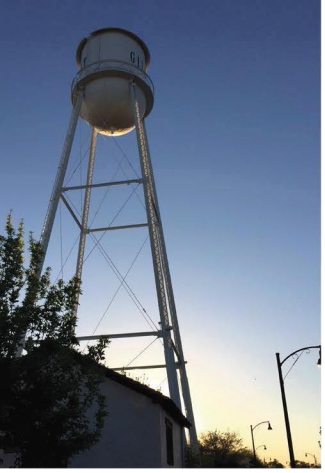
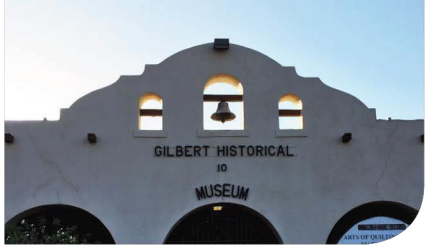




GILBERT
ARIZONA

July 2015 Consultant Report

Traffic and Circulation Study

This document represents Kimley-Horn's findings and recommendations for Gilbert to consider regarding traffic and circulation in the Heritage District.

Prepared for Gilbert by

Kimley»Horn

Expect More. Experience Better.

Existing and Future Traffic and Circulation Conditions in the Heritage District

Existing Traffic and Circulation Conditions

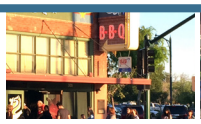
Notable existing transportation features in the Heritage District include: the Powerline Trail shared use path along the Western Canal, which provides regional pedestrian and bicycle access to/from the Heritage District; the railroad, which intersects Gilbert Road at-grade in the middle of the Heritage District; local bus routes and an express bus route; a park-and-ride lot; five traffic signals; two pedestrian-activated crossings; and two school crossings. The railroad and canal serve as barriers to mobility because there are limited locations to cross these facilities. The primary mobility gap in the Heritage District is that no bicycle facilities exist along Gilbert Road, along Elliot Road west of Gilbert Road, and across the railroad along the Powerline Trail.

All signalized intersections within the Heritage District are currently operating at acceptable levels of service (LOS), meaning LOS E or better, with all but the Gilbert Road/Elliot Road intersection operating at LOS C or better. Vehicle queues are typically no longer than about 10 vehicles, or approximately 250 feet long. The afternoon (PM) peak period is the most congested time of the day in the Heritage District, particularly on Friday, followed by the mid-day (MD) peak period.

Projected Future Traffic and Circulation Conditions

Future programmed and funded improvements in the Heritage District include a grade-separated crossing over the railroad on the Powerline Trail, the extension of Ash Street between Vaughn Avenue and Juniper Avenue, and the installation of sidewalk on Elliot Road just east of Gilbert Road. It should also be noted that the eastbound bus stop on Elliot Road west of Gilbert Road is programmed to be relocated east of Gilbert Road in the near future and that the Gilbert Road railroad crossing will soon receive safety upgrades. Regional commuter rail is planned along the existing railroad line, along with a commuter rail station at the existing park-and-ride lot in the Heritage District, but funding has not yet been identified for the planned commuter rail improvements.

Future development is anticipated to continue within the Heritage District, with projected land uses including mixed-use and higher-density development. The projected 'build-out' development, when all developable parcels have been developed, is anticipated to generate an additional 12,000 daily vehicle trips beyond the existing estimated 8,000 daily vehicle trips that have an origin or destination within the Heritage District. This increase in vehicle trips will result in increased congestion on and around Gilbert Road, with Gilbert Road essentially being at capacity in the build-out condition. Lindsay Road and Cooper Road, the adjacent parallel arterial streets, are also projected to be at capacity in the build-out condition unless they are widened. Widening is programmed at the Cooper Road/Elliot Road, Cooper Road/Guadalupe Road, and Gilbert Road/Elliot Road intersections, which will help mitigate congestion to a degree.




Recommended Improvements to Traffic and Circulation in the Heritage District

Based on the findings of the analysis of existing and future traffic conditions, near-term and long-term recommendations have been developed to improve traffic and circulation in the Heritage District. Near-term recommendations are summarized in **Table ES-1** and displayed in **Figure ES-1**. Long-term recommendations include widening the Lindsay Road/Guadalupe Road and Lindsay Road/Elliot Road intersections, bus rapid transit service along Gilbert Road and local circulator service in the Heritage District, and preserving the outside lanes on Gilbert Road for potential future needs.

TABLE ES-1 – NEAR-TERM TRANSPORTATION NETWORK RECOMMENDATIONS AND ESTIMATED COSTS

Recommended Improvement	Project Description	Estimated Total Cost
Vaughn Avenue Right-Turn Lane	Install eastbound right-turn only lane at the Vaughn Avenue/Gilbert Road intersection.	$1,000
Bike Lanes on Elliot Road	Restripe portion of Elliot Road between Neely Street and Gilbert Road to include bike lanes.	$105,000
Bike Lanes on Gilbert Road	Restripe portion of Gilbert Road between Bruce Avenue and Silver Creek Road and between the Western Canal and Olive Avenue to include bike lanes.	$235,000
Shared Roadway Lane Markings along Gilbert Road	Provide shared lane markings ("sharrows") and signage along Gilbert Road throughout the District to accommodate bicyclists without reducing lane width.	$3,000
Ash Street Bikeway	Develop Ash Street as a bikeway between Juniper Avenue and Gilbert Road: ◆ Juniper Avenue to Vaughn Avenue: install bike lanes ◆ Vaughn Avenue to Page Avenue: construct a 10-foot shared use path in place of the existing western sidewalk ◆ Page Avenue and proposed Cullumber Avenue extension: provide shared lane markings and signage ◆ Along proposed Cullumber Avenue extension: install bike lanes	$62,000
Cullumber Avenue and Elm Street Shared Use Paved Path	Construct shared use paths along Cullumber Avenue and Elm Street: *Cullumber Avenue* ◆ Gilbert Road to Elm Street: construct a 10-foot shared use path in place of the existing southern sidewalk *Elm Street* ◆ Cullumber Avenue to Vaughn Avenue: construct a 10-foot shared use path in place of the existing western sidewalk ◆ Vaughn Avenue to Powerline Trail: construct a 10-foot shared use path along the eastern edge of the vacant Town-owned parcels	$170,000
Shared Use Path Canal Crossing	Construct a bridge over the canal to connect the Powerline Trail to the Village II park on the north side of the canal.	$225,000
Cullumber Avenue Extension	Construct a two-lane road with bike lanes and sidewalks that connects Ash Street to Gilbert Road at Cullumber Road. This will require parcel acquisition and removal of one building.	$675,000
New Signal at Cullumber Avenue and Gilbert Road	In coordination with the Cullumber Avenue Extension, install a traffic signal at the Cullumber Avenue/Gilbert Road intersection.	$400,000
	TOTALS	**$1,876,000**

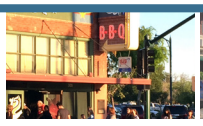
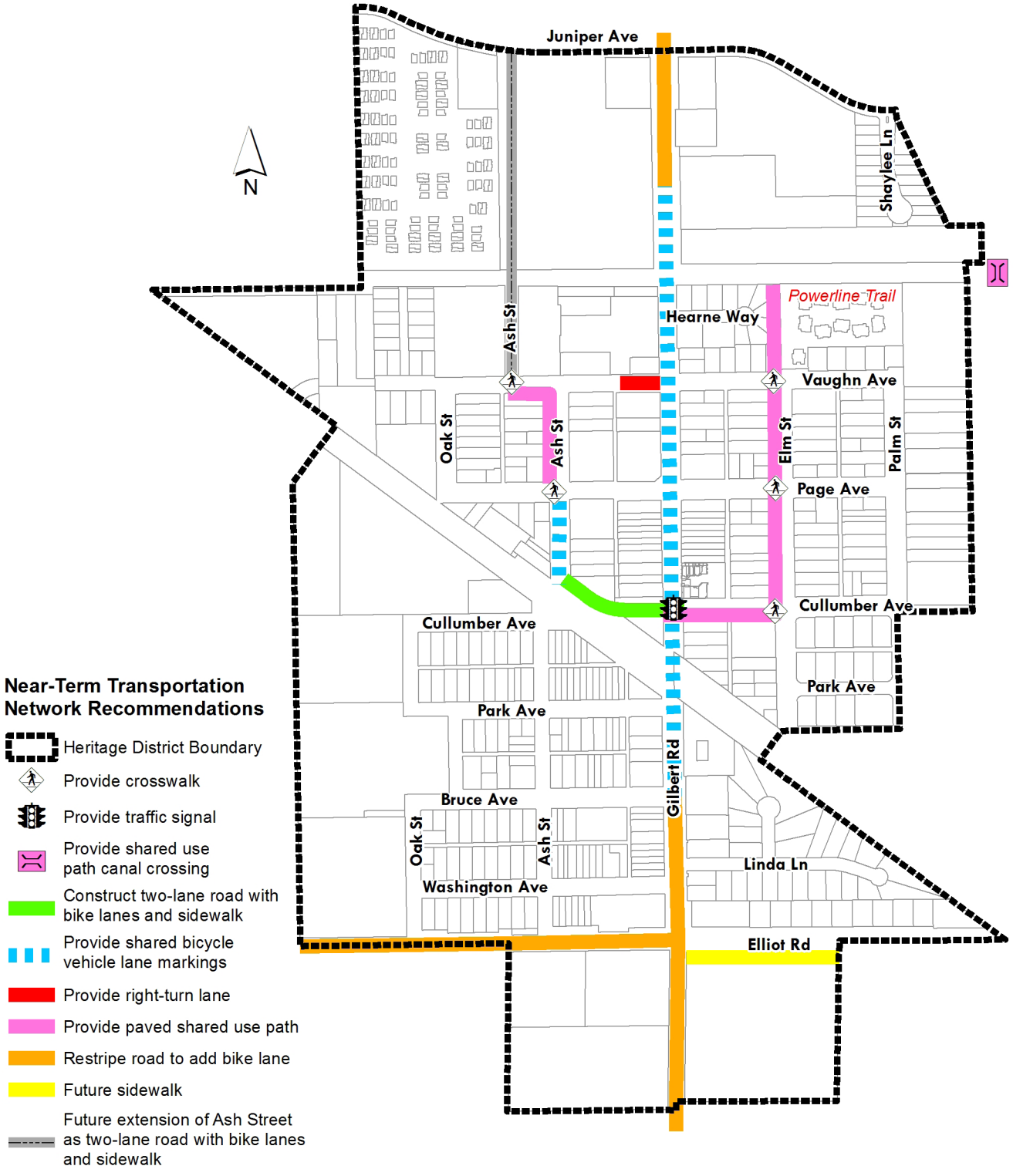



Figure ES-1 - Near-Term Transportation Network Recommendations



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Tables

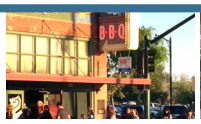
I. Introduction

Access, mobility and safety are critical to the long-term economic success of the Heritage District ("District"). As a primarily retail and entertainment-based area, the District needs patrons to be able to travel to, from, and around the District efficiently and safely by various modes of travel.

The importance of transportation and circulation to the District is evident in previously approved Town documents. In the Heritage District Character Area Goals, one of the objectives is to 'improve pedestrian and vehicular circulation to ensure a pedestrian friendly and safe environment". Similarly, transportation and mobility are discussed throughout the Heritage District Design Guidelines. Some examples of mobility-based guidelines found in the document include:

- Pedestrian-friendly streets and public places
- Narrow streets designed for slower speeds, creating a safe, attractive environment for all transportation modes
- Interconnected streets to provide for better dispersal of traffic
- Support social interaction and focus on health of neighborhoods within and adjacent to the District
- Maintain and enhance system of alleys

This document will discuss existing and future traffic and circulation conditions within the Heritage District. It is anticipated that the District will likely experience significant changes in travel demands and patterns due to projected growth, so it is important to plan for these changes and ensure that access, mobility and safety are maintained so that the District can continue to grow and thrive.



Existing Transportation Features

Figure 1 depicts the key existing transportation features within the Heritage District. Some notable existing features include: the Powerline Trail shared use path along the Western Canal, which provides regional pedestrian and bicycle access to/from the District; the railroad, which intersects Gilbert Road at-grade in the middle of the District; local bus routes and an express bus route; a park-and-ride lot; five traffic signals; two pedestrian-activated crossings; and two school crossings. The numbers in red on the figure indicate the current Average Daily Traffic (ADT) volume for the District's two arterial roads (Gilbert Road and Elliot Road).

Committed Transportation Features

Figure 1 also shows several "committed" future transportation features that are expected to be implemented within the District at some point in the future. Some of these elements are programmed, meaning that funding has been identified for their construction; these features are labeled as "Future". Future programmed projects in the District include a grade-separated crossing over the railroad on the Powerline Trail, the extension of Ash Street between Vaughn Avenue and Juniper Avenue, and the installation of sidewalk on Elliot Road just east of Gilbert Road. It should also be noted that the eastbound bus stop on Elliot Road west of Gilbert Road is programmed to be relocated east of Gilbert Road in the near future and that the Gilbert Road railroad crossing will soon receive some safety upgrades.

Elements labeled as "Planned" on Figure 1 indicate planned projects that have been approved and adopted but for which no funding source has been identified and assigned yet. The main planned project in the District is a regional commuter rail along the existing railroad line. This project was proposed in the Maricopa Association of Governments (MAG) Commuter Rail System Study, which was approved and adopted by the MAG member agencies in 2010. This study also identified a proposed commuter rail station that would be constructed at the existing park-and-ride lot in the District adjacent to the railroad tracks.

Existing Mobility Gaps

The primary mobility gap in the District is that no bicycle facilities exist along the entirety of Gilbert Road within the District and along Elliot Road west of Gilbert Road. The railroad and canal also serve as barriers to mobility because there are limited crossings of these facilities in the District.

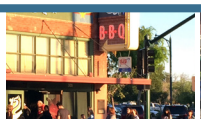
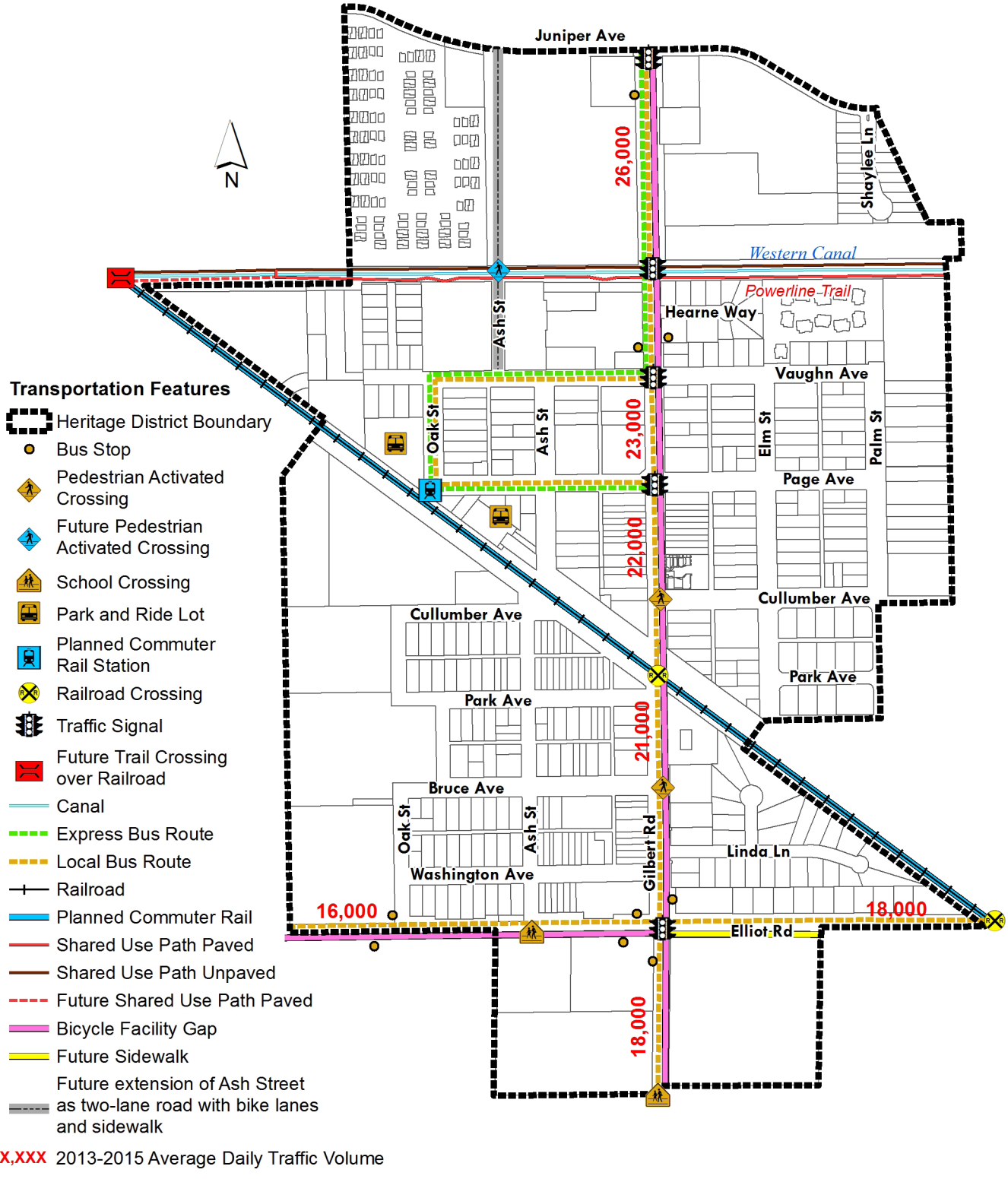


Figure 1 - Heritage District Existing Transportation Features



Existing Access Routes

Figure 2 shows a map of the primary and secondary access routes to, from, and within the District. The District's primary access routes are the high-volume arterial streets of Gilbert Road and Elliot Road, which provide two travel lanes in each direction and connect to the regional arterial street network. Secondary access routes are lower-volume local streets primarily used to travel within the District or connect to adjacent neighborhoods. The Powerline Trail is also considered a secondary access route for bicyclists and pedestrians.

Existing Traffic Conditions

The Synchro traffic modeling program was utilized to analyze existing traffic conditions at signalized intersections in the District based on existing traffic count data from 2015, existing lane geometry, and existing signal timing parameters.

All signalized intersections within the District currently operate at acceptable levels of service (LOS) for a downtown area, meaning LOS E or better, with all but the Gilbert Road/Elliot Road intersection operating at LOS C or better. Vehicle queues are typically no longer than about 10 vehicles (approximately 250 feet), with queuing most commonly present on Gilbert Road northbound (NB) approaching Page Avenue and southbound (SB) approaching Vaughn Avenue, as well as eastbound on Vaughn Avenue and Page Avenue approaching Gilbert Road.

The afternoon (PM) peak period is the most congested time of the day in the District, particularly on Friday, followed by the mid-day (MD) peak period. On-street parking is permitted on most District streets, and the parking near existing restaurants is heavily utilized during the MD and PM peak periods.

More information on existing traffic conditions is provided in the Synchro output reports in the Appendix.

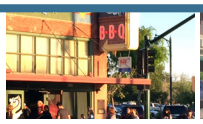
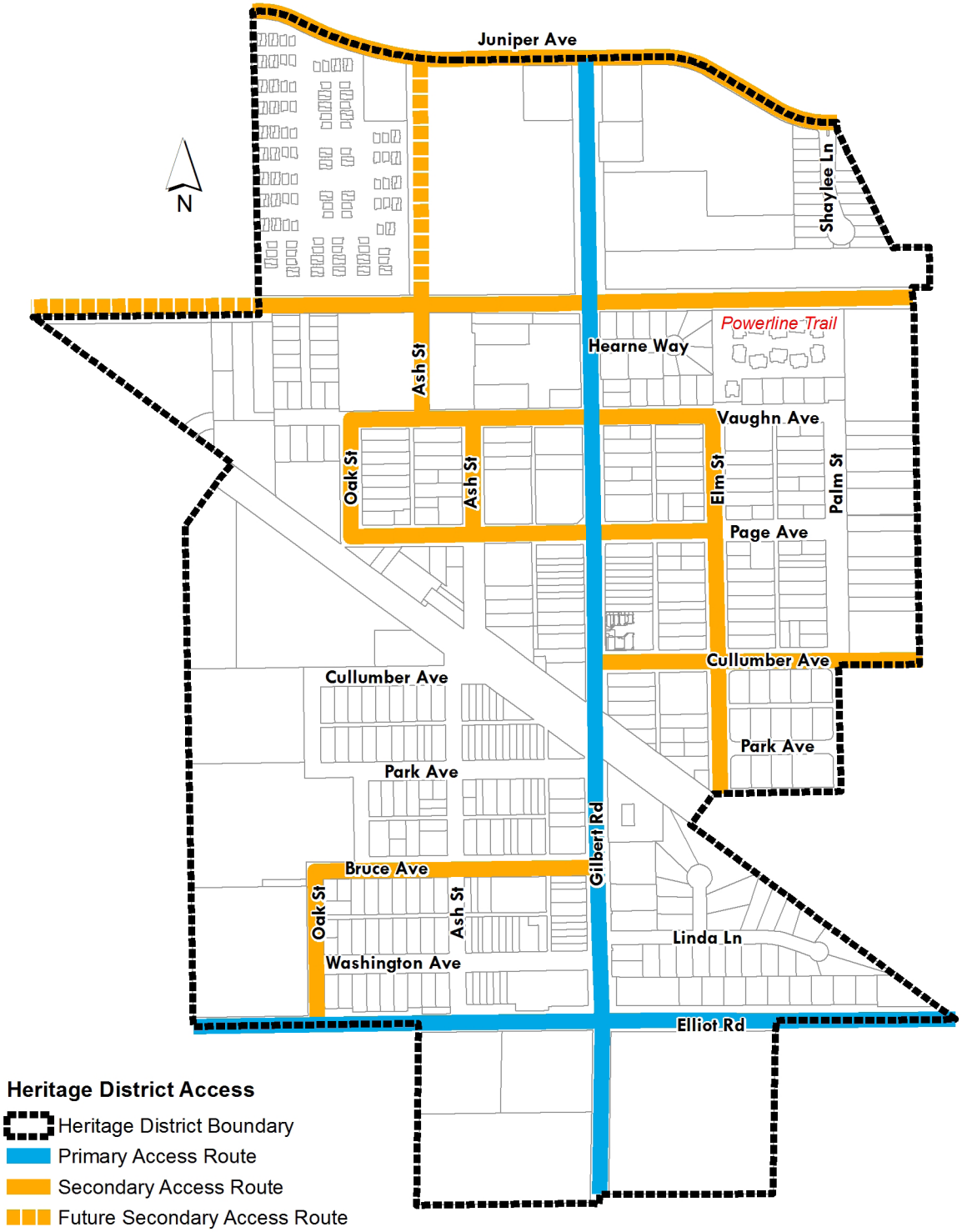


Figure 2 - Heritage District Existing Access Routes



III. Projected Future Conditions

The Heritage District Redevelopment Plan Update Addendum: Real Estate, Land Use & Housing Assessment, conducted by the Calfee Group, projects that future development will continue within the District, with projected land uses including mixed-use and higher-density residential uses in addition to retail/restaurant and office uses. This trend in development is already in motion and is expected to continue to occur within the District for the foreseeable future.

This section of the document discusses the impacts of projected future developments on the transportation network and features within the District and the wider effects on transportation within the region.

Projected Future Development

Figure 3 shows the projected "build-out" land uses within the District as described in the Heritage District Redevelopment Plan Update Addendum: Real Estate, Land Use & Housing Assessment. The build-out condition refers to when all developable parcels have been developed. These projected developments generally conform to the land use and zoning maps published in the Town's General Plan for the Heritage District.

The build-out condition projects a total of approximately 4.3 million square feet of development, an increase of 3.0 million square feet over the existing 1.3 million square feet of development. This change in square footage includes approximately 1,000 new residential dwelling units, most of which are anticipated to be multi-family housing (e.g., apartments, townhomes, condos). More information on the projected development assumptions is provided in the Appendix.

Estimated Trip Generation Volumes

The projected build-out development will generate substantially more traffic into, out of, and within the District compared to existing development. To understand this anticipated increase in travel demand, an analysis on trip generation volumes for all anticipated new developments and redeveloped areas within the District was completed. The following is a summary of the method used to estimate the trips generated by existing and projected land uses and the results and implications of this analysis.

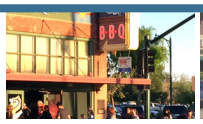
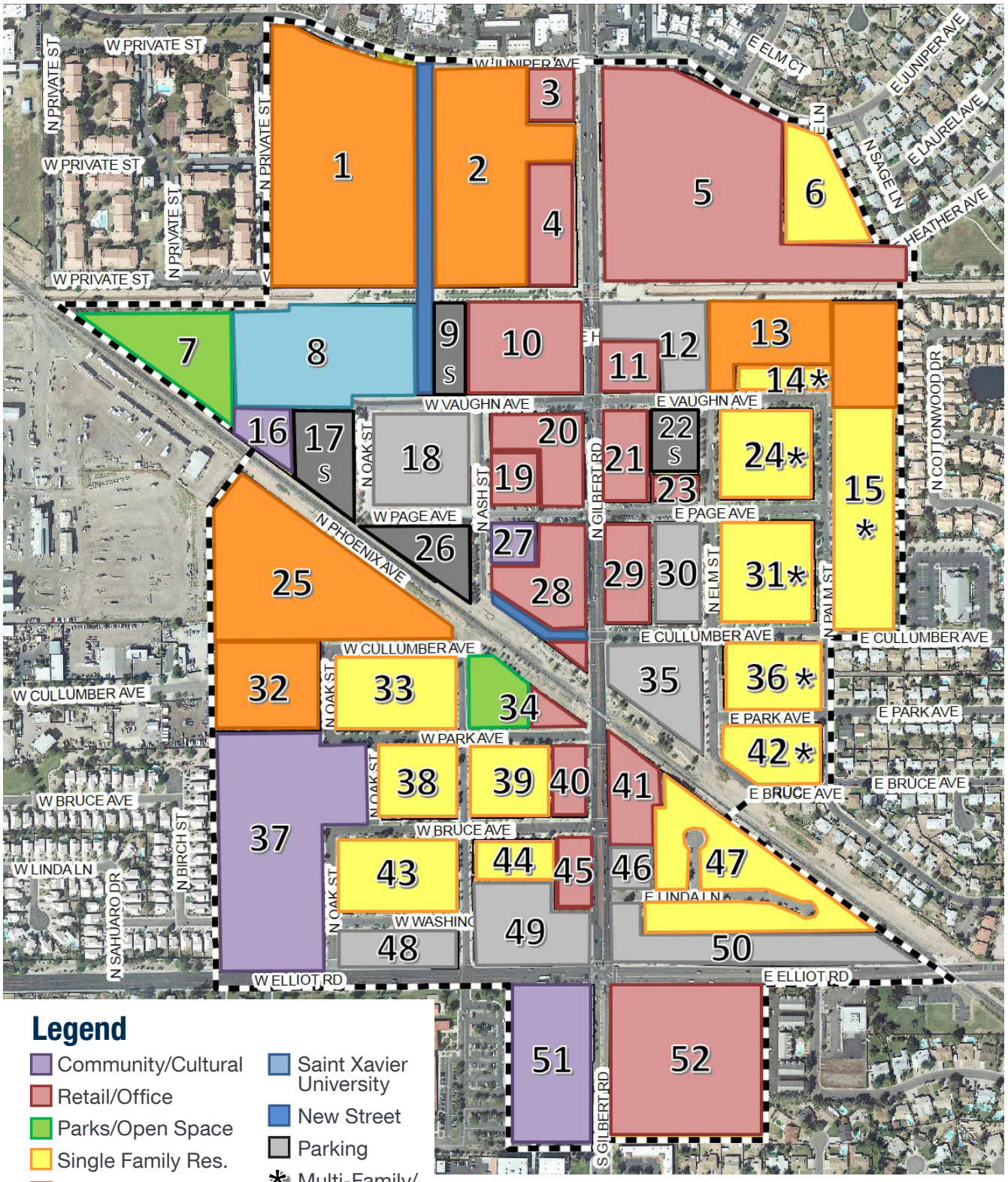


Figure 3 - Projected Future Heritage District Land Uses



Legend

- Community/Cultural
- Retail/Office
- Parks/Open Space
- Single Family Res.
- Multi-Family Res.
- Mixed Use
- Saint Xavier University
- New Street
- Parking
- * Multi-Family/ Low Density (MF/L) Infill

This map was developed as part of the Heritage District Redevelopment Plan Update Addendum: Real Estate, Land Use & Housing Assessment.

As shown in Figure 3, the Heritage District was separated into 52 different blocks for analysis purposes, each with its own respective land uses and intensities. Trip generation estimations were calculated for each block for both the existing and projected land use scenarios. The 9th edition of the Institute of Transportation Engineers (ITE) Trip Generation manual was used to obtain PM peak hour trip generation rates and inbound/outbound percentages, which were then used to estimate the number of PM peak hour trips that can be attributed to the projected development. In this analysis, the PM peak hour was defined as the PM peak hour of Gilbert Road, which is typically in the 5pm-7pm timeframe. In general, the ITE land use codes that were used to estimate expected trip generation for each land use were:

- 210 – Single-Family Detached Housing;
- 223 – Mid-Rise Apartments;
- 710 – General Office Building;
- 730 – Government Office Building; and
- 826 – Specialty Retail Center.

For mixed-use blocks, a combination of the aforementioned land use codes was used to estimate the trip generation for those blocks. No trip generation estimates were calculated for open spaces. No trip generation estimates were calculated for parking areas, with the exception of the park-and-ride lot and the planned commuter rail station. Vehicle trips to a parking area are typically not destination trips, but are instead trips generated by the surrounding land uses.

In some instances other land use codes or exceptions were used to estimate trip generation for existing and projected land uses that more accurately reflect the existing or projected land use. These exceptions are summarized in the Appendix.

The blocks were also aggregated together to form seven distinct areas designated as Areas A through G. Due to the diversity of existing and projected land uses within each area of the District, it is reasonable to expect that trip interaction will result between land uses within each area. To account for this interaction, the methodology for estimating internally captured trips in the 2004 ITE Trip Generation Handbook was used. Given the calculated interaction percentages, conservative interaction estimates were applied for each group of blocks and the resulting trip generation reduction was calculated. These interaction reductions ranged from 0%-15% within each of the seven areas.

Land uses such as high-turnover (sit-down) restaurants and shopping centers do not typically generate all new traffic on a roadway system. The total traffic generation is a combination of pass-by trips, or traffic drawn directly from the passing traffic flow on the adjacent streets, and primary trips, which represent new traffic drawn to the facility. To assess the pass-by trips, the data published in the ITE Trip Generation manual was used to estimate the pass-by percentages for the applicable land uses. Given the pass-by percentages, conservative estimates were applied for each applicable land use within a block and the resulting trip generation reduction was calculated. These pass-by reductions ranged from 0%-10% within each of the seven areas.

Due to the close proximity of land uses as well as existing and planned pedestrian, bicycle, and transit facilities, it is also reasonable to expect an alternate modes trip reduction in the District as many trips will be made by walking, biking, and transit. It was assumed that 5% of existing trips are made by an alternate mode, with 15% of projected development trips being made by an alternate mode, which results in approximately 10% of all trips in the build-out condition being made by an alternate mode.

Distribution percentages for the existing and projected development site-generated traffic were developed using existing intersection PM peak hour movement counts as well as projected daily traffic volumes on surrounding arterials. Based on existing traffic counts, during the PM peak hour the majority of traffic on Gilbert Road is traveling southbound. It was assumed that 55% of the trips entering the Heritage District would come from the north and that 55% of the exiting trips would continue to the south. It was assumed that the remaining 45% of entering trips would come from the south and that the remaining 45% of exiting trips would continue to the north.

Due to the lack of connectivity in the District, all of the trips to/from Areas A through G were assigned using the aforementioned distribution along Gilbert Road with the exceptions that five percent of the trips from Areas E and F and ten percent of the trips from Area G were assigned along Elliot Road. Entering and exiting trips were then aggregated together at several locations along Gilbert Road to get an estimate of how much traffic on Gilbert Road is due to developments within the District.

The results from the trip generation analysis can be found in **Tables 1 - 4.**

TABLE 1 – SUMMARY OF HERITAGE DISTRICT TRIP GENERATION ANALYSIS

Area	Blocks	Description	Change in Development (Projected - Existing) (ft2)	Change in Dwelling Units (Projected - Existing)	Factored PM Peak Trips In	Factored PM Peak Trips Out	Factored PM Peak Trips Total
A	1-4	North of canal, west of Gilbert Rd	407,875	300	102	129	231
B	5-6	North of canal, east of Gilbert Rd	-	-	-	-	-
C	7-10, 16-20, 26-28	Canal to railroad, west of Gilbert Rd	1,034,839	243	227	573	800
D	11-15, 21-24, 29-31, 35-36, 42	Canal to railroad, east of Gilbert Rd	989,669	336	240	268	508
E	25, 32-34, 37-40, 43-45, 48-49	Railroad to Elliot Rd, west of Gilbert Rd	381,333	194	43	72	115
F	41, 46-47, 50	Railroad to Elliot Rd, east of Gilbert Rd	23,195	(2)	27	39	66
G	51-52	South of Elliot Rd, west & east of Gilbert Rd	170,000	-	232	251	483
		Total	3,006,911	1,071	871	1,332	2,203

TABLE 2 – PM PEAK HOUR VOLUMES ON GILBERT ROAD DUE TO EXISTING DEVELOPMENT			
Location	Northbound	Southbound	Total
North of Juniper Avenue	336	375	711
North of Western Canal	274	452	726
North of Railroad	297	425	722
North of Elliot Road	300	404	704

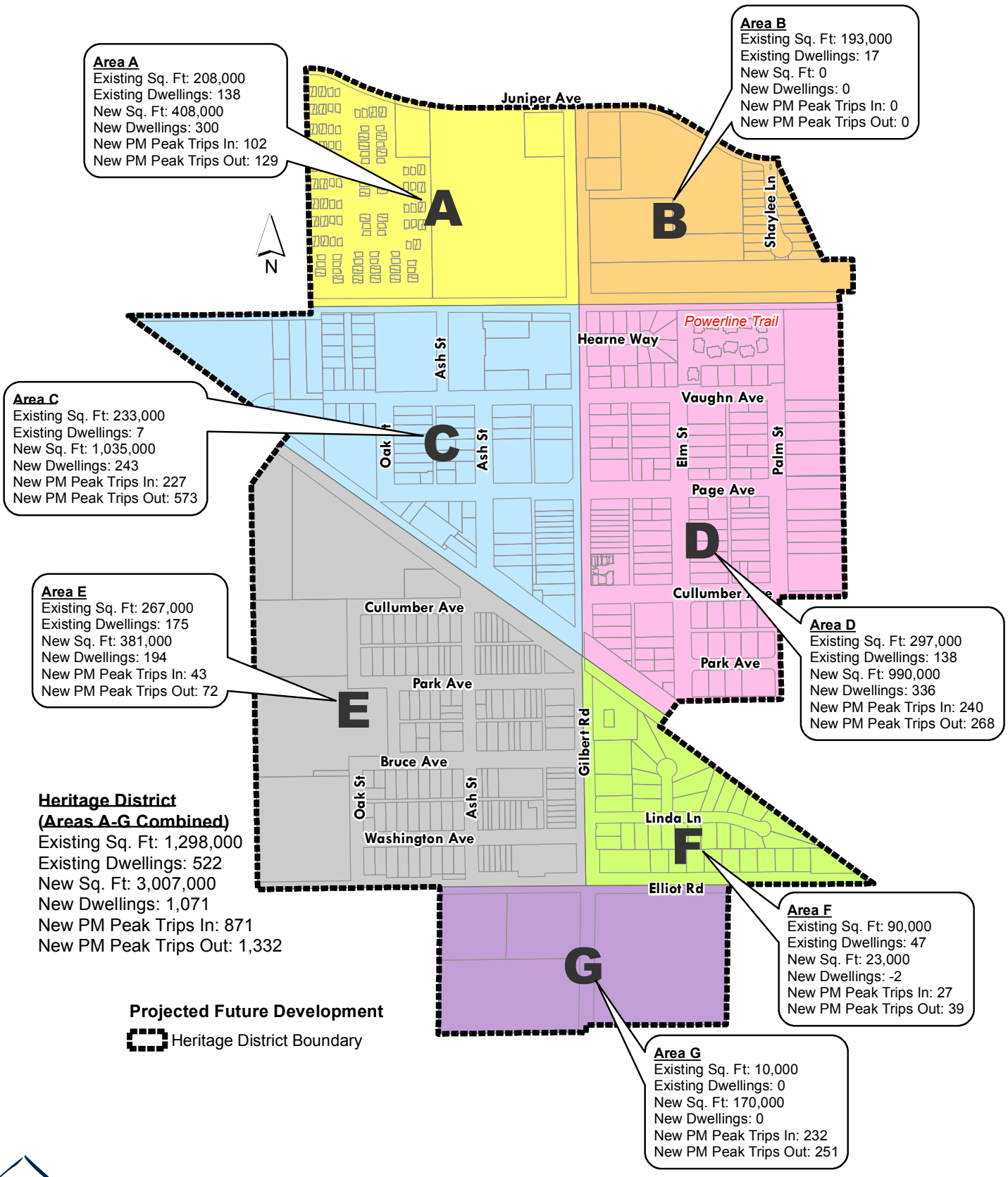
TABLE 3 – PM PEAK HOUR VOLUMES ON GILBERT ROAD DUE TO BUILD-OUT DEVELOPMENT			
Location	Northbound	Southbound	Total
North of Juniper Avenue	953	861	1,814
North of Western Canal	880	948	1,828
North of Railroad	723	1,140	1,863
North of Elliot Road	704	1,139	1,843

TABLE 4 – PM PEAK HOUR VOLUMES ON GILBERT ROAD DUE TO CHANGES IN DEVELOPMENT			
Location	Northbound	Southbound	Total
North of Juniper Avenue	600	480	1,080
North of Western Canal	588	495	1,083
North of Railroad	419	700	1,119
North of Elliot Road	397	717	1,114

The existing and new (projected minus existing) square footage, dwelling units, and PM peak hour trips in/out are summarized in **Figure 4** for each defined Area. More information on the trip generation analysis is provided in the Appendix.

PM peak hour volumes can be converted to estimated daily traffic volumes through the use of a "K factor", which is the ratio of the PM peak hour volume to the daily traffic volume. In comparing existing peak hour and daily traffic count data, Gilbert Road in the Heritage District has a K factor of approximately 9%. Applying this K factor to the trip generation information indicates that approximately 8,000 vehicles that travel on Gilbert Road through the District on a typical day have an origin or destination within the District. This represents 30%-40% of the total traffic on Gilbert Road through the District. The projected development is anticipated to generate an additional 12,000 daily vehicle trips, for a total of 20,000 vehicle trips in the build-out condition that have an origin or destination within the District. This increase in vehicle trips will result in increased congestion on Gilbert Road in the build-out condition compared to existing conditions.

Figure 4 - Projected Future Development and Trip Generation in the Heritage District



Projected Regional Traffic Conditions

Currently, Gilbert Road serves as a throughway for regional traffic traveling north-south, with approximately 60%-70% of the total traffic on Gilbert Road through the Heritage District being pass-through traffic that does not have an origin or destination in the District. Changes in regional traffic volumes and patterns also need to be accounted for when analyzing future traffic conditions in the District. Cooper Road and Lindsay Road are the adjacent north-south arterials that parallel Gilbert Road. From a regional perspective, these three arterials need to be evaluated together as changes on Gilbert Road can impact Cooper Road or Lindsay Road, and vice versa.

The Maricopa Association of Governments (MAG) has developed a regional travel demand model that estimates existing and future vehicle trips and air quality emissions. In 2014, MAG prepared a model that projected daily traffic volumes on the regional transportation network for the year 2035. This model incorporated the improvement projects recommended in MAG's 2035 Regional Transportation Plan (RTP). The assumed RTP future improvements most relevant to the Heritage District are the following:

- Construction of a "half" traffic interchange on US 60 at Lindsay Road with an eastbound off-ramp and westbound on-ramp (programmed for 2027-2035)
- Intersection improvements that involve widening the intersection to six through lanes and constructing dual left-turn lanes:
  - Elliot Road and Cooper Road (programmed for 2015-2019)
  - Guadalupe Road and Cooper Road (programmed for 2015-2019)
  - Elliot Road and Gilbert Road (programmed for 2020-2024)

The projected 2035 daily traffic volumes developed by MAG are shown in **Figure 5** for the major roadways in the vicinity of the Heritage District. This figure also shows existing daily traffic volumes, with volumes outside the District obtained from the 2014 Gilbert Transportation Master Plan (TMP). Volume-to-capacity (v/c) ratios are also shown for both existing and 2035 volumes based on capacity values obtained from the Gilbert TMP.

Table 5 summarizes the existing and projected 2035 daily volumes and volume-to-capacity (v/c) ratios for these key north-south arterials. The traffic volumes on Gilbert Road, Cooper Road, and Lindsay Road are all expected to increase by 2035. The v/c ratios are also all expected to increase except on Cooper Road (which reflects the programmed intersection widening projects on Cooper Road at Guadalupe Road and Elliot Road).

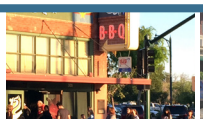


Figure 5 - Regional Existing and Projected Arterial Daily Volumes

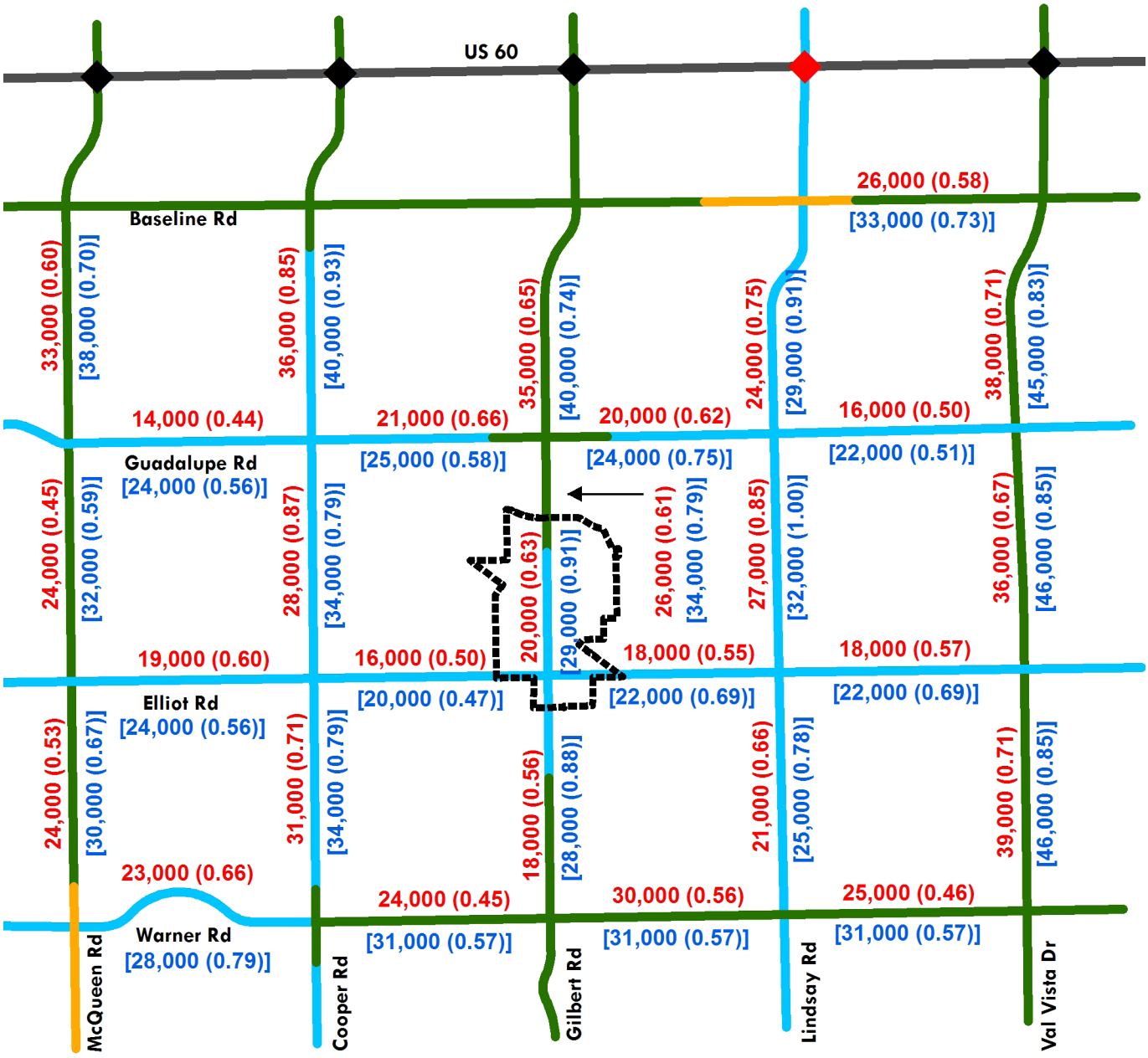


TABLE 5 – EXISTING AND PROJECTED DAILY TRAFFIC VOLUMES ON KEY NORTH-SOUTH ARTERIALS				
Arterial Roadway Segment	Existing Daily Volume	Existing Volume-to-Capacity Ratio	2035 Daily Volume	2035 Volume-to-Capacity Ratio
Cooper Road between Guadalupe Road and Elliot Road	28,000	0.87	34,000	0.79
Gilbert Road between Guadalupe Road and Heritage District	26,000	0.61	34,000	0.79
Gilbert Road in the Heritage District	20,000	0.63	29,000	0.91
Lindsay Road between Guadalupe Road and Elliot Road	27,000	0.85	32,000	1.00

In the transportation industry, a v/c ratio of 0.85 (equivalent to LOS D) is typically considered the upper limit of acceptable traffic conditions in suburban environments (e.g., most arterial segments in the Phoenix area). In urbanized downtown areas (such as the Heritage District), a v/c ratio of 1.00 (equivalent to LOS E) is typically considered the upper limit of acceptable traffic conditions, indicating that higher congestion levels are generally expected in urbanized downtown areas.

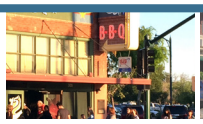
Based on this information, both Cooper Road and Lindsay Road currently are right at or just over the upper limit of acceptable congestion while Gilbert Road has acceptable levels of congestion. By 2035, Lindsay Road is projected to have an unacceptable level of congestion. Gilbert Road in the Heritage District is projected to still have an acceptable level of service in 2035, although it will be getting close to the upper acceptable limit for urbanized downtown areas.

The previously discussed build-out trip generation analysis had projected daily traffic volumes on Gilbert Road in the District will increase by 12,000 vehicles, which is 3,000 vehicles more than the 9,000 vehicle increase the MAG model had projected between existing and 2035 conditions. This suggests the build-out land use assumptions are either more intense than what had been assumed in the MAG model for the District or that build-out in the District will occur later than 2035. Either way, Gilbert Road through the District is expected to essentially be at capacity in the build-out condition and will not be able to accommodate increases in vehicular regional through traffic.

Previously Recommended But Unfunded Future Transportation Improvements

Gilbert's TMP includes the following transportation improvement recommendations relevant to the District that are not yet funded:

- Intersection improvements that involve widening the intersection to six through lanes and constructing dual left-turn lanes:
  - Lindsay Road and Guadalupe Road
  - Lindsay Road and Elliot Road




- Transit circulator that serves the Heritage District and the area generally bounded by Baseline Road, Lindsay Road, Warner Road, and Cooper Road
- Bus Rapid Transit (BRT) service along Gilbert Road between the northern Town limits and Williams Field Road that serves the Heritage District and could connect to the light rail in Mesa

MAG's 2035 RTP shows regional commuter rail service along the railroad through the Heritage District as an "illustrative" improvement, which means it is currently unfunded.

Evaluation of Traffic Impacts if Reduce Travel Lanes on Gilbert Road

One idea that has been suggested for creating a more pedestrian-oriented environment in the Heritage District is to restripe Gilbert Road through the District to convert the 13.5-foot-wide outside travel lane into a 5.5-foot-wide bike lane and 8-foot-wide on-street parking. This would result in Gilbert Road having one travel lane in each direction through the District. This concept would likely reduce vehicle speeds on Gilbert Road and would increase the distance between the travel lanes and the sidewalk, improving safety for pedestrians. The on-street parking created in this concept would provide convenient parking for the land uses along Gilbert Road. The bike lane created in this concept would provide continuous bike facilities through the core of the District. These anticipated benefits need to be weighed against the adverse traffic impacts of eliminating a travel lane in each direction.

The traffic impacts of this potential concept were evaluated to determine how it would affect traffic operations within the District and the region. Synchro traffic models were developed to calculate the anticipated 2015 LOS, delay, and queues in the District with the outside travel lane in each direction converted to on-street parking and a bike lane. The Page Avenue/Gilbert Road intersection was selected as a representative intersection to evaluate as it is in the middle of the busiest part of the District and peak hour data was available for the weekday AM, MD, and PM periods as well as for the Friday MD and PM peak periods.

Table 6 shows the volumes, queue lengths, delay, and LOS at the Page Avenue/Gilbert Road intersection for the five aforementioned peak periods under existing conditions, with Gilbert Road having two travel lanes in each direction. The Friday PM peak hour has the highest volumes and queue levels, with queues essentially backing up to the adjacent intersections at Vaughn Avenue and at Cullumber Avenue. All time periods have acceptable delay and LOS.

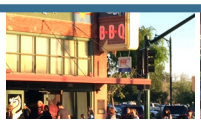


TABLE 6 – PAGE AVENUE/GILBERT ROAD 2015 CAPACITY ANALYSIS WITH 4-LANE GILBERT ROAD							
Time Period	Page Ave/ Gilbert Rd 2015 Peak Hour Volume	% of Friday PM Volume	50% Queue Length (ft) with 4-Lane Gilbert Rd		95% Queue Length (ft) with 4-Lane Gilbert Rd		Page Ave/ Gilbert Rd Intersection Delay (s) / LOS w/ 4-Lane Gilbert Rd
			SB at Page	NB at Page	SB at Page	NB at Page	
Weekday AM	1,427	63%	31	88	50	166	8 / A
Weekday MD	1,638	72%	33	117	47	162	9 / A
Weekday PM	1,921	85%	45	151	57	200	10 / A
Friday MD	2,064	91%	56	148	71	201	11 / B
Friday PM	2,261	100%	51	286	58	371	9 / A

Table 7 shows the results of reducing Gilbert Road to one travel lane in each direction (with right-turn lanes) under the assumption that no diversion or reduction of traffic volumes occurs. Compared to existing conditions, the queue lengths and delay along Gilbert Road increase significantly for all time periods, particularly in the weekday PM and Friday MD and PM time periods. The LOS worsens for all time periods, particularly in the weekday PM and Friday MD and PM time periods. These results reflect severe congestion that would significantly inhibit travel within and through the District.

TABLE 7 – PAGE AVENUE/GILBERT ROAD 2015 CAPACITY ANALYSIS WITH 2-LANE GILBERT ROAD							
Time Period	Page Ave/ Gilbert Rd 2015 Peak Hour Volume	% of Friday PM Volume	50% Queue Length (ft) with 2-Lane Gilbert Rd		95% Queue Length (ft) with 2-Lane Gilbert Rd		Page Ave/ Gilbert Rd Intersection Delay (s) / LOS w/ 2-Lane Gilbert Rd
			SB at Page	NB at Page	SB at Page	NB at Page	
Weekday AM	1,427	63%	130	243	310	571	18 / B
Weekday MD	1,638	72%	183	298	485	528	25 / C
Weekday PM	1,921	85%	544	506	677	710	78 / E
Friday MD	2,064	91%	627	464	600	677	77 / E
Friday PM	2,261	100%	848	771	1,042	1,018	66 / E

If Gilbert Road were reduced to two lanes (one lane each direction) and congestion occurred as described in Table 7, some drivers without origins or destinations in the District would divert to other roads such as Cooper Road and Lindsay Road. **Table 8** shows the results for the two busiest time periods – weekday PM and Friday PM – under two different volume diversion scenarios: if the volume is reduced by 400 vehicles in each direction; and if the volume is reduced by 200 vehicles in each direction.

The 400-vehicle diversion scenario results in queues, delays, and LOS values similar to those of existing conditions where Gilbert Road has four travel lanes (see Table 6). The 200-vehicle diversion scenario results in queues, delays, and LOS values lengths worse than the 400-vehicle diversion scenario but better than the no-diversion scenario. The 200-vehicle diversion scenario results reflect moderate congestion that would have a noticeable impact on travel within and through the District.

TABLE 8 – PAGE AVENUE/GILBERT ROAD 2015 CAPACITY ANALYSIS WITH 2-LANE GILBERT ROAD AND DIVERSION

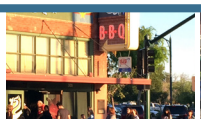
Time Period	Page Ave/ Gilbert Rd 2015 Peak Hour Volume	% of Friday PM Volume	50% Queue Length (ft) with 2-Lane Gilbert Rd		95% Queue Length (ft) with 2-Lane Gilbert Rd		Page Ave/ Gilbert Rd Intersection Delay (s) / LOS w/ 2-Lane Gilbert Rd
			SB at Page	NB at Page	SB at Page	NB at Page	
Weekday PM (minus 400)	1,121	50%	41	130	169	209	12 / B
Friday PM (minus 400)	1,461	65%	218	305	300	384	14 / B
Weekday PM (minus 200)	1,521	67%	77	256	521	454	22 / C
Friday PM (minus 200)	1,861	82%	500	550	592	664	27 / C

From a regional perspective, the 200-vehicle and 400-vehicle peak hour diversions translate into diversions of approximately 4,500 and 9,000 daily vehicles, most of which would likely shift to Cooper Road and Lindsay Road. As has been discussed previously, Lindsay Road and Cooper Road are both near capacity currently.

In the future 2035 or build-out condition, the diversion volumes would essentially have to double to maintain the same traffic performance as can be achieved in 2015 with the 4,500-vehicle and 9,000-vehicle diversions. Lindsay Road and Cooper Road would both likely need to be widened to six through lanes between Guadalupe Road and Elliot Road in the future condition if Gilbert Road were reduced to one travel lane in each direction.

Another consideration in the build-out condition is that the volume of traffic having an origin or destination in the District was estimated to be 20,000 daily vehicles. This value is higher than the 16,500 capacity of a two-lane road, which indicates there would likely be significant congestion in the District even if all of the regional through traffic was diverted from Gilbert Road. This situation could be mitigated with either less-intense development in the District than had been projected or an increased shift in trips to alternate modes.

More information on the traffic impacts of reducing travel lanes on Gilbert Road is provided in the Appendix.



Based on the findings of the analysis of existing and future traffic conditions, near-term and long-term recommendations have been developed to improve traffic and circulation in the Heritage District.

Near-Term Recommendations

Figure 6 shows the near-term recommendations for the Heritage District to improve existing and future traffic and circulation within the District. These recommendations are described in more detail below.

Near-Term Roadway Improvements

Cullumber Avenue Extension – It is recommended that Cullumber Avenue be extended as a two-lane road to connect between Ash Street and Gilbert Road adjacent to the railroad to improve roadway network continuity. This extension should include bike lanes and sidewalks in each direction to improve bicycle and pedestrian connectivity and have a similar cross-section to the underway Ash Street extension. The Town owns all of the parcels along the proposed Cullumber Avenue extension with the exception of parcels that are part of the existing Norwood Furniture development. The implementation of this extension would require removal of one existing building.

New Signalized Intersection at Cullumber Avenue and Gilbert Road – In coordination with the West Cullumber Extension from Ash Street to Gilbert Road and the Ash Street Bikeway (discussed later in this document), it is recommended that a signalized intersection be constructed at the intersection of Cullumber Avenue and Gilbert Road to facilitate the movement of vehicles, pedestrians, and bicyclists across Gilbert Road.

Vaughn Avenue Right-Turn Lane and On-Street Parking Designation – It is recommended that a 10-foot-wide eastbound right-turn-only lane be installed at the intersection of Vaughn Ave and Gilbert Road. A dedicated right-turn lane will help improve traffic flow by allowing right-turning vehicles to turn on red while vehicles traveling straight or left wait for the signal to change. The roadway is currently wide enough that the right-turn-lane can be installed using striping and pavement markings without needing to relocate the existing curbs. In addition, the Town should designate existing on-street parking spaces through signing and striping of the available spaces for both sides of the street along Vaughn Avenue and Ash Street.

Near-Term Bicycle and Pedestrian Facility Improvements

Bike Lanes on Elliot Road – It is recommended that the portion of Elliot Road that does not currently have bike lanes (between Neely Street and Gilbert Road) be restriped to provide this facility and fill this existing gap in the bicycle facility network. This can be done without having to move the existing curbs. The existing and proposed typical cross-sections on this segment of Elliot Road can be seen in **Figure 7.**

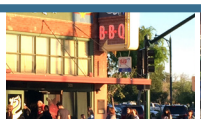
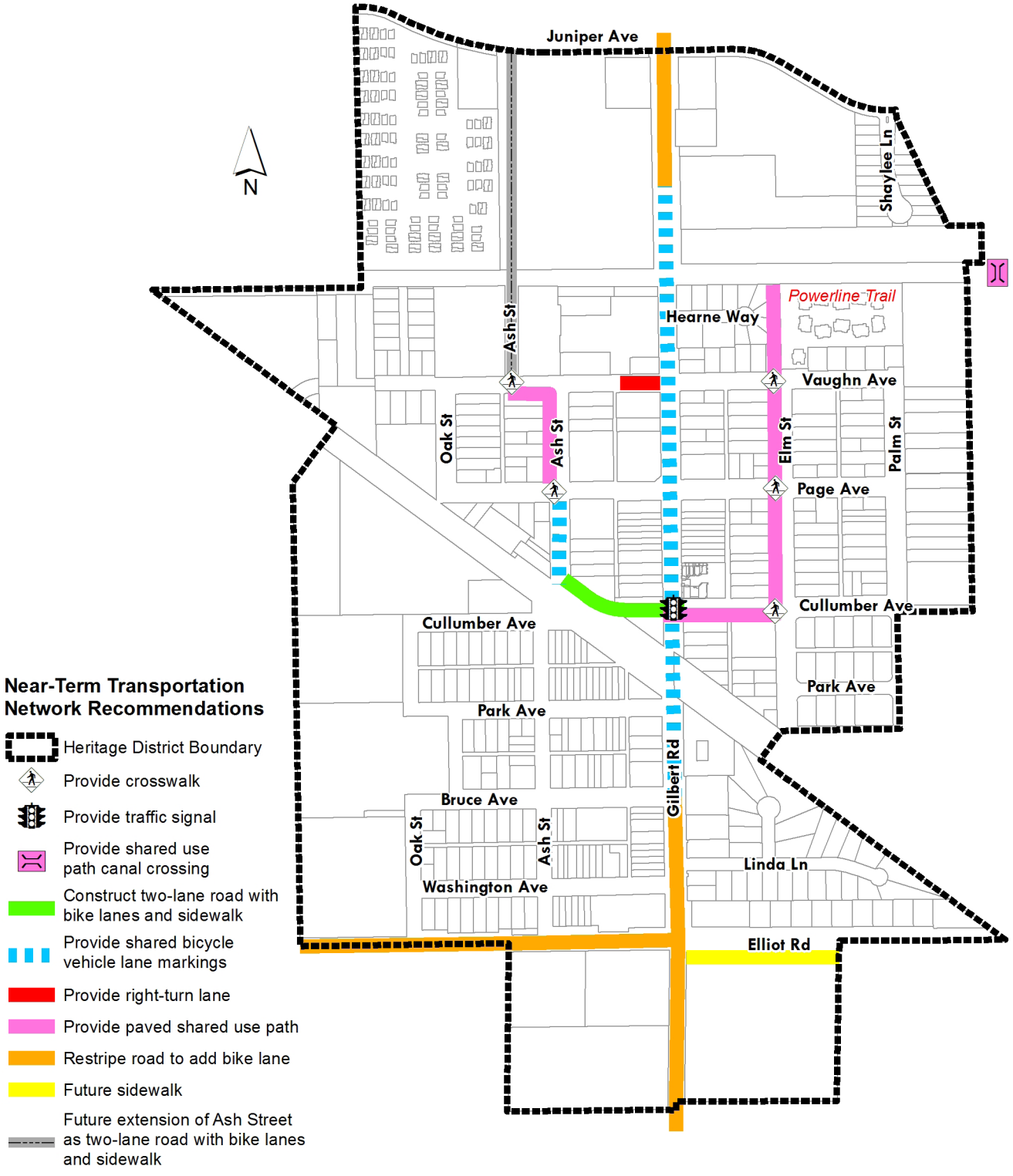



Figure 6 - Near-Term Transportation Network Recommendations for the Heritage District



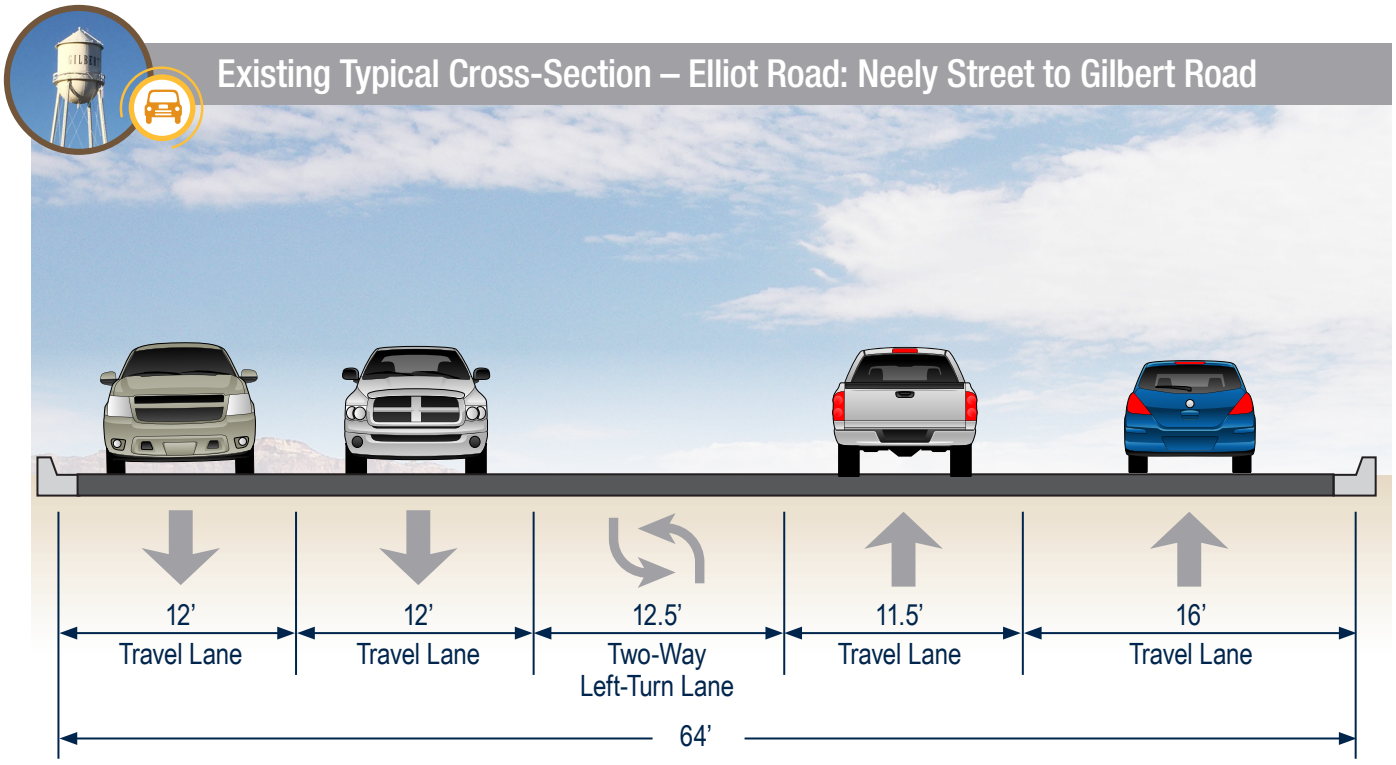
Bike Lanes on Gilbert Road – Similar to the above recommendation for Elliot Road, restriping Gilbert Road between Bruce Avenue and Silver Creek Road and between Olive Avenue and the Powerline Trail to include bike lanes is recommended. This can be done without having to move the existing curbs. The existing and proposed typical cross-sections on these two segments of Gilbert Road can be seen in **Figure 8** and **Figure 9**, respectively. It should be noted that an existing raised median exists along Gilbert Road for approximately 115 feet north of Elliot Road and 300 feet south of Elliot Road. In this area, the proposed typical section would include 10-foot travel lanes and a 5-foot bike lane to avoid impacting the median. These reduced widths would be a temporary, near-term improvement. A more permanent restriping with wider dimensions for the bike lane and travel lanes could potentially be completed as part of the Elliot Road/Gilbert Road intersection improvement project, which is programmed for construction in the 2020-2024 time period.

Shared Lane Markings and Signage along Gilbert Road – This recommendation addresses the current bicycle facility gap that exists along Gilbert Road in the core of the Heritage District. The recommended shared lane markings (also known as "sharrows") and signage, like those shown in **Figure 10**, do not reduce the number of travel lanes along Gilbert Road but do remind drivers that bicyclists have the legal right to utilize a travel lane, promoting safer travel for bicyclists through the District.

Figure 7 - Example of Shared Lane Markings and Signage

Source:
(left) http://cityofwatsonville.org
(right) http://mutcd.fhwa.dot.gov

Figure 8 - Existing and Proposed Cross-Sections for Elliot Road: Neely Street to Gilbert Road



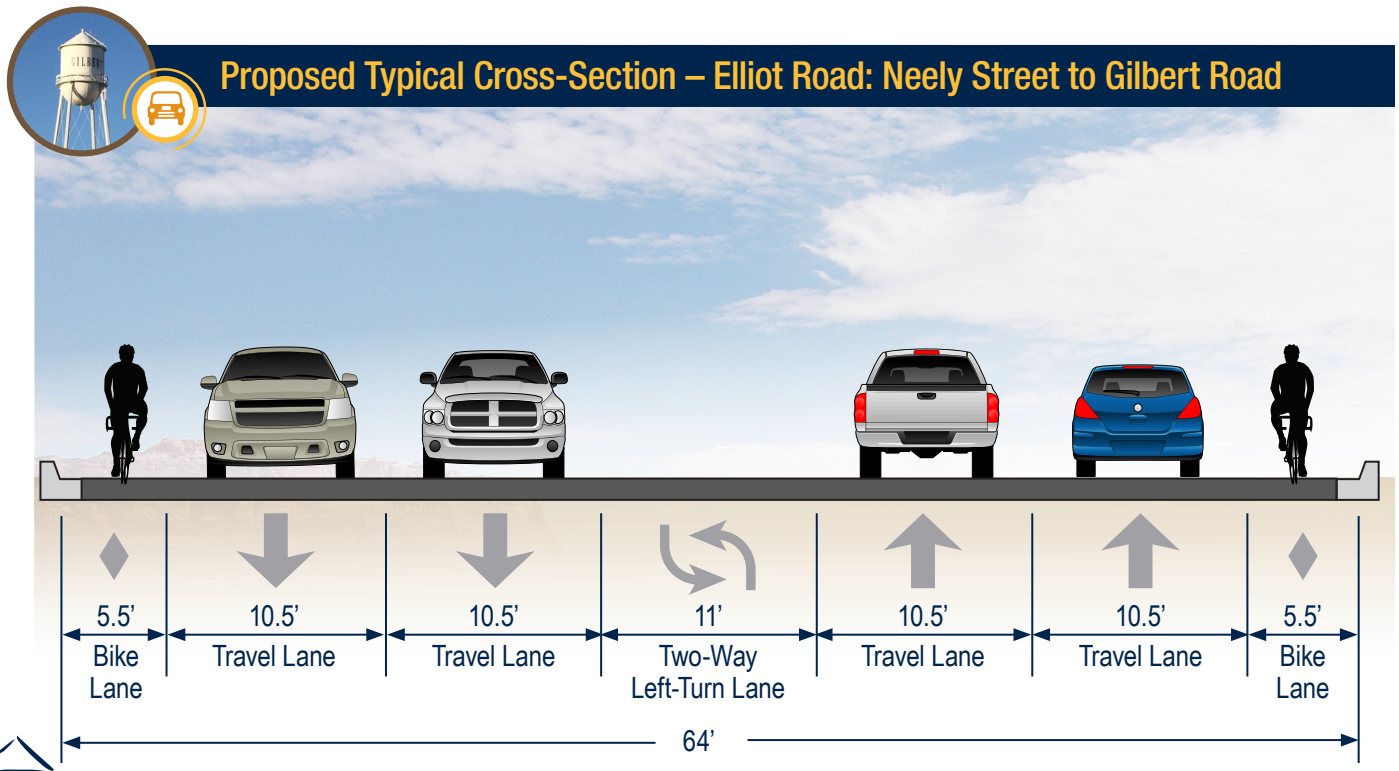
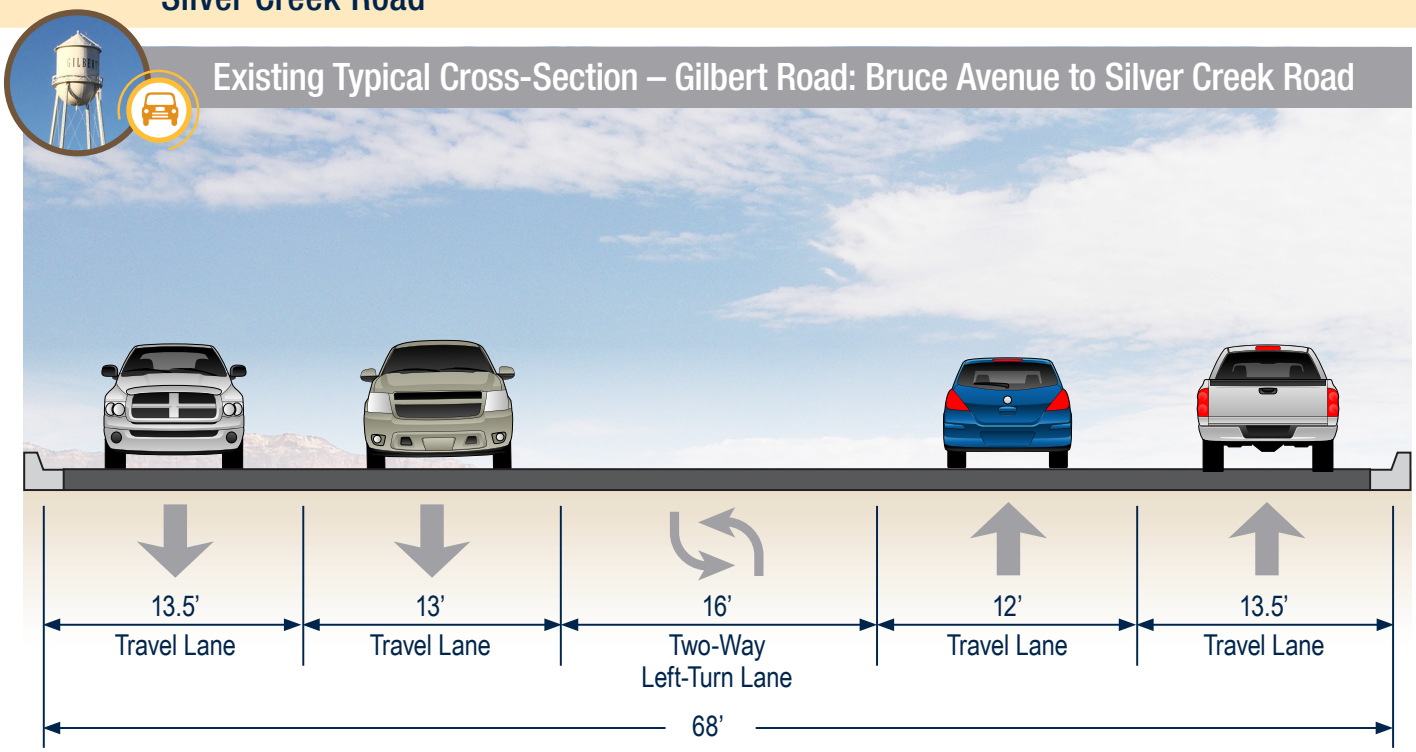


Figure 9 - Existing and Proposed Cross-Sections for Gilbert Road: Bruce Avenue to Silver Creek Road



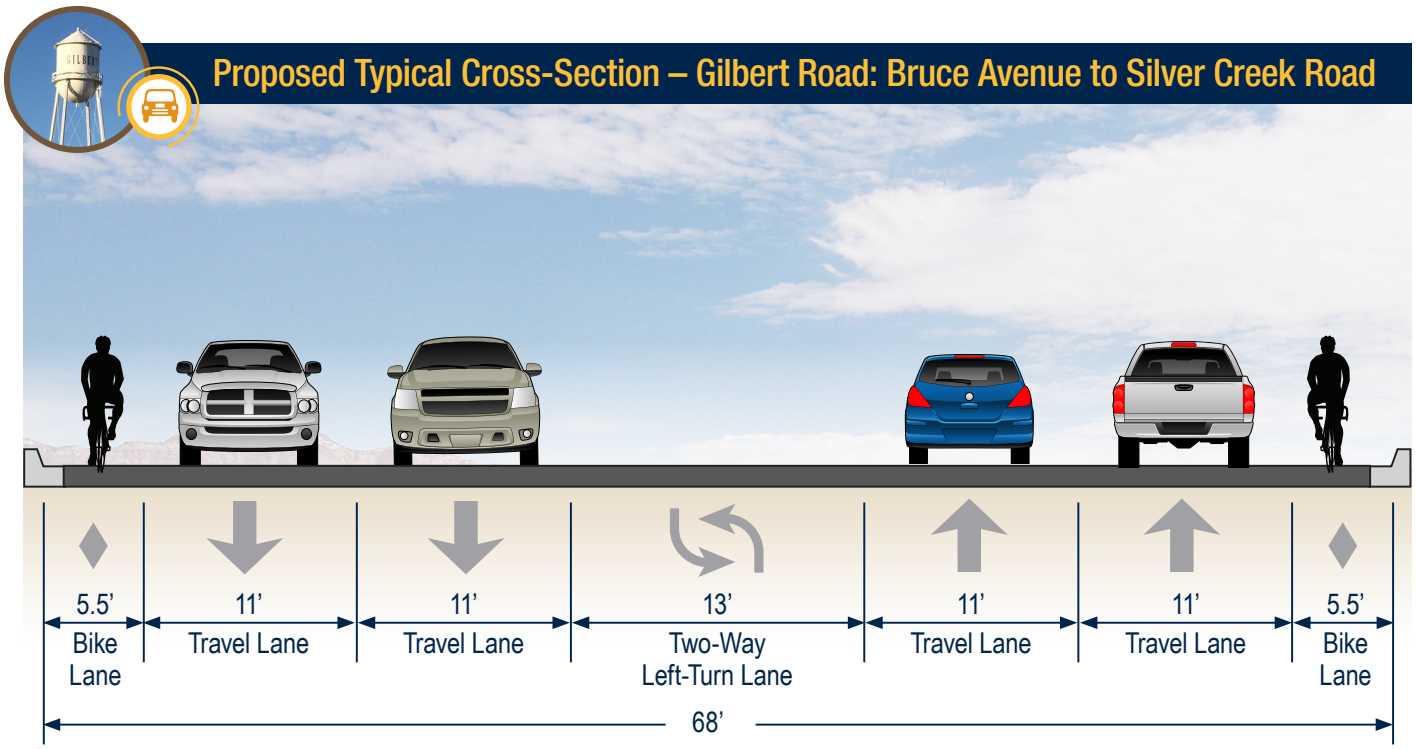
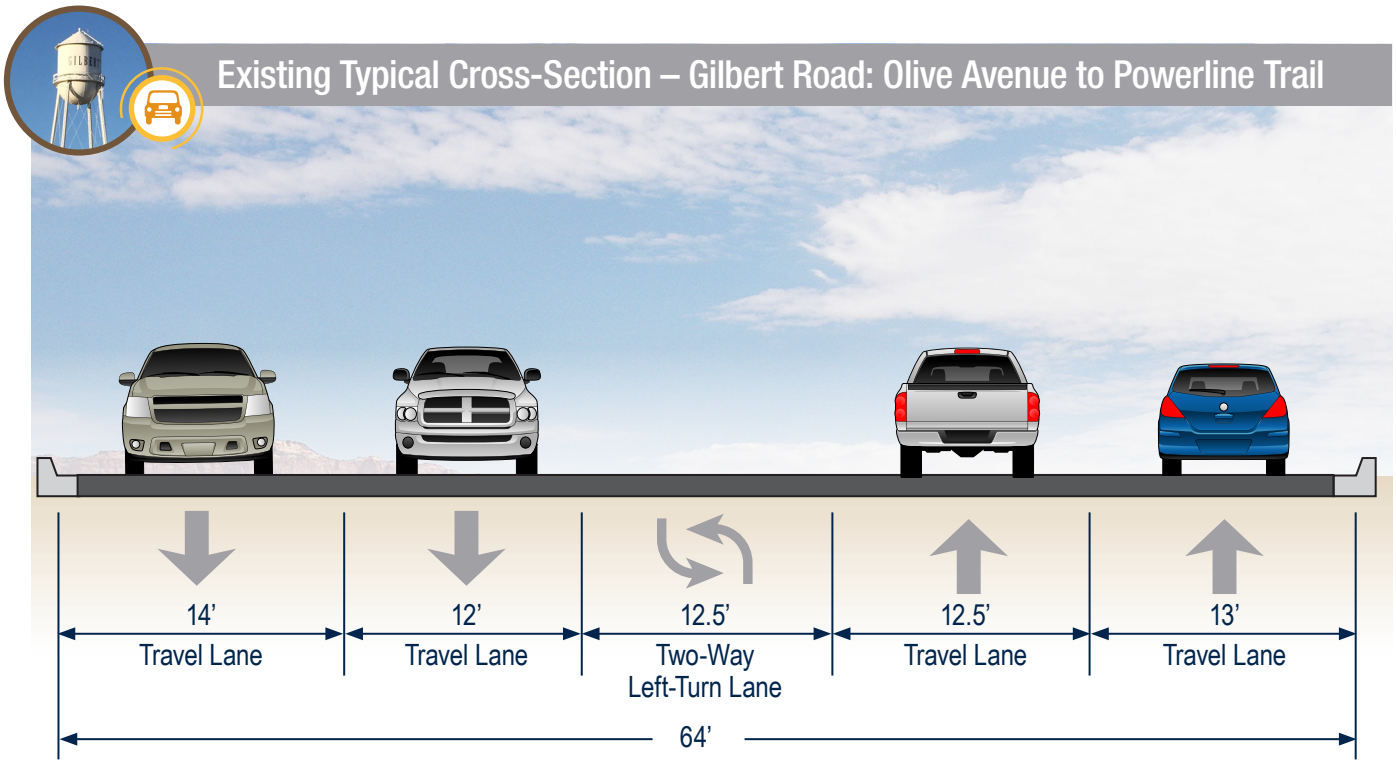
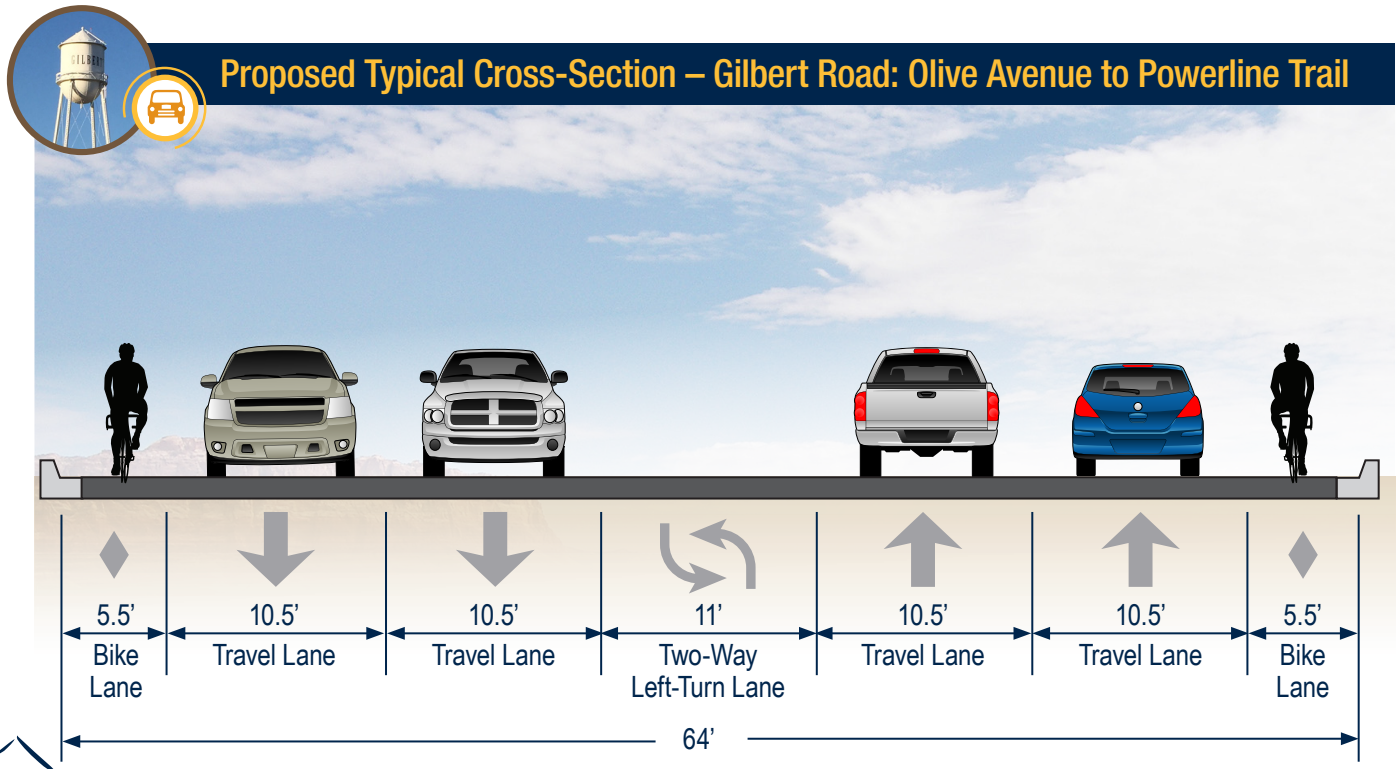


Figure 10 - Existing and Proposed Cross-Sections for Gilbert Road: Olive Ave to Powerline Trail





Ash Street Bikeway – This recommendation, which is based on a recommendation in the Town's Heritage District Design Guidelines, establishes Ash Street as a bikeway between Juniper Avenue and Gilbert Road. It also includes designating the segment of Juniper Avenue between Gilbert Road and Ash Street as a bike route. Implementing this recommendation would create a continuous bikeway loop on the west side of Gilbert Road through the District and would be an alternate route to Gilbert Road. Due to on-street parking and right-of-way constraints, there is not enough space to install bike lanes along all of Ash Street. The Ash Street bikeway would be comprised of the following:

- Between Juniper Avenue and Vaughn Avenue, bike lanes will be installed as part of the extension of Ash Street project that is currently under design
- Between Vaughn Avenue and Page Avenue, a 10-foot-wide shared use paved path should be constructed on the west side of the street to accommodate bicycles and pedestrians and prevent them from mixing with traffic and on-street parking along this busy section of Ash Street. The existing 4-foot-wide sidewalk would be replaced by this wider paved path
- Between Page Avenue and the proposed Cullumber Avenue extension, shared lane markings and signage should be installed
- Along the proposed Cullumber Avenue extension, bike lanes should be installed
- Striped crosswalks should be installed at the intersections of Ash Street/Vaughn Avenue and Ash Street/Page Avenue

Cullumber Avenue/Elm Street Shared Use Paved Path – This recommendation will help improve bicycle and pedestrian connectivity on the east side of the District and will connect to the Ash Street Bikeway on the west side of Gilbert Road. This path is recommended to have the following segments:

- On Cullumber Avenue between Gilbert Road and Elm Street, a 10-foot-wide shared use paved path should be constructed on the south side of the street in place of the existing narrower sidewalk
- On Elm Street between Cullumber Avenue and Vaughn Avenue, a 10-foot-wide shared use paved path should be constructed on the west side of the street in place of the existing narrower sidewalk
- Between Vaughn Avenue and the Powerline Trail, a 10-foot-wide shared use paved path should be constructed along the eastern edge of the vacant Town-owned parcels
- Striped crosswalks should be installed at the intersections of Cullumber Avenue/Elm Street, Elm Street/Page Avenue, and Elm Street/Vaughn Avenue

Shared Use Path Canal Crossing at Northeastern District Boundary – It is recommended that a shared use path canal crossing (i.e., bridge) be constructed to connect the Powerline Trail to the Village II park on the north side of the Western Canal. This improvement will provide a travel path for bicyclists and pedestrians between the District and the neighborhood located just northeast of the District.

Withdrawal of Pedestrian Parkway Concept Along Alley – It is recommended that the pedestrian parkway concept proposed along the alley just west of Gilbert Road in the Heritage District Design Guidelines be withdrawn as a recommendation. The other near-term recommendations negate the need for this additional pedestrian facility. This recommendation will allow the existing alley to continue to function as an alley for vehicle/truck use and will focus pedestrian activity on Gilbert Road.

Long-Term Recommendations

While the near-term recommendations address the major identified transportation needs and gaps, the following long-term recommendations provide guidance on how to further improve future traffic and circulation within the District.

Program the Unfunded Gilbert TMP Recommended Improvements Relevant to the District – The unfunded recommended TMP improvements of widening the Lindsay Road/Guadalupe Road and Lindsay Road/Elliot Road intersections should be programmed in the Town's Capital Improvement Program. The Town should coordinate with MAG and Valley Metro to work towards getting the recommended TMP improvements of providing BRT service along Gilbert Road and local circulator service in the Heritage District programmed in the regional transit program in the next generation of the RTP. The Town should also continue to support the proposed regional commuter rail service along the railroad through the District with a commuter rail station at the existing park-and-ride facility. These projects will help address regional traffic needs and provide more travel options to/from, through, and within the District.

Preserve Outside Lanes on Gilbert Road for Potential Future Needs – While the traffic analysis indicated potentially significant local and regional impacts could occur if the outside lanes on Gilbert Road through the District were converted to bike lanes and on-street parking, there may be a point in the long-term future where it makes sense for the outside lanes to be converted to other uses in response to how land use and transportation patterns change over time. Potential uses could be the aforementioned bike lanes and on-street parking or other uses such as a high-capacity transit (BRT) lane or shared bus/bike/right-turn lane. For now, the outside lanes should remain in place, with the thought that their use will be re-evaluated periodically to determine if any changes are needed.

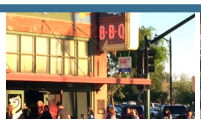


Table 9 provides the assumed unit costs for various bicycle, pedestrian, and roadway improvements that are recommended in this report. The estimated average construction costs for bicycle, pedestrian and roadway facilities were obtained from FHWA (http://pedbikesafe.org/BIKESAFE/countermeasures.cfm) as well as from recently completed local projects that use similar infrastructure. The FHWA data provides ranges of cost estimates - these costs were averaged and rounded to get an average unit cost.

Table 10 provides an overview of the near-term recommendations from the previous section that have costs and provides planning-level cost estimates for the implementation of the recommendations. Estimated materials costs are based on project cost information provided by the Town, where available, or the unit costs in Table 9 and only account for materials and construction. The estimated total costs account for soft costs such as planning, design, construction management, right-of-way and contingency. The inclusion of soft costs typically increases the cost by 10% to 50%. Soft costs vary significantly depending on the type and scale of improvements. More refined cost estimates should be developed as project development proceeds. The estimated total cost for the near-term recommended improvements is approximately $1.9 million.

TABLE 9 – ASSUMED UNIT COSTS FOR IMPROVEMENTS

Improvement	Cost
Roadway stripe	$3 per linear foot
Roadway stripe removal	$2 per linear foot
Striped crosswalk	$350 each
Pavement markings (shared lane, bike lane, right turn arrow)*	$180 each
Roadway signage (bike lane and shared roadway)*	$160 each
10-foot concrete shared use path	$50 per linear foot
ADA Ramp construction	$1,500 each
Signalized Intersection	$360,000 each
Pre-fabricated steel shared use path bridge	$150,000 each
New two-lane road with bike lanes and sidewalks	$500 per linear foot
Sidewalk Removal	$25 per linear foot

**Pavement markings and signage are assumed to have spacing of 200-1200 feet, depending on street context*

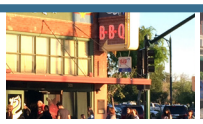


TABLE 10 – PLANNING-LEVEL COST ESTIMATES FOR NEAR-TERM RECOMMENDED IMPROVEMENTS				
Recommended Improvement	**Associated Components**	**Number of Units**	**Estimated Materials Cost**	**Estimated Total Cost**
Cullumber Avenue Extension	New 2-lane road with bike lanes and sidewalks	500 linear ft	$250,000	675,000
	Bike lane pavement marking	2 markings		
	Bike lane signage	2 signs		
New Signal at Cullumber Avenue and Gilbert Road	Traffic signal equipment	1 intersection	$360,000	$400,000
	Intersection striping	75 linear ft		
Vaughn Avenue Right-Turn Lane and On-Street Parking Designation	Striping	410 linear ft	$6,000	$10,000
	Right-turn pavement marking	1 marking		
	Signage	17 signs		
Bike Lanes on Elliot Road (between Neely St and Gilbert Road	Existing stripe removal	10,500 linear ft	$70,000	$105,000
	Restriping travel lanes and bike lane	15,600 linear ft		
	Bike lane pavement marking	8 markings		
	Bike lane signage	2 signs		
Bike Lanes on Gilbert Road (between Bruce Ave and Silver Creek Road and between Western Canal and Olive Ave)	Existing stripe removal	13,600 linear ft	$155,000	$235,000
	Restriping travel lanes and bike lane	20,500 linear ft		
	Bike lane pavement marking	14 markings		
	Bike lane signage	4 signs		
Shared Roadway Lane Markings along Gilbert Road	Shared lane/ bicycle marking pavement marking	10 markings	$2,000	$3,000
Ash Street Bikeway	Shared lane/ bicycle marking pavement marking	2 markings	$42,000	$62,000
	10-foot concrete shared use path	500 ft		
	ADA ramp construction	2 ramps		
	Striped crosswalk	2 crosswalks		
	Shared roadway signage	2 signs		
	Sidewalk removal	470 linear ft		
Cullumber and Elm Street Shared Use Paved Path	10-foot concrete shared use path	1600 ft	$114,000	$170,000
	ADA ramp construction	8 ramps		
	Striped crosswalk	3 crosswalks		
	Sidewalk removal	820 linear ft		
Shared Use Path Canal Crossing	Pre-fabricated steel bridge	1 bridge	$150,000	$225,000
		Total	**$1 ,149,000**	**$1,885,000**

GILBERT
ARIZONA

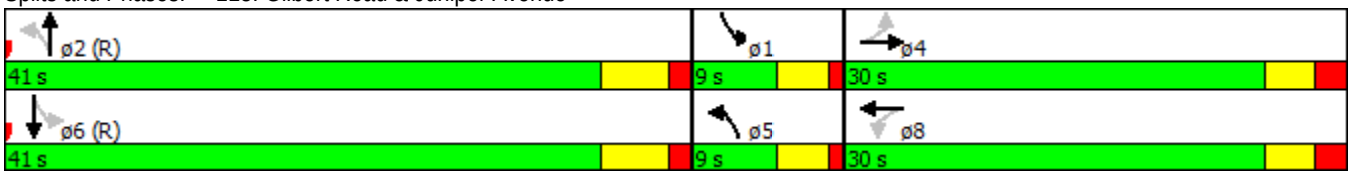
Appendix

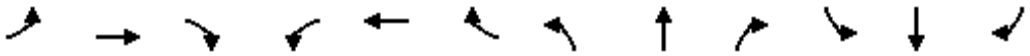
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	8	59	30	10	57	37	826	20	39	853	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	90		0	85		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			85			80		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.868			0.872			0.996			0.986	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	1563	0	1711	1570	0	1770	3525	0	1770	3490	0
Flt Permitted	0.699			0.699			0.160			0.245		
Satd. Flow (perm)	1259	1563	0	1259	1570	0	298	3525	0	456	3490	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		79			76			4			17	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		441			384			886			816	
Travel Time (s)		12.0			10.5			17.3			15.9	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.97	0.83	0.82	0.86	0.75
Adj. Flow (vph)	95	11	79	40	13	76	49	852	24	48	992	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	95	90	0	40	89	0	49	876	0	48	1093	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		9.0	16.0		9.0	16.0	
Total Split (s)	30.0	30.0		30.0	30.0		9.0	41.0		9.0	41.0	
Total Split (%)	37.5%	37.5%		37.5%	37.5%		11.3%	51.3%		11.3%	51.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	5.5		4.0	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Ped	Ped		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	25.0	25.0		25.0	25.0		45.6	39.1		45.6	39.1	
Actuated g/C Ratio	0.31	0.31		0.31	0.31		0.57	0.49		0.57	0.49	
v/c Ratio	0.24	0.17		0.10	0.16		0.19	0.51		0.14	0.64	
Control Delay	22.5	7.2		20.5	7.5		17.1	21.3		9.4	17.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	22.5	7.2		20.5	7.5		17.1	21.3		9.4	17.9	
LOS	C	A		C	A		B	C		A	B	
Approach Delay		15.1			11.5			21.1			17.5	
Approach LOS		B			B			C			B	
Stops (vph)	51	15		21	16		26	682		16	661	
Fuel Used(gal)	1	0		0	0		1	14		1	20	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
CO Emissions (g/hr)	0	0		0	0		0	0		0	0	
NOx Emissions (g/hr)	0	0		0	0		0	0		0	0	
VOC Emissions (g/hr)	0	0		0	0		0	0		0	0	
Dilemma Vehicles (#)	0	0		0	0		0	101		0	58	
Queue Length 50th (ft)	35	4		14	5		18	216		10	220	
Queue Length 95th (ft)	59	24		30	25		27	278		21	271	
Internal Link Dist (ft)		361			304			806			736	
Turn Bay Length (ft)							90			85		
Base Capacity (vph)	393	542		393	542		261	1724		341	1714	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.24	0.17		0.10	0.16		0.19	0.51		0.14	0.64	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 49 (61%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 18.4		Intersection LOS: B	
Intersection Capacity Utilization 51.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 118: Gilbert Road & Juniper Avenue





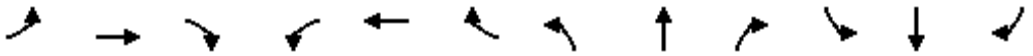
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	0	0	0	860	0	0	930	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	0	0	0	0	0	0	3539	0	0	3539	0
Flt Permitted												
Satd. Flow (perm)	0	0	0	0	0	0	0	3539	0	0	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			35	
Link Distance (ft)		98			112			421			886	
Travel Time (s)		2.2			2.5			11.5			17.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	935	0	0	1011	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	935	0	0	1011	0
Turn Type								NA			NA	
Protected Phases								2			6	
Permitted Phases												
Detector Phase								2			6	
Switch Phase												
Minimum Initial (s)								10.0			10.0	
Minimum Split (s)								15.0			15.0	
Total Split (s)								54.0			54.0	
Total Split (%)								67.5%			67.5%	
Yellow Time (s)								3.0			3.0	
All-Red Time (s)								1.5			1.5	
Lost Time Adjust (s)								0.0			0.0	
Total Lost Time (s)								4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode								C-Max			C-Max	
Act Effct Green (s)								61.7			61.7	
Actuated g/C Ratio								0.77			0.77	
v/c Ratio								0.34			0.37	
Control Delay								3.5			1.6	
Queue Delay								0.0			0.0	
Total Delay								3.5			1.6	
LOS								A			A	
Approach Delay								3.5			1.6	
Approach LOS								A			A	
Stops (vph)								137			54	
Fuel Used(gal)								4			7	
CO Emissions (g/hr)								0			0	
NOx Emissions (g/hr)								0			0	
VOC Emissions (g/hr)								0			0	
Dilemma Vehicles (#)								0			5	

Lane Group	ø4	ø8
Lane Configurations		
Volume (vph)		
Ideal Flow (vphpl)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	4	8
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	4.0	4.0
Minimum Split (s)	26.0	26.0
Total Split (s)	26.0	26.0
Total Split (%)	33%	33%
Yellow Time (s)	3.0	3.0
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Stops (vph)		
Fuel Used(gal)		
CO Emissions (g/hr)		
NOx Emissions (g/hr)		
VOC Emissions (g/hr)		
Dilemma Vehicles (#)		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)								50			20	
Queue Length 95th (ft)								88			32	
Internal Link Dist (ft)		18			32			341			806	
Turn Bay Length (ft)												
Base Capacity (vph)								2729			2729	
Starvation Cap Reductn								128			0	
Spillback Cap Reductn								0			0	
Storage Cap Reductn								0			0	
Reduced v/c Ratio								0.36			0.37	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 64 (80%), Referenced to phase 2:NBT and 6:SBT, Start of 1st Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.37			
Intersection Signal Delay: 2.5		Intersection LOS: A	
Intersection Capacity Utilization 29.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 119: Gilbert Road & Trl Crossing



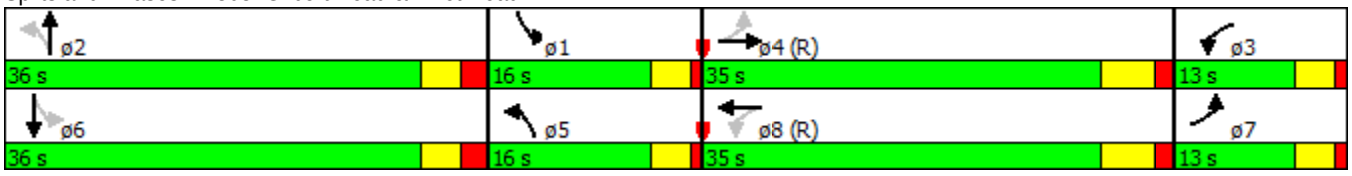
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	294	75	248	750	118	120	475	121	105	440	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	11	11	12	12	12	11	11	11	11	11	11
Storage Length (ft)	100		0	115		0	185		0	85		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	65			65			85			60		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.969			0.980			0.969			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1888	3304	0	1770	3459	0	1711	3306	0	1711	3339	0
Flt Permitted	0.135			0.483			0.315			0.255		
Satd. Flow (perm)	268	3304	0	897	3459	0	567	3306	0	459	3339	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32			18			33			20	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		2658			2408			370			388	
Travel Time (s)		72.5			65.7			10.1			10.6	
Confl. Peds. (#/hr)	6		4	4		6	2		1	1		2
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.95	0.95	0.95	0.90	0.90	0.90	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	148	309	79	276	833	131	136	540	138	119	500	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	148	388	0	276	964	0	136	678	0	119	586	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	9.0	30.5		9.0	30.5		9.0	31.0		9.0	31.0	
Total Split (s)	13.0	35.0		13.0	35.0		16.0	36.0		16.0	36.0	
Total Split (%)	13.0%	35.0%		13.0%	35.0%		16.0%	36.0%		16.0%	36.0%	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.5		1.0	1.5		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.5		4.0	5.5		4.0	5.0		4.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	C-Max		None	C-Max		None	Max		None	Max	
Act Effct Green (s)	44.6	36.0		44.6	36.0		39.4	32.9		39.4	32.9	
Actuated g/C Ratio	0.45	0.36		0.45	0.36		0.39	0.33		0.39	0.33	
v/c Ratio	0.63	0.32		0.60	0.77		0.48	0.61		0.48	0.53	
Control Delay	41.4	22.2		25.9	32.9		29.0	29.9		31.0	28.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	41.4	22.2		25.9	32.9		29.0	29.9		31.0	28.7	
LOS	D	C		C	C		C	C		C	C	
Approach Delay		27.5			31.4			29.8			29.1	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		C			C			C			C	
Stops (vph)	96	236		153	731		75	468		66	395	
Fuel Used(gal)	5	11		7	26		6	31		2	12	
CO Emissions (g/hr)	0	0		0	0		0	0		0	0	
NOx Emissions (g/hr)	0	0		0	0		0	0		0	0	
VOC Emissions (g/hr)	0	0		0	0		0	0		0	0	
Dilemma Vehicles (#)	0	0		0	0		0	0		0	0	
Queue Length 50th (ft)	50	84		102	275		53	181		46	153	
Queue Length 95th (ft)	87	127		162	368		89	241		79	207	
Internal Link Dist (ft)		2578			2328			290			308	
Turn Bay Length (ft)	100			115			185			85		
Base Capacity (vph)	270	1209		495	1255		397	1109		361	1111	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.55	0.32		0.56	0.77		0.34	0.61		0.33	0.53	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 86 (86%), Referenced to phase 4:EBTL and 8:WBTL, Start of 1st Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 29.9 Intersection LOS: C
Intersection Capacity Utilization 78.3% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 303: Gilbert Road & Elliot Road



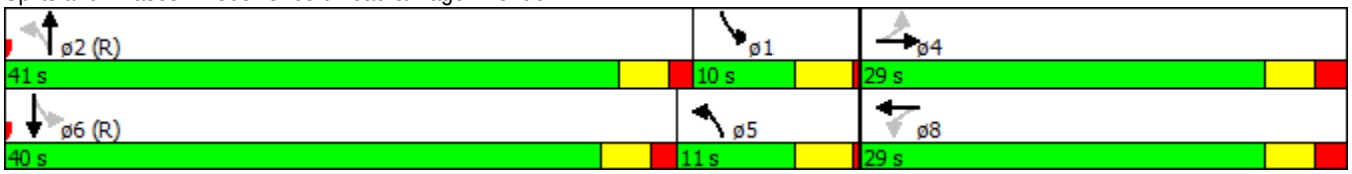
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	1	18	11	1	10	33	683	12	8	615	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	11	11	10	11	11
Storage Length (ft)	0		0	0		0	70		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			60			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			1.00		1.00	1.00		1.00	1.00	
Frt		0.930			0.937			0.997			0.996	
Flt Protected		0.978			0.976		0.950			0.950		
Satd. Flow (prot)	0	1625	0	0	1647	0	1652	3409	0	1652	3404	0
Flt Permitted		0.887			0.890		0.327			0.315		
Satd. Flow (perm)	0	1474	0	0	1501	0	567	3409	0	547	3404	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			14			3			5	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		326			574			1381			427	
Travel Time (s)		8.9			15.7			37.7			11.6	
Confl. Peds. (#/hr)			1	1			4		2	2		4
Confl. Bikes (#/hr)			2									
Peak Hour Factor	0.55	0.55	0.55	0.73	0.73	0.73	0.93	0.93	0.93	0.89	0.89	0.89
Adj. Flow (vph)	29	2	33	15	1	14	35	734	13	9	691	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	64	0	0	30	0	35	747	0	9	712	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	27.0	27.0		27.0	27.0		9.0	21.5		9.0	22.5	
Total Split (s)	29.0	29.0		29.0	29.0		11.0	41.0		10.0	40.0	
Total Split (%)	36.3%	36.3%		36.3%	36.3%		13.8%	51.3%		12.5%	50.0%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.0		3.5	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.5	1.5		0.5	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		4.0	4.5		4.0	4.5	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	Ped	Ped		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		22.0			22.0		50.6	46.6		48.6	42.6	
Actuated g/C Ratio		0.28			0.28		0.63	0.58		0.61	0.53	
v/c Ratio		0.15			0.07		0.08	0.38		0.02	0.39	
Control Delay		13.9			15.1		6.9	10.2		1.4	5.1	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		13.9			15.1		6.9	10.2		1.4	5.1	
LOS		B			B		A	B		A	A	
Approach Delay		13.9			15.1			10.0			5.0	

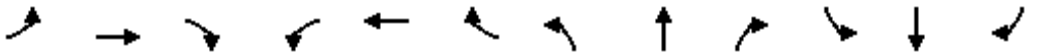
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		B			B			B			A	
Stops (vph)		15			12		14	353		1	107	
Fuel Used(gal)		0			0		1	13		0	3	
CO Emissions (g/hr)		0			0		0	0		0	0	
NOx Emissions (g/hr)		0			0		0	0		0	0	
VOC Emissions (g/hr)		0			0		0	0		0	0	
Dilemma Vehicles (#)		0			0		0	0		0	0	
Queue Length 50th (ft)		11			6		6	88		0	31	
Queue Length 95th (ft)		19			20		17	166		m1	50	
Internal Link Dist (ft)		246			494			1301			347	
Turn Bay Length (ft)							70			75		
Base Capacity (vph)		465			460		462	1985		418	1813	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.14			0.07		0.08	0.38		0.02	0.39	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green, Master Intersection	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.39	
Intersection Signal Delay: 8.0	Intersection LOS: A
Intersection Capacity Utilization 53.0%	ICU Level of Service A
Analysis Period (min) 15	

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

Splits and Phases: 308: Gilbert Road & Page Avenue





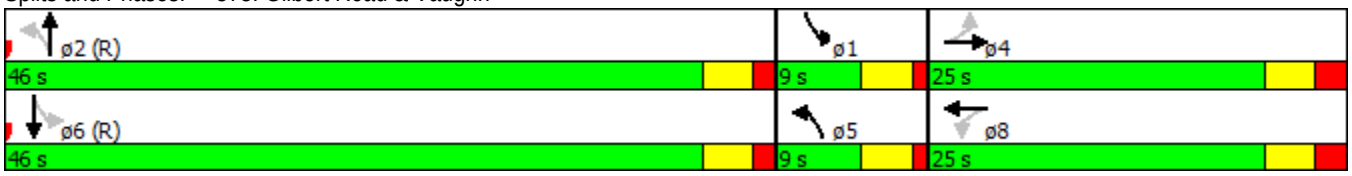
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	10	70	25	10	40	35	785	25	55	1010	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	110		0	110		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.946			0.928			0.995			0.994	
Flt Protected		0.974			0.984		0.950			0.950		
Satd. Flow (prot)	0	1716	0	0	1701	0	1770	3522	0	1770	3518	0
Flt Permitted		0.821			0.873		0.185			0.275		
Satd. Flow (perm)	0	1447	0	0	1509	0	345	3522	0	512	3518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40			43			6			7	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		323			321			427			421	
Travel Time (s)		8.8			8.8			11.6			11.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	11	76	27	11	43	38	853	27	60	1098	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	190	0	0	81	0	38	880	0	60	1141	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	13.0	13.0		13.0	13.0		9.0	16.0		9.0	16.0	
Total Split (s)	25.0	25.0		25.0	25.0		9.0	46.0		9.0	46.0	
Total Split (%)	31.3%	31.3%		31.3%	31.3%		11.3%	57.5%		11.3%	57.5%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		4.0	4.5		4.0	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		15.7			15.7		53.1	47.6		53.1	47.6	
Actuated g/C Ratio		0.20			0.20		0.66	0.60		0.66	0.60	
v/c Ratio		0.60			0.25		0.12	0.42		0.14	0.54	
Control Delay		30.1			15.4		4.7	7.9		1.7	3.2	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		30.1			15.4		4.7	7.9		1.7	3.2	
LOS		C			B		A	A		A	A	
Approach Delay		30.1			15.4			7.8			3.1	
Approach LOS		C			B			A			A	
Stops (vph)		121			33		7	244		5	106	
Fuel Used(gal)		2			1		0	5		0	5	
CO Emissions (g/hr)		0			0		0	0		0	0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)		0			0		0	0		0	0	
VOC Emissions (g/hr)		0			0		0	0		0	0	
Dilemma Vehicles (#)		0			0		0	0		0	0	
Queue Length 50th (ft)		63			15		5	91		2	31	
Queue Length 95th (ft)		126			49		7	87		4	36	
Internal Link Dist (ft)		243			241			347			341	
Turn Bay Length (ft)							110			110		
Base Capacity (vph)		391			409		318	2099		418	2097	
Starvation Cap Reductn		0			0		0	162		0	42	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.49			0.20		0.12	0.45		0.14	0.56	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 70 (88%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 7.5 Intersection LOS: A
Intersection Capacity Utilization 61.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 373: Gilbert Road & Vaughn

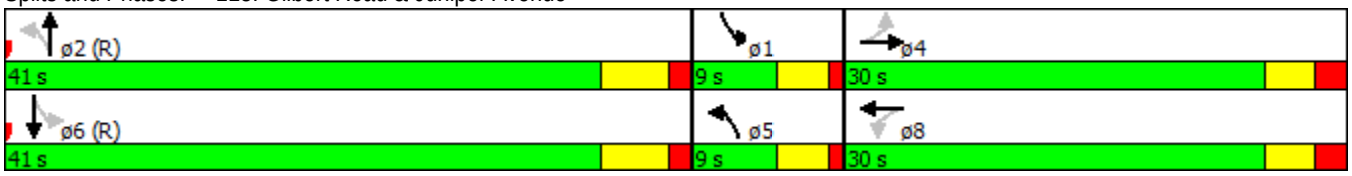


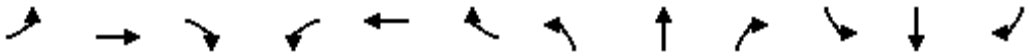
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	8	59	30	10	57	37	826	20	39	853	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	90		0	85		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			85			80		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.868			0.872			0.996			0.986	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	1563	0	1711	1570	0	1770	3525	0	1770	3490	0
Flt Permitted	0.699			0.699			0.160			0.245		
Satd. Flow (perm)	1259	1563	0	1259	1570	0	298	3525	0	456	3490	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		79			76			4			17	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		441			384			886			816	
Travel Time (s)		12.0			10.5			17.3			15.9	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.97	0.83	0.82	0.86	0.75
Adj. Flow (vph)	95	11	79	40	13	76	49	852	24	48	992	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	95	90	0	40	89	0	49	876	0	48	1093	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		9.0	16.0		9.0	16.0	
Total Split (s)	30.0	30.0		30.0	30.0		9.0	41.0		9.0	41.0	
Total Split (%)	37.5%	37.5%		37.5%	37.5%		11.3%	51.3%		11.3%	51.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	5.5		4.0	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Ped	Ped		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	25.0	25.0		25.0	25.0		45.6	39.1		45.6	39.1	
Actuated g/C Ratio	0.31	0.31		0.31	0.31		0.57	0.49		0.57	0.49	
v/c Ratio	0.24	0.17		0.10	0.16		0.19	0.51		0.14	0.64	
Control Delay	22.5	7.2		20.5	7.5		15.3	25.4		9.4	17.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	22.5	7.2		20.5	7.5		15.3	25.4		9.4	17.9	
LOS	C	A		C	A		B	C		A	B	
Approach Delay		15.1			11.5			24.8			17.5	
Approach LOS		B			B			C			B	
Stops (vph)	51	15		21	16		21	644		16	661	
Fuel Used(gal)	1	0		0	0		1	15		1	20	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
CO Emissions (g/hr)	0	0		0	0		0	0		0	0	
NOx Emissions (g/hr)	0	0		0	0		0	0		0	0	
VOC Emissions (g/hr)	0	0		0	0		0	0		0	0	
Dilemma Vehicles (#)	0	0		0	0		0	128		0	58	
Queue Length 50th (ft)	35	4		14	5		11	216		10	220	
Queue Length 95th (ft)	59	24		30	25		25	278		21	271	
Internal Link Dist (ft)		361			304			806			736	
Turn Bay Length (ft)							90			85		
Base Capacity (vph)	393	542		393	542		261	1724		341	1714	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.24	0.17		0.10	0.16		0.19	0.51		0.14	0.64	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 40 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 19.9		Intersection LOS: B	
Intersection Capacity Utilization 51.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 118: Gilbert Road & Juniper Avenue





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	0	0	0	860	0	0	930	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	0	0	0	0	0	0	3539	0	0	3539	0
Flt Permitted												
Satd. Flow (perm)	0	0	0	0	0	0	0	3539	0	0	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			35	
Link Distance (ft)		98			112			421			886	
Travel Time (s)		2.2			2.5			11.5			17.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	935	0	0	1011	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	935	0	0	1011	0
Turn Type								NA			NA	
Protected Phases								2			6	
Permitted Phases												
Detector Phase								2			6	
Switch Phase												
Minimum Initial (s)								10.0			10.0	
Minimum Split (s)								15.0			15.0	
Total Split (s)								54.0			54.0	
Total Split (%)								67.5%			67.5%	
Yellow Time (s)								3.0			3.0	
All-Red Time (s)								1.5			1.5	
Lost Time Adjust (s)								0.0			0.0	
Total Lost Time (s)								4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode								C-Max			C-Max	
Act Effct Green (s)								61.7			61.7	
Actuated g/C Ratio								0.77			0.77	
v/c Ratio								0.34			0.37	
Control Delay								7.5			1.6	
Queue Delay								0.0			0.0	
Total Delay								7.5			1.6	
LOS								A			A	
Approach Delay								7.5			1.6	
Approach LOS								A			A	
Stops (vph)								248			54	
Fuel Used(gal)								5			7	
CO Emissions (g/hr)								0			0	
NOx Emissions (g/hr)								0			0	
VOC Emissions (g/hr)								0			0	
Dilemma Vehicles (#)								0			5	

Lane Group	ø4	ø8
Lane Configurations		
Volume (vph)		
Ideal Flow (vphpl)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	4	8
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	4.0	4.0
Minimum Split (s)	26.0	26.0
Total Split (s)	26.0	26.0
Total Split (%)	33%	33%
Yellow Time (s)	3.0	3.0
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Stops (vph)		
Fuel Used(gal)		
CO Emissions (g/hr)		
NOx Emissions (g/hr)		
VOC Emissions (g/hr)		
Dilemma Vehicles (#)		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)								116			20	
Queue Length 95th (ft)								128			32	
Internal Link Dist (ft)		18			32			341			806	
Turn Bay Length (ft)												
Base Capacity (vph)								2729			2729	
Starvation Cap Reductn								128			0	
Spillback Cap Reductn								0			0	
Storage Cap Reductn								0			0	
Reduced v/c Ratio								0.36			0.37	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 55 (69%), Referenced to phase 2:NBT and 6:SBT, Start of 1st Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.37			
Intersection Signal Delay: 4.4		Intersection LOS: A	
Intersection Capacity Utilization 29.5%		ICU Level of Service A	
Analysis Period (min) 15			

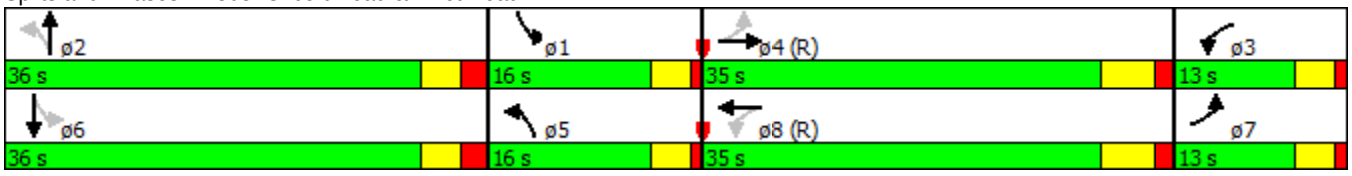
Splits and Phases: 119: Gilbert Road & Trl Crossing

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	325	55	160	390	115	80	525	125	140	550	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	11	11	12	12	12	11	11	11	11	11	11
Storage Length (ft)	100		0	115		0	185		0	85		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	65			65			85			60		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.99	1.00		1.00	0.99		1.00				1.00	
Frt		0.978			0.966			0.971			0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1888	3336	0	1770	3398	0	1711	3322	0	1711	3350	0
Flt Permitted	0.359			0.454			0.197			0.244		
Satd. Flow (perm)	709	3336	0	842	3398	0	354	3322	0	439	3350	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			39			30			17	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		2658			2408			370			388	
Travel Time (s)		72.5			65.7			10.1			10.6	
Confl. Peds. (#/hr)	13		7	7		13	3					3
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.91	0.91	0.91	0.93	0.93	0.93	0.90	0.90	0.90	0.78	0.78	0.78
Adj. Flow (vph)	132	357	60	172	419	124	89	583	139	179	705	103
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	417	0	172	543	0	89	722	0	179	808	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	9.0	30.5		9.0	30.5		9.0	31.0		9.0	31.0	
Total Split (s)	13.0	35.0		13.0	35.0		16.0	36.0		16.0	36.0	
Total Split (%)	13.0%	35.0%		13.0%	35.0%		16.0%	36.0%		16.0%	36.0%	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.5		1.0	1.5		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.5		4.0	5.5		4.0	5.0		4.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	C-Max		None	C-Max		None	Max		None	Max	
Act Effct Green (s)	40.7	34.2		40.7	34.2		43.3	35.0		43.3	35.0	
Actuated g/C Ratio	0.41	0.34		0.41	0.34		0.43	0.35		0.43	0.35	
v/c Ratio	0.38	0.36		0.44	0.46		0.35	0.61		0.63	0.68	
Control Delay	24.2	25.2		24.9	25.8		23.9	28.4		35.4	30.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	24.2	25.2		24.9	25.8		23.9	28.4		35.4	30.7	
LOS	C	C		C	C		C	C		D	C	
Approach Delay		25.0			25.6			27.9			31.6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		C			C			C			C	
Stops (vph)	72	265		100	358		45	501		90	512	
Fuel Used(gal)	4	12		4	14		4	34		3	15	
CO Emissions (g/hr)	0	0		0	0		0	0		0	0	
NOx Emissions (g/hr)	0	0		0	0		0	0		0	0	
VOC Emissions (g/hr)	0	0		0	0		0	0		0	0	
Dilemma Vehicles (#)	0	0		0	0		0	0		0	0	
Queue Length 50th (ft)	47	96		64	127		31	190		66	224	
Queue Length 95th (ft)	94	151		120	193		53	252		83	240	
Internal Link Dist (ft)		2578			2328			290			308	
Turn Bay Length (ft)	100			115			185			85		
Base Capacity (vph)	422	1152		459	1187		332	1181		363	1182	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.31	0.36		0.37	0.46		0.27	0.61		0.49	0.68	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 86 (86%), Referenced to phase 4:EBTL and 8:WBTL, Start of 1st Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 28.0		Intersection LOS: C	
Intersection Capacity Utilization 71.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 303: Gilbert Road & Elliot Road



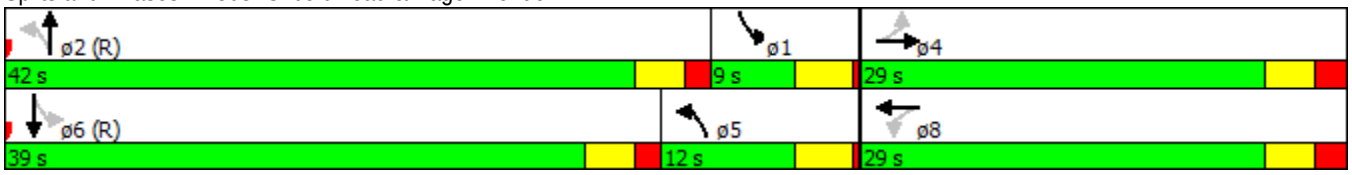
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	5	35	30	5	45	65	645	55	45	660	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	11	11	10	11	11
Storage Length (ft)	0		0	0		0	70		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			60			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.97			0.97		0.98	0.99		0.97	0.99	
Frt		0.927			0.924			0.988			0.991	
Flt Protected		0.981			0.982		0.950			0.950		
Satd. Flow (prot)	0	1599	0	0	1600	0	1652	3342	0	1652	3371	0
Flt Permitted		0.859			0.864		0.285			0.308		
Satd. Flow (perm)	0	1389	0	0	1395	0	487	3342	0	518	3371	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		66			62			15			10	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		326			574			1381			427	
Travel Time (s)		8.9			15.7			37.7			11.6	
Confl. Peds. (#/hr)	23		29	29		23	28		43	43		28
Confl. Bikes (#/hr)									1			
Peak Hour Factor	0.53	0.53	0.53	0.73	0.73	0.73	0.94	0.94	0.94	0.89	0.89	0.89
Adj. Flow (vph)	47	9	66	41	7	62	69	686	59	51	742	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	110	0	69	745	0	51	787	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	27.0	27.0		27.0	27.0		9.0	21.5		9.0	22.5	
Total Split (s)	29.0	29.0		29.0	29.0		12.0	42.0		9.0	39.0	
Total Split (%)	36.3%	36.3%		36.3%	36.3%		15.0%	52.5%		11.3%	48.8%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.0		3.5	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.5	1.5		0.5	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		4.0	4.5		4.0	4.5	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	Ped	Ped		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		22.0			22.0		49.5	43.1		44.9	39.4	
Actuated g/C Ratio		0.28			0.28		0.62	0.54		0.56	0.49	
v/c Ratio		0.28			0.26		0.17	0.41		0.14	0.47	
Control Delay		13.7			13.1		8.6	12.3		3.3	4.2	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		13.7			13.1		8.6	12.3		3.3	4.2	
LOS		B			B		A	B		A	A	
Approach Delay		13.7			13.1			12.0			4.1	

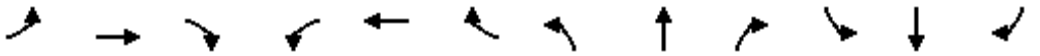
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		B			B			B			A	
Stops (vph)		26			32		24	393		7	204	
Fuel Used(gal)		0			1		1	14		0	4	
CO Emissions (g/hr)		0			0		0	0		0	0	
NOx Emissions (g/hr)		0			0		0	0		0	0	
VOC Emissions (g/hr)		0			0		0	0		0	0	
Dilemma Vehicles (#)		0			0		0	0		0	0	
Queue Length 50th (ft)		21			18		12	117		2	33	
Queue Length 95th (ft)		24			40		28	162		m4	47	
Internal Link Dist (ft)		246			494			1301			347	
Turn Bay Length (ft)							70			75		
Base Capacity (vph)		462			461		423	1807		361	1665	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.26			0.24		0.16	0.41		0.14	0.47	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green, Master Intersection
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 53.6% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 308: Gilbert Road & Page Avenue





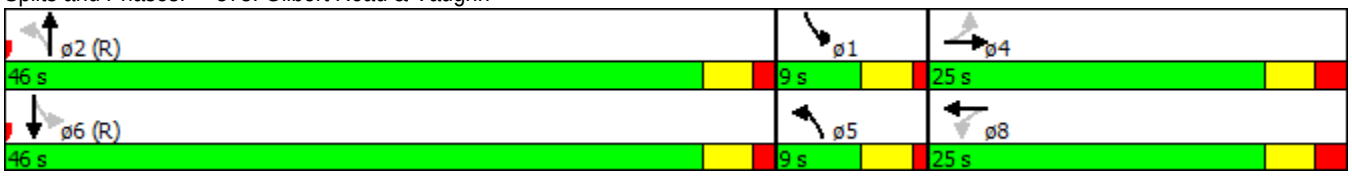
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	10	70	25	10	40	35	785	25	55	1010	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	110		0	110		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.946			0.928			0.995			0.994	
Flt Protected		0.974			0.984		0.950			0.950		
Satd. Flow (prot)	0	1716	0	0	1701	0	1770	3522	0	1770	3518	0
Flt Permitted		0.821			0.873		0.185			0.275		
Satd. Flow (perm)	0	1447	0	0	1509	0	345	3522	0	512	3518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40			43			6			7	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		323			321			427			421	
Travel Time (s)		8.8			8.8			11.6			11.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	11	76	27	11	43	38	853	27	60	1098	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	190	0	0	81	0	38	880	0	60	1141	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	13.0	13.0		13.0	13.0		9.0	16.0		9.0	16.0	
Total Split (s)	25.0	25.0		25.0	25.0		9.0	46.0		9.0	46.0	
Total Split (%)	31.3%	31.3%		31.3%	31.3%		11.3%	57.5%		11.3%	57.5%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		4.0	4.5		4.0	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		15.7			15.7		53.1	47.6		53.1	47.6	
Actuated g/C Ratio		0.20			0.20		0.66	0.60		0.66	0.60	
v/c Ratio		0.60			0.25		0.12	0.42		0.14	0.54	
Control Delay		30.1			15.4		5.5	9.7		1.7	3.2	
Queue Delay		0.0			0.0		0.0	0.1		0.0	0.0	
Total Delay		30.1			15.4		5.5	9.8		1.7	3.2	
LOS		C			B		A	A		A	A	
Approach Delay		30.1			15.4			9.6			3.1	
Approach LOS		C			B			A			A	
Stops (vph)		121			33		10	322		5	106	
Fuel Used(gal)		2			1		0	6		0	5	
CO Emissions (g/hr)		0			0		0	0		0	0	

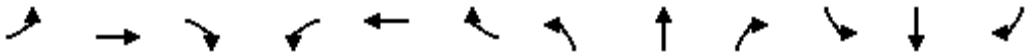
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)		0			0		0	0		0	0	
VOC Emissions (g/hr)		0			0		0	0		0	0	
Dilemma Vehicles (#)		0			0		0	0		0	0	
Queue Length 50th (ft)		63			15		5	89		2	31	
Queue Length 95th (ft)		126			49		m11	146		4	36	
Internal Link Dist (ft)		243			241			347			341	
Turn Bay Length (ft)							110			110		
Base Capacity (vph)		391			409		318	2099		418	2097	
Starvation Cap Reductn		0			0		0	201		0	42	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.49			0.20		0.12	0.46		0.14	0.56	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 61 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 8.2 Intersection LOS: A
Intersection Capacity Utilization 61.2% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 373: Gilbert Road & Vaughn



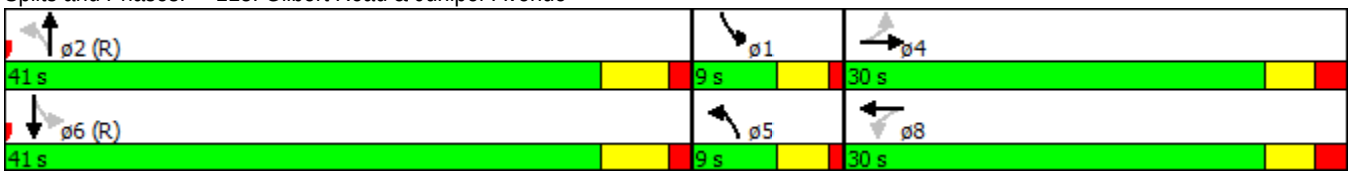


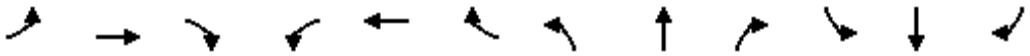
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	8	59	30	10	57	37	826	20	39	853	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	90		0	85		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			85			80		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.868			0.872			0.996			0.986	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	1563	0	1711	1570	0	1770	3525	0	1770	3490	0
Flt Permitted	0.699			0.699			0.160			0.245		
Satd. Flow (perm)	1259	1563	0	1259	1570	0	298	3525	0	456	3490	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		79			76			4			17	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		441			384			886			816	
Travel Time (s)		12.0			10.5			17.3			15.9	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.97	0.83	0.82	0.86	0.75
Adj. Flow (vph)	95	11	79	40	13	76	49	852	24	48	992	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	95	90	0	40	89	0	49	876	0	48	1093	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		9.0	16.0		9.0	16.0	
Total Split (s)	30.0	30.0		30.0	30.0		9.0	41.0		9.0	41.0	
Total Split (%)	37.5%	37.5%		37.5%	37.5%		11.3%	51.3%		11.3%	51.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		4.0	5.5		4.0	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Ped	Ped		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)	25.0	25.0		25.0	25.0		45.6	39.1		45.6	39.1	
Actuated g/C Ratio	0.31	0.31		0.31	0.31		0.57	0.49		0.57	0.49	
v/c Ratio	0.24	0.17		0.10	0.16		0.19	0.51		0.14	0.64	
Control Delay	22.5	7.2		20.5	7.5		15.0	24.8		9.4	17.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	22.5	7.2		20.5	7.5		15.0	24.8		9.4	17.9	
LOS	C	A		C	A		B	C		A	B	
Approach Delay		15.1			11.5			24.3			17.5	
Approach LOS		B			B			C			B	
Stops (vph)	51	15		21	16		20	583		16	661	
Fuel Used(gal)	1	0		0	0		0	14		1	20	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
CO Emissions (g/hr)	0	0		0	0		0	0		0	0	
NOx Emissions (g/hr)	0	0		0	0		0	0		0	0	
VOC Emissions (g/hr)	0	0		0	0		0	0		0	0	
Dilemma Vehicles (#)	0	0		0	0		0	128		0	58	
Queue Length 50th (ft)	35	4		14	5		10	216		10	220	
Queue Length 95th (ft)	59	24		30	25		25	278		21	271	
Internal Link Dist (ft)		361			304			806			736	
Turn Bay Length (ft)							90			85		
Base Capacity (vph)	393	542		393	542		261	1724		341	1714	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.24	0.17		0.10	0.16		0.19	0.51		0.14	0.64	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 40 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 19.7		Intersection LOS: B	
Intersection Capacity Utilization 51.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 118: Gilbert Road & Juniper Avenue





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	0	0	0	860	0	0	930	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	0	0	0	0	0	0	3539	0	0	3539	0
Flt Permitted												
Satd. Flow (perm)	0	0	0	0	0	0	0	3539	0	0	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			35	
Link Distance (ft)		98			112			421			886	
Travel Time (s)		2.2			2.5			11.5			17.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	935	0	0	1011	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	935	0	0	1011	0
Turn Type								NA			NA	
Protected Phases								2			6	
Permitted Phases												
Detector Phase								2			6	
Switch Phase												
Minimum Initial (s)								10.0			10.0	
Minimum Split (s)								15.0			15.0	
Total Split (s)								54.0			54.0	
Total Split (%)								67.5%			67.5%	
Yellow Time (s)								3.0			3.0	
All-Red Time (s)								1.5			1.5	
Lost Time Adjust (s)								0.0			0.0	
Total Lost Time (s)								4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode								C-Max			C-Max	
Act Effct Green (s)								61.7			61.7	
Actuated g/C Ratio								0.77			0.77	
v/c Ratio								0.34			0.37	
Control Delay								7.8			1.6	
Queue Delay								0.0			0.0	
Total Delay								7.8			1.6	
LOS								A			A	
Approach Delay								7.8			1.6	
Approach LOS								A			A	
Stops (vph)								257			54	
Fuel Used(gal)								5			7	
CO Emissions (g/hr)								0			0	
NOx Emissions (g/hr)								0			0	
VOC Emissions (g/hr)								0			0	
Dilemma Vehicles (#)								0			5	

Lane Group	ø4	ø8
Lane Configurations		
Volume (vph)		
Ideal Flow (vphpl)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	4	8
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	4.0	4.0
Minimum Split (s)	26.0	26.0
Total Split (s)	26.0	26.0
Total Split (%)	33%	33%
Yellow Time (s)	3.0	3.0
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Stops (vph)		
Fuel Used(gal)		
CO Emissions (g/hr)		
NOx Emissions (g/hr)		
VOC Emissions (g/hr)		
Dilemma Vehicles (#)		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)								129			20	
Queue Length 95th (ft)								130			32	
Internal Link Dist (ft)		18			32			341			806	
Turn Bay Length (ft)												
Base Capacity (vph)								2729			2729	
Starvation Cap Reductn								128			0	
Spillback Cap Reductn								0			0	
Storage Cap Reductn								0			0	
Reduced v/c Ratio								0.36			0.37	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 55 (69%), Referenced to phase 2:NBT and 6:SBT, Start of 1st Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.37			
Intersection Signal Delay: 4.5		Intersection LOS: A	
Intersection Capacity Utilization 29.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 119: Gilbert Road & Trl Crossing

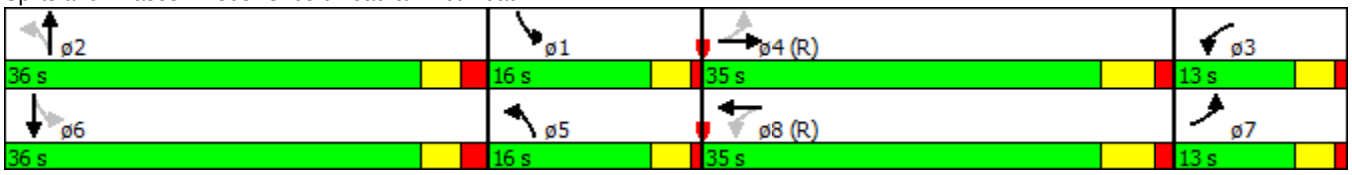
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	664	96	188	387	97	74	560	178	170	623	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	11	11	12	12	12	11	11	11	11	11	11
Storage Length (ft)	100		0	115		0	185		0	85		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	65			65			85			60		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.981			0.970			0.964			0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1888	3343	0	1770	3422	0	1711	3286	0	1711	3348	0
Flt Permitted	0.332			0.175			0.171			0.178		
Satd. Flow (perm)	659	3343	0	325	3422	0	307	3286	0	320	3348	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			31			44			16	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		2658			2408			370			388	
Travel Time (s)		72.5			65.7			10.1			10.6	
Confl. Peds. (#/hr)	3		14	14		3	7		3	3		7
Confl. Bikes (#/hr)			5			1						1
Peak Hour Factor	0.92	0.92	0.92	0.85	0.85	0.85	0.94	0.94	0.94	0.89	0.89	0.89
Adj. Flow (vph)	147	722	104	221	455	114	79	596	189	191	700	99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	147	826	0	221	569	0	79	785	0	191	799	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	9.0	30.5		9.0	30.5		9.0	31.0		9.0	31.0	
Total Split (s)	13.0	35.0		13.0	35.0		16.0	36.0		16.0	36.0	
Total Split (%)	13.0%	35.0%		13.0%	35.0%		16.0%	36.0%		16.0%	36.0%	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.5		1.0	1.5		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.5		4.0	5.5		4.0	5.0		4.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	C-Max		None	C-Max		None	Max		None	Max	
Act Effct Green (s)	43.0	32.7		43.0	32.7		41.0	31.2		41.0	31.2	
Actuated g/C Ratio	0.43	0.33		0.43	0.33		0.41	0.31		0.41	0.31	
v/c Ratio	0.38	0.75		0.83	0.50		0.32	0.74		0.75	0.76	
Control Delay	23.2	35.2		58.7	27.9		25.7	34.2		50.2	35.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	23.2	35.2		58.7	27.9		25.7	34.2		50.2	35.9	
LOS	C	D		E	C		C	C		D	D	
Approach Delay		33.4			36.5			33.4			38.7	

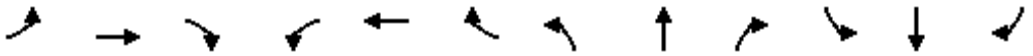
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		C			D			C			D	
Stops (vph)	77	641		135	361		43	612		134	614	
Fuel Used(gal)	4	25		7	14		4	40		5	18	
CO Emissions (g/hr)	0	0		0	0		0	0		0	0	
NOx Emissions (g/hr)	0	0		0	0		0	0		0	0	
VOC Emissions (g/hr)	0	0		0	0		0	0		0	0	
Dilemma Vehicles (#)	0	0		0	0		0	0		0	0	
Queue Length 50th (ft)	52	242		83	144		28	222		73	236	
Queue Length 95th (ft)	95	#331		#172	191		52	295		112	303	
Internal Link Dist (ft)		2578			2328			290			308	
Turn Bay Length (ft)	100			115			185			85		
Base Capacity (vph)	395	1103		270	1139		304	1055		308	1055	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.37	0.75		0.82	0.50		0.26	0.74		0.62	0.76	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 86 (86%), Referenced to phase 4:EBTL and 8:WBTL, Start of 1st Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 35.5 Intersection LOS: D
Intersection Capacity Utilization 78.5% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 303: Gilbert Road & Elliot Road



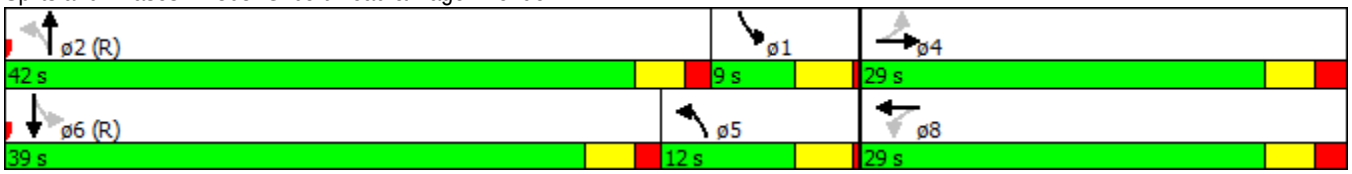


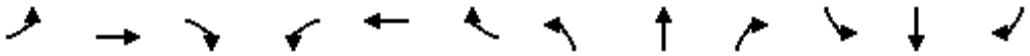
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	4	27	22	5	27	57	753	40	67	863	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	11	11	10	11	11
Storage Length (ft)	0		0	0		0	70		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			60			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.98			0.97		0.98	1.00		0.99	0.99	
Frt		0.924			0.932			0.992			0.994	
Flt Protected		0.983			0.980		0.950			0.950		
Satd. Flow (prot)	0	1617	0	0	1604	0	1652	3378	0	1652	3383	0
Flt Permitted		0.900			0.881		0.223			0.240		
Satd. Flow (perm)	0	1462	0	0	1437	0	382	3378	0	412	3383	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		45			34			9			7	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		326			574			1381			427	
Travel Time (s)		8.9			15.7			37.7			11.6	
Confl. Peds. (#/hr)	35		8	8		35	35		26	26		35
Peak Hour Factor	0.60	0.60	0.60	0.79	0.79	0.79	0.89	0.89	0.89	0.97	0.97	0.97
Adj. Flow (vph)	28	7	45	28	6	34	64	846	45	69	890	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	80	0	0	68	0	64	891	0	69	930	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	27.0	27.0		27.0	27.0		9.0	21.5		9.0	22.5	
Total Split (s)	29.0	29.0		29.0	29.0		12.0	42.0		9.0	39.0	
Total Split (%)	36.3%	36.3%		36.3%	36.3%		15.0%	52.5%		11.3%	48.8%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.0		3.5	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.5	1.5		0.5	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		4.0	4.5		4.0	4.5	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	Ped	Ped		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		22.0			22.0		49.3	41.3		44.4	38.9	
Actuated g/C Ratio		0.28			0.28		0.62	0.52		0.56	0.49	
v/c Ratio		0.18			0.16		0.18	0.51		0.23	0.56	
Control Delay		13.1			14.3		9.3	14.4		4.7	5.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.1	
Total Delay		13.1			14.3		9.3	14.4		4.7	5.4	
LOS		B			B		A	B		A	A	
Approach Delay		13.1			14.3			14.0			5.4	
Approach LOS		B			B			B			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Stops (vph)		20			25		22	495		13	338	
Fuel Used(gal)		0			1		1	16		0	6	
CO Emissions (g/hr)		0			0		0	0		0	0	
NOx Emissions (g/hr)		0			0		0	0		0	0	
VOC Emissions (g/hr)		0			0		0	0		0	0	
Dilemma Vehicles (#)		0			0		0	0		0	0	
Queue Length 50th (ft)		13			13		12	151		3	45	
Queue Length 95th (ft)		23			36		26	200		m6	57	
Internal Link Dist (ft)		246			494			1301			347	
Turn Bay Length (ft)							70			75		
Base Capacity (vph)		470			454		365	1748		305	1648	
Starvation Cap Reductn		0			0		0	0		0	93	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.17			0.15		0.18	0.51		0.23	0.60	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green, Master Intersection			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 9.9		Intersection LOS: A	
Intersection Capacity Utilization 59.0%		ICU Level of Service B	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 308: Gilbert Road & Page Avenue





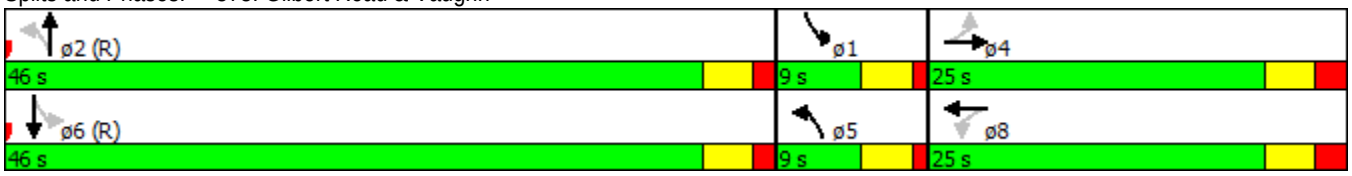
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	10	70	25	10	40	35	785	25	55	1010	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	110		0	110		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.946			0.928			0.995			0.994	
Flt Protected		0.974			0.984		0.950			0.950		
Satd. Flow (prot)	0	1716	0	0	1701	0	1770	3522	0	1770	3518	0
Flt Permitted		0.821			0.873		0.185			0.275		
Satd. Flow (perm)	0	1447	0	0	1509	0	345	3522	0	512	3518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40			43			6			7	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		323			321			427			421	
Travel Time (s)		8.8			8.8			11.6			11.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	11	76	27	11	43	38	853	27	60	1098	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	190	0	0	81	0	38	880	0	60	1141	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	13.0	13.0		13.0	13.0		9.0	16.0		9.0	16.0	
Total Split (s)	25.0	25.0		25.0	25.0		9.0	46.0		9.0	46.0	
Total Split (%)	31.3%	31.3%		31.3%	31.3%		11.3%	57.5%		11.3%	57.5%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		4.0	4.5		4.0	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		15.7			15.7		53.1	47.6		53.1	47.6	
Actuated g/C Ratio		0.20			0.20		0.66	0.60		0.66	0.60	
v/c Ratio		0.60			0.25		0.12	0.42		0.14	0.54	
Control Delay		30.1			15.4		5.5	11.9		1.7	3.2	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		30.1			15.4		5.5	12.0		1.7	3.2	
LOS		C			B		A	B		A	A	
Approach Delay		30.1			15.4			11.7			3.1	
Approach LOS		C			B			B			A	
Stops (vph)		121			33		10	332		5	106	
Fuel Used(gal)		2			1		0	6		0	5	
CO Emissions (g/hr)		0			0		0	0		0	0	

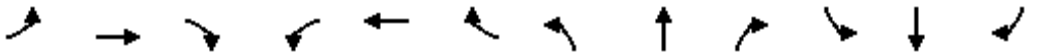
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)		0			0		0	0		0	0	
VOC Emissions (g/hr)		0			0		0	0		0	0	
Dilemma Vehicles (#)		0			0		0	0		0	0	
Queue Length 50th (ft)		63			15		4	96		2	31	
Queue Length 95th (ft)		126			49		m9	170		4	36	
Internal Link Dist (ft)		243			241			347			341	
Turn Bay Length (ft)							110			110		
Base Capacity (vph)		391			409		318	2099		418	2097	
Starvation Cap Reductn		0			0		0	156		0	42	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.49			0.20		0.12	0.45		0.14	0.56	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 61 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 9.0 Intersection LOS: A
Intersection Capacity Utilization 61.2% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 373: Gilbert Road & Vaughn





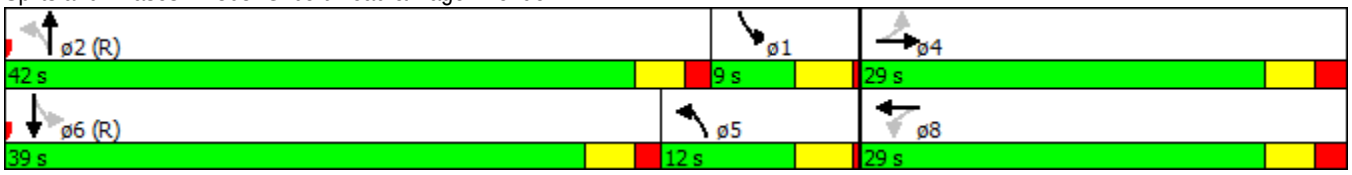
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	1	49	30	5	35	90	768	43	62	868	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	11	11	10	11	11
Storage Length (ft)	0		0	0		0	70		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			60			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.96			0.96		0.99	0.99		0.98	0.99	
Frt		0.932			0.932			0.992			0.989	
Flt Protected		0.976			0.979		0.950			0.950		
Satd. Flow (prot)	0	1588	0	0	1607	0	1652	3373	0	1652	3355	0
Flt Permitted		0.821			0.845		0.214			0.244		
Satd. Flow (perm)	0	1318	0	0	1364	0	367	3373	0	417	3355	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		58			54			10			12	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		326			574			1381			427	
Travel Time (s)		8.9			15.7			37.7			11.6	
Confl. Peds. (#/hr)	30		44	44		30	34		33	33		34
Confl. Bikes (#/hr)			2						5			4
Peak Hour Factor	0.84	0.84	0.84	0.65	0.65	0.65	0.92	0.92	0.92	0.98	0.98	0.98
Adj. Flow (vph)	56	1	58	46	8	54	98	835	47	63	886	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	115	0	0	108	0	98	882	0	63	953	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	27.0	27.0		27.0	27.0		9.0	21.5		9.0	22.5	
Total Split (s)	29.0	29.0		29.0	29.0		12.0	42.0		9.0	39.0	
Total Split (%)	36.3%	36.3%		36.3%	36.3%		15.0%	52.5%		11.3%	48.8%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.0		3.5	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.5	1.5		0.5	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		4.0	4.5		4.0	4.5	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	Ped	Ped		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		22.0			22.0		49.3	41.3		44.4	38.9	
Actuated g/C Ratio		0.28			0.28		0.62	0.52		0.56	0.49	
v/c Ratio		0.28			0.26		0.28	0.51		0.20	0.58	
Control Delay		14.6			14.4		11.7	14.3		4.9	6.2	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.1	
Total Delay		14.6			14.4		11.7	14.3		4.9	6.3	
LOS		B			B		B	B		A	A	
Approach Delay		14.6			14.4			14.0			6.3	

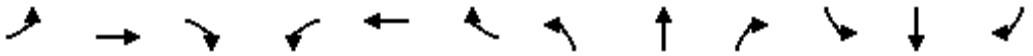
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		B			B			B			A	
Stops (vph)		41			30		34	506		13	414	
Fuel Used(gal)		1			1		2	17		0	6	
CO Emissions (g/hr)		0			0		0	0		0	0	
NOx Emissions (g/hr)		0			0		0	0		0	0	
VOC Emissions (g/hr)		0			0		0	0		0	0	
Dilemma Vehicles (#)		0			0		0	0		0	0	
Queue Length 50th (ft)		22			20		18	148		5	56	
Queue Length 95th (ft)		56			35		36	201		m6	71	
Internal Link Dist (ft)		246			494			1301			347	
Turn Bay Length (ft)							70			75		
Base Capacity (vph)		436			447		356	1746		308	1637	
Starvation Cap Reductn		0			0		0	0		0	114	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.26			0.24		0.28	0.51		0.20	0.63	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green, Master Intersection			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 10.5		Intersection LOS: B	
Intersection Capacity Utilization 60.9%		ICU Level of Service B	
Analysis Period (min) 15			

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

Splits and Phases: 308: Gilbert Road & Page Avenue



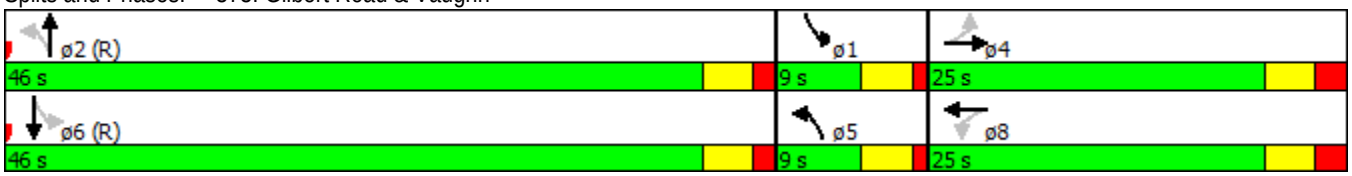


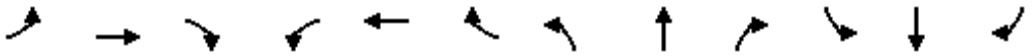
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	6	73	14	3	60	72	825	8	31	908	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	110		0	110		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			0.99			1.00		0.99	0.98	
Frt		0.944			0.896			0.999			0.980	
Flt Protected		0.973			0.991		0.950			0.950		
Satd. Flow (prot)	0	1696	0	0	1632	0	1770	3534	0	1770	3404	0
Flt Permitted		0.810			0.925		0.156			0.233		
Satd. Flow (perm)	0	1408	0	0	1522	0	291	3534	0	432	3404	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		42			71			2			33	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		323			321			427			421	
Travel Time (s)		8.8			8.8			11.6			11.5	
Confl. Peds. (#/hr)	5		9	9		5	40		12	12		40
Confl. Bikes (#/hr)									6			5
Peak Hour Factor	0.67	0.67	0.67	0.84	0.84	0.84	0.85	0.85	0.85	0.86	0.86	0.86
Adj. Flow (vph)	145	9	109	17	4	71	85	971	9	36	1056	167
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	263	0	0	92	0	85	980	0	36	1223	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	13.0	13.0		13.0	13.0		9.0	16.0		9.0	16.0	
Total Split (s)	25.0	25.0		25.0	25.0		9.0	46.0		9.0	46.0	
Total Split (%)	31.3%	31.3%		31.3%	31.3%		11.3%	57.5%		11.3%	57.5%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		4.0	4.5		4.0	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		16.8			16.8		52.0	46.5		52.0	46.5	
Actuated g/C Ratio		0.21			0.21		0.65	0.58		0.65	0.58	
v/c Ratio		0.80			0.25		0.30	0.48		0.10	0.61	
Control Delay		43.6			10.9		8.6	12.1		1.7	3.9	
Queue Delay		0.0			0.0		0.0	0.1		0.0	0.0	
Total Delay		43.6			10.9		8.6	12.1		1.7	3.9	
LOS		D			B		A	B		A	A	
Approach Delay		43.6			10.9			11.9			3.8	
Approach LOS		D			B			B			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Stops (vph)		137			23		25	364		3	124	
Fuel Used(gal)		3			0		0	6		0	5	
CO Emissions (g/hr)		0			0		0	0		0	0	
NOx Emissions (g/hr)		0			0		0	0		0	0	
VOC Emissions (g/hr)		0			0		0	0		0	0	
Dilemma Vehicles (#)		0			0		0	0		0	0	
Queue Length 50th (ft)		103			8		10	107		1	35	
Queue Length 95th (ft)		119			38		19	177		3	40	
Internal Link Dist (ft)		243			241			347			341	
Turn Bay Length (ft)							110			110		
Base Capacity (vph)		383			433		281	2056		364	1994	
Starvation Cap Reductn		0			0		0	211		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.69			0.21		0.30	0.53		0.10	0.61	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 61 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 11.2		Intersection LOS: B	
Intersection Capacity Utilization 63.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 373: Gilbert Road & Vaughn



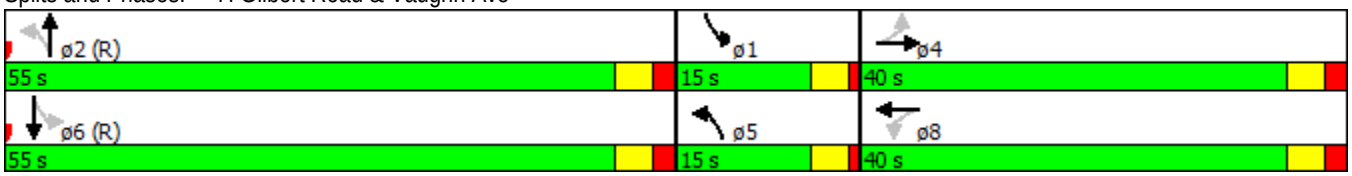


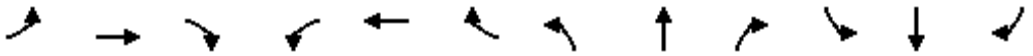
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	89	10	60	20	2	63	123	771	48	119	943	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.94			0.93			0.99			0.93	
Frt		0.949			0.899			0.991			0.978	
Flt Protected		0.973			0.988		0.950			0.950		
Satd. Flow (prot)	0	1663	0	0	1552	0	1770	3467	0	1770	3209	0
Flt Permitted		0.751			0.902		0.067			0.177		
Satd. Flow (perm)	0	1242	0	0	1402	0	125	3467	0	330	3209	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			77			8			23	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		334			502			365			483	
Travel Time (s)		9.1			13.7			10.0			13.2	
Confl. Peds. (#/hr)	48		51	51		48	140		51	51		140
Confl. Bikes (#/hr)			1						5			7
Peak Hour Factor	0.76	0.76	0.76	0.82	0.82	0.82	0.71	0.71	0.71	0.68	0.68	0.68
Adj. Flow (vph)	117	13	79	24	2	77	173	1086	68	175	1387	240
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	209	0	0	103	0	173	1154	0	175	1627	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	27.0	27.0		27.0	27.0		9.0	21.0		9.0	21.0	
Total Split (s)	40.0	40.0		40.0	40.0		15.0	55.0		15.0	55.0	
Total Split (%)	36.4%	36.4%		36.4%	36.4%		13.6%	50.0%		13.6%	50.0%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		4.0	5.0		4.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		22.2			22.2		74.8	64.6		74.8	64.6	
Actuated g/C Ratio		0.20			0.20		0.68	0.59		0.68	0.59	
v/c Ratio		0.77			0.30		0.78	0.57		0.51	0.86	
Control Delay		52.8			13.8		48.5	8.4		12.1	25.6	
Queue Delay		0.0			0.0		0.0	0.1		0.0	1.2	
Total Delay		52.8			13.8		48.5	8.5		12.1	26.8	
LOS		D			B		D	A		B	C	
Approach Delay		52.8			13.8			13.7			25.4	
Approach LOS		D			B			B			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Stops (vph)		128			24		137	229		37	595	
Fuel Used(gal)		3			1		2	5		1	13	
CO Emissions (g/hr)		0			0		0	0		0	0	
NOx Emissions (g/hr)		0			0		0	0		0	0	
VOC Emissions (g/hr)		0			0		0	0		0	0	
Dilemma Vehicles (#)		0			0		0	0		0	0	
Queue Length 50th (ft)		122			15		67	103		19	352	
Queue Length 95th (ft)		150			47		103	103		30	321	
Internal Link Dist (ft)		254			422			285			403	
Turn Bay Length (ft)							100			100		
Base Capacity (vph)		414			498		251	2040		374	1895	
Starvation Cap Reductn		0			0		0	165		0	109	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.50			0.21		0.69	0.62		0.47	0.91	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 72 (65%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 22.2		Intersection LOS: C	
Intersection Capacity Utilization 68.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 7: Gilbert Road & Vaughn Ave





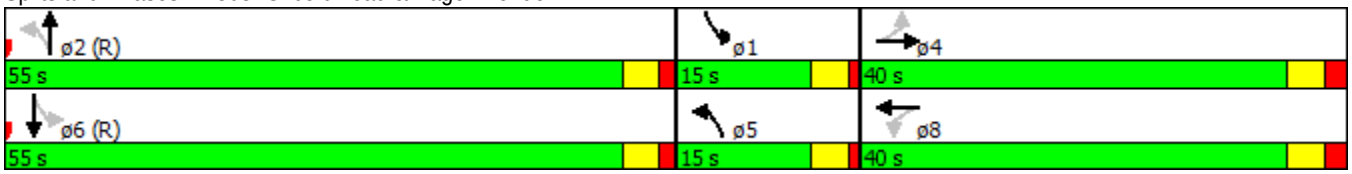
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	12	58	35	4	25	119	890	55	45	924	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	11	11	10	11	11
Storage Length (ft)	0		0	0		0	70		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			60			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.95			0.94			0.99			0.98	
Frt		0.919			0.947			0.991			0.990	
Flt Protected		0.986			0.973		0.950			0.950		
Satd. Flow (prot)	0	1581	0	0	1593	0	1652	3343	0	1652	3318	0
Flt Permitted		0.899			0.780		0.203			0.230		
Satd. Flow (perm)	0	1410	0	0	1256	0	353	3343	0	400	3318	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		72			30			8			9	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		326			574			414			365	
Travel Time (s)		8.9			15.7			11.3			10.0	
Confl. Peds. (#/hr)	61		26	26		61	73		56	56		73
Confl. Bikes (#/hr)			2						9			4
Peak Hour Factor	0.81	0.81	0.81	0.84	0.84	0.84	0.92	0.92	0.92	0.89	0.89	0.89
Adj. Flow (vph)	33	15	72	42	5	30	129	967	60	51	1038	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	120	0	0	77	0	129	1027	0	51	1113	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	27.0	27.0		27.0	27.0		9.0	21.5		9.0	21.5	
Total Split (s)	40.0	40.0		40.0	40.0		15.0	55.0		15.0	55.0	
Total Split (%)	36.4%	36.4%		36.4%	36.4%		13.6%	50.0%		13.6%	50.0%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		4.0	4.5		4.0	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Act Effct Green (s)		19.0			19.0		78.0	70.5		78.0	70.5	
Actuated g/C Ratio		0.17			0.17		0.71	0.64		0.71	0.64	
v/c Ratio		0.40			0.32		0.39	0.48		0.14	0.52	
Control Delay		21.0			28.1		14.8	11.0		1.3	3.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.4	
Total Delay		21.0			28.1		14.8	11.0		1.3	4.0	
LOS		C			C		B	B		A	A	
Approach Delay		21.0			28.1			11.4			3.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		C			C			B			A	
Stops (vph)		38			35		42	624		4	110	
Fuel Used(gal)		1			1		1	8		0	4	
CO Emissions (g/hr)		0			0		0	0		0	0	
NOx Emissions (g/hr)		0			0		0	0		0	0	
VOC Emissions (g/hr)		0			0		0	0		0	0	
Dilemma Vehicles (#)		0			0		0	0		0	0	
Queue Length 50th (ft)		28			28		24	286		2	51	
Queue Length 95th (ft)		68			65		m50	371		m2	58	
Internal Link Dist (ft)		246			494			334			285	
Turn Bay Length (ft)							70			75		
Base Capacity (vph)		497			420		393	2146		423	2130	
Starvation Cap Reductn		0			0		0	0		0	485	
Spillback Cap Reductn		0			0		0	23		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.24			0.18		0.33	0.48		0.12	0.68	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 78 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 8.9		Intersection LOS: A	
Intersection Capacity Utilization 62.9%		ICU Level of Service B	
Analysis Period (min) 15			

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

Splits and Phases: 308: Gilbert Road & Page Avenue

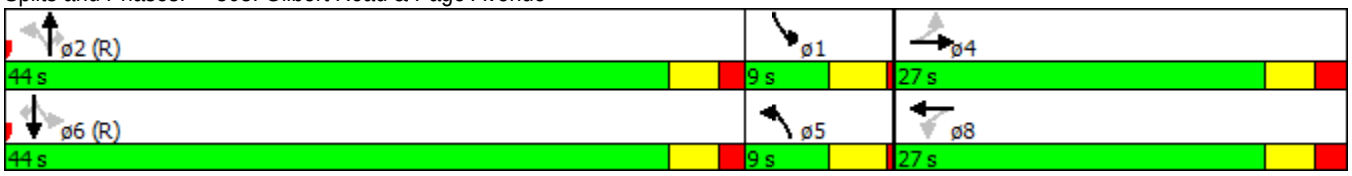


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	1	18	11	1	10	33	683	12	8	615	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	11	11	10	11	11
Storage Length (ft)	0		0	0		0	70		75	75		75
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			60			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00				0.97			0.97
Frt		0.930			0.937				0.850			0.850
Flt Protected		0.978			0.976		0.950			0.950		
Satd. Flow (prot)	0	1617	0	0	1647	0	1652	1576	1339	1652	1576	1339
Flt Permitted		0.887			0.890		0.213			0.187		
Satd. Flow (perm)	0	1467	0	0	1500	0	370	1576	1305	325	1576	1297
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			14				82			82
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		326			574			601			427	
Travel Time (s)		8.9			15.7			16.4			11.6	
Confl. Peds. (#/hr)			1	1			4		2	2		4
Confl. Bikes (#/hr)			2									
Peak Hour Factor	0.55	0.55	0.55	0.73	0.73	0.73	0.93	0.93	0.93	0.89	0.89	0.89
Parking (#/hr)								5	5		5	5
Adj. Flow (vph)	29	2	33	15	1	14	35	734	13	9	691	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	64	0	0	30	0	35	734	13	9	691	21
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	27.0	27.0		27.0	27.0		9.0	21.5	21.5	9.0	22.5	22.5
Total Split (s)	27.0	27.0		27.0	27.0		9.0	44.0	44.0	9.0	44.0	44.0
Total Split (%)	33.8%	33.8%		33.8%	33.8%		11.3%	55.0%	55.0%	11.3%	55.0%	55.0%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.0	3.0	3.5	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		0.5	1.5	1.5	0.5	1.5	1.5
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0			5.0		4.0	4.5	4.5	4.0	4.5	4.5
Lead/Lag							Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Ped	Ped		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		22.0			22.0		50.2	46.7	46.7	48.6	43.1	43.1
Actuated g/C Ratio		0.28			0.28		0.63	0.58	0.58	0.61	0.54	0.54
v/c Ratio		0.15			0.07		0.11	0.80	0.02	0.03	0.81	0.03
Control Delay		13.9			15.1		7.8	22.9	0.0	2.1	13.7	0.1
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	1.7	0.0
Total Delay		13.9			15.1		7.8	22.9	0.0	2.1	15.4	0.1
LOS		B			B		A	C	A	A	B	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		13.9			15.1			21.8			14.8	
Approach LOS		B			B			C			B	
Stops (vph)		15			12		14	465	0	2	328	0
Fuel Used(gal)		0			0		1	15	0	0	5	0
CO Emissions (g/hr)		0			0		0	0	0	0	0	0
NOx Emissions (g/hr)		0			0		0	0	0	0	0	0
VOC Emissions (g/hr)		0			0		0	0	0	0	0	0
Dilemma Vehicles (#)		0			0		0	0	0	0	0	0
Queue Length 50th (ft)		11			6		6	243	0	1	130	0
Queue Length 95th (ft)		19			20		17	#571	0	m1	m#310	m0
Internal Link Dist (ft)		246			494			521			347	
Turn Bay Length (ft)							70		75	75		75
Base Capacity (vph)		427			422		312	920	795	280	849	736
Starvation Cap Reductn		0			0		0	0	0	0	58	0
Spillback Cap Reductn		0			0		0	0	0	0	0	0
Storage Cap Reductn		0			0		0	0	0	0	0	0
Reduced v/c Ratio		0.15			0.07		0.11	0.80	0.02	0.03	0.87	0.03

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green, Master Intersection	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 18.2	Intersection LOS: B
Intersection Capacity Utilization 62.2%	ICU Level of Service B
Analysis Period (min) 15	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 308: Gilbert Road & Page Avenue

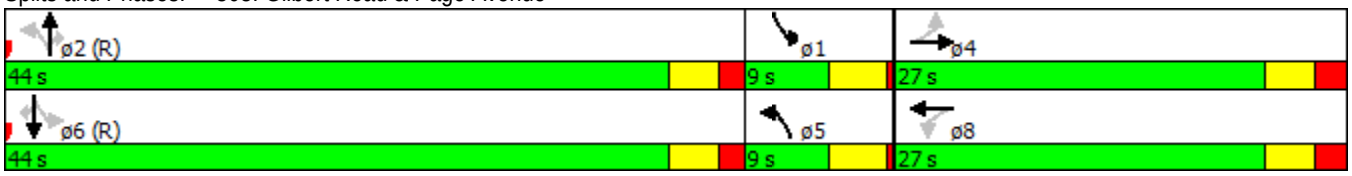


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	5	35	30	5	45	65	645	55	45	660	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	11	11	10	11	11
Storage Length (ft)	0		0	0		0	70		75	75		75
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			60			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.95			0.95				0.86			0.90
Frt		0.927			0.924				0.850			0.850
Flt Protected		0.981			0.982		0.950			0.950		
Satd. Flow (prot)	0	1574	0	0	1578	0	1652	1531	1301	1652	1531	1301
Flt Permitted		0.859			0.864		0.164			0.209		
Satd. Flow (perm)	0	1360	0	0	1366	0	285	1531	1117	363	1531	1173
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		66			62				82			82
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		326			574			601			427	
Travel Time (s)		8.9			15.7			16.4			11.6	
Confl. Peds. (#/hr)	23		29	29		23	28		43	43		28
Confl. Bikes (#/hr)									1			
Peak Hour Factor	0.53	0.53	0.53	0.73	0.73	0.73	0.94	0.94	0.94	0.89	0.89	0.89
Parking (#/hr)								10	10		10	10
Adj. Flow (vph)	47	9	66	41	7	62	69	686	59	51	742	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	110	0	69	686	59	51	742	45
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	27.0	27.0		27.0	27.0		9.0	21.5	21.5	9.0	22.5	22.5
Total Split (s)	27.0	27.0		27.0	27.0		9.0	44.0	44.0	9.0	44.0	44.0
Total Split (%)	33.8%	33.8%		33.8%	33.8%		11.3%	55.0%	55.0%	11.3%	55.0%	55.0%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.0	3.0	3.5	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		0.5	1.5	1.5	0.5	1.5	1.5
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0			5.0		4.0	4.5	4.5	4.0	4.5	4.5
Lead/Lag							Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Ped	Ped		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		22.0			22.0		47.6	43.1	43.1	46.8	41.3	41.3
Actuated g/C Ratio		0.28			0.28		0.60	0.54	0.54	0.58	0.52	0.52
v/c Ratio		0.29			0.26		0.27	0.83	0.09	0.17	0.94	0.07
Control Delay		13.8			13.2		12.4	28.3	1.9	3.1	24.4	0.3
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	7.2	0.0
Total Delay		13.8			13.2		12.4	28.3	1.9	3.1	31.6	0.3
LOS		B			B		B	C	A	A	C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		13.8			13.2			25.0			28.2	
Approach LOS		B			B			C			C	
Stops (vph)		26			32		25	486	4	10	433	1
Fuel Used(gal)		0			1		1	15	1	0	7	0
CO Emissions (g/hr)		0			0		0	0	0	0	0	0
NOx Emissions (g/hr)		0			0		0	0	0	0	0	0
VOC Emissions (g/hr)		0			0		0	0	0	0	0	0
Dilemma Vehicles (#)		0			0		0	0	0	0	0	0
Queue Length 50th (ft)		21			18		12	298	0	3	183	0
Queue Length 95th (ft)		24			40		28	#528	12	m4	m#485	m0
Internal Link Dist (ft)		246			494			521			347	
Turn Bay Length (ft)							70		75	75		75
Base Capacity (vph)		421			420		254	824	639	292	790	645
Starvation Cap Reductn		0			0		0	0	0	0	39	0
Spillback Cap Reductn		0			0		0	0	0	0	0	0
Storage Cap Reductn		0			0		0	0	0	0	0	0
Reduced v/c Ratio		0.29			0.26		0.27	0.83	0.09	0.17	0.99	0.07

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green, Master Intersection	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 25.0	Intersection LOS: C
Intersection Capacity Utilization 68.5%	ICU Level of Service C
Analysis Period (min) 15	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 308: Gilbert Road & Page Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	4	27	22	5	27	57	753	40	67	863	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	11	11	10	11	11
Storage Length (ft)	0		0	0		0	70		75	75		75
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			60			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96			0.95				0.91			0.88
Frt		0.924			0.932				0.850			0.850
Flt Protected		0.983			0.980		0.950			0.950		
Satd. Flow (prot)	0	1604	0	0	1577	0	1652	1486	1263	1652	1486	1263
Flt Permitted		0.900			0.881		0.099			0.099		
Satd. Flow (perm)	0	1439	0	0	1410	0	172	1486	1146	172	1486	1114
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		45			34				82			82
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		326			574			601			427	
Travel Time (s)		8.9			15.7			16.4			11.6	
Confl. Peds. (#/hr)	35		8	8		35	35		26	26		35
Peak Hour Factor	0.60	0.60	0.60	0.79	0.79	0.79	0.89	0.89	0.89	0.97	0.97	0.97
Parking (#/hr)								15	15		15	15
Adj. Flow (vph)	28	7	45	28	6	34	64	846	45	69	890	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	80	0	0	68	0	64	846	45	69	890	40
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	27.0	27.0		27.0	27.0		9.0	21.5	21.5	9.0	22.5	22.5
Total Split (s)	27.0	27.0		27.0	27.0		9.0	44.0	44.0	9.0	44.0	44.0
Total Split (%)	33.8%	33.8%		33.8%	33.8%		11.3%	55.0%	55.0%	11.3%	55.0%	55.0%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.0	3.0	3.5	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		0.5	1.5	1.5	0.5	1.5	1.5
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0			5.0		4.0	4.5	4.5	4.0	4.5	4.5
Lead/Lag							Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Ped	Ped		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		22.0			22.0		46.8	41.3	41.3	46.8	41.3	41.3
Actuated g/C Ratio		0.28			0.28		0.58	0.52	0.52	0.58	0.52	0.52
v/c Ratio		0.19			0.17		0.33	1.10	0.07	0.36	1.16	0.07
Control Delay		13.1			14.3		19.2	87.8	1.1	10.7	96.4	0.3
Queue Delay		0.1			0.1		0.0	0.0	0.0	0.0	0.1	0.0
Total Delay		13.2			14.4		19.2	87.8	1.1	10.7	96.5	0.3
LOS		B			B		B	F	A	B	F	A
Approach Delay		13.2			14.4			79.1			86.7	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		B			B			E			F	
Stops (vph)		20			25		26	577	2	17	586	1
Fuel Used(gal)		0			1		1	27	1	0	22	0
CO Emissions (g/hr)		0			0		0	0	0	0	0	0
NOx Emissions (g/hr)		0			0		0	0	0	0	0	0
VOC Emissions (g/hr)		0			0		0	0	0	0	0	0
Dilemma Vehicles (#)		0			0		0	0	0	0	0	0
Queue Length 50th (ft)		13			13		12	~506	0	4	~544	0
Queue Length 95th (ft)		23			36		26	#710	6	m5	m#677	m0
Internal Link Dist (ft)		246			494			521			347	
Turn Bay Length (ft)							70		75	75		75
Base Capacity (vph)		428			412		193	766	631	193	766	614
Starvation Cap Reductn		0			0		0	0	0	0	7	0
Spillback Cap Reductn		42			41		0	0	0	0	0	0
Storage Cap Reductn		0			0		0	0	0	0	0	0
Reduced v/c Ratio		0.21			0.18		0.33	1.10	0.07	0.36	1.17	0.07

Intersection Summary

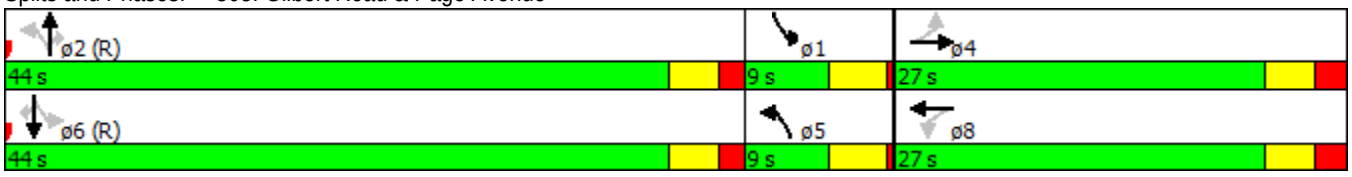
Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green, Master Intersection
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.16
Intersection Signal Delay: 78.1 Intersection LOS: E
Intersection Capacity Utilization 79.2% ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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

Splits and Phases: 308: Gilbert Road & Page Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	1	49	30	5	35	90	768	43	62	868	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	11	11	10	11	11
Storage Length (ft)	0		0	0		0	70		75	75		75
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			60			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.93			0.94				0.88			0.88
Frt		0.932			0.932				0.850			0.850
Flt Protected		0.976			0.979		0.950			0.950		
Satd. Flow (prot)	0	1555	0	0	1583	0	1652	1531	1301	1652	1531	1301
Flt Permitted		0.819			0.840		0.099			0.107		
Satd. Flow (perm)	0	1275	0	0	1326	0	172	1531	1150	186	1531	1148
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		63			48				82			82
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		326			574			601			427	
Travel Time (s)		8.9			15.7			16.4			11.6	
Confl. Peds. (#/hr)	30		44	44		30	34		33	33		34
Confl. Bikes (#/hr)			2						5			4
Peak Hour Factor	0.53	0.53	0.53	0.73	0.73	0.73	0.94	0.94	0.94	0.89	0.89	0.89
Parking (#/hr)								10	10		10	10
Adj. Flow (vph)	89	2	92	41	7	48	96	817	46	70	975	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	183	0	0	96	0	96	817	46	70	975	74
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	27.0	27.0		27.0	27.0		9.0	21.5	21.5	9.0	22.5	22.5
Total Split (s)	27.0	27.0		27.0	27.0		9.0	44.0	44.0	9.0	44.0	44.0
Total Split (%)	33.8%	33.8%		33.8%	33.8%		11.3%	55.0%	55.0%	11.3%	55.0%	55.0%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.0	3.0	3.5	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		0.5	1.5	1.5	0.5	1.5	1.5
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0			5.0		4.0	4.5	4.5	4.0	4.5	4.5
Lead/Lag							Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Ped	Ped		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		22.0			22.0		46.8	41.3	41.3	46.8	41.3	41.3
Actuated g/C Ratio		0.28			0.28		0.58	0.52	0.52	0.58	0.52	0.52
v/c Ratio		0.46			0.24		0.50	1.03	0.07	0.35	1.23	0.12
Control Delay		20.0			14.5		27.6	64.3	1.2	8.5	124.1	0.5
Queue Delay		1.0			0.3		0.0	0.0	0.0	0.0	0.2	0.0
Total Delay		20.9			14.8		27.6	64.3	1.2	8.5	124.3	0.5
LOS		C			B		C	E	A	A	F	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		20.9			14.8			57.6			108.8	
Approach LOS		C			B			E			F	
Stops (vph)		54			31		41	593	2	16	527	4
Fuel Used(gal)		1			1		2	24	1	0	27	0
CO Emissions (g/hr)		0			0		0	0	0	0	0	0
NOx Emissions (g/hr)		0			0		0	0	0	0	0	0
VOC Emissions (g/hr)		0			0		0	0	0	0	0	0
Dilemma Vehicles (#)		0			0		0	0	0	0	0	0
Queue Length 50th (ft)		48			18		18	~464	0	5	~627	0
Queue Length 95th (ft)		45			40		46	#677	7	m5	m#600	m1
Internal Link Dist (ft)		246			494			521			347	
Turn Bay Length (ft)							70		75	75		75
Base Capacity (vph)		396			399		193	790	633	200	790	632
Starvation Cap Reductn		0			0		0	0	0	0	22	0
Spillback Cap Reductn		72			75		0	0	0	0	0	0
Storage Cap Reductn		0			0		0	0	0	0	0	0
Reduced v/c Ratio		0.56			0.30		0.50	1.03	0.07	0.35	1.27	0.12

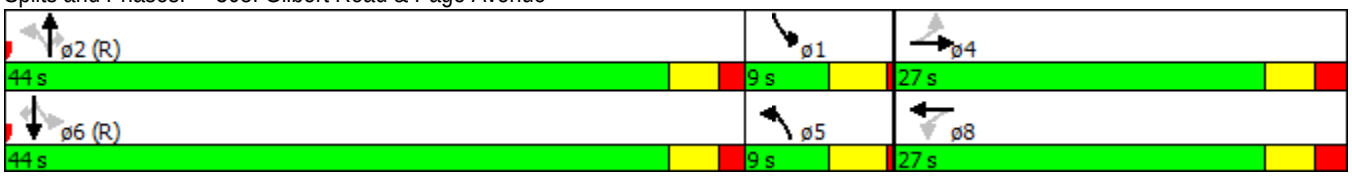
Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green, Master Intersection	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.23	
Intersection Signal Delay: 77.3	Intersection LOS: E
Intersection Capacity Utilization 80.3%	ICU Level of Service D
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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

Splits and Phases: 308: Gilbert Road & Page Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	6	73	14	3	60	72	825	8	31	908	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	110		100	110		100
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98			0.98				0.94			0.87
Frt		0.944			0.896				0.850			0.850
Flt Protected		0.973			0.991		0.950			0.950		
Satd. Flow (prot)	0	1685	0	0	1617	0	1770	1583	1346	1770	1583	1346
Flt Permitted		0.811			0.897		0.089			0.138		
Satd. Flow (perm)	0	1399	0	0	1461	0	166	1583	1269	257	1583	1165
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36			71				82			104
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		323			321			427			421	
Travel Time (s)		8.8			8.8			11.6			11.5	
Confl. Peds. (#/hr)	5		9	9		5	40		12	12		40
Confl. Bikes (#/hr)									6			5
Peak Hour Factor	0.67	0.67	0.67	0.84	0.84	0.84	0.85	0.85	0.85	0.86	0.86	0.86
Parking (#/hr)								10	10		10	10
Adj. Flow (vph)	145	9	109	17	4	71	85	971	9	36	1056	167
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	263	0	0	92	0	85	971	9	36	1056	167
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	13.0	13.0		13.0	13.0		9.0	16.0	16.0	9.0	16.0	16.0
Total Split (s)	14.0	14.0		14.0	14.0		9.0	57.0	57.0	9.0	57.0	57.0
Total Split (%)	17.5%	17.5%		17.5%	17.5%		11.3%	71.3%	71.3%	11.3%	71.3%	71.3%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5	1.5	1.0	1.5	1.5
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0			5.0		4.0	4.5	4.5	4.0	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		10.8			10.8		58.0	52.5	52.5	58.0	52.5	52.5
Actuated g/C Ratio		0.14			0.14		0.72	0.66	0.66	0.72	0.66	0.66
v/c Ratio		1.20			0.36		0.39	0.94	0.01	0.13	1.02	0.21
Control Delay		156.2			16.8		8.6	25.1	0.0	1.3	38.6	0.6
Queue Delay		0.5			0.2		0.0	5.9	0.0	0.0	32.4	0.0
Total Delay		156.7			17.0		8.6	31.0	0.0	1.3	71.0	0.6
LOS		F			B		A	C	A	A	E	A
Approach Delay		156.7			17.0			29.0			59.7	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		F			B			C			E	
Stops (vph)		102			28		23	398	0	2	337	1
Fuel Used(gal)		6			1		0	9	0	0	12	1
CO Emissions (g/hr)		0			0		0	0	0	0	0	0
NOx Emissions (g/hr)		0			0		0	0	0	0	0	0
VOC Emissions (g/hr)		0			0		0	0	0	0	0	0
Dilemma Vehicles (#)		0			0		0	0	0	0	0	0
Queue Length 50th (ft)		~162			10		9	285	0	1	~74	0
Queue Length 95th (ft)		#198			46		m10	m291	m0	m1	#726	m0
Internal Link Dist (ft)		243			241			347			341	
Turn Bay Length (ft)							110		100	110		100
Base Capacity (vph)		220			258		220	1038	860	280	1038	800
Starvation Cap Reductn		0			0		0	32	0	0	0	0
Spillback Cap Reductn		7			14		0	50	0	0	329	0
Storage Cap Reductn		0			0		0	0	0	0	0	0
Reduced v/c Ratio		1.23			0.38		0.39	0.98	0.01	0.13	1.49	0.21

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 61 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.20
Intersection Signal Delay: 55.5 Intersection LOS: E
Intersection Capacity Utilization 80.7% ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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

Splits and Phases: 373: Gilbert Road & Vaughn

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	89	10	60	20	2	63	123	771	48	119	943	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		100	100		100
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.90			0.88				0.81			0.51
Frt		0.949			0.899				0.850			0.850
Flt Protected		0.973			0.988		0.950			0.950		
Satd. Flow (prot)	0	1625	0	0	1484	0	1770	1537	1306	1770	1537	1306
Flt Permitted		0.745			0.896		0.058			0.058		
Satd. Flow (perm)	0	1179	0	0	1324	0	108	1537	1052	108	1537	661
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			77				60			74
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		334			502			365			483	
Travel Time (s)		9.1			13.7			10.0			13.2	
Confl. Peds. (#/hr)	48		51	51		48	140		51	51		140
Confl. Bikes (#/hr)			1						5			7
Peak Hour Factor	0.76	0.76	0.76	0.82	0.82	0.82	0.71	0.71	0.71	0.68	0.68	0.68
Parking (#/hr)								15	15		15	15
Adj. Flow (vph)	117	13	79	24	2	77	173	1086	68	175	1387	240
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	209	0	0	103	0	173	1086	68	175	1387	240
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	27.0	27.0		27.0	27.0		9.0	21.0	21.0	9.0	21.0	21.0
Total Split (s)	27.0	27.0		27.0	27.0		10.0	73.0	73.0	10.0	73.0	73.0
Total Split (%)	24.5%	24.5%		24.5%	24.5%		9.1%	66.4%	66.4%	9.1%	66.4%	66.4%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0			5.0		4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		20.5			20.5		76.5	69.5	69.5	76.5	69.5	69.5
Actuated g/C Ratio		0.19			0.19		0.70	0.63	0.63	0.70	0.63	0.63
v/c Ratio		0.87			0.33		1.05	1.12	0.10	1.06	1.43	0.54
Control Delay		71.8			16.1		94.2	78.8	2.8	113.3	218.1	12.6
Queue Delay		0.2			0.0		0.0	0.1	0.0	0.0	0.6	0.0
Total Delay		72.0			16.2		94.2	78.9	2.8	113.3	218.7	12.6
LOS		E			B		F	E	A	F	F	B
Approach Delay		72.0			16.2			77.0			181.1	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		E			B			E			F	
Stops (vph)		126			24		64	405	6	93	606	50
Fuel Used(gal)		3			1		3	16	0	4	48	1
CO Emissions (g/hr)		0			0		0	0	0	0	0	0
NOx Emissions (g/hr)		0			0		0	0	0	0	0	0
VOC Emissions (g/hr)		0			0		0	0	0	0	0	0
Dilemma Vehicles (#)		0			0		0	0	0	0	0	0
Queue Length 50th (ft)		126			15		~81	~892	3	~84	~1341	44
Queue Length 95th (ft)		#182			52		m#94	#752	m4	#126	#1042	81
Internal Link Dist (ft)		254			422			285			403	
Turn Bay Length (ft)							100		100	100		100
Base Capacity (vph)		255			326		165	971	687	165	971	444
Starvation Cap Reductn		0			0		0	19	0	0	0	0
Spillback Cap Reductn		1			5		0	0	0	0	109	0
Storage Cap Reductn		0			0		0	0	0	0	0	0
Reduced v/c Ratio		0.82			0.32		1.05	1.14	0.10	1.06	1.61	0.54

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 72 (65%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.43
Intersection Signal Delay: 129.4 Intersection LOS: F
Intersection Capacity Utilization 86.3% ICU Level of Service E
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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

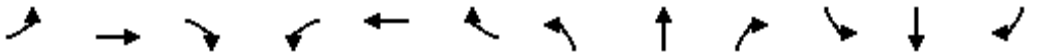
Splits and Phases: 7: Gilbert Road & Vaughn Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	12	58	35	4	25	119	890	55	45	924	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	11	11	10	11	11
Storage Length (ft)	0		0	0		0	70		75	75		75
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			60			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.91			0.91				0.76			0.70
Frt		0.919			0.947				0.850			0.850
Flt Protected		0.986			0.973		0.950			0.950		
Satd. Flow (prot)	0	1546	0	0	1550	0	1652	1486	1263	1652	1486	1263
Flt Permitted		0.899			0.780		0.090			0.131		
Satd. Flow (perm)	0	1360	0	0	1210	0	156	1486	960	228	1486	880
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61			26				60			60
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		326			574			414			365	
Travel Time (s)		8.9			15.7			11.3			10.0	
Confl. Peds. (#/hr)	61		26	26		61	73		56	56		73
Confl. Bikes (#/hr)			2						9			4
Peak Hour Factor	0.81	0.81	0.81	0.84	0.84	0.84	0.92	0.92	0.92	0.89	0.89	0.89
Parking (#/hr)								15	15		15	15
Adj. Flow (vph)	33	15	72	42	5	30	129	967	60	51	1038	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	120	0	0	77	0	129	967	60	51	1038	75
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	27.0	27.0		27.0	27.0		9.0	21.5	21.5	9.0	21.5	21.5
Total Split (s)	27.0	27.0		27.0	27.0		11.0	72.0	72.0	11.0	72.0	72.0
Total Split (%)	24.5%	24.5%		24.5%	24.5%		10.0%	65.5%	65.5%	10.0%	65.5%	65.5%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5	1.5	1.0	1.5	1.5
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0			5.0		4.0	4.5	4.5	4.0	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		19.0			19.0		78.0	70.8	70.8	77.9	70.8	70.8
Actuated g/C Ratio		0.17			0.17		0.71	0.64	0.64	0.71	0.64	0.64
v/c Ratio		0.42			0.33		0.64	1.01	0.09	0.21	1.09	0.13
Control Delay		24.6			30.3		51.9	61.4	6.7	1.1	52.5	0.3
Queue Delay		0.9			0.7		0.0	32.4	0.0	0.0	6.7	0.0
Total Delay		25.6			31.0		51.9	93.9	6.7	1.1	59.1	0.3
LOS		C			C		D	F	A	A	E	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		25.6			31.0			84.6			52.8	
Approach LOS		C			C			F			D	
Stops (vph)		44			38		146	764	20	4	345	1
Fuel Used(gal)		1			1		2	17	0	0	14	0
CO Emissions (g/hr)		0			0		0	0	0	0	0	0
NOx Emissions (g/hr)		0			0		0	0	0	0	0	0
VOC Emissions (g/hr)		0			0		0	0	0	0	0	0
Dilemma Vehicles (#)		0			0		0	0	0	0	0	0
Queue Length 50th (ft)		35			30		59	~771	13	2	~848	0
Queue Length 95th (ft)		76			68		m83	#1018	m24	m1	m72	m0
Internal Link Dist (ft)		246			494			334			285	
Turn Bay Length (ft)							70		75	75		75
Base Capacity (vph)		320			262		206	956	639	253	956	588
Starvation Cap Reductn		0			0		0	0	0	0	146	0
Spillback Cap Reductn		68			57		0	125	0	0	0	0
Storage Cap Reductn		0			0		0	0	0	0	0	0
Reduced v/c Ratio		0.48			0.38		0.63	1.16	0.09	0.20	1.28	0.13

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 78 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.09			
Intersection Signal Delay: 65.5		Intersection LOS: E	
Intersection Capacity Utilization 83.5%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 308: Gilbert Road & Page Avenue



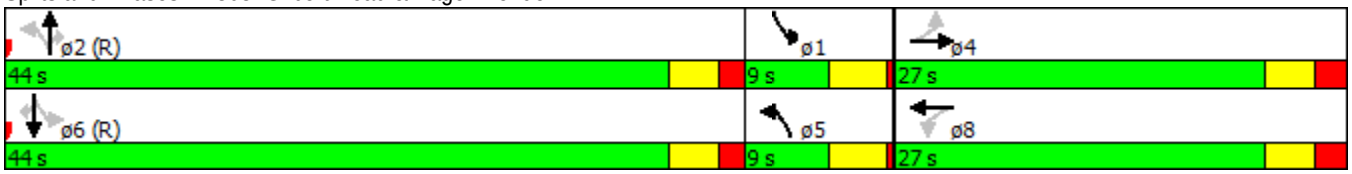
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	4	27	22	5	27	57	353	40	67	463	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	11	11	10	11	11
Storage Length (ft)	0		0	0		0	70		75	75		75
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			60			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96			0.95				0.91	0.97		0.88
Frt		0.924			0.932				0.850			0.850
Flt Protected		0.983			0.980		0.950			0.950		
Satd. Flow (prot)	0	1604	0	0	1577	0	1652	1486	1263	1652	1486	1263
Flt Permitted		0.900			0.881		0.372			0.441		
Satd. Flow (perm)	0	1439	0	0	1410	0	647	1486	1146	742	1486	1114
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		45			34				82			82
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		326			574			601			427	
Travel Time (s)		8.9			15.7			16.4			11.6	
Confl. Peds. (#/hr)	35		8	8		35	35		26	26		35
Peak Hour Factor	0.60	0.60	0.60	0.79	0.79	0.79	0.89	0.89	0.89	0.97	0.97	0.97
Parking (#/hr)								15	15		15	15
Adj. Flow (vph)	28	7	45	28	6	34	64	397	45	69	477	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	80	0	0	68	0	64	397	45	69	477	40
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	27.0	27.0		27.0	27.0		9.0	21.5	21.5	9.0	22.5	22.5
Total Split (s)	27.0	27.0		27.0	27.0		9.0	44.0	44.0	9.0	44.0	44.0
Total Split (%)	33.8%	33.8%		33.8%	33.8%		11.3%	55.0%	55.0%	11.3%	55.0%	55.0%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.0	3.0	3.5	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		0.5	1.5	1.5	0.5	1.5	1.5
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0			5.0		4.0	4.5	4.5	4.0	4.5	4.5
Lead/Lag							Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Ped	Ped		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		22.0			22.0		46.8	41.3	41.3	46.8	41.3	41.3
Actuated g/C Ratio		0.28			0.28		0.58	0.52	0.52	0.58	0.52	0.52
v/c Ratio		0.19			0.17		0.15	0.52	0.07	0.14	0.62	0.07
Control Delay		13.1			14.3		7.9	16.5	1.1	3.1	10.4	0.3
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	0.2	0.0
Total Delay		13.1			14.3		7.9	16.5	1.1	3.1	10.6	0.3
LOS		B			B		A	B	A	A	B	A
Approach Delay		13.1			14.3			14.1			9.0	

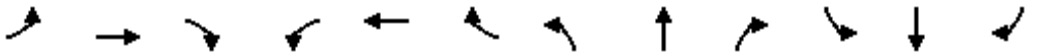
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		B			B			B			A	
Stops (vph)		20			25		23	231	2	13	219	1
Fuel Used(gal)		0			1		1	7	1	0	4	0
CO Emissions (g/hr)		0			0		0	0	0	0	0	0
NOx Emissions (g/hr)		0			0		0	0	0	0	0	0
VOC Emissions (g/hr)		0			0		0	0	0	0	0	0
Dilemma Vehicles (#)		0			0		0	0	0	0	0	0
Queue Length 50th (ft)		13			13		12	130	0	4	41	0
Queue Length 95th (ft)		23			36		26	209	6	m11	m169	m1
Internal Link Dist (ft)		246			494			521			347	
Turn Bay Length (ft)							70		75	75		75
Base Capacity (vph)		428			412		441	766	631	491	766	614
Starvation Cap Reductn		0			0		0	0	0	0	29	0
Spillback Cap Reductn		0			0		0	0	0	0	0	0
Storage Cap Reductn		0			0		0	0	0	0	0	0
Reduced v/c Ratio		0.19			0.17		0.15	0.52	0.07	0.14	0.65	0.07

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green, Master Intersection	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 11.6	Intersection LOS: B
Intersection Capacity Utilization 58.1%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 308: Gilbert Road & Page Avenue





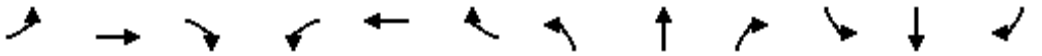
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	10	70	25	10	40	35	385	25	55	610	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	110		100	110		100
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.946			0.928				0.850			0.850
Flt Protected		0.974			0.984		0.950			0.950		
Satd. Flow (prot)	0	1716	0	0	1701	0	1770	1863	1583	1770	1863	1583
Flt Permitted		0.836			0.806		0.324			0.481		
Satd. Flow (perm)	0	1473	0	0	1393	0	604	1863	1583	896	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		34			43				82			82
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		323			321			427			421	
Travel Time (s)		8.8			8.8			11.6			11.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	11	76	27	11	43	38	418	27	60	663	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	190	0	0	81	0	38	418	27	60	663	43
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	13.0	13.0		13.0	13.0		9.0	16.0	16.0	9.0	16.0	16.0
Total Split (s)	14.0	14.0		14.0	14.0		9.0	57.0	57.0	9.0	57.0	57.0
Total Split (%)	17.5%	17.5%		17.5%	17.5%		11.3%	71.3%	71.3%	11.3%	71.3%	71.3%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5	1.5	1.0	1.5	1.5
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0			5.0		4.0	4.5	4.5	4.0	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		9.7			9.7		59.1	53.6	53.6	59.1	53.6	53.6
Actuated g/C Ratio		0.12			0.12		0.74	0.67	0.67	0.74	0.67	0.67
v/c Ratio		0.91			0.39		0.07	0.34	0.02	0.08	0.53	0.04
Control Delay		75.7			24.5		1.8	5.5	0.2	0.3	1.8	0.1
Queue Delay		50.3			1.6		0.0	0.2	0.0	0.0	0.4	0.0
Total Delay		125.9			26.1		1.8	5.7	0.2	0.3	2.3	0.1
LOS		F			C		A	A	A	A	A	A
Approach Delay		125.9			26.1			5.1			2.0	
Approach LOS		F			C			A			A	
Stops (vph)		114			40		5	96	0	1	22	0
Fuel Used(gal)		4			1		0	2	0	0	2	0
CO Emissions (g/hr)		0			0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)		0			0		0	0	0	0	0	0
VOC Emissions (g/hr)		0			0		0	0	0	0	0	0
Dilemma Vehicles (#)		0			0		0	0	0	0	0	0
Queue Length 50th (ft)		79			18		2	51	0	0	1	0
Queue Length 95th (ft)		#208			59		m4	85	m1	m0	23	m0
Internal Link Dist (ft)		243			241			347			341	
Turn Bay Length (ft)							110		100	110		100
Base Capacity (vph)		208			207		518	1247	1087	716	1247	1087
Starvation Cap Reductn		0			0		0	274	0	0	213	0
Spillback Cap Reductn		45			44		0	176	0	0	0	0
Storage Cap Reductn		0			0		0	0	0	0	0	0
Reduced v/c Ratio		1.17			0.50		0.07	0.43	0.02	0.08	0.64	0.04

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 61 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 19.7 Intersection LOS: B
Intersection Capacity Utilization 64.1% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 373: Gilbert Road & Vaughn



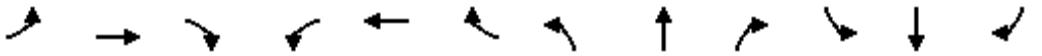
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	89	10	60	20	2	63	123	371	48	119	543	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		100	100		100
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.90			0.88				0.81	0.95		0.51
Frt		0.949			0.899				0.850			0.850
Flt Protected		0.973			0.988		0.950			0.950		
Satd. Flow (prot)	0	1625	0	0	1484	0	1770	1537	1306	1770	1537	1306
Flt Permitted		0.745			0.896		0.221			0.392		
Satd. Flow (perm)	0	1179	0	0	1324	0	412	1537	1052	692	1537	661
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			77				60			129
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		334			502			365			483	
Travel Time (s)		9.1			13.7			10.0			13.2	
Confl. Peds. (#/hr)	48		51	51		48	140		51	51		140
Confl. Bikes (#/hr)			1						5			7
Peak Hour Factor	0.76	0.76	0.76	0.82	0.82	0.82	0.71	0.71	0.71	0.68	0.68	0.68
Parking (#/hr)								15	15		15	15
Adj. Flow (vph)	117	13	79	24	2	77	173	523	68	175	799	240
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	209	0	0	103	0	173	523	68	175	799	240
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	27.0	27.0		27.0	27.0		9.0	21.0	21.0	9.0	21.0	21.0
Total Split (s)	27.0	27.0		27.0	27.0		10.0	73.0	73.0	10.0	73.0	73.0
Total Split (%)	24.5%	24.5%		24.5%	24.5%		9.1%	66.4%	66.4%	9.1%	66.4%	66.4%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0			5.0		4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		20.5			20.5		76.5	69.5	69.5	76.5	69.5	69.5
Actuated g/C Ratio		0.19			0.19		0.70	0.63	0.63	0.70	0.63	0.63
v/c Ratio		0.87			0.33		0.48	0.54	0.10	0.32	0.82	0.52
Control Delay		71.8			16.1		7.3	5.8	0.5	6.3	19.7	9.3
Queue Delay		0.0			0.0		0.0	0.5	0.0	0.0	2.2	0.0
Total Delay		71.8			16.1		7.3	6.3	0.5	6.3	21.9	9.3
LOS		E			B		A	A	A	A	C	A
Approach Delay		71.8			16.1			6.0			17.2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		E			B			A			B	
Stops (vph)		126			24		19	64	1	27	254	37
Fuel Used(gal)		3			1		1	2	0	1	5	1
CO Emissions (g/hr)		0			0		0	0	0	0	0	0
NOx Emissions (g/hr)		0			0		0	0	0	0	0	0
VOC Emissions (g/hr)		0			0		0	0	0	0	0	0
Dilemma Vehicles (#)		0			0		0	0	0	0	0	0
Queue Length 50th (ft)		126			15		14	64	0	19	218	33
Queue Length 95th (ft)		#182			52		19	76	1	49	300	66
Internal Link Dist (ft)		254			422			285			403	
Turn Bay Length (ft)							100		100	100		100
Base Capacity (vph)		255			326		360	971	687	540	971	465
Starvation Cap Reductn		0			0		0	145	0	0	78	0
Spillback Cap Reductn		0			0		0	0	0	0	0	0
Storage Cap Reductn		0			0		0	0	0	0	0	0
Reduced v/c Ratio		0.82			0.32		0.48	0.63	0.10	0.32	0.89	0.52

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 72 (65%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 18.4 Intersection LOS: B
Intersection Capacity Utilization 65.2% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Gilbert Road & Vaughn Ave

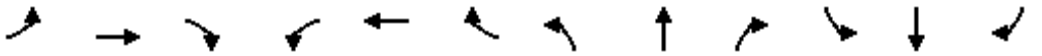


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	12	58	35	4	25	119	490	55	45	524	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	11	11	10	11	11
Storage Length (ft)	0		0	0		0	70		75	75		75
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			60			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.91			0.91				0.76	0.95		0.70
Frt		0.919			0.947				0.850			0.850
Flt Protected		0.986			0.973		0.950			0.950		
Satd. Flow (prot)	0	1546	0	0	1550	0	1652	1486	1263	1652	1486	1263
Flt Permitted		0.899			0.780		0.358			0.393		
Satd. Flow (perm)	0	1360	0	0	1210	0	622	1486	960	646	1486	880
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61			26				60			60
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		326			574			414			365	
Travel Time (s)		8.9			15.7			11.3			10.0	
Confl. Peds. (#/hr)	61		26	26		61	73		56	56		73
Confl. Bikes (#/hr)			2						9			4
Peak Hour Factor	0.81	0.81	0.81	0.84	0.84	0.84	0.92	0.92	0.92	0.89	0.89	0.89
Parking (#/hr)								15	15		15	15
Adj. Flow (vph)	33	15	72	42	5	30	129	533	60	51	589	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	120	0	0	77	0	129	533	60	51	589	75
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	27.0	27.0		27.0	27.0		9.0	21.5	21.5	9.0	21.5	21.5
Total Split (s)	27.0	27.0		27.0	27.0		11.0	72.0	72.0	11.0	72.0	72.0
Total Split (%)	24.5%	24.5%		24.5%	24.5%		10.0%	65.5%	65.5%	10.0%	65.5%	65.5%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5	1.5	1.0	1.5	1.5
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0			5.0		4.0	4.5	4.5	4.0	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		19.0			19.0		78.0	72.5	72.5	78.0	72.5	72.5
Actuated g/C Ratio		0.17			0.17		0.71	0.66	0.66	0.71	0.66	0.66
v/c Ratio		0.42			0.33		0.26	0.54	0.09	0.10	0.60	0.12
Control Delay		24.6			30.3		16.7	22.3	7.4	1.6	5.2	0.5
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	1.0	0.0
Total Delay		24.6			30.3		16.7	22.3	7.4	1.6	6.2	0.5
LOS		C			C		B	C	A	A	A	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		24.6			30.3			20.1			5.2	
Approach LOS		C			C			C			A	
Stops (vph)		44			38		81	386	25	5	83	1
Fuel Used(gal)		1			1		1	5	0	0	2	0
CO Emissions (g/hr)		0			0		0	0	0	0	0	0
NOx Emissions (g/hr)		0			0		0	0	0	0	0	0
VOC Emissions (g/hr)		0			0		0	0	0	0	0	0
Dilemma Vehicles (#)		0			0		0	0	0	0	0	0
Queue Length 50th (ft)		35			30		67	305	17	3	68	0
Queue Length 95th (ft)		76			68		m79	m384	m24	m4	m88	m0
Internal Link Dist (ft)		246			494			334			285	
Turn Bay Length (ft)							70		75	75		75
Base Capacity (vph)		320			262		517	979	653	534	979	600
Starvation Cap Reductn		0			0		0	0	0	0	178	0
Spillback Cap Reductn		0			0		0	0	0	0	0	0
Storage Cap Reductn		0			0		0	0	0	0	0	0
Reduced v/c Ratio		0.38			0.29		0.25	0.54	0.09	0.10	0.74	0.13

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 78 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 14.4	Intersection LOS: B
Intersection Capacity Utilization 62.5%	ICU Level of Service B
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 308: Gilbert Road & Page Avenue



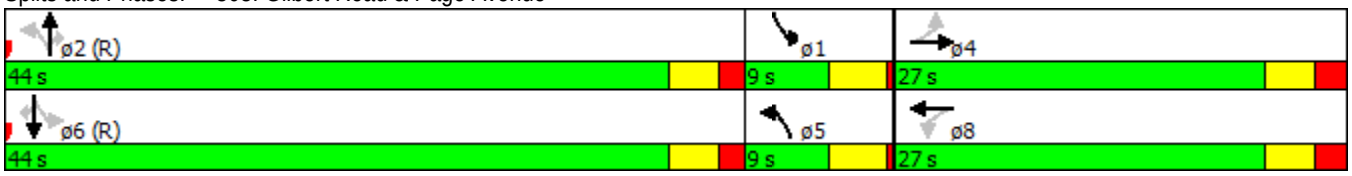
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	4	27	22	5	27	57	553	40	67	663	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	11	11	10	11	11
Storage Length (ft)	0		0	0		0	70		75	75		75
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			60			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96			0.95				0.91			0.88
Frt		0.924			0.932				0.850			0.850
Flt Protected		0.983			0.980		0.950			0.950		
Satd. Flow (prot)	0	1604	0	0	1577	0	1652	1486	1263	1652	1486	1263
Flt Permitted		0.900			0.881		0.208			0.256		
Satd. Flow (perm)	0	1439	0	0	1410	0	362	1486	1146	445	1486	1114
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		45			34				82			82
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		326			574			601			427	
Travel Time (s)		8.9			15.7			16.4			11.6	
Confl. Peds. (#/hr)	35		8	8		35	35		26	26		35
Peak Hour Factor	0.60	0.60	0.60	0.79	0.79	0.79	0.89	0.89	0.89	0.97	0.97	0.97
Parking (#/hr)								15	15		15	15
Adj. Flow (vph)	28	7	45	28	6	34	64	621	45	69	684	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	80	0	0	68	0	64	621	45	69	684	40
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	27.0	27.0		27.0	27.0		9.0	21.5	21.5	9.0	22.5	22.5
Total Split (s)	27.0	27.0		27.0	27.0		9.0	44.0	44.0	9.0	44.0	44.0
Total Split (%)	33.8%	33.8%		33.8%	33.8%		11.3%	55.0%	55.0%	11.3%	55.0%	55.0%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.5	3.0	3.0	3.5	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		0.5	1.5	1.5	0.5	1.5	1.5
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0			5.0		4.0	4.5	4.5	4.0	4.5	4.5
Lead/Lag							Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Ped	Ped		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		22.0			22.0		46.8	41.3	41.3	46.8	41.3	41.3
Actuated g/C Ratio		0.28			0.28		0.58	0.52	0.52	0.58	0.52	0.52
v/c Ratio		0.19			0.17		0.22	0.81	0.07	0.21	0.89	0.07
Control Delay		13.1			14.3		10.2	27.7	1.1	3.3	22.5	0.3
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	1.0	0.0
Total Delay		13.1			14.3		10.2	27.7	1.1	3.3	23.6	0.3
LOS		B			B		B	C	A	A	C	A
Approach Delay		13.1			14.3			24.5			20.6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		B			B			C			C	
Stops (vph)		20			25		23	431	2	12	407	1
Fuel Used(gal)		0			1		1	13	1	0	7	0
CO Emissions (g/hr)		0			0		0	0	0	0	0	0
NOx Emissions (g/hr)		0			0		0	0	0	0	0	0
VOC Emissions (g/hr)		0			0		0	0	0	0	0	0
Dilemma Vehicles (#)		0			0		0	0	0	0	0	0
Queue Length 50th (ft)		13			13		12	256	0	3	77	0
Queue Length 95th (ft)		23			36		26	#454	6	m7	m#521	m0
Internal Link Dist (ft)		246			494			521			347	
Turn Bay Length (ft)							70		75	75		75
Base Capacity (vph)		428			412		292	766	631	335	766	614
Starvation Cap Reductn		0			0		0	0	0	0	15	0
Spillback Cap Reductn		0			0		0	0	0	0	0	0
Storage Cap Reductn		0			0		0	0	0	0	0	0
Reduced v/c Ratio		0.19			0.17		0.22	0.81	0.07	0.21	0.91	0.07

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 21.7 Intersection LOS: C
Intersection Capacity Utilization 68.6% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 308: Gilbert Road & Page Avenue



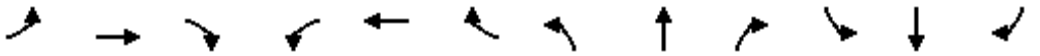
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	10	70	25	10	40	35	585	25	55	810	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	110		100	110		100
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.946			0.928				0.850			0.850
Flt Protected		0.974			0.984		0.950			0.950		
Satd. Flow (prot)	0	1716	0	0	1701	0	1770	1863	1583	1770	1863	1583
Flt Permitted		0.836			0.806		0.200			0.340		
Satd. Flow (perm)	0	1473	0	0	1393	0	373	1863	1583	633	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		34			43				82			82
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		323			321			427			421	
Travel Time (s)		8.8			8.8			11.6			11.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	11	76	27	11	43	38	636	27	60	880	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	190	0	0	81	0	38	636	27	60	880	43
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	13.0	13.0		13.0	13.0		9.0	16.0	16.0	9.0	16.0	16.0
Total Split (s)	14.0	14.0		14.0	14.0		9.0	57.0	57.0	9.0	57.0	57.0
Total Split (%)	17.5%	17.5%		17.5%	17.5%		11.3%	71.3%	71.3%	11.3%	71.3%	71.3%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5	1.5	1.0	1.5	1.5
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0			5.0		4.0	4.5	4.5	4.0	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		9.7			9.7		59.1	53.6	53.6	59.1	53.6	53.6
Actuated g/C Ratio		0.12			0.12		0.74	0.67	0.67	0.74	0.67	0.67
v/c Ratio		0.91			0.39		0.10	0.51	0.02	0.11	0.71	0.04
Control Delay		75.7			24.5		3.1	9.4	1.2	0.4	3.1	0.1
Queue Delay		35.7			0.8		0.0	0.5	0.0	0.0	0.4	0.0
Total Delay		111.3			25.3		3.1	10.0	1.2	0.4	3.6	0.1
LOS		F			C		A	A	A	A	A	A
Approach Delay		111.3			25.3			9.3			3.2	
Approach LOS		F			C			A			A	
Stops (vph)		114			40		7	219	2	1	41	0
Fuel Used(gal)		4			1		0	4	0	0	4	0
CO Emissions (g/hr)		0			0		0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
NOx Emissions (g/hr)		0			0		0	0	0	0	0	0
VOC Emissions (g/hr)		0			0		0	0	0	0	0	0
Dilemma Vehicles (#)		0			0		0	0	0	0	0	0
Queue Length 50th (ft)		79			18		2	118	0	0	1	0
Queue Length 95th (ft)		#208			59		m6	m207	m0	m0	29	m0
Internal Link Dist (ft)		243			241			347			341	
Turn Bay Length (ft)							110		100	110		100
Base Capacity (vph)		208			207		362	1247	1087	537	1247	1087
Starvation Cap Reductn		0			0		0	258	0	0	80	0
Spillback Cap Reductn		29			28		0	173	0	0	88	0
Storage Cap Reductn		0			0		0	0	0	0	0	0
Reduced v/c Ratio		1.06			0.45		0.10	0.64	0.02	0.11	0.76	0.04

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 61 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 16.8 Intersection LOS: B
Intersection Capacity Utilization 70.2% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 373: Gilbert Road & Vaughn



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	89	10	60	20	2	63	123	571	48	119	743	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		100	100		100
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.90			0.88				0.81			0.51
Frt		0.949			0.899				0.850			0.850
Flt Protected		0.973			0.988		0.950			0.950		
Satd. Flow (prot)	0	1625	0	0	1484	0	1770	1537	1306	1770	1537	1306
Flt Permitted		0.745			0.896		0.058			0.218		
Satd. Flow (perm)	0	1179	0	0	1324	0	108	1537	1052	406	1537	661
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			77				60			94
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		334			502			365			483	
Travel Time (s)		9.1			13.7			10.0			13.2	
Confl. Peds. (#/hr)	48		51	51		48	140		51	51		140
Confl. Bikes (#/hr)			1						5			7
Peak Hour Factor	0.76	0.76	0.76	0.82	0.82	0.82	0.71	0.71	0.71	0.68	0.68	0.68
Parking (#/hr)								15	15		15	15
Adj. Flow (vph)	117	13	79	24	2	77	173	804	68	175	1093	240
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	209	0	0	103	0	173	804	68	175	1093	240
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	27.0	27.0		27.0	27.0		9.0	21.0	21.0	9.0	21.0	21.0
Total Split (s)	27.0	27.0		27.0	27.0		10.0	73.0	73.0	10.0	73.0	73.0
Total Split (%)	24.5%	24.5%		24.5%	24.5%		9.1%	66.4%	66.4%	9.1%	66.4%	66.4%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0			5.0		4.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		20.5			20.5		76.5	69.5	69.5	76.5	69.5	69.5
Actuated g/C Ratio		0.19			0.19		0.70	0.63	0.63	0.70	0.63	0.63
v/c Ratio		0.87			0.33		1.05	0.83	0.10	0.49	1.13	0.53
Control Delay		71.8			16.1		102.4	14.8	2.1	11.1	86.9	11.3
Queue Delay		0.0			0.0		0.0	2.0	0.0	0.0	0.2	0.0
Total Delay		71.8			16.1		102.4	16.8	2.1	11.1	87.1	11.3
LOS		E			B		F	B	A	B	F	B
Approach Delay		71.8			16.1			30.0			66.2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		E			B			C			E	
Stops (vph)		126			24		72	186	5	29	409	41
Fuel Used(gal)		3			1		3	4	0	1	18	1
CO Emissions (g/hr)		0			0		0	0	0	0	0	0
NOx Emissions (g/hr)		0			0		0	0	0	0	0	0
VOC Emissions (g/hr)		0			0		0	0	0	0	0	0
Dilemma Vehicles (#)		0			0		0	0	0	0	0	0
Queue Length 50th (ft)		126			15		~86	113	0	21	~901	35
Queue Length 95th (ft)		#182			52		#137	189	m5	47	#592	76
Internal Link Dist (ft)		254			422			285			403	
Turn Bay Length (ft)							100		100	100		100
Base Capacity (vph)		255			326		165	971	687	357	971	452
Starvation Cap Reductn		0			0		0	72	0	0	0	0
Spillback Cap Reductn		0			1		0	0	0	0	31	0
Storage Cap Reductn		0			0		0	0	0	0	0	0
Reduced v/c Ratio		0.82			0.32		1.05	0.89	0.10	0.49	1.16	0.53

Intersection Summary

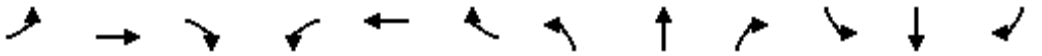
Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 72 (65%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.13
Intersection Signal Delay: 51.6 Intersection LOS: D
Intersection Capacity Utilization 75.7% ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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

Splits and Phases: 7: Gilbert Road & Vaughn Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	12	58	35	4	25	119	690	55	45	724	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	11	11	10	11	11
Storage Length (ft)	0		0	0		0	70		75	75		75
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			60			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.91			0.91				0.76			0.70
Frt		0.919			0.947				0.850			0.850
Flt Protected		0.986			0.973		0.950			0.950		
Satd. Flow (prot)	0	1546	0	0	1550	0	1652	1486	1263	1652	1486	1263
Flt Permitted		0.899			0.780		0.218			0.254		
Satd. Flow (perm)	0	1360	0	0	1210	0	379	1486	960	442	1486	880
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61			26				60			60
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		326			574			414			365	
Travel Time (s)		8.9			15.7			11.3			10.0	
Confl. Peds. (#/hr)	61		26	26		61	73		56	56		73
Confl. Bikes (#/hr)			2						9			4
Peak Hour Factor	0.81	0.81	0.81	0.84	0.84	0.84	0.92	0.92	0.92	0.89	0.89	0.89
Parking (#/hr)								15	15		15	15
Adj. Flow (vph)	33	15	72	42	5	30	129	750	60	51	813	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	120	0	0	77	0	129	750	60	51	813	75
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	27.0	27.0		27.0	27.0		9.0	21.5	21.5	9.0	21.5	21.5
Total Split (s)	27.0	27.0		27.0	27.0		11.0	72.0	72.0	11.0	72.0	72.0
Total Split (%)	24.5%	24.5%		24.5%	24.5%		10.0%	65.5%	65.5%	10.0%	65.5%	65.5%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.5	1.5	1.0	1.5	1.5
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0			5.0		4.0	4.5	4.5	4.0	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		19.0			19.0		78.0	70.8	70.8	77.9	70.8	70.8
Actuated g/C Ratio		0.17			0.17		0.71	0.64	0.64	0.71	0.64	0.64
v/c Ratio		0.42			0.33		0.37	0.78	0.09	0.13	0.85	0.13
Control Delay		24.6			30.3		24.2	33.3	8.1	1.2	7.2	0.3
Queue Delay		0.0			0.0		0.0	0.5	0.0	0.0	18.2	0.0
Total Delay		24.7			30.3		24.2	33.8	8.1	1.2	25.3	0.3
LOS		C			C		C	C	A	A	C	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		24.7			30.3			30.9			22.0	
Approach LOS		C			C			C			C	
Stops (vph)		44			38		77	640	26	4	241	1
Fuel Used(gal)		1			1		1	10	0	0	4	0
CO Emissions (g/hr)		0			0		0	0	0	0	0	0
NOx Emissions (g/hr)		0			0		0	0	0	0	0	0
VOC Emissions (g/hr)		0			0		0	0	0	0	0	0
Dilemma Vehicles (#)		0			0		0	0	0	0	0	0
Queue Length 50th (ft)		35			30		67	550	17	3	83	0
Queue Length 95th (ft)		76			68		m82	m664	m25	m2	m78	m0
Internal Link Dist (ft)		246			494			334			285	
Turn Bay Length (ft)							70		75	75		75
Base Capacity (vph)		320			262		350	956	639	391	956	588
Starvation Cap Reductn		0			0		0	0	0	0	155	0
Spillback Cap Reductn		1			0		0	36	0	0	0	0
Storage Cap Reductn		0			0		0	0	0	0	0	0
Reduced v/c Ratio		0.38			0.29		0.37	0.82	0.09	0.13	1.01	0.13

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 78 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 26.5		Intersection LOS: C	
Intersection Capacity Utilization 73.0%		ICU Level of Service D	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 308: Gilbert Road & Page Avenue

Existing and Projected Land Uses and Unfactored Trip Generation

Block #	Existing Land Use	Existing Development (ft^2)	Existing Multi-Family & Single-Family Units	Existing Lot Size (ft^2)	Existing Lot Size (acres)	Projected Build-out Land Use	Projected Maximum Stories	Projected Build-out Retail (ft^2)	Projected Build-out Office (ft^2)	Projected Build-out Multi-Family Units	Projected Build-out Single-Family Units	Projected Floor Area Ratio (FAR)	Projected Build-out Development (ft^2)	Change in Development (Projected - Existing) (ft^2)	Change in MF & SF Units (Projected - Existing)	Existing PM Peak In	Existing PM Peak Out	Existing PM Peak Total	Projected PM Peak In	Projected PM Peak Out	Projected PM Peak Total	Change for PM Peak In	Change For PM Peak Out	Change For PM Peak Total
1	MF	190,500	138	381,000	8.75	MF	2	0	0	138	0	0.50	190,500	0	0	31	23	54	31	23	54	0	0	0
2	VACANT	0	0	327,375	7.52	MF	3	0	0	300	0	1.00	327,375	327,375	300	0	0	0	68	49	117	68	49	117
3	COM	17,500	0	35,000	0.80	COM	2	17,500	0	0	0	0.50	17,500	0	0	21	26	47	21	26	47	0	0	0
4	VACANT	0	0	80,500	1.85	COM	2	40,250	40,250	0	0	1.00	80,500	80,500	0	0	0	0	58	111	169	58	111	169
5	COM	178,500	0	595,000	13.66	COM	4	0	0	0	0	0.30	178,500	0	0	113	283	396	113	283	396	0	0	0
6	SF	14,400	17	72,000	1.65	SF	2	0	0	0	17	0.20	14,400	0	0	11	6	17	11	6	17	0	0	0
7	OPEN	0	0	122,000	2.80	OPEN	0	0	0	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0
8	SXU	28,200	4	266,400	6.12	SXU	5	0	0	100	0	1.00	266,400	238,200	96	3	1	4	62	37	99	59	36	95
9	PKG	114,000	0	57,000	1.31	PKG	4	0	0	0	0	2.00	114,000	0	0	0	0	0	0	0	0	0	0	0
10	COM	31,832	0	118,000	2.71	COM	2	59,000	59,000	0	0	1.00	118,000	86,168	0	188	126	314	273	289	562	85	163	248
11	COM	6,335	0	44,500	1.02	COM	2	24,500	20,000	0	0	1.00	44,500	38,165	0	2	7	9	34	62	96	32	55	87
12	VACANT	0	0	89,500	2.05	MU	4	5,000	17,000	60	0	1.00	89,500	89,500	60	0	0	0	23	39	62	23	39	62
13	MF	74,175	40	98,900	2.27	MF	2	0	0	40	0	0.75	74,175	0	0	9	7	16	9	7	16	0	0	0
14	SF	16,500	5	35,200	0.81	SF	2	0	0	0	8	0.75	26,400	9,900	3	3	2	5	5	3	8	2	1	3
15	SF	0	16	306,300	7.03	SF	2	0	0	60	48	0.75	229,725	229,725	92	10	6	16	43	28	71	33	22	55
16	GOV	0	0	88,800	2.04	GOV	0	0	0	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0
17	SF	4,500	3	80,600	1.85	PKG	4	0	0	0	0	3.00	241,800	237,300	-3	2	26	28	0	368	368	-2	342	340
18	PKG	0	0	127,800	2.93	MU	5	20,000	0	150	0	3.00	383,400	383,400	150	0	0	0	58	55	113	58	55	113
19	COM	8,500	0	35,000	0.80	COM	2	8,500	0	0	0	0.30	8,500	0	0	4	4	8	4	4	8	0	0	0
20	COM	10,894	0	88,000	2.02	COM	2	44,000	0	0	0	0.50	44,000	33,106	0	64	43	107	127	106	233	63	63	126
21	COM	7,035	0	55,000	1.26	COM	2	27,500	0	0	0	0.50	27,500	20,465	0	41	28	69	163	108	271	122	80	202
22	PKG	0	0	34,400	0.79	PKG	3	0	0	0	0	3.00	103,200	103,200	0	0	0	0	0	0	0	0	0	0
23	COM	3,600	0	17,500	0.40	COM	3	17,500	17,500	0	0	2.00	35,000	31,400	0	1	1	2	25	48	73	24	47	71
24	SF	63,000	20	126,000	2.89	SF	2	0	0	0	30	0.75	94,500	31,500	10	13	7	20	19	11	30	6	4	10
25	VACANT	0	0	243,000	5.58	MF	3	0	0	150	0	1.00	243,000	243,000	150	0	0	0	34	25	59	34	25	59
26	PKG	0	0	64,500	1.48	PKG	1	0	0	0	0	0.00	0	0	0	0	10	10	0	80	80	0	70	70
27	GOV	0	0	27,000	0.62	GOV	0	0	0	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0
28	COM	35,335	0	92,000	2.11	COM	2	70,000	22,000	0	0	1.00	92,000	56,665	0	22	27	49	90	133	223	68	106	174
29	COM	56,156	0	58,000	1.33	COM	2	86,000	30,000	0	0	2.00	116,000	59,844	0	67	85	152	111	167	278	44	82	126
30	PKG	0	0	58,000	1.33	MU	3	11,000	0	75	0	3.00	174,000	174,000	75	0	0	0	30	29	59	30	29	59
31	SF	27,720	33	126,000	2.89	SF	2	0	0	0	33	0.20	27,720	0	0	21	12	33	21	12	33	0	0	0
32	MF	146,000	75	146,000	3.35	MF	2	0	0	75	0	1.00	146,000	0	0	17	12	29	17	12	29	0	0	0
33	SF	25,200	18	126,000	2.89	SF	2	0	0	0	18	0.20	25,200	0	0	11	7	18	11	7	18	0	0	0
34	OPEN	0	0	73,000	1.68	OPEN	3	2,000	0	0	0	0.00	2,000	2,000	0	0	0	0	2	3	5	2	3	5
35	COM	8,030	4	105,000	2.41	MU	4	15,000	0	100	0	2.00	210,000	201,970	96	8	8	16	41	39	80	33	31	64
36	SF	18,600	12	93,000	2.13	SF	2	0	0	0	12	0.20	18,600	0	0	8	4	12	8	4	12	0	0	0
37	GOV	9,993	0	49,967	1.15	GOV	2	0	0	0	0	0.20	9,993	0	0	4	8	12	4	8	12	0	0	0
38	SF	15,680	20	78,400	1.80	SF	2	0	0	0	20	0.20	15,680	0	0	13	7	20	13	7	20	0	0	0
39	SF	15,680	20	78,400	1.80	SF	2	0	0	0	20	0.20	15,680	0	0	13	7	20	13	7	20	0	0	0
40	COM	2,633	0	35,700	0.82	COM	2	20,000	15,700	0	0	1.00	35,700	33,067	0	45	46	91	28	49	77	-17	3	-14
41	GOV	6,870	0	65,000	1.49	COM	1	6,870	0	0	0	0.10	6,870	0	0	2	6	8	8	11	19	6	5	11
42	SF	15,600	8	78,000	1.79	SF	2	0	0	0	8	0.20	15,600	0	0	5	3	8	5	3	8	0	0	0
43	SF	26,200	20	131,000	3.01	SF	2	0	0	0	20	0.20	26,200	0	0	13	7	20	13	7	20	0	0	0
44	SF	7,840	16	39,200	0.90	SF	2	0	0	0	16	0.20	7,840	0	0	10	6	16	10	6	16	0	0	0
45	COM	8,554	0	35,700	0.82	COM	2	15,700	20,000	0	0	1.00	35,700	27,146	0	10	13	23	24	49	73	14	36	50
46	COM	4,805	2	28,000	0.64	MU	2	28,000	0	0	0	1.00	28,000	23,195	-2	7	8	15	33	43	76	26	35	61
47	SF	46,000	23	230,000	5.28	SF	2	0	0	0	23	0.20	46,000	0	0	14	9	23	14	9	23	0	0	0
48	SF	8,880	6	74,000	1.70	MU	2	0	3,000	0	10	0.20	14,800	5,920	4	4	2	6	7	7	14	3	5	8
49	VACANT	0	0	93,600	2.15	MU	3	10,000	0	40	0	0.75	70,200	70,200	40	0	0	0	21	22	43	21	22	43
50	COM/SF	32,700	22	140,000	3.21	MU	2	4,700	6,600	0	22	0.20	32,700	0	0	24	19	43	26	27	53	2	8	10
51	GOV	10,000	0	195,000	4.48	GOV	1	0	0	0	0	1.00	10,000	0	0	4	8	12	4	8	12	0	0	0
52	VACANT	0	0	340,000	7.81	COM	1	170,000	0	0	0	0.50	170,000	170,000	0	0	0	0	303	328	631	303	328	631
Total	**-**	**1,297,947**	**522**	**6,185,242**	**141.99**	**-**	**-**	**703,020**	**251,050**	**1,288**	**305**	**-**	**4,304,858**	**3,006,911**	**1,071**	**838**	**910**	**1,748**	**2,038**	**2,765**	**4,803**	**1,200**	**1,855**	**3,055**

Existing Development Trip Generation Assumptions

Area	Pass-By % Applied	Internal Capture % Applied	After Internal Capture and Pass-By Reductions			Alt Mode % Applied	After Internal Capture, Pass-By, and Alternative Mode Reductions			To and from the North		To and from the South	
			PM Peak External In	PM Peak External Out	PM Peak External Total		PM Peak External In	PM Peak External Out	PM Peak External Total	PM Peak NB Out	PM Peak SB In	PM Peak NB In	PM Peak SB Out
A	0%	5%	49	47	96	5%	47	45	92	20	26	21	25
B	0%	10%	112	260	372	5%	106	247	353	111	58	48	136
C	5%	15%	229	191	420	5%	218	181	399	81	120	98	100
D	5%	15%	152	137	289	5%	144	130	274	59	79	65	72
E	0%	10%	126	104	230	5%	120	99	219	45	66	48	50
F	0%	5%	45	40	85	5%	43	38	81	17	24	17	19
G	10%	0%	4	7	11	5%	4	7	11	3	2	1	2
Total	-	-	**717**	**786**	**1,503**	-	**682**	**747**	**1,429**	**336**	**375**	**298**	**404**

Total Projected Build-out Development Trip Generation Assumptions

Area	Pass-By % Applied	Internal Capture % Applied	After Internal Capture and Pass-By Reductions			Alt Mode % Applied	After Internal Capture, Pass-By, and Alternative Mode Reductions			To and from the North		To and from the South	
			PM Peak External In	PM Peak External Out	PM Peak External Total		PM Peak External In	PM Peak External Out	PM Peak External Total	PM Peak NB Out	PM Peak SB In	PM Peak NB In	PM Peak SB Out
A	0%	5%	169	199	368	10%	152	179	331	81	84	68	98
B	0%	10%	112	260	372	10%	101	234	335	105	56	45	129
C	5%	15%	496	866	1,362	10%	446	779	1,225	351	245	201	428
D	5%	15%	434	452	886	10%	391	407	798	183	215	176	224
E	0%	10%	177	188	365	10%	159	169	328	76	87	64	85
F	0%	5%	77	86	163	10%	69	77	146	35	38	28	39
G	10%	0%	276	302	578	10%	248	272	520	122	136	62	95
Total	-	-	**1,741**	**2,353**	**4,094**	-	**1,566**	**2,117**	**3,683**	**953**	**861**	**644**	**1,098**

Change in Development (Projected-Existing) Trip Generation Assumptions

Area	Pass-By % Applied	Internal Capture % Applied	After Internal Capture and Pass-By			Alt Mode % Applied	After Internal Capture, Pass-By, and			To and from the		To and from the	
			PM Peak External In	PM Peak External Out	PM Peak External Total		PM Peak External In	PM Peak External Out	PM Peak External Total	PM Peak NB Out	PM Peak SB In	PM Peak NB In	PM Peak SB Out
A	0%	5%	120	152	272	15%	102	129	231	58	56	46	71
B	0%	10%	0	0	0	15%	0	0	0	0	0	0	0
C	5%	15%	267	674	941	15%	227	573	800	258	125	102	315
D	5%	15%	282	315	597	15%	240	268	508	121	132	108	147
E	0%	10%	51	85	136	15%	43	72	115	32	24	17	36
F	0%	5%	32	46	78	15%	27	39	66	18	15	11	20
G	10%	0%	273	295	568	15%	232	251	483	113	128	58	88
Total	-	-	**1,025**	**1,567**	**2,592**	-	**871**	**1,332**	**2,203**	**600**	**480**	**342**	**677**

Existing Land Uses

Block	ITE Land Use Code	Description	Notes
5	710	general office building	Remainder as office
	934	fast-food restaurant with drive-through window	2,200 sq ft
	937	coffee/donut shop with drive-through window	1,500 sq ft
10	932	high-turnover (sit-down) restaurant	Remains after redevelopment
11	710	general office building	Existing as office
16	-	Town well site	No trip generation was assumed for this block
20	932	high-turnover (sit-down) restaurant	-
21	932	high-turnover (sit-down) restaurant	-
23	560	church	-
28	826	specialty retail center	18,000 sq ft
35	223	mid-rise apartment	4 dwelling units
	560	church	4,330 sq ft
	942	automobile care center	3,700 sq ft
40	852	convenience market (open 15-16 hours)	-
50	812	building materials and lumber store	4,700 sq ft - remains after redevelopment

Projected General Land Uses

Land Use	ITE Land Use Code	Description
Multi-Family	223	mid-rise apartment
Single-Family	210	single-family detached housing
Commercial	826	specialty retail center
Office	710	general office building
Government Building	730	government office building
Open	-	open
Parking	-	parking

Specialty Use Exceptions to Projected General Land Uses

Block	ITE Land Use Code	Description	Notes
8	223	mid-rise apartment	100 dwelling units
	540	junior/community college	500 students
20	826	specialty retail center	-
	932	high-turnover (sit-down) restaurant	Additional 5,000 sq ft
21	932	high-turnover (sit-down) restaurant	-
52	820	shopping center	-

Service Volume Thresholds by Roadway Type

Type of Roadway	Number of Through Lanes	Max. Daily Volume at LOS E (V/C=1.0)	Max. Daily Volume at LOS D (V/C=0.85)
Arterial	2	16,500	14,000
Arterial (no median)	4	32,000	27,200
Arterial (with median)	4	35,500	30,200
Arterial (with median)	4 mid./ 6 at int.	42,900	36,500
Arterial (no median)	6	49,000	41,700
Arterial (with median)	6	54,000	46,000

2015 Weekday Capacity Analysis Summary

	Scenario: Existing 2015 Weekday (4-Lane Gilbert Rd)				Scenario: Existing 2015 Weekday w/ 2-Lane Gilbert Rd				Scenario: 2015 Weekday w/ 2-Lane Gilbert Rd & 4500 Daily Diversion				Scenario: 2015 Weekday w/ 2-Lane Gilbert Rd & 9000 Daily Diversion			
Roadway Segment	ADT	Capacity	V/C Ratio	Excess Capacity	ADT	Capacity	V/C Ratio	Excess Capacity	ADT	Capacity	V/C Ratio	Excess Capacity	ADT	Capacity	V/C Ratio	Excess Capacity
Gilbert: Guadalupe to Juniper	26,000	42,900	0.61	16,900	26,000	42,900	0.61	16,900	21,000	42,900	0.49	21,900	16,000	42,900	0.37	26,900
Gilbert: Juniper to Elliot	20,000	32,000	0.63	12,000	20,000	16,500	1.21	(3,500)	16,000	16,500	0.97	500	11,000	16,500	0.67	5,500
Cooper: Guadalupe to Elliot	28,000	32,000	0.87	4,000	28,000	32,000	0.87	4,000	30,000	32,000	0.94	2,000	33,000	32,000	1.03	(1,000)
Lindsay: Guadalupe to Elliot	27,000	32,000	0.85	5,000	27,000	32,000	0.85	5,000	29,000	32,000	0.91	3,000	32,000	32,000	1.00	-

2015 Friday Capacity Analysis Summary

	Scenario: Existing 2015 Friday (4-Lane Gilbert Rd)				Scenario: Existing 2015 Friday w/ 2-Lane Gilbert Rd				Scenario: 2015 Friday w/ 2-Lane Gilbert Rd & 4500 Daily Diversion				Scenario: 2015 Friday w/ 2-Lane Gilbert Rd & 9000 Daily Diversion			
Roadway Segment	ADT	Capacity	V/C Ratio	Excess Capacity	ADT	Capacity	V/C Ratio	Excess Capacity	ADT	Capacity	V/C Ratio	Excess Capacity	ADT	Capacity	V/C Ratio	Excess Capacity
Gilbert: Guadalupe to Juniper	26,000	42,900	0.61	16,900	30,000	42,900	0.70	12,900	25,000	42,900	0.58	17,900	20,000	42,900	0.47	22,900
Gilbert: Juniper to Elliot	24,000	32,000	0.75	8,000	24,000	16,500	1.45	(7,500)	19,000	16,500	1.15	(2,500)	15,000	16,500	0.91	1,500
Cooper: Guadalupe to Elliot	28,000	32,000	0.87	4,000	28,000	32,000	0.87	4,000	30,000	32,000	0.94	2,000	33,000	32,000	1.03	(1,000)
Lindsay: Guadalupe to Elliot	27,000	32,000	0.85	5,000	27,000	32,000	0.85	5,000	29,000	32,000	0.91	3,000	32,000	32,000	1.00	-

2035 Weekday Capacity Analysis Summary

	Scenario: Future 2035 Weekday (4-Lane Gilbert Rd)				Scenario: Future 2035 Weekday w/ 2-Lane Gilbert Rd & 2000 HD Growth				Scenario: 2035 Weekday w/ 2-Lane Gilbert Rd, 4500 Diversion, 8000 MAG & 2000 HD				Scenario: 2035 Weekday w/ 2-Lane Gilbert Rd, 9000 Diversion, 8000 MAG & 2000 HD			
Roadway Segment	ADT	Capacity	V/C Ratio	Excess Capacity	ADT	Capacity	V/C Ratio	Excess Capacity	ADT	Capacity	V/C Ratio	Excess Capacity	ADT	Capacity	V/C Ratio	Excess Capacity
Gilbert: Guadalupe to Juniper	34,000	42,900	0.79	8,900	36,000	42,900	0.84	6,900	21,500	42,900	0.50	21,400	17,000	42,900	0.40	25,900
Gilbert: Juniper to Elliot	29,000	32,000	0.91	3,000	31,000	16,500	1.88	(14,500)	16,500	16,500	1.00	-	12,000	16,500	0.73	4,500
Cooper: Guadalupe to Elliot	34,000	42,900	0.79	8,900	34,000	42,900	0.79	8,900	41,000	42,900	0.96	(9,000)	44,000	42,900	1.03	(12,000)
Lindsay: Guadalupe to Elliot	32,000	32,000	1.00	-	32,000	32,000	1.00	-	39,000	32,000	1.22	(7,000)	42,000	32,000	1.31	(10,000)

2035 Friday Capacity Analysis Summary

	Scenario: Future 2035 Friday (4-Lane Gilbert Rd)				Scenario: Future 2035 Friday w/ 2-Lane Gilbert Rd & 2000 HD Growth				Scenario: 2035 Friday w/ 2-Lane Gilbert Rd, 4500 Diversion, 8000 MAG & 2000 HD				Scenario: 2035 Friday w/ 2-Lane Gilbert Rd, 9000 Diversion, 8000 MAG & 2000 HD			
Roadway Segment	ADT	Capacity	V/C Ratio	Excess Capacity	ADT	Capacity	V/C Ratio	Excess Capacity	ADT	Capacity	V/C Ratio	Excess Capacity	ADT	Capacity	V/C Ratio	Excess Capacity
Gilbert: Guadalupe to Juniper	34,000	42,900	0.79	8,900	40,000	42,900	0.93	2,900	29,500	42,900	0.69	13,400	25,000	42,900	0.58	17,900
Gilbert: Juniper to Elliot	33,000	32,000	1.03	(1,000)	35,000	16,500	2.12	(18,500)	20,500	16,500	1.24	(4,000)	16,000	16,500	0.97	500
Cooper: Guadalupe to Elliot	34,000	42,900	0.79	8,900	34,000	42,900	0.79	8,900	41,000	42,900	0.96	(9,000)	44,000	42,900	1.03	(12,000)
Lindsay: Guadalupe to Elliot	32,000	32,000	1.00	-	32,000	32,000	1.00	-	39,000	32,000	1.22	(7,000)	42,000	32,000	1.31	(10,000)

ECONOMIC DEVELOPMENT
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