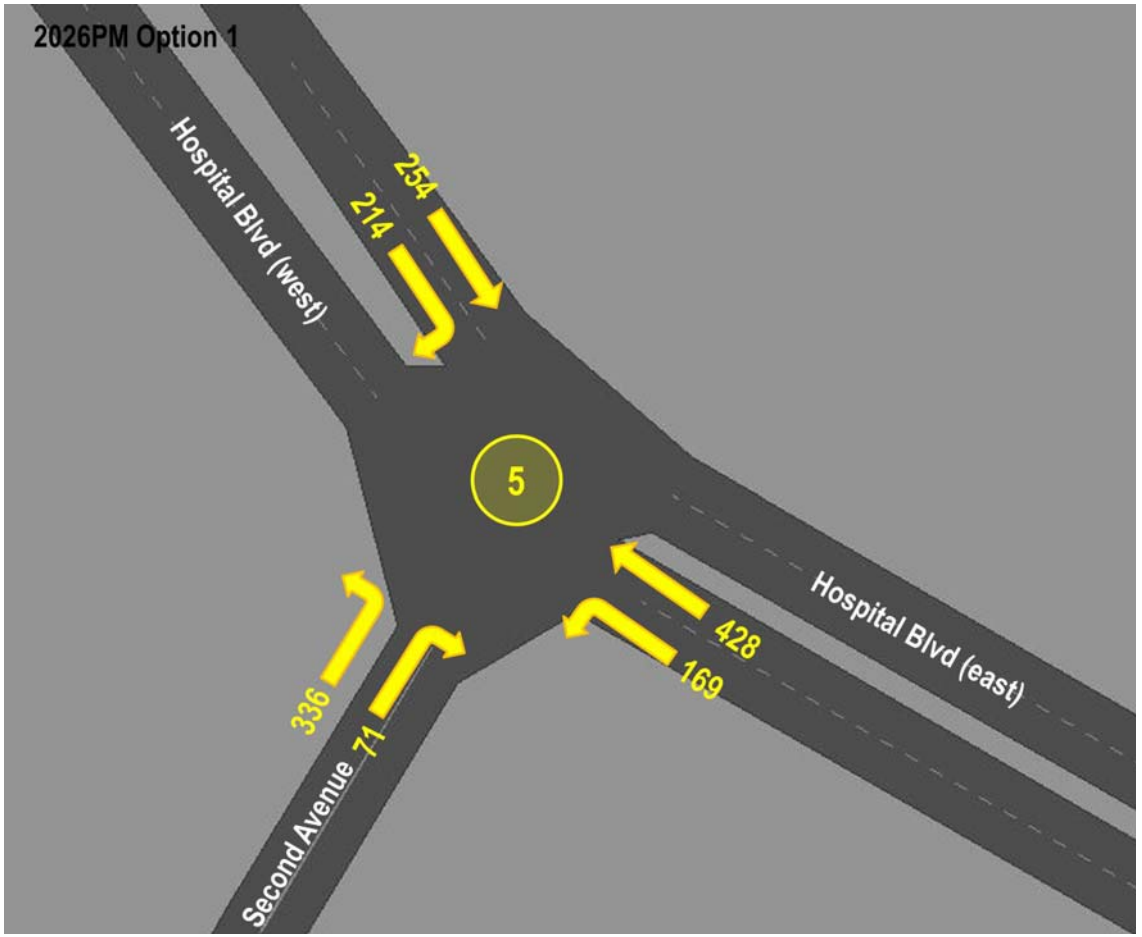
Hospital Blvd (north)
27
274
20
Main Street (east)
29
15
1
4
131
12
299
5
438
92
Main Street (west)
Hospital Blvd (south)


2026PM Option 2
Hospital Blvd (north)
23
281
15
Main Street (east)
61
18
3
4
99
11
314
4
439
86
Main Street (west)
Hospital Blvd (south)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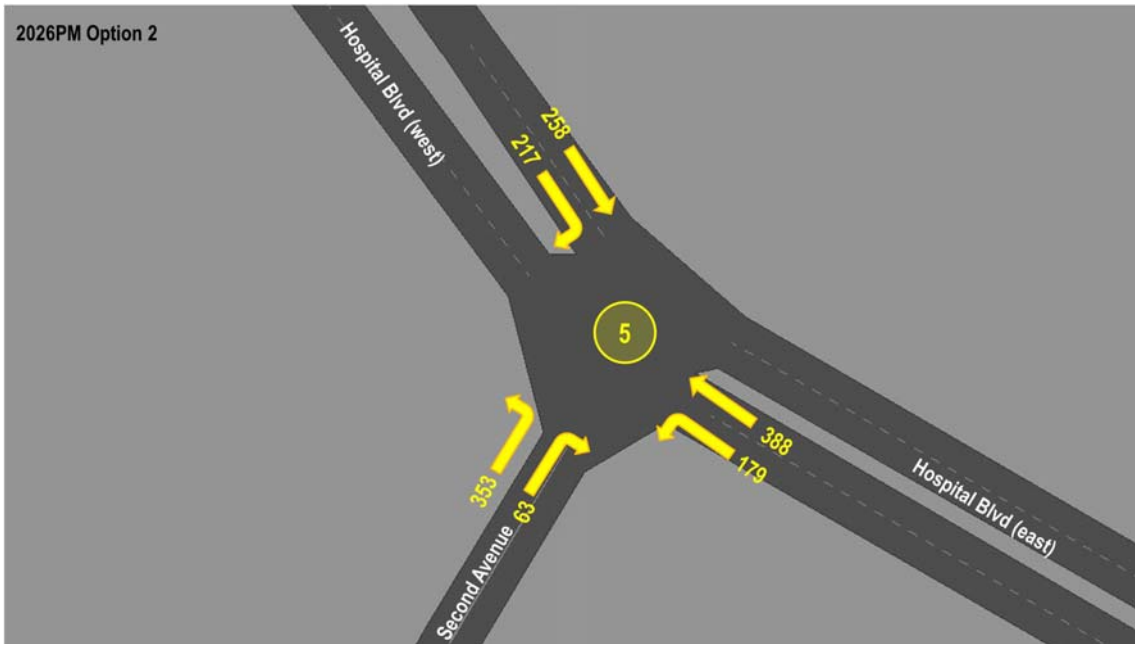
Hospital Blvd (west)
254
214
5
Hospital Blvd (east)
428
169
336
71
Second Avenue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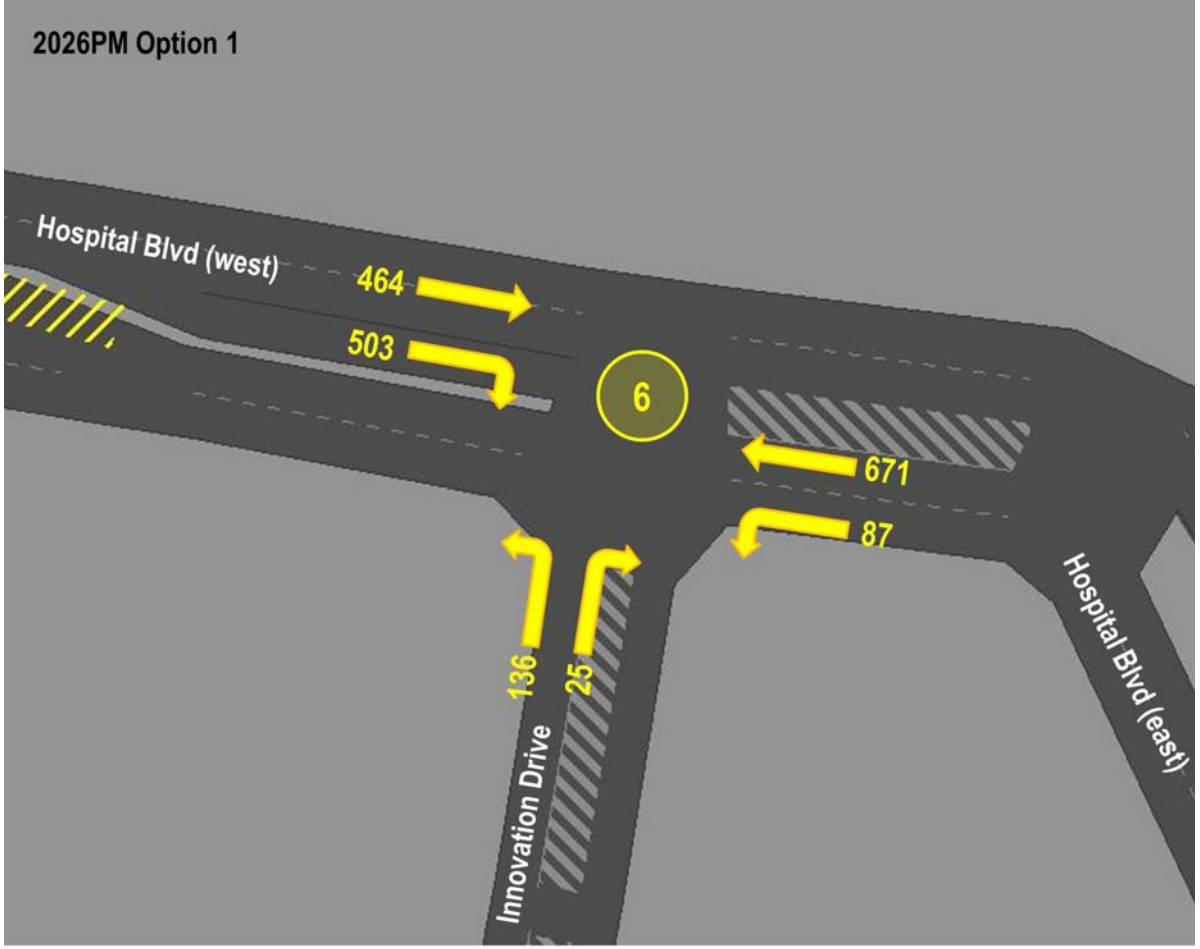
Hospital Blvd (west)
258
217
5
388
179
Hospital Blvd (east)
353
63
Second Avenue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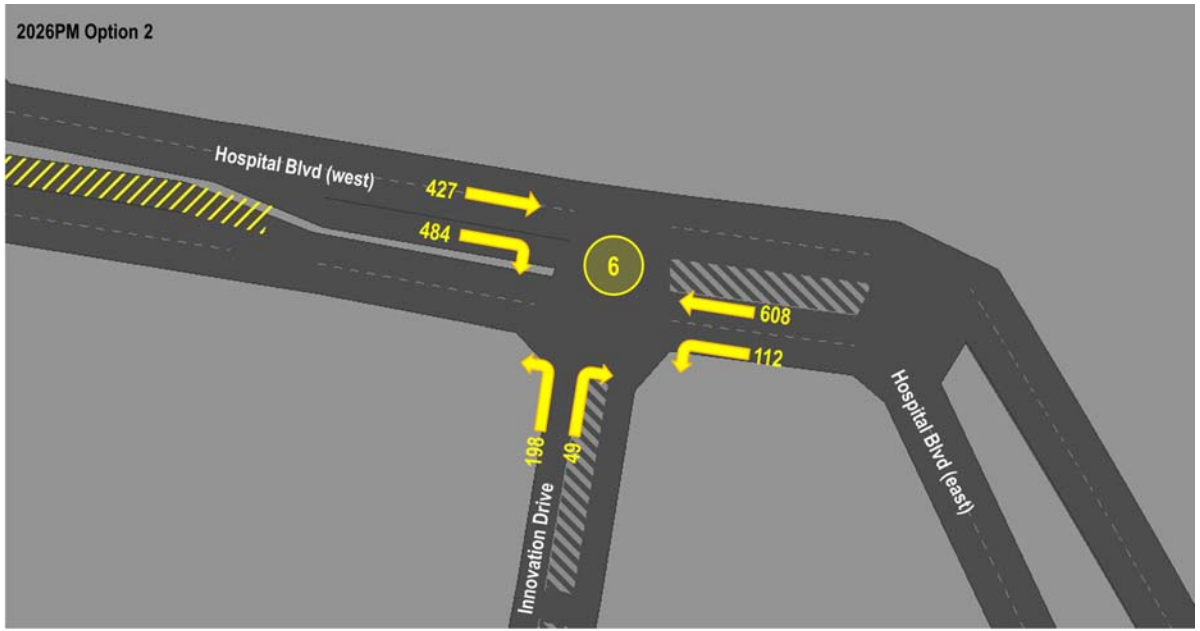
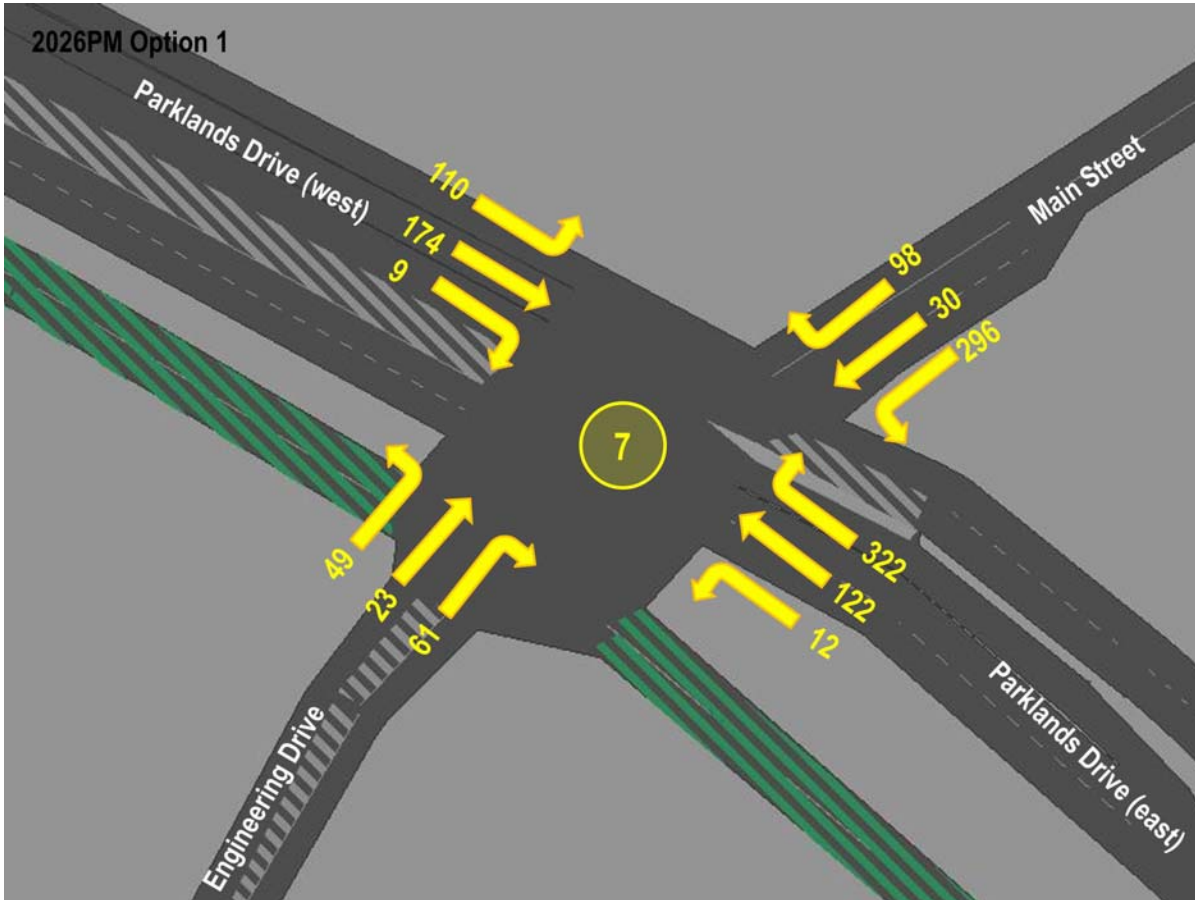
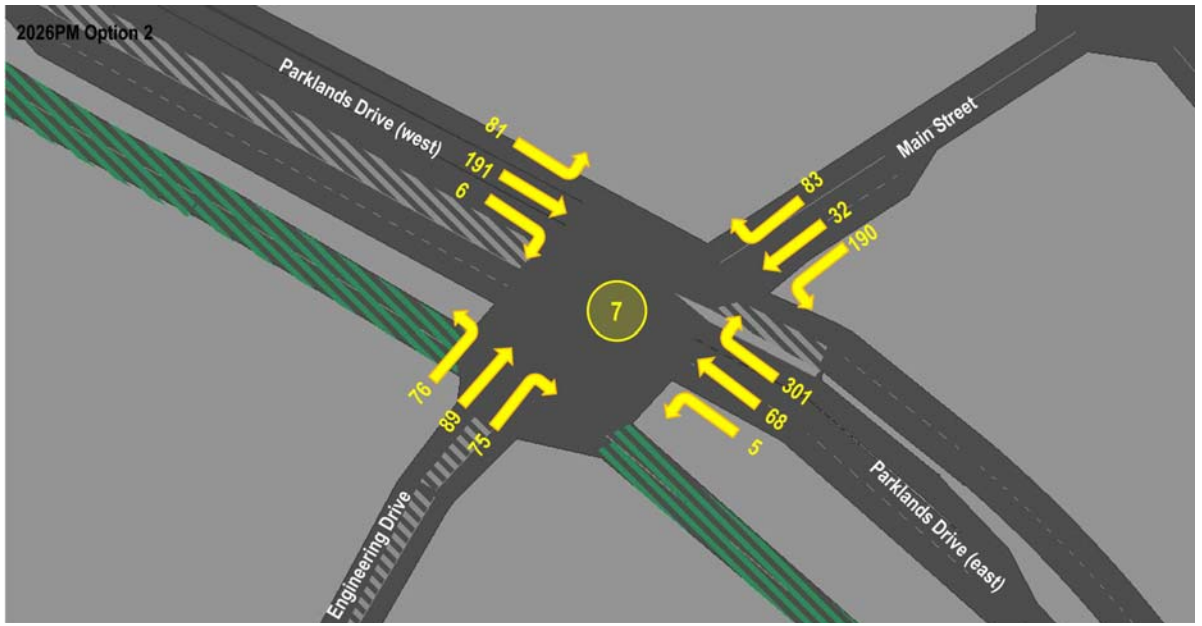
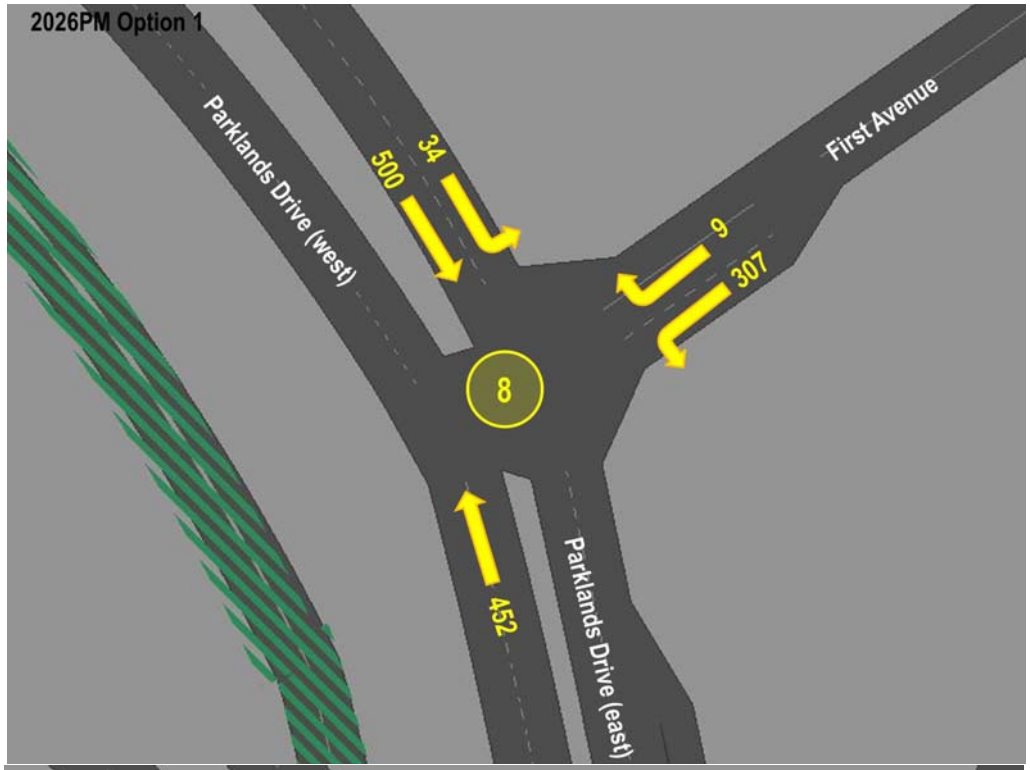
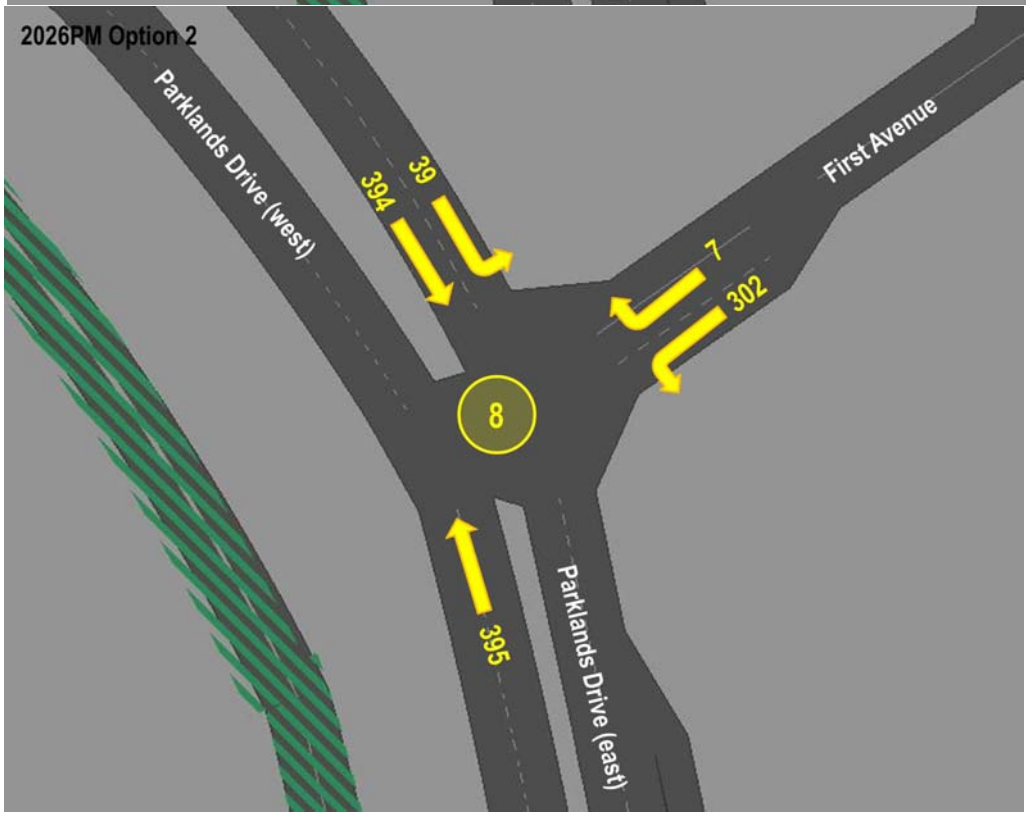
Hospital Blvd (west)
464
503
6
671
87
136
25
Innovation Drive
Hospital Blvd (east)


2026PM Option 2
Hospital Blvd (west)
427
484
6
608
112
198
49
Innovation Drive
Hospital Blvd (east)


2026PM Option 1
Parklands Drive (west)
Main Street
Engineering Drive
Parklands Drive (east)
7
110
174
9
98
30
296
49
23
61
322
122
12


2026PM Option 2
Parklands Drive (west)
Main Street
Engineering Drive
Parklands Drive (east)
7
81
191
6
83
32
190
76
89
75
301
68
5


2026PM Option 1
Parklands Drive (west)
34
500
First Avenue
9
307
8
452
Parklands Drive (east)


2026PM Option 2
Parklands Drive (west)
39
394
First Avenue
7
302
8
395
Parklands Drive (east)

APPENDIX B

# DETAILED SIDRA RESULTS – SMITH STREET WORST CASE SCENARIO

# MOVEMENT SUMMARY

**Site: 2026AM - Smith St/Parklands Dr - Option 1**

Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 160 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Car Park Access | | | | | | | | | | | |
| 1 | L | 11 | 5.0 | 0.094 | 52.7 | LOS D | 2.5 | 18.2 | 0.77 | 0.79 | 25.0 |
| 2 | T | 23 | 5.0 | 0.094 | 44.3 | LOS D | 2.5 | 18.2 | 0.77 | 0.59 | 25.7 |
| 3 | R | 11 | 5.0 | 0.094 | 52.5 | LOS D | 2.5 | 18.2 | 0.77 | 0.78 | 25.1 |
| Approach | | 44 | 5.0 | 0.094 | 48.2 | LOS D | 2.5 | 18.2 | 0.77 | 0.68 | 25.4 |
| East: Smith St E | | | | | | | | | | | |
| 4 | L | 85 | 5.0 | 0.755 | 43.3 | LOS D | 35.2 | 257.2 | 0.81 | 0.92 | 28.5 |
| 5 | T | 1140 | 5.0 | 0.755 | 34.9 | LOS C | 35.5 | 259.1 | 0.81 | 0.73 | 29.3 |
| 6 | R | 85 | 5.0 | 0.634 | 96.5 | LOS F | 3.5 | 25.8 | 1.00 | 0.76 | 16.5 |
| Approach | | 1311 | 5.0 | 0.755 | 39.5 | LOS D | 35.5 | 259.1 | 0.82 | 0.75 | 27.8 |
| North: Parklands Dr | | | | | | | | | | | |
| 7 | L | 40 | 5.0 | 0.022 | 7.7 | X | X | X | X | 0.60 | 49.8 |
| 8 | T | 87 | 5.0 | 0.911 | 76.2 | LOS E | 31.0 | 226.0 | 1.00 | 0.98 | 18.3 |
| 9 | R | 614 | 5.0 | 0.911 | 84.9 | LOS F | 31.0 | 226.0 | 1.00 | 0.97 | 18.1 |
| Approach | | 741 | 5.0 | 0.911 | 79.7 | LOS E | 31.0 | 226.0 | 0.95 | 0.96 | 18.8 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 456 | 5.0 | 0.427 | 8.4 | LOS A | 3.2 | 23.3 | 0.15 | 0.64 | 49.0 |
| 11 | T | 1971 | 5.0 | 0.907 | 38.6 | LOS D | 72.6 | 529.7 | 0.97 | 0.94 | 27.8 |
| 12 | R | 220 | 5.0 | 0.757 | 77.2 | LOS E | 16.6 | 121.3 | 0.99 | 0.86 | 19.2 |
| Approach | | 2646 | 5.0 | 0.907 | 36.6 | LOS D | 72.6 | 529.7 | 0.83 | 0.89 | 28.9 |
| All Vehicles | | 4742 | 5.0 | 0.911 | 44.2 | LOS D | 72.6 | 529.7 | 0.85 | 0.86 | 26.4 |

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 28.8 | LOS C | 0.1 | 0.1 | 0.60 | 0.60 |
| P3 | Across E approach | 53 | 56.1 | LOS E | 0.2 | 0.2 | 0.84 | 0.84 |
| P5 | Across N approach | 53 | 20.0 | LOS B | 0.1 | 0.1 | 0.50 | 0.50 |
| All Pedestrians | | 159 | 35.0 | LOS D | | | 0.65 | 0.65 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

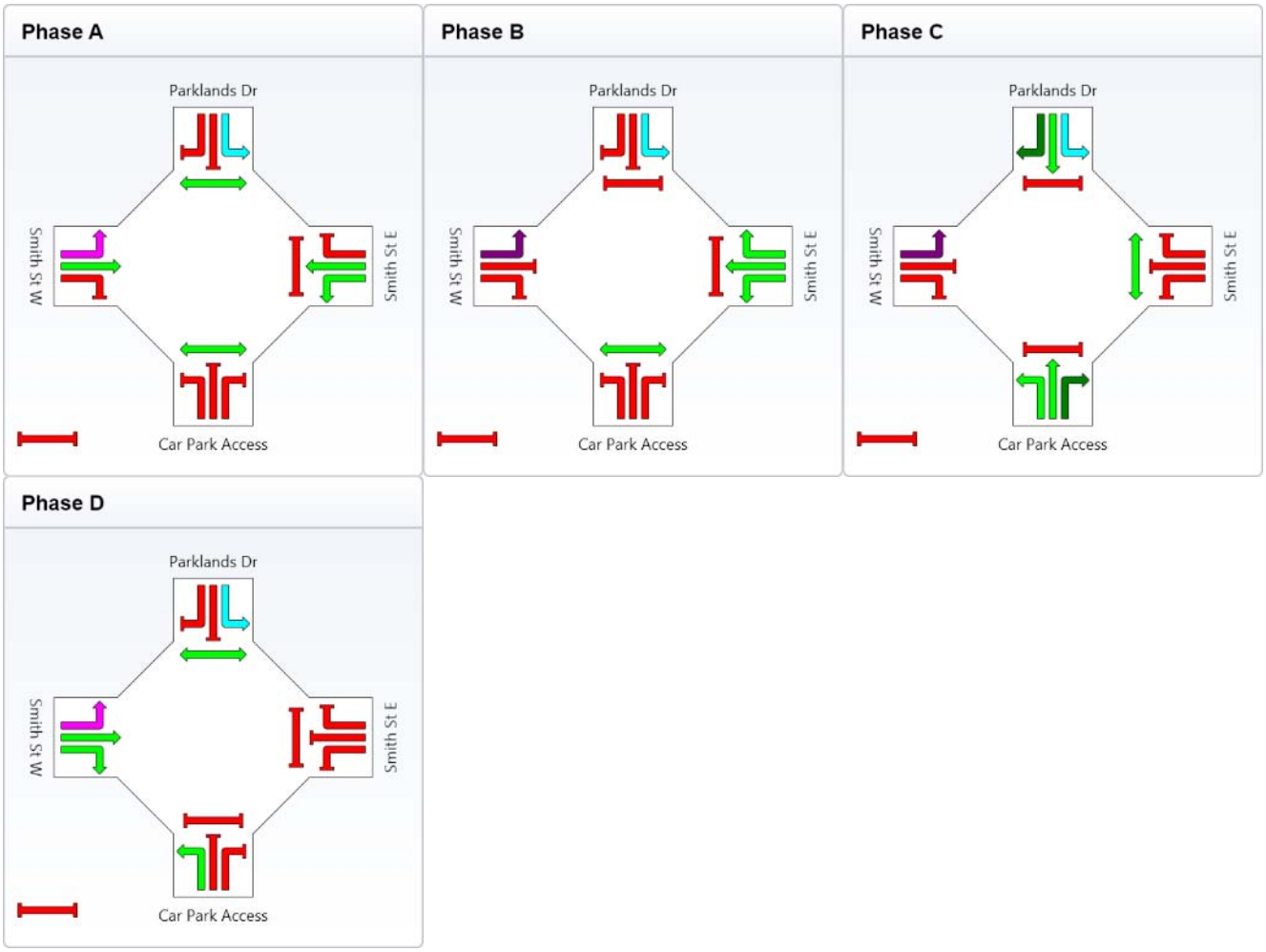


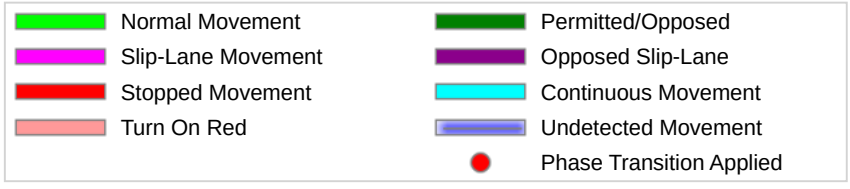
Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 160 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Phasing**
**Input Sequence: A, B, C, D**
**Output Sequence: A, B, C, D**

**Phase Timing Results**

| Phase | A | B | C | D |
|---|---|---|---|---|
| Green Time (sec) | 57 | 6 | 44 | 29 |
| Yellow Time (sec) | 4 | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 | 2 |
| Phase Time (sec) | 63 | 12 | 50 | 35 |
| Phase Split | 39 % | 8 % | 31 % | 22 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Smith St/Parklands Dr - Option 1**

Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Car Park Access | | | | | | | | | | | |
| 1 | L | 117 | 5.0 | 0.276 | 31.6 | LOS C | 8.1 | 58.9 | 0.68 | 0.81 | 32.5 |
| 2 | T | 58 | 5.0 | 0.276 | 23.3 | LOS C | 8.1 | 58.9 | 0.68 | 0.58 | 33.9 |
| 3 | R | 42 | 5.0 | 0.276 | 31.5 | LOS C | 8.1 | 58.9 | 0.68 | 0.80 | 32.6 |
| Approach | | 217 | 5.0 | 0.276 | 29.4 | LOS C | 8.1 | 58.9 | 0.68 | 0.75 | 32.9 |
| East: Smith St E | | | | | | | | | | | |
| 4 | L | 19 | 5.0 | 0.805 | 39.5 | LOS D | 30.1 | 219.9 | 0.87 | 0.94 | 30.3 |
| 5 | T | 1222 | 5.0 | 0.805 | 31.1 | LOS C | 30.2 | 220.2 | 0.87 | 0.80 | 30.9 |
| 6 | R | 55 | 5.0 | 0.305 | 71.4 | LOS E | 1.6 | 11.9 | 0.98 | 0.71 | 20.3 |
| Approach | | 1296 | 5.0 | 0.805 | 33.0 | LOS C | 30.2 | 220.2 | 0.88 | 0.80 | 30.2 |
| North: Parklands Dr | | | | | | | | | | | |
| 7 | L | 11 | 5.0 | 0.006 | 7.7 | X | X | X | X | 0.60 | 49.8 |
| 8 | T | 21 | 5.0 | 0.889 | 47.3 | LOS D | 26.6 | 194.2 | 0.96 | 0.95 | 24.1 |
| 9 | R | 821 | 5.0 | 0.889 | 55.8 | LOS E | 26.6 | 194.2 | 0.96 | 0.97 | 23.8 |
| Approach | | 853 | 5.0 | 0.889 | 55.0 | LOS E | 26.6 | 194.2 | 0.95 | 0.97 | 24.0 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 363 | 5.0 | 0.307 | 8.2 | LOS A | 1.6 | 11.8 | 0.15 | 0.64 | 49.0 |
| 11 | T | 1369 | 5.0 | 0.888 | 45.8 | LOS D | 42.7 | 311.8 | 1.00 | 1.02 | 25.5 |
| 12 | R | 78 | 5.0 | 0.869 | 80.5 | LOS F | 5.2 | 38.0 | 1.00 | 0.94 | 18.6 |
| Approach | | 1811 | 5.0 | 0.888 | 39.7 | LOS D | 42.7 | 311.8 | 0.83 | 0.94 | 27.7 |
| All Vehicles | | 4176 | 5.0 | 0.889 | 40.2 | LOS D | 42.7 | 311.8 | 0.86 | 0.89 | 27.8 |

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 24.1 | LOS C | 0.1 | 0.1 | 0.63 | 0.63 |
| P3 | Across E approach | 53 | 34.5 | LOS D | 0.1 | 0.1 | 0.76 | 0.76 |
| P5 | Across N approach | 53 | 28.7 | LOS C | 0.1 | 0.1 | 0.69 | 0.69 |
| All Pedestrians | | 159 | 29.1 | LOS C | | | 0.69 | 0.69 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

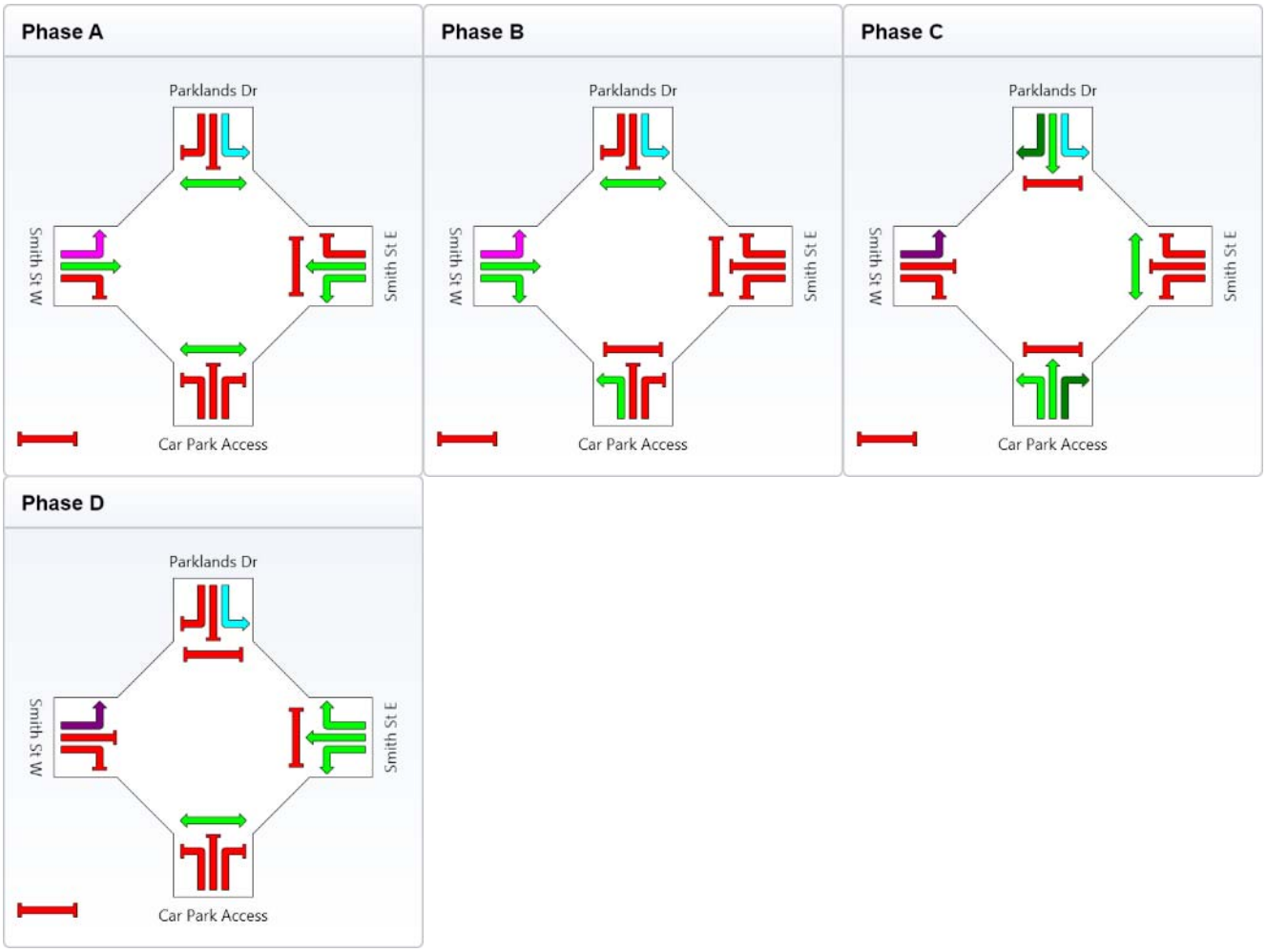


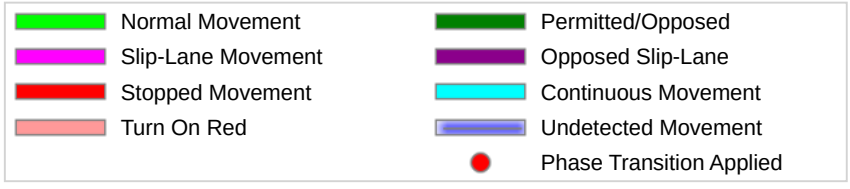
Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Phasing**
**Input Sequence: A, B, C, D**
**Output Sequence: A, B, C, D**

**Phase Timing Results**

| Phase | A | B | C | D |
|---|---|---|---|---|
| Green Time (sec) | 37 | 6 | 47 | 6 |
| Yellow Time (sec) | 4 | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 | 2 |
| Phase Time (sec) | 43 | 12 | 53 | 12 |
| Phase Split | 36 % | 10 % | 44 % | 10 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Smith St/Parklands Dr - Legacy Adjusted Option 1**

Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 160 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Car Park Access | | | | | | | | | | | |
| 1 | L | 11 | 5.0 | 0.132 | 63.9 | LOS E | 2.8 | 20.5 | 0.85 | 0.78 | 22.2 |
| 2 | T | 23 | 5.0 | 0.132 | 55.6 | LOS E | 2.8 | 20.5 | 0.85 | 0.65 | 22.5 |
| 3 | R | 11 | 5.0 | 0.132 | 63.7 | LOS E | 2.8 | 20.5 | 0.85 | 0.77 | 22.2 |
| Approach | | 44 | 5.0 | 0.132 | 59.5 | LOS E | 2.8 | 20.5 | 0.85 | 0.71 | 22.4 |
| East: Smith St E | | | | | | | | | | | |
| 4 | L | 85 | 5.0 | 0.739 | 33.3 | LOS C | 34.9 | 254.9 | 0.70 | 0.94 | 32.6 |
| 5 | T | 1324 | 5.0 | 0.739 | 24.9 | LOS C | 35.1 | 256.5 | 0.70 | 0.64 | 34.1 |
| 6 | R | 348 | 5.0 | 0.914 | 98.1 | LOS F | 15.1 | 110.5 | 1.00 | 0.95 | 16.3 |
| Approach | | 1758 | 5.0 | 0.914 | 39.8 | LOS D | 35.1 | 256.5 | 0.76 | 0.72 | 28.0 |
| North: Parklands Dr | | | | | | | | | | | |
| 7 | L | 309 | 5.0 | 0.173 | 7.7 | X | X | X | X | 0.60 | 49.8 |
| 8 | T | 87 | 5.0 | 0.945 | 92.2 | LOS F | 24.8 | 181.4 | 1.00 | 1.03 | 16.2 |
| 9 | R | 429 | 5.0 | 0.945 | 101.0 | LOS F | 24.8 | 181.4 | 1.00 | 1.02 | 16.0 |
| Approach | | 826 | 5.0 | 0.945 | 65.2 | LOS E | 24.8 | 181.4 | 0.63 | 0.86 | 21.5 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 319 | 5.0 | 0.412 | 10.0 | LOS A | 4.4 | 32.3 | 0.24 | 0.66 | 47.3 |
| 11 | T | 2107 | 5.0 | 0.950 | 52.3 | LOS D | 90.5 | 660.6 | 1.00 | 1.04 | 23.7 |
| 12 | R | 220 | 5.0 | 0.751 | 75.9 | LOS E | 16.4 | 120.0 | 0.98 | 0.86 | 19.4 |
| Approach | | 2646 | 5.0 | 0.950 | 49.1 | LOS D | 90.5 | 660.6 | 0.91 | 0.98 | 24.7 |
| All Vehicles | | 5275 | 5.0 | 0.950 | 48.6 | LOS D | 90.5 | 660.6 | 0.81 | 0.87 | 25.1 |

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 22.1 | LOS C | 0.1 | 0.1 | 0.53 | 0.53 |
| P3 | Across E approach | 53 | 67.5 | LOS F | 0.2 | 0.2 | 0.92 | 0.92 |
| P5 | Across N approach | 53 | 19.0 | LOS B | 0.1 | 0.1 | 0.49 | 0.49 |
| All Pedestrians | | 159 | 36.2 | LOS D | | | 0.64 | 0.64 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

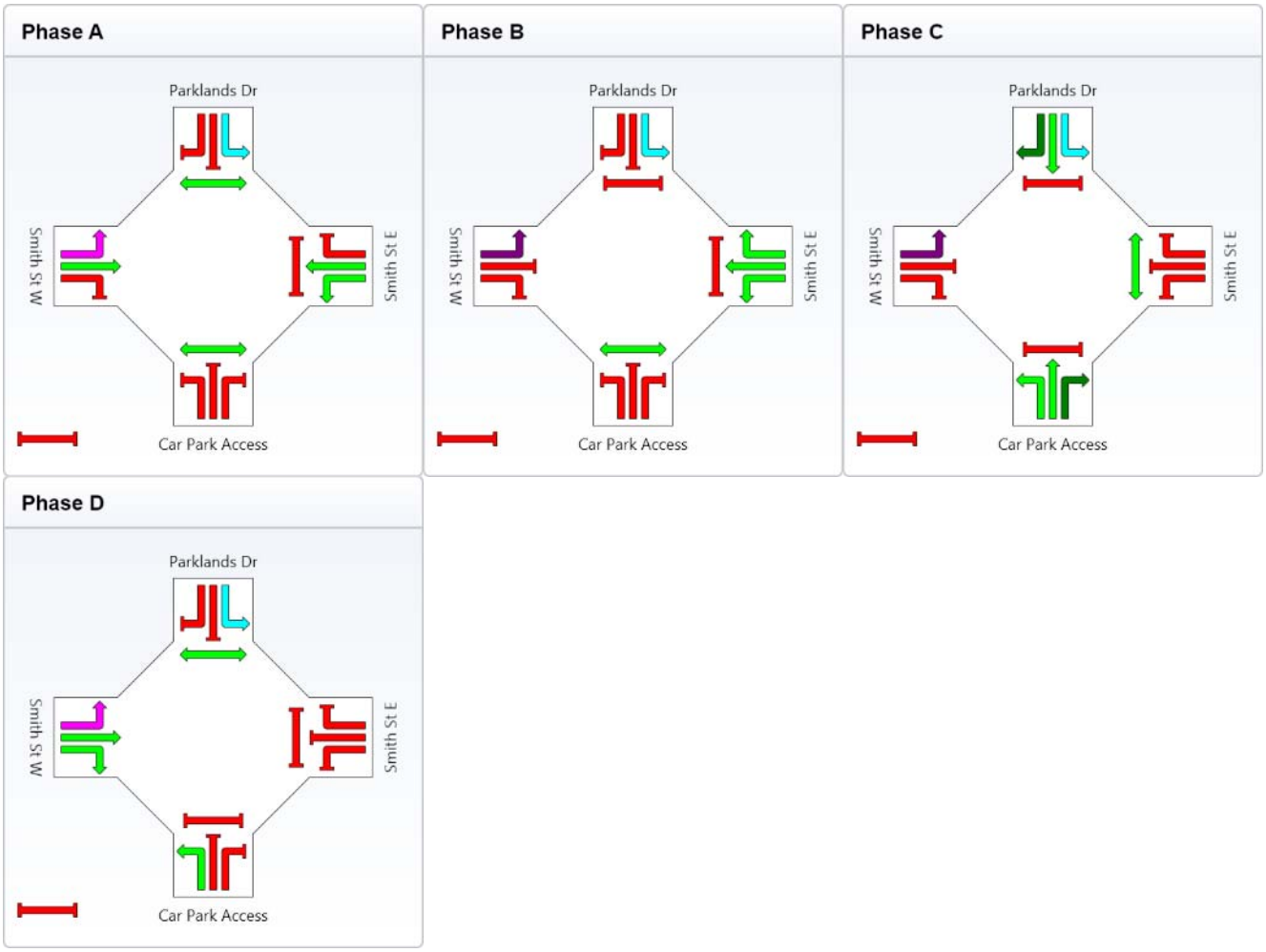


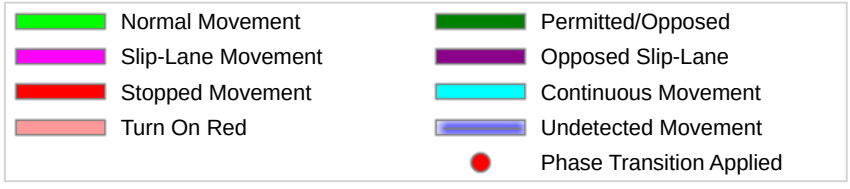
Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 160 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Phasing**
**Input Sequence: A, B, C, D**
**Output Sequence: A, B, C, D**

**Phase Timing Results**

| Phase | A | B | C | D |
|---|---|---|---|---|
| Green Time (sec) | 58 | 17 | 31 | 30 |
| Yellow Time (sec) | 4 | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 | 2 |
| Phase Time (sec) | 64 | 23 | 37 | 36 |
| Phase Split | 40 % | 14 % | 23 % | 23 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Smith St/Parklands Dr - Legacy Adjusted Option 1**

Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Car Park Access | | | | | | | | | | | |
| 1 | L | 117 | 5.0 | 0.343 | 39.9 | LOS D | 9.4 | 68.7 | 0.79 | 0.82 | 29.0 |
| 2 | T | 58 | 5.0 | 0.343 | 31.5 | LOS C | 9.4 | 68.7 | 0.79 | 0.67 | 29.8 |
| 3 | R | 42 | 5.0 | 0.343 | 39.7 | LOS D | 9.4 | 68.7 | 0.79 | 0.81 | 29.0 |
| Approach | | 217 | 5.0 | 0.343 | 37.6 | LOS D | 9.4 | 68.7 | 0.79 | 0.78 | 29.2 |
| East: Smith St E | | | | | | | | | | | |
| 4 | L | 19 | 5.0 | 0.801 | 29.9 | LOS C | 31.5 | 229.8 | 0.79 | 0.95 | 34.7 |
| 5 | T | 1468 | 5.0 | 0.801 | 21.5 | LOS C | 31.5 | 230.0 | 0.79 | 0.72 | 35.9 |
| 6 | R | 271 | 5.0 | 0.823 | 72.2 | LOS E | 8.5 | 61.8 | 1.00 | 0.90 | 20.2 |
| Approach | | 1758 | 5.0 | 0.823 | 29.4 | LOS C | 31.5 | 230.0 | 0.82 | 0.75 | 32.1 |
| North: Parklands Dr | | | | | | | | | | | |
| 7 | L | 255 | 5.0 | 0.142 | 7.7 | X | X | X | X | 0.60 | 49.8 |
| 8 | T | 21 | 5.0 | 0.833 | 50.6 | LOS D | 17.8 | 130.3 | 0.97 | 0.91 | 23.2 |
| 9 | R | 575 | 5.0 | 0.833 | 59.0 | LOS E | 17.8 | 130.3 | 0.97 | 0.93 | 23.0 |
| Approach | | 851 | 5.0 | 0.833 | 43.4 | LOS D | 17.8 | 130.3 | 0.68 | 0.83 | 27.5 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 255 | 5.0 | 0.258 | 8.9 | LOS A | 2.1 | 15.1 | 0.21 | 0.65 | 48.3 |
| 11 | T | 1479 | 5.0 | 0.854 | 36.1 | LOS D | 41.5 | 303.2 | 0.96 | 0.93 | 28.8 |
| 12 | R | 78 | 5.0 | 0.745 | 74.7 | LOS E | 4.9 | 36.0 | 1.00 | 0.85 | 19.6 |
| Approach | | 1812 | 5.0 | 0.854 | 33.9 | LOS C | 41.5 | 303.2 | 0.86 | 0.89 | 29.9 |
| All Vehicles | | 4637 | 5.0 | 0.854 | 34.1 | LOS C | 41.5 | 303.2 | 0.81 | 0.82 | 30.1 |

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 18.2 | LOS B | 0.1 | 0.1 | 0.55 | 0.55 |
| P3 | Across E approach | 53 | 43.4 | LOS E | 0.2 | 0.2 | 0.85 | 0.85 |
| P5 | Across N approach | 53 | 24.7 | LOS C | 0.1 | 0.1 | 0.64 | 0.64 |
| All Pedestrians | | 159 | 28.7 | LOS C | | | 0.68 | 0.68 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

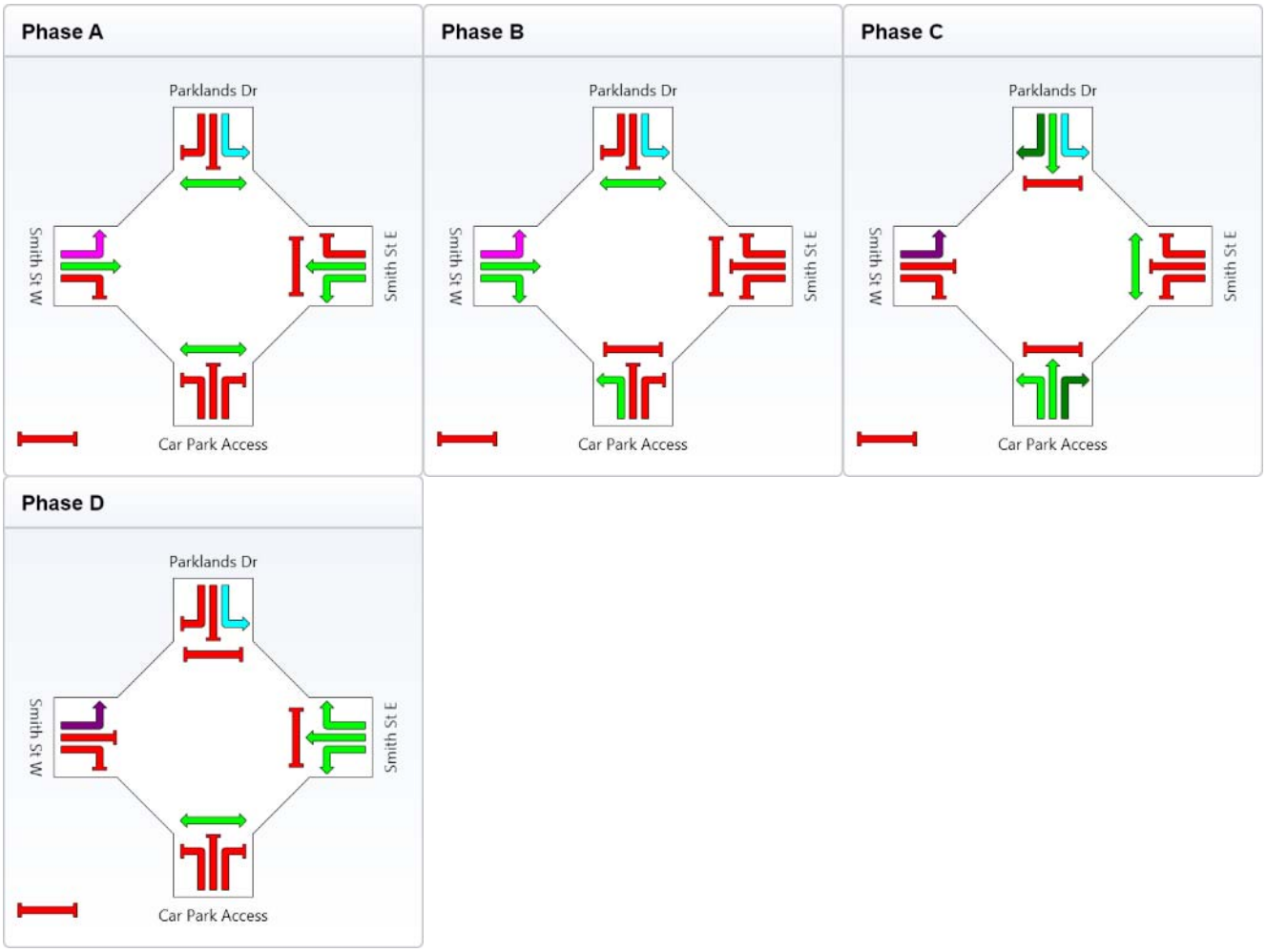


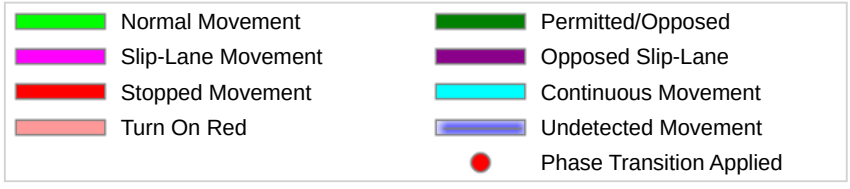
Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Phasing**
**Input Sequence: A, B, C, D**
**Output Sequence: A, B, C, D**

**Phase Timing Results**

| Phase | A | B | C | D |
|---|---|---|---|---|
| Green Time (sec) | 42 | 7 | 36 | 11 |
| Yellow Time (sec) | 4 | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 | 2 |
| Phase Time (sec) | 48 | 13 | 42 | 17 |
| Phase Split | 40 % | 11 % | 35 % | 14 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Smith St/Hospital Blvd - Option 1**

Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 140 seconds (User-Given Phase Times)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Smith St E | | | | | | | | | | | |
| 5 | T | 1143 | 5.0 | 0.415 | 1.6 | LOS A | 3.1 | 22.9 | 0.09 | 0.08 | 56.9 |
| 6 | R | 877 | 5.0 | 0.835 | 61.6 | LOS E | 28.6 | 209.0 | 0.97 | 0.91 | 22.4 |
| Approach | | 2020 | 5.0 | 0.835 | 27.7 | LOS C | 28.6 | 209.0 | 0.47 | 0.44 | 34.1 |
| North: Hospital Blvd | | | | | | | | | | | |
| 7 | L | 763 | 5.0 | 1.000[3] | 16.8 | LOS B | 17.9 | 130.8 | 0.57 | 0.77 | 41.2 |
| 9 | R | 316 | 5.0 | 0.475 | 63.3 | LOS E | 9.3 | 68.0 | 0.90 | 0.80 | 22.0 |
| Approach | | 1079 | 5.0 | 1.000 | 30.5 | LOS C | 17.9 | 130.8 | 0.67 | 0.78 | 32.9 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 153 | 5.0 | 0.155 | 9.2 | LOS A | 0.7 | 5.0 | 0.08 | 0.62 | 48.2 |
| 11 | T | 1852 | 5.0 | 0.832 | 39.2 | LOS D | 36.5 | 266.8 | 0.91 | 0.84 | 27.7 |
| Approach | | 2004 | 5.0 | 0.832 | 36.9 | LOS D | 36.5 | 266.8 | 0.85 | 0.83 | 28.6 |
| All Vehicles | | 5103 | 5.0 | 1.000 | 31.9 | LOS C | 36.5 | 266.8 | 0.66 | 0.66 | 31.5 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

3 x = 1.00 due to short lane. Refer to the Lane Summary report for information about excess flow and related conditions.

**Movement Performance - Pedestrians**

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P3 | Across E approach | 50 | 64.1 | LOS F | 0.2 | 0.2 | 0.96 | 0.96 |
| P5 | Across N approach | 50 | 33.6 | LOS D | 0.1 | 0.1 | 0.69 | 0.69 |
| All Pedestrians | | 100 | 48.9 | LOS E | | | 0.83 | 0.83 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

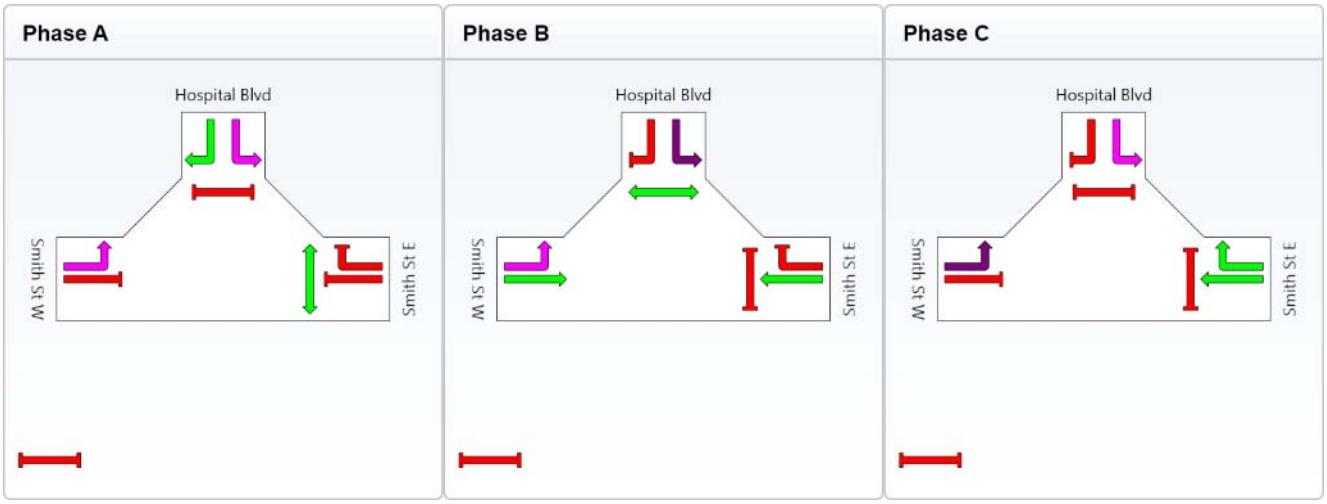


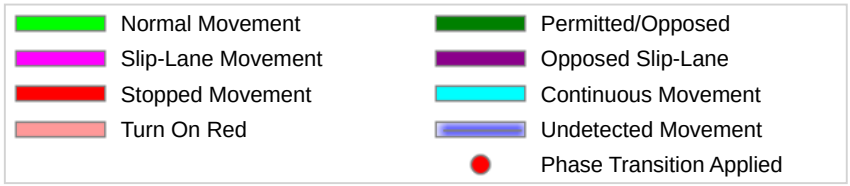
Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 140 seconds (User-Given Phase Times)

**Phase times specified by the user**
**Sequence: Two-Phase**
**Input Sequence: A, B, C**
**Output Sequence: A, B, C**

**Phase Timing Results**

| Phase | A | B | C |
|---|---|---|---|
| Green Time (sec) | 26 | 55 | 41 |
| Yellow Time (sec) | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 |
| Phase Time (sec) | 32 | 61 | 47 |
| Phase Split | 23 % | 44 % | 34 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Smith St/Hospital Blvd - Option 1**

Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Smith St E | | | | | | | | | | | |
| 5 | T | 1384 | 5.0 | 0.579 | 6.6 | LOS A | 12.1 | 88.5 | 0.33 | 0.30 | 49.5 |
| 6 | R | 719 | 5.0 | 0.729 | 51.3 | LOS D | 18.5 | 135.1 | 0.92 | 0.85 | 25.0 |
| Approach | | 2103 | 5.0 | 0.729 | 21.9 | LOS C | 18.5 | 135.1 | 0.53 | 0.49 | 37.1 |
| North: Hospital Blvd | | | | | | | | | | | |
| 7 | L | 843 | 5.0 | 0.773 | 9.8 | LOS A | 6.6 | 47.9 | 0.22 | 0.67 | 47.5 |
| 9 | R | 25 | 5.0 | 0.026 | 42.5 | LOS D | 0.5 | 3.5 | 0.67 | 0.68 | 27.8 |
| Approach | | 868 | 5.0 | 0.773 | 10.7 | LOS B | 6.6 | 47.9 | 0.23 | 0.67 | 46.6 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 120 | 5.0 | 0.106 | 8.5 | LOS A | 0.3 | 2.3 | 0.06 | 0.61 | 48.9 |
| 11 | T | 1280 | 5.0 | 0.733 | 39.3 | LOS D | 21.2 | 154.5 | 0.90 | 0.79 | 27.7 |
| Approach | | 1400 | 5.0 | 0.733 | 36.7 | LOS D | 21.2 | 154.5 | 0.83 | 0.78 | 28.7 |
| All Vehicles | | 4372 | 5.0 | 0.773 | 24.4 | LOS C | 21.2 | 154.5 | 0.57 | 0.62 | 35.2 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P3 | Across E approach | 50 | 48.6 | LOS E | 0.2 | 0.2 | 0.90 | 0.90 |
| P5 | Across N approach | 50 | 37.6 | LOS D | 0.1 | 0.1 | 0.79 | 0.79 |
| All Pedestrians | | 100 | 43.1 | LOS E | | | 0.85 | 0.85 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

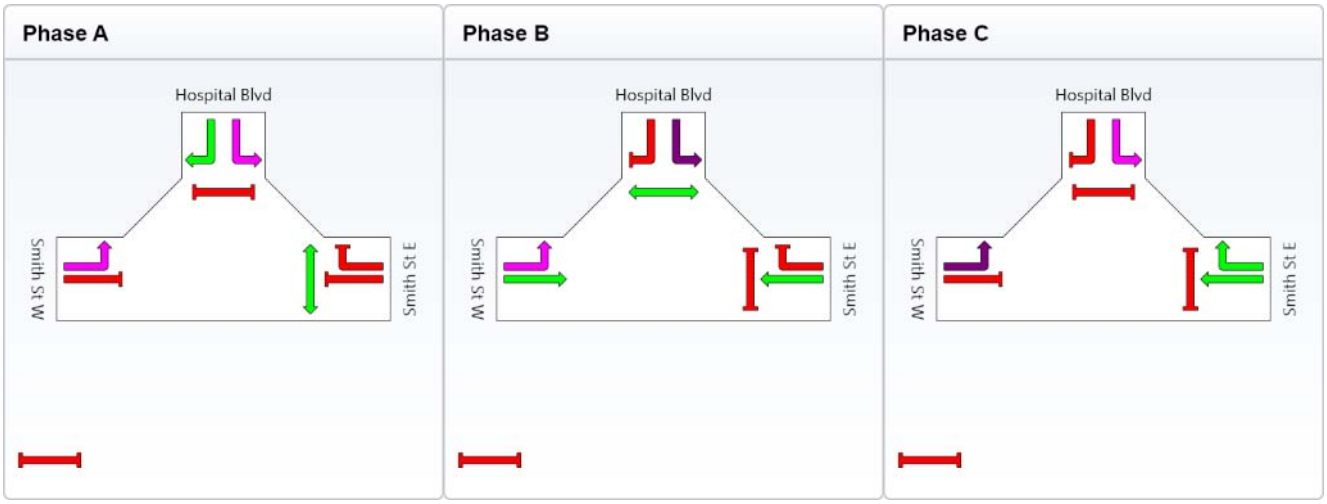


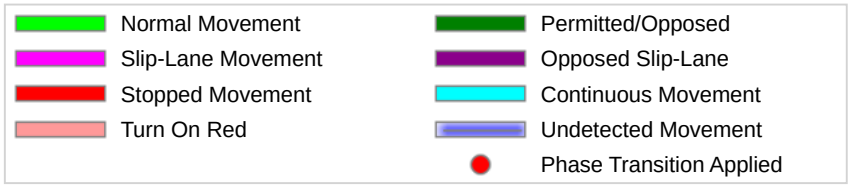
Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Two-Phase**
**Input Sequence: A, B, C**
**Output Sequence: A, B, C**

**Phase Timing Results**

| Phase | A | B | C |
|---|---|---|---|
| Green Time (sec) | 32 | 37 | 33 |
| Yellow Time (sec) | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 |
| Phase Time (sec) | 38 | 43 | 39 |
| Phase Split | 32 % | 36 % | 33 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Smith St/Hospital Blvd - Legacy Adjusted Option 1**

Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 140 seconds (User-Given Phase Times)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Smith St E | | | | | | | | | | | |
| 5 | T | 1406 | 5.0 | 0.511 | 1.8 | LOS A | 4.6 | 33.2 | 0.11 | 0.10 | 56.6 |
| 6 | R | 614 | 5.0 | 0.799 | 67.4 | LOS E | 20.3 | 148.2 | 0.99 | 0.89 | 21.1 |
| Approach | | 2020 | 5.0 | 0.799 | 21.8 | LOS C | 20.3 | 148.2 | 0.37 | 0.34 | 37.4 |
| North: Hospital Blvd | | | | | | | | | | | |
| 7 | L | 629 | 5.0 | 0.876 | 23.1 | LOS C | 17.9 | 130.6 | 0.43 | 0.77 | 37.0 |
| 9 | R | 364 | 5.0 | 0.547 | 64.2 | LOS E | 10.9 | 79.9 | 0.92 | 0.81 | 21.8 |
| Approach | | 994 | 5.0 | 0.876 | 38.2 | LOS D | 17.9 | 130.6 | 0.61 | 0.78 | 29.5 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 289 | 5.0 | 0.247 | 8.6 | LOS A | 1.0 | 7.6 | 0.07 | 0.62 | 48.8 |
| 11 | T | 2121 | 5.0 | 0.794 | 26.8 | LOS C | 35.3 | 257.9 | 0.80 | 0.73 | 33.0 |
| Approach | | 2411 | 5.0 | 0.794 | 24.6 | LOS C | 35.3 | 257.9 | 0.71 | 0.72 | 34.4 |
| All Vehicles | | 5424 | 5.0 | 0.876 | 26.0 | LOS C | 35.3 | 257.9 | 0.57 | 0.59 | 34.4 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P3 | Across E approach | 50 | 64.1 | LOS F | 0.2 | 0.2 | 0.96 | 0.96 |
| P5 | Across N approach | 50 | 26.4 | LOS C | 0.1 | 0.1 | 0.61 | 0.61 |
| All Pedestrians | | 100 | 45.3 | LOS E | | | 0.79 | 0.79 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

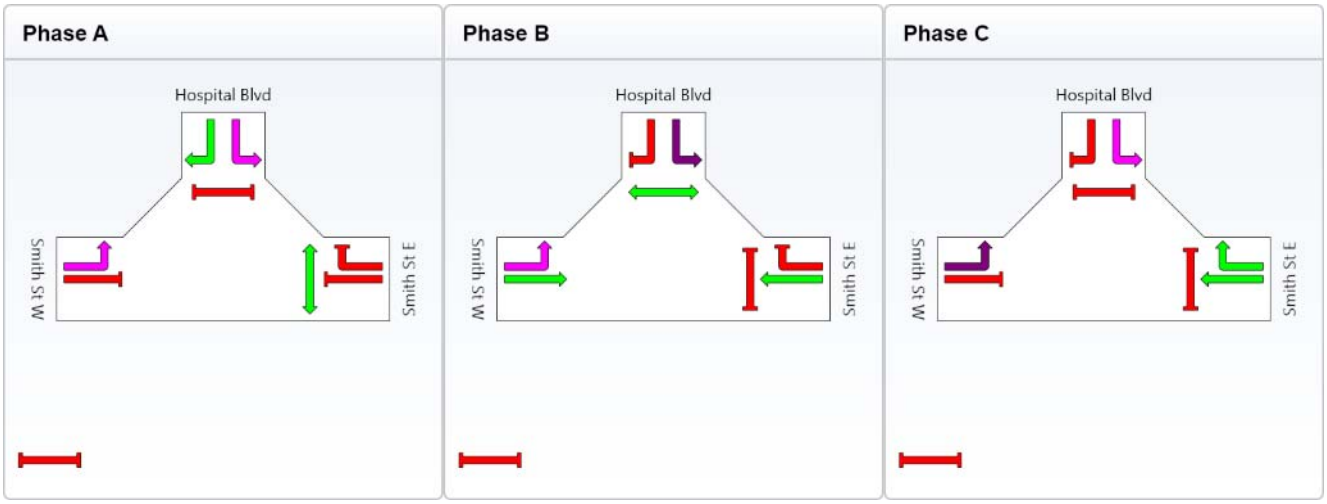


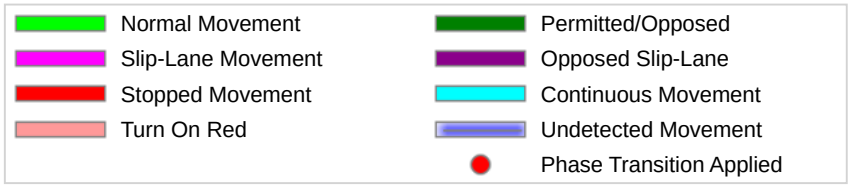
Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 140 seconds (User-Given Phase Times)

**Phase times specified by the user**
**Sequence: Two-Phase**
**Input Sequence: A, B, C**
**Output Sequence: A, B, C**

**Phase Timing Results**

| Phase | A | B | C |
|---|---|---|---|
| Green Time (sec) | 26 | 66 | 30 |
| Yellow Time (sec) | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 |
| Phase Time (sec) | 32 | 72 | 36 |
| Phase Split | 23 % | 51 % | 26 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Smith St/Hospital Blvd - Legacy Adjusted Option 1**

Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Smith St E | | | | | | | | | | | |
| 5 | T | 1600 | 5.0 | 0.620 | 3.6 | LOS A | 9.4 | 68.7 | 0.22 | 0.20 | 53.6 |
| 6 | R | 503 | 5.0 | 0.648 | 54.7 | LOS D | 13.1 | 95.4 | 0.93 | 0.83 | 24.1 |
| Approach | | 2103 | 5.0 | 0.648 | 15.8 | LOS B | 13.1 | 95.4 | 0.39 | 0.35 | 41.4 |
| North: Hospital Blvd | | | | | | | | | | | |
| 7 | L | 591 | 5.0 | 0.640 | 9.1 | LOS A | 3.4 | 24.9 | 0.12 | 0.64 | 48.2 |
| 9 | R | 272 | 5.0 | 0.350 | 51.2 | LOS D | 6.3 | 46.3 | 0.83 | 0.78 | 25.1 |
| Approach | | 862 | 5.0 | 0.640 | 22.4 | LOS C | 6.3 | 46.3 | 0.35 | 0.68 | 37.4 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 229 | 5.0 | 0.188 | 8.3 | LOS A | 0.6 | 4.6 | 0.06 | 0.62 | 49.1 |
| 11 | T | 1533 | 5.0 | 0.649 | 26.2 | LOS C | 20.6 | 150.7 | 0.75 | 0.66 | 33.5 |
| Approach | | 1762 | 5.0 | 0.649 | 23.9 | LOS C | 20.6 | 150.7 | 0.66 | 0.66 | 34.9 |
| All Vehicles | | 4727 | 5.0 | 0.649 | 20.0 | LOS C | 20.6 | 150.7 | 0.48 | 0.53 | 38.0 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P3 | Across E approach | 50 | 54.2 | LOS E | 0.2 | 0.2 | 0.95 | 0.95 |
| P5 | Across N approach | 50 | 28.0 | LOS C | 0.1 | 0.1 | 0.68 | 0.68 |
| All Pedestrians | | 100 | 41.1 | LOS E | | | 0.82 | 0.82 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

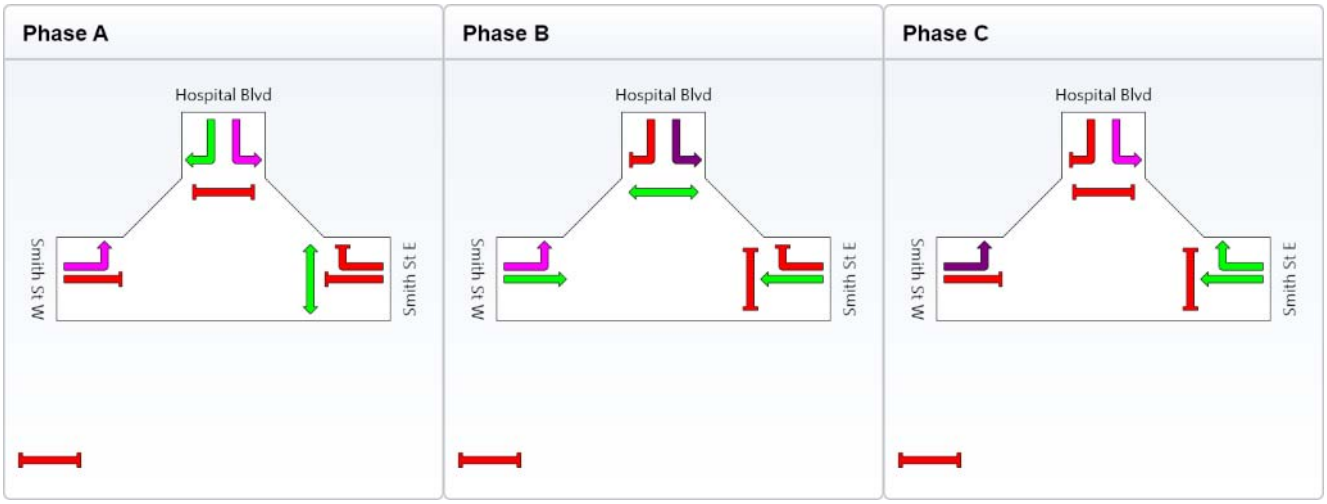


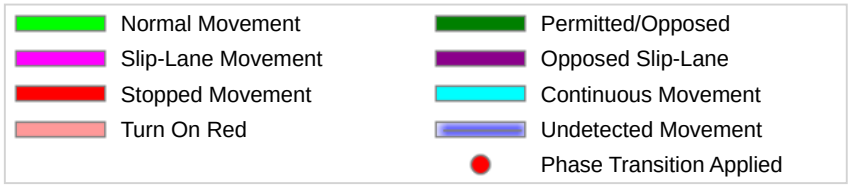
Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Two-Phase**
**Input Sequence: A, B, C**
**Output Sequence: A, B, C**

**Phase Timing Results**

| Phase | A | B | C |
|---|---|---|---|
| Green Time (sec) | 26 | 50 | 26 |
| Yellow Time (sec) | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 |
| Phase Time (sec) | 32 | 56 | 32 |
| Phase Split | 27 % | 47 % | 27 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Hospital Blvd/First St - Option 1**

Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 90 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Boulevard S | | | | | | | | | | | |
| 1 | L | 326 | 5.0 | 0.475 | 11.4 | LOS B | 4.9 | 35.5 | 0.21 | 0.82 | 46.2 |
| 2 | T | 664 | 5.0 | 0.475 | 3.3 | LOS A | 4.9 | 35.5 | 0.22 | 0.20 | 53.6 |
| 3 | R | 37 | 5.0 | 0.475 | 11.9 | LOS B | 4.2 | 30.8 | 0.23 | 1.02 | 46.2 |
| Approach | | 1027 | 5.0 | 0.475 | 6.2 | LOS A | 4.9 | 35.5 | 0.22 | 0.43 | 50.7 |
| East: First Street E | | | | | | | | | | | |
| 4 | L | 33 | 5.0 | 0.163 | 41.1 | LOS D | 2.0 | 14.8 | 0.86 | 0.76 | 28.4 |
| 5 | T | 11 | 5.0 | 0.163 | 32.7 | LOS C | 2.0 | 14.8 | 0.86 | 0.66 | 29.0 |
| 6 | R | 12 | 5.0 | 0.163 | 41.1 | LOS D | 2.0 | 14.8 | 0.86 | 0.76 | 28.4 |
| Approach | | 55 | 5.0 | 0.163 | 39.5 | LOS D | 2.0 | 14.8 | 0.86 | 0.74 | 28.5 |
| North: Hospital Boulevard N | | | | | | | | | | | |
| 7 | L | 11 | 5.0 | 0.594 | 11.8 | LOS B | 7.7 | 55.9 | 0.26 | 1.05 | 46.6 |
| 8 | T | 901 | 5.0 | 0.594 | 3.6 | LOS A | 7.7 | 55.9 | 0.26 | 0.24 | 53.2 |
| 9 | R | 104 | 5.0 | 0.594 | 13.1 | LOS B | 3.5 | 25.5 | 0.31 | 0.88 | 45.0 |
| Approach | | 1016 | 5.0 | 0.594 | 4.7 | LOS A | 7.7 | 55.9 | 0.27 | 0.31 | 52.1 |
| West: First Street W | | | | | | | | | | | |
| 10 | L | 17 | 5.0 | 0.602 | 45.1 | LOS D | 7.2 | 52.8 | 0.96 | 0.82 | 26.9 |
| 11 | T | 11 | 5.0 | 0.602 | 36.8 | LOS D | 7.2 | 52.8 | 0.96 | 0.79 | 27.1 |
| 12 | R | 146 | 5.0 | 0.602 | 45.1 | LOS D | 7.2 | 52.8 | 0.96 | 0.82 | 26.9 |
| Approach | | 174 | 5.0 | 0.602 | 44.6 | LOS D | 7.2 | 52.8 | 0.96 | 0.82 | 26.9 |
| All Vehicles | | 2272 | 5.0 | 0.602 | 9.2 | LOS A | 7.7 | 55.9 | 0.31 | 0.41 | 47.2 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 39.2 | LOS D | 0.1 | 0.1 | 0.93 | 0.93 |
| P3 | Across E approach | 53 | 6.8 | LOS A | 0.1 | 0.1 | 0.39 | 0.39 |
| P5 | Across N approach | 53 | 39.2 | LOS D | 0.1 | 0.1 | 0.93 | 0.93 |
| P7 | Across W approach | 53 | 6.8 | LOS A | 0.1 | 0.1 | 0.39 | 0.39 |
| All Pedestrians | | 212 | 23.0 | LOS C | | | 0.66 | 0.66 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

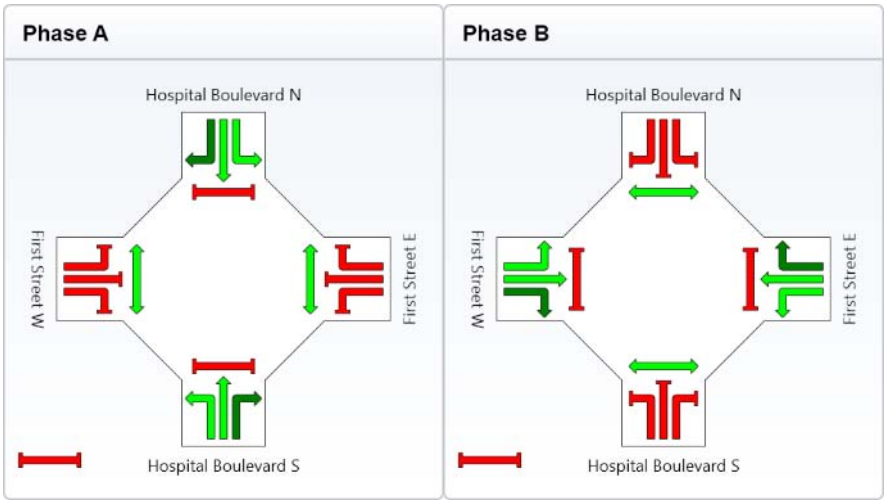


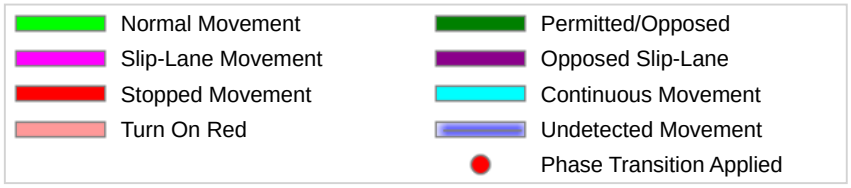
Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 90 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Opposed Turns**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 60 | 18 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 66 | 24 |
| Phase Split | 73 % | 27 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Hospital Blvd/First St - Option 1**

Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Boulevard S | | | | | | | | | | | |
| 1 | L | 266 | 5.0 | 0.654 | 22.8 | LOS C | 10.3 | 75.1 | 0.77 | 0.86 | 37.9 |
| 2 | T | 509 | 5.0 | 0.654 | 16.8 | LOS B | 10.3 | 75.1 | 0.81 | 0.70 | 38.1 |
| 3 | R | 59 | 5.0 | 0.654 | 26.9 | LOS C | 8.5 | 62.2 | 0.83 | 0.89 | 36.3 |
| Approach | | 835 | 5.0 | 0.654 | 19.4 | LOS B | 10.3 | 75.1 | 0.79 | 0.77 | 37.9 |
| East: First Street E | | | | | | | | | | | |
| 4 | L | 27 | 5.0 | 0.085 | 20.5 | LOS C | 1.0 | 7.3 | 0.65 | 0.75 | 38.8 |
| 5 | T | 11 | 5.0 | 0.085 | 12.2 | LOS B | 1.0 | 7.3 | 0.65 | 0.50 | 41.0 |
| 6 | R | 17 | 5.0 | 0.085 | 20.6 | LOS C | 1.0 | 7.3 | 0.65 | 0.75 | 38.8 |
| Approach | | 55 | 5.0 | 0.085 | 18.9 | LOS B | 1.0 | 7.3 | 0.65 | 0.70 | 39.2 |
| North: Hospital Boulevard N | | | | | | | | | | | |
| 7 | L | 11 | 5.0 | 0.523 | 21.8 | LOS C | 7.6 | 55.6 | 0.69 | 0.93 | 39.6 |
| 8 | T | 525 | 5.0 | 0.523 | 15.3 | LOS B | 7.6 | 55.6 | 0.73 | 0.62 | 40.0 |
| 9 | R | 61 | 5.0 | 0.523 | 28.8 | LOS C | 4.8 | 35.2 | 0.82 | 0.85 | 34.8 |
| Approach | | 597 | 5.0 | 0.523 | 16.8 | LOS B | 7.6 | 55.6 | 0.73 | 0.65 | 39.4 |
| West: First Street W | | | | | | | | | | | |
| 10 | L | 49 | 5.0 | 0.635 | 24.5 | LOS C | 9.1 | 66.6 | 0.86 | 0.84 | 36.0 |
| 11 | T | 11 | 5.0 | 0.635 | 16.1 | LOS B | 9.1 | 66.6 | 0.86 | 0.75 | 36.8 |
| 12 | R | 315 | 5.0 | 0.635 | 24.5 | LOS C | 9.1 | 66.6 | 0.86 | 0.84 | 36.0 |
| Approach | | 375 | 5.0 | 0.635 | 24.3 | LOS C | 9.1 | 66.6 | 0.86 | 0.84 | 36.0 |
| All Vehicles | | 1861 | 5.0 | 0.654 | 19.5 | LOS B | 10.3 | 75.1 | 0.78 | 0.74 | 38.0 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 19.2 | LOS B | 0.1 | 0.1 | 0.80 | 0.80 |
| P3 | Across E approach | 53 | 14.0 | LOS B | 0.1 | 0.1 | 0.68 | 0.68 |
| P5 | Across N approach | 53 | 19.2 | LOS B | 0.1 | 0.1 | 0.80 | 0.80 |
| P7 | Across W approach | 53 | 14.0 | LOS B | 0.1 | 0.1 | 0.68 | 0.68 |
| All Pedestrians | | 212 | 16.6 | LOS B | | | 0.74 | 0.74 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

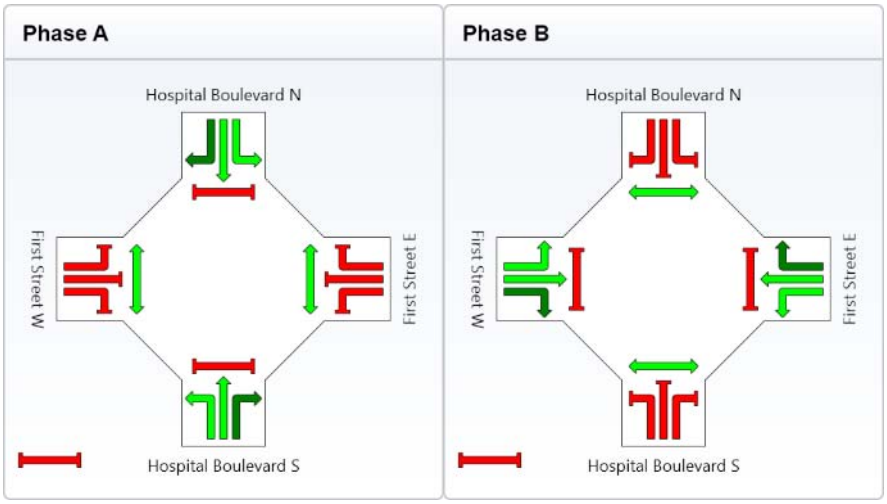


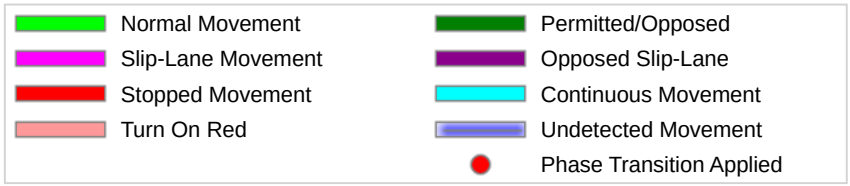
Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Opposed Turns**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 24 | 24 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 30 | 30 |
| Phase Split | 50 % | 50 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Hospital Blvd/First St - Option 1 - Adjusted**

Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 90 seconds (Optimum Cycle Time - Minimum Delay)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Boulevard S | | | | | | | | | | | |
| 1 | L | 275 | 5.0 | 0.409 | 11.6 | LOS B | 4.2 | 30.5 | 0.21 | 0.82 | 46.0 |
| 2 | T | 585 | 5.0 | 0.409 | 3.6 | LOS A | 4.2 | 30.5 | 0.23 | 0.20 | 53.2 |
| 3 | R | 31 | 5.0 | 0.409 | 12.2 | LOS B | 3.8 | 27.7 | 0.23 | 1.02 | 46.0 |
| Approach | | 891 | 5.0 | 0.409 | 6.4 | LOS A | 4.2 | 30.5 | 0.22 | 0.42 | 50.5 |
| East: First Street E | | | | | | | | | | | |
| 4 | L | 12 | 5.0 | 0.161 | 40.2 | LOS D | 1.9 | 14.1 | 0.85 | 0.76 | 28.8 |
| 5 | T | 11 | 5.0 | 0.161 | 31.9 | LOS C | 1.9 | 14.1 | 0.85 | 0.65 | 29.3 |
| 6 | R | 31 | 5.0 | 0.161 | 40.3 | LOS D | 1.9 | 14.1 | 0.85 | 0.76 | 28.7 |
| Approach | | 53 | 5.0 | 0.161 | 38.6 | LOS D | 1.9 | 14.1 | 0.85 | 0.74 | 28.9 |
| North: Hospital Boulevard N | | | | | | | | | | | |
| 7 | L | 11 | 5.0 | 0.529 | 12.0 | LOS B | 6.7 | 48.7 | 0.25 | 1.04 | 46.3 |
| 8 | T | 825 | 5.0 | 0.529 | 3.8 | LOS A | 6.7 | 48.7 | 0.26 | 0.23 | 52.9 |
| 9 | R | 104 | 5.0 | 0.529 | 12.7 | LOS B | 3.3 | 24.1 | 0.28 | 0.89 | 45.3 |
| Approach | | 940 | 5.0 | 0.529 | 4.9 | LOS A | 6.7 | 48.7 | 0.26 | 0.31 | 51.9 |
| West: First Street W | | | | | | | | | | | |
| 10 | L | 17 | 5.0 | 0.516 | 43.4 | LOS D | 6.6 | 48.5 | 0.93 | 0.81 | 27.5 |
| 11 | T | 11 | 5.0 | 0.516 | 35.0 | LOS C | 6.6 | 48.5 | 0.93 | 0.77 | 27.8 |
| 12 | R | 138 | 5.0 | 0.516 | 43.4 | LOS D | 6.6 | 48.5 | 0.93 | 0.81 | 27.5 |
| Approach | | 165 | 5.0 | 0.516 | 42.9 | LOS D | 6.6 | 48.5 | 0.93 | 0.81 | 27.5 |
| All Vehicles | | 2048 | 5.0 | 0.529 | 9.5 | LOS A | 6.7 | 48.7 | 0.31 | 0.41 | 47.0 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

**Movement Performance - Pedestrians**

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 38.3 | LOS D | 0.1 | 0.1 | 0.92 | 0.92 |
| P3 | Across E approach | 53 | 7.2 | LOS A | 0.1 | 0.1 | 0.40 | 0.40 |
| P5 | Across N approach | 53 | 38.3 | LOS D | 0.1 | 0.1 | 0.92 | 0.92 |
| P7 | Across W approach | 53 | 7.2 | LOS A | 0.1 | 0.1 | 0.40 | 0.40 |
| All Pedestrians | | 212 | 22.7 | LOS C | | | 0.66 | 0.66 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

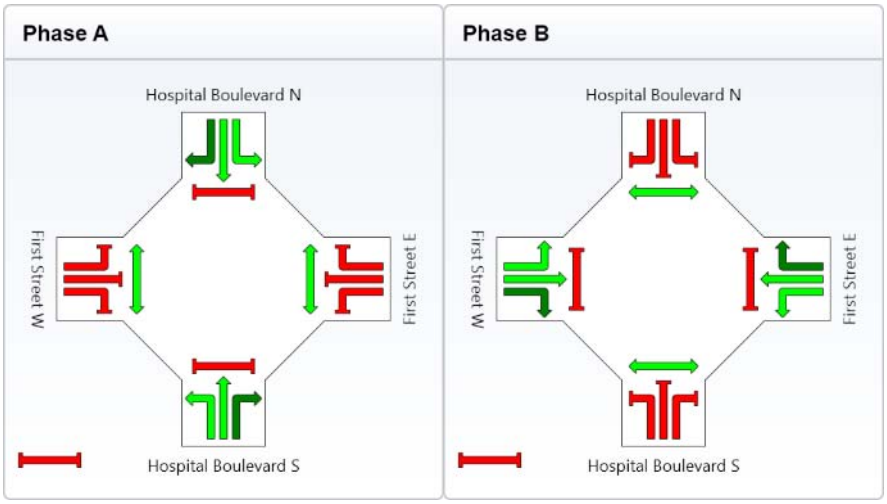


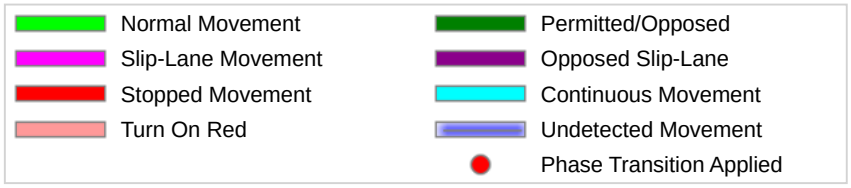
Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 90 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Opposed Turns**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 59 | 19 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 65 | 25 |
| Phase Split | 72 % | 28 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Hospital Blvd/First St - Option 1 - Adjusted**

Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Boulevard S | | | | | | | | | | | |
| 1 | L | 225 | 5.0 | 0.574 | 23.0 | LOS C | 8.4 | 61.0 | 0.74 | 0.85 | 37.6 |
| 2 | T | 453 | 5.0 | 0.574 | 15.9 | LOS B | 8.4 | 61.0 | 0.76 | 0.65 | 38.9 |
| 3 | R | 49 | 5.0 | 0.574 | 25.0 | LOS C | 7.1 | 52.1 | 0.77 | 0.89 | 37.3 |
| Approach | | 727 | 5.0 | 0.574 | 18.7 | LOS B | 8.4 | 61.0 | 0.75 | 0.73 | 38.4 |
| East: First Street E | | | | | | | | | | | |
| 4 | L | 27 | 5.0 | 0.082 | 19.8 | LOS B | 1.0 | 7.1 | 0.63 | 0.75 | 39.2 |
| 5 | T | 11 | 5.0 | 0.082 | 11.5 | LOS B | 1.0 | 7.1 | 0.63 | 0.49 | 41.7 |
| 6 | R | 17 | 5.0 | 0.082 | 19.9 | LOS B | 1.0 | 7.1 | 0.63 | 0.75 | 39.2 |
| Approach | | 55 | 5.0 | 0.082 | 18.2 | LOS B | 1.0 | 7.1 | 0.63 | 0.70 | 39.7 |
| North: Hospital Boulevard N | | | | | | | | | | | |
| 7 | L | 11 | 5.0 | 0.462 | 22.2 | LOS C | 6.4 | 46.5 | 0.68 | 0.93 | 39.3 |
| 8 | T | 520 | 5.0 | 0.462 | 15.0 | LOS B | 6.4 | 46.5 | 0.70 | 0.60 | 40.3 |
| 9 | R | 40 | 5.0 | 0.462 | 25.2 | LOS C | 5.0 | 36.6 | 0.74 | 0.88 | 37.1 |
| Approach | | 571 | 5.0 | 0.462 | 15.8 | LOS B | 6.4 | 46.5 | 0.71 | 0.62 | 40.0 |
| West: First Street W | | | | | | | | | | | |
| 10 | L | 49 | 5.0 | 0.607 | 23.5 | LOS C | 8.8 | 64.1 | 0.83 | 0.84 | 36.5 |
| 11 | T | 11 | 5.0 | 0.607 | 15.2 | LOS B | 8.8 | 64.1 | 0.83 | 0.72 | 37.6 |
| 12 | R | 313 | 5.0 | 0.607 | 23.5 | LOS C | 8.8 | 64.1 | 0.83 | 0.84 | 36.5 |
| Approach | | 373 | 5.0 | 0.607 | 23.3 | LOS C | 8.8 | 64.1 | 0.83 | 0.83 | 36.6 |
| All Vehicles | | 1725 | 5.0 | 0.607 | 18.7 | LOS B | 8.8 | 64.1 | 0.75 | 0.72 | 38.6 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 18.4 | LOS B | 0.1 | 0.1 | 0.78 | 0.78 |
| P3 | Across E approach | 53 | 14.7 | LOS B | 0.1 | 0.1 | 0.70 | 0.70 |
| P5 | Across N approach | 53 | 18.4 | LOS B | 0.1 | 0.1 | 0.78 | 0.78 |
| P7 | Across W approach | 53 | 14.7 | LOS B | 0.1 | 0.1 | 0.70 | 0.70 |
| All Pedestrians | | 212 | 16.6 | LOS B | | | 0.74 | 0.74 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

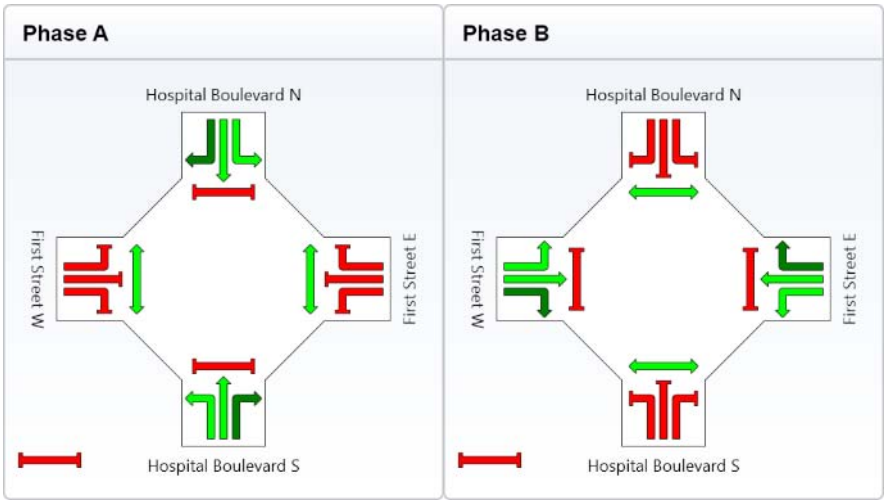


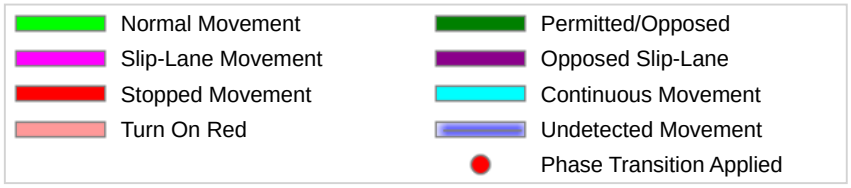
Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Opposed Turns**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 23 | 25 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 29 | 31 |
| Phase Split | 48 % | 52 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Main St/Hospital Blvd - Option 1**

Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 95 | 5.0 | 0.106 | 14.9 | LOS B | 1.0 | 7.3 | 0.38 | 0.72 | 42.7 |
| 2 | T | 591 | 5.0 | 0.659 | 9.4 | LOS A | 10.6 | 77.5 | 0.64 | 0.57 | 45.4 |
| 3 | R | 11 | 5.0 | 0.659 | 17.8 | LOS B | 10.6 | 77.5 | 0.64 | 0.97 | 42.6 |
| Approach | | 696 | 5.0 | 0.659 | 10.3 | LOS B | 10.6 | 77.5 | 0.60 | 0.59 | 45.0 |
| East: Main St E | | | | | | | | | | | |
| 4 | L | 11 | 5.0 | 0.189 | 25.6 | LOS C | 2.2 | 15.7 | 0.78 | 0.78 | 35.7 |
| 5 | T | 22 | 5.0 | 0.189 | 17.2 | LOS B | 2.2 | 15.7 | 0.78 | 0.62 | 37.0 |
| 6 | R | 64 | 5.0 | 0.189 | 25.6 | LOS C | 2.2 | 15.7 | 0.78 | 0.78 | 35.7 |
| Approach | | 97 | 5.0 | 0.189 | 23.7 | LOS C | 2.2 | 15.7 | 0.78 | 0.74 | 36.0 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 7 | L | 18 | 5.0 | 0.630 | 18.5 | LOS B | 6.2 | 45.2 | 0.65 | 0.93 | 42.0 |
| 8 | T | 627 | 5.0 | 0.630 | 12.6 | LOS B | 9.4 | 68.3 | 0.74 | 0.64 | 41.8 |
| 9 | R | 87 | 5.0 | 0.630 | 23.8 | LOS C | 9.4 | 68.3 | 0.84 | 0.89 | 38.2 |
| Approach | | 733 | 5.0 | 0.630 | 14.1 | LOS B | 9.4 | 68.3 | 0.75 | 0.68 | 41.3 |
| West: Main St W | | | | | | | | | | | |
| 10 | L | 69 | 5.0 | 0.169 | 25.1 | LOS C | 1.5 | 11.0 | 0.76 | 0.75 | 35.5 |
| 11 | T | 11 | 5.0 | 0.669 | 21.0 | LOS C | 9.8 | 71.7 | 0.93 | 0.81 | 33.7 |
| 12 | R | 353 | 5.0 | 0.669 | 29.4 | LOS C | 9.8 | 71.7 | 0.93 | 0.86 | 33.3 |
| Approach | | 433 | 5.0 | 0.669 | 28.5 | LOS C | 9.8 | 71.7 | 0.90 | 0.84 | 33.6 |
| All Vehicles | | 1958 | 5.0 | 0.669 | 16.4 | LOS B | 10.6 | 77.5 | 0.73 | 0.69 | 40.2 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 24.3 | LOS C | 0.1 | 0.1 | 0.90 | 0.90 |
| P3 | Across E approach | 53 | 10.2 | LOS B | 0.1 | 0.1 | 0.58 | 0.58 |
| P5 | Across N approach | 53 | 21.7 | LOS C | 0.1 | 0.1 | 0.85 | 0.85 |
| P7 | Across W approach | 53 | 11.4 | LOS B | 0.1 | 0.1 | 0.62 | 0.62 |
| All Pedestrians | | 212 | 16.9 | LOS B | | | 0.74 | 0.74 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

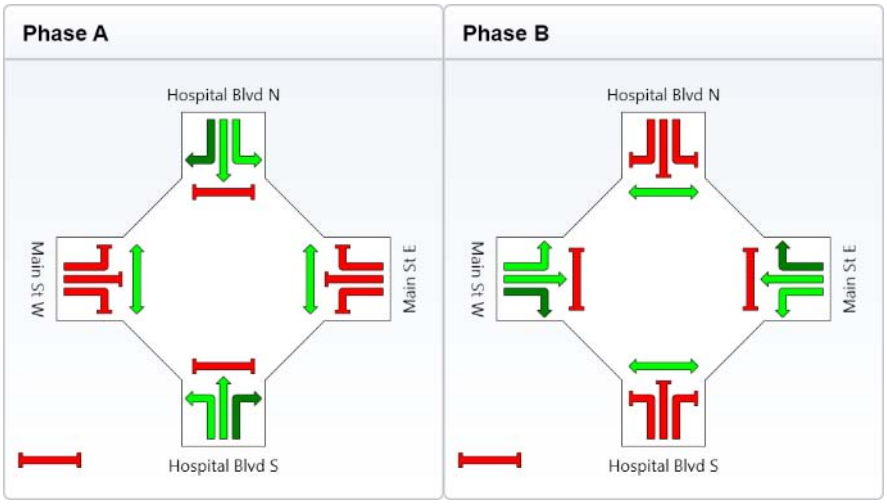


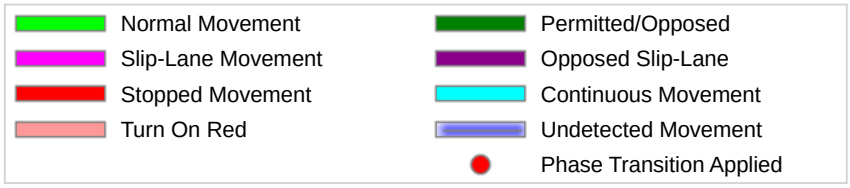
Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Two-Phase**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 30 | 18 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 36 | 24 |
| Phase Split | 60 % | 40 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Main St/Hospital Blvd - Option 1**

Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 97 | 5.0 | 0.116 | 16.3 | LOS B | 1.2 | 8.5 | 0.43 | 0.72 | 41.5 |
| 2 | T | 461 | 5.0 | 0.542 | 10.2 | LOS B | 8.0 | 58.3 | 0.61 | 0.53 | 44.8 |
| 3 | R | 11 | 5.0 | 0.542 | 18.6 | LOS B | 8.0 | 58.3 | 0.61 | 0.96 | 41.8 |
| Approach | | 568 | 5.0 | 0.542 | 11.4 | LOS B | 8.0 | 58.3 | 0.58 | 0.57 | 44.1 |
| East: Main St E | | | | | | | | | | | |
| 4 | L | 11 | 5.0 | 0.108 | 23.5 | LOS C | 1.2 | 8.6 | 0.72 | 0.76 | 37.0 |
| 5 | T | 16 | 5.0 | 0.108 | 15.2 | LOS B | 1.2 | 8.6 | 0.72 | 0.56 | 38.6 |
| 6 | R | 31 | 5.0 | 0.108 | 23.6 | LOS C | 1.2 | 8.6 | 0.72 | 0.76 | 37.0 |
| Approach | | 57 | 5.0 | 0.108 | 21.2 | LOS C | 1.2 | 8.6 | 0.72 | 0.71 | 37.4 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 7 | L | 28 | 5.0 | 0.266 | 18.3 | LOS B | 2.3 | 16.9 | 0.61 | 0.87 | 41.6 |
| 8 | T | 288 | 5.0 | 0.266 | 10.8 | LOS B | 3.7 | 27.2 | 0.64 | 0.53 | 43.8 |
| 9 | R | 21 | 5.0 | 0.266 | 19.7 | LOS B | 3.7 | 27.2 | 0.66 | 0.91 | 40.9 |
| Approach | | 338 | 5.0 | 0.266 | 12.0 | LOS B | 3.7 | 27.2 | 0.64 | 0.58 | 43.4 |
| West: Main St W | | | | | | | | | | | |
| 10 | L | 138 | 5.0 | 0.323 | 24.2 | LOS C | 3.0 | 21.7 | 0.76 | 0.77 | 36.1 |
| 11 | T | 13 | 5.0 | 0.539 | 18.0 | LOS B | 8.0 | 58.4 | 0.86 | 0.73 | 35.7 |
| 12 | R | 315 | 5.0 | 0.539 | 26.4 | LOS C | 8.0 | 58.4 | 0.86 | 0.83 | 34.9 |
| Approach | | 465 | 5.0 | 0.539 | 25.5 | LOS C | 8.0 | 58.4 | 0.83 | 0.81 | 35.3 |
| All Vehicles | | 1428 | 5.0 | 0.542 | 16.5 | LOS B | 8.0 | 58.4 | 0.68 | 0.66 | 40.4 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 22.5 | LOS C | 0.1 | 0.1 | 0.87 | 0.87 |
| P3 | Across E approach | 53 | 11.4 | LOS B | 0.1 | 0.1 | 0.62 | 0.62 |
| P5 | Across N approach | 53 | 20.0 | LOS C | 0.1 | 0.1 | 0.82 | 0.82 |
| P7 | Across W approach | 53 | 12.7 | LOS B | 0.1 | 0.1 | 0.65 | 0.65 |
| All Pedestrians | | 212 | 16.7 | LOS B | | | 0.74 | 0.74 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

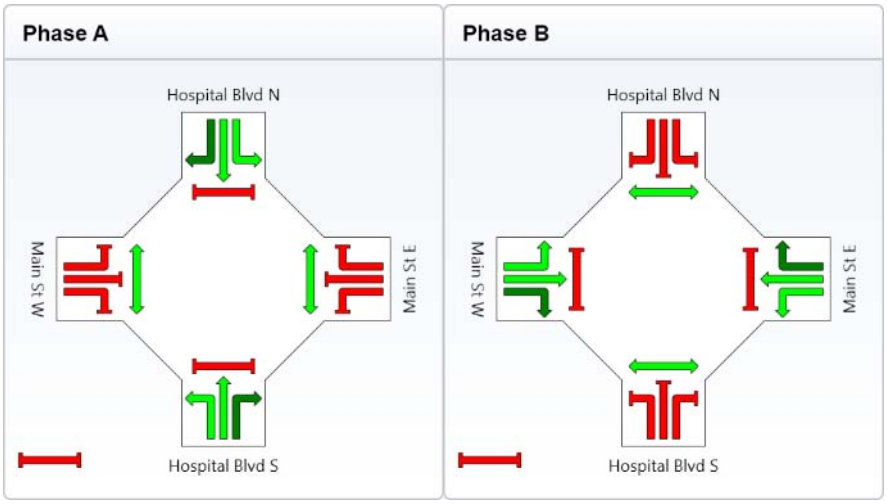
**Site: 2026PM - Main St/Hospital Blvd - Option 1**

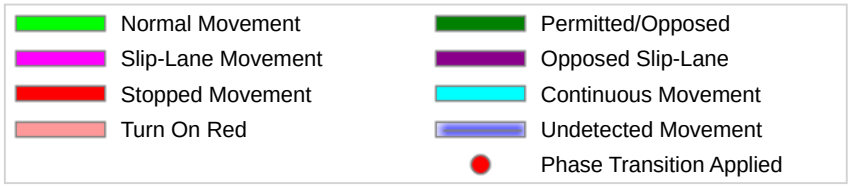
Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Two-Phase**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 28 | 20 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 34 | 26 |
| Phase Split | 57 % | 43 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Main St/Hospital Blvd - Legacy Adjusted Option 1**

Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 80 | 5.0 | 0.092 | 15.5 | LOS B | 0.9 | 6.5 | 0.40 | 0.72 | 42.2 |
| 2 | T | 538 | 5.0 | 0.622 | 9.9 | LOS A | 9.7 | 70.6 | 0.64 | 0.56 | 44.9 |
| 3 | R | 11 | 5.0 | 0.622 | 18.3 | LOS B | 9.7 | 70.6 | 0.64 | 0.96 | 42.1 |
| Approach | | 628 | 5.0 | 0.622 | 10.8 | LOS B | 9.7 | 70.6 | 0.61 | 0.59 | 44.5 |
| East: Main St E | | | | | | | | | | | |
| 4 | L | 11 | 5.0 | 0.179 | 24.7 | LOS C | 2.1 | 15.3 | 0.76 | 0.78 | 36.2 |
| 5 | T | 22 | 5.0 | 0.179 | 16.3 | LOS B | 2.1 | 15.3 | 0.76 | 0.60 | 37.6 |
| 6 | R | 64 | 5.0 | 0.179 | 24.7 | LOS C | 2.1 | 15.3 | 0.76 | 0.78 | 36.2 |
| Approach | | 97 | 5.0 | 0.179 | 22.8 | LOS C | 2.1 | 15.3 | 0.76 | 0.74 | 36.5 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 7 | L | 18 | 5.0 | 0.592 | 18.8 | LOS B | 5.7 | 41.7 | 0.66 | 0.92 | 41.7 |
| 8 | T | 572 | 5.0 | 0.592 | 13.0 | LOS B | 8.6 | 63.1 | 0.75 | 0.64 | 41.5 |
| 9 | R | 87 | 5.0 | 0.592 | 24.1 | LOS C | 8.6 | 63.1 | 0.84 | 0.88 | 37.9 |
| Approach | | 677 | 5.0 | 0.592 | 14.6 | LOS B | 8.6 | 63.1 | 0.76 | 0.68 | 41.0 |
| West: Main St W | | | | | | | | | | | |
| 10 | L | 69 | 5.0 | 0.165 | 24.3 | LOS C | 1.5 | 10.7 | 0.74 | 0.74 | 36.0 |
| 11 | T | 11 | 5.0 | 0.600 | 19.2 | LOS B | 8.7 | 63.8 | 0.90 | 0.76 | 34.9 |
| 12 | R | 333 | 5.0 | 0.600 | 27.6 | LOS C | 8.7 | 63.8 | 0.90 | 0.83 | 34.2 |
| Approach | | 413 | 5.0 | 0.600 | 26.8 | LOS C | 8.7 | 63.8 | 0.87 | 0.82 | 34.5 |
| All Vehicles | | 1815 | 5.0 | 0.622 | 16.5 | LOS B | 9.7 | 70.6 | 0.73 | 0.68 | 40.1 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 23.4 | LOS C | 0.1 | 0.1 | 0.88 | 0.88 |
| P3 | Across E approach | 53 | 10.8 | LOS B | 0.1 | 0.1 | 0.60 | 0.60 |
| P5 | Across N approach | 53 | 20.8 | LOS C | 0.1 | 0.1 | 0.83 | 0.83 |
| P7 | Across W approach | 53 | 12.0 | LOS B | 0.1 | 0.1 | 0.63 | 0.63 |
| All Pedestrians | | 212 | 16.8 | LOS B | | | 0.74 | 0.74 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

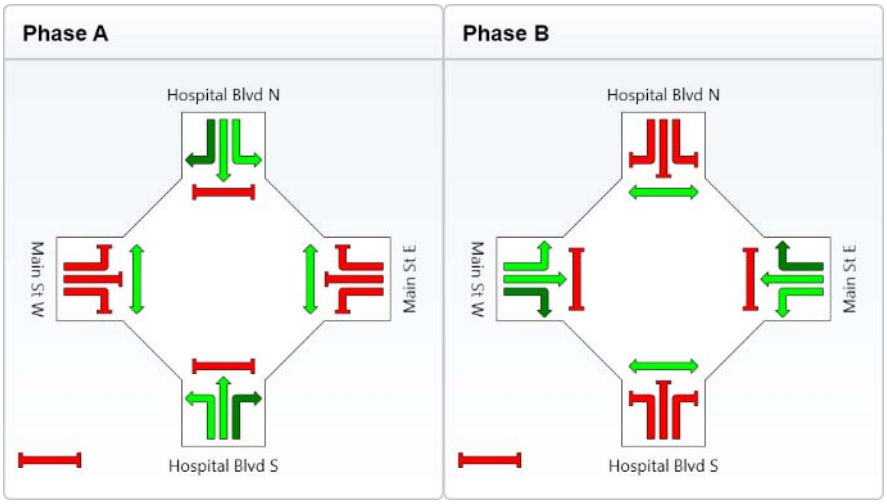


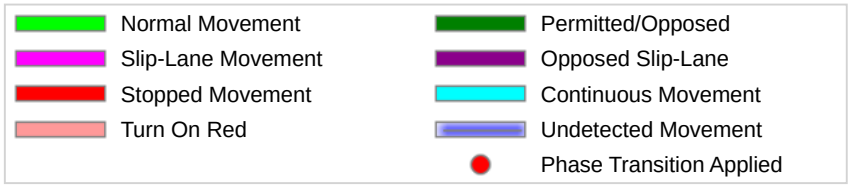
Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Two-Phase**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 29 | 19 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 35 | 25 |
| Phase Split | 58 % | 42 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Main St/Hospital Blvd - Legacy Adjusted Option 1**

Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 82 | 5.0 | 0.102 | 17.0 | LOS B | 1.0 | 7.5 | 0.45 | 0.72 | 41.0 |
| 2 | T | 420 | 5.0 | 0.514 | 10.8 | LOS B | 7.4 | 54.0 | 0.62 | 0.54 | 44.1 |
| 3 | R | 11 | 5.0 | 0.514 | 19.2 | LOS B | 7.4 | 54.0 | 0.62 | 0.96 | 41.4 |
| Approach | | 513 | 5.0 | 0.514 | 12.0 | LOS B | 7.4 | 54.0 | 0.59 | 0.58 | 43.6 |
| East: Main St E | | | | | | | | | | | |
| 4 | L | 11 | 5.0 | 0.103 | 22.8 | LOS C | 1.1 | 8.3 | 0.70 | 0.76 | 37.5 |
| 5 | T | 16 | 5.0 | 0.103 | 14.4 | LOS B | 1.1 | 8.3 | 0.70 | 0.54 | 39.3 |
| 6 | R | 31 | 5.0 | 0.103 | 22.8 | LOS C | 1.1 | 8.3 | 0.70 | 0.77 | 37.5 |
| Approach | | 57 | 5.0 | 0.103 | 20.4 | LOS C | 1.1 | 8.3 | 0.70 | 0.70 | 37.9 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 7 | L | 28 | 5.0 | 0.269 | 19.0 | LOS B | 2.4 | 17.3 | 0.62 | 0.86 | 41.1 |
| 8 | T | 285 | 5.0 | 0.269 | 11.4 | LOS B | 3.8 | 27.7 | 0.66 | 0.54 | 43.1 |
| 9 | R | 21 | 5.0 | 0.269 | 20.3 | LOS C | 3.8 | 27.7 | 0.68 | 0.90 | 40.5 |
| Approach | | 335 | 5.0 | 0.269 | 12.6 | LOS B | 3.8 | 27.7 | 0.66 | 0.59 | 42.8 |
| West: Main St W | | | | | | | | | | | |
| 10 | L | 138 | 5.0 | 0.316 | 23.4 | LOS C | 2.9 | 21.1 | 0.74 | 0.77 | 36.6 |
| 11 | T | 13 | 5.0 | 0.510 | 17.0 | LOS B | 7.7 | 56.4 | 0.84 | 0.72 | 36.4 |
| 12 | R | 313 | 5.0 | 0.510 | 25.4 | LOS C | 7.7 | 56.4 | 0.84 | 0.82 | 35.4 |
| Approach | | 463 | 5.0 | 0.510 | 24.6 | LOS C | 7.7 | 56.4 | 0.81 | 0.80 | 35.8 |
| All Vehicles | | 1367 | 5.0 | 0.514 | 16.7 | LOS B | 7.7 | 56.4 | 0.69 | 0.66 | 40.2 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 21.7 | LOS C | 0.1 | 0.1 | 0.85 | 0.85 |
| P3 | Across E approach | 53 | 12.0 | LOS B | 0.1 | 0.1 | 0.63 | 0.63 |
| P5 | Across N approach | 53 | 19.2 | LOS B | 0.1 | 0.1 | 0.80 | 0.80 |
| P7 | Across W approach | 53 | 13.3 | LOS B | 0.1 | 0.1 | 0.67 | 0.67 |
| All Pedestrians | | 212 | 16.6 | LOS B | | | 0.74 | 0.74 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

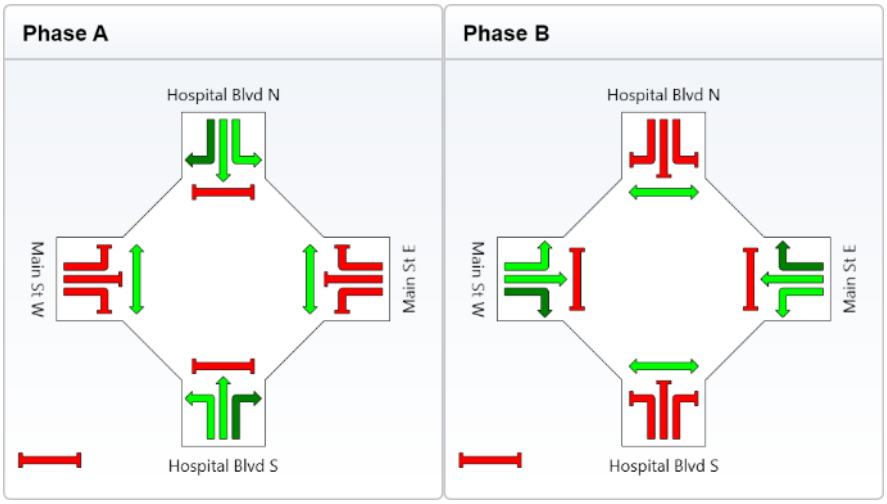


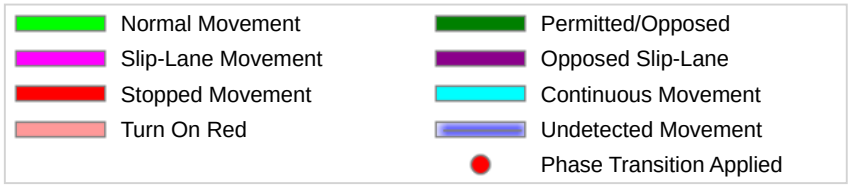
Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Two-Phase**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 27 | 21 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 33 | 27 |
| Phase Split | 55 % | 45 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Hospital Blvd/ Second St Option 1**

Hospital Boulevard / Second Street Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 245 | 5.0 | 0.137 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 474 | 5.0 | 0.251 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 719 | 5.0 | 0.251 | 2.9 | NA | 0.0 | 0.0 | 0.00 | 0.23 | 55.7 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 649 | 5.0 | 0.344 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 248 | 5.0 | 0.284 | 12.2 | LOS B | 1.4 | 10.2 | 0.64 | 0.90 | 45.0 |
| Approach | | 898 | 5.0 | 0.344 | 3.4 | NA | 1.4 | 10.2 | 0.18 | 0.25 | 55.0 |
| West: Second St | | | | | | | | | | | |
| 10 | L | 218 | 5.0 | 0.363 | 14.0 | LOS B | 1.7 | 12.7 | 0.62 | 0.93 | 43.5 |
| 12 | R | 87 | 5.0 | 0.515 | 38.4 | LOS E | 1.9 | 14.2 | 0.93 | 1.06 | 29.2 |
| Approach | | 305 | 5.0 | 0.515 | 21.0 | LOS C | 1.9 | 14.2 | 0.71 | 0.97 | 38.1 |
| All Vehicles | | 1922 | 5.0 | 0.515 | 6.0 | NA | 1.9 | 14.2 | 0.19 | 0.35 | 51.6 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026PM - Hospital Blvd/ Second St Option 1**

Hospital Boulevard / Second Street Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 178 | 5.0 | 0.099 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 451 | 5.0 | 0.239 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 628 | 5.0 | 0.239 | 2.4 | NA | 0.0 | 0.0 | 0.00 | 0.19 | 56.4 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 267 | 5.0 | 0.142 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 225 | 5.0 | 0.232 | 11.3 | LOS B | 1.1 | 7.7 | 0.59 | 0.82 | 45.9 |
| Approach | | 493 | 5.0 | 0.232 | 5.2 | NA | 1.1 | 7.7 | 0.27 | 0.38 | 52.6 |
| West: Second St | | | | | | | | | | | |
| 10 | L | 354 | 5.0 | 0.546 | 15.2 | LOS C | 3.6 | 26.4 | 0.67 | 1.03 | 42.5 |
| 12 | R | 75 | 5.0 | 0.215 | 18.3 | LOS C | 0.8 | 5.5 | 0.76 | 0.93 | 40.0 |
| Approach | | 428 | 5.0 | 0.546 | 15.7 | LOS C | 3.6 | 26.4 | 0.69 | 1.01 | 42.0 |
| All Vehicles | | 1549 | 5.0 | 0.546 | 6.9 | NA | 3.6 | 26.4 | 0.28 | 0.48 | 50.5 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026AM - Hospital Blvd/ Second St Legacy Adjusted- Option 1**

Hospital Boulevard / Second Street Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 206 | 5.0 | 0.115 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 474 | 5.0 | 0.251 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 680 | 5.0 | 0.251 | 2.5 | NA | 0.0 | 0.0 | 0.00 | 0.20 | 56.2 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 599 | 5.0 | 0.317 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 248 | 5.0 | 0.271 | 11.8 | LOS B | 1.3 | 9.5 | 0.62 | 0.87 | 45.4 |
| Approach | | 847 | 5.0 | 0.317 | 3.5 | NA | 1.3 | 9.5 | 0.18 | 0.25 | 54.8 |
| West: Second St | | | | | | | | | | | |
| 10 | L | 218 | 5.0 | 0.354 | 13.7 | LOS B | 1.7 | 12.2 | 0.61 | 0.92 | 43.7 |
| 12 | R | 82 | 5.0 | 0.431 | 32.7 | LOS D | 1.6 | 11.6 | 0.90 | 1.04 | 31.6 |
| Approach | | 300 | 5.0 | 0.431 | 18.9 | LOS C | 1.7 | 12.2 | 0.69 | 0.95 | 39.6 |
| All Vehicles | | 1827 | 5.0 | 0.431 | 5.7 | NA | 1.7 | 12.2 | 0.20 | 0.35 | 52.0 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026PM - Hospital Blvd/ Second St Legacy Adjusted - Option 1**

Hospital Boulevard / Second Street Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 151 | 5.0 | 0.084 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 451 | 5.0 | 0.239 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 601 | 5.0 | 0.239 | 2.1 | NA | 0.0 | 0.0 | 0.00 | 0.17 | 56.8 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 264 | 5.0 | 0.140 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 225 | 5.0 | 0.225 | 11.1 | LOS B | 1.0 | 7.5 | 0.58 | 0.81 | 46.1 |
| Approach | | 489 | 5.0 | 0.225 | 5.1 | NA | 1.0 | 7.5 | 0.27 | 0.37 | 52.7 |
| West: Second St | | | | | | | | | | | |
| 10 | L | 354 | 5.0 | 0.537 | 14.9 | LOS B | 3.5 | 25.7 | 0.66 | 1.02 | 42.7 |
| 12 | R | 75 | 5.0 | 0.210 | 17.9 | LOS C | 0.7 | 5.4 | 0.75 | 0.93 | 40.3 |
| Approach | | 428 | 5.0 | 0.537 | 15.4 | LOS C | 3.5 | 25.7 | 0.68 | 1.00 | 42.3 |
| All Vehicles | | 1519 | 5.0 | 0.537 | 6.8 | NA | 3.5 | 25.7 | 0.28 | 0.47 | 50.6 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026AM - Hospital Blvd/ Innovation Dr - Option 1**

Hospital Boulevard / Innovation Drive Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 87 | 5.0 | 0.049 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 606 | 5.0 | 0.321 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 694 | 5.0 | 0.321 | 1.1 | NA | 0.0 | 0.0 | 0.00 | 0.08 | 58.3 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 827 | 5.0 | 0.438 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 482 | 5.0 | 0.535 | 14.2 | LOS B | 4.1 | 29.9 | 0.72 | 1.06 | 43.3 |
| Approach | | 1309 | 5.0 | 0.535 | 5.2 | NA | 4.1 | 29.9 | 0.26 | 0.39 | 52.5 |
| West: Innovation Dr | | | | | | | | | | | |
| 10 | L | 101 | 5.0 | 0.181 | 13.2 | LOS B | 0.7 | 4.8 | 0.58 | 0.86 | 44.1 |
| 12 | R | 72 | 5.0 | 0.987 | 180.4 | LOS F | 5.9 | 42.8 | 1.00 | 1.41 | 10.0 |
| Approach | | 173 | 5.0 | 0.987 | 82.5 | LOS F | 5.9 | 42.8 | 0.76 | 1.09 | 18.3 |
| All Vehicles | | 2176 | 5.0 | 0.987 | 10.0 | NA | 5.9 | 42.8 | 0.22 | 0.35 | 47.1 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026PM - Hospital Blvd/ Innovation Dr - Option 1**

Hospital Boulevard / Innovation Drive Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 92 | 5.0 | 0.051 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 706 | 5.0 | 0.374 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 798 | 5.0 | 0.374 | 1.0 | NA | 0.0 | 0.0 | 0.00 | 0.08 | 58.5 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 488 | 5.0 | 0.259 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 529 | 5.0 | 0.665 | 17.2 | LOS C | 6.0 | 43.5 | 0.79 | 1.20 | 40.8 |
| Approach | | 1018 | 5.0 | 0.665 | 8.9 | NA | 6.0 | 43.5 | 0.41 | 0.62 | 48.3 |
| West: Innovation Dr | | | | | | | | | | | |
| 10 | L | 143 | 5.0 | 0.297 | 15.5 | LOS C | 1.2 | 8.9 | 0.68 | 0.93 | 42.2 |
| 12 | R | 26 | 5.0 | 0.252 | 45.8 | LOS E | 0.8 | 5.5 | 0.93 | 1.00 | 26.6 |
| Approach | | 169 | 5.0 | 0.297 | 20.2 | LOS C | 1.2 | 8.9 | 0.72 | 0.94 | 38.7 |
| All Vehicles | | 1985 | 5.0 | 0.665 | 6.7 | NA | 6.0 | 43.5 | 0.27 | 0.43 | 50.8 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026AM - Hospital Blvd/ Innovation Dr - Legacy Adjusted Option 1**

Hospital Boulevard / Innovation Drive Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 74 | 5.0 | 0.041 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 606 | 5.0 | 0.321 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 680 | 5.0 | 0.321 | 0.9 | NA | 0.0 | 0.0 | 0.00 | 0.07 | 58.6 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 781 | 5.0 | 0.414 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 482 | 5.0 | 0.526 | 14.0 | LOS B | 4.0 | 29.3 | 0.71 | 1.05 | 43.5 |
| Approach | | 1263 | 5.0 | 0.526 | 5.3 | NA | 4.0 | 29.3 | 0.27 | 0.40 | 52.4 |
| West: Innovation Dr | | | | | | | | | | | |
| 10 | L | 101 | 5.0 | 0.180 | 13.1 | LOS B | 0.6 | 4.7 | 0.58 | 0.86 | 44.2 |
| 12 | R | 67 | 5.0 | 0.837 | 114.8 | LOS F | 3.5 | 25.6 | 0.99 | 1.20 | 14.4 |
| Approach | | 168 | 5.0 | 0.837 | 53.8 | LOS F | 3.5 | 25.6 | 0.74 | 1.00 | 24.2 |
| All Vehicles | | 2112 | 5.0 | 0.837 | 7.8 | NA | 4.0 | 29.3 | 0.22 | 0.34 | 49.5 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026PM - Hospital Blvd/ Innovation Dr - Legacy Adjusted Option 1**

Hospital Boulevard / Innovation Drive Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 78 | 5.0 | 0.043 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 706 | 5.0 | 0.374 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 784 | 5.0 | 0.374 | 0.8 | NA | 0.0 | 0.0 | 0.00 | 0.07 | 58.7 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 486 | 5.0 | 0.257 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 529 | 5.0 | 0.654 | 16.8 | LOS C | 5.8 | 42.3 | 0.78 | 1.18 | 41.1 |
| Approach | | 1016 | 5.0 | 0.654 | 8.8 | NA | 5.8 | 42.3 | 0.41 | 0.62 | 48.4 |
| West: Innovation Dr | | | | | | | | | | | |
| 10 | L | 143 | 5.0 | 0.294 | 15.4 | LOS C | 1.2 | 8.8 | 0.67 | 0.93 | 42.3 |
| 12 | R | 26 | 5.0 | 0.248 | 45.0 | LOS E | 0.7 | 5.4 | 0.93 | 1.00 | 26.8 |
| Approach | | 169 | 5.0 | 0.294 | 20.0 | LOS C | 1.2 | 8.8 | 0.71 | 0.94 | 38.8 |
| All Vehicles | | 1969 | 5.0 | 0.654 | 6.6 | NA | 5.8 | 42.3 | 0.27 | 0.42 | 50.9 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026AM - Parklands Dr/Main St/Engineering Dr - Option 1**

Parklands Drive / Main Street / Engineering Drive Intersection
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 1 | L | 69 | 5.0 | 0.266 | 88.1 | LOS F | 5.7 | 41.7 | 0.88 | 0.81 | 17.6 |
| 2 | T | 108 | 5.0 | 0.266 | 46.1 | LOS D | 5.7 | 41.7 | 0.82 | 0.66 | 25.5 |
| 3 | R | 381 | 5.0 | 0.746 | 34.5 | LOS C | 14.0 | 102.3 | 0.68 | 0.81 | 30.9 |
| Approach | | 559 | 5.0 | 0.746 | 43.4 | LOS D | 14.0 | 102.3 | 0.73 | 0.78 | 27.2 |
| East: Main St | | | | | | | | | | | |
| 4 | L | 189 | 5.0 | 0.485 | 18.8 | LOS B | 4.7 | 34.6 | 0.45 | 0.74 | 39.7 |
| 5 | T | 72 | 5.0 | 0.724 | 57.2 | LOS E | 12.2 | 89.3 | 1.00 | 0.87 | 21.8 |
| 6 | R | 129 | 5.0 | 0.724 | 65.4 | LOS E | 12.2 | 89.3 | 1.00 | 0.87 | 21.8 |
| Approach | | 391 | 5.0 | 0.724 | 41.3 | LOS D | 12.2 | 89.3 | 0.73 | 0.81 | 27.9 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 107 | 5.0 | 0.755 | 64.2 | LOS E | 6.1 | 44.2 | 0.91 | 0.84 | 21.7 |
| 8 | T | 214 | 5.0 | 0.744 | 57.3 | LOS E | 12.8 | 93.4 | 0.99 | 0.86 | 22.5 |
| 9 | R | 62 | 5.0 | 0.848 | 61.3 | LOS E | 3.0 | 22.0 | 0.55 | 0.91 | 22.3 |
| Approach | | 383 | 5.0 | 0.848 | 59.9 | LOS E | 12.8 | 93.4 | 0.90 | 0.86 | 22.2 |
| West: Engineering Dr | | | | | | | | | | | |
| 10 | L | 52 | 5.0 | 0.744 | 71.4 | LOS E | 8.9 | 64.8 | 1.00 | 0.87 | 20.4 |
| 11 | T | 24 | 5.0 | 0.744 | 63.1 | LOS E | 8.9 | 64.8 | 1.00 | 0.87 | 20.5 |
| 12 | R | 64 | 5.0 | 0.744 | 71.3 | LOS E | 8.9 | 64.8 | 1.00 | 0.87 | 20.4 |
| Approach | | 140 | 5.0 | 0.744 | 69.9 | LOS E | 8.9 | 64.8 | 1.00 | 0.87 | 20.4 |
| All Vehicles | | 1473 | 5.0 | 0.848 | 49.6 | LOS D | 14.0 | 102.3 | 0.80 | 0.82 | 25.1 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 42.4 | LOS E | 0.2 | 0.2 | 0.82 | 0.82 |
| P3 | Across E approach | 53 | 52.9 | LOS E | 0.2 | 0.2 | 0.92 | 0.92 |
| P5 | Across N approach | 53 | 42.4 | LOS E | 0.2 | 0.2 | 0.82 | 0.82 |
| P7 | Across W approach | 53 | 43.3 | LOS E | 0.2 | 0.2 | 0.83 | 0.83 |
| All Pedestrians | | 212 | 45.3 | LOS E | | | 0.85 | 0.85 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

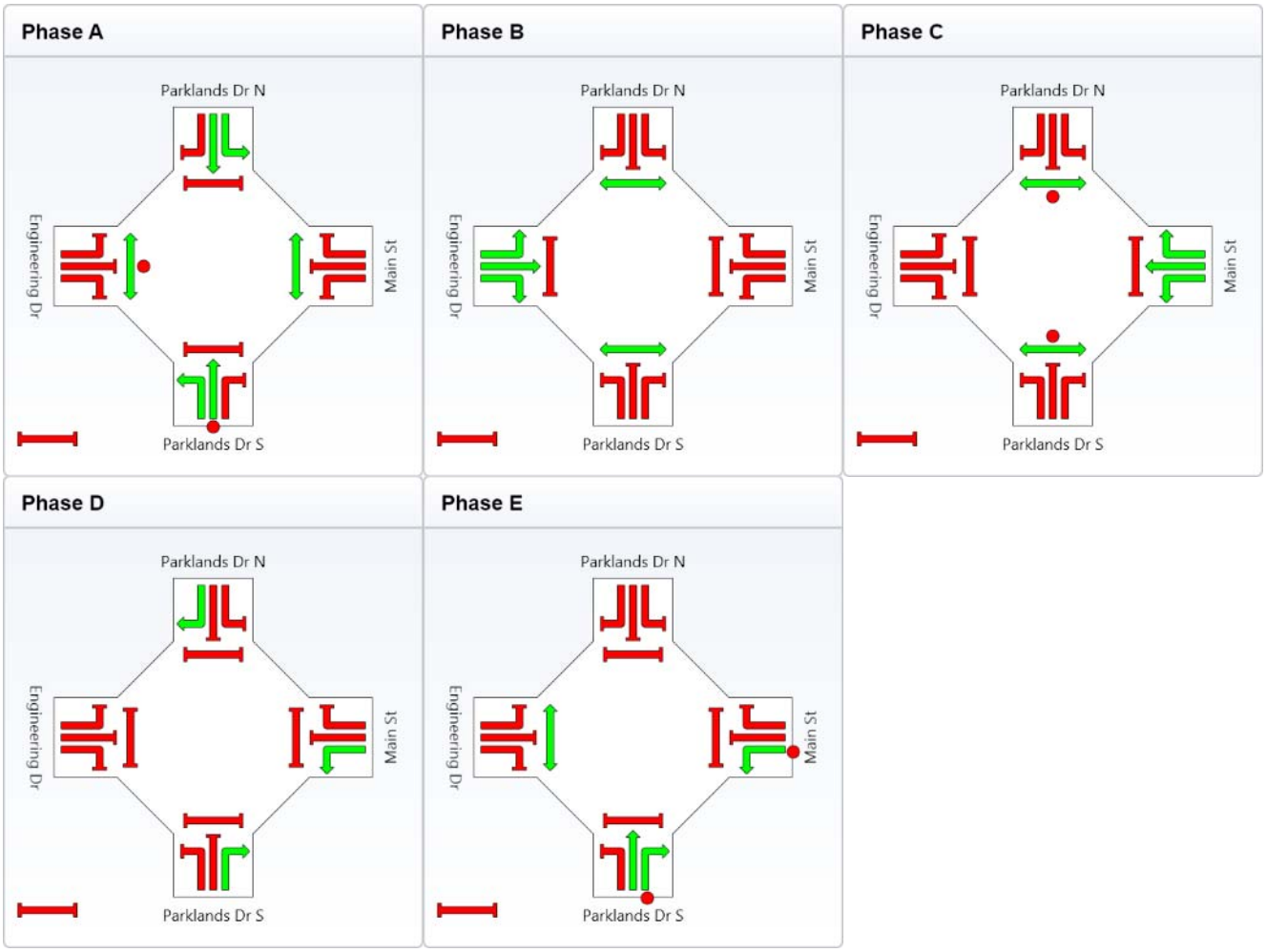


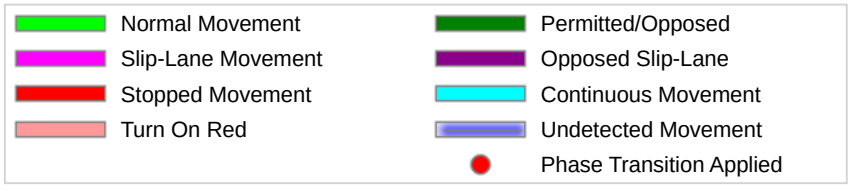
Parklands Drive / Main Street / Engineering Drive Intersection
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

**Phase times specified by the user**
**Sequence: GCRT Phasing**
**Input Sequence: A, B, C, D, E**
**Output Sequence: A, B, C, D, E**

**Phase Timing Results**

| Phase | A | B | C | D | E |
|---|---|---|---|---|---|
| Green Time (sec) | 19 | 13 | 19 | 47 | 2 |
| Yellow Time (sec) | 3 | 3 | 3 | 3 | 3 |
| All-Red Time (sec) | 2 | 2 | 2 | 2 | 2 |
| Phase Time (sec) | 24 | 18 | 24 | 52 | 7 |
| Phase Split | 19 % | 14 % | 19 % | 42 % | 6 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Parklands Dr/Main St/Engineering Dr - Option 1**

2026AM - Parklands Drive / Main Street / Engineering Drive
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 1 | L | 13 | 5.0 | 0.159 | 49.3 | LOS D | 2.9 | 20.8 | 0.79 | 0.80 | 26.3 |
| 2 | T | 128 | 5.0 | 0.159 | 39.0 | LOS D | 3.3 | 24.1 | 0.75 | 0.57 | 27.8 |
| 3 | R | 339 | 5.0 | 0.609 | 27.5 | LOS C | 10.4 | 76.0 | 0.55 | 0.77 | 34.3 |
| Approach | | 480 | 5.0 | 0.609 | 31.2 | LOS C | 10.4 | 76.0 | 0.61 | 0.72 | 32.0 |
| East: Main St | | | | | | | | | | | |
| 4 | L | 312 | 5.0 | 0.800 | 36.7 | LOS D | 11.2 | 81.6 | 0.77 | 0.87 | 29.9 |
| 5 | T | 32 | 5.0 | 0.619 | 58.3 | LOS E | 8.1 | 59.1 | 1.00 | 0.81 | 21.5 |
| 6 | R | 103 | 5.0 | 0.619 | 66.5 | LOS E | 8.1 | 59.1 | 1.00 | 0.81 | 21.4 |
| Approach | | 446 | 5.0 | 0.800 | 45.1 | LOS D | 11.2 | 81.6 | 0.84 | 0.85 | 26.7 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 116 | 5.0 | 0.805 | 65.7 | LOS E | 6.7 | 48.6 | 0.90 | 0.87 | 21.4 |
| 8 | T | 183 | 5.0 | 0.471 | 55.0 | LOS E | 7.7 | 56.3 | 0.94 | 0.74 | 23.0 |
| 9 | R | 11 | 5.0 | 0.471 | 73.0 | LOS E | 3.2 | 23.2 | 0.99 | 0.75 | 20.6 |
| Approach | | 309 | 5.0 | 0.805 | 59.6 | LOS E | 7.7 | 56.3 | 0.93 | 0.79 | 22.3 |
| West: Engineering Dr | | | | | | | | | | | |
| 10 | L | 52 | 5.0 | 0.806 | 74.8 | LOS E | 9.2 | 66.9 | 1.00 | 0.92 | 19.8 |
| 11 | T | 24 | 5.0 | 0.806 | 66.4 | LOS E | 9.2 | 66.9 | 1.00 | 0.92 | 19.9 |
| 12 | R | 64 | 5.0 | 0.806 | 74.6 | LOS E | 9.2 | 66.9 | 1.00 | 0.92 | 19.8 |
| Approach | | 140 | 5.0 | 0.806 | 73.2 | LOS E | 9.2 | 66.9 | 1.00 | 0.92 | 19.8 |
| All Vehicles | | 1376 | 5.0 | 0.806 | 46.4 | LOS D | 11.2 | 81.6 | 0.79 | 0.80 | 26.1 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 46.7 | LOS E | 0.2 | 0.2 | 0.86 | 0.86 |
| P3 | Across E approach | 53 | 52.0 | LOS E | 0.2 | 0.2 | 0.91 | 0.91 |
| P5 | Across N approach | 53 | 46.7 | LOS E | 0.2 | 0.2 | 0.86 | 0.86 |
| P7 | Across W approach | 53 | 37.6 | LOS D | 0.1 | 0.1 | 0.78 | 0.78 |
| All Pedestrians | | 212 | 45.7 | LOS E | | | 0.85 | 0.85 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

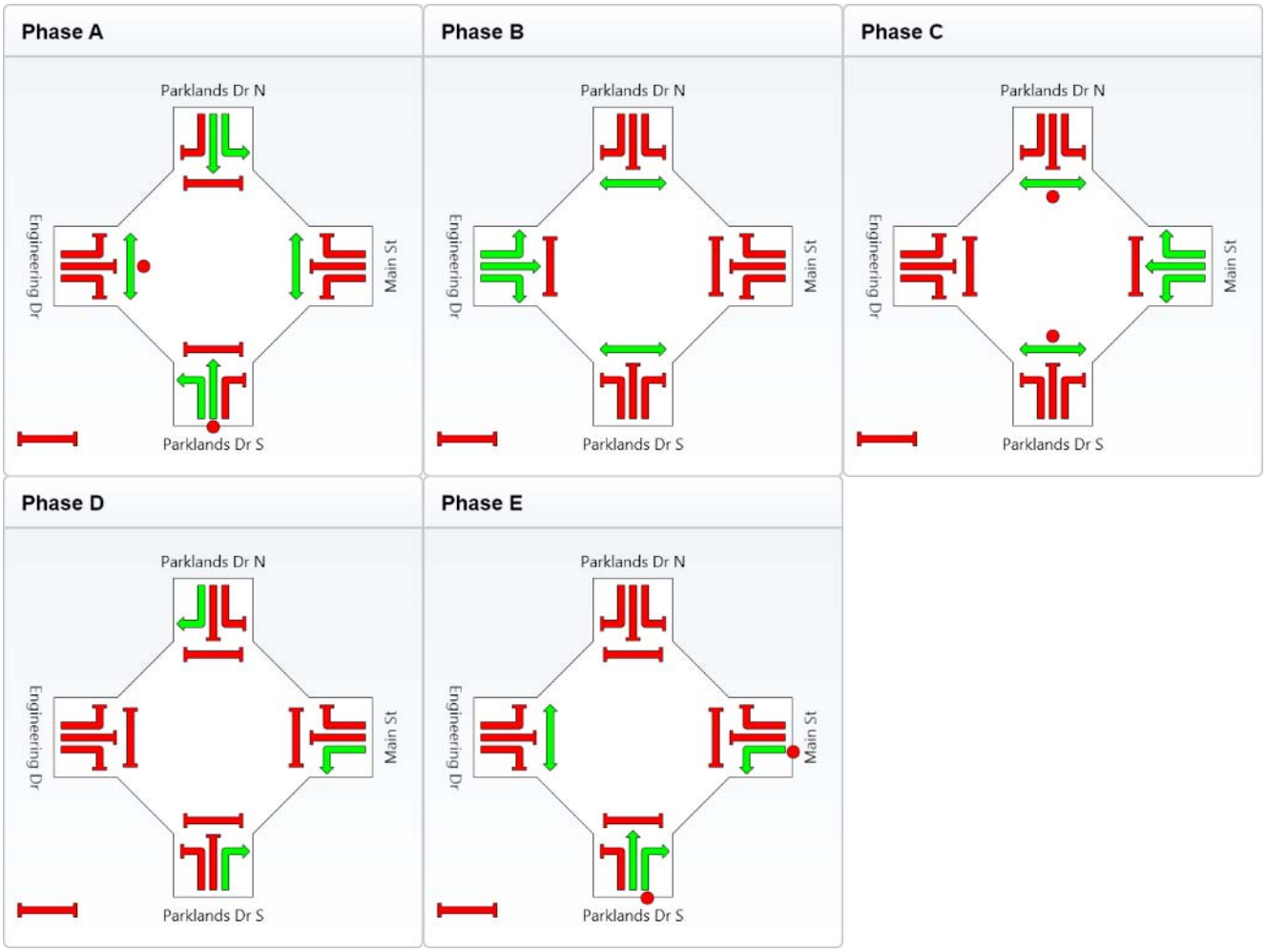


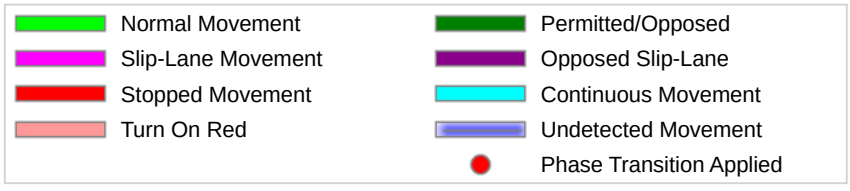
2026AM - Parklands Drive / Main Street / Engineering Drive
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

**Phase times specified by the user**
**Sequence: GCRT Phasing**
**Input Sequence: A, B, C, D, E**
**Output Sequence: A, B, C, D, E**

**Phase Timing Results**

| Phase | A | B | C | D | E |
|---|---|---|---|---|---|
| Green Time (sec) | 20 | 12 | 15 | 45 | 8 |
| Yellow Time (sec) | 3 | 3 | 3 | 3 | 3 |
| All-Red Time (sec) | 2 | 2 | 2 | 2 | 2 |
| Phase Time (sec) | 25 | 17 | 20 | 50 | 13 |
| Phase Split | 20 % | 14 % | 16 % | 40 % | 10 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Parklands Dr/Main St/Engineering Dr - Legacy Adjusted Option 1**

Parklands Drive / Main Street / Engineering Drive Intersection
Signals - Fixed Time Cycle Time = 125 seconds (User-Given Phase Times)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 1 | L | 85 | 5.0 | 0.396 | 64.7 | LOS E | 4.8 | 35.0 | 0.94 | 0.77 | 21.6 |
| 2 | T | 133 | 5.0 | 0.314 | 43.7 | LOS D | 6.3 | 45.9 | 0.82 | 0.66 | 26.3 |
| 3 | R | 466 | 5.0 | 0.813 | 36.9 | LOS D | 16.8 | 122.6 | 0.76 | 0.85 | 29.9 |
| Approach | | 684 | 5.0 | 0.813 | 41.7 | LOS D | 16.8 | 122.6 | 0.79 | 0.81 | 27.8 |
| East: Main St | | | | | | | | | | | |
| 4 | L | 209 | 5.0 | 0.304 | 16.8 | LOS B | 4.7 | 34.6 | 0.41 | 0.74 | 41.2 |
| 5 | T | 72 | 5.0 | 0.810 | 62.6 | LOS E | 13.0 | 94.6 | 1.00 | 0.93 | 20.7 |
| 6 | R | 129 | 5.0 | 0.810 | 70.8 | LOS E | 13.0 | 94.6 | 1.00 | 0.93 | 20.7 |
| Approach | | 411 | 5.0 | 0.810 | 41.8 | LOS D | 13.0 | 94.6 | 0.70 | 0.83 | 27.7 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 107 | 5.0 | 0.801 | 69.8 | LOS E | 6.5 | 47.4 | 0.96 | 0.87 | 20.5 |
| 8 | T | 236 | 5.0 | 1.040 | 163.6 | LOS F | 26.2 | 191.3 | 1.00 | 1.50 | 10.7 |
| 9 | R | 62 | 5.0 | 1.077 | 594.3 | LOS F | 9.1 | 66.6 | 0.84 | 1.39 | 3.4 |
| Approach | | 405 | 5.0 | 1.077 | 204.7 | LOS F | 26.2 | 191.3 | 0.96 | 1.32 | 9.0 |
| West: Engineering Dr | | | | | | | | | | | |
| 10 | L | 52 | 5.0 | 0.843 | 77.0 | LOS E | 9.8 | 71.5 | 1.00 | 0.96 | 19.4 |
| 11 | T | 24 | 5.0 | 0.843 | 68.6 | LOS E | 9.8 | 71.5 | 1.00 | 0.96 | 19.5 |
| 12 | R | 71 | 5.0 | 0.843 | 76.8 | LOS E | 9.8 | 71.5 | 1.00 | 0.96 | 19.4 |
| Approach | | 146 | 5.0 | 0.843 | 75.5 | LOS E | 9.8 | 71.5 | 1.00 | 0.96 | 19.4 |
| All Vehicles | | 1646 | 5.0 | 1.077 | 84.8 | LOS F | 26.2 | 191.3 | 0.83 | 0.95 | 17.9 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 44.9 | LOS E | 0.2 | 0.2 | 0.85 | 0.85 |
| P3 | Across E approach | 53 | 56.6 | LOS E | 0.2 | 0.2 | 0.95 | 0.95 |
| P5 | Across N approach | 53 | 44.9 | LOS E | 0.2 | 0.2 | 0.85 | 0.85 |
| P7 | Across W approach | 53 | 41.6 | LOS E | 0.2 | 0.2 | 0.82 | 0.82 |
| All Pedestrians | | 212 | 47.0 | LOS E | | | 0.87 | 0.87 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

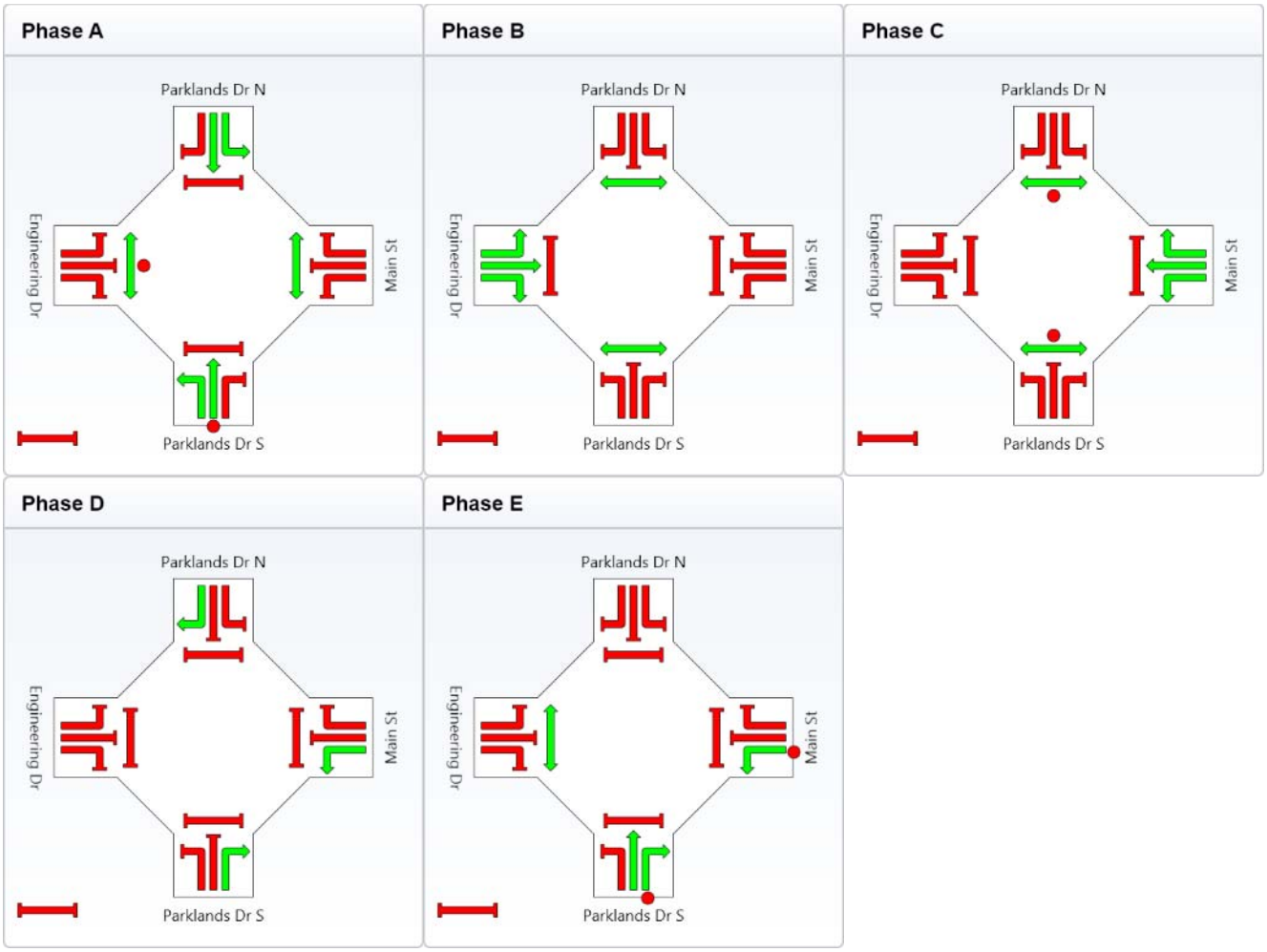
**Site: 2026AM - Parklands Dr/Main St/Engineering Dr - Legacy Adjusted Option 1**

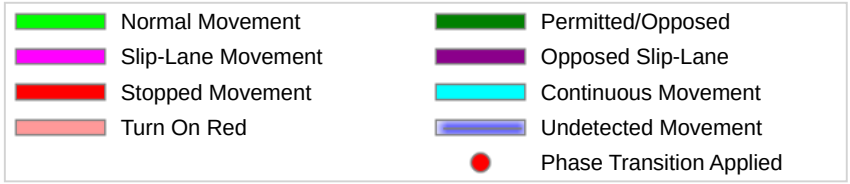
Parklands Drive / Main Street / Engineering Drive Intersection
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

**Phase times specified by the user**
**Sequence: GGCRT Phasing**
**Input Sequence: A, B, C, D, E**
**Output Sequence: A, B, C, D, E**

**Phase Timing Results**

| Phase | A | B | C | D | E |
|---|---|---|---|---|---|
| Green Time (sec) | 15 | 12 | 17 | 48 | 8 |
| Yellow Time (sec) | 3 | 3 | 3 | 3 | 3 |
| All-Red Time (sec) | 2 | 2 | 2 | 2 | 2 |
| Phase Time (sec) | 20 | 17 | 22 | 53 | 13 |
| Phase Split | 16 % | 14 % | 18 % | 42 % | 10 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Parklands Dr/Main St/Engineering Dr - Legacy Adjusted Option 1**

2026AM - Parklands Drive / Main Street / Engineering Drive
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 1 | L | 16 | 5.0 | 0.188 | 48.0 | LOS D | 3.3 | 24.4 | 0.79 | 0.80 | 26.7 |
| 2 | T | 157 | 5.0 | 0.188 | 37.7 | LOS D | 4.1 | 29.7 | 0.74 | 0.58 | 28.3 |
| 3 | R | 415 | 5.0 | 0.728 | 30.0 | LOS C | 13.0 | 95.1 | 0.65 | 0.80 | 33.0 |
| Approach | | 587 | 5.0 | 0.728 | 32.6 | LOS C | 13.0 | 95.1 | 0.68 | 0.74 | 31.4 |
| East: Main St | | | | | | | | | | | |
| 4 | L | 314 | 5.0 | 0.805 | 36.6 | LOS D | 11.2 | 81.6 | 0.78 | 0.87 | 29.9 |
| 5 | T | 32 | 5.0 | 0.714 | 62.2 | LOS E | 8.4 | 61.7 | 1.00 | 0.85 | 20.7 |
| 6 | R | 103 | 5.0 | 0.714 | 70.4 | LOS E | 8.4 | 61.7 | 1.00 | 0.85 | 20.7 |
| Approach | | 448 | 5.0 | 0.805 | 46.2 | LOS D | 11.2 | 81.6 | 0.84 | 0.86 | 26.4 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 116 | 5.0 | 0.805 | 65.7 | LOS E | 6.7 | 48.6 | 0.90 | 0.87 | 21.4 |
| 8 | T | 184 | 5.0 | 0.472 | 55.0 | LOS E | 7.7 | 56.5 | 0.94 | 0.74 | 23.0 |
| 9 | R | 11 | 5.0 | 0.472 | 73.0 | LOS E | 3.2 | 23.5 | 0.99 | 0.75 | 20.6 |
| Approach | | 311 | 5.0 | 0.805 | 59.6 | LOS E | 7.7 | 56.5 | 0.93 | 0.79 | 22.3 |
| West: Engineering Dr | | | | | | | | | | | |
| 10 | L | 52 | 5.0 | 0.806 | 74.8 | LOS E | 9.2 | 66.9 | 1.00 | 0.92 | 19.8 |
| 11 | T | 24 | 5.0 | 0.806 | 66.4 | LOS E | 9.2 | 66.9 | 1.00 | 0.92 | 19.9 |
| 12 | R | 64 | 5.0 | 0.806 | 74.6 | LOS E | 9.2 | 66.9 | 1.00 | 0.92 | 19.8 |
| Approach | | 140 | 5.0 | 0.806 | 73.2 | LOS E | 9.2 | 66.9 | 1.00 | 0.92 | 19.8 |
| All Vehicles | | 1486 | 5.0 | 0.806 | 46.2 | LOS D | 13.0 | 95.1 | 0.81 | 0.80 | 26.2 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 48.4 | LOS E | 0.2 | 0.2 | 0.88 | 0.88 |
| P3 | Across E approach | 53 | 52.0 | LOS E | 0.2 | 0.2 | 0.91 | 0.91 |
| P5 | Across N approach | 53 | 48.4 | LOS E | 0.2 | 0.2 | 0.88 | 0.88 |
| P7 | Across W approach | 53 | 36.1 | LOS D | 0.1 | 0.1 | 0.76 | 0.76 |
| All Pedestrians | | 212 | 46.2 | LOS E | | | 0.86 | 0.86 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

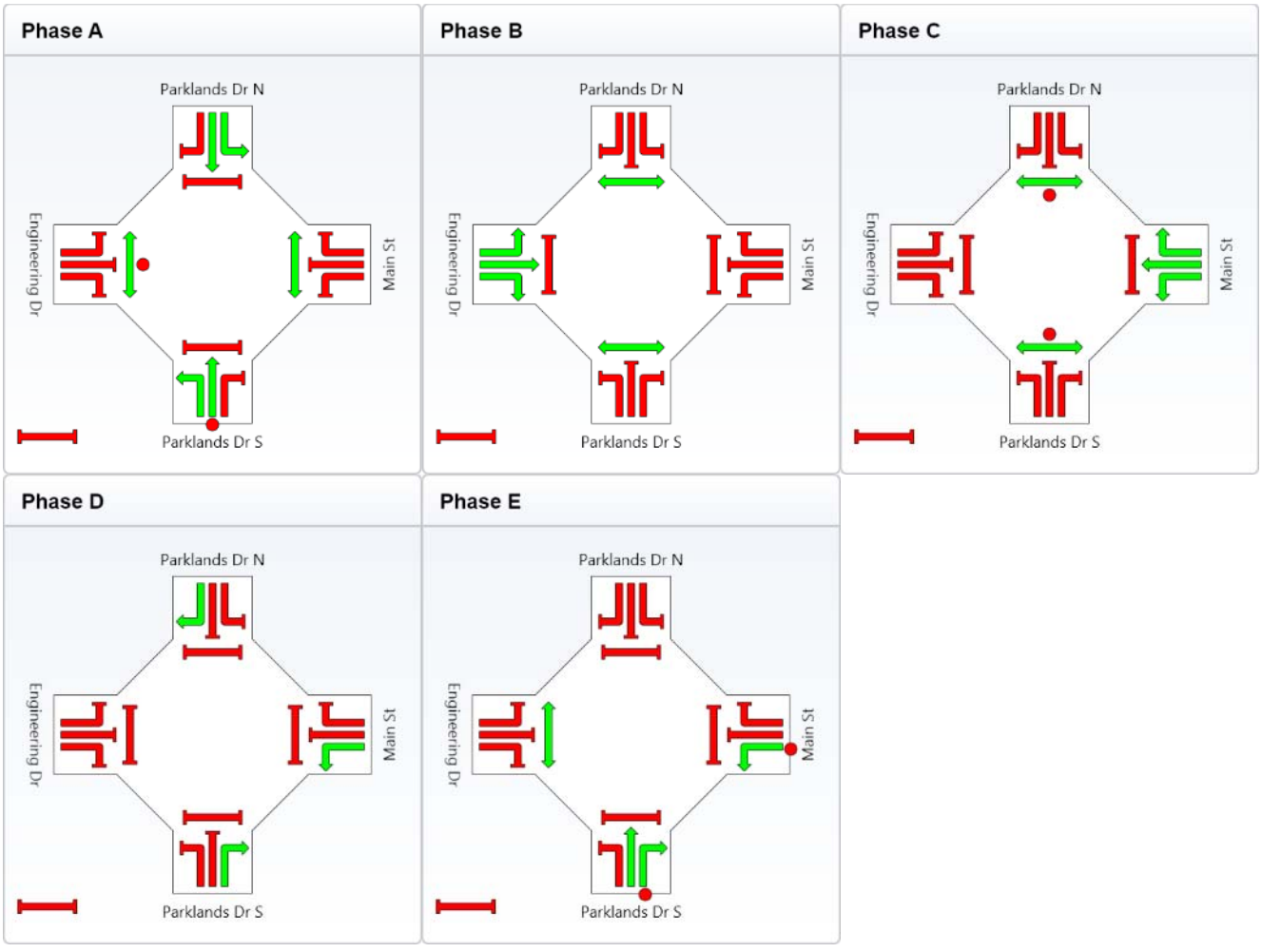


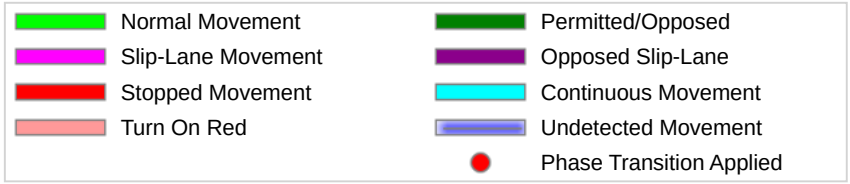
2026AM - Parklands Drive / Main Street / Engineering Drive
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

**Phase times specified by the user**
**Sequence: GCRT Phasing**
**Input Sequence: A, B, C, D, E**
**Output Sequence: A, B, C, D, E**

**Phase Timing Results**

| Phase | A | B | C | D | E |
|---|---|---|---|---|---|
| Green Time (sec) | 20 | 12 | 13 | 45 | 10 |
| Yellow Time (sec) | 3 | 3 | 3 | 3 | 3 |
| All-Red Time (sec) | 2 | 2 | 2 | 2 | 2 |
| Phase Time (sec) | 25 | 17 | 18 | 50 | 15 |
| Phase Split | 20 % | 14 % | 14 % | 40 % | 12 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Parklands Dr/First St Option 1**

Parklands Drive / First Street Intersection
Stop (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 2 | T | 567 | 0.0 | 0.145 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 567 | 0.0 | 0.145 | 0.0 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| East: First Street | | | | | | | | | | | |
| 4 | L | 356 | 0.0 | 0.393 | 14.5 | LOS B | 2.6 | 18.4 | 0.67 | 0.94 | 44.0 |
| 6 | R | 11 | 0.0 | 0.103 | 43.5 | LOS E | 0.3 | 2.1 | 0.87 | 1.00 | 27.9 |
| Approach | | 366 | 0.0 | 0.393 | 15.4 | LOS C | 2.6 | 18.4 | 0.67 | 0.94 | 43.3 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 49 | 0.0 | 0.120 | 8.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.95 | 49.0 |
| 8 | T | 418 | 0.0 | 0.120 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 467 | 0.0 | 0.120 | 0.9 | NA | 0.0 | 0.0 | 0.00 | 0.10 | 58.6 |
| All Vehicles | | 1401 | 0.0 | 0.393 | 4.3 | NA | 2.6 | 18.4 | 0.18 | 0.28 | 54.1 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026PM - Parklands Dr/First St**
**Option 1**

Parklands Drive / First Street Intersection
Stop (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 2 | T | 476 | 5.0 | 0.126 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 476 | 5.0 | 0.126 | 0.0 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| East: First Street | | | | | | | | | | | |
| 4 | L | 323 | 5.0 | 0.389 | 16.1 | LOS C | 2.7 | 19.7 | 0.72 | 1.00 | 43.0 |
| 6 | R | 11 | 5.0 | 0.108 | 45.3 | LOS E | 0.3 | 2.3 | 0.88 | 1.00 | 27.4 |
| Approach | | 334 | 5.0 | 0.389 | 17.1 | LOS C | 2.7 | 19.7 | 0.72 | 1.00 | 42.2 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 36 | 5.0 | 0.149 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 1.01 | 49.0 |
| 8 | T | 526 | 5.0 | 0.149 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 562 | 5.0 | 0.149 | 0.5 | NA | 0.0 | 0.0 | 0.00 | 0.06 | 59.2 |
| All Vehicles | | 1372 | 5.0 | 0.389 | 4.4 | NA | 2.7 | 19.7 | 0.18 | 0.27 | 54.2 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026AM - Parklands Dr/First St - Legacy Adjusted Option 1**

Parklands Drive / First Street Intersection
Stop (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 2 | T | 694 | 0.0 | 0.178 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 694 | 0.0 | 0.178 | 0.0 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| East: First Street | | | | | | | | | | | |
| 4 | L | 393 | 0.0 | 0.444 | 15.7 | LOS C | 3.5 | 24.4 | 0.71 | 1.01 | 43.1 |
| 6 | R | 11 | 0.0 | 0.157 | 62.4 | LOS F | 0.4 | 3.1 | 0.92 | 1.00 | 22.5 |
| Approach | | 403 | 0.0 | 0.444 | 17.0 | LOS C | 3.5 | 24.4 | 0.72 | 1.01 | 42.1 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 49 | 0.0 | 0.133 | 8.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.97 | 49.0 |
| 8 | T | 466 | 0.0 | 0.133 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 516 | 0.0 | 0.133 | 0.8 | NA | 0.0 | 0.0 | 0.00 | 0.09 | 58.7 |
| All Vehicles | | 1613 | 0.0 | 0.444 | 4.5 | NA | 3.5 | 24.4 | 0.18 | 0.28 | 53.9 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026PM - Parklands Dr/First St - Legacy Adjusted Option 1**

Parklands Drive / First Street Intersection
Stop (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 2 | T | 582 | 5.0 | 0.154 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 582 | 5.0 | 0.154 | 0.0 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| East: First Street | | | | | | | | | | | |
| 4 | L | 325 | 5.0 | 0.364 | 16.0 | LOS C | 2.6 | 19.2 | 0.72 | 0.99 | 43.1 |
| 6 | R | 11 | 5.0 | 0.141 | 56.4 | LOS F | 0.4 | 2.9 | 0.91 | 1.00 | 24.0 |
| Approach | | 336 | 5.0 | 0.364 | 17.2 | LOS C | 2.6 | 19.2 | 0.73 | 0.99 | 42.1 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 36 | 5.0 | 0.150 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 1.01 | 49.0 |
| 8 | T | 531 | 5.0 | 0.150 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 566 | 5.0 | 0.150 | 0.5 | NA | 0.0 | 0.0 | 0.00 | 0.06 | 59.2 |
| All Vehicles | | 1484 | 5.0 | 0.364 | 4.1 | NA | 2.6 | 19.2 | 0.16 | 0.25 | 54.5 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

APPENDIX C

# DETAILED SIDRA RESULTS – SMITH STREET BEST CASE SCENARIO

# MOVEMENT SUMMARY

**Site: 2026AM - Smith St/Parklands Dr - Option 2**

Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Car Park Access | | | | | | | | | | | |
| 1 | L | 11 | 5.0 | 0.083 | 39.8 | LOS D | 1.8 | 13.3 | 0.74 | 0.79 | 29.3 |
| 2 | T | 23 | 5.0 | 0.083 | 31.4 | LOS C | 1.8 | 13.3 | 0.74 | 0.57 | 30.3 |
| 3 | R | 11 | 5.0 | 0.083 | 39.4 | LOS D | 1.8 | 13.3 | 0.74 | 0.76 | 29.4 |
| Approach | | 44 | 5.0 | 0.083 | 35.3 | LOS D | 1.8 | 13.3 | 0.74 | 0.67 | 29.9 |
| East: Smith St E | | | | | | | | | | | |
| 4 | L | 95 | 5.0 | 0.747 | 51.3 | LOS D | 20.4 | 148.9 | 0.93 | 0.89 | 25.8 |
| 5 | T | 1099 | 5.0 | 0.747 | 42.9 | LOS D | 20.6 | 150.6 | 0.93 | 0.82 | 26.3 |
| 6 | R | 45 | 5.0 | 0.252 | 71.2 | LOS E | 1.3 | 9.8 | 0.98 | 0.71 | 20.3 |
| Approach | | 1239 | 5.0 | 0.747 | 44.6 | LOS D | 20.6 | 150.6 | 0.93 | 0.82 | 26.0 |
| North: Parklands Dr | | | | | | | | | | | |
| 7 | L | 11 | 5.0 | 0.775 | 30.5 | LOS C | 13.0 | 95.0 | 0.76 | 0.92 | 33.1 |
| 8 | T | 69 | 5.0 | 0.775 | 22.5 | LOS C | 13.0 | 95.0 | 0.76 | 0.76 | 34.1 |
| 9 | R | 680 | 5.0 | 0.775 | 41.1 | LOS D | 17.1 | 124.8 | 0.85 | 0.90 | 28.4 |
| Approach | | 760 | 5.0 | 0.775 | 39.3 | LOS D | 17.1 | 124.8 | 0.84 | 0.89 | 28.9 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 620 | 5.0 | 0.525 | 8.4 | LOS A | 4.0 | 29.1 | 0.20 | 0.66 | 48.7 |
| 11 | T | 2067 | 5.0 | 0.718 | 24.3 | LOS C | 30.9 | 225.4 | 0.84 | 0.76 | 34.3 |
| 12 | R | 236 | 5.0 | 0.581 | 47.6 | LOS D | 11.6 | 84.5 | 0.89 | 0.82 | 26.0 |
| Approach | | 2923 | 5.0 | 0.718 | 22.8 | LOS C | 30.9 | 225.4 | 0.71 | 0.74 | 35.6 |
| All Vehicles | | 4966 | 5.0 | 0.775 | 30.9 | LOS C | 30.9 | 225.4 | 0.78 | 0.78 | 31.6 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 34.5 | LOS D | 0.1 | 0.1 | 0.76 | 0.76 |
| P3 | Across E approach | 53 | 46.8 | LOS E | 0.2 | 0.2 | 0.88 | 0.88 |
| P5 | Across N approach | 53 | 21.0 | LOS C | 0.1 | 0.1 | 0.59 | 0.59 |
| All Pedestrians | | 159 | 34.1 | LOS D | | | 0.74 | 0.74 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

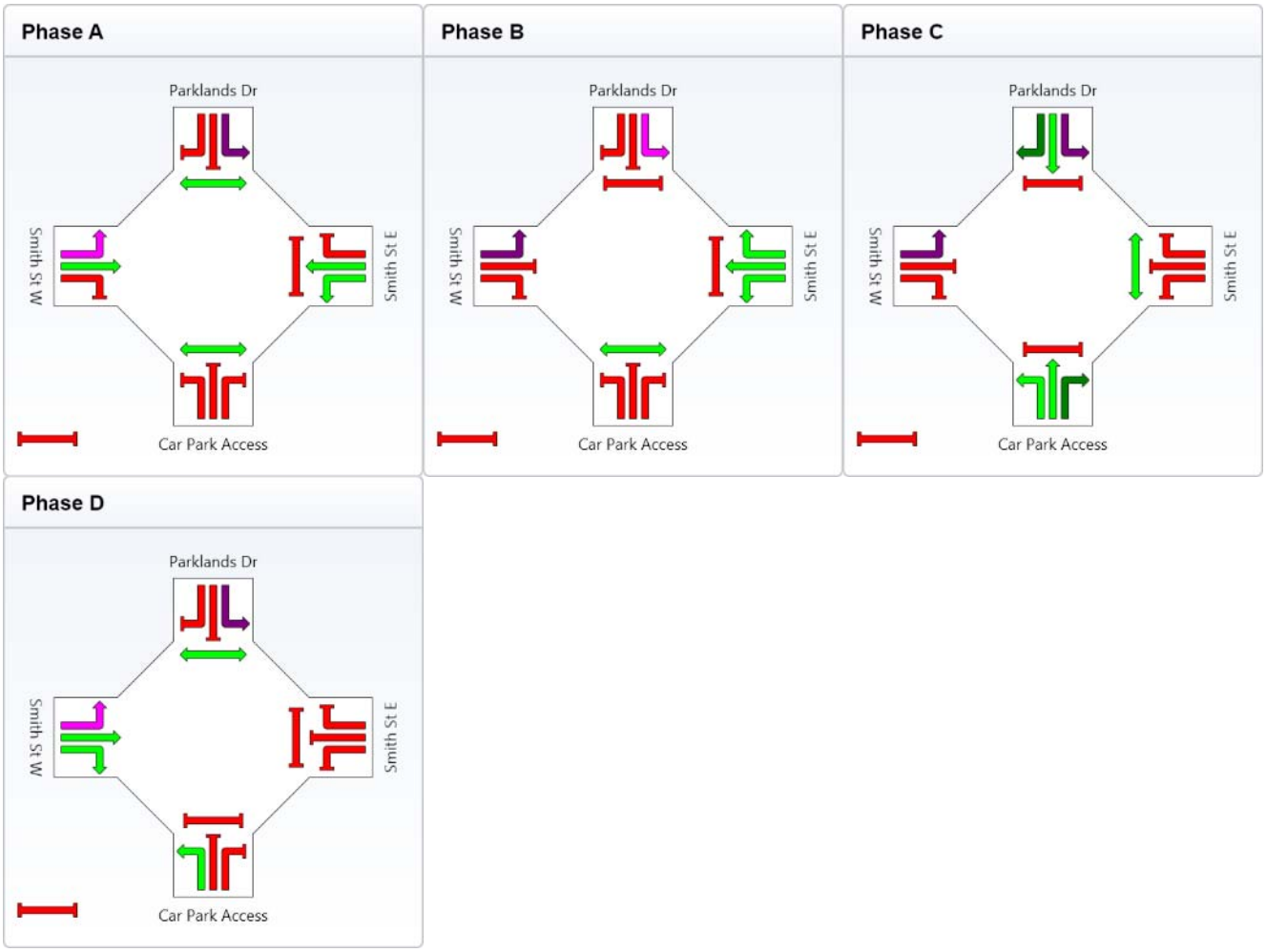


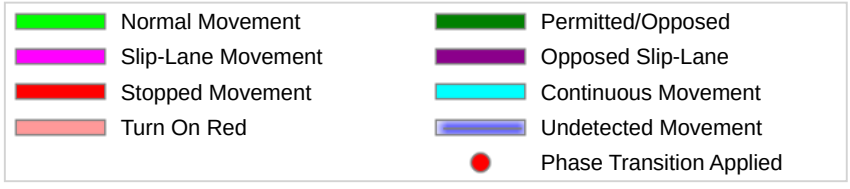
Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Phasing**
**Input Sequence: A, B, C, D**
**Output Sequence: A, B, C, D**

**Phase Timing Results**

| Phase | A | B | C | D |
|---|---|---|---|---|
| Green Time (sec) | 22 | 6 | 35 | 33 |
| Yellow Time (sec) | 4 | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 | 2 |
| Phase Time (sec) | 28 | 12 | 41 | 39 |
| Phase Split | 23 % | 10 % | 34 % | 33 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Smith St/Parklands Dr - Option 2**

Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Car Park Access | | | | | | | | | | | |
| 1 | L | 118 | 5.0 | 0.319 | 34.8 | LOS C | 9.2 | 66.9 | 0.73 | 0.82 | 31.0 |
| 2 | T | 44 | 5.0 | 0.319 | 26.4 | LOS C | 9.2 | 66.9 | 0.73 | 0.62 | 32.1 |
| 3 | R | 67 | 5.0 | 0.319 | 34.4 | LOS C | 9.2 | 66.9 | 0.73 | 0.80 | 31.1 |
| Approach | | 229 | 5.0 | 0.319 | 33.1 | LOS C | 9.2 | 66.9 | 0.73 | 0.77 | 31.2 |
| East: Smith St E | | | | | | | | | | | |
| 4 | L | 31 | 5.0 | 0.579 | 31.9 | LOS C | 17.4 | 127.0 | 0.68 | 0.94 | 33.4 |
| 5 | T | 1389 | 5.0 | 0.579 | 23.5 | LOS C | 17.5 | 127.4 | 0.68 | 0.60 | 35.0 |
| 6 | R | 26 | 5.0 | 0.126 | 68.8 | LOS E | 0.8 | 5.5 | 0.96 | 0.69 | 20.8 |
| Approach | | 1446 | 5.0 | 0.579 | 24.5 | LOS C | 17.5 | 127.4 | 0.69 | 0.61 | 34.5 |
| North: Parklands Dr | | | | | | | | | | | |
| 7 | L | 11 | 5.0 | 0.576 | 12.2 | LOS B | 4.3 | 31.6 | 0.20 | 0.77 | 45.2 |
| 8 | T | 13 | 5.0 | 0.576 | 4.2 | LOS A | 4.3 | 31.6 | 0.20 | 0.26 | 52.0 |
| 9 | R | 715 | 5.0 | 0.576 | 22.4 | LOS C | 11.0 | 80.1 | 0.41 | 0.78 | 37.3 |
| Approach | | 738 | 5.0 | 0.576 | 22.0 | LOS C | 11.0 | 80.1 | 0.40 | 0.77 | 37.6 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 346 | 5.0 | 0.280 | 8.1 | LOS A | 1.3 | 9.5 | 0.14 | 0.63 | 49.0 |
| 11 | T | 1398 | 5.0 | 0.548 | 25.7 | LOS C | 19.7 | 143.9 | 0.78 | 0.69 | 33.7 |
| 12 | R | 75 | 5.0 | 0.556 | 69.3 | LOS E | 4.5 | 32.6 | 1.00 | 0.77 | 20.6 |
| Approach | | 1819 | 5.0 | 0.556 | 24.1 | LOS C | 19.7 | 143.9 | 0.67 | 0.69 | 34.9 |
| All Vehicles | | 4233 | 5.0 | 0.579 | 24.4 | LOS C | 19.7 | 143.9 | 0.63 | 0.68 | 35.0 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 22.2 | LOS C | 0.1 | 0.1 | 0.61 | 0.61 |
| P3 | Across E approach | 53 | 41.7 | LOS E | 0.2 | 0.2 | 0.83 | 0.83 |
| P5 | Across N approach | 53 | 25.4 | LOS C | 0.1 | 0.1 | 0.65 | 0.65 |
| All Pedestrians | | 159 | 29.7 | LOS C | | | 0.70 | 0.70 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

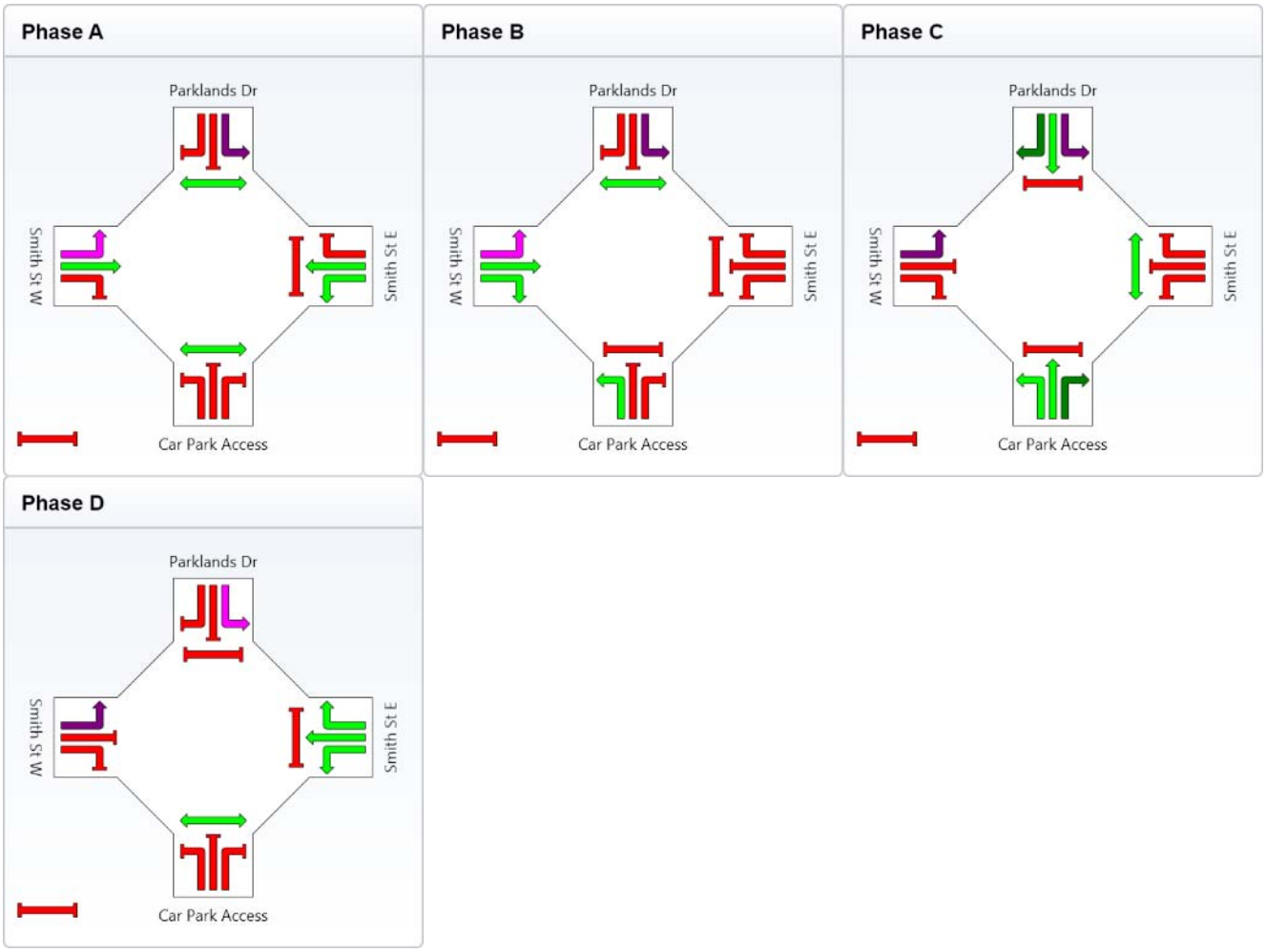


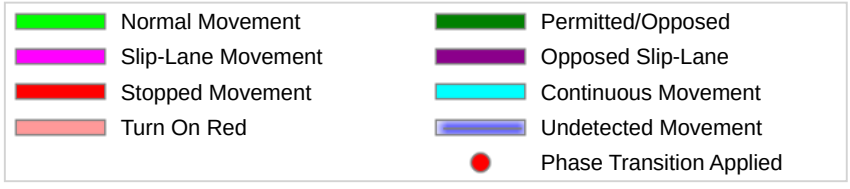
Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Phasing**
**Input Sequence: A, B, C, D**
**Output Sequence: A, B, C, D**

**Phase Timing Results**

| Phase | A | B | C | D |
|---|---|---|---|---|
| Green Time (sec) | 39 | 9 | 41 | 7 |
| Yellow Time (sec) | 4 | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 | 2 |
| Phase Time (sec) | 45 | 15 | 47 | 13 |
| Phase Split | 38 % | 13 % | 39 % | 11 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Smith St/Parklands Dr - Legacy Adjusted Option 2**

Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Car Park Access | | | | | | | | | | | |
| 1 | L | 11 | 5.0 | 0.087 | 41.3 | LOS D | 1.9 | 13.6 | 0.76 | 0.78 | 28.8 |
| 2 | T | 23 | 5.0 | 0.087 | 33.0 | LOS C | 1.9 | 13.6 | 0.76 | 0.58 | 29.6 |
| 3 | R | 11 | 5.0 | 0.087 | 41.0 | LOS D | 1.9 | 13.6 | 0.76 | 0.76 | 28.8 |
| Approach | | 44 | 5.0 | 0.087 | 36.9 | LOS D | 1.9 | 13.6 | 0.76 | 0.67 | 29.2 |
| East: Smith St E | | | | | | | | | | | |
| 4 | L | 95 | 5.0 | 0.691 | 41.4 | LOS D | 21.1 | 153.8 | 0.84 | 0.89 | 29.2 |
| 5 | T | 1303 | 5.0 | 0.691 | 33.0 | LOS C | 21.3 | 155.4 | 0.84 | 0.74 | 30.1 |
| 6 | R | 309 | 5.0 | 0.797 | 69.6 | LOS E | 9.5 | 69.1 | 1.00 | 0.88 | 20.6 |
| Approach | | 1707 | 5.0 | 0.797 | 40.1 | LOS D | 21.3 | 155.4 | 0.87 | 0.77 | 27.7 |
| North: Parklands Dr | | | | | | | | | | | |
| 7 | L | 281 | 5.0 | 0.828 | 32.1 | LOS C | 17.3 | 126.6 | 0.88 | 0.93 | 32.2 |
| 8 | T | 69 | 5.0 | 0.828 | 24.1 | LOS C | 17.3 | 126.6 | 0.88 | 0.85 | 32.8 |
| 9 | R | 476 | 5.0 | 0.828 | 49.7 | LOS D | 18.5 | 135.3 | 0.94 | 0.92 | 25.6 |
| Approach | | 826 | 5.0 | 0.828 | 41.6 | LOS D | 18.5 | 135.3 | 0.91 | 0.92 | 28.0 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 434 | 5.0 | 0.495 | 9.8 | LOS A | 5.1 | 37.4 | 0.29 | 0.68 | 47.4 |
| 11 | T | 2254 | 5.0 | 0.852 | 35.1 | LOS D | 41.8 | 305.0 | 0.96 | 0.92 | 29.2 |
| 12 | R | 236 | 5.0 | 0.607 | 54.6 | LOS D | 12.6 | 92.1 | 0.96 | 0.83 | 24.0 |
| Approach | | 2923 | 5.0 | 0.852 | 32.9 | LOS C | 41.8 | 305.0 | 0.86 | 0.88 | 30.4 |
| All Vehicles | | 5501 | 5.0 | 0.852 | 36.5 | LOS D | 41.8 | 305.0 | 0.87 | 0.85 | 29.1 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 28.0 | LOS C | 0.1 | 0.1 | 0.68 | 0.68 |
| P3 | Across E approach | 53 | 48.6 | LOS E | 0.2 | 0.2 | 0.90 | 0.90 |
| P5 | Across N approach | 53 | 24.1 | LOS C | 0.1 | 0.1 | 0.63 | 0.63 |
| All Pedestrians | | 159 | 33.6 | LOS D | | | 0.74 | 0.74 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

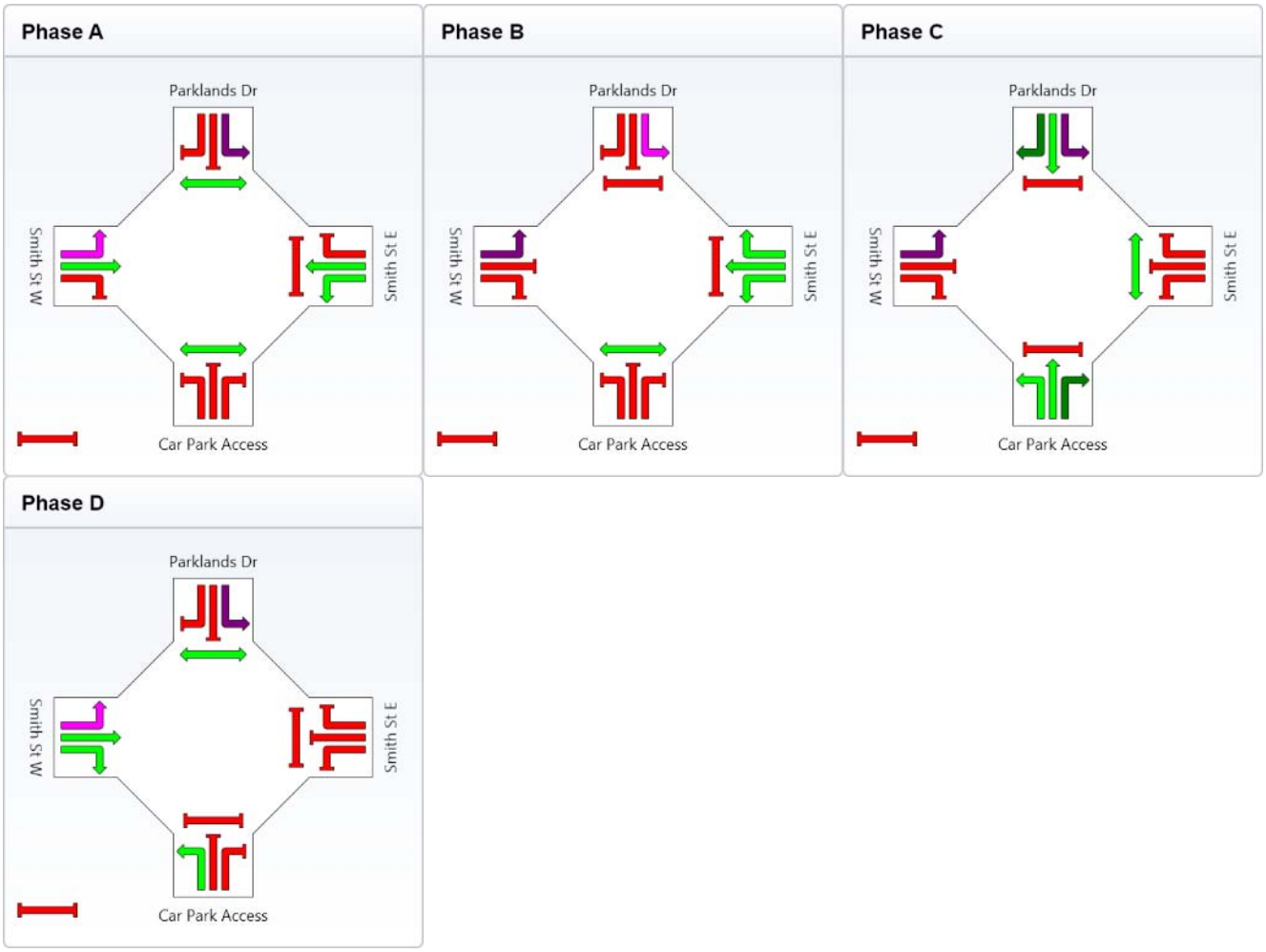


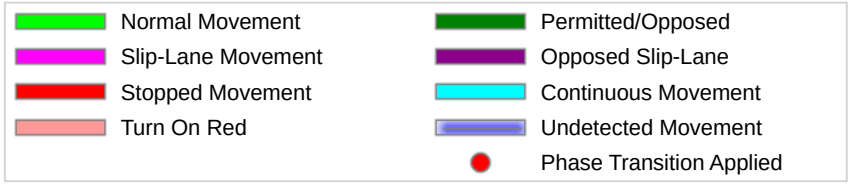
Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Phasing**
**Input Sequence: A, B, C, D**
**Output Sequence: A, B, C, D**

**Phase Timing Results**

| Phase | A | B | C | D |
|---|---|---|---|---|
| Green Time (sec) | 24 | 13 | 33 | 26 |
| Yellow Time (sec) | 4 | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 | 2 |
| Phase Time (sec) | 30 | 19 | 39 | 32 |
| Phase Split | 25 % | 16 % | 33 % | 27 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Smith St/Parklands Dr - Legacy Adjusted Option 2**

Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Car Park Access | | | | | | | | | | | |
| 1 | L | 118 | 5.0 | 0.361 | 39.4 | LOS D | 9.9 | 72.6 | 0.79 | 0.82 | 29.1 |
| 2 | T | 44 | 5.0 | 0.361 | 31.1 | LOS C | 9.9 | 72.6 | 0.79 | 0.67 | 29.9 |
| 3 | R | 67 | 5.0 | 0.361 | 39.1 | LOS D | 9.9 | 72.6 | 0.79 | 0.81 | 29.2 |
| Approach | | 229 | 5.0 | 0.361 | 37.7 | LOS D | 9.9 | 72.6 | 0.79 | 0.79 | 29.3 |
| East: Smith St E | | | | | | | | | | | |
| 4 | L | 31 | 5.0 | 0.598 | 27.3 | LOS C | 18.2 | 132.9 | 0.62 | 0.96 | 35.8 |
| 5 | T | 1604 | 5.0 | 0.598 | 19.0 | LOS B | 18.3 | 133.3 | 0.62 | 0.56 | 37.9 |
| 6 | R | 245 | 5.0 | 0.586 | 64.3 | LOS E | 6.9 | 50.5 | 0.98 | 0.79 | 21.7 |
| Approach | | 1880 | 5.0 | 0.598 | 25.0 | LOS C | 18.3 | 133.3 | 0.67 | 0.59 | 34.5 |
| North: Parklands Dr | | | | | | | | | | | |
| 7 | L | 249 | 5.0 | 0.595 | 14.0 | LOS B | 6.9 | 50.0 | 0.29 | 0.82 | 43.5 |
| 8 | T | 13 | 5.0 | 0.595 | 6.0 | LOS A | 6.9 | 50.0 | 0.29 | 0.37 | 49.0 |
| 9 | R | 500 | 5.0 | 0.595 | 28.8 | LOS C | 10.5 | 76.6 | 0.54 | 0.81 | 33.7 |
| Approach | | 762 | 5.0 | 0.595 | 23.6 | LOS C | 10.5 | 76.6 | 0.45 | 0.81 | 36.6 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 242 | 5.0 | 0.243 | 8.8 | LOS A | 1.8 | 13.3 | 0.20 | 0.65 | 48.5 |
| 11 | T | 1502 | 5.0 | 0.600 | 27.1 | LOS C | 22.1 | 161.1 | 0.82 | 0.73 | 32.9 |
| 12 | R | 75 | 5.0 | 0.556 | 69.3 | LOS E | 4.5 | 32.6 | 1.00 | 0.77 | 20.6 |
| Approach | | 1819 | 5.0 | 0.600 | 26.4 | LOS C | 22.1 | 161.1 | 0.74 | 0.72 | 33.5 |
| All Vehicles | | 4691 | 5.0 | 0.600 | 26.0 | LOS C | 22.1 | 161.1 | 0.67 | 0.69 | 34.1 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 18.7 | LOS B | 0.1 | 0.1 | 0.56 | 0.56 |
| P3 | Across E approach | 53 | 46.8 | LOS E | 0.2 | 0.2 | 0.88 | 0.88 |
| P5 | Across N approach | 53 | 26.0 | LOS C | 0.1 | 0.1 | 0.66 | 0.66 |
| All Pedestrians | | 159 | 30.5 | LOS D | | | 0.70 | 0.70 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

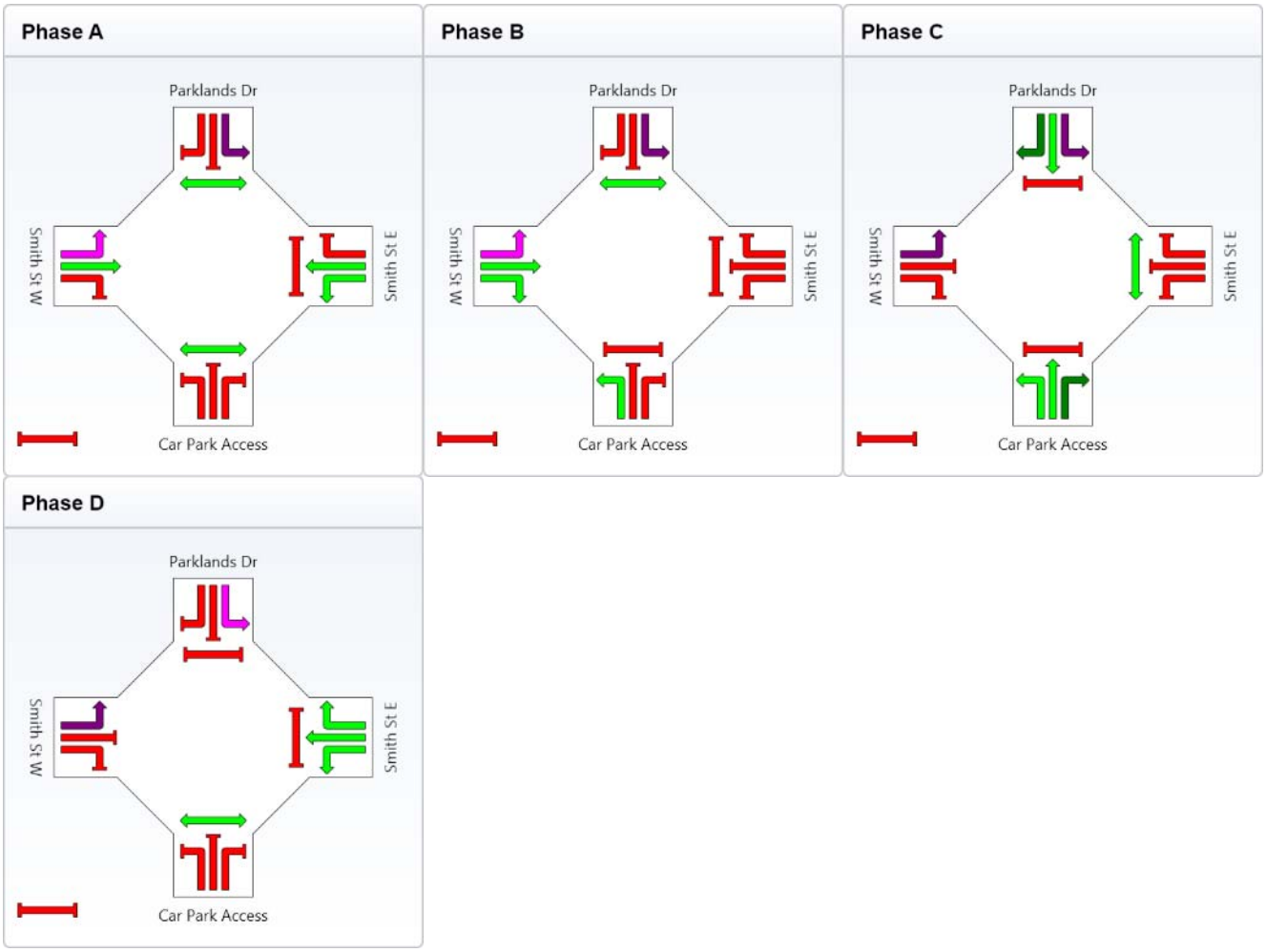


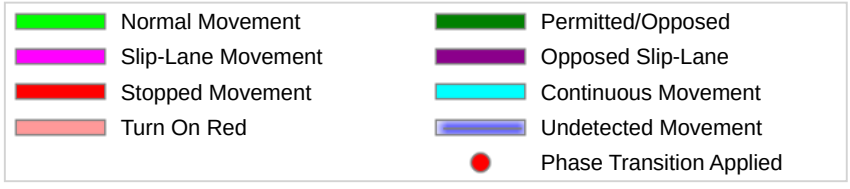
Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Phasing**
**Input Sequence: A, B, C, D**
**Output Sequence: A, B, C, D**

**Phase Timing Results**

| Phase | A | B | C | D |
|---|---|---|---|---|
| Green Time (sec) | 38 | 9 | 35 | 14 |
| Yellow Time (sec) | 4 | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 | 2 |
| Phase Time (sec) | 44 | 15 | 41 | 20 |
| Phase Split | 37 % | 13 % | 34 % | 17 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Smith St/Hospital Blvd - Option 2**

Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 150 seconds (User-Given Phase Times)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Smith St E | | | | | | | | | | | |
| 5 | T | 1035 | 5.0 | 0.251 | 1.5 | LOS A | 1.6 | 11.7 | 0.07 | 0.06 | 57.2 |
| 6 | R | 880 | 5.0 | 0.850 | 64.9 | LOS E | 32.3 | 235.8 | 0.96 | 0.91 | 21.7 |
| Approach | | 1915 | 5.0 | 0.850 | 30.7 | LOS C | 32.3 | 235.8 | 0.48 | 0.45 | 32.6 |
| North: Hospital Blvd | | | | | | | | | | | |
| 7 | L | 722 | 5.0 | 1.000[3] | 18.3 | LOS B | 17.9 | 130.8 | 0.56 | 0.77 | 40.1 |
| 9 | R | 401 | 5.0 | 0.578 | 67.6 | LOS E | 12.9 | 94.1 | 0.92 | 0.82 | 21.2 |
| Approach | | 1123 | 5.0 | 1.000 | 35.9 | LOS D | 17.9 | 130.8 | 0.69 | 0.79 | 30.4 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 164 | 5.0 | 0.171 | 9.6 | LOS A | 0.9 | 6.7 | 0.09 | 0.62 | 47.8 |
| 11 | T | 1892 | 5.0 | 0.863 | 45.5 | LOS D | 42.3 | 309.1 | 0.94 | 0.89 | 25.6 |
| Approach | | 2056 | 5.0 | 0.863 | 42.6 | LOS D | 42.3 | 309.1 | 0.87 | 0.87 | 26.6 |
| All Vehicles | | 5094 | 5.0 | 1.000 | 36.6 | LOS D | 42.3 | 309.1 | 0.69 | 0.70 | 29.5 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

3 x = 1.00 due to short lane. Refer to the Lane Summary report for information about excess flow and related conditions.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P3 | Across E approach | 50 | 69.1 | LOS F | 0.2 | 0.2 | 0.96 | 0.96 |
| P5 | Across N approach | 50 | 36.1 | LOS D | 0.1 | 0.1 | 0.69 | 0.69 |
| All Pedestrians | | 100 | 52.6 | LOS E | | | 0.83 | 0.83 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

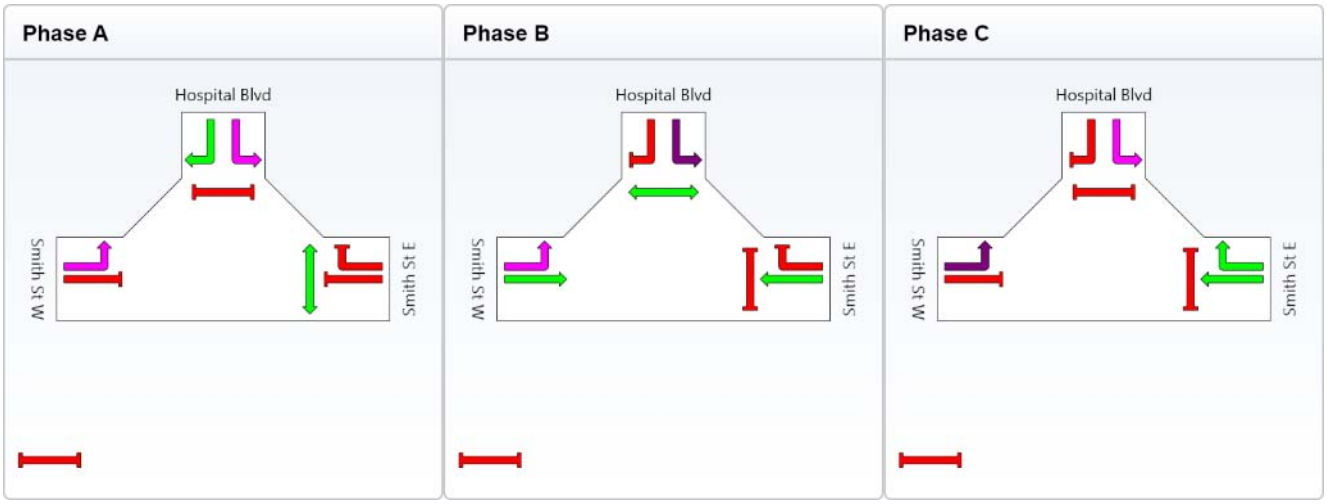


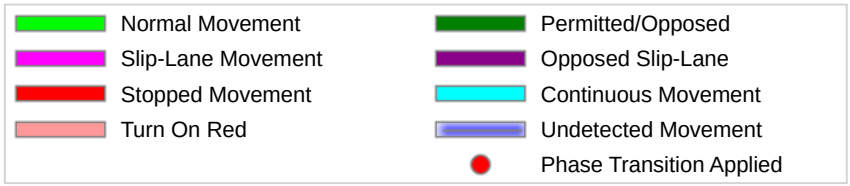
Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 150 seconds (User-Given Phase Times)

**Phase times specified by the user**
**Sequence: Two-Phase**
**Input Sequence: A, B, C**
**Output Sequence: A, B, C**

**Phase Timing Results**

| Phase | A | B | C |
|---|---|---|---|
| Green Time (sec) | 29 | 58 | 45 |
| Yellow Time (sec) | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 |
| Phase Time (sec) | 35 | 64 | 51 |
| Phase Split | 23 % | 43 % | 34 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Smith St/Hospital Blvd - Option 2**

Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Smith St E | | | | | | | | | | | |
| 5 | T | 1536 | 5.0 | 0.440 | 6.8 | LOS A | 8.2 | 59.8 | 0.30 | 0.27 | 49.3 |
| 6 | R | 731 | 5.0 | 0.764 | 53.4 | LOS D | 19.6 | 142.8 | 0.94 | 0.87 | 24.4 |
| Approach | | 2266 | 5.0 | 0.764 | 21.8 | LOS C | 19.6 | 142.8 | 0.51 | 0.46 | 37.1 |
| North: Hospital Blvd | | | | | | | | | | | |
| 7 | L | 829 | 5.0 | 0.769 | 10.0 | LOS A | 6.9 | 50.1 | 0.23 | 0.67 | 47.3 |
| 9 | R | 88 | 5.0 | 0.087 | 41.7 | LOS D | 1.7 | 12.1 | 0.67 | 0.72 | 28.1 |
| Approach | | 918 | 5.0 | 0.769 | 13.0 | LOS B | 6.9 | 50.1 | 0.27 | 0.67 | 44.4 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 154 | 5.0 | 0.134 | 8.5 | LOS A | 0.4 | 3.0 | 0.06 | 0.62 | 48.9 |
| 11 | T | 1287 | 5.0 | 0.757 | 41.3 | LOS D | 22.0 | 160.8 | 0.92 | 0.82 | 27.0 |
| Approach | | 1441 | 5.0 | 0.757 | 37.8 | LOS D | 22.0 | 160.8 | 0.83 | 0.80 | 28.3 |
| All Vehicles | | 4625 | 5.0 | 0.769 | 25.1 | LOS C | 22.0 | 160.8 | 0.56 | 0.61 | 34.9 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P3 | Across E approach | 50 | 49.5 | LOS E | 0.2 | 0.2 | 0.91 | 0.91 |
| P5 | Across N approach | 50 | 38.4 | LOS D | 0.1 | 0.1 | 0.80 | 0.80 |
| All Pedestrians | | 100 | 44.0 | LOS E | | | 0.85 | 0.85 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

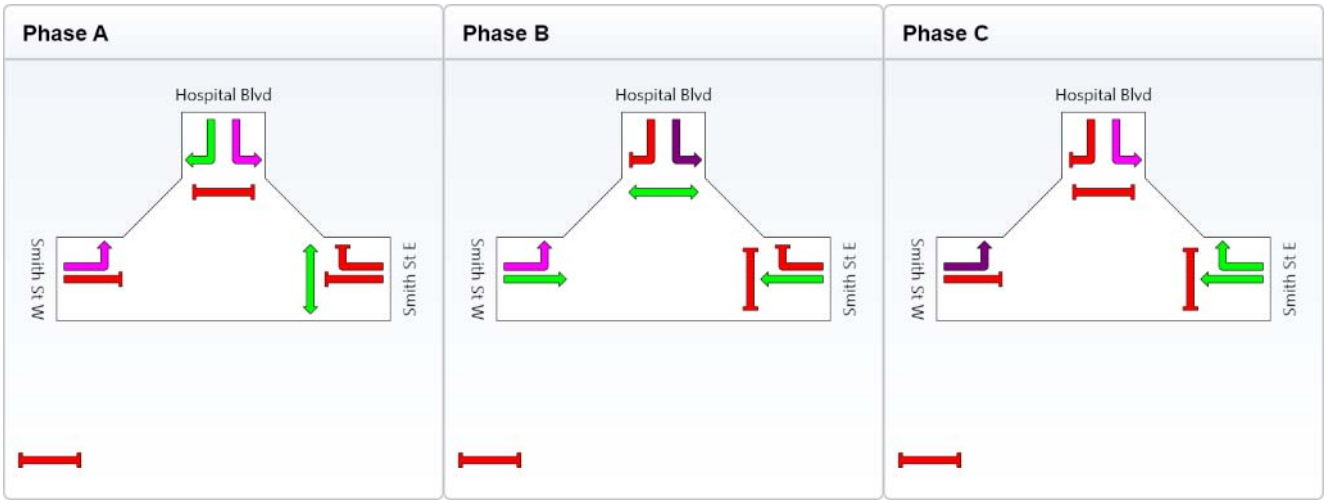


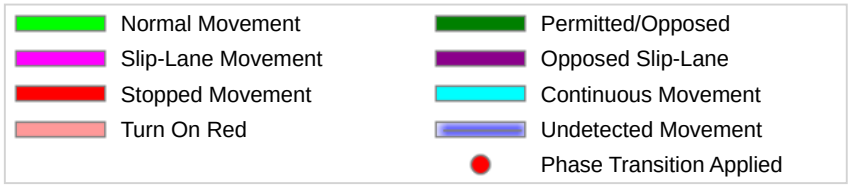
Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Two-Phase**
**Input Sequence: A, B, C**
**Output Sequence: A, B, C**

**Phase Timing Results**

| Phase | A | B | C |
|---|---|---|---|
| Green Time (sec) | 34 | 36 | 32 |
| Yellow Time (sec) | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 |
| Phase Time (sec) | 40 | 42 | 38 |
| Phase Split | 33 % | 35 % | 32 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Smith St/Hospital Blvd - Legacy Adjusted Option 2**

Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 150 seconds (User-Given Phase Times)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Smith St E | | | | | | | | | | | |
| 5 | T | 1299 | 5.0 | 0.315 | 1.6 | LOS A | 2.2 | 16.0 | 0.08 | 0.07 | 57.1 |
| 6 | R | 616 | 5.0 | 0.805 | 71.7 | LOS E | 21.8 | 159.4 | 0.99 | 0.89 | 20.3 |
| Approach | | 1915 | 5.0 | 0.805 | 24.1 | LOS C | 21.8 | 159.4 | 0.37 | 0.33 | 36.0 |
| North: Hospital Blvd | | | | | | | | | | | |
| 7 | L | 640 | 5.0 | 0.955 | 20.9 | LOS C | 17.9 | 130.6 | 0.51 | 0.77 | 38.4 |
| 9 | R | 413 | 5.0 | 0.595 | 67.8 | LOS E | 13.3 | 97.4 | 0.93 | 0.82 | 21.1 |
| Approach | | 1053 | 5.0 | 0.955 | 39.3 | LOS D | 17.9 | 130.6 | 0.67 | 0.79 | 29.1 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 351 | 5.0 | 0.303 | 8.7 | LOS A | 1.4 | 10.5 | 0.07 | 0.62 | 48.7 |
| 11 | T | 2166 | 5.0 | 0.808 | 28.8 | LOS C | 39.2 | 285.8 | 0.82 | 0.74 | 32.1 |
| Approach | | 2517 | 5.0 | 0.808 | 26.0 | LOS C | 39.2 | 285.8 | 0.71 | 0.73 | 33.7 |
| All Vehicles | | 5484 | 5.0 | 0.955 | 27.9 | LOS C | 39.2 | 285.8 | 0.58 | 0.60 | 33.4 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P3 | Across E approach | 50 | 69.1 | LOS F | 0.2 | 0.2 | 0.96 | 0.96 |
| P5 | Across N approach | 50 | 27.6 | LOS C | 0.1 | 0.1 | 0.61 | 0.61 |
| All Pedestrians | | 100 | 48.4 | LOS E | | | 0.78 | 0.78 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

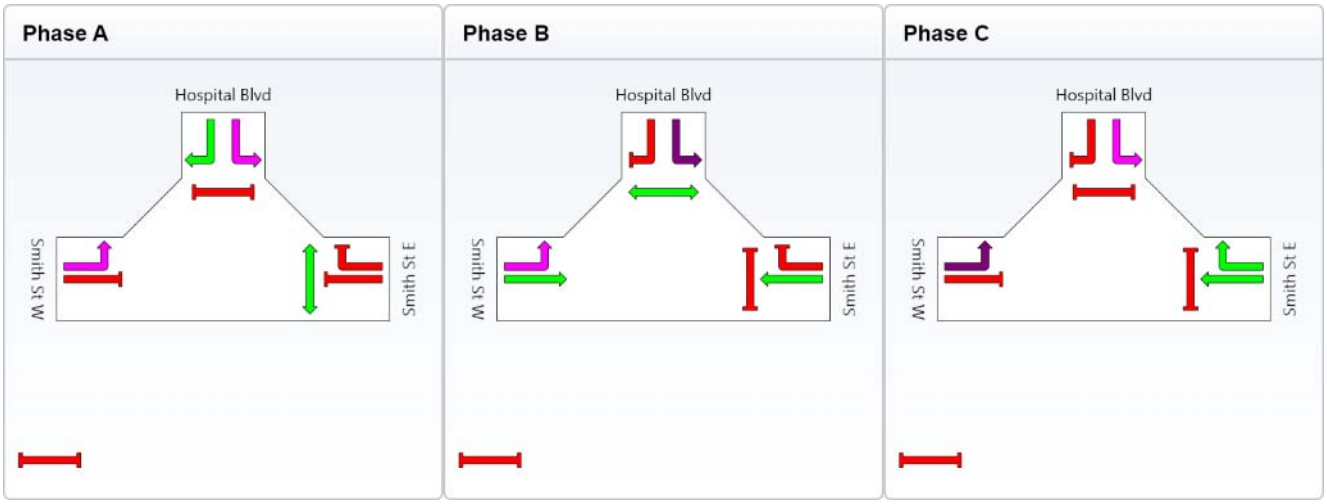


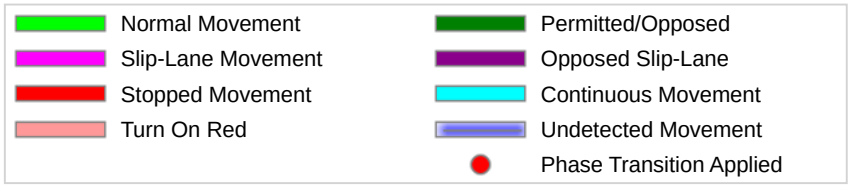
Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 150 seconds (User-Given Phase Times)

**Phase times specified by the user**
**Sequence: Two-Phase**
**Input Sequence: A, B, C**
**Output Sequence: A, B, C**

**Phase Timing Results**

| Phase | A | B | C |
|---|---|---|---|
| Green Time (sec) | 29 | 71 | 32 |
| Yellow Time (sec) | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 |
| Phase Time (sec) | 35 | 77 | 38 |
| Phase Split | 23 % | 51 % | 25 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Smith St/Hospital Blvd - Legacy Adjusted Option 2**

Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Smith St E | | | | | | | | | | | |
| 5 | T | 1755 | 5.0 | 0.470 | 4.4 | LOS A | 7.0 | 51.1 | 0.23 | 0.20 | 52.5 |
| 6 | R | 512 | 5.0 | 0.685 | 56.2 | LOS E | 13.6 | 99.5 | 0.95 | 0.84 | 23.7 |
| Approach | | 2266 | 5.0 | 0.685 | 16.1 | LOS B | 13.6 | 99.5 | 0.39 | 0.35 | 41.1 |
| North: Hospital Blvd | | | | | | | | | | | |
| 7 | L | 581 | 5.0 | 0.635 | 9.3 | LOS A | 3.6 | 26.5 | 0.13 | 0.64 | 48.1 |
| 9 | R | 303 | 5.0 | 0.350 | 48.8 | LOS D | 6.8 | 49.8 | 0.81 | 0.78 | 25.8 |
| Approach | | 884 | 5.0 | 0.635 | 22.8 | LOS C | 6.8 | 49.8 | 0.36 | 0.69 | 37.1 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 258 | 5.0 | 0.207 | 8.4 | LOS A | 0.7 | 5.3 | 0.07 | 0.62 | 49.0 |
| 11 | T | 1536 | 5.0 | 0.678 | 28.4 | LOS C | 21.8 | 159.0 | 0.79 | 0.70 | 32.3 |
| Approach | | 1794 | 5.0 | 0.678 | 25.5 | LOS C | 21.8 | 159.0 | 0.68 | 0.69 | 34.0 |
| All Vehicles | | 4944 | 5.0 | 0.685 | 20.7 | LOS C | 21.8 | 159.0 | 0.49 | 0.53 | 37.6 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P3 | Across E approach | 50 | 54.2 | LOS E | 0.2 | 0.2 | 0.95 | 0.95 |
| P5 | Across N approach | 50 | 29.4 | LOS C | 0.1 | 0.1 | 0.70 | 0.70 |
| All Pedestrians | | 100 | 41.8 | LOS E | | | 0.83 | 0.83 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

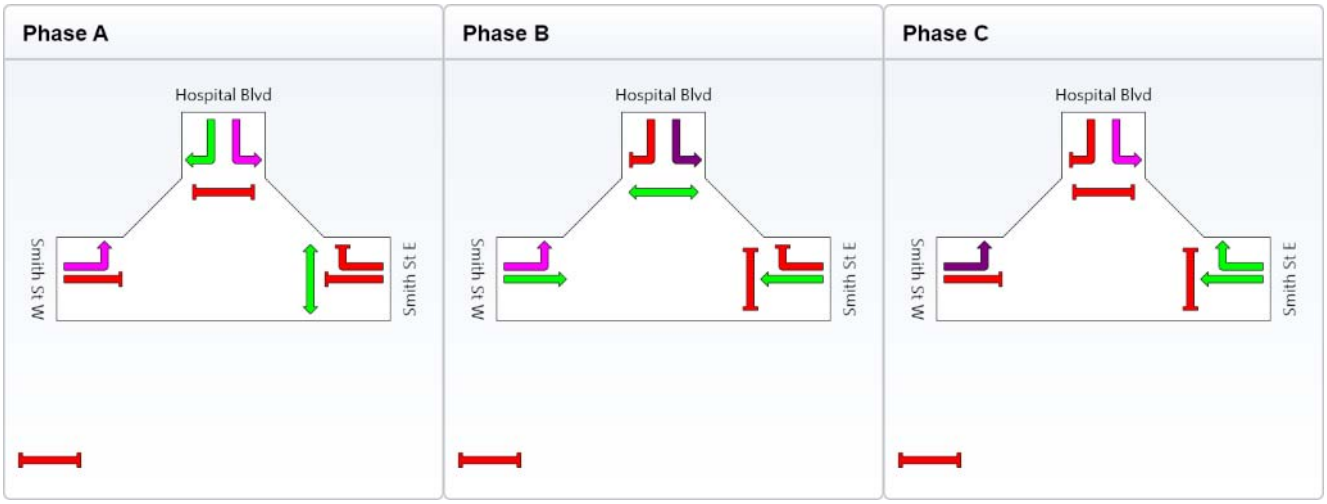


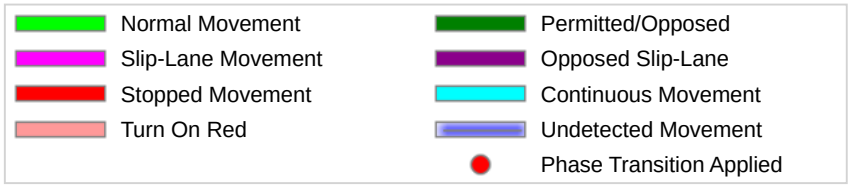
Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Two-Phase**
**Input Sequence: A, B, C**
**Output Sequence: A, B, C**

**Phase Timing Results**

| Phase | A | B | C |
|---|---|---|---|
| Green Time (sec) | 29 | 48 | 25 |
| Yellow Time (sec) | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 |
| Phase Time (sec) | 35 | 54 | 31 |
| Phase Split | 29 % | 45 % | 26 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Hospital Blvd/First St - Option 2**

Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Boulevard S | | | | | | | | | | | |
| 1 | L | 363 | 5.0 | 0.575 | 15.7 | LOS B | 9.0 | 65.7 | 0.48 | 0.83 | 42.7 |
| 2 | T | 641 | 5.0 | 0.575 | 8.3 | LOS A | 9.0 | 65.7 | 0.52 | 0.46 | 46.3 |
| 3 | R | 40 | 5.0 | 0.575 | 17.2 | LOS B | 7.9 | 57.5 | 0.53 | 0.96 | 42.6 |
| Approach | | 1044 | 5.0 | 0.575 | 11.2 | LOS B | 9.0 | 65.7 | 0.50 | 0.61 | 44.9 |
| East: First Street E | | | | | | | | | | | |
| 4 | L | 52 | 5.0 | 0.156 | 29.6 | LOS C | 1.9 | 14.0 | 0.80 | 0.76 | 33.3 |
| 5 | T | 11 | 5.0 | 0.156 | 21.3 | LOS C | 1.9 | 14.0 | 0.80 | 0.62 | 34.4 |
| 6 | R | 11 | 5.0 | 0.156 | 29.7 | LOS C | 1.9 | 14.0 | 0.80 | 0.76 | 33.3 |
| Approach | | 73 | 5.0 | 0.156 | 28.4 | LOS C | 1.9 | 14.0 | 0.80 | 0.74 | 33.5 |
| North: Hospital Boulevard N | | | | | | | | | | | |
| 7 | L | 11 | 5.0 | 0.619 | 15.9 | LOS B | 10.6 | 77.5 | 0.51 | 0.99 | 43.7 |
| 8 | T | 878 | 5.0 | 0.619 | 8.7 | LOS A | 10.6 | 77.5 | 0.54 | 0.48 | 46.2 |
| 9 | R | 79 | 5.0 | 0.619 | 20.0 | LOS C | 6.6 | 48.0 | 0.63 | 0.90 | 40.2 |
| Approach | | 967 | 5.0 | 0.619 | 9.7 | LOS A | 10.6 | 77.5 | 0.55 | 0.52 | 45.7 |
| West: First Street W | | | | | | | | | | | |
| 10 | L | 16 | 5.0 | 0.635 | 34.0 | LOS C | 7.7 | 56.4 | 0.93 | 0.84 | 31.1 |
| 11 | T | 11 | 5.0 | 0.635 | 25.6 | LOS C | 7.7 | 56.4 | 0.93 | 0.80 | 31.5 |
| 12 | R | 217 | 5.0 | 0.635 | 34.0 | LOS C | 7.7 | 56.4 | 0.93 | 0.85 | 31.1 |
| Approach | | 243 | 5.0 | 0.635 | 33.6 | LOS C | 7.7 | 56.4 | 0.93 | 0.84 | 31.1 |
| All Vehicles | | 2327 | 5.0 | 0.635 | 13.4 | LOS B | 10.6 | 77.5 | 0.58 | 0.60 | 42.7 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 28.4 | LOS C | 0.1 | 0.1 | 0.90 | 0.90 |
| P3 | Across E approach | 53 | 9.3 | LOS A | 0.1 | 0.1 | 0.51 | 0.51 |
| P5 | Across N approach | 53 | 28.4 | LOS C | 0.1 | 0.1 | 0.90 | 0.90 |
| P7 | Across W approach | 53 | 9.3 | LOS A | 0.1 | 0.1 | 0.51 | 0.51 |
| All Pedestrians | | 212 | 18.8 | LOS B | | | 0.71 | 0.71 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

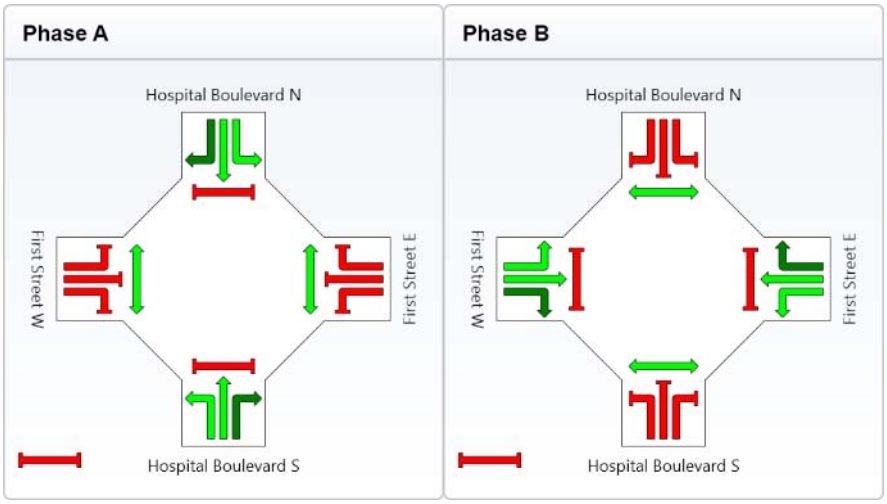


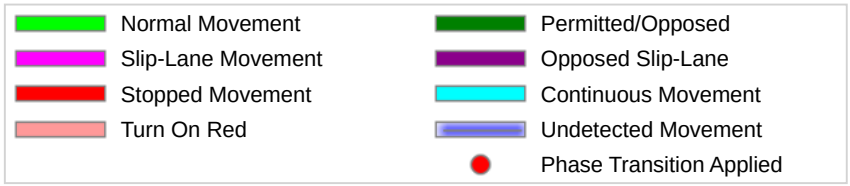
Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Opposed Turns**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 39 | 19 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 45 | 25 |
| Phase Split | 64 % | 36 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Hospital Blvd/First St - Option 2**

Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Boulevard S | | | | | | | | | | | |
| 1 | L | 296 | 5.0 | 0.682 | 23.2 | LOS C | 11.1 | 80.9 | 0.78 | 0.86 | 37.5 |
| 2 | T | 492 | 5.0 | 0.682 | 17.4 | LOS B | 11.1 | 80.9 | 0.82 | 0.73 | 37.6 |
| 3 | R | 66 | 5.0 | 0.682 | 27.5 | LOS C | 8.8 | 64.3 | 0.85 | 0.90 | 35.9 |
| Approach | | 854 | 5.0 | 0.682 | 20.2 | LOS C | 11.1 | 80.9 | 0.81 | 0.79 | 37.4 |
| East: First Street E | | | | | | | | | | | |
| 4 | L | 43 | 5.0 | 0.095 | 20.6 | LOS C | 1.2 | 8.6 | 0.65 | 0.75 | 38.7 |
| 5 | T | 11 | 5.0 | 0.095 | 12.2 | LOS B | 1.2 | 8.6 | 0.65 | 0.51 | 40.9 |
| 6 | R | 11 | 5.0 | 0.095 | 20.6 | LOS C | 1.2 | 8.6 | 0.65 | 0.76 | 38.7 |
| Approach | | 64 | 5.0 | 0.095 | 19.2 | LOS B | 1.2 | 8.6 | 0.65 | 0.71 | 39.0 |
| North: Hospital Boulevard N | | | | | | | | | | | |
| 7 | L | 11 | 5.0 | 0.549 | 22.0 | LOS C | 8.2 | 59.6 | 0.70 | 0.93 | 39.5 |
| 8 | T | 545 | 5.0 | 0.549 | 15.4 | LOS B | 8.2 | 59.6 | 0.74 | 0.63 | 39.8 |
| 9 | R | 64 | 5.0 | 0.549 | 29.0 | LOS C | 5.0 | 36.3 | 0.83 | 0.85 | 34.7 |
| Approach | | 620 | 5.0 | 0.549 | 16.9 | LOS B | 8.2 | 59.6 | 0.75 | 0.66 | 39.2 |
| West: First Street W | | | | | | | | | | | |
| 10 | L | 54 | 5.0 | 0.676 | 25.6 | LOS C | 10.1 | 73.5 | 0.88 | 0.86 | 35.3 |
| 11 | T | 11 | 5.0 | 0.676 | 17.2 | LOS B | 10.1 | 73.5 | 0.88 | 0.78 | 36.1 |
| 12 | R | 329 | 5.0 | 0.676 | 25.6 | LOS C | 10.1 | 73.5 | 0.88 | 0.86 | 35.3 |
| Approach | | 394 | 5.0 | 0.676 | 25.4 | LOS C | 10.1 | 73.5 | 0.88 | 0.86 | 35.4 |
| All Vehicles | | 1932 | 5.0 | 0.682 | 20.2 | LOS C | 11.1 | 80.9 | 0.80 | 0.76 | 37.6 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 19.2 | LOS B | 0.1 | 0.1 | 0.80 | 0.80 |
| P3 | Across E approach | 53 | 14.0 | LOS B | 0.1 | 0.1 | 0.68 | 0.68 |
| P5 | Across N approach | 53 | 19.2 | LOS B | 0.1 | 0.1 | 0.80 | 0.80 |
| P7 | Across W approach | 53 | 14.0 | LOS B | 0.1 | 0.1 | 0.68 | 0.68 |
| All Pedestrians | | 212 | 16.6 | LOS B | | | 0.74 | 0.74 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

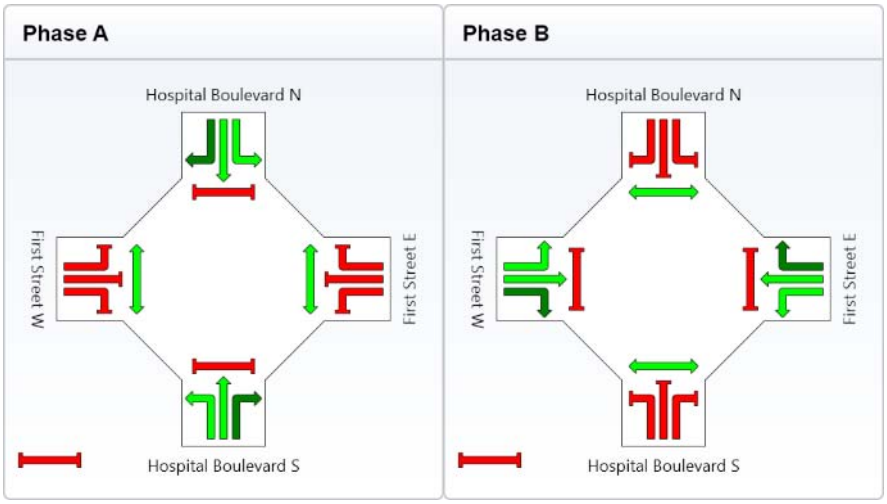


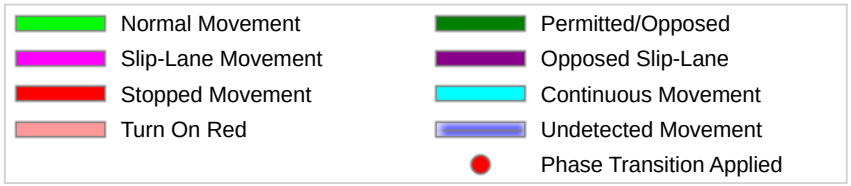
Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Opposed Turns**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 24 | 24 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 30 | 30 |
| Phase Split | 50 % | 50 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Hospital Blvd/First St -Option 2 - Adjusted**

Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Boulevard S | | | | | | | | | | | |
| 1 | L | 328 | 5.0 | 0.538 | 16.1 | LOS B | 8.3 | 60.4 | 0.49 | 0.83 | 42.3 |
| 2 | T | 602 | 5.0 | 0.538 | 8.7 | LOS A | 8.3 | 60.4 | 0.52 | 0.46 | 45.9 |
| 3 | R | 36 | 5.0 | 0.538 | 17.6 | LOS B | 7.4 | 54.3 | 0.53 | 0.96 | 42.2 |
| Approach | | 966 | 5.0 | 0.538 | 11.6 | LOS B | 8.3 | 60.4 | 0.51 | 0.60 | 44.5 |
| East: First Street E | | | | | | | | | | | |
| 4 | L | 48 | 5.0 | 0.142 | 28.7 | LOS C | 1.8 | 13.1 | 0.78 | 0.76 | 33.8 |
| 5 | T | 11 | 5.0 | 0.142 | 20.4 | LOS C | 1.8 | 13.1 | 0.78 | 0.60 | 34.9 |
| 6 | R | 11 | 5.0 | 0.142 | 28.8 | LOS C | 1.8 | 13.1 | 0.78 | 0.76 | 33.8 |
| Approach | | 69 | 5.0 | 0.142 | 27.5 | LOS C | 1.8 | 13.1 | 0.78 | 0.74 | 34.0 |
| North: Hospital Boulevard N | | | | | | | | | | | |
| 7 | L | 11 | 5.0 | 0.590 | 16.4 | LOS B | 10.0 | 73.0 | 0.52 | 0.99 | 43.3 |
| 8 | T | 824 | 5.0 | 0.590 | 9.0 | LOS A | 10.0 | 73.0 | 0.54 | 0.48 | 45.9 |
| 9 | R | 79 | 5.0 | 0.590 | 19.8 | LOS B | 6.2 | 45.4 | 0.61 | 0.90 | 40.4 |
| Approach | | 914 | 5.0 | 0.590 | 10.0 | LOS B | 10.0 | 73.0 | 0.55 | 0.52 | 45.3 |
| West: First Street W | | | | | | | | | | | |
| 10 | L | 16 | 5.0 | 0.571 | 32.2 | LOS C | 7.0 | 51.2 | 0.90 | 0.83 | 31.9 |
| 11 | T | 11 | 5.0 | 0.571 | 23.9 | LOS C | 7.0 | 51.2 | 0.90 | 0.76 | 32.4 |
| 12 | R | 205 | 5.0 | 0.571 | 32.3 | LOS C | 7.0 | 51.2 | 0.90 | 0.83 | 31.9 |
| Approach | | 232 | 5.0 | 0.571 | 31.9 | LOS C | 7.0 | 51.2 | 0.90 | 0.82 | 31.9 |
| All Vehicles | | 2181 | 5.0 | 0.590 | 13.6 | LOS B | 10.0 | 73.0 | 0.58 | 0.60 | 42.6 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 27.5 | LOS C | 0.1 | 0.1 | 0.89 | 0.89 |
| P3 | Across E approach | 53 | 9.8 | LOS A | 0.1 | 0.1 | 0.53 | 0.53 |
| P5 | Across N approach | 53 | 27.5 | LOS C | 0.1 | 0.1 | 0.89 | 0.89 |
| P7 | Across W approach | 53 | 9.8 | LOS A | 0.1 | 0.1 | 0.53 | 0.53 |
| All Pedestrians | | 212 | 18.6 | LOS B | | | 0.71 | 0.71 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

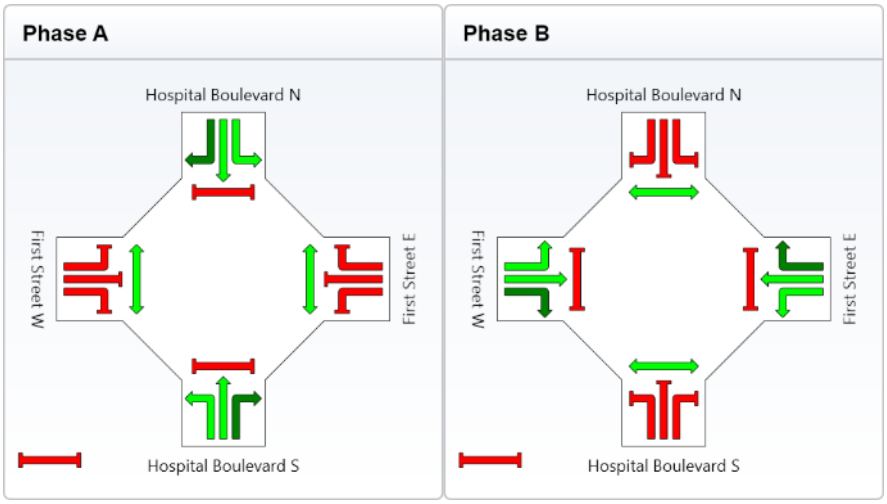


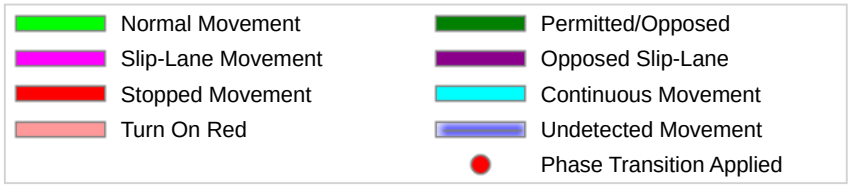
Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Opposed Turns**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 38 | 20 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 44 | 26 |
| Phase Split | 63 % | 37 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Hospital Blvd/First St - Option 2 - Adjusted**

Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Boulevard S | | | | | | | | | | | |
| 1 | L | 263 | 5.0 | 0.604 | 23.3 | LOS C | 9.0 | 65.4 | 0.75 | 0.84 | 37.4 |
| 2 | T | 417 | 5.0 | 0.604 | 16.7 | LOS B | 9.0 | 65.4 | 0.79 | 0.68 | 38.2 |
| 3 | R | 59 | 5.0 | 0.604 | 26.2 | LOS C | 7.3 | 53.1 | 0.81 | 0.88 | 36.6 |
| Approach | | 739 | 5.0 | 0.604 | 19.8 | LOS B | 9.0 | 65.4 | 0.78 | 0.75 | 37.8 |
| East: First Street E | | | | | | | | | | | |
| 4 | L | 42 | 5.0 | 0.090 | 19.9 | LOS B | 1.1 | 8.2 | 0.63 | 0.75 | 39.2 |
| 5 | T | 11 | 5.0 | 0.090 | 11.5 | LOS B | 1.1 | 8.2 | 0.63 | 0.49 | 41.6 |
| 6 | R | 11 | 5.0 | 0.090 | 19.9 | LOS B | 1.1 | 8.2 | 0.63 | 0.76 | 39.2 |
| Approach | | 63 | 5.0 | 0.090 | 18.5 | LOS B | 1.1 | 8.2 | 0.63 | 0.71 | 39.6 |
| North: Hospital Boulevard N | | | | | | | | | | | |
| 7 | L | 11 | 5.0 | 0.530 | 22.7 | LOS C | 7.7 | 56.0 | 0.71 | 0.92 | 39.0 |
| 8 | T | 525 | 5.0 | 0.530 | 15.8 | LOS B | 7.7 | 56.0 | 0.74 | 0.63 | 39.5 |
| 9 | R | 64 | 5.0 | 0.530 | 27.8 | LOS C | 5.1 | 37.0 | 0.81 | 0.85 | 35.4 |
| Approach | | 600 | 5.0 | 0.530 | 17.2 | LOS B | 7.7 | 56.0 | 0.75 | 0.66 | 39.0 |
| West: First Street W | | | | | | | | | | | |
| 10 | L | 54 | 5.0 | 0.636 | 23.8 | LOS C | 9.3 | 67.6 | 0.85 | 0.84 | 36.4 |
| 11 | T | 11 | 5.0 | 0.636 | 15.4 | LOS B | 9.3 | 67.6 | 0.85 | 0.74 | 37.3 |
| 12 | R | 322 | 5.0 | 0.636 | 23.8 | LOS C | 9.3 | 67.6 | 0.85 | 0.84 | 36.4 |
| Approach | | 386 | 5.0 | 0.636 | 23.6 | LOS C | 9.3 | 67.6 | 0.85 | 0.84 | 36.4 |
| All Vehicles | | 1788 | 5.0 | 0.636 | 19.7 | LOS B | 9.3 | 67.6 | 0.78 | 0.74 | 37.9 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 18.4 | LOS B | 0.1 | 0.1 | 0.78 | 0.78 |
| P3 | Across E approach | 53 | 14.7 | LOS B | 0.1 | 0.1 | 0.70 | 0.70 |
| P5 | Across N approach | 53 | 18.4 | LOS B | 0.1 | 0.1 | 0.78 | 0.78 |
| P7 | Across W approach | 53 | 14.7 | LOS B | 0.1 | 0.1 | 0.70 | 0.70 |
| All Pedestrians | | 212 | 16.6 | LOS B | | | 0.74 | 0.74 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

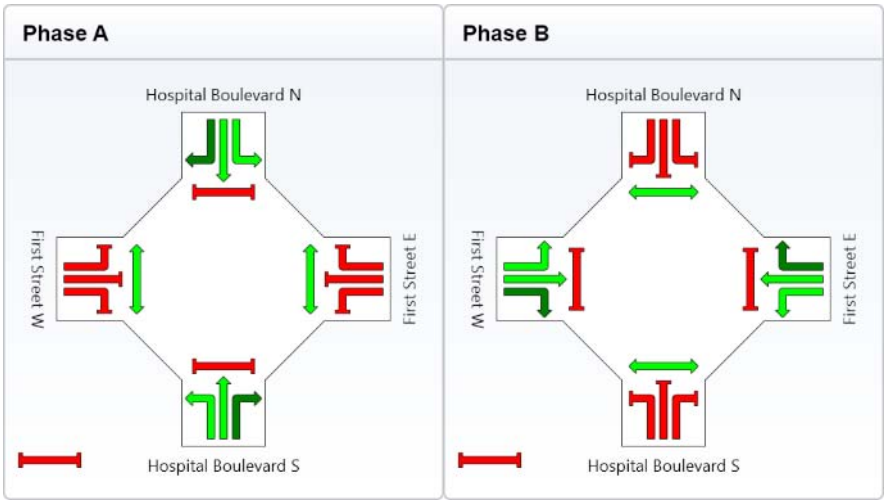


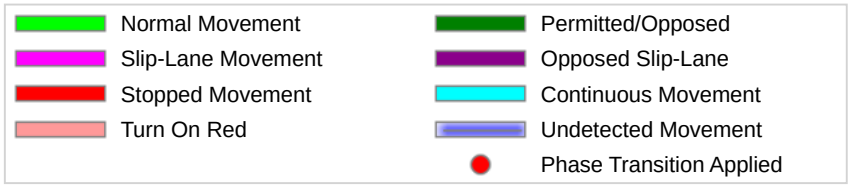
Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Opposed Turns**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 23 | 25 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 29 | 31 |
| Phase Split | 48 % | 52 % |








SIDRA INTERSECTION

# MOVEMENT SUMMARY

**Site: 2026AM - Main St/Hospital Blvd - Option 2**

Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 85 | 5.0 | 0.098 | 15.5 | LOS B | 0.9 | 6.9 | 0.40 | 0.72 | 42.1 |
| 2 | T | 579 | 5.0 | 0.665 | 10.2 | LOS B | 10.9 | 79.6 | 0.67 | 0.59 | 44.5 |
| 3 | R | 11 | 5.0 | 0.665 | 18.6 | LOS B | 10.9 | 79.6 | 0.67 | 0.96 | 42.0 |
| Approach | | 675 | 5.0 | 0.665 | 11.0 | LOS B | 10.9 | 79.6 | 0.63 | 0.61 | 44.2 |
| East: Main St E | | | | | | | | | | | |
| 4 | L | 11 | 5.0 | 0.177 | 24.7 | LOS C | 2.0 | 14.8 | 0.76 | 0.77 | 36.1 |
| 5 | T | 19 | 5.0 | 0.177 | 16.3 | LOS B | 2.0 | 14.8 | 0.76 | 0.60 | 37.5 |
| 6 | R | 64 | 5.0 | 0.177 | 24.7 | LOS C | 2.0 | 14.8 | 0.76 | 0.78 | 36.1 |
| Approach | | 94 | 5.0 | 0.177 | 23.0 | LOS C | 2.0 | 14.8 | 0.76 | 0.74 | 36.4 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 7 | L | 20 | 5.0 | 0.540 | 18.6 | LOS B | 5.1 | 37.4 | 0.65 | 0.91 | 41.8 |
| 8 | T | 599 | 5.0 | 0.540 | 12.2 | LOS B | 8.5 | 61.8 | 0.73 | 0.62 | 42.3 |
| 9 | R | 48 | 5.0 | 0.540 | 22.3 | LOS C | 8.5 | 61.8 | 0.79 | 0.90 | 39.3 |
| Approach | | 667 | 5.0 | 0.540 | 13.2 | LOS B | 8.5 | 61.8 | 0.73 | 0.65 | 42.1 |
| West: Main St W | | | | | | | | | | | |
| 10 | L | 83 | 5.0 | 0.198 | 24.5 | LOS C | 1.8 | 13.0 | 0.75 | 0.75 | 35.9 |
| 11 | T | 15 | 5.0 | 0.631 | 19.5 | LOS B | 9.4 | 68.4 | 0.91 | 0.78 | 34.7 |
| 12 | R | 348 | 5.0 | 0.631 | 27.9 | LOS C | 9.4 | 68.4 | 0.91 | 0.84 | 34.1 |
| Approach | | 446 | 5.0 | 0.631 | 27.0 | LOS C | 9.4 | 68.4 | 0.88 | 0.82 | 34.4 |
| All Vehicles | | 1882 | 5.0 | 0.665 | 16.2 | LOS B | 10.9 | 79.6 | 0.73 | 0.68 | 40.3 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 23.4 | LOS C | 0.1 | 0.1 | 0.88 | 0.88 |
| P3 | Across E approach | 53 | 10.8 | LOS B | 0.1 | 0.1 | 0.60 | 0.60 |
| P5 | Across N approach | 53 | 20.8 | LOS C | 0.1 | 0.1 | 0.83 | 0.83 |
| P7 | Across W approach | 53 | 12.0 | LOS B | 0.1 | 0.1 | 0.63 | 0.63 |
| All Pedestrians | | 212 | 16.8 | LOS B | | | 0.74 | 0.74 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

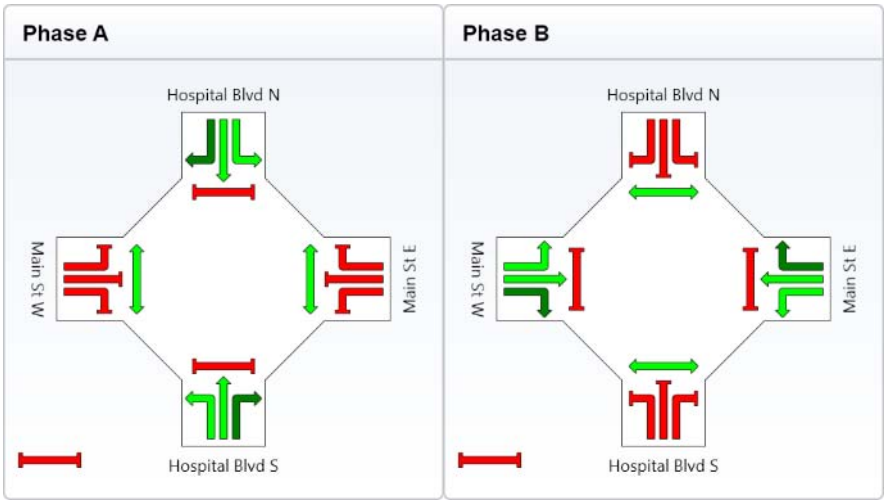


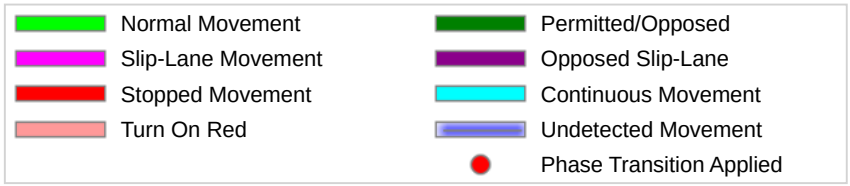
Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Two-Phase**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 29 | 19 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 35 | 25 |
| Phase Split | 58 % | 42 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Main St/Hospital Blvd - Option 2**

Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 91 | 5.0 | 0.112 | 17.0 | LOS B | 1.1 | 8.3 | 0.45 | 0.72 | 41.0 |
| 2 | T | 462 | 5.0 | 0.564 | 11.1 | LOS B | 8.5 | 62.0 | 0.65 | 0.57 | 43.8 |
| 3 | R | 11 | 5.0 | 0.564 | 19.5 | LOS B | 8.5 | 62.0 | 0.65 | 0.95 | 41.2 |
| Approach | | 563 | 5.0 | 0.564 | 12.2 | LOS B | 8.5 | 62.0 | 0.62 | 0.60 | 43.2 |
| East: Main St E | | | | | | | | | | | |
| 4 | L | 11 | 5.0 | 0.164 | 23.1 | LOS C | 1.9 | 14.1 | 0.72 | 0.77 | 37.1 |
| 5 | T | 19 | 5.0 | 0.164 | 14.8 | LOS B | 1.9 | 14.1 | 0.72 | 0.57 | 38.7 |
| 6 | R | 64 | 5.0 | 0.164 | 23.2 | LOS C | 1.9 | 14.1 | 0.72 | 0.78 | 37.1 |
| Approach | | 94 | 5.0 | 0.164 | 21.5 | LOS C | 1.9 | 14.1 | 0.72 | 0.73 | 37.4 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 7 | L | 24 | 5.0 | 0.267 | 18.9 | LOS B | 2.3 | 17.1 | 0.62 | 0.87 | 41.2 |
| 8 | T | 296 | 5.0 | 0.267 | 11.4 | LOS B | 3.8 | 27.9 | 0.66 | 0.54 | 43.2 |
| 9 | R | 16 | 5.0 | 0.267 | 20.3 | LOS C | 3.8 | 27.9 | 0.68 | 0.91 | 40.6 |
| Approach | | 336 | 5.0 | 0.267 | 12.4 | LOS B | 3.8 | 27.9 | 0.66 | 0.58 | 42.9 |
| West: Main St W | | | | | | | | | | | |
| 10 | L | 104 | 5.0 | 0.238 | 23.1 | LOS C | 2.1 | 15.6 | 0.72 | 0.76 | 36.8 |
| 11 | T | 12 | 5.0 | 0.539 | 17.3 | LOS B | 8.2 | 60.1 | 0.85 | 0.73 | 36.2 |
| 12 | R | 331 | 5.0 | 0.539 | 25.6 | LOS C | 8.2 | 60.1 | 0.85 | 0.83 | 35.3 |
| Approach | | 446 | 5.0 | 0.539 | 24.8 | LOS C | 8.2 | 60.1 | 0.82 | 0.81 | 35.7 |
| All Vehicles | | 1439 | 5.0 | 0.564 | 16.8 | LOS B | 8.5 | 62.0 | 0.70 | 0.67 | 40.1 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 21.7 | LOS C | 0.1 | 0.1 | 0.85 | 0.85 |
| P3 | Across E approach | 53 | 12.0 | LOS B | 0.1 | 0.1 | 0.63 | 0.63 |
| P5 | Across N approach | 53 | 19.2 | LOS B | 0.1 | 0.1 | 0.80 | 0.80 |
| P7 | Across W approach | 53 | 13.3 | LOS B | 0.1 | 0.1 | 0.67 | 0.67 |
| All Pedestrians | | 212 | 16.6 | LOS B | | | 0.74 | 0.74 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

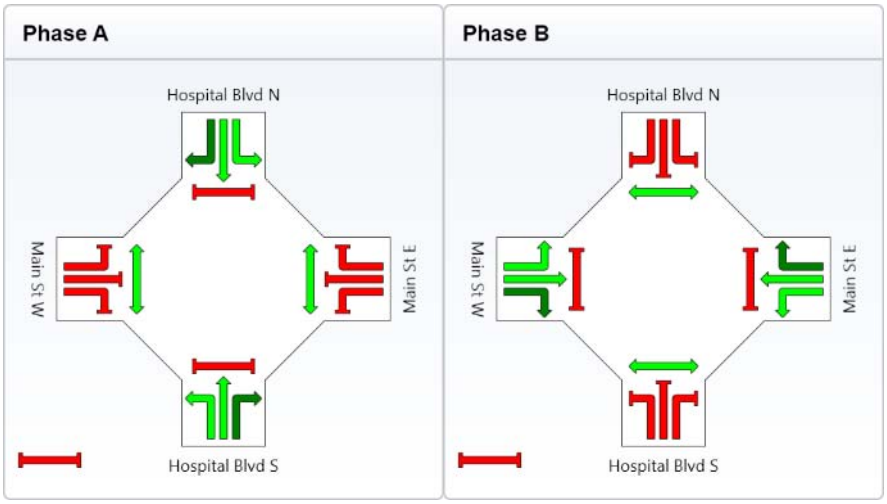


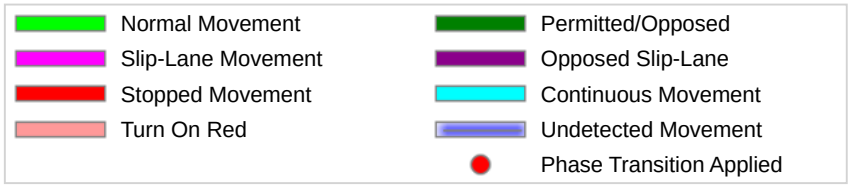
Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Two-Phase**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 27 | 21 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 33 | 27 |
| Phase Split | 55 % | 45 % |








SIDRA INTERSECTION

# MOVEMENT SUMMARY

**Site: 2026AM - Main St/Hospital Blvd - Legacy Adjusted Option 2**

Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 77 | 5.0 | 0.089 | 15.5 | LOS B | 0.8 | 6.2 | 0.40 | 0.71 | 42.2 |
| 2 | T | 548 | 5.0 | 0.627 | 9.9 | LOS A | 9.9 | 72.4 | 0.64 | 0.57 | 44.9 |
| 3 | R | 11 | 5.0 | 0.627 | 18.3 | LOS B | 9.9 | 72.4 | 0.64 | 0.96 | 42.1 |
| Approach | | 636 | 5.0 | 0.627 | 10.7 | LOS B | 9.9 | 72.4 | 0.61 | 0.59 | 44.5 |
| East: Main St E | | | | | | | | | | | |
| 4 | L | 11 | 5.0 | 0.177 | 24.7 | LOS C | 2.0 | 14.8 | 0.76 | 0.77 | 36.1 |
| 5 | T | 19 | 5.0 | 0.177 | 16.3 | LOS B | 2.0 | 14.8 | 0.76 | 0.60 | 37.5 |
| 6 | R | 64 | 5.0 | 0.177 | 24.7 | LOS C | 2.0 | 14.8 | 0.76 | 0.78 | 36.1 |
| Approach | | 94 | 5.0 | 0.177 | 23.0 | LOS C | 2.0 | 14.8 | 0.76 | 0.74 | 36.4 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 7 | L | 18 | 5.0 | 0.439 | 18.3 | LOS B | 4.0 | 29.4 | 0.62 | 0.91 | 42.0 |
| 8 | T | 555 | 5.0 | 0.439 | 11.0 | LOS B | 7.2 | 52.5 | 0.68 | 0.58 | 43.6 |
| 9 | R | 20 | 5.0 | 0.439 | 20.1 | LOS C | 7.2 | 52.5 | 0.72 | 0.93 | 40.9 |
| Approach | | 593 | 5.0 | 0.439 | 11.5 | LOS B | 7.2 | 52.5 | 0.68 | 0.60 | 43.5 |
| West: Main St W | | | | | | | | | | | |
| 10 | L | 83 | 5.0 | 0.198 | 24.5 | LOS C | 1.8 | 13.0 | 0.75 | 0.75 | 35.9 |
| 11 | T | 15 | 5.0 | 0.599 | 19.2 | LOS B | 8.8 | 63.9 | 0.90 | 0.76 | 34.9 |
| 12 | R | 329 | 5.0 | 0.599 | 27.6 | LOS C | 8.8 | 63.9 | 0.90 | 0.83 | 34.3 |
| Approach | | 427 | 5.0 | 0.599 | 26.7 | LOS C | 8.8 | 63.9 | 0.87 | 0.82 | 34.6 |
| All Vehicles | | 1749 | 5.0 | 0.627 | 15.6 | LOS B | 9.9 | 72.4 | 0.70 | 0.66 | 40.8 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 23.4 | LOS C | 0.1 | 0.1 | 0.88 | 0.88 |
| P3 | Across E approach | 53 | 10.8 | LOS B | 0.1 | 0.1 | 0.60 | 0.60 |
| P5 | Across N approach | 53 | 20.8 | LOS C | 0.1 | 0.1 | 0.83 | 0.83 |
| P7 | Across W approach | 53 | 12.0 | LOS B | 0.1 | 0.1 | 0.63 | 0.63 |
| All Pedestrians | | 212 | 16.8 | LOS B | | | 0.74 | 0.74 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

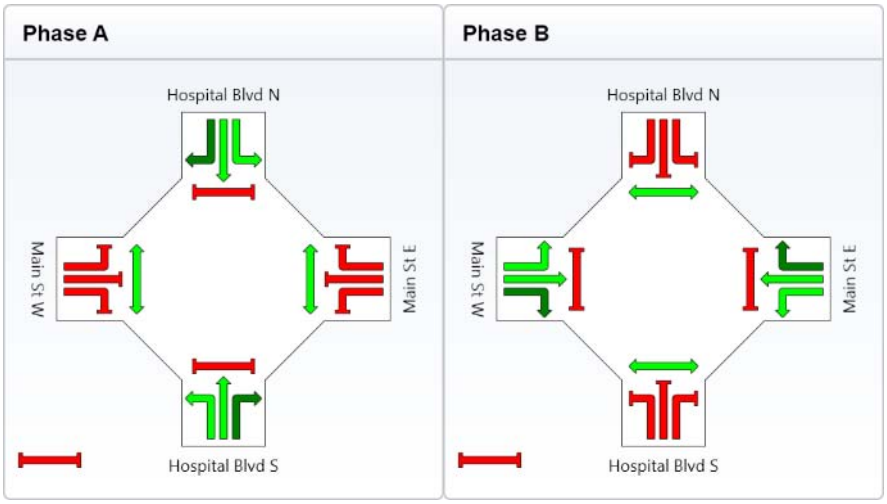


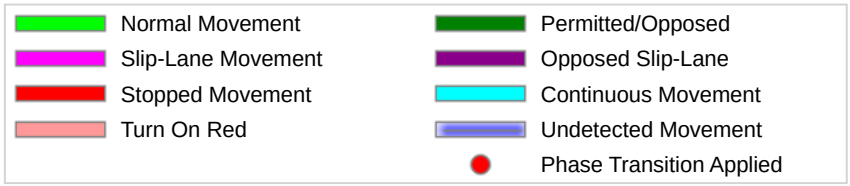
Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Two-Phase**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 29 | 19 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 35 | 25 |
| Phase Split | 58 % | 42 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Main St/Hospital Blvd - Legacy Adjusted Option 2**

Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 80 | 5.0 | 0.103 | 17.7 | LOS B | 1.1 | 7.7 | 0.47 | 0.72 | 40.4 |
| 2 | T | 398 | 5.0 | 0.507 | 11.6 | LOS B | 7.3 | 53.0 | 0.64 | 0.55 | 43.4 |
| 3 | R | 11 | 5.0 | 0.507 | 20.0 | LOS B | 7.3 | 53.0 | 0.64 | 0.95 | 40.8 |
| Approach | | 488 | 5.0 | 0.507 | 12.8 | LOS B | 7.3 | 53.0 | 0.61 | 0.59 | 42.8 |
| East: Main St E | | | | | | | | | | | |
| 4 | L | 11 | 5.0 | 0.156 | 22.3 | LOS C | 1.9 | 13.7 | 0.71 | 0.77 | 37.6 |
| 5 | T | 19 | 5.0 | 0.156 | 14.0 | LOS B | 1.9 | 13.7 | 0.71 | 0.56 | 39.4 |
| 6 | R | 64 | 5.0 | 0.156 | 22.4 | LOS C | 1.9 | 13.7 | 0.71 | 0.77 | 37.6 |
| Approach | | 94 | 5.0 | 0.156 | 20.7 | LOS C | 1.9 | 13.7 | 0.71 | 0.73 | 37.9 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 7 | L | 24 | 5.0 | 0.260 | 19.6 | LOS B | 2.3 | 16.8 | 0.64 | 0.86 | 40.7 |
| 8 | T | 280 | 5.0 | 0.260 | 12.0 | LOS B | 3.7 | 27.2 | 0.67 | 0.55 | 42.6 |
| 9 | R | 16 | 5.0 | 0.260 | 20.9 | LOS C | 3.7 | 27.2 | 0.69 | 0.90 | 40.1 |
| Approach | | 320 | 5.0 | 0.260 | 13.0 | LOS B | 3.7 | 27.2 | 0.67 | 0.59 | 42.4 |
| West: Main St W | | | | | | | | | | | |
| 10 | L | 104 | 5.0 | 0.233 | 22.3 | LOS C | 2.1 | 15.2 | 0.71 | 0.75 | 37.3 |
| 11 | T | 12 | 5.0 | 0.504 | 16.3 | LOS B | 7.8 | 56.9 | 0.83 | 0.71 | 36.9 |
| 12 | R | 323 | 5.0 | 0.504 | 24.7 | LOS C | 7.8 | 56.9 | 0.83 | 0.82 | 35.9 |
| Approach | | 439 | 5.0 | 0.504 | 23.9 | LOS C | 7.8 | 56.9 | 0.80 | 0.80 | 36.2 |
| All Vehicles | | 1341 | 5.0 | 0.507 | 17.0 | LOS B | 7.8 | 56.9 | 0.69 | 0.67 | 40.0 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 20.8 | LOS C | 0.1 | 0.1 | 0.83 | 0.83 |
| P3 | Across E approach | 53 | 12.7 | LOS B | 0.1 | 0.1 | 0.65 | 0.65 |
| P5 | Across N approach | 53 | 18.4 | LOS B | 0.1 | 0.1 | 0.78 | 0.78 |
| P7 | Across W approach | 53 | 14.0 | LOS B | 0.1 | 0.1 | 0.68 | 0.68 |
| All Pedestrians | | 212 | 16.5 | LOS B | | | 0.74 | 0.74 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

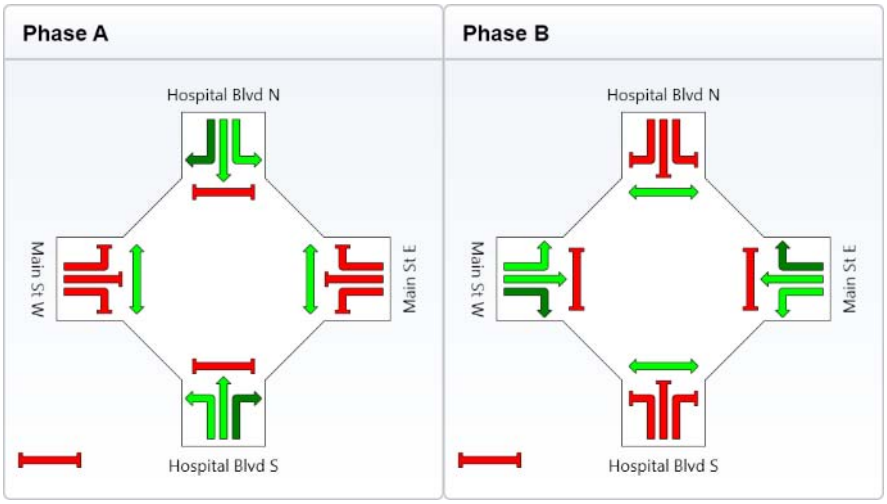


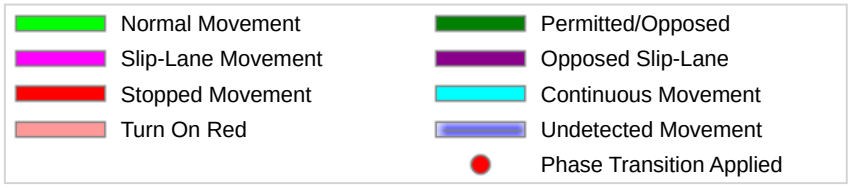
Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Two-Phase**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 26 | 22 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 32 | 28 |
| Phase Split | 53 % | 47 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Hospital Blvd/ Second St Option 2**

Hospital Boulevard / Second Street Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 304 | 5.0 | 0.170 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 420 | 5.0 | 0.222 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 724 | 5.0 | 0.222 | 3.5 | NA | 0.0 | 0.0 | 0.00 | 0.28 | 54.8 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 604 | 5.0 | 0.320 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 218 | 5.0 | 0.250 | 12.0 | LOS B | 1.1 | 8.4 | 0.63 | 0.87 | 45.2 |
| Approach | | 822 | 5.0 | 0.320 | 3.2 | NA | 1.1 | 8.4 | 0.17 | 0.23 | 55.2 |
| West: Second St | | | | | | | | | | | |
| 10 | L | 189 | 5.0 | 0.306 | 13.2 | LOS B | 1.3 | 9.8 | 0.59 | 0.90 | 44.1 |
| 12 | R | 63 | 5.0 | 0.315 | 29.0 | LOS D | 1.1 | 8.0 | 0.88 | 1.00 | 33.4 |
| Approach | | 253 | 5.0 | 0.315 | 17.1 | LOS C | 1.3 | 9.8 | 0.66 | 0.92 | 40.9 |
| All Vehicles | | 1799 | 5.0 | 0.320 | 5.3 | NA | 1.3 | 9.8 | 0.17 | 0.35 | 52.5 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026PM - Hospital Blvd/ Second St Option 2**

Hospital Boulevard / Second Street Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 188 | 5.0 | 0.105 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 408 | 5.0 | 0.216 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 597 | 5.0 | 0.216 | 2.6 | NA | 0.0 | 0.0 | 0.00 | 0.21 | 56.0 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 272 | 5.0 | 0.144 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 228 | 5.0 | 0.227 | 11.1 | LOS B | 1.0 | 7.6 | 0.58 | 0.81 | 46.1 |
| Approach | | 500 | 5.0 | 0.227 | 5.1 | NA | 1.0 | 7.6 | 0.27 | 0.37 | 52.8 |
| West: Second St | | | | | | | | | | | |
| 10 | L | 372 | 5.0 | 0.547 | 14.7 | LOS B | 3.7 | 27.2 | 0.66 | 1.02 | 42.9 |
| 12 | R | 66 | 5.0 | 0.183 | 17.4 | LOS C | 0.6 | 4.5 | 0.74 | 0.92 | 40.7 |
| Approach | | 438 | 5.0 | 0.547 | 15.1 | LOS C | 3.7 | 27.2 | 0.67 | 1.01 | 42.5 |
| All Vehicles | | 1535 | 5.0 | 0.547 | 7.0 | NA | 3.7 | 27.2 | 0.28 | 0.49 | 50.4 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026AM - Hospital Blvd/ Second St Legacy Adjusted - Option 2**

Hospital Boulevard / Second Street Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 275 | 5.0 | 0.153 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 420 | 5.0 | 0.222 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 695 | 5.0 | 0.222 | 3.3 | NA | 0.0 | 0.0 | 0.00 | 0.26 | 55.1 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 581 | 5.0 | 0.308 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 218 | 5.0 | 0.242 | 11.7 | LOS B | 1.1 | 7.9 | 0.62 | 0.85 | 45.5 |
| Approach | | 799 | 5.0 | 0.308 | 3.2 | NA | 1.1 | 7.9 | 0.17 | 0.23 | 55.2 |
| West: Second St | | | | | | | | | | | |
| 10 | L | 189 | 5.0 | 0.215 | 12.3 | LOS B | 1.2 | 8.7 | 0.68 | 0.81 | 45.0 |
| 12 | R | 57 | 5.0 | 0.267 | 26.8 | LOS D | 0.9 | 6.6 | 0.86 | 0.98 | 34.6 |
| Approach | | 246 | 5.0 | 0.267 | 15.6 | LOS C | 1.2 | 8.7 | 0.72 | 0.85 | 42.1 |
| All Vehicles | | 1740 | 5.0 | 0.308 | 5.0 | NA | 1.2 | 8.7 | 0.18 | 0.33 | 52.8 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026PM - Hospital Blvd/ Second St Legacy Adjusted - Option 2**

Hospital Boulevard / Second Street Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 160 | 5.0 | 0.089 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 391 | 5.0 | 0.207 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 551 | 5.0 | 0.207 | 2.4 | NA | 0.0 | 0.0 | 0.00 | 0.19 | 56.3 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 257 | 5.0 | 0.136 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 228 | 5.0 | 0.216 | 10.8 | LOS B | 1.0 | 7.3 | 0.56 | 0.78 | 46.4 |
| Approach | | 485 | 5.0 | 0.216 | 5.1 | NA | 1.0 | 7.3 | 0.26 | 0.37 | 52.7 |
| West: Second St | | | | | | | | | | | |
| 10 | L | 372 | 5.0 | 0.525 | 14.0 | LOS B | 3.5 | 25.7 | 0.64 | 1.00 | 43.4 |
| 12 | R | 63 | 5.0 | 0.163 | 16.5 | LOS C | 0.6 | 4.0 | 0.71 | 0.91 | 41.4 |
| Approach | | 435 | 5.0 | 0.525 | 14.4 | LOS B | 3.5 | 25.7 | 0.65 | 0.99 | 43.1 |
| All Vehicles | | 1471 | 5.0 | 0.525 | 6.8 | NA | 3.5 | 25.7 | 0.28 | 0.49 | 50.6 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026AM - Hospital Blvd/ Innovation Dr - Option 2**

Hospital Boulevard / Innovation Drive Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 11 | 5.0 | 0.006 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 603 | 5.0 | 0.319 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 614 | 5.0 | 0.319 | 0.1 | NA | 0.0 | 0.0 | 0.00 | 0.01 | 59.8 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 762 | 5.0 | 0.404 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 434 | 5.0 | 0.439 | 12.6 | LOS B | 3.0 | 21.8 | 0.66 | 0.96 | 44.7 |
| Approach | | 1196 | 5.0 | 0.439 | 4.6 | NA | 3.0 | 21.8 | 0.24 | 0.35 | 53.4 |
| West: Innovation Dr | | | | | | | | | | | |
| 10 | L | 127 | 5.0 | 0.216 | 12.9 | LOS B | 0.8 | 5.8 | 0.58 | 0.86 | 44.4 |
| 12 | R | 59 | 5.0 | 0.602 | 66.1 | LOS F | 2.1 | 15.3 | 0.97 | 1.08 | 21.3 |
| Approach | | 186 | 5.0 | 0.602 | 29.7 | LOS D | 2.1 | 15.3 | 0.70 | 0.93 | 33.1 |
| All Vehicles | | 1996 | 5.0 | 0.602 | 5.6 | NA | 3.0 | 21.8 | 0.21 | 0.30 | 52.1 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026PM - Hospital Blvd/ Innovation Dr - Option 2**

Hospital Boulevard / Innovation Drive Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 118 | 5.0 | 0.066 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 640 | 5.0 | 0.339 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 758 | 5.0 | 0.339 | 1.3 | NA | 0.0 | 0.0 | 0.00 | 0.10 | 58.0 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 449 | 5.0 | 0.238 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 509 | 5.0 | 0.610 | 15.8 | LOS C | 5.1 | 37.1 | 0.76 | 1.13 | 41.9 |
| Approach | | 959 | 5.0 | 0.610 | 8.4 | NA | 5.1 | 37.1 | 0.40 | 0.60 | 48.9 |
| West: Innovation Dr | | | | | | | | | | | |
| 10 | L | 208 | 5.0 | 0.401 | 15.8 | LOS C | 1.9 | 14.0 | 0.68 | 0.97 | 42.0 |
| 12 | R | 52 | 5.0 | 0.403 | 43.8 | LOS E | 1.3 | 9.8 | 0.93 | 1.03 | 27.2 |
| Approach | | 260 | 5.0 | 0.403 | 21.3 | LOS C | 1.9 | 14.0 | 0.73 | 0.98 | 37.9 |
| All Vehicles | | 1977 | 5.0 | 0.610 | 7.4 | NA | 5.1 | 37.1 | 0.29 | 0.46 | 50.0 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026AM - Hospital Blvd/ Innovation Dr - Legacy Adjusted Option 2**

Hospital Boulevard / Innovation Drive Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 11 | 5.0 | 0.006 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 603 | 5.0 | 0.319 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 614 | 5.0 | 0.319 | 0.1 | NA | 0.0 | 0.0 | 0.00 | 0.01 | 59.8 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 744 | 5.0 | 0.394 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 434 | 5.0 | 0.439 | 12.6 | LOS B | 3.0 | 21.8 | 0.66 | 0.96 | 44.7 |
| Approach | | 1178 | 5.0 | 0.439 | 4.6 | NA | 3.0 | 21.8 | 0.24 | 0.35 | 53.3 |
| West: Innovation Dr | | | | | | | | | | | |
| 10 | L | 127 | 5.0 | 0.216 | 12.9 | LOS B | 0.8 | 5.8 | 0.58 | 0.86 | 44.4 |
| 12 | R | 54 | 5.0 | 0.531 | 59.5 | LOS F | 1.8 | 13.0 | 0.96 | 1.06 | 22.8 |
| Approach | | 181 | 5.0 | 0.531 | 26.7 | LOS D | 1.8 | 13.0 | 0.69 | 0.92 | 34.7 |
| All Vehicles | | 1973 | 5.0 | 0.531 | 5.3 | NA | 3.0 | 21.8 | 0.21 | 0.30 | 52.5 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026PM - Hospital Blvd/ Innovation Dr - Legacy Adjusted Option 2**

Hospital Boulevard / Innovation Drive Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 100 | 5.0 | 0.056 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 640 | 5.0 | 0.339 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 740 | 5.0 | 0.339 | 1.1 | NA | 0.0 | 0.0 | 0.00 | 0.09 | 58.2 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 437 | 5.0 | 0.231 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 509 | 5.0 | 0.597 | 15.4 | LOS C | 4.9 | 36.0 | 0.75 | 1.12 | 42.3 |
| Approach | | 946 | 5.0 | 0.597 | 8.3 | NA | 4.9 | 36.0 | 0.40 | 0.60 | 49.0 |
| West: Innovation Dr | | | | | | | | | | | |
| 10 | L | 208 | 5.0 | 0.396 | 15.6 | LOS C | 1.9 | 13.8 | 0.68 | 0.97 | 42.1 |
| 12 | R | 49 | 5.0 | 0.372 | 41.4 | LOS E | 1.2 | 8.9 | 0.93 | 1.02 | 28.1 |
| Approach | | 258 | 5.0 | 0.396 | 20.5 | LOS C | 1.9 | 13.8 | 0.73 | 0.98 | 38.4 |
| All Vehicles | | 1944 | 5.0 | 0.597 | 7.2 | NA | 4.9 | 36.0 | 0.29 | 0.46 | 50.2 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026AM - Parklands Dr/Main St/Engineering Dr - Option 2**

Parklands Drive / Main Street / Engineering Drive Intersection
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 1 | L | 105 | 5.0 | 0.489 | 65.5 | LOS E | 6.0 | 44.1 | 0.96 | 0.78 | 21.4 |
| 2 | T | 76 | 5.0 | 0.228 | 48.0 | LOS D | 3.8 | 27.5 | 0.85 | 0.66 | 25.0 |
| 3 | R | 523 | 5.0 | 0.907 | 42.1 | LOS D | 20.1 | 146.9 | 0.88 | 0.89 | 27.9 |
| Approach | | 704 | 5.0 | 0.907 | 46.3 | LOS D | 20.1 | 146.9 | 0.89 | 0.85 | 26.4 |
| East: Main St | | | | | | | | | | | |
| 4 | L | 279 | 5.0 | 0.405 | 17.2 | LOS B | 6.6 | 48.3 | 0.43 | 0.75 | 40.9 |
| 5 | T | 58 | 5.0 | 0.859 | 67.1 | LOS E | 13.5 | 98.3 | 1.00 | 0.99 | 19.8 |
| 6 | R | 142 | 5.0 | 0.859 | 75.3 | LOS E | 13.5 | 98.3 | 1.00 | 0.99 | 19.8 |
| Approach | | 479 | 5.0 | 0.859 | 40.5 | LOS D | 13.5 | 98.3 | 0.67 | 0.85 | 28.3 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 108 | 5.0 | 0.809 | 70.2 | LOS E | 6.6 | 48.1 | 0.96 | 0.88 | 20.5 |
| 8 | T | 251 | 5.0 | 1.044 | 168.3 | LOS F | 26.7 | 195.0 | 1.00 | 1.50 | 10.5 |
| 9 | R | 58 | 5.0 | 1.044 | 178.9 | LOS F | 8.0 | 58.7 | 1.00 | 1.27 | 10.2 |
| Approach | | 417 | 5.0 | 1.044 | 144.3 | LOS F | 26.7 | 195.0 | 0.99 | 1.30 | 11.9 |
| West: Engineering Dr | | | | | | | | | | | |
| 10 | L | 51 | 5.0 | 0.876 | 79.9 | LOS E | 10.5 | 76.7 | 1.00 | 1.01 | 18.9 |
| 11 | T | 37 | 5.0 | 0.876 | 71.5 | LOS E | 10.5 | 76.7 | 1.00 | 1.01 | 19.0 |
| 12 | R | 65 | 5.0 | 0.876 | 79.7 | LOS E | 10.5 | 76.7 | 1.00 | 1.01 | 19.0 |
| Approach | | 153 | 5.0 | 0.876 | 77.8 | LOS E | 10.5 | 76.7 | 1.00 | 1.01 | 19.0 |
| All Vehicles | | 1753 | 5.0 | 1.044 | 70.7 | LOS E | 26.7 | 195.0 | 0.86 | 0.97 | 20.2 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 45.8 | LOS E | 0.2 | 0.2 | 0.86 | 0.86 |
| P3 | Across E approach | 53 | 56.6 | LOS E | 0.2 | 0.2 | 0.95 | 0.95 |
| P5 | Across N approach | 53 | 45.8 | LOS E | 0.2 | 0.2 | 0.86 | 0.86 |
| P7 | Across W approach | 53 | 46.7 | LOS E | 0.2 | 0.2 | 0.86 | 0.86 |
| All Pedestrians | | 212 | 48.7 | LOS E | | | 0.88 | 0.88 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

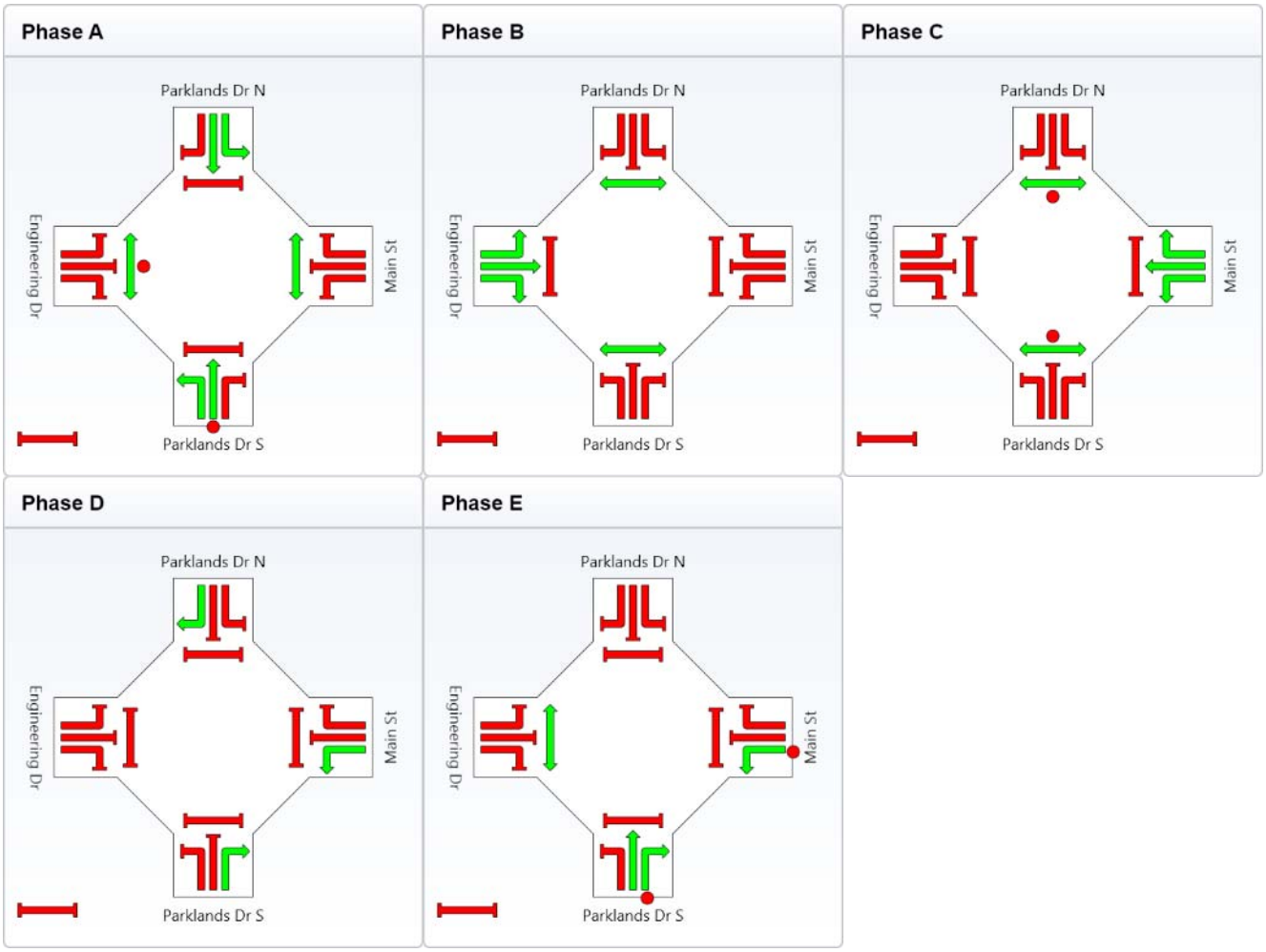


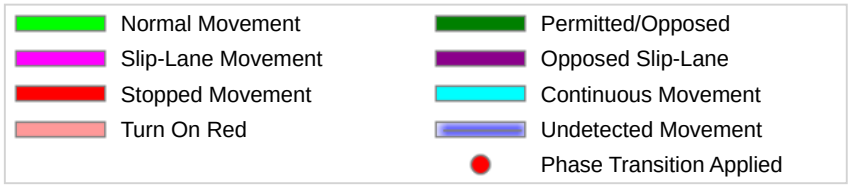
Parklands Drive / Main Street / Engineering Drive Intersection
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

**Phase times specified by the user**
**Sequence: GCRT Phasing**
**Input Sequence: A, B, C, D, E**
**Output Sequence: A, B, C, D, E**

**Phase Timing Results**

| Phase | A | B | C | D | E |
|---|---|---|---|---|---|
| Green Time (sec) | 15 | 12 | 16 | 55 | 2 |
| Yellow Time (sec) | 3 | 3 | 3 | 3 | 3 |
| All-Red Time (sec) | 2 | 2 | 2 | 2 | 2 |
| Phase Time (sec) | 20 | 17 | 21 | 60 | 7 |
| Phase Split | 16 % | 14 % | 17 % | 48 % | 6 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Parklands Dr/Main St/Engineering Dr - Option 2**

2026AM - Parklands Drive / Main Street / Engineering Drive
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 1 | L | 11 | 5.0 | 0.117 | 54.4 | LOS D | 1.6 | 12.0 | 0.85 | 0.75 | 24.7 |
| 2 | T | 72 | 5.0 | 0.117 | 42.9 | LOS D | 2.2 | 16.0 | 0.79 | 0.59 | 26.5 |
| 3 | R | 317 | 5.0 | 0.689 | 37.3 | LOS D | 12.5 | 91.5 | 0.70 | 0.80 | 29.7 |
| Approach | | 399 | 5.0 | 0.689 | 38.7 | LOS D | 12.5 | 91.5 | 0.72 | 0.76 | 28.9 |
| East: Main St | | | | | | | | | | | |
| 4 | L | 200 | 5.0 | 0.617 | 25.1 | LOS C | 6.4 | 46.4 | 0.57 | 0.76 | 35.5 |
| 5 | T | 34 | 5.0 | 0.640 | 60.6 | LOS E | 7.4 | 54.2 | 1.00 | 0.82 | 21.1 |
| 6 | R | 87 | 5.0 | 0.640 | 68.8 | LOS E | 7.4 | 54.2 | 1.00 | 0.82 | 21.0 |
| Approach | | 321 | 5.0 | 0.640 | 40.7 | LOS D | 7.4 | 54.2 | 0.73 | 0.78 | 28.2 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 85 | 5.0 | 0.632 | 65.3 | LOS E | 4.8 | 35.4 | 0.94 | 0.79 | 21.5 |
| 8 | T | 201 | 5.0 | 0.595 | 59.7 | LOS E | 7.9 | 57.4 | 0.98 | 0.78 | 21.9 |
| 9 | R | 11 | 5.0 | 0.595 | 71.9 | LOS E | 4.7 | 34.6 | 1.00 | 0.79 | 20.9 |
| Approach | | 297 | 5.0 | 0.632 | 61.7 | LOS E | 7.9 | 57.4 | 0.97 | 0.78 | 21.7 |
| West: Engineering Dr | | | | | | | | | | | |
| 10 | L | 80 | 5.0 | 0.665 | 58.0 | LOS E | 14.3 | 104.7 | 0.98 | 0.84 | 23.5 |
| 11 | T | 94 | 5.0 | 0.665 | 49.6 | LOS D | 14.3 | 104.7 | 0.98 | 0.82 | 23.7 |
| 12 | R | 79 | 5.0 | 0.665 | 57.8 | LOS E | 14.3 | 104.7 | 0.98 | 0.84 | 23.5 |
| Approach | | 253 | 5.0 | 0.665 | 54.8 | LOS D | 14.3 | 104.7 | 0.98 | 0.83 | 23.6 |
| All Vehicles | | 1269 | 5.0 | 0.689 | 47.8 | LOS D | 14.3 | 104.7 | 0.83 | 0.78 | 25.6 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 36.1 | LOS D | 0.1 | 0.1 | 0.76 | 0.76 |
| P3 | Across E approach | 53 | 56.6 | LOS E | 0.2 | 0.2 | 0.95 | 0.95 |
| P5 | Across N approach | 53 | 36.1 | LOS D | 0.1 | 0.1 | 0.76 | 0.76 |
| P7 | Across W approach | 53 | 41.6 | LOS E | 0.2 | 0.2 | 0.82 | 0.82 |
| All Pedestrians | | 212 | 42.6 | LOS E | | | 0.82 | 0.82 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

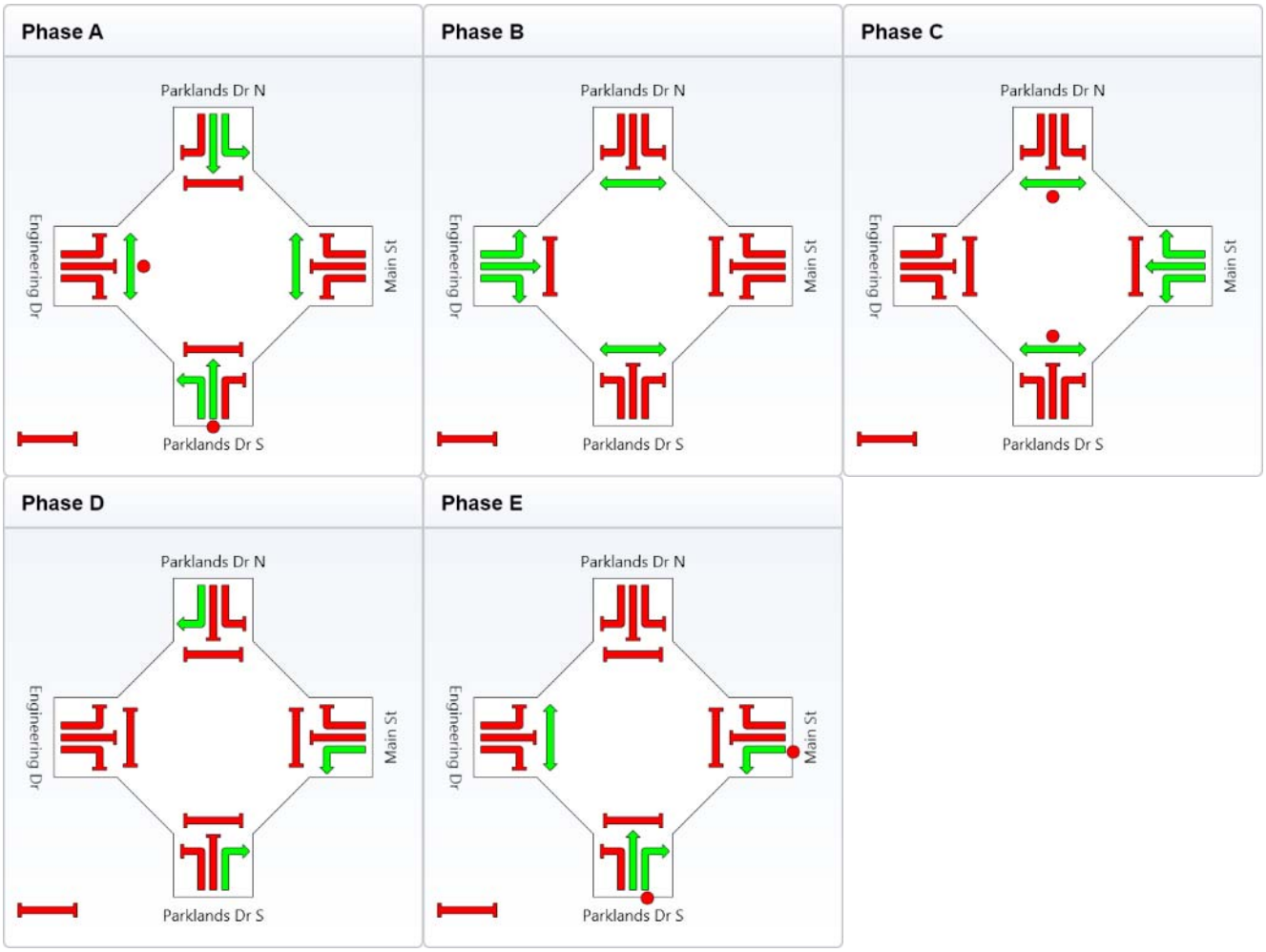


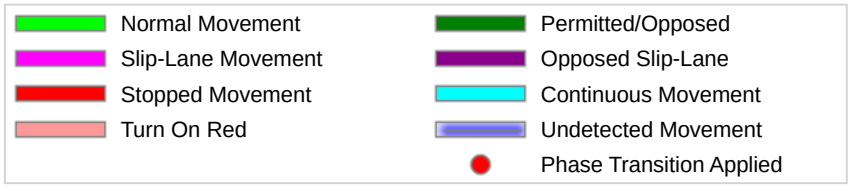
2026AM - Parklands Drive / Main Street / Engineering Drive
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

**Phase times specified by the user**
**Sequence: GCRT Phasing**
**Input Sequence: A, B, C, D, E**
**Output Sequence: A, B, C, D, E**

**Phase Timing Results**

| Phase | A | B | C | D | E |
|---|---|---|---|---|---|
| Green Time (sec) | 15 | 26 | 13 | 34 | 7 |
| Yellow Time (sec) | 4 | 4 | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 | 2 | 2 |
| Phase Time (sec) | 21 | 32 | 19 | 40 | 13 |
| Phase Split | 17 % | 26 % | 15 % | 32 % | 10 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Parklands Dr/Main St/Engineering Dr - Legacy Adjusted Option 2**

Parklands Drive / Main Street / Engineering Drive Intersection
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 1 | L | 117 | 5.0 | 0.543 | 65.9 | LOS E | 6.8 | 49.4 | 0.97 | 0.79 | 21.3 |
| 2 | T | 86 | 5.0 | 0.228 | 45.3 | LOS D | 4.1 | 30.1 | 0.82 | 0.64 | 25.8 |
| 3 | R | 579 | 5.0 | 1.000[3] | 38.2 | LOS D | 20.1 | 146.9 | 1.00 | 0.89 | 29.3 |
| Approach | | 782 | 5.0 | 1.000 | 43.1 | LOS D | 20.1 | 146.9 | 0.97 | 0.85 | 27.4 |
| East: Main St | | | | | | | | | | | |
| 4 | L | 302 | 5.0 | 0.439 | 17.3 | LOS B | 7.3 | 53.1 | 0.43 | 0.75 | 40.8 |
| 5 | T | 58 | 5.0 | 0.916 | 76.2 | LOS E | 14.5 | 106.1 | 1.00 | 1.10 | 18.3 |
| 6 | R | 142 | 5.0 | 0.916 | 84.4 | LOS F | 14.5 | 106.1 | 1.00 | 1.10 | 18.3 |
| Approach | | 502 | 5.0 | 0.916 | 43.1 | LOS D | 14.5 | 106.1 | 0.66 | 0.89 | 27.3 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 108 | 5.0 | 0.809 | 70.2 | LOS E | 6.6 | 48.1 | 0.96 | 0.88 | 20.5 |
| 8 | T | 272 | 5.0 | 1.140 | 328.9 | LOS F | 44.3 | 323.6 | 1.00 | 2.00 | 5.9 |
| 9 | R | 58 | 5.0 | 1.140 | 341.4 | LOS F | 12.2 | 89.3 | 1.00 | 1.52 | 5.8 |
| Approach | | 438 | 5.0 | 1.140 | 266.5 | LOS F | 44.3 | 323.6 | 0.99 | 1.66 | 7.1 |
| West: Engineering Dr | | | | | | | | | | | |
| 10 | L | 51 | 5.0 | 0.906 | 84.1 | LOS F | 11.3 | 82.3 | 1.00 | 1.07 | 18.3 |
| 11 | T | 37 | 5.0 | 0.906 | 75.7 | LOS E | 11.3 | 82.3 | 1.00 | 1.07 | 18.3 |
| 12 | R | 71 | 5.0 | 0.906 | 83.9 | LOS F | 11.3 | 82.3 | 1.00 | 1.07 | 18.3 |
| Approach | | 158 | 5.0 | 0.906 | 82.1 | LOS F | 11.3 | 82.3 | 1.00 | 1.07 | 18.3 |
| All Vehicles | | 1880 | 5.0 | 1.140 | 98.4 | LOS F | 44.3 | 323.6 | 0.90 | 1.07 | 16.1 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

3 x = 1.00 due to short lane. Refer to the Lane Summary report for information about excess flow and related conditions.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 46.7 | LOS E | 0.2 | 0.2 | 0.86 | 0.86 |
| P3 | Across E approach | 53 | 56.6 | LOS E | 0.2 | 0.2 | 0.95 | 0.95 |
| P5 | Across N approach | 53 | 46.7 | LOS E | 0.2 | 0.2 | 0.86 | 0.86 |
| P7 | Across W approach | 53 | 44.1 | LOS E | 0.2 | 0.2 | 0.84 | 0.84 |
| All Pedestrians | | 212 | 48.5 | LOS E | | | 0.88 | 0.88 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

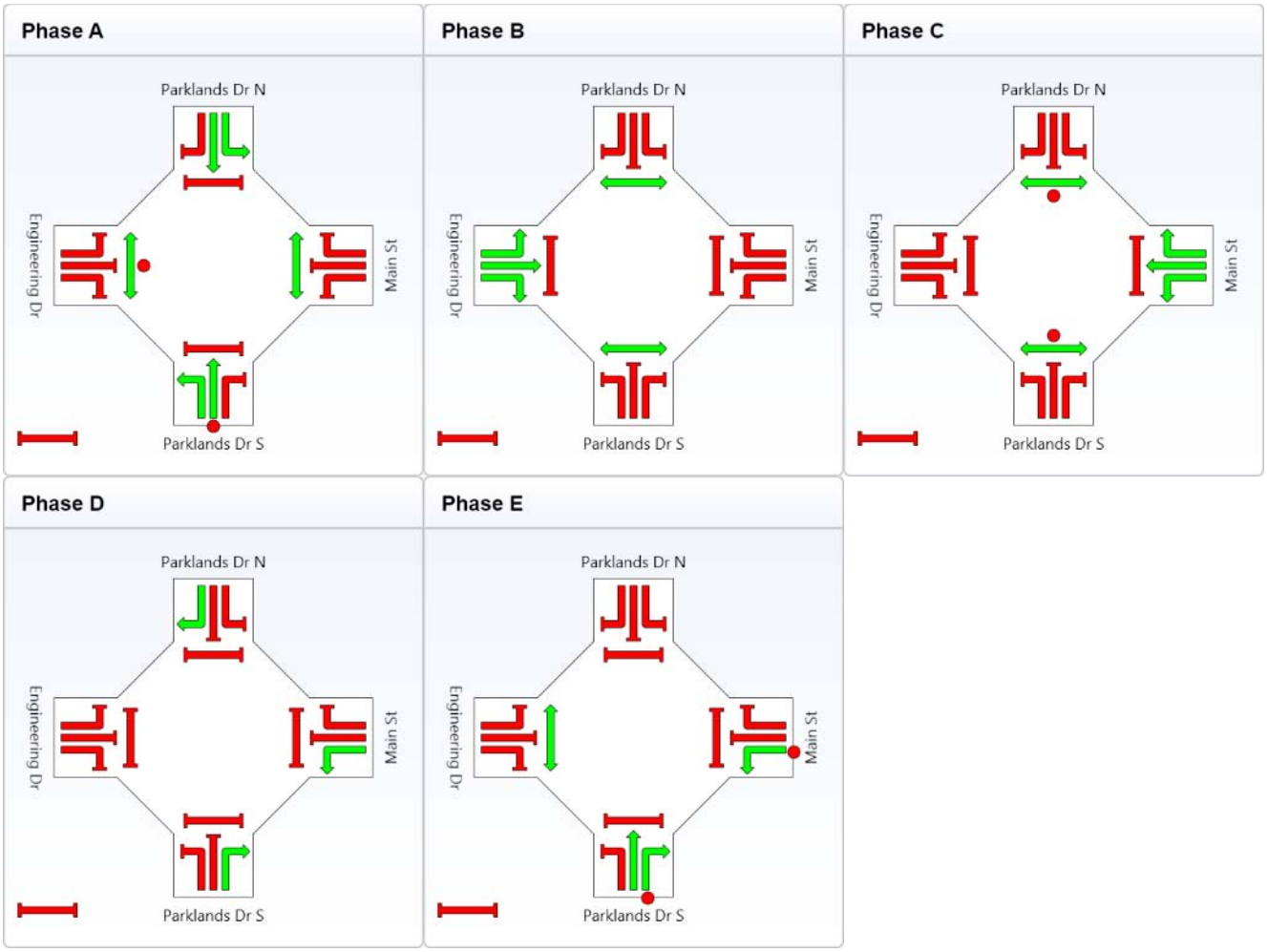
**Site: 2026AM - Parklands Dr/Main St/Engineering Dr - Legacy Adjusted Option 2**

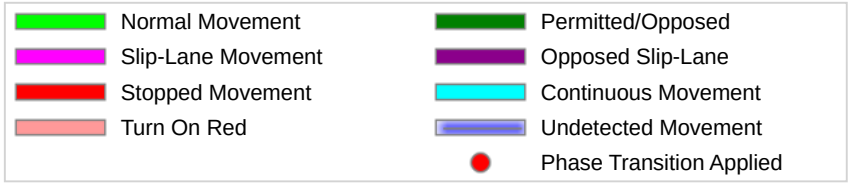
Parklands Drive / Main Street / Engineering Drive Intersection
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

**Phase times specified by the user**
**Sequence: GCRT Phasing**
**Input Sequence: A, B, C, D, E**
**Output Sequence: A, B, C, D, E**

**Phase Timing Results**

| Phase | A | B | C | D | E |
|---|---|---|---|---|---|
| Green Time (sec) | 15 | 12 | 15 | 53 | 5 |
| Yellow Time (sec) | 3 | 3 | 3 | 3 | 3 |
| All-Red Time (sec) | 2 | 2 | 2 | 2 | 2 |
| Phase Time (sec) | 20 | 17 | 20 | 58 | 10 |
| Phase Split | 16 % | 14 % | 16 % | 46 % | 8 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Parklands Dr/Main St/Engineering Dr - Legacy Adjusted Option 2**

2026AM - Parklands Drive / Main Street / Engineering Drive
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 1 | L | 11 | 5.0 | 0.150 | 55.7 | LOS E | 2.3 | 16.5 | 0.84 | 0.77 | 24.4 |
| 2 | T | 93 | 5.0 | 0.150 | 44.9 | LOS D | 2.7 | 19.7 | 0.81 | 0.61 | 25.8 |
| 3 | R | 409 | 5.0 | 0.777 | 36.1 | LOS D | 15.2 | 111.0 | 0.72 | 0.83 | 30.2 |
| Approach | | 513 | 5.0 | 0.777 | 38.1 | LOS D | 15.2 | 111.0 | 0.74 | 0.79 | 29.2 |
| East: Main St | | | | | | | | | | | |
| 4 | L | 208 | 5.0 | 0.588 | 22.5 | LOS C | 6.0 | 43.6 | 0.54 | 0.76 | 37.1 |
| 5 | T | 34 | 5.0 | 0.756 | 65.2 | LOS E | 7.8 | 56.9 | 1.00 | 0.88 | 20.2 |
| 6 | R | 87 | 5.0 | 0.756 | 73.4 | LOS E | 7.8 | 56.9 | 1.00 | 0.88 | 20.1 |
| Approach | | 329 | 5.0 | 0.756 | 40.4 | LOS D | 7.8 | 56.9 | 0.71 | 0.80 | 28.3 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 85 | 5.0 | 0.632 | 65.3 | LOS E | 4.8 | 35.4 | 0.94 | 0.79 | 21.5 |
| 8 | T | 209 | 5.0 | 0.612 | 59.9 | LOS E | 8.1 | 59.3 | 0.99 | 0.79 | 21.8 |
| 9 | R | 11 | 5.0 | 0.612 | 72.0 | LOS E | 5.0 | 36.7 | 1.00 | 0.79 | 20.9 |
| Approach | | 305 | 5.0 | 0.632 | 61.8 | LOS E | 8.1 | 59.3 | 0.97 | 0.79 | 21.7 |
| West: Engineering Dr | | | | | | | | | | | |
| 10 | L | 80 | 5.0 | 0.761 | 63.7 | LOS E | 15.6 | 113.8 | 1.00 | 0.89 | 22.1 |
| 11 | T | 94 | 5.0 | 0.761 | 55.4 | LOS E | 15.6 | 113.8 | 1.00 | 0.89 | 22.2 |
| 12 | R | 82 | 5.0 | 0.761 | 63.6 | LOS E | 15.6 | 113.8 | 1.00 | 0.89 | 22.2 |
| Approach | | 256 | 5.0 | 0.761 | 60.6 | LOS E | 15.6 | 113.8 | 1.00 | 0.89 | 22.2 |
| All Vehicles | | 1403 | 5.0 | 0.777 | 47.9 | LOS D | 15.6 | 113.8 | 0.83 | 0.81 | 25.6 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 40.8 | LOS E | 0.2 | 0.2 | 0.81 | 0.81 |
| P3 | Across E approach | 53 | 56.6 | LOS E | 0.2 | 0.2 | 0.95 | 0.95 |
| P5 | Across N approach | 53 | 40.8 | LOS E | 0.2 | 0.2 | 0.81 | 0.81 |
| P7 | Across W approach | 53 | 43.3 | LOS E | 0.2 | 0.2 | 0.83 | 0.83 |
| All Pedestrians | | 212 | 45.4 | LOS E | | | 0.85 | 0.85 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

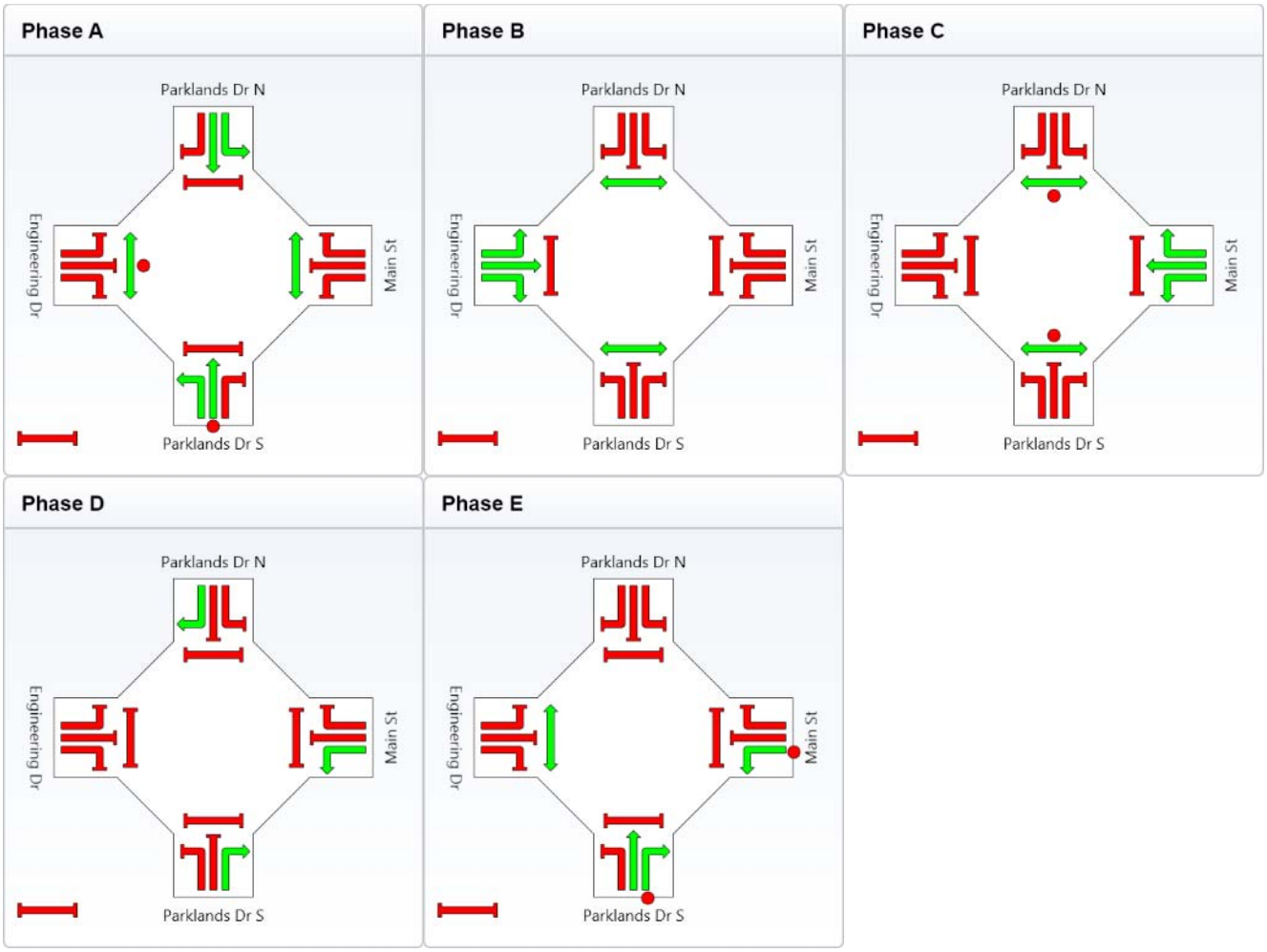


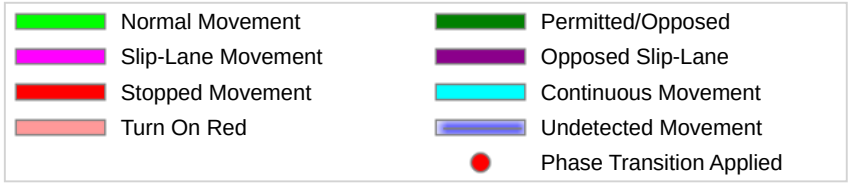
2026AM - Parklands Drive / Main Street / Engineering Drive
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

**Phase times specified by the user**
**Sequence: GCRT Phasing**
**Input Sequence: A, B, C, D, E**
**Output Sequence: A, B, C, D, E**

**Phase Timing Results**

| Phase | A | B | C | D | E |
|---|---|---|---|---|---|
| Green Time (sec) | 15 | 23 | 11 | 45 | 6 |
| Yellow Time (sec) | 3 | 3 | 3 | 3 | 3 |
| All-Red Time (sec) | 2 | 2 | 2 | 2 | 2 |
| Phase Time (sec) | 20 | 28 | 16 | 50 | 11 |
| Phase Split | 16 % | 22 % | 13 % | 40 % | 9 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Parklands Dr/First St Option 2**

Parklands Drive / First Street Intersection
Stop (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 2 | T | 693 | 5.0 | 0.183 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 693 | 5.0 | 0.183 | 0.0 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| East: First Street | | | | | | | | | | | |
| 4 | L | 240 | 5.0 | 0.276 | 15.2 | LOS C | 1.6 | 11.7 | 0.70 | 0.94 | 43.7 |
| 6 | R | 11 | 5.0 | 0.196 | 77.8 | LOS F | 0.5 | 4.0 | 0.94 | 1.01 | 19.4 |
| Approach | | 251 | 5.0 | 0.276 | 17.9 | LOS C | 1.6 | 11.7 | 0.71 | 0.94 | 41.6 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 51 | 5.0 | 0.158 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.99 | 49.0 |
| 8 | T | 543 | 5.0 | 0.158 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 594 | 5.0 | 0.158 | 0.7 | NA | 0.0 | 0.0 | 0.00 | 0.08 | 58.9 |
| All Vehicles | | 1537 | 5.0 | 0.276 | 3.2 | NA | 1.6 | 11.7 | 0.12 | 0.19 | 55.6 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026PM - Parklands Dr/First St Option 2**

Parklands Drive / First Street Intersection
Stop (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 2 | T | 416 | 5.0 | 0.110 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 416 | 5.0 | 0.110 | 0.0 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| East: First Street | | | | | | | | | | | |
| 4 | L | 318 | 5.0 | 0.360 | 14.4 | LOS B | 2.1 | 15.6 | 0.65 | 0.91 | 44.4 |
| 6 | R | 11 | 5.0 | 0.073 | 33.3 | LOS D | 0.2 | 1.6 | 0.81 | 1.00 | 32.2 |
| Approach | | 328 | 5.0 | 0.360 | 15.0 | LOS C | 2.1 | 15.6 | 0.66 | 0.91 | 43.8 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 41 | 5.0 | 0.121 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.98 | 49.0 |
| 8 | T | 415 | 5.0 | 0.121 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 456 | 5.0 | 0.121 | 0.8 | NA | 0.0 | 0.0 | 0.00 | 0.09 | 58.8 |
| All Vehicles | | 1200 | 5.0 | 0.360 | 4.4 | NA | 2.1 | 15.6 | 0.18 | 0.28 | 54.1 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026AM - Parklands Dr/First St - Legacy Adjusted Option 2**

Parklands Drive / First Street Intersection
Stop (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 2 | T | 771 | 5.0 | 0.204 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 771 | 5.0 | 0.204 | 0.0 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| East: First Street | | | | | | | | | | | |
| 4 | L | 260 | 5.0 | 0.322 | 16.4 | LOS C | 2.1 | 15.2 | 0.73 | 1.00 | 42.8 |
| 6 | R | 11 | 5.0 | 0.275 | 111.8 | LOS F | 0.8 | 5.6 | 0.96 | 1.02 | 14.9 |
| Approach | | 271 | 5.0 | 0.322 | 20.1 | LOS C | 2.1 | 15.2 | 0.74 | 1.00 | 39.9 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 51 | 5.0 | 0.171 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.99 | 49.0 |
| 8 | T | 594 | 5.0 | 0.171 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 644 | 5.0 | 0.171 | 0.7 | NA | 0.0 | 0.0 | 0.00 | 0.08 | 59.0 |
| All Vehicles | | 1685 | 5.0 | 0.322 | 3.5 | NA | 2.1 | 15.2 | 0.12 | 0.19 | 55.2 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026PM - Parklands Dr/First St - Legacy Adjusted Option 2**

Parklands Drive / First Street Intersection
Stop (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 2 | T | 806 | 5.0 | 0.213 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 806 | 5.0 | 0.213 | 0.0 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| East: First Street | | | | | | | | | | | |
| 4 | L | 332 | 5.0 | 0.379 | 14.9 | LOS B | 2.4 | 17.7 | 0.67 | 0.94 | 44.0 |
| 6 | R | 11 | 5.0 | 0.196 | 78.2 | LOS F | 0.6 | 4.0 | 0.94 | 1.01 | 19.4 |
| Approach | | 342 | 5.0 | 0.379 | 16.8 | LOS C | 2.4 | 17.7 | 0.68 | 0.94 | 42.3 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 41 | 5.0 | 0.127 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.98 | 49.0 |
| 8 | T | 436 | 5.0 | 0.127 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 477 | 5.0 | 0.127 | 0.7 | NA | 0.0 | 0.0 | 0.00 | 0.08 | 58.9 |
| All Vehicles | | 1625 | 5.0 | 0.379 | 3.8 | NA | 2.4 | 17.7 | 0.14 | 0.22 | 54.9 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

APPENDIX D

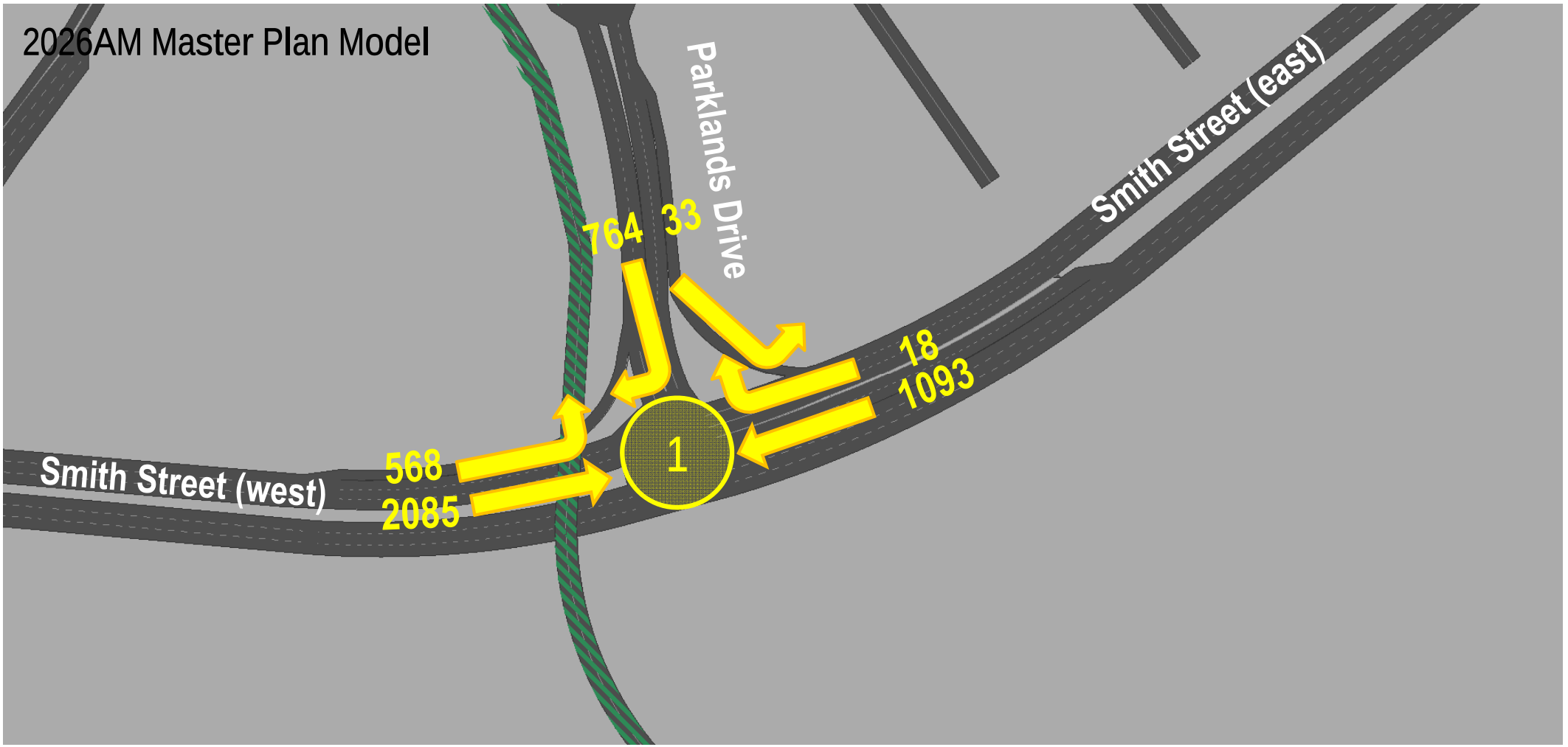
# PARAMICS MODEL OUTPUTS – 2026 LEGACY DEVELOPMENT – ADDITIONAL CONNECTIONS SCENARIO

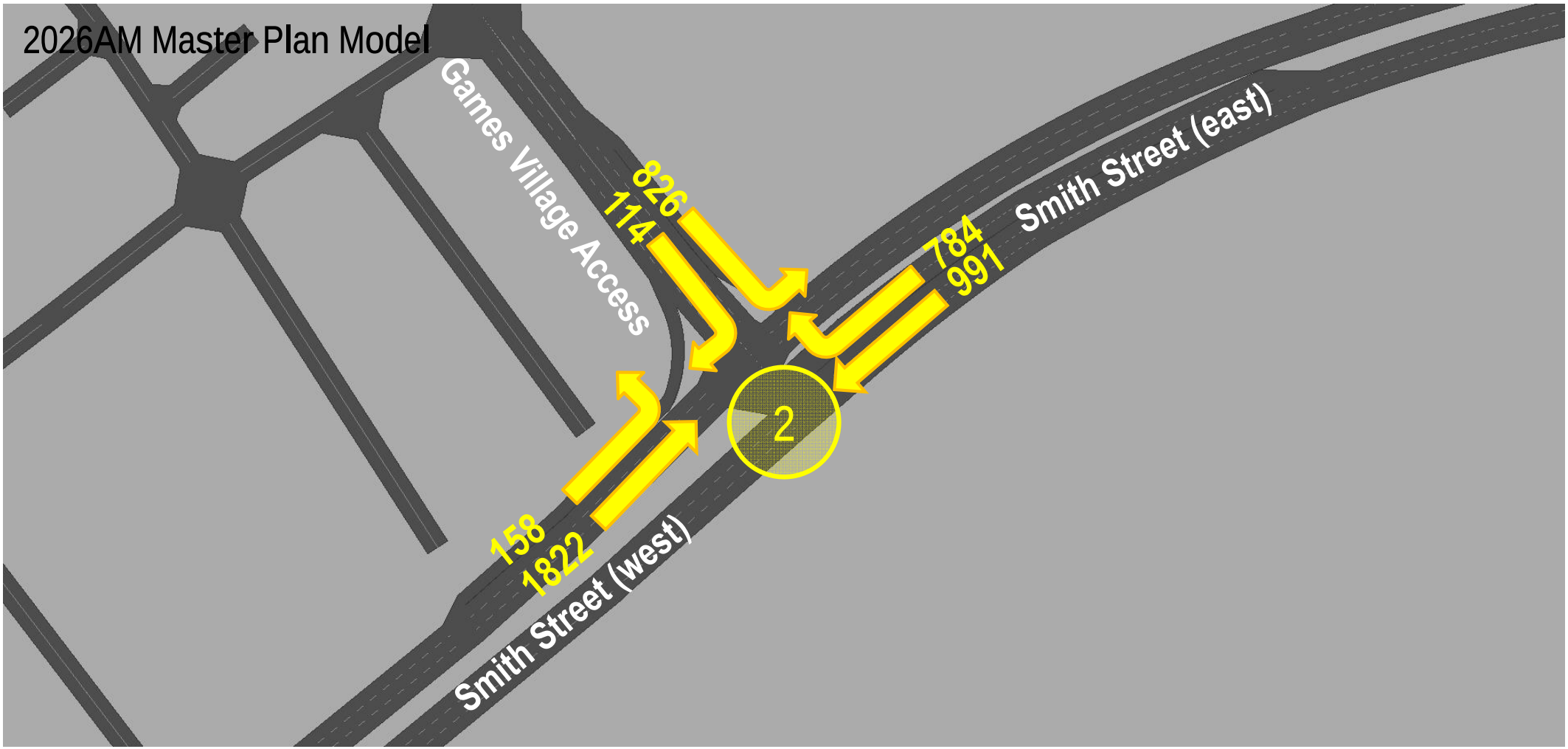
Figure 3.1: 2026 AM Master Plan Model – Typical Peak Operations

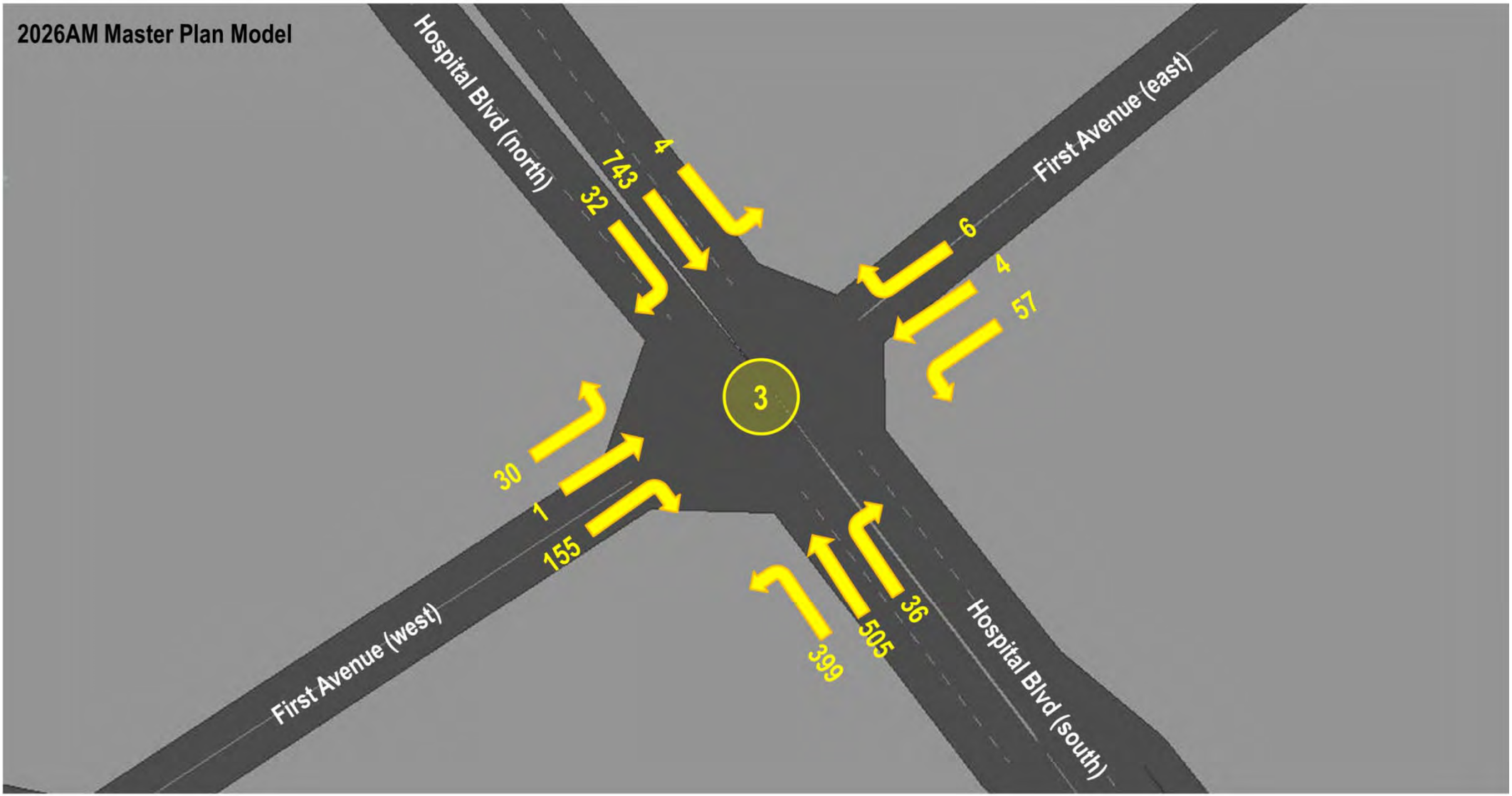
Figure 3.2: 2026 PM Master Plan Model - Peak Operations

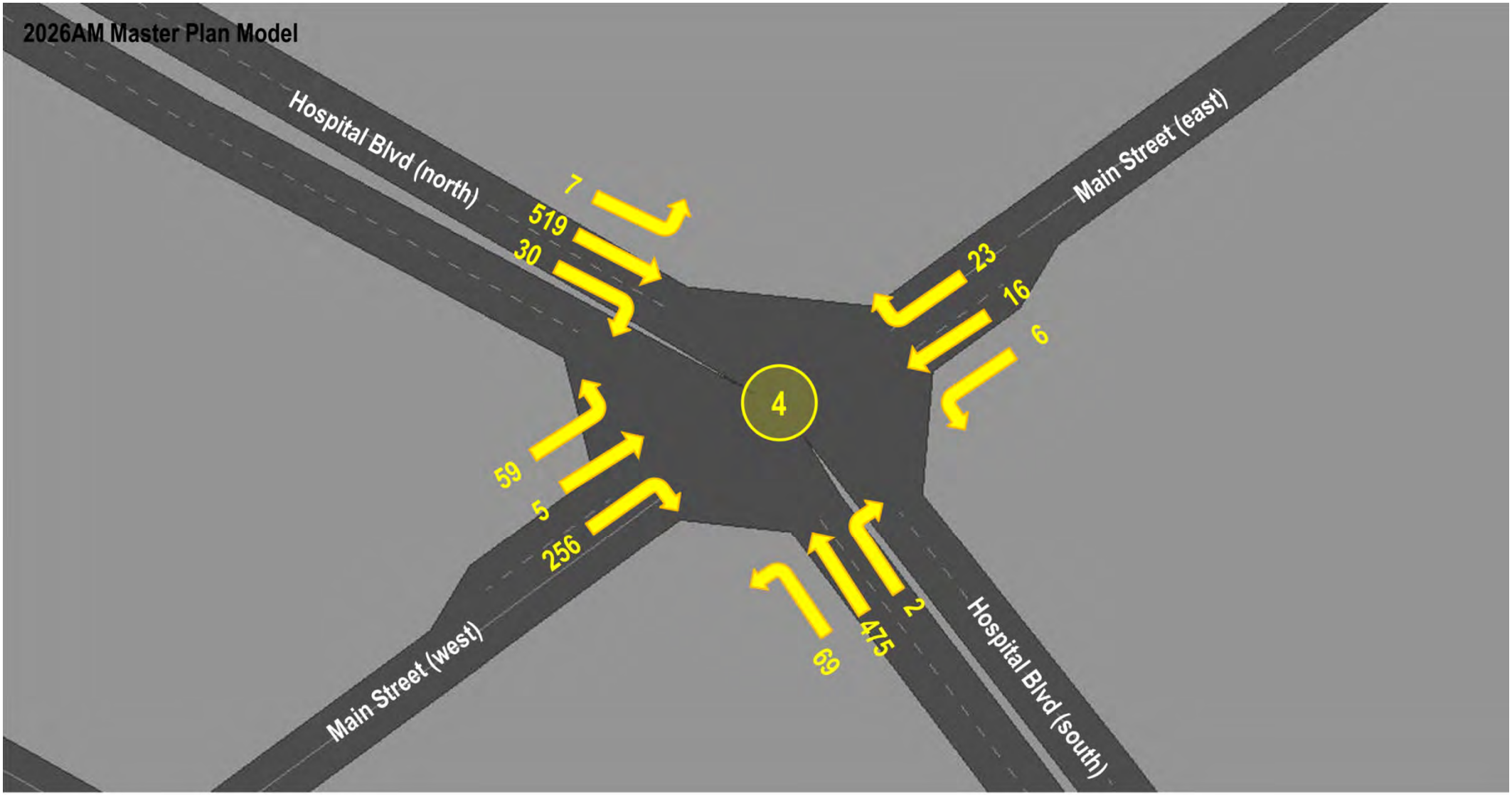
# 2026 AM PEAK

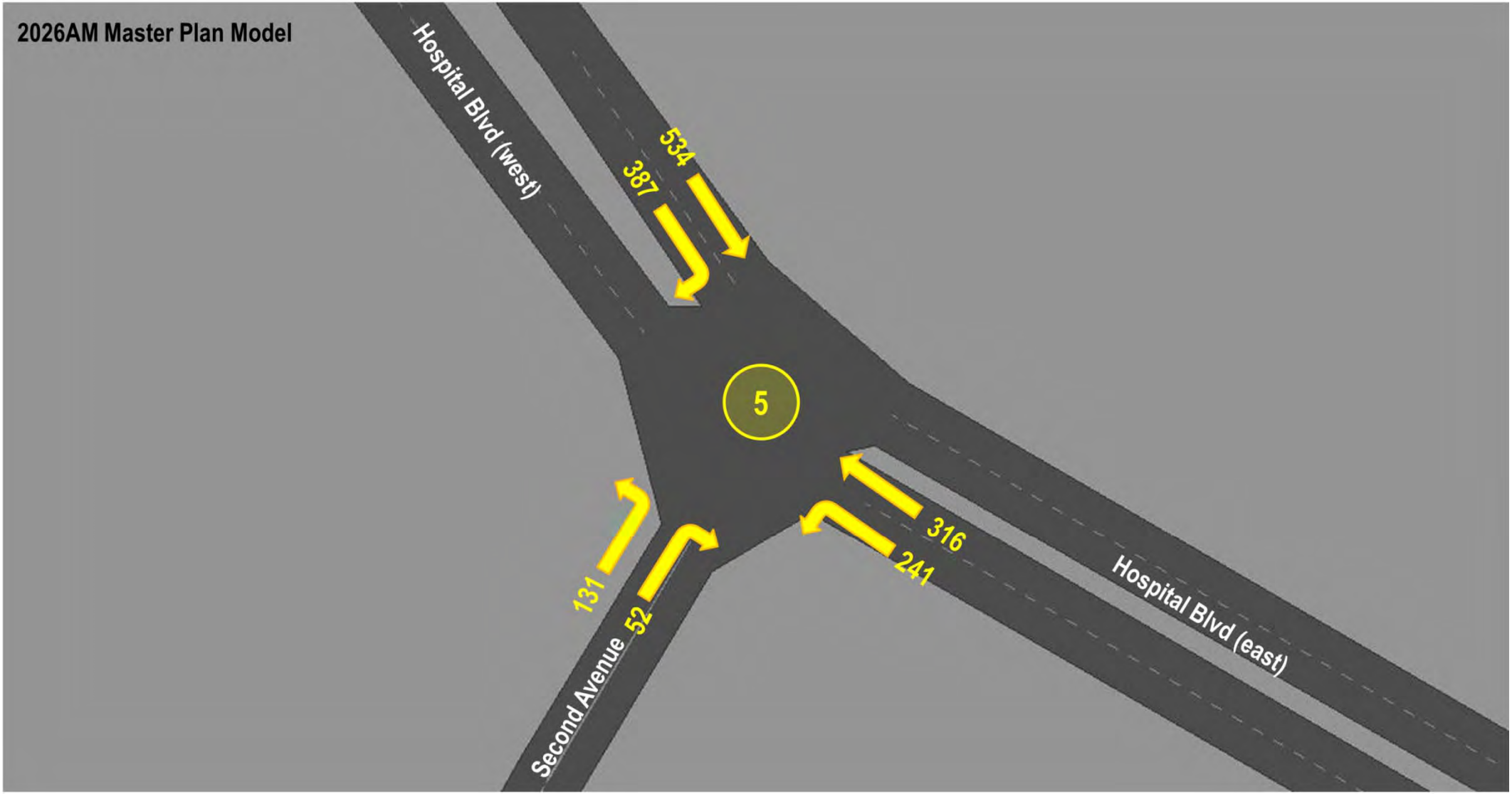

6
9
5
4
3
2
7
8
1

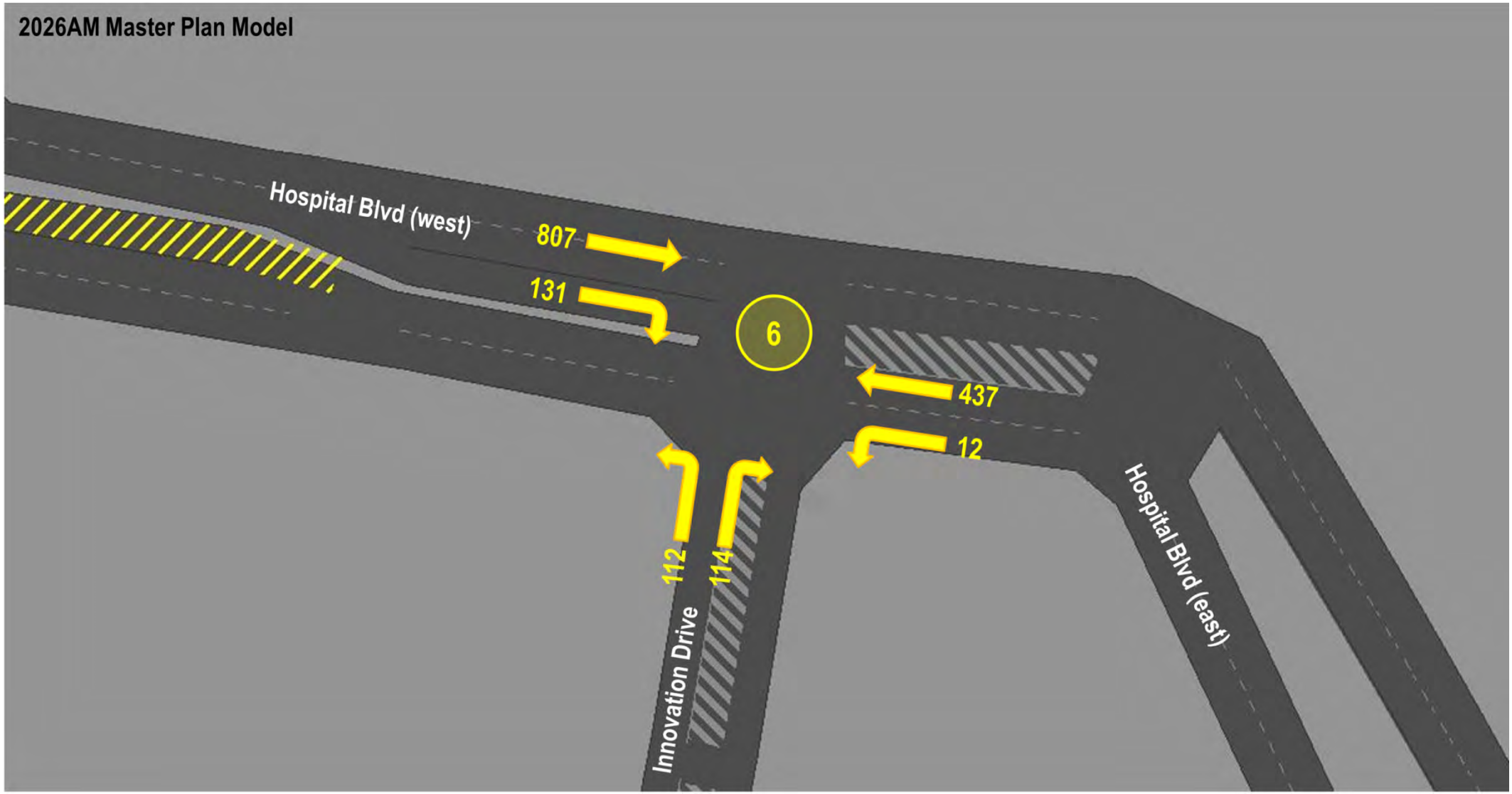

2026AM Master Plan Model
Parklands Drive
Smith Street (east)
Smith Street (west)
764
33
18
1093
568
2085
1

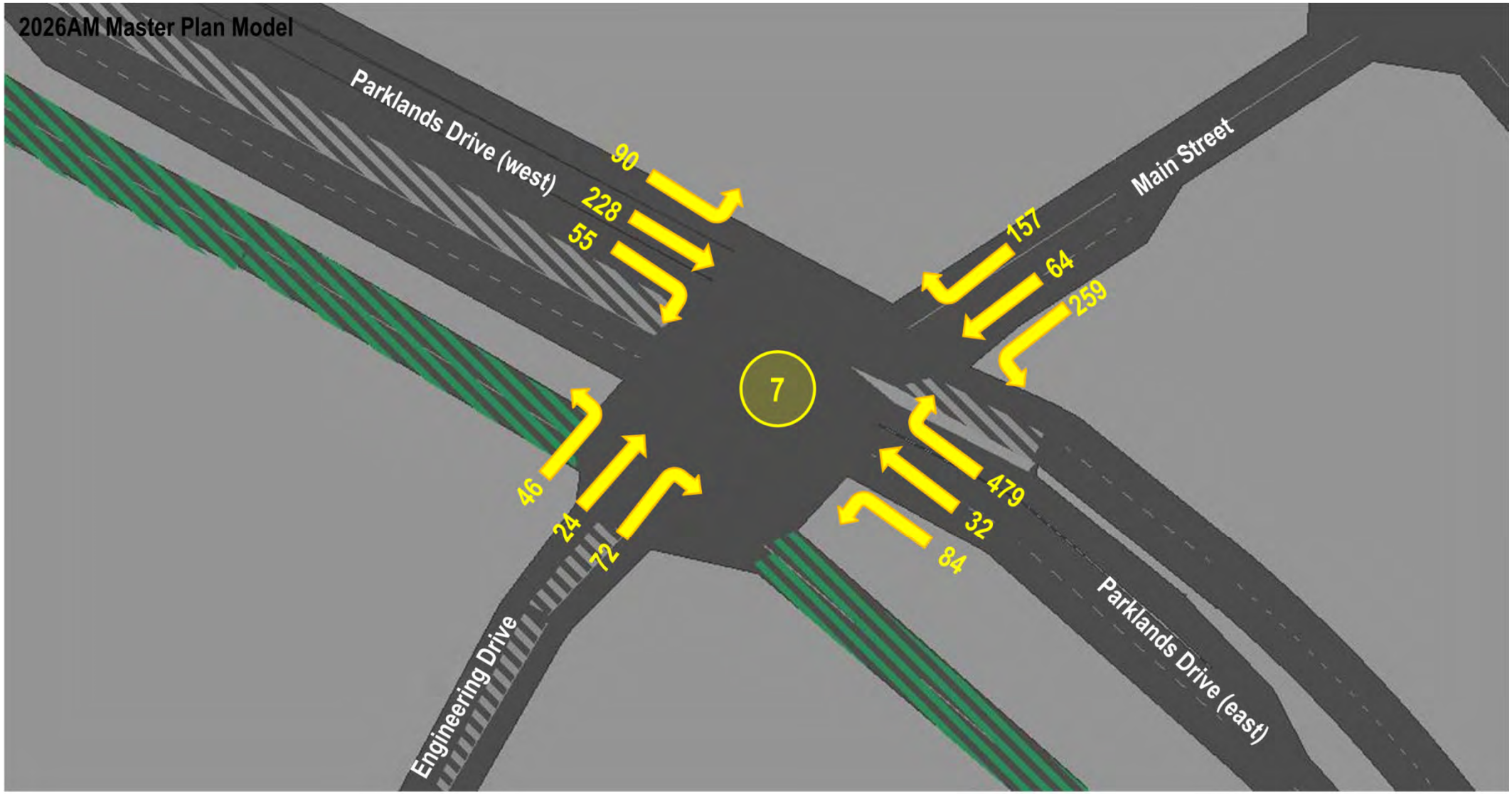

2026AM Master Plan Model
Games Village Access
826
114
784
991
Smith Street (east)
2
158
1822
Smith Street (west)

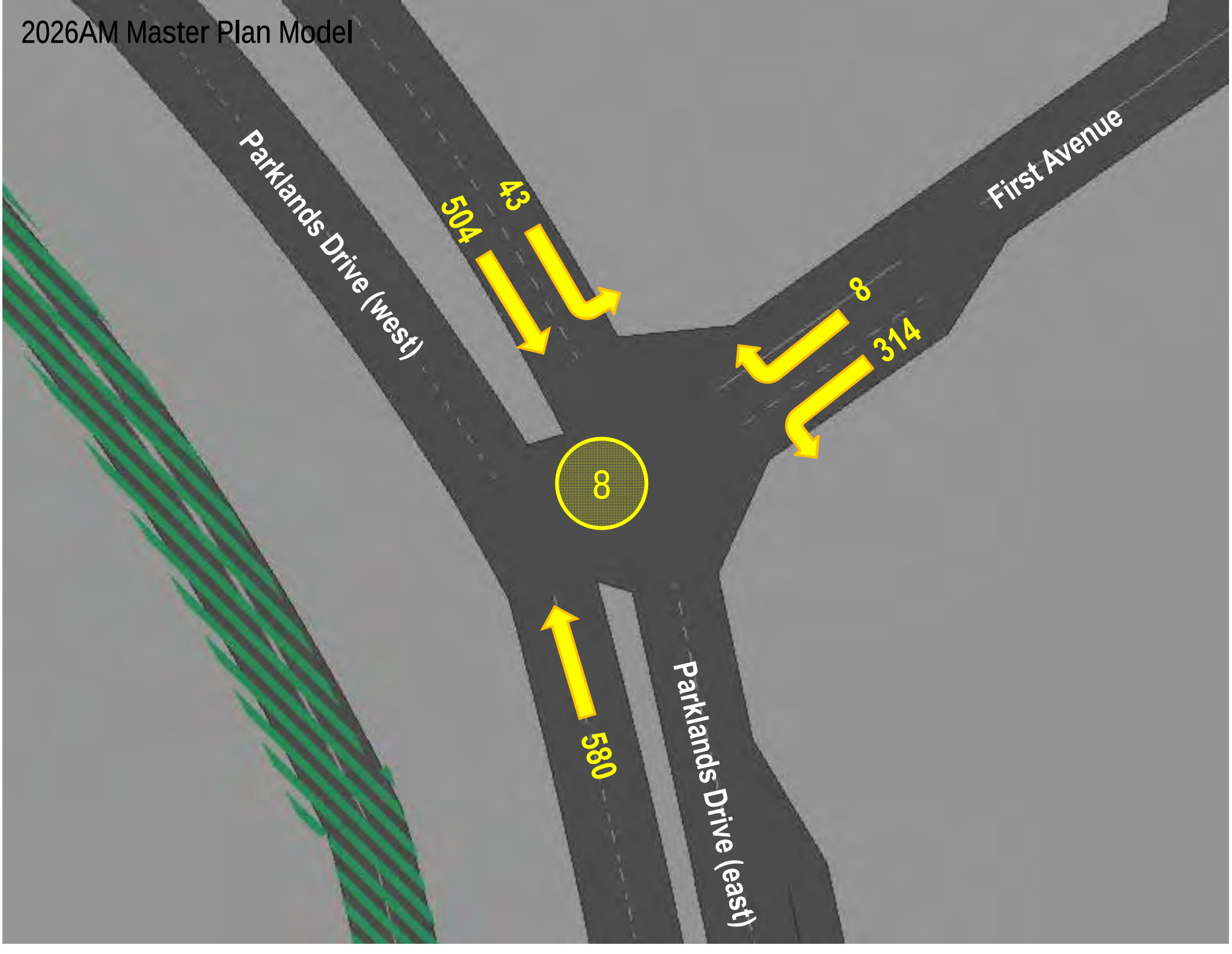

2026AM Master Plan Model
Hospital Blvd (north)
First Avenue (east)
First Avenue (west)
Hospital Blvd (south)
3
4
743
32
6
4
57
30
1
155
399
505
36


2026AM Master Plan Model
Hospital Blvd (north)
Main Street (east)
Main Street (west)
Hospital Blvd (south)
4
7
519
30
23
16
6
59
5
256
69
475
2

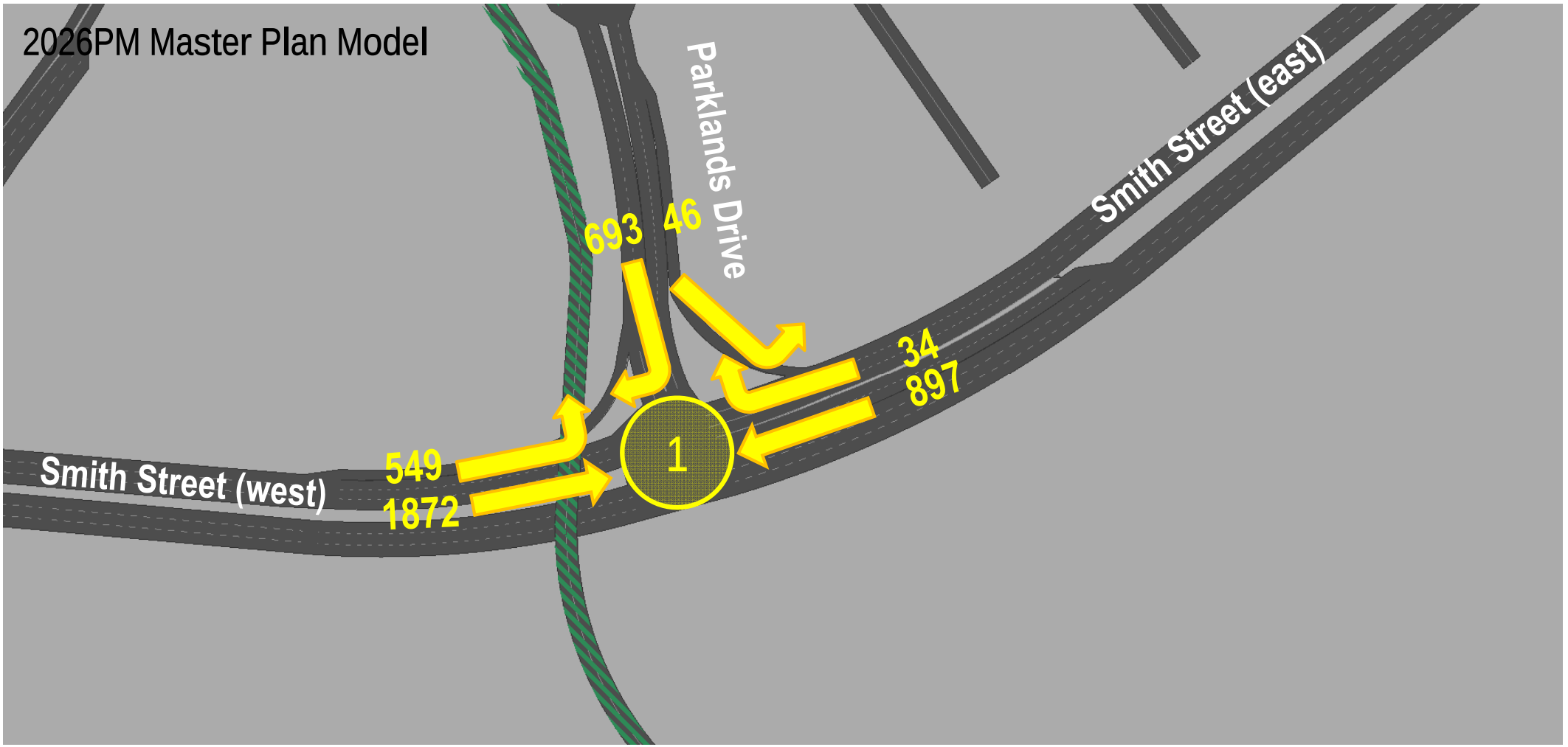

2026AM Master Plan Model
Hospital Blvd (west)
534
387
5
131
52
316
241
Second Avenue
Hospital Blvd (east)

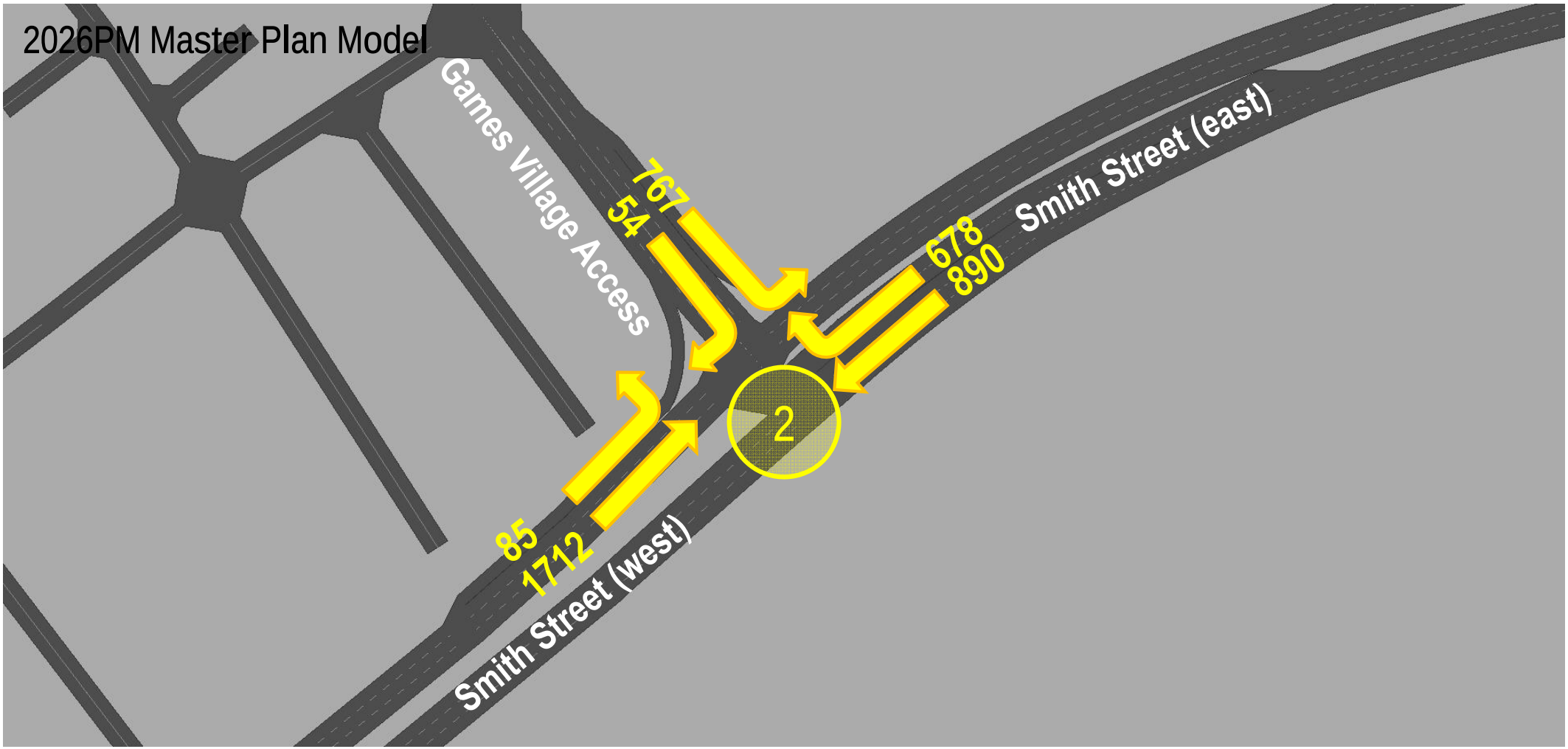

2026AM Master Plan Model
Hospital Blvd (west)
807
131
6
437
12
112
114
Innovation Drive
Hospital Blvd (east)

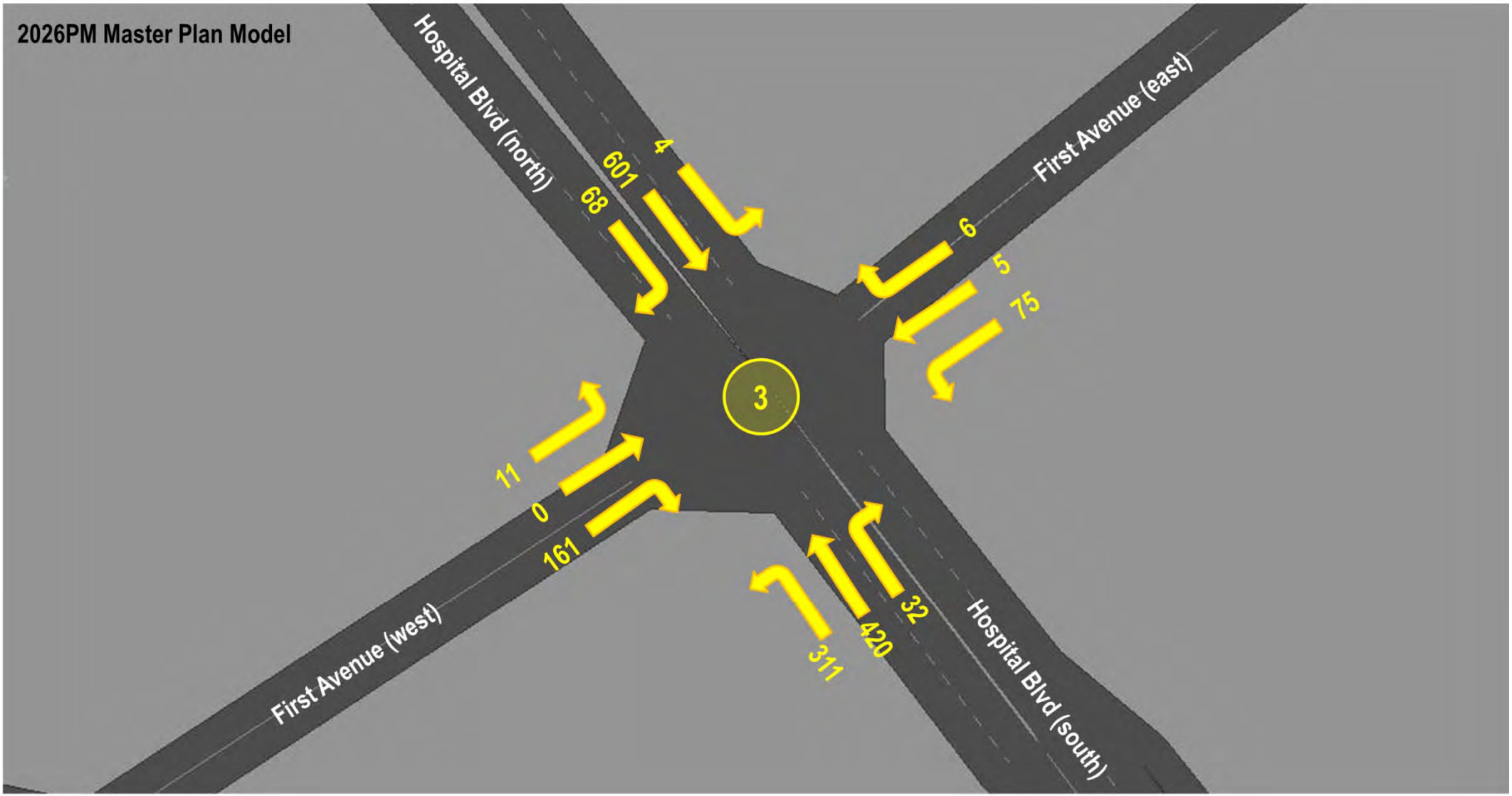

2026AM Master Plan Model
Parklands Drive (west)
Main Street
Engineering Drive
Parklands Drive (east)
7
90
228
55
157
64
259
46
24
72
479
32
84

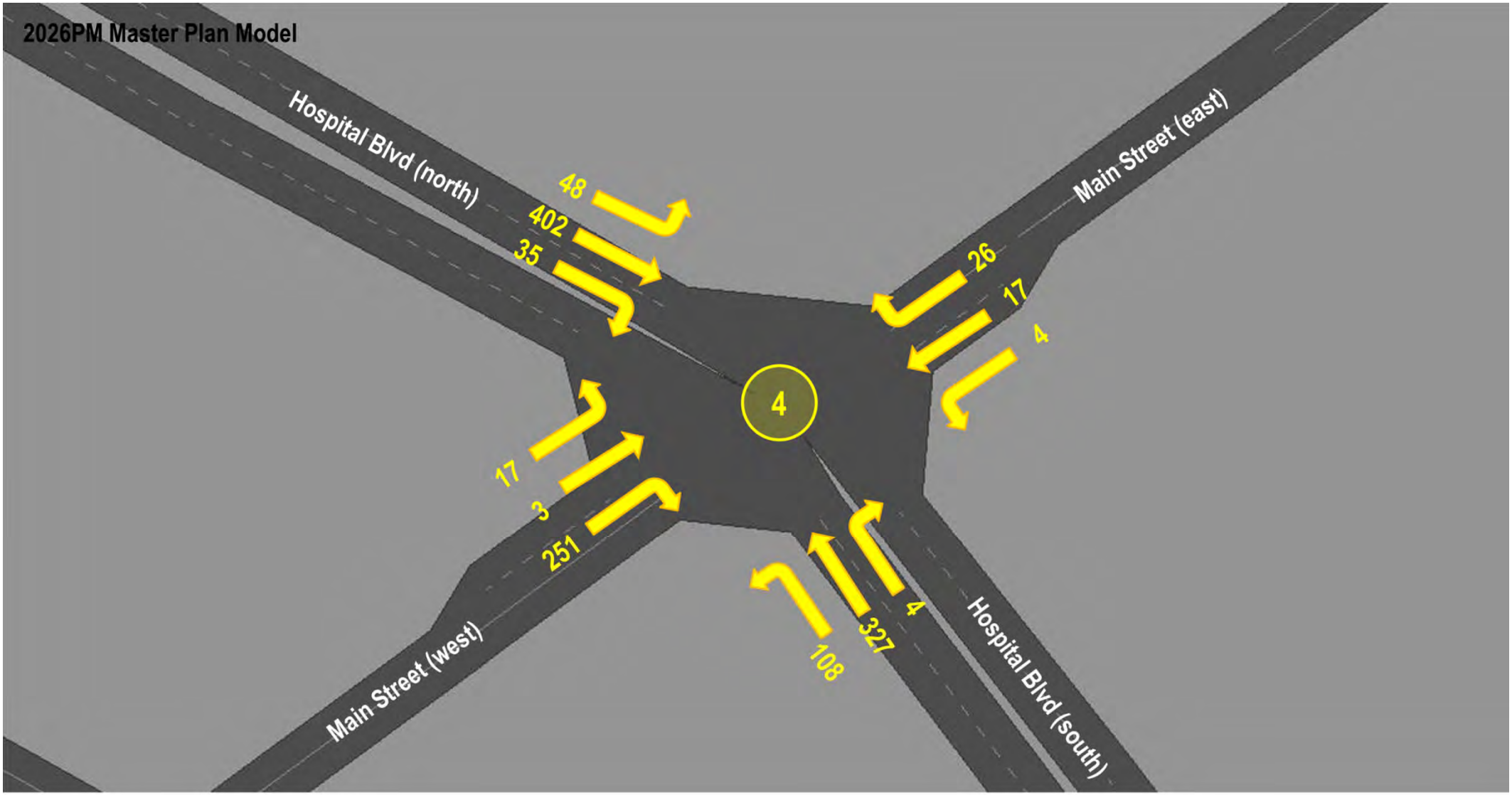

2026AM Master Plan Model
Parklands Drive (west)
43
504
First Avenue
8
314
8
580
Parklands Drive (east)

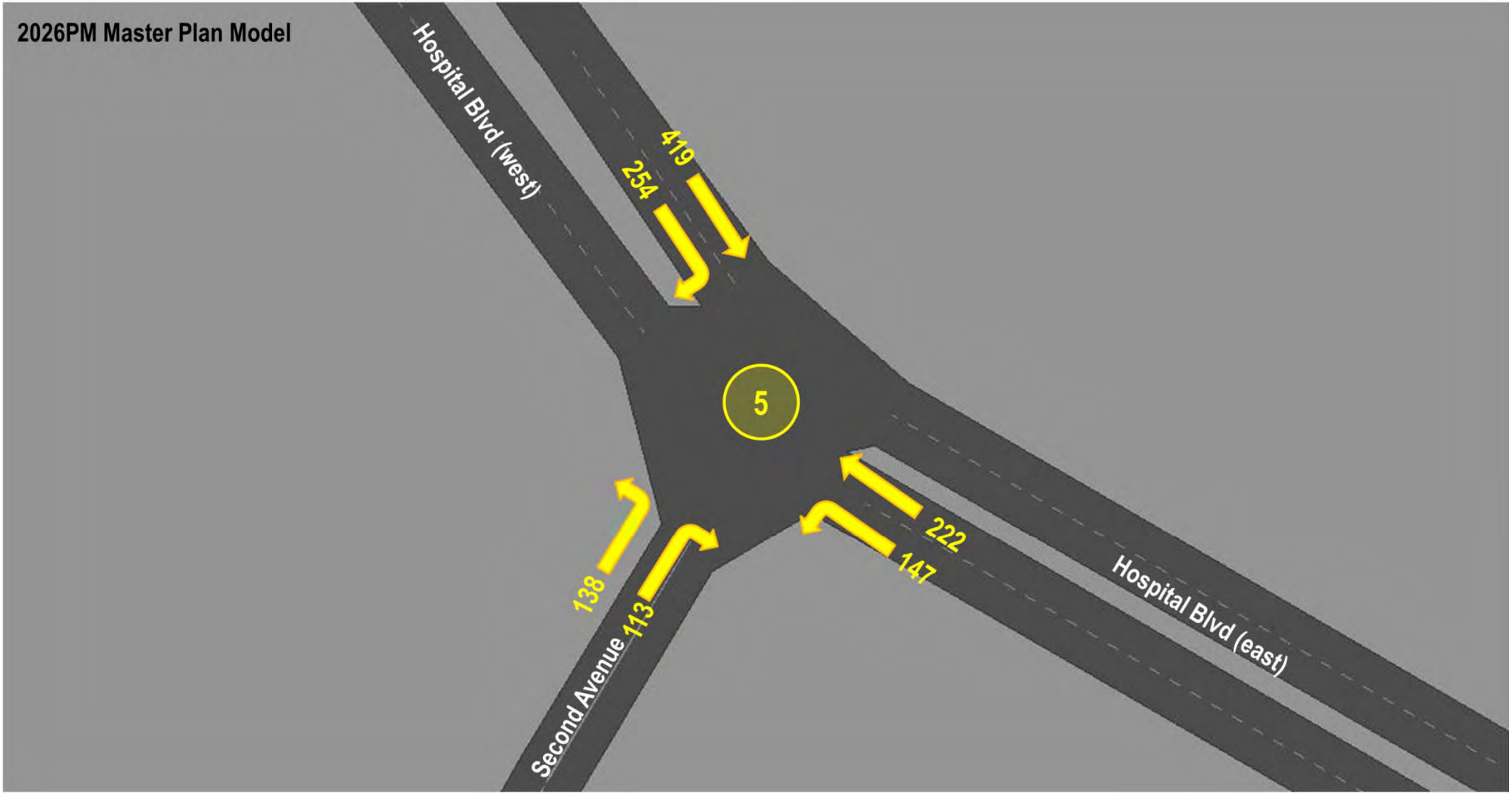
# 2026 PM PEAK

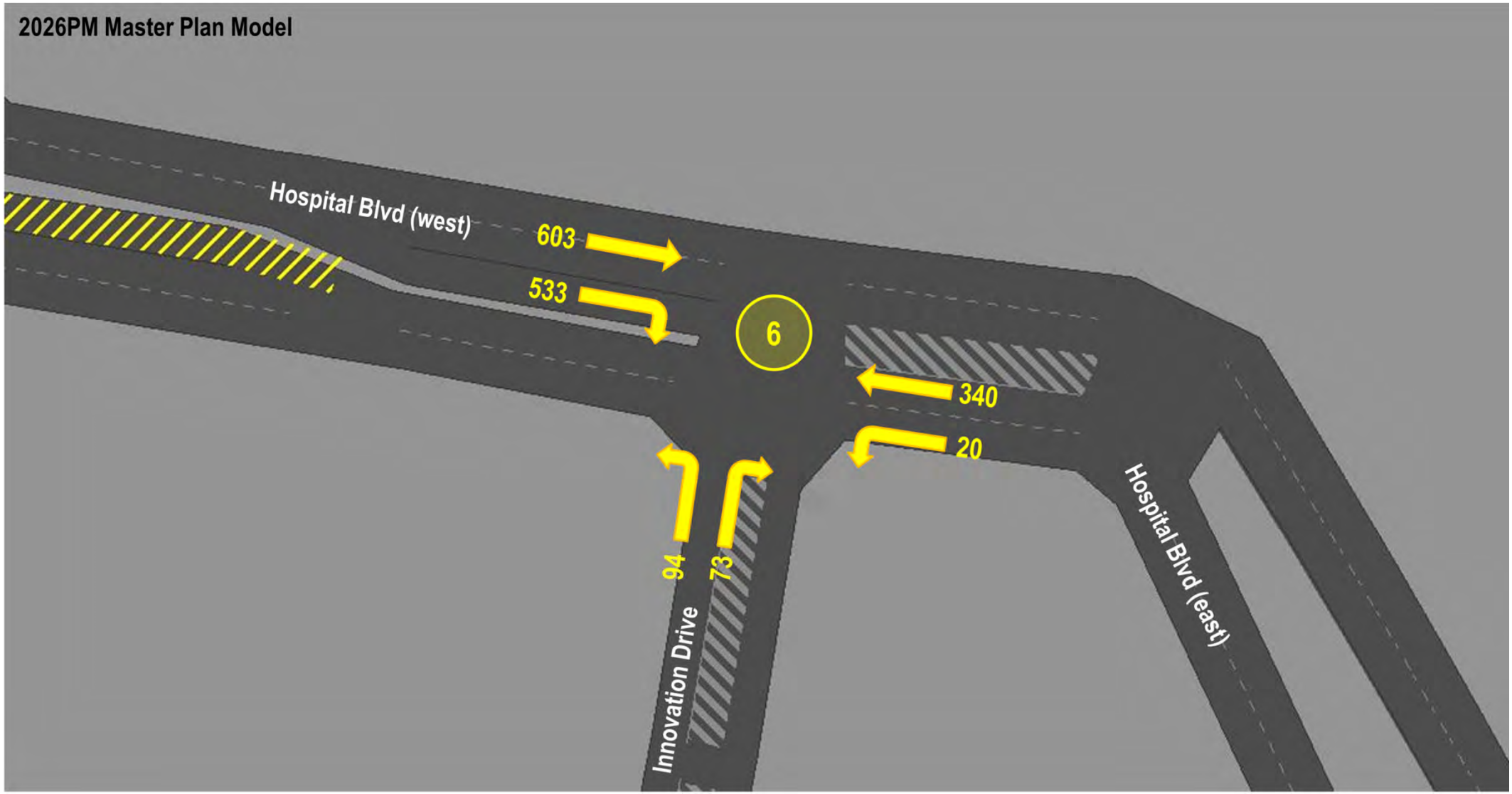

2026PM Master Plan Model
Parklands Drive
Smith Street (east)
Smith Street (west)
693
46
34
897
549
1872
1

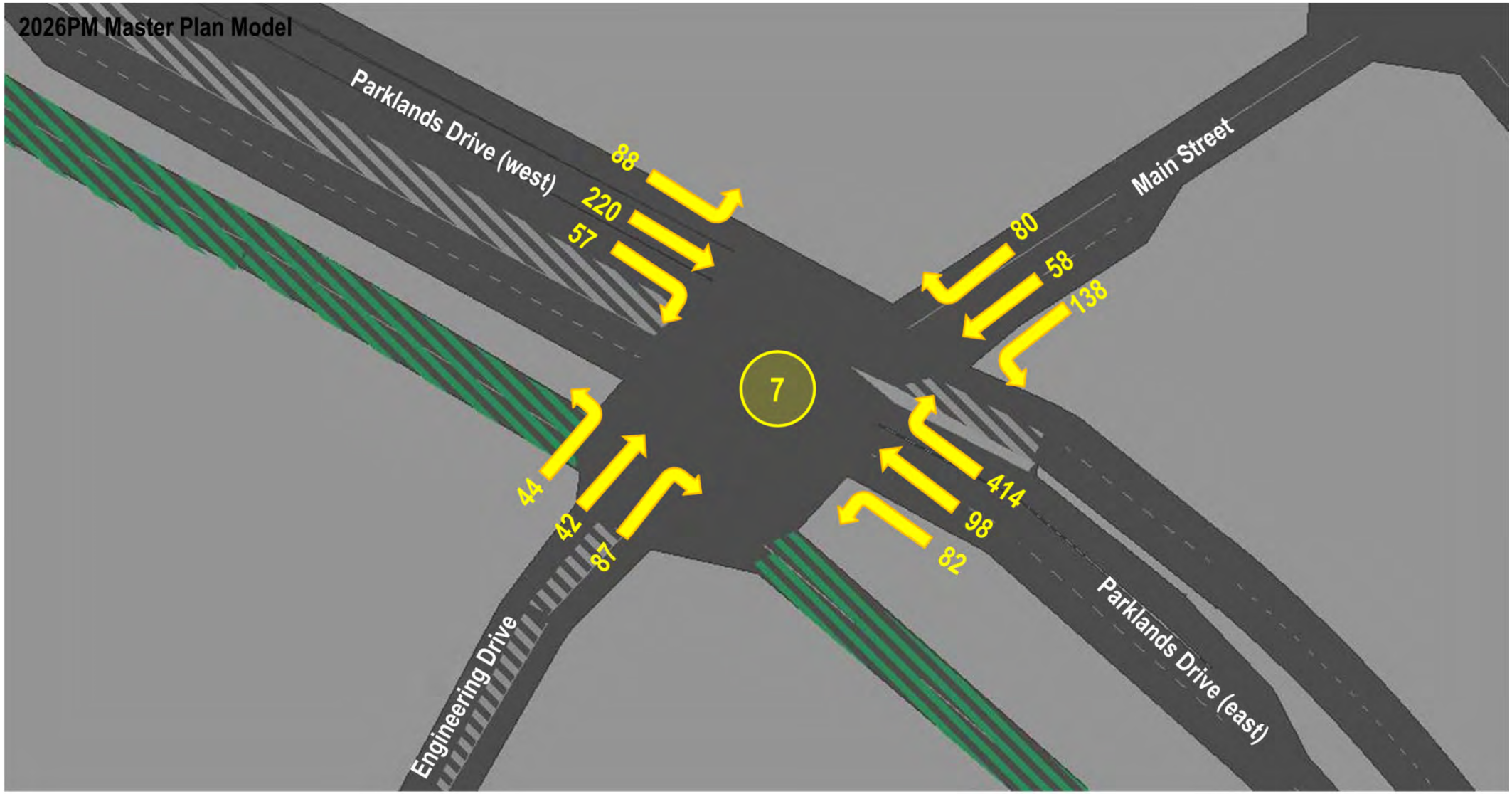

2026PM Master Plan Model
Games Village Access
767
54
678
890
Smith Street (east)
2
85
1712
Smith Street (west)

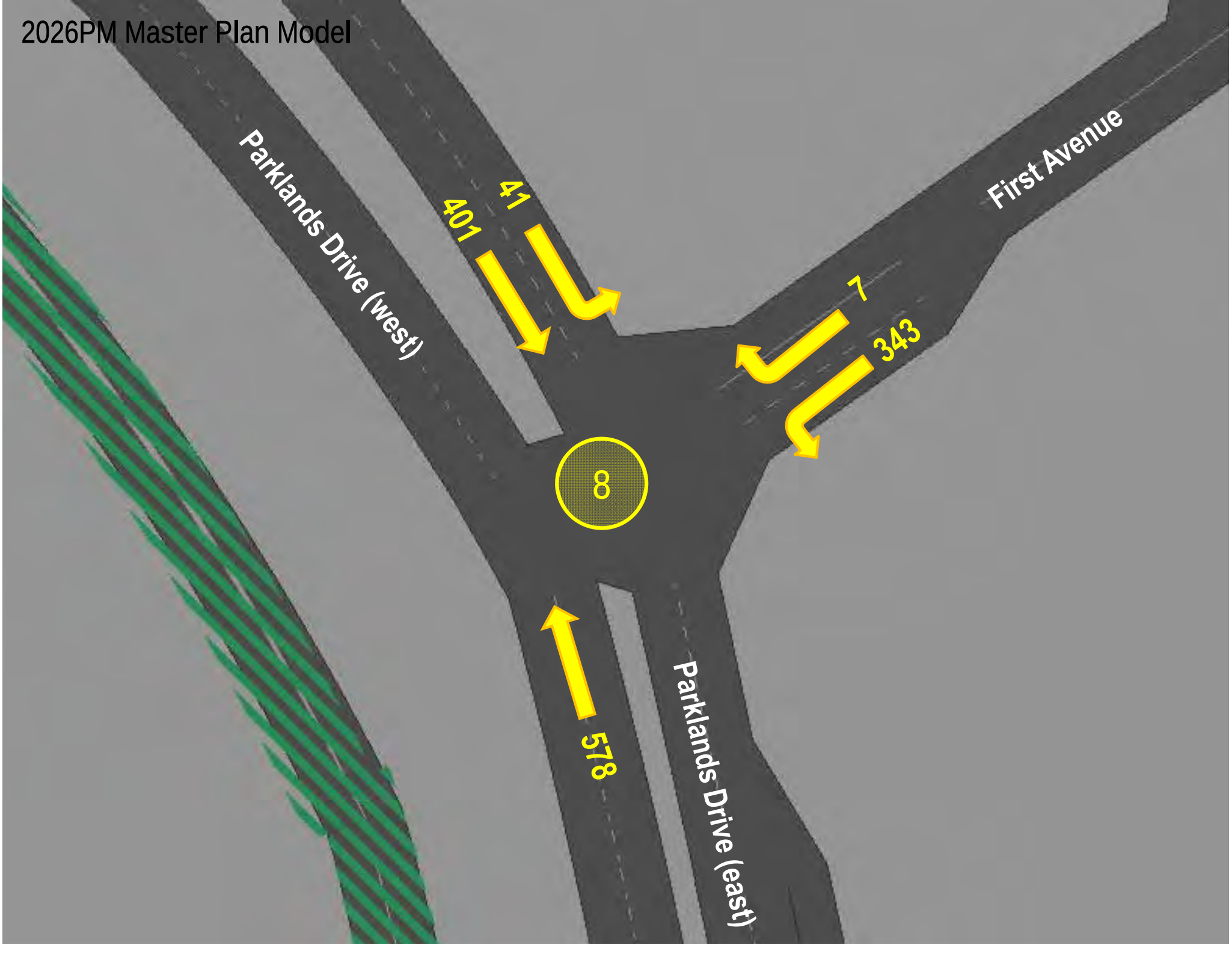

2026PM Master Plan Model
Hospital Blvd (north)
First Avenue (east)
First Avenue (west)
Hospital Blvd (south)
4
601
68
6
5
75
3
11
0
161
311
420
32


2026PM Master Plan Model
Hospital Blvd (north)
Main Street (east)
Main Street (west)
Hospital Blvd (south)
48
402
35
26
17
4
17
3
251
4
327
108
4


2026PM Master Plan Model
Hospital Blvd (west)
419
254
5
138
113
Second Avenue
222
147
Hospital Blvd (east)


2026PM Master Plan Model
Hospital Blvd (west)
603
533
6
340
20
94
73
Innovation Drive
Hospital Blvd (east)


2026PM Master Plan Model
Parklands Drive (west)
Main Street
Engineering Drive
Parklands Drive (east)
7
88
220
57
80
58
138
44
42
87
414
98
82


2026PM Master Plan Model
Parklands Drive (west)
First Avenue
Parklands Drive (east)
41
401
7
343
578
8

APPENDIX E

# DETAILED SIDRA RESULTS - ADDITIONAL CONNECTIONS SCENARIO

# MOVEMENT SUMMARY

**Site: 2026AM - Smith St/Parklands Dr - Option 3**

Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 110 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Smith St E | | | | | | | | | | | |
| 5 | T | 1151 | 5.0 | 0.338 | 6.7 | LOS A | 5.6 | 40.5 | 0.29 | 0.26 | 49.4 |
| 6 | R | 19 | 5.0 | 0.097 | 64.4 | LOS E | 0.5 | 3.7 | 0.96 | 0.67 | 21.7 |
| Approach | | 1169 | 5.0 | 0.338 | 7.7 | LOS A | 5.6 | 40.5 | 0.31 | 0.27 | 48.4 |
| North: Parklands Dr | | | | | | | | | | | |
| 7 | L | 35 | 5.0 | 0.802 | 55.5 | LOS E | 21.1 | 153.7 | 0.95 | 0.92 | 23.9 |
| 9 | R | 804 | 5.0 | 0.802 | 52.5 | LOS D | 21.1 | 154.2 | 0.95 | 0.91 | 24.7 |
| Approach | | 839 | 5.0 | 0.802 | 52.7 | LOS D | 21.1 | 154.2 | 0.95 | 0.91 | 24.6 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 598 | 5.0 | 0.431 | 8.2 | LOS A | 2.6 | 19.1 | 0.18 | 0.64 | 48.8 |
| 11 | T | 2195 | 5.0 | 0.789 | 25.3 | LOS C | 32.7 | 238.4 | 0.90 | 0.82 | 33.7 |
| Approach | | 2793 | 5.0 | 0.789 | 21.6 | LOS C | 32.7 | 238.4 | 0.74 | 0.78 | 36.1 |
| All Vehicles | | 4801 | 5.0 | 0.802 | 23.6 | LOS C | 32.7 | 238.4 | 0.67 | 0.68 | 35.4 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P3 | Across E approach | 53 | 44.6 | LOS E | 0.1 | 0.1 | 0.90 | 0.90 |
| P5 | Across N approach | 53 | 21.0 | LOS C | 0.1 | 0.1 | 0.62 | 0.62 |
| All Pedestrians | | 106 | 32.8 | LOS D | | | 0.76 | 0.76 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

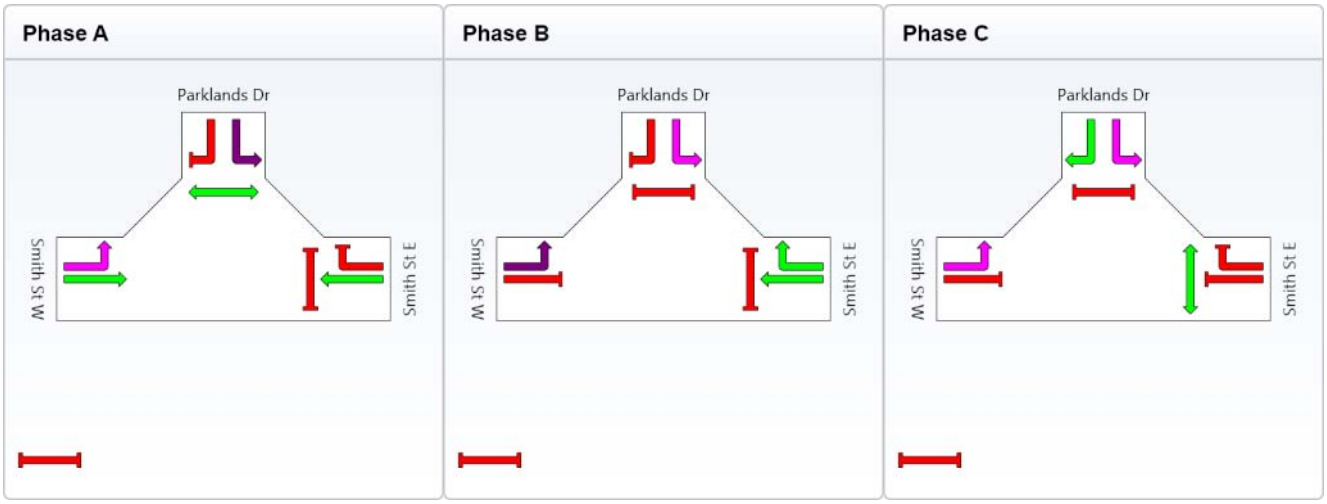


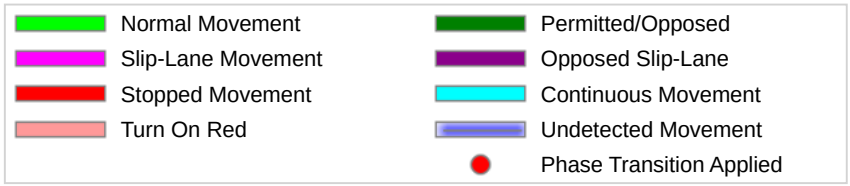
Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 110 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Phasing**
**Input Sequence: A, B, C**
**Output Sequence: A, B, C**

**Phase Timing Results**

| Phase | A | B | C |
|---|---|---|---|
| Green Time (sec) | 54 | 6 | 32 |
| Yellow Time (sec) | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 |
| Phase Time (sec) | 60 | 12 | 38 |
| Phase Split | 55 % | 11 % | 35 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Smith St/Parklands Dr - Option 3**

Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 100 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Smith St E | | | | | | | | | | | |
| 5 | T | 944 | 5.0 | 0.282 | 6.4 | LOS A | 4.2 | 30.3 | 0.29 | 0.25 | 49.8 |
| 6 | R | 36 | 5.0 | 0.166 | 59.3 | LOS E | 0.9 | 6.3 | 0.96 | 0.70 | 22.9 |
| Approach | | 980 | 5.0 | 0.282 | 8.3 | LOS A | 4.2 | 30.3 | 0.32 | 0.27 | 47.8 |
| North: Parklands Dr | | | | | | | | | | | |
| 7 | L | 48 | 5.0 | 0.744 | 47.7 | LOS D | 16.7 | 122.0 | 0.91 | 0.89 | 26.1 |
| 9 | R | 729 | 5.0 | 0.744 | 45.8 | LOS D | 16.9 | 123.1 | 0.92 | 0.88 | 26.7 |
| Approach | | 778 | 5.0 | 0.744 | 45.9 | LOS D | 16.9 | 123.1 | 0.92 | 0.88 | 26.7 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 578 | 5.0 | 0.417 | 8.3 | LOS A | 2.5 | 18.3 | 0.19 | 0.65 | 48.7 |
| 11 | T | 1971 | 5.0 | 0.740 | 23.1 | LOS C | 26.0 | 189.4 | 0.88 | 0.79 | 34.9 |
| Approach | | 2548 | 5.0 | 0.740 | 19.7 | LOS B | 26.0 | 189.4 | 0.72 | 0.76 | 37.3 |
| All Vehicles | | 4306 | 5.0 | 0.744 | 21.9 | LOS C | 26.0 | 189.4 | 0.66 | 0.67 | 36.5 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P3 | Across E approach | 53 | 42.3 | LOS E | 0.1 | 0.1 | 0.92 | 0.92 |
| P5 | Across N approach | 53 | 21.1 | LOS C | 0.1 | 0.1 | 0.65 | 0.65 |
| All Pedestrians | | 106 | 31.7 | LOS D | | | 0.79 | 0.79 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

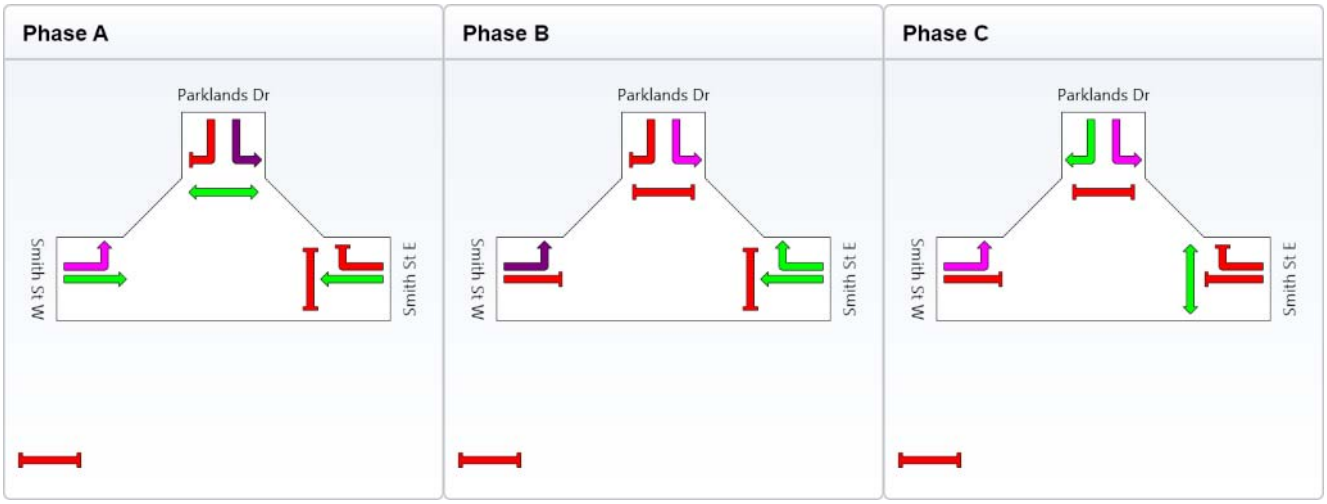


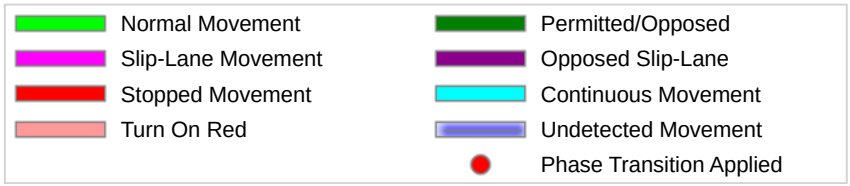
Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 100 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Phasing**
**Input Sequence: A, B, C**
**Output Sequence: A, B, C**

**Phase Timing Results**

| Phase | A | B | C |
|---|---|---|---|
| Green Time (sec) | 47 | 6 | 29 |
| Yellow Time (sec) | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 |
| Phase Time (sec) | 53 | 12 | 35 |
| Phase Split | 53 % | 12 % | 35 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Smith St/Parklands Dr - Option 3 - Adjusted**

Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Smith St E | | | | | | | | | | | |
| 5 | T | 1392 | 5.0 | 0.388 | 5.5 | LOS A | 6.2 | 45.0 | 0.25 | 0.22 | 51.0 |
| 6 | R | 266 | 5.0 | 0.810 | 71.8 | LOS E | 8.3 | 60.5 | 1.00 | 0.88 | 20.2 |
| Approach | | 1658 | 5.0 | 0.810 | 16.2 | LOS B | 8.3 | 60.5 | 0.37 | 0.33 | 41.0 |
| North: Parklands Dr | | | | | | | | | | | |
| 7 | L | 296 | 5.0 | 0.839 | 50.5 | LOS D | 22.2 | 162.4 | 0.96 | 1.01 | 25.2 |
| 9 | R | 563 | 5.0 | 0.839 | 55.8 | LOS E | 23.3 | 170.0 | 0.97 | 0.94 | 23.8 |
| Approach | | 859 | 5.0 | 0.839 | 54.0 | LOS D | 23.3 | 170.0 | 0.97 | 0.97 | 24.3 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 419 | 5.0 | 0.391 | 9.1 | LOS A | 3.7 | 27.2 | 0.23 | 0.66 | 48.2 |
| 11 | T | 2374 | 5.0 | 0.852 | 32.8 | LOS C | 43.2 | 315.2 | 0.95 | 0.91 | 30.1 |
| Approach | | 2793 | 5.0 | 0.852 | 29.3 | LOS C | 43.2 | 315.2 | 0.84 | 0.87 | 31.9 |
| All Vehicles | | 5309 | 5.0 | 0.852 | 29.2 | LOS C | 43.2 | 315.2 | 0.71 | 0.72 | 32.5 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P3 | Across E approach | 53 | 49.5 | LOS E | 0.2 | 0.2 | 0.91 | 0.91 |
| P5 | Across N approach | 53 | 22.2 | LOS C | 0.1 | 0.1 | 0.61 | 0.61 |
| All Pedestrians | | 106 | 35.9 | LOS D | | | 0.76 | 0.76 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

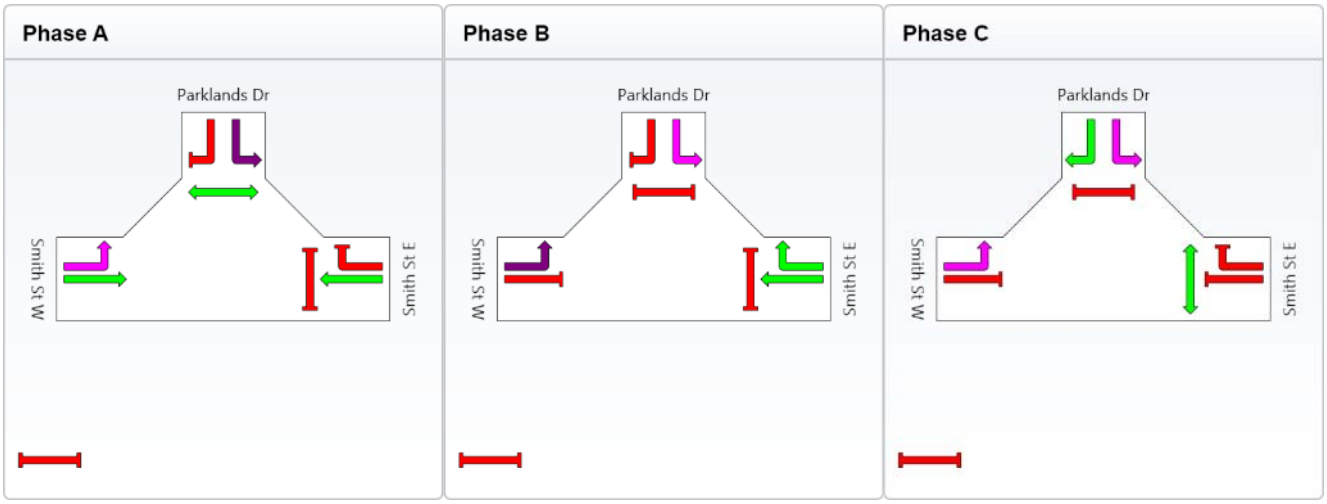


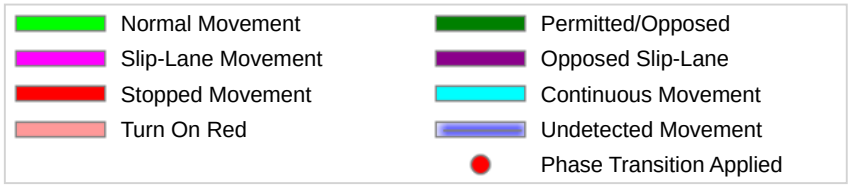
Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Phasing**
**Input Sequence: A, B, C**
**Output Sequence: A, B, C**

**Phase Timing Results**

| Phase | A | B | C |
|---|---|---|---|
| Green Time (sec) | 59 | 11 | 32 |
| Yellow Time (sec) | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 |
| Phase Time (sec) | 65 | 17 | 38 |
| Phase Split | 54 % | 14 % | 32 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Smith St/Parklands Dr - Option 3 - Adjusted**

Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 110 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Smith St E | | | | | | | | | | | |
| 5 | T | 1163 | 5.0 | 0.327 | 5.1 | LOS A | 4.6 | 33.6 | 0.24 | 0.21 | 51.5 |
| 6 | R | 249 | 5.0 | 0.765 | 65.7 | LOS E | 7.0 | 51.3 | 1.00 | 0.86 | 21.4 |
| Approach | | 1413 | 5.0 | 0.765 | 15.8 | LOS B | 7.0 | 51.3 | 0.38 | 0.33 | 41.3 |
| North: Parklands Dr | | | | | | | | | | | |
| 7 | L | 291 | 5.0 | 0.780 | 40.5 | LOS D | 16.7 | 122.3 | 0.92 | 0.96 | 28.5 |
| 9 | R | 511 | 5.0 | 0.780 | 48.1 | LOS D | 18.6 | 135.5 | 0.94 | 0.90 | 25.9 |
| Approach | | 801 | 5.0 | 0.780 | 45.4 | LOS D | 18.6 | 135.5 | 0.93 | 0.92 | 26.8 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 404 | 5.0 | 0.365 | 9.0 | LOS A | 3.3 | 24.1 | 0.24 | 0.66 | 48.2 |
| 11 | T | 2144 | 5.0 | 0.785 | 25.7 | LOS C | 32.0 | 233.6 | 0.90 | 0.82 | 33.4 |
| Approach | | 2548 | 5.0 | 0.785 | 23.1 | LOS C | 32.0 | 233.6 | 0.80 | 0.80 | 35.1 |
| All Vehicles | | 4762 | 5.0 | 0.785 | 24.7 | LOS C | 32.0 | 233.6 | 0.69 | 0.68 | 34.9 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P3 | Across E approach | 53 | 47.3 | LOS E | 0.2 | 0.2 | 0.93 | 0.93 |
| P5 | Across N approach | 53 | 21.6 | LOS C | 0.1 | 0.1 | 0.63 | 0.63 |
| All Pedestrians | | 106 | 34.5 | LOS D | | | 0.78 | 0.78 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

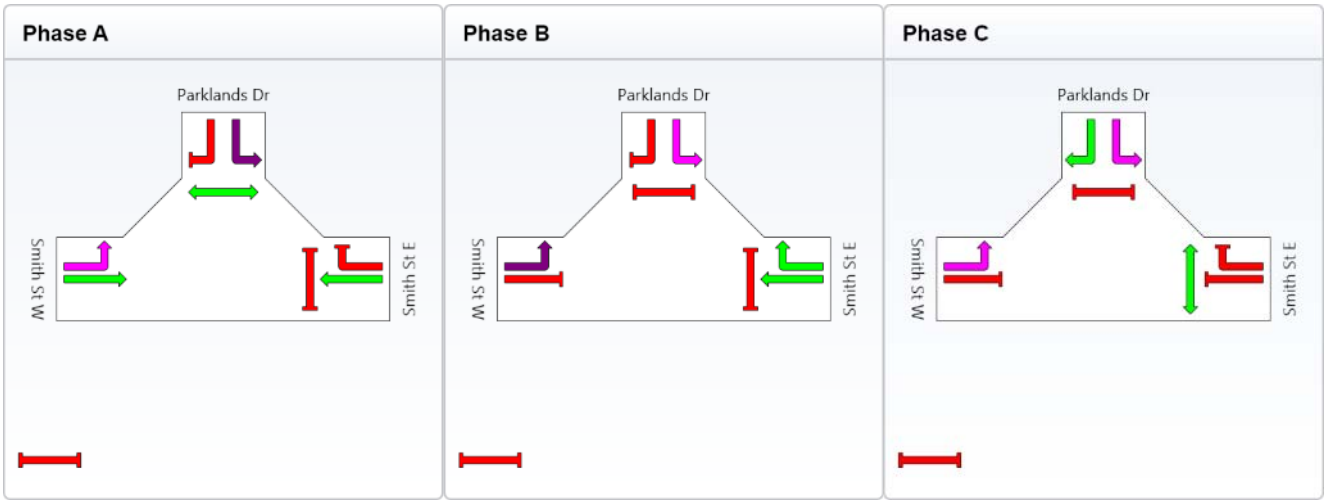


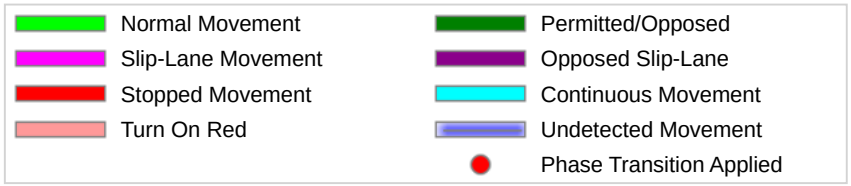
Smith Street / Parklands Drive Intersection
Signals - Fixed Time  Cycle Time = 110 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Phasing**
**Input Sequence: A, B, C**
**Output Sequence: A, B, C**

**Phase Timing Results**

| Phase | A | B | C |
|---|---|---|---|
| Green Time (sec) | 53 | 10 | 29 |
| Yellow Time (sec) | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 |
| Phase Time (sec) | 59 | 16 | 35 |
| Phase Split | 54 % | 15 % | 32 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Smith St/Hospital Blvd - Option 3**

Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 150 seconds (User-Given Phase Times)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Smith St E | | | | | | | | | | | |
| 5 | T | 1043 | 5.0 | 0.253 | 1.5 | LOS A | 1.6 | 11.9 | 0.07 | 0.06 | 57.2 |
| 6 | R | 825 | 5.0 | 0.838 | 66.7 | LOS E | 29.6 | 215.9 | 0.97 | 0.90 | 21.3 |
| Approach | | 1868 | 5.0 | 0.838 | 30.3 | LOS C | 29.6 | 215.9 | 0.47 | 0.43 | 32.7 |
| North: Hospital Blvd | | | | | | | | | | | |
| 7 | L | 726 | 5.0 | 1.000[3] | 17.9 | LOS B | 17.9 | 130.8 | 0.56 | 0.77 | 40.4 |
| 9 | R | 263 | 5.0 | 0.413 | 60.6 | LOS E | 7.2 | 52.4 | 0.87 | 0.36 | 21.8 |
| Approach | | 989 | 5.0 | 1.000 | 29.3 | LOS C | 17.9 | 130.8 | 0.64 | 0.66 | 36.0 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 166 | 5.0 | 0.162 | 9.1 | LOS A | 0.7 | 5.1 | 0.07 | 0.62 | 48.3 |
| 11 | T | 1918 | 5.0 | 0.832 | 39.4 | LOS D | 39.6 | 288.8 | 0.90 | 0.83 | 27.7 |
| Approach | | 2084 | 5.0 | 0.832 | 36.9 | LOS D | 39.6 | 288.8 | 0.83 | 0.81 | 28.6 |
| All Vehicles | | 4942 | 5.0 | 1.000 | 32.9 | LOS C | 39.6 | 288.8 | 0.66 | 0.64 | 31.3 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

3 x = 1.00 due to short lane. Refer to the Lane Summary report for information about excess flow and related conditions.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P3 | Across E approach | 50 | 69.1 | LOS F | 0.2 | 0.2 | 0.96 | 0.96 |
| P5 | Across N approach | 50 | 34.0 | LOS D | 0.1 | 0.1 | 0.67 | 0.67 |
| All Pedestrians | | 100 | 51.6 | LOS E | | | 0.82 | 0.82 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

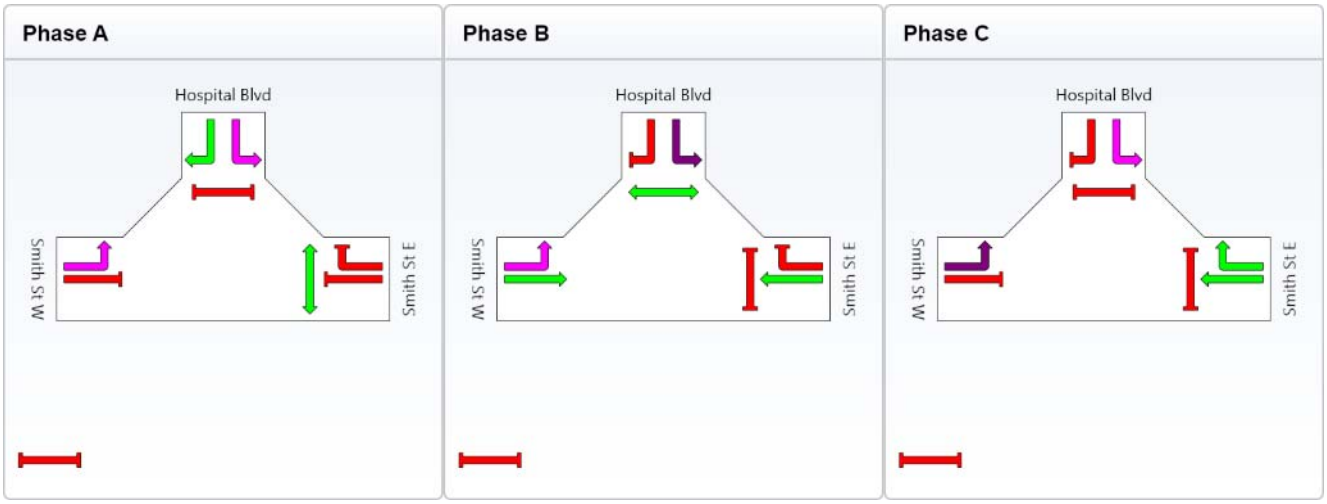


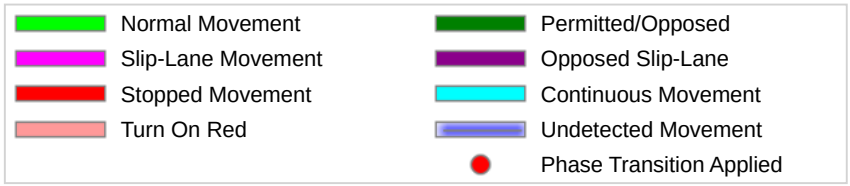
Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 150 seconds (User-Given Phase Times)

**Phase times specified by the user**
**Sequence: Two-Phase**
**Input Sequence: A, B, C**
**Output Sequence: A, B, C**

**Phase Timing Results**

| Phase | A | B | C |
|---|---|---|---|
| Green Time (sec) | 29 | 61 | 42 |
| Yellow Time (sec) | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 |
| Phase Time (sec) | 35 | 67 | 48 |
| Phase Split | 23 % | 45 % | 32 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Smith St/Hospital Blvd - Option 3**

Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 140 seconds (User-Given Phase Times)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Smith St E | | | | | | | | | | | |
| 5 | T | 937 | 5.0 | 0.234 | 1.7 | LOS A | 1.5 | 11.1 | 0.08 | 0.07 | 56.9 |
| 6 | R | 714 | 5.0 | 0.774 | 61.6 | LOS E | 22.4 | 163.3 | 0.96 | 0.87 | 22.4 |
| Approach | | 1651 | 5.0 | 0.774 | 27.6 | LOS C | 22.4 | 163.3 | 0.46 | 0.42 | 34.1 |
| North: Hospital Blvd | | | | | | | | | | | |
| 7 | L | 807 | 5.0 | 1.000[3] | 15.6 | LOS B | 17.9 | 130.8 | 0.57 | 0.78 | 42.1 |
| 9 | R | 57 | 5.0 | 0.077 | 55.8 | LOS E | 1.4 | 10.5 | 0.77 | 0.71 | 23.8 |
| Approach | | 864 | 5.0 | 1.000 | 18.3 | LOS B | 17.9 | 130.8 | 0.58 | 0.77 | 40.1 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 89 | 5.0 | 0.081 | 8.6 | LOS A | 0.3 | 2.0 | 0.06 | 0.61 | 48.8 |
| 11 | T | 1802 | 5.0 | 0.781 | 34.1 | LOS C | 32.2 | 235.3 | 0.86 | 0.77 | 29.7 |
| Approach | | 1892 | 5.0 | 0.781 | 32.9 | LOS C | 32.2 | 235.3 | 0.82 | 0.76 | 30.3 |
| All Vehicles | | 4406 | 5.0 | 1.000 | 28.1 | LOS C | 32.2 | 235.3 | 0.64 | 0.63 | 33.3 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

3 x = 1.00 due to short lane. Refer to the Lane Summary report for information about excess flow and related conditions.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P3 | Across E approach | 50 | 64.1 | LOS F | 0.2 | 0.2 | 0.96 | 0.96 |
| P5 | Across N approach | 50 | 32.2 | LOS D | 0.1 | 0.1 | 0.68 | 0.68 |
| All Pedestrians | | 100 | 48.2 | LOS E | | | 0.82 | 0.82 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

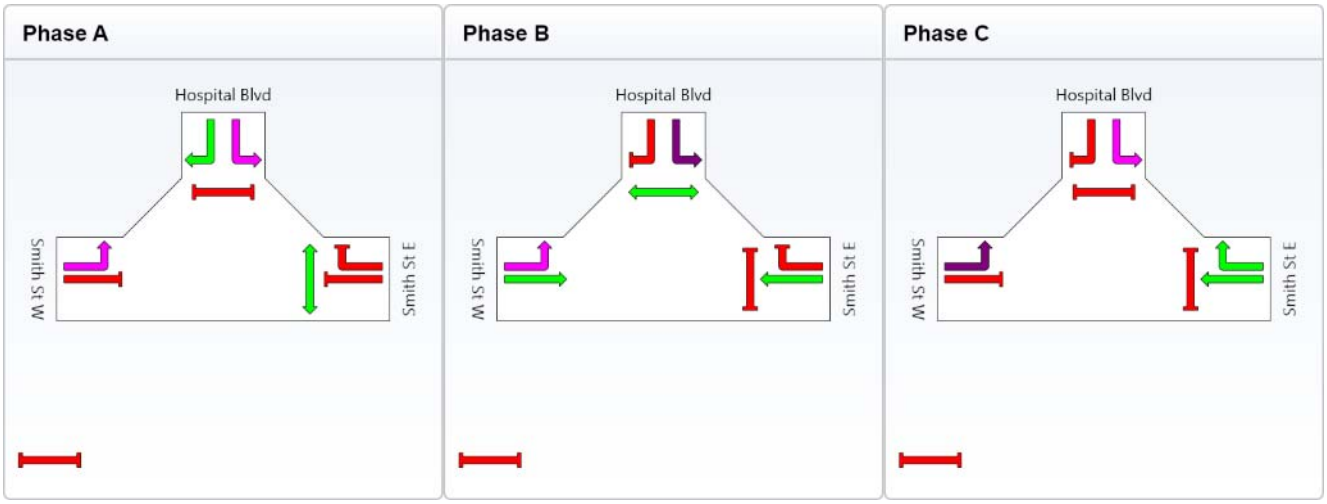


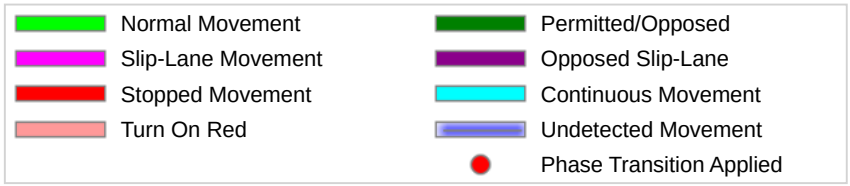
Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 140 seconds (User-Given Phase Times)

**Phase times specified by the user**
**Sequence: Two-Phase**
**Input Sequence: A, B, C**
**Output Sequence: A, B, C**

**Phase Timing Results**

| Phase | A | B | C |
|---|---|---|---|
| Green Time (sec) | 29 | 57 | 36 |
| Yellow Time (sec) | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 |
| Phase Time (sec) | 35 | 63 | 42 |
| Phase Split | 25 % | 45 % | 30 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Smith St/Hospital Blvd - Option 3 - Adjusted**

Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 150 seconds (User-Given Phase Times)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Smith St E | | | | | | | | | | | |
| 5 | T | 1291 | 5.0 | 0.313 | 1.6 | LOS A | 2.2 | 15.9 | 0.08 | 0.07 | 57.1 |
| 6 | R | 578 | 5.0 | 0.780 | 71.1 | LOS E | 20.2 | 147.3 | 0.98 | 0.87 | 20.4 |
| Approach | | 1868 | 5.0 | 0.780 | 23.1 | LOS C | 20.2 | 147.3 | 0.36 | 0.32 | 36.7 |
| North: Hospital Blvd | | | | | | | | | | | |
| 7 | L | 608 | 5.0 | 0.890 | 23.6 | LOS C | 17.9 | 130.6 | 0.44 | 0.77 | 36.7 |
| 9 | R | 361 | 5.0 | 0.521 | 66.8 | LOS E | 11.4 | 83.3 | 0.91 | 0.81 | 21.3 |
| Approach | | 969 | 5.0 | 0.890 | 39.7 | LOS D | 17.9 | 130.6 | 0.61 | 0.78 | 28.9 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 345 | 5.0 | 0.293 | 8.7 | LOS A | 1.4 | 10.2 | 0.07 | 0.62 | 48.7 |
| 11 | T | 2179 | 5.0 | 0.801 | 27.8 | LOS C | 38.7 | 282.2 | 0.80 | 0.73 | 32.6 |
| Approach | | 2524 | 5.0 | 0.801 | 25.2 | LOS C | 38.7 | 282.2 | 0.70 | 0.72 | 34.1 |
| All Vehicles | | 5362 | 5.0 | 0.890 | 27.1 | LOS C | 38.7 | 282.2 | 0.57 | 0.59 | 33.8 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P3 | Across E approach | 50 | 69.1 | LOS F | 0.2 | 0.2 | 0.96 | 0.96 |
| P5 | Across N approach | 50 | 27.0 | LOS C | 0.1 | 0.1 | 0.60 | 0.60 |
| All Pedestrians | | 100 | 48.1 | LOS E | | | 0.78 | 0.78 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

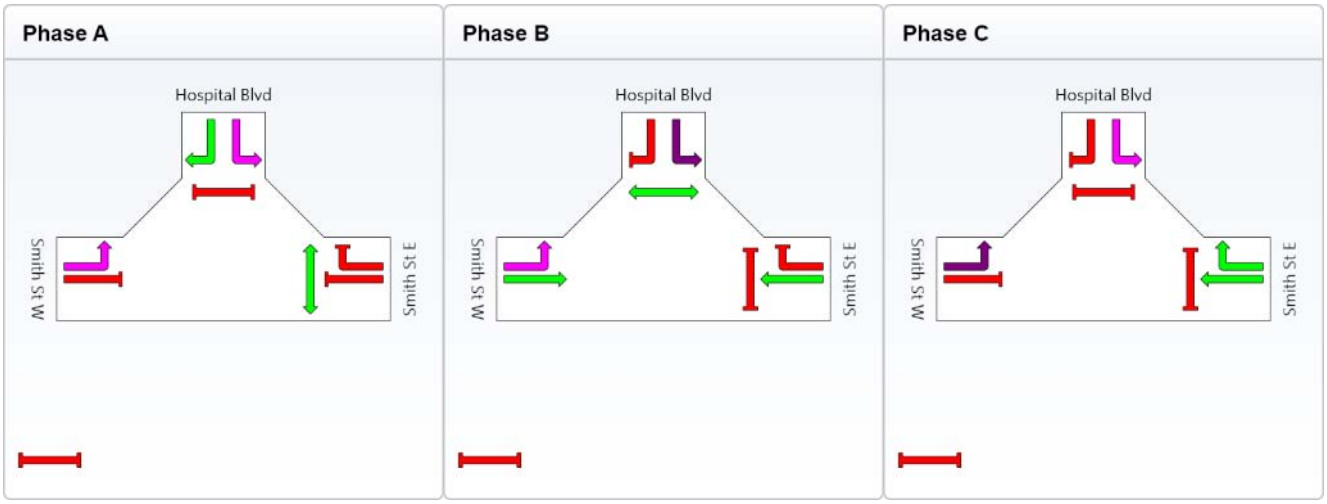


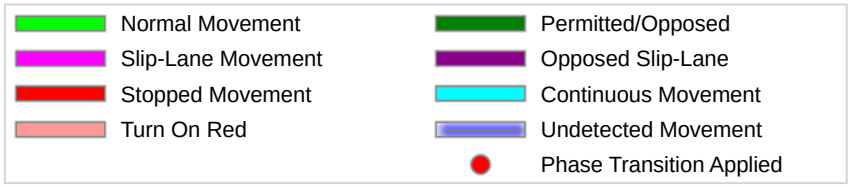
Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 150 seconds (User-Given Phase Times)

**Phase times specified by the user**
**Sequence: Two-Phase**
**Input Sequence: A, B, C**
**Output Sequence: A, B, C**

**Phase Timing Results**

| Phase | A | B | C |
|---|---|---|---|
| Green Time (sec) | 29 | 72 | 31 |
| Yellow Time (sec) | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 |
| Phase Time (sec) | 35 | 78 | 37 |
| Phase Split | 23 % | 52 % | 25 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Smith St/Hospital Blvd - Option 3 - Adjusted**

Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 140 seconds (User-Given Phase Times)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Smith St E | | | | | | | | | | | |
| 5 | T | 1151 | 5.0 | 0.287 | 1.8 | LOS A | 2.0 | 14.6 | 0.08 | 0.07 | 56.8 |
| 6 | R | 500 | 5.0 | 0.751 | 68.3 | LOS E | 16.3 | 119.1 | 0.98 | 0.86 | 21.0 |
| Approach | | 1651 | 5.0 | 0.751 | 21.9 | LOS C | 16.3 | 119.1 | 0.36 | 0.31 | 37.4 |
| North: Hospital Blvd | | | | | | | | | | | |
| 7 | L | 565 | 5.0 | 0.748 | 12.5 | LOS B | 9.2 | 67.1 | 0.29 | 0.69 | 44.9 |
| 9 | R | 276 | 5.0 | 0.371 | 59.5 | LOS E | 7.6 | 55.7 | 0.85 | 0.79 | 22.9 |
| Approach | | 841 | 5.0 | 0.748 | 27.9 | LOS C | 9.2 | 67.1 | 0.47 | 0.72 | 34.2 |
| West: Smith St W | | | | | | | | | | | |
| 10 | L | 263 | 5.0 | 0.211 | 8.5 | LOS A | 0.9 | 6.4 | 0.07 | 0.62 | 48.9 |
| 11 | T | 2044 | 5.0 | 0.754 | 25.2 | LOS C | 32.0 | 233.6 | 0.75 | 0.69 | 34.0 |
| Approach | | 2307 | 5.0 | 0.754 | 23.3 | LOS C | 32.0 | 233.6 | 0.68 | 0.68 | 35.2 |
| All Vehicles | | 4799 | 5.0 | 0.754 | 23.6 | LOS C | 32.0 | 233.6 | 0.53 | 0.56 | 35.7 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P3 | Across E approach | 50 | 64.1 | LOS F | 0.2 | 0.2 | 0.96 | 0.96 |
| P5 | Across N approach | 50 | 25.8 | LOS C | 0.1 | 0.1 | 0.61 | 0.61 |
| All Pedestrians | | 100 | 45.0 | LOS E | | | 0.78 | 0.78 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

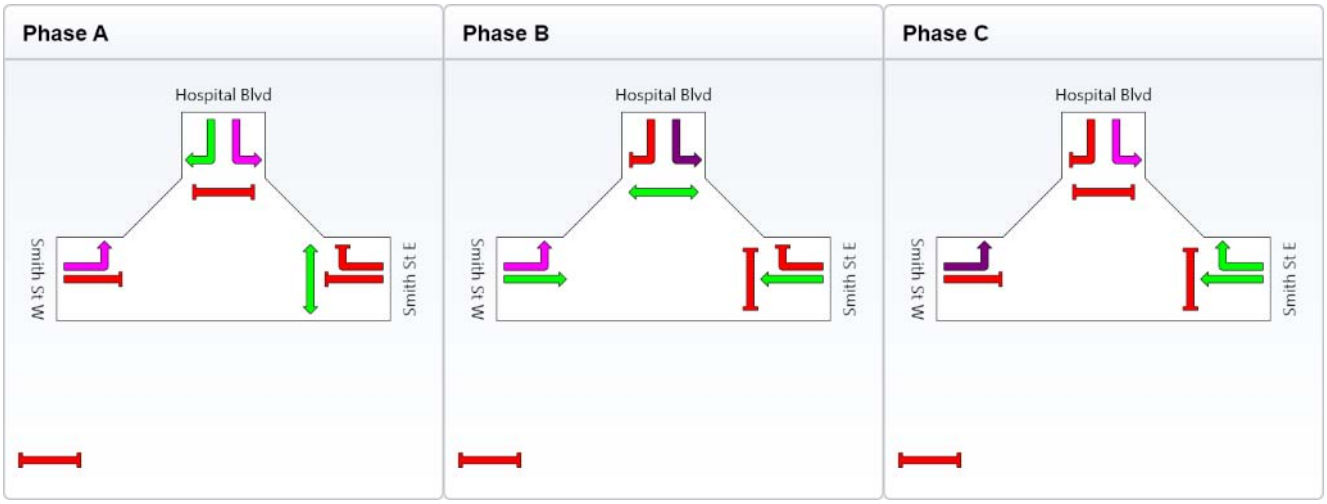


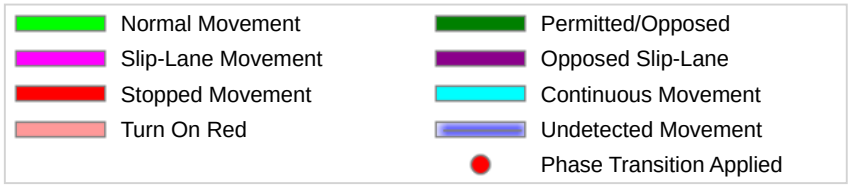
Smith Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 140 seconds (User-Given Phase Times)

**Phase times specified by the user**
**Sequence: Two-Phase**
**Input Sequence: A, B, C**
**Output Sequence: A, B, C**

**Phase Timing Results**

| Phase | A | B | C |
|---|---|---|---|
| Green Time (sec) | 29 | 67 | 26 |
| Yellow Time (sec) | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 |
| Phase Time (sec) | 35 | 73 | 32 |
| Phase Split | 25 % | 52 % | 23 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Hospital Blvd/First St - Option 3**

Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Boulevard S | | | | | | | | | | | |
| 1 | L | 420 | 5.0 | 0.534 | 15.4 | LOS B | 7.9 | 57.6 | 0.46 | 0.80 | 42.6 |
| 2 | T | 532 | 5.0 | 0.534 | 7.1 | LOS A | 7.9 | 57.6 | 0.46 | 0.41 | 47.9 |
| 3 | R | 38 | 5.0 | 0.534 | 15.5 | LOS B | 6.6 | 48.3 | 0.46 | 0.98 | 43.7 |
| Approach | | 989 | 5.0 | 0.534 | 10.9 | LOS B | 7.9 | 57.6 | 0.46 | 0.60 | 45.3 |
| East: First Street E | | | | | | | | | | | |
| 4 | L | 60 | 5.0 | 0.175 | 29.8 | LOS C | 2.2 | 15.8 | 0.80 | 0.77 | 33.2 |
| 5 | T | 11 | 5.0 | 0.175 | 21.4 | LOS C | 2.2 | 15.8 | 0.80 | 0.63 | 34.2 |
| 6 | R | 11 | 5.0 | 0.175 | 29.8 | LOS C | 2.2 | 15.8 | 0.80 | 0.77 | 33.2 |
| Approach | | 81 | 5.0 | 0.175 | 28.7 | LOS C | 2.2 | 15.8 | 0.80 | 0.75 | 33.4 |
| North: Hospital Boulevard N | | | | | | | | | | | |
| 7 | L | 11 | 5.0 | 0.455 | 15.0 | LOS B | 6.4 | 46.4 | 0.42 | 1.00 | 44.2 |
| 8 | T | 782 | 5.0 | 0.455 | 6.9 | LOS A | 6.4 | 46.4 | 0.43 | 0.37 | 48.6 |
| 9 | R | 34 | 5.0 | 0.455 | 15.8 | LOS B | 5.0 | 36.2 | 0.44 | 0.97 | 43.4 |
| Approach | | 826 | 5.0 | 0.455 | 7.4 | LOS A | 6.4 | 46.4 | 0.43 | 0.41 | 48.3 |
| West: First Street W | | | | | | | | | | | |
| 10 | L | 32 | 5.0 | 0.536 | 32.7 | LOS C | 6.2 | 45.4 | 0.90 | 0.82 | 31.7 |
| 11 | T | 11 | 5.0 | 0.536 | 24.4 | LOS C | 6.2 | 45.4 | 0.90 | 0.75 | 32.2 |
| 12 | R | 163 | 5.0 | 0.536 | 32.8 | LOS C | 6.2 | 45.4 | 0.90 | 0.82 | 31.7 |
| Approach | | 205 | 5.0 | 0.536 | 32.3 | LOS C | 6.2 | 45.4 | 0.90 | 0.82 | 31.7 |
| All Vehicles | | 2102 | 5.0 | 0.536 | 12.3 | LOS B | 7.9 | 57.6 | 0.50 | 0.55 | 43.9 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 28.4 | LOS C | 0.1 | 0.1 | 0.90 | 0.90 |
| P3 | Across E approach | 53 | 9.3 | LOS A | 0.1 | 0.1 | 0.51 | 0.51 |
| P5 | Across N approach | 53 | 28.4 | LOS C | 0.1 | 0.1 | 0.90 | 0.90 |
| P7 | Across W approach | 53 | 9.3 | LOS A | 0.1 | 0.1 | 0.51 | 0.51 |
| All Pedestrians | | 212 | 18.8 | LOS B | | | 0.71 | 0.71 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

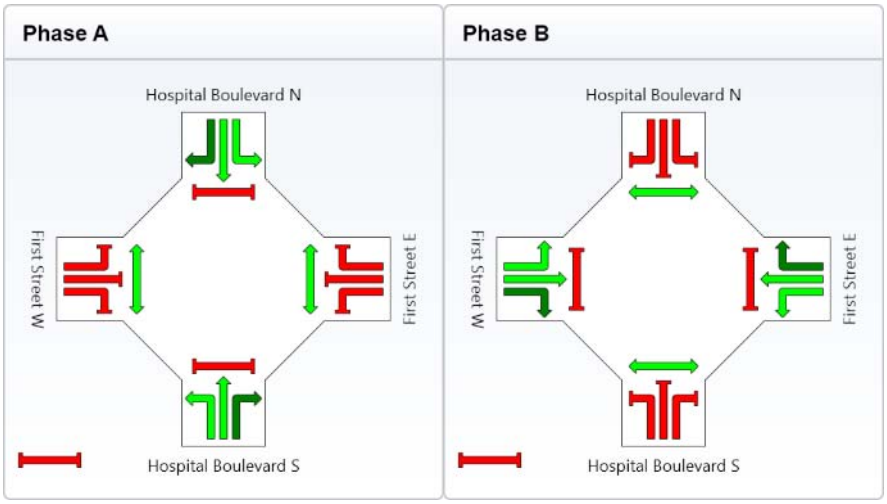


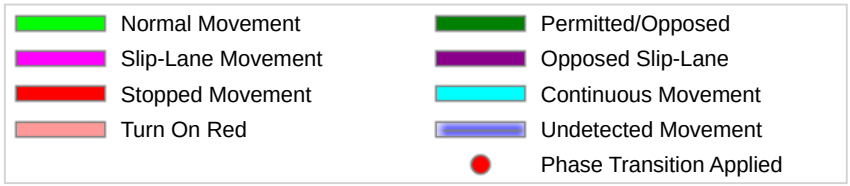
Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Opposed Turns**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 39 | 19 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 45 | 25 |
| Phase Split | 64 % | 36 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Hospital Blvd/First St - Option 3**

Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Boulevard S | | | | | | | | | | | |
| 1 | L | 327 | 5.0 | 0.473 | 16.6 | LOS B | 6.2 | 45.2 | 0.52 | 0.81 | 41.7 |
| 2 | T | 442 | 5.0 | 0.473 | 8.8 | LOS A | 6.2 | 45.2 | 0.54 | 0.47 | 45.7 |
| 3 | R | 34 | 5.0 | 0.473 | 17.4 | LOS B | 5.7 | 41.6 | 0.55 | 0.95 | 42.4 |
| Approach | | 803 | 5.0 | 0.473 | 12.3 | LOS B | 6.2 | 45.2 | 0.53 | 0.63 | 43.9 |
| East: First Street E | | | | | | | | | | | |
| 4 | L | 79 | 5.0 | 0.192 | 25.6 | LOS C | 2.2 | 16.3 | 0.78 | 0.77 | 35.5 |
| 5 | T | 11 | 5.0 | 0.192 | 17.2 | LOS B | 2.2 | 16.3 | 0.78 | 0.62 | 36.7 |
| 6 | R | 11 | 5.0 | 0.192 | 25.6 | LOS C | 2.2 | 16.3 | 0.78 | 0.77 | 35.5 |
| Approach | | 100 | 5.0 | 0.192 | 24.7 | LOS C | 2.2 | 16.3 | 0.78 | 0.75 | 35.6 |
| North: Hospital Boulevard N | | | | | | | | | | | |
| 7 | L | 11 | 5.0 | 0.478 | 16.6 | LOS B | 6.5 | 47.6 | 0.52 | 0.97 | 43.1 |
| 8 | T | 633 | 5.0 | 0.478 | 8.8 | LOS A | 6.5 | 47.6 | 0.54 | 0.47 | 46.1 |
| 9 | R | 72 | 5.0 | 0.478 | 18.4 | LOS B | 4.3 | 31.4 | 0.57 | 0.89 | 41.3 |
| Approach | | 715 | 5.0 | 0.478 | 9.8 | LOS A | 6.5 | 47.6 | 0.54 | 0.52 | 45.6 |
| West: First Street W | | | | | | | | | | | |
| 10 | L | 12 | 5.0 | 0.467 | 27.6 | LOS C | 4.8 | 34.9 | 0.86 | 0.81 | 34.2 |
| 11 | T | 11 | 5.0 | 0.467 | 19.2 | LOS B | 4.8 | 34.9 | 0.86 | 0.72 | 35.0 |
| 12 | R | 169 | 5.0 | 0.467 | 27.6 | LOS C | 4.8 | 34.9 | 0.86 | 0.81 | 34.2 |
| Approach | | 192 | 5.0 | 0.467 | 27.2 | LOS C | 4.8 | 34.9 | 0.86 | 0.81 | 34.3 |
| All Vehicles | | 1809 | 5.0 | 0.478 | 13.6 | LOS B | 6.5 | 47.6 | 0.58 | 0.61 | 42.7 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 24.3 | LOS C | 0.1 | 0.1 | 0.90 | 0.90 |
| P3 | Across E approach | 53 | 10.2 | LOS B | 0.1 | 0.1 | 0.58 | 0.58 |
| P5 | Across N approach | 53 | 24.3 | LOS C | 0.1 | 0.1 | 0.90 | 0.90 |
| P7 | Across W approach | 53 | 10.2 | LOS B | 0.1 | 0.1 | 0.58 | 0.58 |
| All Pedestrians | | 212 | 17.3 | LOS B | | | 0.74 | 0.74 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

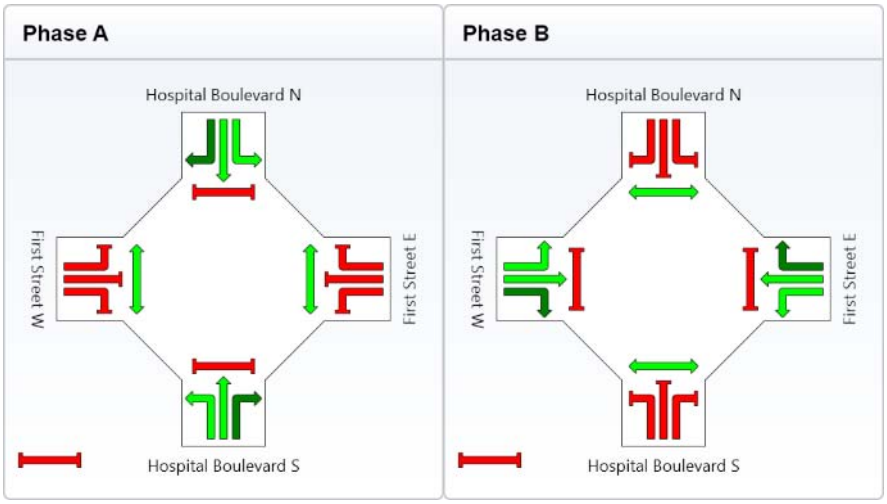


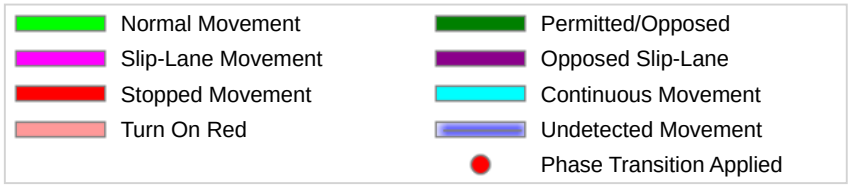
Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Opposed Turns**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 30 | 18 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 36 | 24 |
| Phase Split | 60 % | 40 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Hospital Blvd/First St - Option 3 - Adjusted**

Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Boulevard S | | | | | | | | | | | |
| 1 | L | 384 | 5.0 | 0.507 | 15.9 | LOS B | 7.5 | 54.5 | 0.47 | 0.80 | 42.2 |
| 2 | T | 502 | 5.0 | 0.507 | 8.2 | LOS A | 7.5 | 54.5 | 0.49 | 0.43 | 46.6 |
| 3 | R | 35 | 5.0 | 0.507 | 16.7 | LOS B | 6.7 | 48.8 | 0.49 | 0.97 | 42.8 |
| Approach | | 921 | 5.0 | 0.507 | 11.7 | LOS B | 7.5 | 54.5 | 0.48 | 0.60 | 44.5 |
| East: First Street E | | | | | | | | | | | |
| 4 | L | 58 | 5.0 | 0.162 | 28.9 | LOS C | 2.1 | 15.0 | 0.78 | 0.77 | 33.7 |
| 5 | T | 11 | 5.0 | 0.162 | 20.5 | LOS C | 2.1 | 15.0 | 0.78 | 0.61 | 34.8 |
| 6 | R | 11 | 5.0 | 0.162 | 28.9 | LOS C | 2.1 | 15.0 | 0.78 | 0.77 | 33.7 |
| Approach | | 79 | 5.0 | 0.162 | 27.8 | LOS C | 2.1 | 15.0 | 0.78 | 0.75 | 33.8 |
| North: Hospital Boulevard N | | | | | | | | | | | |
| 7 | L | 11 | 5.0 | 0.452 | 15.6 | LOS B | 6.5 | 47.5 | 0.44 | 1.00 | 43.7 |
| 8 | T | 767 | 5.0 | 0.452 | 7.6 | LOS A | 6.5 | 47.5 | 0.45 | 0.39 | 47.8 |
| 9 | R | 34 | 5.0 | 0.452 | 16.4 | LOS B | 5.2 | 38.1 | 0.46 | 0.96 | 42.9 |
| Approach | | 812 | 5.0 | 0.452 | 8.0 | LOS A | 6.5 | 47.5 | 0.45 | 0.43 | 47.5 |
| West: First Street W | | | | | | | | | | | |
| 10 | L | 32 | 5.0 | 0.493 | 31.6 | LOS C | 5.9 | 43.0 | 0.88 | 0.82 | 32.2 |
| 11 | T | 11 | 5.0 | 0.493 | 23.2 | LOS C | 5.9 | 43.0 | 0.88 | 0.73 | 32.9 |
| 12 | R | 158 | 5.0 | 0.493 | 31.6 | LOS C | 5.9 | 43.0 | 0.88 | 0.82 | 32.2 |
| Approach | | 200 | 5.0 | 0.493 | 31.2 | LOS C | 5.9 | 43.0 | 0.88 | 0.81 | 32.3 |
| All Vehicles | | 2012 | 5.0 | 0.507 | 12.8 | LOS B | 7.5 | 54.5 | 0.52 | 0.56 | 43.5 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 27.5 | LOS C | 0.1 | 0.1 | 0.89 | 0.89 |
| P3 | Across E approach | 53 | 9.8 | LOS A | 0.1 | 0.1 | 0.53 | 0.53 |
| P5 | Across N approach | 53 | 27.5 | LOS C | 0.1 | 0.1 | 0.89 | 0.89 |
| P7 | Across W approach | 53 | 9.8 | LOS A | 0.1 | 0.1 | 0.53 | 0.53 |
| All Pedestrians | | 212 | 18.6 | LOS B | | | 0.71 | 0.71 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

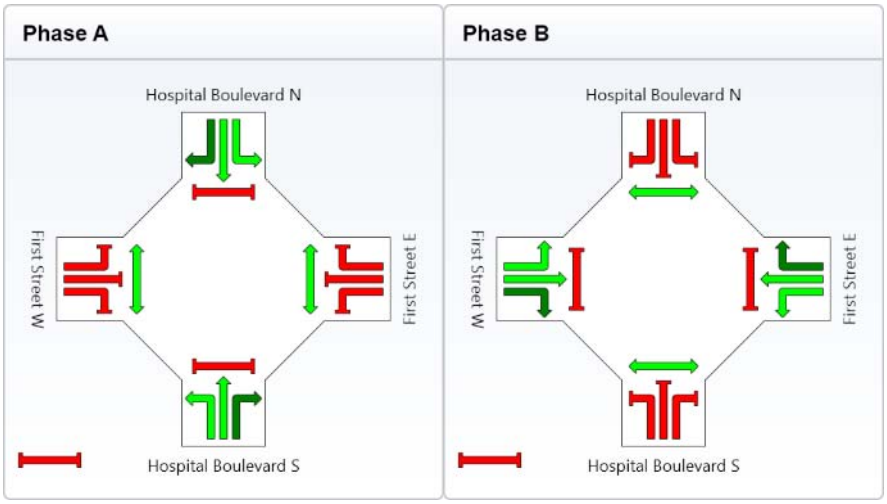


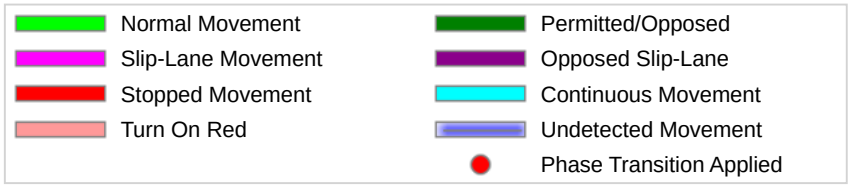
Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Opposed Turns**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 38 | 20 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 44 | 26 |
| Phase Split | 63 % | 37 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Hospital Blvd/First St - Option 3 - Adjusted**

Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Boulevard S | | | | | | | | | | | |
| 1 | L | 307 | 5.0 | 0.448 | 16.4 | LOS B | 5.7 | 41.8 | 0.51 | 0.80 | 41.8 |
| 2 | T | 424 | 5.0 | 0.448 | 8.7 | LOS A | 5.7 | 41.8 | 0.53 | 0.46 | 45.9 |
| 3 | R | 32 | 5.0 | 0.448 | 17.3 | LOS B | 5.3 | 38.7 | 0.53 | 0.95 | 42.5 |
| Approach | | 763 | 5.0 | 0.448 | 12.2 | LOS B | 5.7 | 41.8 | 0.52 | 0.62 | 44.1 |
| East: First Street E | | | | | | | | | | | |
| 4 | L | 77 | 5.0 | 0.189 | 25.5 | LOS C | 2.2 | 15.9 | 0.78 | 0.77 | 35.5 |
| 5 | T | 11 | 5.0 | 0.189 | 17.2 | LOS B | 2.2 | 15.9 | 0.78 | 0.62 | 36.7 |
| 6 | R | 11 | 5.0 | 0.189 | 25.6 | LOS C | 2.2 | 15.9 | 0.78 | 0.77 | 35.5 |
| Approach | | 98 | 5.0 | 0.189 | 24.6 | LOS C | 2.2 | 15.9 | 0.78 | 0.75 | 35.6 |
| North: Hospital Boulevard N | | | | | | | | | | | |
| 7 | L | 11 | 5.0 | 0.462 | 16.5 | LOS B | 6.2 | 45.3 | 0.51 | 0.98 | 43.2 |
| 8 | T | 616 | 5.0 | 0.462 | 8.7 | LOS A | 6.2 | 45.3 | 0.53 | 0.46 | 46.2 |
| 9 | R | 72 | 5.0 | 0.462 | 18.3 | LOS B | 4.2 | 30.7 | 0.56 | 0.89 | 41.4 |
| Approach | | 698 | 5.0 | 0.462 | 9.8 | LOS A | 6.2 | 45.3 | 0.53 | 0.51 | 45.6 |
| West: First Street W | | | | | | | | | | | |
| 10 | L | 12 | 5.0 | 0.452 | 27.5 | LOS C | 4.6 | 33.7 | 0.86 | 0.81 | 34.3 |
| 11 | T | 11 | 5.0 | 0.452 | 19.1 | LOS B | 4.6 | 33.7 | 0.86 | 0.71 | 35.1 |
| 12 | R | 164 | 5.0 | 0.452 | 27.5 | LOS C | 4.6 | 33.7 | 0.86 | 0.81 | 34.3 |
| Approach | | 186 | 5.0 | 0.452 | 27.1 | LOS C | 4.6 | 33.7 | 0.86 | 0.80 | 34.3 |
| All Vehicles | | 1745 | 5.0 | 0.462 | 13.5 | LOS B | 6.2 | 45.3 | 0.58 | 0.60 | 42.8 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 24.3 | LOS C | 0.1 | 0.1 | 0.90 | 0.90 |
| P3 | Across E approach | 53 | 10.2 | LOS B | 0.1 | 0.1 | 0.58 | 0.58 |
| P5 | Across N approach | 53 | 24.3 | LOS C | 0.1 | 0.1 | 0.90 | 0.90 |
| P7 | Across W approach | 53 | 10.2 | LOS B | 0.1 | 0.1 | 0.58 | 0.58 |
| All Pedestrians | | 212 | 17.3 | LOS B | | | 0.74 | 0.74 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

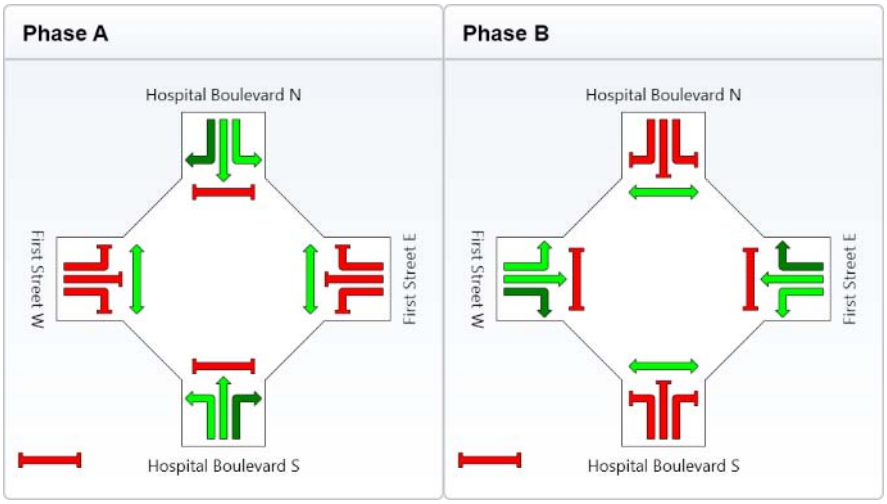


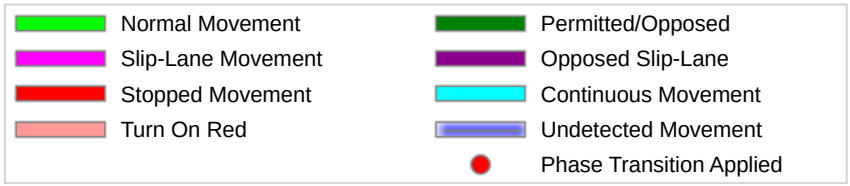
Hospital Boulevard / First Street Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Opposed Turns**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 30 | 18 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 36 | 24 |
| Phase Split | 60 % | 40 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Main St/Hospital Blvd - Option 3**

Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 73 | 5.0 | 0.081 | 14.8 | LOS B | 0.7 | 5.5 | 0.37 | 0.71 | 42.8 |
| 2 | T | 500 | 5.0 | 0.554 | 8.7 | LOS A | 8.0 | 58.4 | 0.57 | 0.50 | 46.3 |
| 3 | R | 11 | 5.0 | 0.554 | 17.1 | LOS B | 8.0 | 58.4 | 0.57 | 0.98 | 42.9 |
| Approach | | 583 | 5.0 | 0.554 | 9.6 | LOS A | 8.0 | 58.4 | 0.54 | 0.53 | 45.8 |
| East: Main St E | | | | | | | | | | | |
| 4 | L | 11 | 5.0 | 0.099 | 25.0 | LOS C | 1.1 | 8.1 | 0.75 | 0.76 | 36.2 |
| 5 | T | 17 | 5.0 | 0.099 | 16.6 | LOS B | 1.1 | 8.1 | 0.75 | 0.57 | 37.6 |
| 6 | R | 24 | 5.0 | 0.099 | 25.0 | LOS C | 1.1 | 8.1 | 0.75 | 0.76 | 36.2 |
| Approach | | 52 | 5.0 | 0.099 | 22.3 | LOS C | 1.1 | 8.1 | 0.75 | 0.70 | 36.7 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 7 | L | 11 | 5.0 | 0.430 | 17.6 | LOS B | 3.9 | 28.5 | 0.61 | 0.92 | 42.5 |
| 8 | T | 546 | 5.0 | 0.430 | 10.3 | LOS B | 6.9 | 50.3 | 0.66 | 0.56 | 44.3 |
| 9 | R | 32 | 5.0 | 0.430 | 19.5 | LOS B | 6.9 | 50.3 | 0.70 | 0.92 | 41.2 |
| Approach | | 588 | 5.0 | 0.430 | 10.9 | LOS B | 6.9 | 50.3 | 0.66 | 0.59 | 44.1 |
| West: Main St W | | | | | | | | | | | |
| 10 | L | 62 | 5.0 | 0.151 | 25.0 | LOS C | 1.3 | 9.8 | 0.76 | 0.74 | 35.6 |
| 11 | T | 11 | 5.0 | 0.510 | 19.3 | LOS B | 7.0 | 51.0 | 0.88 | 0.74 | 34.9 |
| 12 | R | 269 | 5.0 | 0.510 | 27.7 | LOS C | 7.0 | 51.0 | 0.88 | 0.82 | 34.2 |
| Approach | | 342 | 5.0 | 0.510 | 26.9 | LOS C | 7.0 | 51.0 | 0.85 | 0.80 | 34.5 |
| All Vehicles | | 1565 | 5.0 | 0.554 | 14.3 | LOS B | 8.0 | 58.4 | 0.66 | 0.62 | 41.8 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 24.3 | LOS C | 0.1 | 0.1 | 0.90 | 0.90 |
| P3 | Across E approach | 53 | 10.2 | LOS B | 0.1 | 0.1 | 0.58 | 0.58 |
| P5 | Across N approach | 53 | 21.7 | LOS C | 0.1 | 0.1 | 0.85 | 0.85 |
| P7 | Across W approach | 53 | 11.4 | LOS B | 0.1 | 0.1 | 0.62 | 0.62 |
| All Pedestrians | | 212 | 16.9 | LOS B | | | 0.74 | 0.74 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

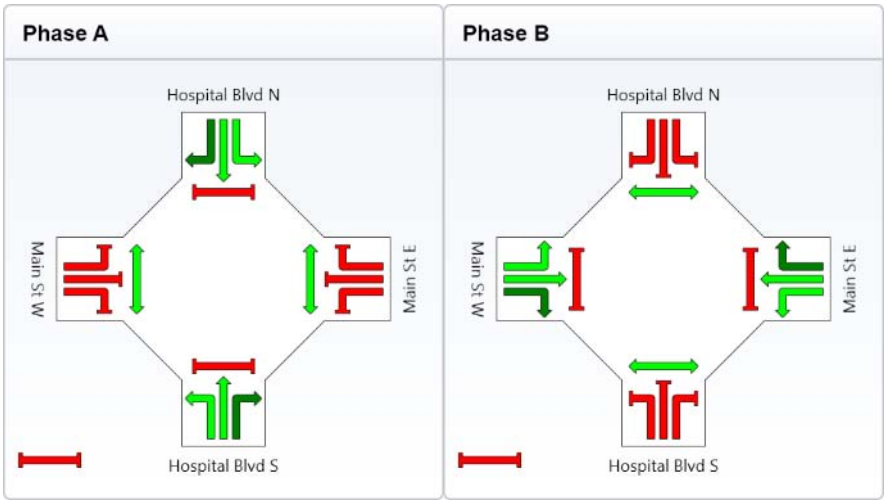


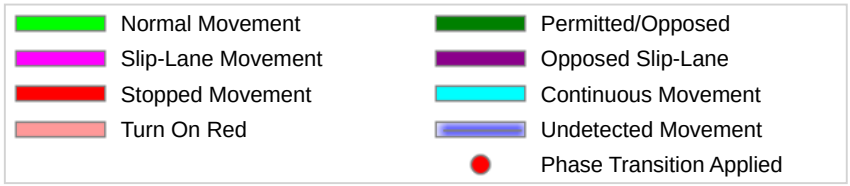
Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Two-Phase**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 30 | 18 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 36 | 24 |
| Phase Split | 60 % | 40 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Main St/Hospital Blvd - Option 3**

Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 114 | 5.0 | 0.141 | 17.1 | LOS B | 1.5 | 10.7 | 0.46 | 0.73 | 40.9 |
| 2 | T | 344 | 5.0 | 0.430 | 10.3 | LOS B | 5.7 | 41.5 | 0.57 | 0.49 | 44.7 |
| 3 | R | 11 | 5.0 | 0.430 | 18.7 | LOS B | 5.7 | 41.5 | 0.57 | 0.96 | 41.6 |
| Approach | | 468 | 5.0 | 0.430 | 12.1 | LOS B | 5.7 | 41.5 | 0.55 | 0.56 | 43.7 |
| East: Main St E | | | | | | | | | | | |
| 4 | L | 11 | 5.0 | 0.088 | 22.6 | LOS C | 1.1 | 8.1 | 0.70 | 0.76 | 37.7 |
| 5 | T | 18 | 5.0 | 0.088 | 14.2 | LOS B | 1.1 | 8.1 | 0.70 | 0.54 | 39.5 |
| 6 | R | 27 | 5.0 | 0.088 | 22.6 | LOS C | 1.1 | 8.1 | 0.70 | 0.77 | 37.7 |
| Approach | | 56 | 5.0 | 0.088 | 19.9 | LOS B | 1.1 | 8.1 | 0.70 | 0.69 | 38.2 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 7 | L | 51 | 5.0 | 0.407 | 19.4 | LOS B | 3.7 | 27.3 | 0.65 | 0.86 | 40.7 |
| 8 | T | 423 | 5.0 | 0.407 | 12.2 | LOS B | 6.3 | 45.8 | 0.70 | 0.59 | 42.3 |
| 9 | R | 37 | 5.0 | 0.407 | 21.2 | LOS C | 6.3 | 45.8 | 0.73 | 0.90 | 39.9 |
| Approach | | 511 | 5.0 | 0.407 | 13.5 | LOS B | 6.3 | 45.8 | 0.70 | 0.64 | 41.9 |
| West: Main St W | | | | | | | | | | | |
| 10 | L | 18 | 5.0 | 0.040 | 22.2 | LOS C | 0.3 | 2.5 | 0.68 | 0.70 | 37.4 |
| 11 | T | 11 | 5.0 | 0.431 | 16.4 | LOS B | 6.3 | 46.0 | 0.81 | 0.68 | 36.9 |
| 12 | R | 264 | 5.0 | 0.431 | 24.8 | LOS C | 6.3 | 46.0 | 0.81 | 0.81 | 35.8 |
| Approach | | 293 | 5.0 | 0.431 | 24.4 | LOS C | 6.3 | 46.0 | 0.80 | 0.80 | 35.9 |
| All Vehicles | | 1327 | 5.0 | 0.431 | 15.7 | LOS B | 6.3 | 46.0 | 0.67 | 0.65 | 40.8 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 21.7 | LOS C | 0.1 | 0.1 | 0.85 | 0.85 |
| P3 | Across E approach | 53 | 12.0 | LOS B | 0.1 | 0.1 | 0.63 | 0.63 |
| P5 | Across N approach | 53 | 19.2 | LOS B | 0.1 | 0.1 | 0.80 | 0.80 |
| P7 | Across W approach | 53 | 13.3 | LOS B | 0.1 | 0.1 | 0.67 | 0.67 |
| All Pedestrians | | 212 | 16.6 | LOS B | | | 0.74 | 0.74 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

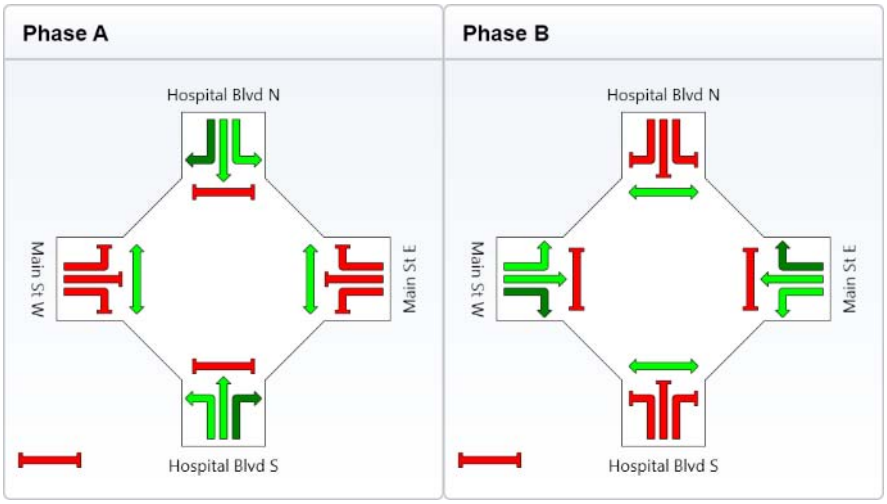


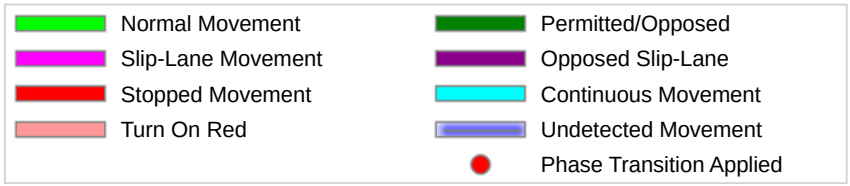
Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Two-Phase**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 27 | 21 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 33 | 27 |
| Phase Split | 55 % | 45 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Main St/Hospital Blvd - Option 3 - Adjusted**

Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 66 | 5.0 | 0.074 | 14.8 | LOS B | 0.7 | 5.0 | 0.37 | 0.71 | 42.8 |
| 2 | T | 477 | 5.0 | 0.529 | 8.5 | LOS A | 7.4 | 54.3 | 0.55 | 0.48 | 46.5 |
| 3 | R | 11 | 5.0 | 0.529 | 16.9 | LOS B | 7.4 | 54.3 | 0.55 | 0.98 | 43.0 |
| Approach | | 554 | 5.0 | 0.529 | 9.4 | LOS A | 7.4 | 54.3 | 0.53 | 0.52 | 46.0 |
| East: Main St E | | | | | | | | | | | |
| 4 | L | 11 | 5.0 | 0.099 | 25.0 | LOS C | 1.1 | 8.1 | 0.75 | 0.76 | 36.2 |
| 5 | T | 17 | 5.0 | 0.099 | 16.6 | LOS B | 1.1 | 8.1 | 0.75 | 0.57 | 37.6 |
| 6 | R | 24 | 5.0 | 0.099 | 25.0 | LOS C | 1.1 | 8.1 | 0.75 | 0.76 | 36.2 |
| Approach | | 52 | 5.0 | 0.099 | 22.3 | LOS C | 1.1 | 8.1 | 0.75 | 0.70 | 36.7 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 7 | L | 11 | 5.0 | 0.418 | 17.6 | LOS B | 3.8 | 27.6 | 0.60 | 0.92 | 42.5 |
| 8 | T | 534 | 5.0 | 0.418 | 10.3 | LOS B | 6.7 | 49.0 | 0.65 | 0.56 | 44.4 |
| 9 | R | 32 | 5.0 | 0.418 | 19.4 | LOS B | 6.7 | 49.0 | 0.69 | 0.92 | 41.3 |
| Approach | | 576 | 5.0 | 0.418 | 10.9 | LOS B | 6.7 | 49.0 | 0.66 | 0.58 | 44.2 |
| West: Main St W | | | | | | | | | | | |
| 10 | L | 62 | 5.0 | 0.151 | 25.0 | LOS C | 1.3 | 9.8 | 0.76 | 0.74 | 35.6 |
| 11 | T | 11 | 5.0 | 0.497 | 19.2 | LOS B | 6.8 | 49.4 | 0.87 | 0.73 | 35.0 |
| 12 | R | 262 | 5.0 | 0.497 | 27.6 | LOS C | 6.8 | 49.4 | 0.87 | 0.82 | 34.3 |
| Approach | | 335 | 5.0 | 0.497 | 26.8 | LOS C | 6.8 | 49.4 | 0.85 | 0.80 | 34.5 |
| All Vehicles | | 1516 | 5.0 | 0.529 | 14.3 | LOS B | 7.4 | 54.3 | 0.66 | 0.61 | 41.9 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 24.3 | LOS C | 0.1 | 0.1 | 0.90 | 0.90 |
| P3 | Across E approach | 53 | 10.2 | LOS B | 0.1 | 0.1 | 0.58 | 0.58 |
| P5 | Across N approach | 53 | 21.7 | LOS C | 0.1 | 0.1 | 0.85 | 0.85 |
| P7 | Across W approach | 53 | 11.4 | LOS B | 0.1 | 0.1 | 0.62 | 0.62 |
| All Pedestrians | | 212 | 16.9 | LOS B | | | 0.74 | 0.74 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

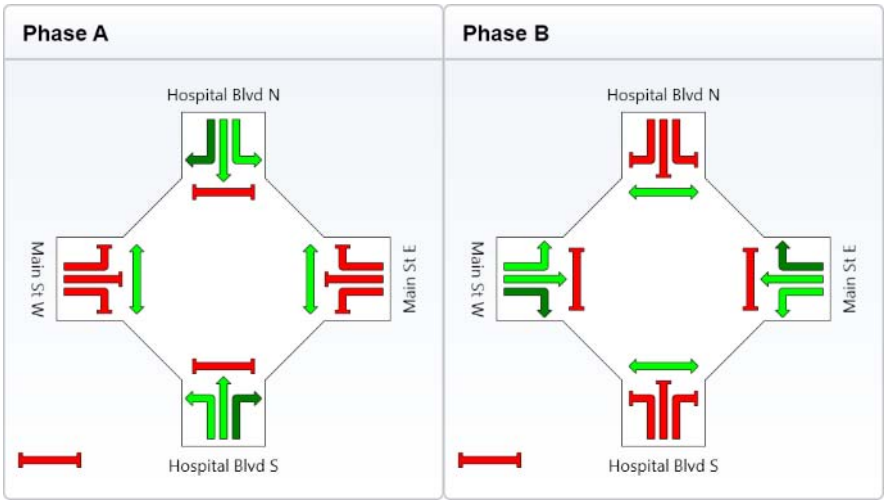


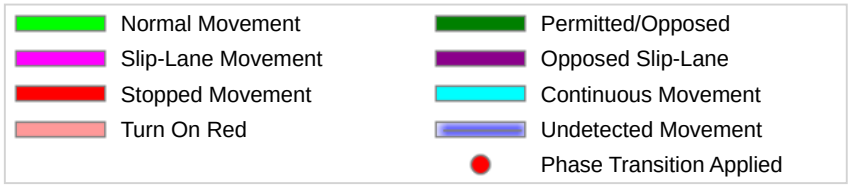
Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Two-Phase**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 30 | 18 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 36 | 24 |
| Phase Split | 60 % | 40 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Main St/Hospital Blvd - Option 3 - Adjusted**

Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 106 | 5.0 | 0.132 | 17.1 | LOS B | 1.4 | 9.9 | 0.46 | 0.73 | 40.9 |
| 2 | T | 334 | 5.0 | 0.417 | 10.2 | LOS B | 5.5 | 39.8 | 0.57 | 0.49 | 44.8 |
| 3 | R | 11 | 5.0 | 0.417 | 18.6 | LOS B | 5.5 | 39.8 | 0.57 | 0.96 | 41.6 |
| Approach | | 451 | 5.0 | 0.417 | 12.0 | LOS B | 5.5 | 39.8 | 0.54 | 0.56 | 43.8 |
| East: Main St E | | | | | | | | | | | |
| 4 | L | 11 | 5.0 | 0.088 | 22.6 | LOS C | 1.1 | 8.1 | 0.70 | 0.76 | 37.7 |
| 5 | T | 18 | 5.0 | 0.088 | 14.2 | LOS B | 1.1 | 8.1 | 0.70 | 0.54 | 39.5 |
| 6 | R | 27 | 5.0 | 0.088 | 22.6 | LOS C | 1.1 | 8.1 | 0.70 | 0.77 | 37.7 |
| Approach | | 56 | 5.0 | 0.088 | 19.9 | LOS B | 1.1 | 8.1 | 0.70 | 0.69 | 38.2 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 7 | L | 51 | 5.0 | 0.395 | 19.4 | LOS B | 3.6 | 26.3 | 0.65 | 0.86 | 40.7 |
| 8 | T | 408 | 5.0 | 0.395 | 12.1 | LOS B | 6.1 | 44.2 | 0.70 | 0.59 | 42.3 |
| 9 | R | 37 | 5.0 | 0.395 | 21.1 | LOS C | 6.1 | 44.2 | 0.73 | 0.90 | 40.0 |
| Approach | | 496 | 5.0 | 0.395 | 13.5 | LOS B | 6.1 | 44.2 | 0.70 | 0.64 | 42.0 |
| West: Main St W | | | | | | | | | | | |
| 10 | L | 18 | 5.0 | 0.040 | 22.2 | LOS C | 0.3 | 2.5 | 0.68 | 0.70 | 37.4 |
| 11 | T | 11 | 5.0 | 0.418 | 16.3 | LOS B | 6.1 | 44.3 | 0.81 | 0.68 | 37.0 |
| 12 | R | 256 | 5.0 | 0.418 | 24.7 | LOS C | 6.1 | 44.3 | 0.81 | 0.81 | 35.8 |
| Approach | | 284 | 5.0 | 0.418 | 24.3 | LOS C | 6.1 | 44.3 | 0.80 | 0.80 | 36.0 |
| All Vehicles | | 1286 | 5.0 | 0.418 | 15.7 | LOS B | 6.1 | 44.3 | 0.67 | 0.65 | 40.9 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 21.7 | LOS C | 0.1 | 0.1 | 0.85 | 0.85 |
| P3 | Across E approach | 53 | 12.0 | LOS B | 0.1 | 0.1 | 0.63 | 0.63 |
| P5 | Across N approach | 53 | 19.2 | LOS B | 0.1 | 0.1 | 0.80 | 0.80 |
| P7 | Across W approach | 53 | 13.3 | LOS B | 0.1 | 0.1 | 0.67 | 0.67 |
| All Pedestrians | | 212 | 16.6 | LOS B | | | 0.74 | 0.74 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

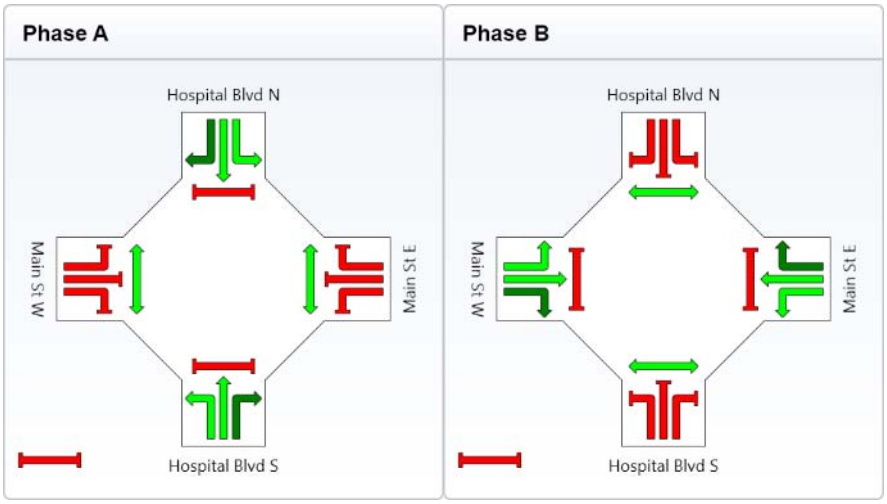


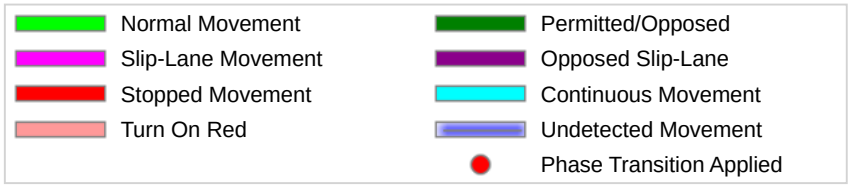
Main Street / Hospital Boulevard Intersection
Signals - Fixed Time  Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

**Phase times determined by the program**
**Sequence: Two-Phase**
**Input Sequence: A, B**
**Output Sequence: A, B**

**Phase Timing Results**

| Phase | A | B |
|---|---|---|
| Green Time (sec) | 27 | 21 |
| Yellow Time (sec) | 4 | 4 |
| All-Red Time (sec) | 2 | 2 |
| Phase Time (sec) | 33 | 27 |
| Phase Split | 55 % | 45 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Hospital Blvd/ Second St Option 3**

Hospital Boulevard / Second Street Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 254 | 5.0 | 0.141 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 333 | 5.0 | 0.176 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 586 | 5.0 | 0.176 | 3.6 | NA | 0.0 | 0.0 | 0.00 | 0.29 | 54.7 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 562 | 5.0 | 0.298 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 386 | 5.0 | 0.379 | 11.9 | LOS B | 2.3 | 16.9 | 0.63 | 0.90 | 45.3 |
| Approach | | 948 | 5.0 | 0.379 | 4.8 | NA | 2.3 | 16.9 | 0.26 | 0.37 | 53.0 |
| West: Second St | | | | | | | | | | | |
| 10 | L | 138 | 5.0 | 0.192 | 11.4 | LOS B | 0.7 | 5.3 | 0.51 | 0.80 | 45.8 |
| 12 | R | 55 | 5.0 | 0.280 | 28.7 | LOS D | 0.9 | 6.9 | 0.88 | 0.99 | 33.6 |
| Approach | | 193 | 5.0 | 0.280 | 16.3 | LOS C | 0.9 | 6.9 | 0.61 | 0.85 | 41.5 |
| All Vehicles | | 1727 | 5.0 | 0.379 | 5.7 | NA | 2.3 | 16.9 | 0.21 | 0.39 | 52.0 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026PM - Hospital Blvd/ Second St Option 3**

Hospital Boulevard / Second Street Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 155 | 5.0 | 0.086 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 234 | 5.0 | 0.124 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 388 | 5.0 | 0.124 | 3.3 | NA | 0.0 | 0.0 | 0.00 | 0.27 | 55.1 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 441 | 5.0 | 0.234 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 267 | 5.0 | 0.213 | 10.0 | LOS A | 1.0 | 7.6 | 0.48 | 0.71 | 46.9 |
| Approach | | 708 | 5.0 | 0.234 | 3.8 | NA | 1.0 | 7.6 | 0.18 | 0.27 | 54.3 |
| West: Second St | | | | | | | | | | | |
| 10 | L | 145 | 5.0 | 0.169 | 10.2 | LOS B | 0.7 | 4.8 | 0.42 | 0.72 | 47.0 |
| 12 | R | 119 | 5.0 | 0.336 | 19.6 | LOS C | 1.3 | 9.8 | 0.78 | 0.98 | 39.1 |
| Approach | | 264 | 5.0 | 0.336 | 14.4 | LOS B | 1.3 | 9.8 | 0.58 | 0.84 | 43.1 |
| All Vehicles | | 1361 | 5.0 | 0.336 | 5.7 | NA | 1.3 | 9.8 | 0.21 | 0.38 | 51.9 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026AM - Hospital Blvd/ Second St Option 3 - Adjusted**

Hospital Boulevard / Second Street Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 232 | 5.0 | 0.129 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 332 | 5.0 | 0.176 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 563 | 5.0 | 0.176 | 3.4 | NA | 0.0 | 0.0 | 0.00 | 0.27 | 54.9 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 545 | 5.0 | 0.289 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 386 | 5.0 | 0.370 | 11.7 | LOS B | 2.2 | 16.3 | 0.61 | 0.88 | 45.6 |
| Approach | | 932 | 5.0 | 0.370 | 4.8 | NA | 2.2 | 16.3 | 0.25 | 0.36 | 53.0 |
| West: Second St | | | | | | | | | | | |
| 10 | L | 138 | 5.0 | 0.189 | 11.3 | LOS B | 0.7 | 5.3 | 0.50 | 0.79 | 45.9 |
| 12 | R | 55 | 5.0 | 0.267 | 27.5 | LOS D | 0.9 | 6.6 | 0.87 | 0.98 | 34.2 |
| Approach | | 193 | 5.0 | 0.267 | 15.9 | LOS C | 0.9 | 6.6 | 0.61 | 0.84 | 41.9 |
| All Vehicles | | 1687 | 5.0 | 0.370 | 5.6 | NA | 2.2 | 16.3 | 0.21 | 0.39 | 52.1 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026PM - Hospital Blvd/ Second St Option 3 - Adjusted**

Hospital Boulevard / Second Street Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 145 | 5.0 | 0.081 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 233 | 5.0 | 0.123 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 378 | 5.0 | 0.123 | 3.2 | NA | 0.0 | 0.0 | 0.00 | 0.26 | 55.2 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 427 | 5.0 | 0.226 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 267 | 5.0 | 0.211 | 9.9 | LOS A | 1.0 | 7.5 | 0.47 | 0.71 | 46.9 |
| Approach | | 695 | 5.0 | 0.226 | 3.8 | NA | 1.0 | 7.5 | 0.18 | 0.27 | 54.2 |
| West: Second St | | | | | | | | | | | |
| 10 | L | 145 | 5.0 | 0.178 | 10.2 | LOS B | 0.7 | 4.8 | 0.41 | 0.71 | 47.0 |
| 12 | R | 115 | 5.0 | 0.315 | 19.0 | LOS C | 1.2 | 9.1 | 0.77 | 0.97 | 39.5 |
| Approach | | 260 | 5.0 | 0.315 | 14.1 | LOS B | 1.2 | 9.1 | 0.57 | 0.83 | 43.4 |
| All Vehicles | | 1333 | 5.0 | 0.315 | 5.6 | NA | 1.2 | 9.1 | 0.21 | 0.38 | 51.9 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026AM - Hospital Blvd/ Innovation Dr - Option 3**

Hospital Boulevard / Innovation Drive Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 13 | 5.0 | 0.007 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 460 | 5.0 | 0.244 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 473 | 5.0 | 0.244 | 0.2 | NA | 0.0 | 0.0 | 0.00 | 0.02 | 59.6 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 849 | 5.0 | 0.450 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 138 | 5.0 | 0.120 | 10.2 | LOS B | 0.5 | 3.9 | 0.50 | 0.72 | 46.8 |
| Approach | | 987 | 5.0 | 0.450 | 1.4 | NA | 0.5 | 3.9 | 0.07 | 0.10 | 57.7 |
| West: Innovation Dr | | | | | | | | | | | |
| 10 | L | 118 | 5.0 | 0.181 | 11.4 | LOS B | 0.6 | 4.5 | 0.50 | 0.79 | 45.8 |
| 12 | R | 120 | 5.0 | 0.661 | 42.5 | LOS E | 2.9 | 21.0 | 0.94 | 1.14 | 27.7 |
| Approach | | 238 | 5.0 | 0.661 | 27.1 | LOS D | 2.9 | 21.0 | 0.73 | 0.97 | 34.4 |
| All Vehicles | | 1698 | 5.0 | 0.661 | 4.7 | NA | 2.9 | 21.0 | 0.14 | 0.20 | 53.2 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026PM - Hospital Blvd/ Innovation Dr - Option 3**

Hospital Boulevard / Innovation Drive Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 21 | 5.0 | 0.012 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 358 | 5.0 | 0.190 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 379 | 5.0 | 0.190 | 0.5 | NA | 0.0 | 0.0 | 0.00 | 0.04 | 59.3 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 635 | 5.0 | 0.336 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 561 | 5.0 | 0.443 | 10.8 | LOS B | 3.3 | 23.9 | 0.56 | 0.79 | 46.4 |
| Approach | | 1196 | 5.0 | 0.443 | 5.1 | NA | 3.3 | 23.9 | 0.26 | 0.37 | 52.8 |
| West: Innovation Dr | | | | | | | | | | | |
| 10 | L | 99 | 5.0 | 0.144 | 10.5 | LOS B | 0.5 | 3.3 | 0.44 | 0.73 | 46.7 |
| 12 | R | 77 | 5.0 | 0.510 | 42.0 | LOS E | 1.9 | 13.6 | 0.93 | 1.06 | 27.9 |
| Approach | | 176 | 5.0 | 0.510 | 24.3 | LOS C | 1.9 | 13.6 | 0.66 | 0.87 | 36.0 |
| All Vehicles | | 1751 | 5.0 | 0.510 | 6.0 | NA | 3.3 | 23.9 | 0.25 | 0.35 | 51.6 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026AM - Hospital Blvd/ Innovation Dr - Option 3 - Adjusted**

Hospital Boulevard / Innovation Drive Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 12 | 5.0 | 0.006 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 460 | 5.0 | 0.244 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 472 | 5.0 | 0.244 | 0.2 | NA | 0.0 | 0.0 | 0.00 | 0.02 | 59.7 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 837 | 5.0 | 0.443 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 138 | 5.0 | 0.120 | 10.2 | LOS B | 0.5 | 3.9 | 0.49 | 0.72 | 46.8 |
| Approach | | 975 | 5.0 | 0.443 | 1.4 | NA | 0.5 | 3.9 | 0.07 | 0.10 | 57.7 |
| West: Innovation Dr | | | | | | | | | | | |
| 10 | L | 118 | 5.0 | 0.181 | 11.4 | LOS B | 0.6 | 4.5 | 0.50 | 0.79 | 45.8 |
| 12 | R | 117 | 5.0 | 0.630 | 40.2 | LOS E | 2.7 | 19.5 | 0.94 | 1.12 | 28.5 |
| Approach | | 235 | 5.0 | 0.630 | 25.7 | LOS D | 2.7 | 19.5 | 0.72 | 0.95 | 35.2 |
| All Vehicles | | 1681 | 5.0 | 0.630 | 4.5 | NA | 2.7 | 19.5 | 0.14 | 0.20 | 53.4 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026PM - Hospital Blvd/ Innovation Dr - Option 3 - Adjusted**

Hospital Boulevard / Innovation Drive Intersection
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Hospital Blvd S | | | | | | | | | | | |
| 1 | L | 20 | 5.0 | 0.011 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.67 | 49.0 |
| 2 | T | 358 | 5.0 | 0.190 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 378 | 5.0 | 0.190 | 0.4 | NA | 0.0 | 0.0 | 0.00 | 0.04 | 59.3 |
| North: Hospital Blvd N | | | | | | | | | | | |
| 8 | T | 624 | 5.0 | 0.331 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| 9 | R | 561 | 5.0 | 0.442 | 10.8 | LOS B | 3.3 | 23.9 | 0.56 | 0.79 | 46.4 |
| Approach | | 1185 | 5.0 | 0.442 | 5.1 | NA | 3.3 | 23.9 | 0.26 | 0.37 | 52.7 |
| West: Innovation Dr | | | | | | | | | | | |
| 10 | L | 99 | 5.0 | 0.144 | 10.5 | LOS B | 0.5 | 3.3 | 0.44 | 0.73 | 46.7 |
| 12 | R | 75 | 5.0 | 0.487 | 40.5 | LOS E | 1.8 | 12.8 | 0.93 | 1.05 | 28.4 |
| Approach | | 174 | 5.0 | 0.487 | 23.4 | LOS C | 1.8 | 12.8 | 0.65 | 0.87 | 36.6 |
| All Vehicles | | 1737 | 5.0 | 0.487 | 5.9 | NA | 3.3 | 23.9 | 0.25 | 0.35 | 51.7 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026AM - Parklands Dr/Main St/Engineering Dr - Option 3**

Parklands Drive / Main Street / Engineering Drive Intersection
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 1 | L | 88 | 5.0 | 0.411 | 64.8 | LOS E | 5.0 | 36.4 | 0.94 | 0.78 | 21.6 |
| 2 | T | 34 | 5.0 | 0.089 | 43.7 | LOS D | 1.5 | 11.2 | 0.78 | 0.58 | 26.3 |
| 3 | R | 504 | 5.0 | 0.907 | 43.5 | LOS D | 20.1 | 146.9 | 0.88 | 0.89 | 27.4 |
| Approach | | 626 | 5.0 | 0.907 | 46.5 | LOS D | 20.1 | 146.9 | 0.88 | 0.86 | 26.3 |
| East: Main St | | | | | | | | | | | |
| 4 | L | 273 | 5.0 | 0.396 | 17.1 | LOS B | 6.4 | 47.0 | 0.42 | 0.75 | 40.9 |
| 5 | T | 67 | 5.0 | 0.888 | 69.5 | LOS E | 16.2 | 118.1 | 1.00 | 1.03 | 19.4 |
| 6 | R | 165 | 5.0 | 0.888 | 77.7 | LOS E | 16.2 | 118.1 | 1.00 | 1.03 | 19.4 |
| Approach | | 505 | 5.0 | 0.888 | 43.9 | LOS D | 16.2 | 118.1 | 0.69 | 0.88 | 27.0 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 95 | 5.0 | 0.704 | 66.6 | LOS E | 5.5 | 40.2 | 0.95 | 0.82 | 21.2 |
| 8 | T | 240 | 5.0 | 1.033 | 152.8 | LOS F | 25.0 | 182.7 | 1.00 | 1.45 | 11.3 |
| 9 | R | 58 | 5.0 | 1.033 | 161.6 | LOS F | 6.7 | 48.7 | 1.00 | 1.21 | 11.0 |
| Approach | | 393 | 5.0 | 1.033 | 133.3 | LOS F | 25.0 | 182.7 | 0.99 | 1.26 | 12.7 |
| West: Engineering Dr | | | | | | | | | | | |
| 10 | L | 48 | 5.0 | 0.861 | 78.4 | LOS E | 10.2 | 74.1 | 1.00 | 0.98 | 19.1 |
| 11 | T | 25 | 5.0 | 0.861 | 70.0 | LOS E | 10.2 | 74.1 | 1.00 | 0.98 | 19.2 |
| 12 | R | 76 | 5.0 | 0.861 | 78.3 | LOS E | 10.2 | 74.1 | 1.00 | 0.98 | 19.2 |
| Approach | | 149 | 5.0 | 0.861 | 76.9 | LOS E | 10.2 | 74.1 | 1.00 | 0.98 | 19.2 |
| All Vehicles | | 1674 | 5.0 | 1.033 | 68.8 | LOS E | 25.0 | 182.7 | 0.86 | 0.97 | 20.6 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 44.1 | LOS E | 0.2 | 0.2 | 0.84 | 0.84 |
| P3 | Across E approach | 53 | 56.6 | LOS E | 0.2 | 0.2 | 0.95 | 0.95 |
| P5 | Across N approach | 53 | 44.1 | LOS E | 0.2 | 0.2 | 0.84 | 0.84 |
| P7 | Across W approach | 53 | 44.1 | LOS E | 0.2 | 0.2 | 0.84 | 0.84 |
| All Pedestrians | | 212 | 47.2 | LOS E | | | 0.87 | 0.87 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

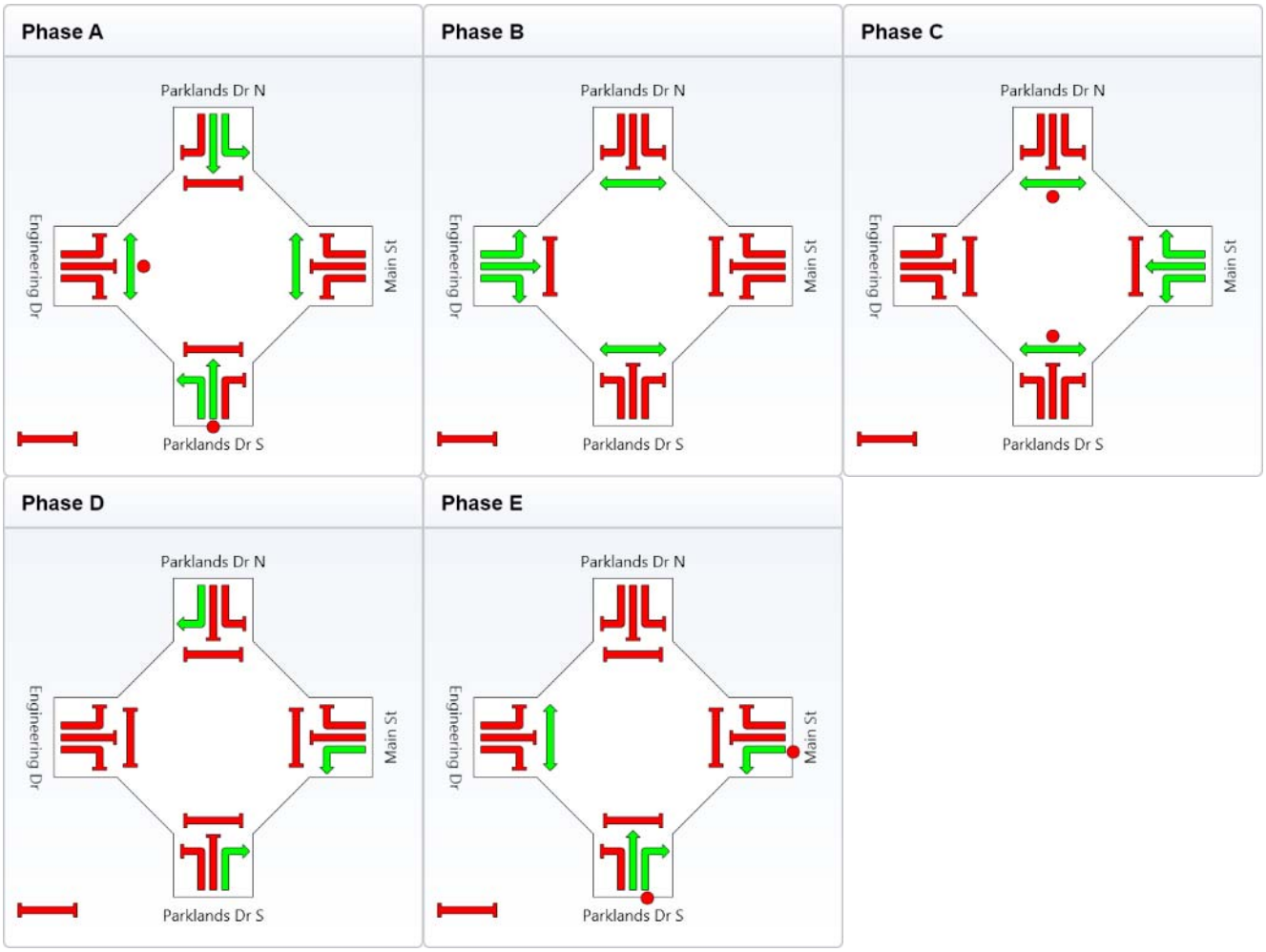


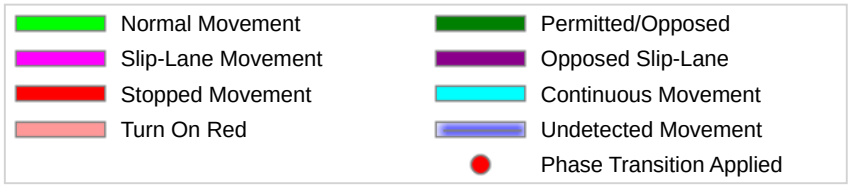
Parklands Drive / Main Street / Engineering Drive Intersection
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

**Phase times specified by the user**
**Sequence: GCRT Phasing**
**Input Sequence: A, B, C, D, E**
**Output Sequence: A, B, C, D, E**

**Phase Timing Results**

| Phase | A | B | C | D | E |
|---|---|---|---|---|---|
| Green Time (sec) | 15 | 12 | 18 | 50 | 5 |
| Yellow Time (sec) | 3 | 3 | 3 | 3 | 3 |
| All-Red Time (sec) | 2 | 2 | 2 | 2 | 2 |
| Phase Time (sec) | 20 | 17 | 23 | 55 | 10 |
| Phase Split | 16 % | 14 % | 18 % | 44 % | 8 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Parklands Dr/Main St/Engineering Dr - Option 3**

2026AM - Parklands Drive / Main Street / Engineering Drive
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 1 | L | 86 | 5.0 | 0.401 | 64.7 | LOS E | 4.9 | 35.5 | 0.94 | 0.77 | 21.6 |
| 2 | T | 103 | 5.0 | 0.213 | 39.3 | LOS D | 4.5 | 32.5 | 0.75 | 0.60 | 27.9 |
| 3 | R | 436 | 5.0 | 0.817 | 39.7 | LOS D | 17.1 | 124.9 | 0.76 | 0.86 | 28.8 |
| Approach | | 625 | 5.0 | 0.817 | 43.1 | LOS D | 17.1 | 124.9 | 0.79 | 0.80 | 27.4 |
| East: Main St | | | | | | | | | | | |
| 4 | L | 145 | 5.0 | 0.384 | 19.3 | LOS B | 3.7 | 26.9 | 0.45 | 0.73 | 39.3 |
| 5 | T | 61 | 5.0 | 0.762 | 63.6 | LOS E | 9.3 | 67.7 | 1.00 | 0.89 | 20.6 |
| 6 | R | 84 | 5.0 | 0.762 | 71.8 | LOS E | 9.3 | 67.7 | 1.00 | 0.89 | 20.5 |
| Approach | | 291 | 5.0 | 0.762 | 43.9 | LOS D | 9.3 | 67.7 | 0.73 | 0.81 | 27.0 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 93 | 5.0 | 0.688 | 66.3 | LOS E | 5.4 | 39.1 | 0.94 | 0.81 | 21.3 |
| 8 | T | 232 | 5.0 | 1.013 | 127.4 | LOS F | 22.2 | 161.9 | 1.00 | 1.36 | 13.0 |
| 9 | R | 60 | 5.0 | 1.013 | 135.6 | LOS F | 5.8 | 42.3 | 1.00 | 1.16 | 12.7 |
| Approach | | 384 | 5.0 | 1.013 | 113.9 | LOS F | 22.2 | 161.9 | 0.99 | 1.20 | 14.3 |
| West: Engineering Dr | | | | | | | | | | | |
| 10 | L | 46 | 5.0 | 0.784 | 70.4 | LOS E | 11.6 | 84.6 | 1.00 | 0.90 | 20.6 |
| 11 | T | 44 | 5.0 | 0.784 | 62.0 | LOS E | 11.6 | 84.6 | 1.00 | 0.90 | 20.7 |
| 12 | R | 92 | 5.0 | 0.784 | 70.3 | LOS E | 11.6 | 84.6 | 1.00 | 0.90 | 20.7 |
| Approach | | 182 | 5.0 | 0.784 | 68.3 | LOS E | 11.6 | 84.6 | 1.00 | 0.90 | 20.7 |
| All Vehicles | | 1482 | 5.0 | 1.013 | 64.7 | LOS E | 22.2 | 161.9 | 0.85 | 0.92 | 21.4 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 44.1 | LOS E | 0.2 | 0.2 | 0.84 | 0.84 |
| P3 | Across E approach | 53 | 56.6 | LOS E | 0.2 | 0.2 | 0.95 | 0.95 |
| P5 | Across N approach | 53 | 44.1 | LOS E | 0.2 | 0.2 | 0.84 | 0.84 |
| P7 | Across W approach | 53 | 38.4 | LOS D | 0.1 | 0.1 | 0.78 | 0.78 |
| All Pedestrians | | 212 | 45.8 | LOS E | | | 0.85 | 0.85 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

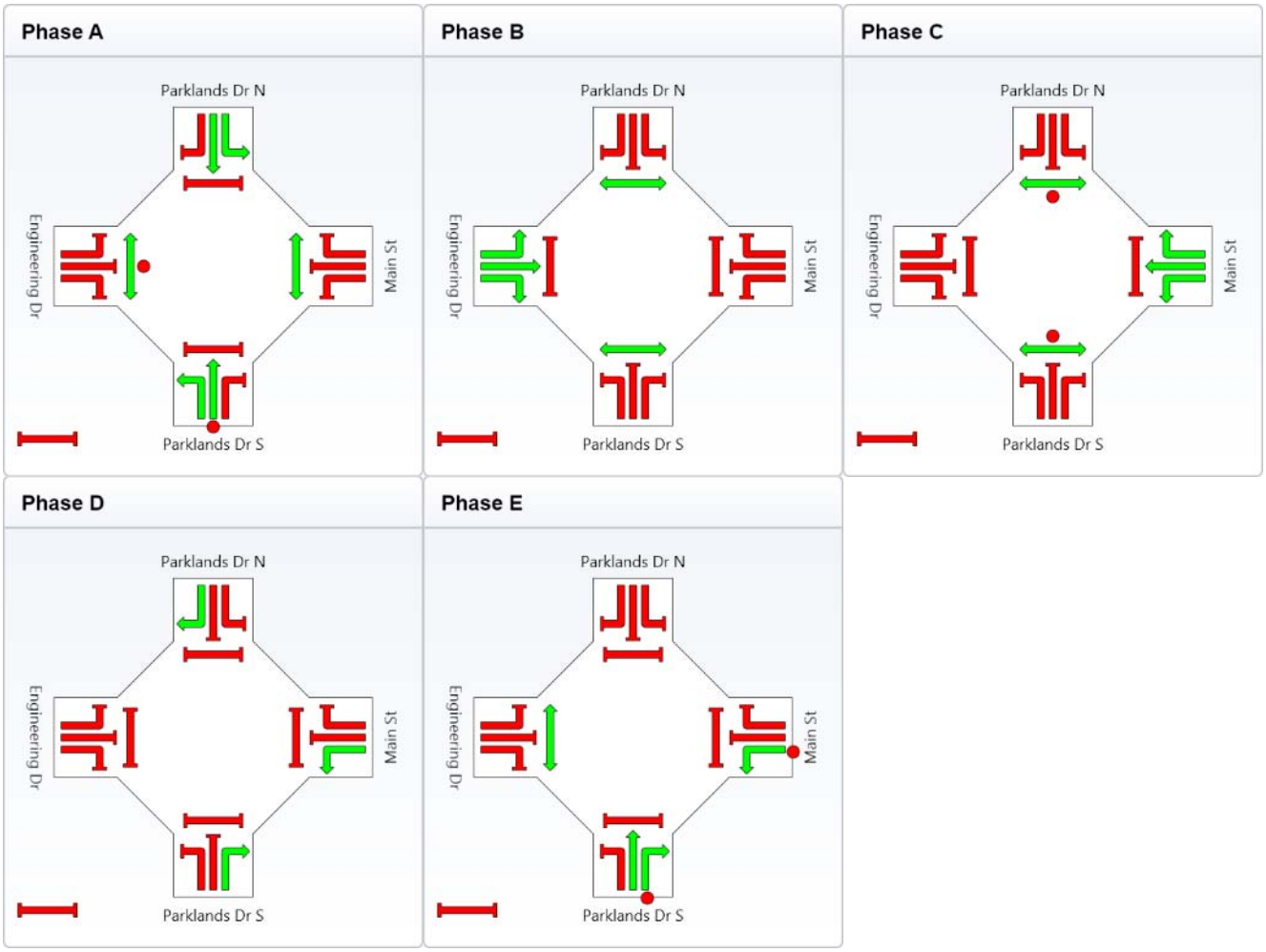


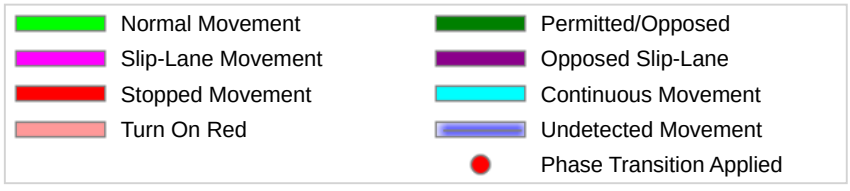
2026AM - Parklands Drive / Main Street / Engineering Drive
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

**Phase times specified by the user**
**Sequence: GCRT Phasing**
**Input Sequence: A, B, C, D, E**
**Output Sequence: A, B, C, D, E**

**Phase Timing Results**

| Phase | A | B | C | D | E |
|---|---|---|---|---|---|
| Green Time (sec) | 15 | 16 | 13 | 40 | 11 |
| Yellow Time (sec) | 4 | 4 | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 | 2 | 2 |
| Phase Time (sec) | 21 | 22 | 19 | 46 | 17 |
| Phase Split | 17 % | 18 % | 15 % | 37 % | 14 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Parklands Dr/Main St/Engineering Dr - Option 3 - Adjusted**

Parklands Drive / Main Street / Engineering Drive Intersection
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 1 | L | 98 | 5.0 | 0.455 | 65.2 | LOS E | 5.6 | 40.7 | 0.95 | 0.78 | 21.5 |
| 2 | T | 37 | 5.0 | 0.084 | 40.2 | LOS D | 1.6 | 11.6 | 0.74 | 0.55 | 27.6 |
| 3 | R | 559 | 5.0 | 0.980 | 39.8 | LOS D | 20.1 | 146.9 | 0.98 | 0.89 | 28.7 |
| Approach | | 694 | 5.0 | 0.980 | 43.4 | LOS D | 20.1 | 146.9 | 0.97 | 0.86 | 27.4 |
| East: Main St | | | | | | | | | | | |
| 4 | L | 279 | 5.0 | 0.399 | 16.7 | LOS B | 6.5 | 47.1 | 0.42 | 0.75 | 41.2 |
| 5 | T | 67 | 5.0 | 0.940 | 82.4 | LOS F | 17.9 | 130.5 | 1.00 | 1.15 | 17.4 |
| 6 | R | 165 | 5.0 | 0.940 | 90.6 | LOS F | 17.9 | 130.5 | 1.00 | 1.15 | 17.4 |
| Approach | | 512 | 5.0 | 0.940 | 49.2 | LOS D | 17.9 | 130.5 | 0.68 | 0.93 | 25.4 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 95 | 5.0 | 0.704 | 66.6 | LOS E | 5.5 | 40.2 | 0.95 | 0.82 | 21.2 |
| 8 | T | 245 | 5.0 | 1.042 | 165.5 | LOS F | 26.4 | 192.8 | 1.00 | 1.49 | 10.6 |
| 9 | R | 58 | 5.0 | 1.042 | 176.8 | LOS F | 7.5 | 54.4 | 1.00 | 1.25 | 10.2 |
| Approach | | 398 | 5.0 | 1.042 | 143.6 | LOS F | 26.4 | 192.8 | 0.99 | 1.30 | 12.0 |
| West: Engineering Dr | | | | | | | | | | | |
| 10 | L | 48 | 5.0 | 0.953 | 96.7 | LOS F | 11.8 | 86.3 | 1.00 | 1.17 | 16.5 |
| 11 | T | 25 | 5.0 | 0.953 | 88.3 | LOS F | 11.8 | 86.3 | 1.00 | 1.17 | 16.5 |
| 12 | R | 78 | 5.0 | 0.953 | 96.6 | LOS F | 11.8 | 86.3 | 1.00 | 1.17 | 16.5 |
| Approach | | 152 | 5.0 | 0.953 | 95.2 | LOS F | 11.8 | 86.3 | 1.00 | 1.17 | 16.5 |
| All Vehicles | | 1755 | 5.0 | 1.042 | 72.3 | LOS E | 26.4 | 192.8 | 0.89 | 1.01 | 20.0 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 45.8 | LOS E | 0.2 | 0.2 | 0.86 | 0.86 |
| P3 | Across E approach | 53 | 56.6 | LOS E | 0.2 | 0.2 | 0.95 | 0.95 |
| P5 | Across N approach | 53 | 45.8 | LOS E | 0.2 | 0.2 | 0.86 | 0.86 |
| P7 | Across W approach | 53 | 40.8 | LOS E | 0.2 | 0.2 | 0.81 | 0.81 |
| All Pedestrians | | 212 | 47.3 | LOS E | | | 0.87 | 0.87 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

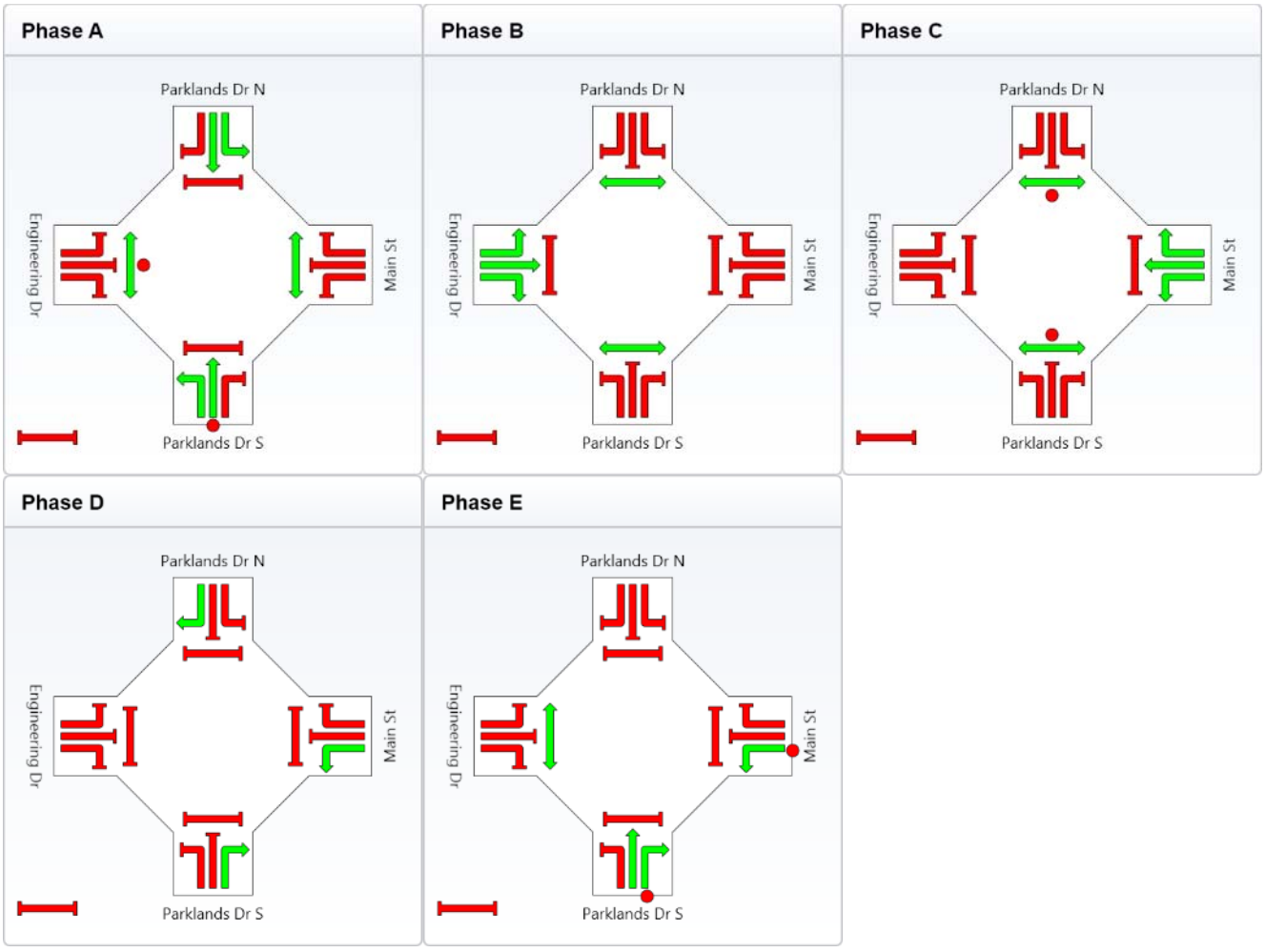


Parklands Drive / Main Street / Engineering Drive Intersection
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

**Phase times specified by the user**
**Sequence: GCRT Phasing**
**Input Sequence: A, B, C, D, E**
**Output Sequence: A, B, C, D, E**

**Phase Timing Results**

| Phase | A | B | C | D | E |
|---|---|---|---|---|---|
| Green Time (sec) | 15 | 11 | 17 | 48 | 9 |
| Yellow Time (sec) | 3 | 3 | 3 | 3 | 3 |
| All-Red Time (sec) | 2 | 2 | 2 | 2 | 2 |
| Phase Time (sec) | 20 | 16 | 22 | 53 | 14 |
| Phase Split | 16 % | 13 % | 18 % | 42 % | 11 % |



# MOVEMENT SUMMARY

**Site: 2026PM - Parklands Dr/Main St/Engineering Dr - Option 3 - Adjusted**

2026AM - Parklands Drive / Main Street / Engineering Drive
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

## Movement Performance - Vehicles

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 1 | L | 92 | 5.0 | 0.426 | 64.9 | LOS E | 5.2 | 37.9 | 0.94 | 0.78 | 21.5 |
| 2 | T | 109 | 5.0 | 0.154 | 25.2 | LOS C | 3.6 | 26.0 | 0.57 | 0.46 | 34.3 |
| 3 | R | 464 | 5.0 | 0.843 | 42.0 | LOS D | 18.7 | 136.4 | 0.80 | 0.88 | 27.9 |
| Approach | | 665 | 5.0 | 0.843 | 42.4 | LOS D | 18.7 | 136.4 | 0.78 | 0.80 | 27.6 |
| East: Main St | | | | | | | | | | | |
| 4 | L | 149 | 5.0 | 0.389 | 18.9 | LOS B | 3.7 | 27.2 | 0.44 | 0.73 | 39.6 |
| 5 | T | 61 | 5.0 | 0.826 | 67.4 | LOS E | 9.6 | 70.2 | 1.00 | 0.94 | 19.9 |
| 6 | R | 84 | 5.0 | 0.826 | 75.6 | LOS E | 9.6 | 70.2 | 1.00 | 0.94 | 19.8 |
| Approach | | 295 | 5.0 | 0.826 | 45.1 | LOS D | 9.6 | 70.2 | 0.72 | 0.84 | 26.5 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 93 | 5.0 | 0.688 | 66.3 | LOS E | 5.4 | 39.1 | 0.94 | 0.81 | 21.3 |
| 8 | T | 238 | 5.0 | 1.048 | 174.6 | LOS F | 27.4 | 200.1 | 1.00 | 1.53 | 10.2 |
| 9 | R | 60 | 5.0 | 1.048 | 185.1 | LOS F | 6.9 | 50.4 | 1.00 | 1.24 | 9.8 |
| Approach | | 391 | 5.0 | 1.048 | 150.5 | LOS F | 27.4 | 200.1 | 0.99 | 1.32 | 11.5 |
| West: Engineering Dr | | | | | | | | | | | |
| 10 | L | 46 | 5.0 | 0.846 | 75.0 | LOS E | 12.3 | 89.6 | 1.00 | 0.97 | 19.8 |
| 11 | T | 44 | 5.0 | 0.846 | 66.7 | LOS E | 12.3 | 89.6 | 1.00 | 0.97 | 19.9 |
| 12 | R | 94 | 5.0 | 0.846 | 74.9 | LOS E | 12.3 | 89.6 | 1.00 | 0.97 | 19.8 |
| Approach | | 184 | 5.0 | 0.846 | 73.0 | LOS E | 12.3 | 89.6 | 1.00 | 0.97 | 19.8 |
| All Vehicles | | 1535 | 5.0 | 1.048 | 74.1 | LOS E | 27.4 | 200.1 | 0.85 | 0.96 | 19.6 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model used.

## Movement Performance - Pedestrians

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate per ped |
|---|---|---|---|---|---|---|---|---|
| P1 | Across S approach | 53 | 45.8 | LOS E | 0.2 | 0.2 | 0.86 | 0.86 |
| P3 | Across E approach | 53 | 56.6 | LOS E | 0.2 | 0.2 | 0.95 | 0.95 |
| P5 | Across N approach | 53 | 45.8 | LOS E | 0.2 | 0.2 | 0.86 | 0.86 |
| P7 | Across W approach | 53 | 27.6 | LOS C | 0.1 | 0.1 | 0.66 | 0.66 |
| All Pedestrians | | 212 | 43.9 | LOS E | | | 0.83 | 0.83 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# PHASING SUMMARY

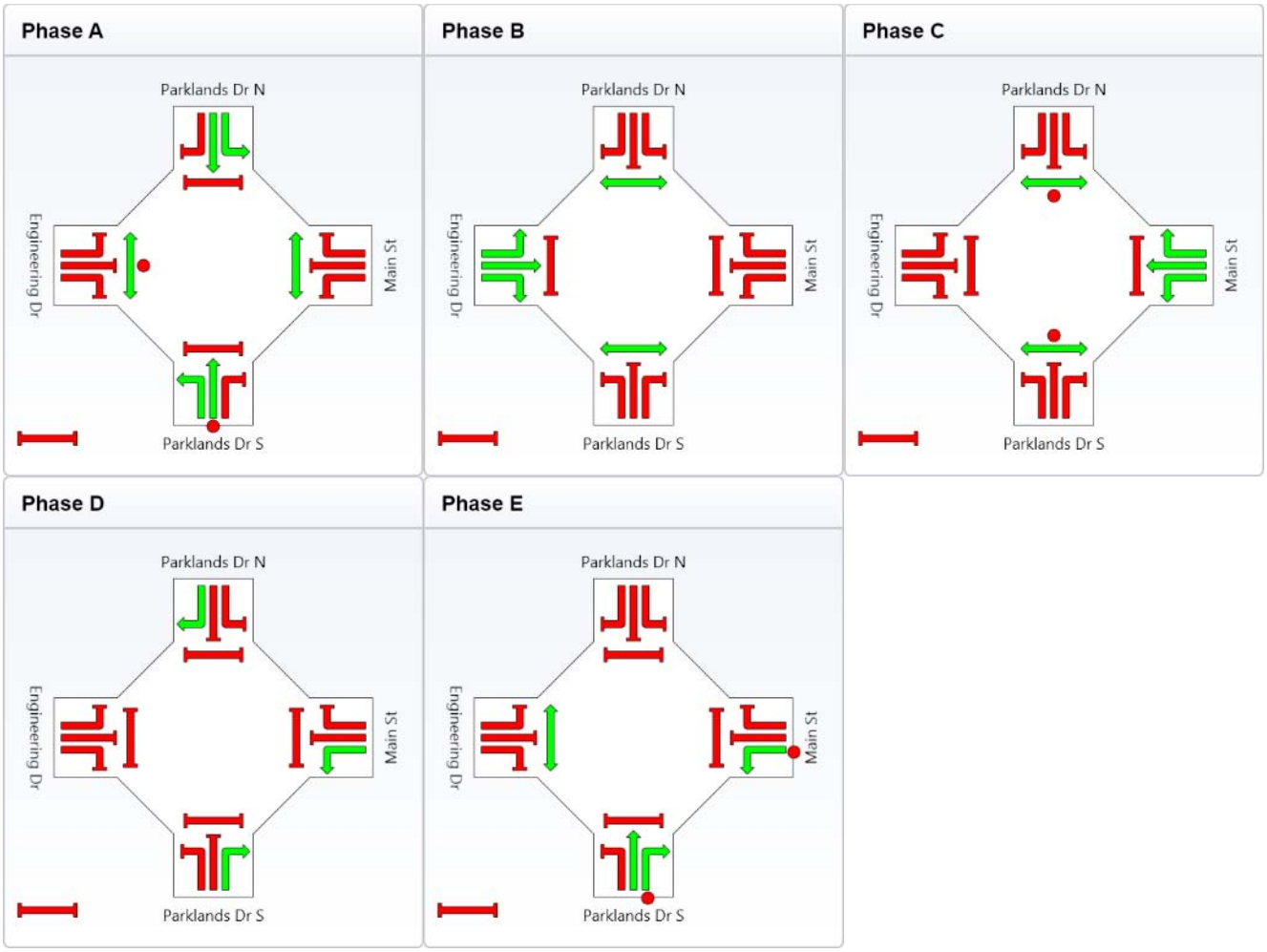


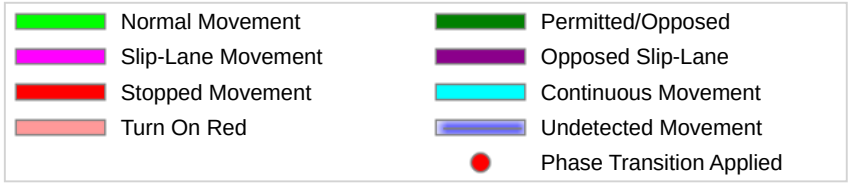
2026AM - Parklands Drive / Main Street / Engineering Drive
Signals - Fixed Time  Cycle Time = 125 seconds (User-Given Phase Times)

**Phase times specified by the user**
**Sequence: GCRT Phasing**
**Input Sequence: A, B, C, D, E**
**Output Sequence: A, B, C, D, E**

**Phase Timing Results**

| Phase | A | B | C | D | E |
|---|---|---|---|---|---|
| Green Time (sec) | 15 | 15 | 12 | 27 | 26 |
| Yellow Time (sec) | 4 | 4 | 4 | 4 | 4 |
| All-Red Time (sec) | 2 | 2 | 2 | 2 | 2 |
| Phase Time (sec) | 21 | 21 | 18 | 33 | 32 |
| Phase Split | 17 % | 17 % | 14 % | 26 % | 26 % |



# MOVEMENT SUMMARY

**Site: 2026AM - Parklands Dr/First St Option 3**

Parklands Drive / First Street Intersection
Stop (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 2 | T | 611 | 5.0 | 0.162 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 611 | 5.0 | 0.162 | 0.0 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| East: First Street | | | | | | | | | | | |
| 4 | L | 331 | 5.0 | 0.372 | 16.1 | LOS C | 2.7 | 20.0 | 0.73 | 1.00 | 43.0 |
| 6 | R | 11 | 5.0 | 0.153 | 60.9 | LOS F | 0.4 | 3.2 | 0.92 | 1.00 | 22.9 |
| Approach | | 341 | 5.0 | 0.372 | 17.5 | LOS C | 2.7 | 20.0 | 0.73 | 1.00 | 41.9 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 45 | 5.0 | 0.153 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.99 | 49.0 |
| 8 | T | 531 | 5.0 | 0.153 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 576 | 5.0 | 0.153 | 0.7 | NA | 0.0 | 0.0 | 0.00 | 0.08 | 59.0 |
| All Vehicles | | 1527 | 5.0 | 0.372 | 4.2 | NA | 2.7 | 20.0 | 0.16 | 0.25 | 54.4 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026PM - Parklands Dr/First St Option 3**

Parklands Drive / First Street Intersection
Stop (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 2 | T | 608 | 5.0 | 0.161 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 608 | 5.0 | 0.161 | 0.0 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| East: First Street | | | | | | | | | | | |
| 4 | L | 361 | 5.0 | 0.409 | 15.1 | LOS C | 2.8 | 20.4 | 0.67 | 0.95 | 43.8 |
| 6 | R | 11 | 5.0 | 0.116 | 48.2 | LOS E | 0.3 | 2.5 | 0.89 | 1.00 | 26.4 |
| Approach | | 372 | 5.0 | 0.409 | 16.0 | LOS C | 2.8 | 20.4 | 0.68 | 0.95 | 43.0 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 43 | 5.0 | 0.124 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.98 | 49.0 |
| 8 | T | 422 | 5.0 | 0.124 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 465 | 5.0 | 0.124 | 0.8 | NA | 0.0 | 0.0 | 0.00 | 0.09 | 58.8 |
| All Vehicles | | 1445 | 5.0 | 0.409 | 4.4 | NA | 2.8 | 20.4 | 0.17 | 0.27 | 54.2 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026AM - Parklands Dr/First St Option 3 - Adjusted**

Parklands Drive / First Street Intersection
Stop (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 2 | T | 679 | 5.0 | 0.180 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 679 | 5.0 | 0.180 | 0.0 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| East: First Street | | | | | | | | | | | |
| 4 | L | 338 | 5.0 | 0.388 | 16.5 | LOS C | 2.9 | 21.4 | 0.74 | 1.02 | 42.7 |
| 6 | R | 11 | 5.0 | 0.188 | 74.6 | LOS F | 0.5 | 3.9 | 0.94 | 1.01 | 20.0 |
| Approach | | 348 | 5.0 | 0.388 | 18.2 | LOS C | 2.9 | 21.4 | 0.74 | 1.02 | 41.3 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 45 | 5.0 | 0.156 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 1.00 | 49.0 |
| 8 | T | 543 | 5.0 | 0.156 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 588 | 5.0 | 0.156 | 0.6 | NA | 0.0 | 0.0 | 0.00 | 0.08 | 59.0 |
| All Vehicles | | 1616 | 5.0 | 0.388 | 4.2 | NA | 2.9 | 21.4 | 0.16 | 0.25 | 54.4 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

# MOVEMENT SUMMARY

**Site: 2026PM - Parklands Dr/First St**
**Option 3 - Adjusted**

Parklands Drive / First Street Intersection
Stop (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance m | Prop. Queued | Effective Stop Rate per veh | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Parklands Dr S | | | | | | | | | | | |
| 2 | T | 649 | 5.0 | 0.172 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 649 | 5.0 | 0.172 | 0.0 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| East: First Street | | | | | | | | | | | |
| 4 | L | 372 | 5.0 | 0.424 | 15.4 | LOS C | 3.0 | 22.2 | 0.69 | 0.97 | 43.6 |
| 6 | R | 11 | 5.0 | 0.133 | 53.7 | LOS F | 0.4 | 2.8 | 0.90 | 1.00 | 24.8 |
| Approach | | 382 | 5.0 | 0.424 | 16.5 | LOS C | 3.0 | 22.2 | 0.69 | 0.97 | 42.7 |
| North: Parklands Dr N | | | | | | | | | | | |
| 7 | L | 43 | 5.0 | 0.127 | 8.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.98 | 49.0 |
| 8 | T | 436 | 5.0 | 0.127 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 60.0 |
| Approach | | 479 | 5.0 | 0.127 | 0.8 | NA | 0.0 | 0.0 | 0.00 | 0.09 | 58.8 |
| All Vehicles | | 1511 | 5.0 | 0.424 | 4.4 | NA | 3.0 | 22.2 | 0.18 | 0.27 | 54.1 |

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.