Transportation Impact Study for the Burns Valley Development

Prepared for the City of Clearlake

Submitted by
W-Trans

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The proposed Burns Valley Development would occupy approximately 29 acres of vacant land between Burns Valley Road and Olympic Drive in the City of Clearlake. The development includes a public works corporation yard, a drive-through coffee shop, six athletic fields, a 15,000 square-foot recreational center, and a separate affordable multi-family residential project. The development would be expected to generate an average of 1,332 new daily trips, with 77 new trips during the weekday a.m. peak hour, 182 new trips during the weekday p.m. peak hour, and 353 new trips during the Saturday p.m. peak hour.

A new crosswalk with high-visibility continental crosswalk markings would be provided on Olympic Drive at the North-South Project Street intersection, along with ADA-compliant curb ramps, pedestrian crossing signage, and advance yield line markings. Crosswalks would also be provided on the project street legs of the new street connections to Burns Valley Road and Olympic Drive. The long-term bicycle storage supply for the Oak Valley Villas should be increased from the proposed four spaces to seven spaces. A total supply of 19 bicycle parking spaces should be provided throughout the non-residential portions of the development site. With the construction of these facilities in addition to sidewalks, crosswalks, and bike lanes within the development site, access for pedestrians, bicyclists, and transit riders would be adequate.

Under guidance provided by the California Governor's Office of Planning and Research (OPR) as well as data contained in the *Senate Bill 743 Vehicle Miles Traveled Regional Baseline Study* for Lake County, all components of the proposed development would be expected to have a less-than-significant transportation impact on vehicle miles traveled (VMT), including the residential, coffee shop, corporation yard, and recreational uses.

The development site would be accessed via a new north-south street extending from Olympic Drive on the south to Burns Valley Road on the north, as well as a new east-west street to be constructed north of the Safeway commercial property and extending from the proposed City corporation yard on the west to Burns Valley Road on the east. The new project streets would provide full access to the parking lots and driveways throughout the development site. The Oak Valley Villas project would also be accessed via a new driveway on Burns Valley Road. Sight lines on Burns Valley Road and Olympic Drive are adequate to accommodate all turns into and out of the proposed intersections and driveways. To maintain clear sight lines, vision triangles at the access points should be kept free of obstructions. The planting of tall vegetation should be avoided at the northeast corner of the site near the intersection of Burns Valley Road/Bowers Avenue-Rumsey Road.

A left-turn lane would be warranted on Olympic Drive at the intersection with the project street. Therefore, it is recommended that the existing two-way left-turn lane (TWLTL) on Olympic Drive be extended to provide 75 feet west of stacking space at the proposed Olympic Drive/North-South Project Street Intersection; this improvement has been added to the site plan. The projected 95th percentile queues in turn pockets at the study intersections would remain within existing storage capacity at each location under all scenarios.

To assess the project's compliance with General Plan policies, operations were evaluated at intersections along Burns Valley Road and Olympic Drive, as well as at new intersections with project streets. For Future Conditions, operations with a roundabout at Olympic Drive/Lakeshore Drive were analyzed. Analysis indicates that all study intersections operate acceptably under Existing Conditions and would continue to do so under Baseline and Future Conditions, with and without project traffic added.

The proposed parking supply would be more than sufficient to meet City and State Density Bonus requirements.

Introduction

This report presents an analysis of the potential transportation impacts and operational effects that would be associated with the proposed Burns Valley Development to be located between Burns Valley Road and Olympic Drive in the City of Clearlake. The transportation study was completed in accordance with the criteria established by the City of Clearlake, reflects a scope of work approved by City staff, and is consistent with standard traffic engineering techniques.

Prelude

The purpose of a transportation impact study (TIS) is to provide City staff and policy makers with data that they can use to make an informed decision regarding the potential transportation impacts of a proposed project, and any associated improvements that would be required to mitigate these impacts to an acceptable level under CEQA, the City's General Plan, or other policies. This report provides an analysis of those items that are identified as areas of environmental concern under the California Environmental Quality Act (CEQA) and that, if significant, require an EIR. Impacts associated with access for pedestrians, bicyclists, and to transit; the vehicle miles traveled (VMT) generated by the project; potential safety concerns such as increased queuing in dedicated turn lanes, adequacy of sight distance, need for turn lanes, and need for additional right-of-way controls; and emergency access are addressed in the context of the CEQA criteria.

While no longer a part of the CEQA review process, vehicular traffic service levels at key intersections were evaluated for consistency with General Plan policies by determining the number of new trips that the proposed uses would be expected to generate, distributing these trips to the surrounding street system based on anticipated travel patterns specific to the proposed project, then analyzing the effect the new traffic would be expected to have on the study intersections and need for improvements to maintain acceptable operation. Adequacy of parking is also addressed as a policy issue. It is noted that while the transportation impacts and traffic effects of the proposed affordable housing project are being presented in this study, for the purposes of environmental clearance the Oak Valley Villas is being entitled separately from the rest of the Burns Valley Development.

Applied Standards and Criteria

The report is organized to provide background data that supports the various aspects of the analysis, followed by the assessment of CEQA issues and then evaluation of policy-related issues. The CEQA criteria evaluated are as follows.

Would the project:

a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?
b. Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
d. Result in inadequate emergency access?

Project Profile

The project includes a public works corporation yard, a drive-through coffee shop, various recreational uses such as baseball, softball, and soccer fields as well as a 15,000 square-foot recreational center and a separate affordable multi-family residential project. As part of the development, a new north-south street would be constructed that

would extend from Olympic Drive to Burns Valley Road west of the Lake County Library. Additionally, an east-west street would be constructed north of the Safeway commercial property and would extend from the proposed City corporation yard on the west to Burns Valley Road on the east.

The project site is located on approximately 29 acres of vacant land between Burns Valley Road and Olympic Drive in the City of Clearlake, as shown in Figure 1.

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Figure 1 – Study Area, Existing and Proposed Lane Configurations

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Transportation Setting

Study Area and Periods

The study area varies depending on the topic. For pedestrian trips it consists of all streets within a half-mile of the project site that would lie along primary routes of pedestrian travel, or those leading to nearby generators or attractors. For bicycle trips it consists of all streets within one mile of the project site that would lie along primary routes of bicycle travel. For the safety and operational analyses, the study area was selected with input from City staff and consists of the following intersections, three of which are existing and four that would be new intersections constructed by the proposed development:

1. Burns Valley Road/North-South Project Street (New)
2. Burns Valley Road/Bowers Avenue-Rumsey Road (Existing)
3. North-South Project Street/East-West Project Street (New)
4. Burns Valley Road/East-West Project Street (New)
5. Olympic Drive/Lakeshore Drive (Existing)
6. Olympic Drive/North-South Project Street (New)
7. Olympic Drive/Burns Valley Road-Old Highway 53 (Existing)

Operating conditions during the weekday a.m. and p.m. peak periods as well as the Saturday afternoon peak period were evaluated to capture the highest trip generation potential for the proposed uses as well as the highest volumes on the local transportation network. The weekday morning peak hour occurs between 7:00 and 9:00 a.m. and reflects conditions during the home to work or school commute, while the weekday p.m. peak hour occurs between 4:00 and 6:00 p.m. and typically reflects the highest level of congestion during the homeward bound commute. The Saturday afternoon peak hour generally occurs between 1:00 and 3:00 p.m. and reflects the highest level of activity associated with the recreational components of the development. New turning movement counts were obtained for the existing study intersections in January 2022.

Study Intersections

Burns Valley Road/North-South Project Street is a proposed tee intersection that would be created by the development and be located approximately 400 feet west of Sharp Lane. The intersection would be stop-controlled on the northbound terminating project street approach and a crosswalk would be provided on the south leg.

Burns Valley Road/Bowers Avenue-Rumsey Road is a four-legged existing intersection with stop controls on the eastbound and westbound Burns Valley Road and Bowers Avenue approaches, which are offset by approximately 20 feet. The south leg of the intersection is also Burns Valley Road, while the north leg is Rumsey Road. A marked crosswalk is provided on the north leg, about 30 feet north of the intersection.

North-South Project Street/East-West Project Street is a proposed four-legged intersection that would be stop-controlled on all approaches. Crosswalks would be provided on all legs.

Burns Valley Road/East-West Project Street is a tee intersection proposed to be located approximately 500 feet north of Olympic Drive. The intersection would be stop-controlled on the terminating eastbound project street approach.

Olympic Drive/Lakeshore Drive is an existing tee intersection with stop control and dedicated left- and right-turn lanes on the westbound terminating Olympic Drive approach. Crosswalks are marked on the north and east legs and the crossing on the north leg has a pedestrian-activated flashing beacon system.

Olympic Drive/North-South Project Street is a proposed tee intersection that would be located approximately 150 feet west of the westernmost driveway to the Safeway commercial center. The intersection would be stop-controlled on the southbound terminating project street approach. A crosswalk would be provided on the north leg.

Olympic Drive/Burns Valley Road-Old Highway 53 is an existing four-legged signalized intersection with left-turn lanes and protected left-turn phasing on all approaches. Crosswalks with pedestrian phasing are provided on all four legs.

The locations of the study intersections along with the existing and proposed lane configurations and controls are shown in Figure 1.

Study Roadways

Burns Valley Road has two travel lanes in each direction and bounds the development site on the eastern and northern boundaries as the roadway changes orientation from north-south to east-west at the intersection with Bowers Avenue-Rumsey Road. The north-south section of the roadway has a posted speed limit of 30 miles per hour (mph), while the east-west section has a posted speed limit of 35 mph. Based on count data collected in January 2022, the roadway has an average daily traffic (ADT) volume of approximately 2,100 vehicles to the west of Sharp Lane and 3,540 vehicles south of Turner Avenue.

Olympic Drive runs mostly east-west between Lakeshore Drive on the west and SR 53 on the east and has two travel lanes in each direction with a posted speed limit of 35 mph. A center two-way left-turn lane (TWLTL) is provided along the Safeway commercial center frontage, which extends to Emerson Street. Based on count data collected in January 2022, the roadway has an ADT volume of approximately 7,100 vehicles adjacent to the project site.

Vehicle Collision History

The collision history for the study area was reviewed to determine any trends or patterns that may indicate a safety issue for motorists in the project vicinity. Collision rates were calculated based on records available from the California Highway Patrol (CHP) as published in their Statewide Integrated Traffic Records System (SWITRS) reports. The most current five-year period available is August 1, 2016, through July 31, 2021.

As presented in Table 1, the calculated collision rates for the three existing study intersections were compared to average collision rates for similar facilities statewide, as indicated in *2018 Collision Data on California State Highways*, California Department of Transportation (Caltrans). These average rates statewide are for intersections in the same environment (urban, suburban, or rural), with the same number of approaches (three or four), and the same controls (all-way stop, two-way stop, or traffic signal). Calculated collision rates for the study intersections were all determined to be lower than the statewide average rates, indicating that the intersections are performing within normal safety parameters. The collision rate calculations are provided in Appendix A.

Table 1 – Collision Rates for the Study Intersections			
Study Intersection	**Number of Collisions (2016–2021)**	**Calculated Collision Rate (c/mve)**	**Statewide Average Collision Rate (c/mve)**
2. Burns Valley Rd/Bowers Ave-Rumsey Rd	1	0.13	0.14
5. Olympic Dr/Lakeshore Dr	1	0.07	0.09
7. Olympic Dr/Burns Valley Rd-Old Hwy 53	4	0.21	0.24

Note: c/mve = collisions per million vehicles entering

Project Data

The proposed development consists of the following uses:

- A city corporation yard consisting of a 12,000 square-foot industrial building;
- Six sports fields consisting of full-size baseball, little league, and softball fields, two tee-ball fields, and one youth soccer field;
- A 15,000 square-foot community recreation center with sports features such as basketball and volleyball courts; and
- A 160 square-foot drive-through coffee shop; and
- A separate project with 80 multi-family apartment units dedicated as "affordable" housing known as the Oak Valley Villas.

Approximately 507 on-site parking spaces would be provided, with 144 of these spaces in a separate lot dedicated to the Oak Valley Villas.

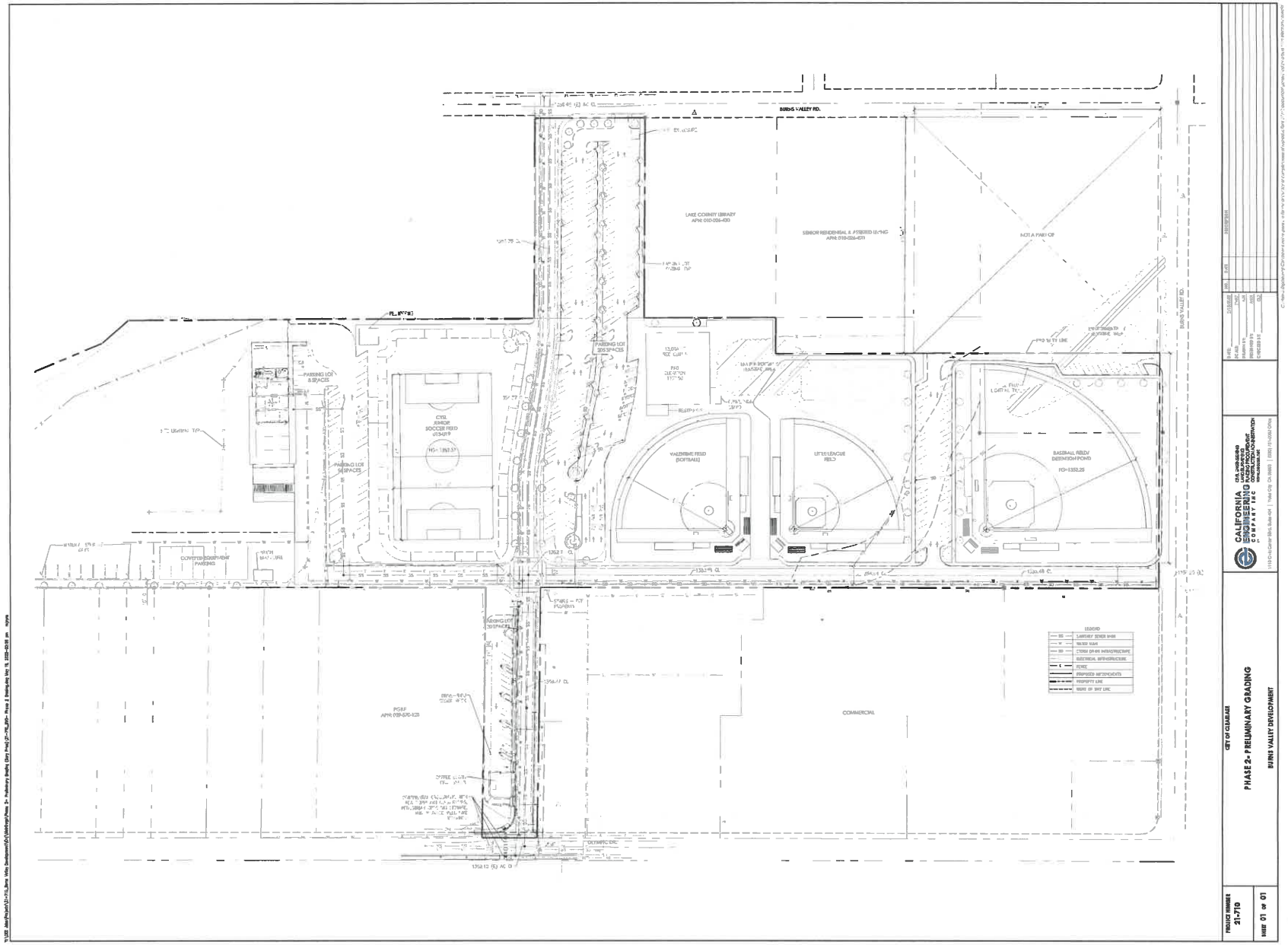
The proposed project site plan is shown in Figure 2.

Trip Generation

The anticipated trip generation for the Burns Valley Development, including the Oak Valley Villas, was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 11th Edition, 2021. Rates for "Affordable Housing – Income Limits" (Land Use #223) were applied to the apartments, rates for "Soccer Complex" (Land Use #488) were applied to the sports field, rates for "Recreational Community Center" (Land Use #495) were applied to the recreation building, rates for "Coffee/Donut Shop with Drive-Through Window and No Indoor Seating" (Land Use #938) were applied to the coffee shop, and rates for "General Light Industrial" (Land Use #110) were applied to the City corporation yard. It is noted that rates for "Soccer Complex" were applied to all sports fields including the baseball, softball, and tee-ball fields as soccer fields and ball fields can be expected to generate similar numbers of trips. To estimate trips during the Saturday p.m. peak hour, standard ITE rates for the "Saturday Peak Hour of the Generator" were applied where available, though the Manual does not include Saturday data for industrial or coffee shop land uses so weekday p.m. peak hour rates were retained for these two uses for the Saturday peak. Further, it is noted that the trip generation calculations for the coffee shop were based on a floor area of 1,000 square feet upon reviewing the anticipated trip generation based on 160 square feet and determination that it would likely underestimate the number of trips that would be generated.

Internal Trips

Internal trips occur at mixed-use developments, and in this case, could consist of residents patronizing the coffee shop and recreational uses or guests visiting more than one establishment in a single round trip to the site, such as someone visiting the sports fields and the recreation center. If these facilities were located on separate sites these trips would occur on the streets between the facilities; however, since the entire development would be connected internally, these trips could occur without affecting operation of the adjacent street network and would therefore be considered internal. However, given the limited published standard internal trip data available for the proposed uses of the development and to result in a conservative analysis no trip deductions were taken for internal trips.



Source: California Engineering Company Inc. 4/12

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Figure 2 – Site Plan

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Pass-by Trips

As is typical of most retail uses, especially drive-through restaurant uses, a portion of the trips associated with the coffee shop would be drawn from existing traffic on nearby streets. These vehicle trips, known as pass-by trips, are not considered new trips since they consist of drivers who are already driving on the adjacent street and choose to make an interim stop. In the case of the proposed coffee shop which would not have indoor seating, most trips would be diverted from traffic already passing by the site on Olympic Drive. Data published in the *Trip Generation Manual* indicates pass-by percentages for a "Coffee/Donut Shop with Drive-Through Window and no Indoor Seating" (ITE LU 938) of 90 and 98 percent during the morning and evening peak hours, respectively, along with a pass-by rate of 84 percent during the weekday afternoon peak hour, which was applied to the Saturday p.m. peak hour. To estimate the number of daily trips that would be pass-by, the lower peak hour rate of 84 percent was applied for informational purposes.

Total Development Trip Generation

The expected trip generation potential for the proposed development is shown in Table 2 for weekdays and Table 3 for Saturdays, with deductions taken for pass-by trips. The development has the potential to result in an average of 1,332 new trips on local streets per day, with 77 new trips during the weekday a.m. peak hour, 182 new trips during the weekday p.m. peak hour, and 353 new trips during the Saturday p.m. peak hour.

Table 2 – Trip Generation Summary (Weekdays)

Land Use	Units	Daily		Weekday AM Peak Hour				Weekday PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Affordable Housing	80 du	4.81	385	0.36	29	8	21	0.46	37	22	15
Soccer Complex	6 fields	71.33	428	0.99	6	4	2	16.43	99	65	34
Recreation Center	15 ksf	28.82	432	1.91	29	19	10	2.50	38	18	20
General Light Ind'l	12 ksf	4.87	58	0.74	9	8	1	0.65	8	1	7
Coffee Shop	1 ksf*	179.00	179	39.81	40	20	20	15.08	15	8	7
Pass-by Deduction		*–84%*	*–150*	*-90%*	*–36*	*–18*	*–18*	*–98%*	*–15*	*–8*	*–7*
Total New Project Trips			**1,332**		**77**	**41**	**36**		**182**	**106**	**76**

Note: du = dwelling unit; ksf = 1,000 square feet; * = actual floor area is 160 sf

Table 3 – Trip Generation Summary (Saturday)					
Land Use	**Units**	**Saturday PM Peak Hour**			
		Rate	**Trips**	**In**	**Out**
Affordable Housing	80 du	1.28	102	60	42
Soccer Complex	6 fields	37.48	225	108	117
Recreational Center	15 ksf	1.07	16	9	7
General Light Ind'l	12 ksf	0.65	8	1	7
Coffee Shop	1 ksf	15.08	15	8	7
Pass-by Deduction		*–84%*	*–13*	*–7*	*–6*
Total New Project Trips			**353**	**179**	**174**

Note: du = dwelling unit; ksf = 1,000 square feet

Trip Distribution

The pattern used to allocate new project trips to the surrounding street network was determined by reviewing existing turning movements at the study intersections, applying knowledge of the area and surrounding region, and considering anticipated travel patterns for patrons of the development. The applied trip distribution assumptions and resulting daily trips are shown in Table 4.

Table 4 – Trip Distribution Assumptions		
Route	**Percent**	**Daily Trips**
To/from Rumsey Rd North of Bowers Ave	5%	67
To/from Burns Valley Rd West of Project Site	10%	133
To/from Lakeshore Dr North of Olympic Dr	10%	133
To/from Lakeshore Dr South of Olympic Dr	20%	266
To/from Old Hwy 53 South of Olympic Dr	25%	334
To/from Olympic Dr East of Old Hwy 53	20%	266
To/from Local Streets Accessed from Olympic Dr to the West of Project Site	10%	133
TOTAL	**100%**	**1332**

Circulation System

This section addresses the first bullet point on the CEQA checklist, which relates to the potential for a project to conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Pedestrian Facilities

Existing and Planned Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. In general, a network of sidewalks is provided on developed frontages surrounding the project site but is missing from undeveloped frontages.

- **Burns Valley Road** – Sidewalk coverage is provided on Burns Valley Road along developed property frontages but is missing from undeveloped parcels including the proposed project site. Existing sections of sidewalk are provided on the west side of Burns Valley Road between Olympic Drive and the northern boundary of the Safeway commercial center, the north side of Burns Valley Road between the project site and Rumsey Road, and on the south side of Burns Valley Road along the library and Orchard Park Senior Living Community frontages. Curb ramps and crosswalks are present at the intersection of Burns Valley Road/Rumsey Road/Bowers Avenue. Lighting is provided by overhead streetlights where sidewalks exist.

- **Olympic Drive** – Continuous sidewalks are provided on the northern side of Olympic Drive between Lakeshore Drive and Old Highway 53, while coverage on the southern side is sporadic. Lighting is provided by overhead streetlights. Crossing opportunities exist at the uncontrolled intersection at Madrone Street and at the signalized intersection with Old Highway 53-Burns Valley Road, which has pedestrian phasing.

Pedestrian Safety

The collision history for the study area was reviewed to determine any trends or patterns that may indicate a safety issue for pedestrians in the vicinity of the project site. For the same five-year study period used for the vehicle collision analysis of August 1, 2016 through July 31, 2021, there were no reported collisions involving pedestrians at the study intersections indicating that there are no readily apparent existing safety issues for pedestrians.

Project Impacts on Pedestrian Facilities

Given the proximity of residential and commercial uses surrounding the site, it is reasonable to assume that some project residents and patrons would want to walk, bicycle, and/or use transit to travel between the project site and surrounding areas. Upon construction of sidewalks along the project frontages with the north-south and east-west sections of Burns Valley Road, as shown on the project site plan, and upon construction of sidewalks along the new streets that would be constructed within the Burns Valley Development, the project site would be connected to the surrounding pedestrian network. A network of sidewalks and crosswalks would be provided throughout the Oak Valley Villas project site, resulting in connected on-site pedestrian circulation.

For the type of uses proposed, including athletic fields and a recreational center, the proposed development has the potential to generate high amounts of active transportation trips such as those made by walking and bicycling. Many of these trips would result in pedestrians needing to cross Olympic Drive when walking between the site and the residential neighborhoods on the south side of the street. The nearest existing pedestrian crossing opportunity on Olympic Drive to the west of the project site is at Madrone Street, approximately 1,400 feet away. Between Madrone Street and the development site, there are five residential streets (Buckeye Street, Maple Street,

Cypress Street, Sycamore Street, and Redwood Street) that intersect Olympic Drive and provide access to numerous homes; these residential streets also connect through to Austin Road, which provides access to even more homes further south. Pedestrians walking between residences located on these streets would not be expected to walk west in the opposite direction of the project site to use the existing crosswalk at Madrone Street to cross Olympic Drive; therefore, consideration was given to the need for a new crosswalk at the intersection that the North-South Project Street would form with Olympic Drive.

The National Cooperative Highway Research Program (NCHRP) Report 562 *Improving Pedestrian Safety at Unsignalized Intersections* Pedestrian Crossing Treatment Worksheet was completed to help determine if installation of a crosswalk or other pedestrian crossing measures would be appropriate at the new project street connection to Olympic Drive. The NCHRP worksheet recommends pedestrian treatment devices such as crosswalks, Rectangular Rapid Flashing Beacons (RRFBs), In-Roadway Warning Lights (IRWLs), High Visibility markings, and signage depending on pedestrian and vehicle volumes and geometrics of the crosswalk.

Based on vehicle counts collected in January 2022, approximately 20 pedestrian crossings would be needed within a single hour for a crosswalk to be warranted, while approximately 100 pedestrian crossings would be needed to warrant installation of a pedestrian-activated crossing device such as an RRFB. Between the demand for new crossings associated with the proposed development and existing demand associated with the Safeway commercial center, it would be reasonable to expect 20 peak hour pedestrian crossings at this location, though 100 pedestrian crossings are unlikely to be achieved; therefore, it is recommended that a crosswalk be striped on Olympic Drive at the North-South Project Street along with provision of ADA-compliant curb ramps and pedestrian crossing signage. A copy of the NCHRP Pedestrian Crossing Treatment Worksheet is contained in Appendix B.

Additionally, it is recommended that crosswalks be striped on the project street legs of the new street connections to Burns Valley Road and Olympic Drive.

Finding – Upon constructing sidewalks along the project frontages with Burns Valley Road and along the new project streets and with provision of a new crosswalk on Olympic Drive at the North-South Project Street intersection, the development would be connected to the existing pedestrian network and circulation for pedestrians would be adequate.

Recommendation – To ensure adequate connectivity for pedestrians traveling between the project site and the residential neighborhoods south of Olympic Drive, the new crosswalk with high visibility continental crosswalk markings proposed to be provided on Olympic Drive at the North-South Project Street intersection along with provision of ADA-compliant curb ramps, pedestrian crossing signage, and advanced yield line markings should be installed. Additionally, crosswalks on the project street legs of the new street connections to Burns Valley Road and Olympic Drive should be provided as proposed. These improvements are indicated on the site plan.

Bicycle Facilities

Existing and Planned Bicycle Facilities

The *Highway Design Manual*, Caltrans, 2017, classifies bikeways into four categories:

- **Class I Multi-Use Path** – a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.
- **Class II Bike Lane** – a striped and signed lane for one-way bike travel on a street or highway.
- **Class III Bike Route** – signing only for shared use with motor vehicles within the same travel lane on a street or highway.

- **Class IV Bikeway** – also known as a separated bikeway, a Class IV Bikeway is for the exclusive use of bicycles and includes a separation between the bikeway and the motor vehicle traffic lane. The separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

In the project area, Class II bike lanes exist on Olympic Drive, Lakeshore Drive, Old Highway 53, and Burns Valley Road. Additional Class II bike lanes are planned on Burns Valley Road and Lakeshore Drive. Bicyclists ride in the roadway and/or on sidewalks along all other streets within the project study area. Table 5 summarizes the existing and planned bicycle facilities in the project vicinity, as contained in the *Active Transportation Plan for Lake County*, 2016.

Table 5 – Bicycle Facility Summary

Status Facility	Class	Length (miles)	Begin Point	End Point
Existing				
Olympic Dr	II	1.7	Lakeshore Dr	SR 53
Lakeshore Dr	II	1.4	Olympic Dr	Old Hwy 53
Burns Valley Rd (SB only)	II	0.25	Bowers Ave	Olympic Dr
Old Hwy 53	II	0.25	Olympic Dr	Austin Rd
Planned				
Lakeshore Dr	II	0.57	Arrowhead Rd	Olympic Dr
Burns Valley Rd (NB only)	II	0.25	Bowers Ave	Olympic Dr

Source: *Active Transportation Plan for Lake County*, Lake County/City Area Planning Council, 2016

Bicyclist Safety

Collision records for the study area were reviewed to determine if any bicyclist-involved crashes were reported. During the five-year study period between August 1, 2016, and July 31, 2021, there were no reported collisions involving bicyclists at any of the study intersections indicating that there are no readily apparent safety issues for cyclists.

Project Impacts on Bicycle Facilities

As part of the project, Class II bike lanes would be provided on the proposed north-south and east-west project streets. These improvements together with the existing bicycle lanes on Olympic Drive, Burns Valley Road, Old Highway 53, and Lakeshore Drive and the planned facilities outlined in the County's *Active Transportation Plan* would provide adequate access for bicyclists.

Bicycle Storage

According to the Clearlake Municipal Code, bicycle parking shall be provided at a rate of five percent of the required vehicle parking spaces. For the Oak Valley Villas' proposed supply of 144 vehicle parking spaces, seven bicycle parking spaces would need to be supplied. According to the site plan, 40 short-term bicycle parking spaces would be provided in the form of bike racks throughout the residential project site along with four long-term bicycle lockers. To accommodate residents who own bicycles and since residents would not have private garages, it is recommended that the City Code requirements be applied to long-term bicycle lockers, meaning seven long-term bicycle parking spaces should be provided.

For the other development uses which would share 363 parking spaces, a supply of 19 bicycle parking spaces would need to be provided.

Finding – Bicycle facilities serving the project site would be adequate with the planned provision of Class II bike lanes on the new project streets.

Recommendation – The long-term bicycle storage supply for the Oak Valley Villas should be increased from four spaces to seven spaces. A total supply of 19 bicycle parking spaces should be provided throughout the non-residential portions of the development site.

Transit Facilities

Existing Transit Facilities

Lake Transit provides fixed route bus service in the City of Clearlake and throughout Lake County. Lake Transit Route 10 provides loop service in the northern part of the City and stops on Olympic Drive west of Old Highway 53. Route 10 operates Monday through Friday with approximately one-hour headways between 5:10 a.m. and 7:10 p.m. Route 11 provides loop service in the central portion of the City and stops on Burns Valley Road north of Olympic Drive and Rumsey Road north of Bowers Avenue. Route 11 operates Monday through Friday between 7:20 a.m. and 5:20 p.m.

Two bicycles can be carried on most Lake Transit buses. Bike rack space is on a first come, first served basis. Additional bicycles are allowed on Lake Transit buses at the discretion of the driver.

Dial-a-ride, also known as paratransit, or door-to-door service, is available for those who are unable to independently use the transit system due to a physical or mental disability. Lake Transit Dial-A-Ride and Flex Stops are designed to serve the needs of individuals with disabilities within Clearlake.

Impact on Transit Facilities

Existing stops are within an acceptable walking distance of the site and would be reachable upon completion of the proposed sidewalk improvements. Nothing proposed by the project would be expected to negatively impact Lake Transit operations; therefore, existing transit routes are adequate to accommodate project-generated transit trips.

Finding – Existing transit facilities serving the project site are adequate.

Vehicle Miles Traveled (VMT)

The potential for the project to conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b) was evaluated based the project's anticipated Vehicle Miles Traveled (VMT).

Background and Guidance

Senate Bill (SB) 743 established VMT as the metric to be applied in determining transportation impacts associated with development projects. As of the date of this analysis, the City of Clearlake has not yet adopted a policy or thresholds of significance regarding VMT so the project-related VMT impacts were assessed based on guidance provided by the California Governor's Office of Planning and Research (OPR) in the publication *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory*, 2018 as well as information contained within the *Senate Bill 743 Vehicle Miles Traveled Regional Baseline Study* (RBS), Fehr & Peers, 2020, prepared for the Lake Area Planning Council (LAPC). Many of the recommendations in the RBS are consistent with the OPR Technical Advisory. As allowed by CEQA, each component of the proposed development was assessed individually considering the residential, employee-based, retail, and recreational uses separately.

Residential VMT (Oak Valley Villas)

The OPR *Technical Advisory* notes that "a project consisting of a high percentage of affordable housing may be a basis for the lead agency to find a less-than-significant impact on VMT. Evidence supports a presumption of less-than-significant impact for a 100 percent affordable residential development (or the residential component of a mixed-use development) in infill locations." Because the residential component of the proposed development is a 100 percent affordable housing project within a developed area of the City of Clearlake, the screening guidance provided by OPR would apply, and it is reasonable to conclude that the project would have a less-than-significant impact on VMT.

Finding – The Oak Valley Villas residential component of the proposed development would be expected to have a less-than-significant transportation impact on vehicle miles traveled.

Employee VMT

VMT impacts associated with employees of the proposed development, including those for the coffee shop, corporation yard, and recreational facilities, were assessed based on guidance contained in the both the *Technical Advisory* and the County's RBS, which indicate that an employee-based project generating vehicle travel that is 15 or more percent below the existing average countywide VMT per worker may indicate a less-than-significant VMT impact. OPR encourages the use of screening maps to establish geographic areas that achieve the 15 percent below regional average thresholds, allowing jurisdictions to "screen" projects in those areas from quantitative VMT analysis since impacts can be presumed to be less than significant.

The RBS includes a link to a web-based VMT screening tool in the appendix of the document that can be used to screen employment-based projects that are located in low VMT-generating areas. The tool uses data from the Wine Country Travel Demand Model (WCTDM) to compare the home-based VMT per worker for the Traffic Analysis Zone (TAZ) in which a study parcel is located to the same measure for the County as a whole. The tool projects the Countywide average baseline VMT per worker to be 12.3 miles per day in 2022. A project generating a VMT that is 15 percent or more below this value, or 10.5 miles per employee or less per day, would have a less-than-significant VMT impact.

The development site is located within TAZ 1908, which is bounded by Burns Valley Road on the east and north, Olympic Drive on the south, and Lakeshore Drive on the west and has a baseline VMT per employee of 7.6 miles

per day. Because this per capita VMT ratio is below the significance threshold of 10.5 miles per day, the VMT generated by employees of the proposed development would be considered to have a less-than-significant VMT impact. A copy of the VMT screening tool output is provided in Appendix C and the VMT calculations are summarized in Table 6.

Table 6 – Employee Vehicle Miles Traveled Analysis Summary	
Proposed Development VMT for TAZ 1908	7.6
Countywide Average VMT	12.3
Significance Threshold VMT	10.5
Result	**Less than Significant**

Note: TAZ = Traffic Analysis Zone, VMT is measured in daily miles driven per employee

Finding – Employees of the proposed development including those for the coffee shop, City corporation yard, and the recreational facilities would be expected to have a less-than-significant transportation impact on vehicle miles traveled.

Retail VMT

The OPR *Technical Advisory* indicates that retail projects should generally be analyzed by examining total VMT, with an increase in total regional VMT being considered a significant impact. The *Technical Advisory* also indicates that local-serving retail uses may generally be presumed by lead agencies to have a less-than-significant VMT impact (see *Technical Advisory* pages 16-17). OPR based this presumption on substantial evidence and research demonstrating that adding local-serving retail uses typically improves destination accessibility to customers. The theory behind this criterion is that while a larger retail project may generate interregional trips that increase a region's total VMT, small retail establishments do not necessarily add new trips to a region, but change where existing customers shop within the region, and often shorten trip lengths. OPR cites a size of 50,000 square feet or greater as being a potential indicator of regional-serving retail (versus local-serving) that would typically require a quantitative VMT analysis.

The retail component of the proposed development is a 160 square-foot coffee shop, which is well below the local-serving retail screening threshold of 50,000 square feet; therefore, it is reasonable to conclude that the coffee shop would have a less-than-significant transportation impact on VMT. This conclusion is further supported by the notion that approximately 84 percent of the total daily coffee shops are anticipated to be pulled from traffic already passing by the site on Olympic Drive.

Finding – The proposed coffee shop would be expected to have a less-than-significant transportation impact on vehicle miles traveled as a local-serving retail use.

Recreational Facilities VMT

The OPR *Technical Advisory* does not specifically address recreational uses such as the proposed sports fields and recreation center, indicating that lead agencies may develop their own thresholds for other land use types, and also allowing assessment on a case-by-case basis. For land uses not addressed in the *Technical Advisory*, it is common practice to consider whether the land use of interest has travel characteristics that are similar to the residential, employment-based, or retail land use types that are addressed. If so, similar VMT assessment methodologies can often be used. In some cases, recreation-based uses have similarities to retail, in that the total demand for services (shopping trips, or in this case recreation visits) tends to remain steady at a regional level and customers/visitors often choose to visit a store/facility based on convenience and its proximity to their home. The use of retail-based methods for assessing recreational uses is also consistent with opinions offered by OPR staff

during VMT "office hours" – informational sessions during the summer of 2020 – during which it was suggested that the analysis could be based on whether the recreational use would draw visitors from the wider region or whether it would be more local-serving.

In order to determine if the proposed recreation uses would have the potential to generate interregional trips, consideration was given to the project's intended visitor base and whether or not it would include any notable components that would potentially draw new visitors to the region. The proposed recreation uses consist of various athletic fields and sports courts including a soccer field, softball field, little league field, two tee ball fields, and a baseball field; the recreation center building would include basketball and volleyball courts. These recreation facilities would be public facilities intended to serve the local residents of the City of Clearlake, as is it the intent for most public recreation facilities to serve local residents. It is further noted that the proposed athletic fields and sports courts are common facilities that are typically provided in most cities so it is unlikely that they will draw new recreation visits to the City, but rather redistribute where existing residents choose to recreate. It is likely that the proposed recreation uses would redistribute trips within the City of Clearlake from other public parks such as Austin Park and Redbud Park, rather than generate new regional trips to the City. Therefore, it was determined that it would be appropriate to evaluate the recreation component of the development as a local-serving use.

Applying the aforementioned logic behind the screening of local-serving retail uses to the proposed recreation uses, adding new recreational facilities to the urban fabric of a City can be expected to shift automobile travel patterns within the City but would be unlikely to increase the region's total VMT, and in fact may result in a reduction in total VMT by improving destination proximity. Since the public recreational uses are intending to be primarily local-serving, as opposed to a private athletic club which may have more of a tendency to draw recreation trips from a wider region, it is reasonable to conclude that the proposed uses would have a less-than-significant impact on VMT.

Finding – The proposed recreation uses would reasonably be classified as local-serving uses with a less-than-significant transportation impact on vehicle miles traveled.

Safety Issues

The potential for the project to impact safety was evaluated in terms of the adequacy of sight distance and need for turn lanes at the project accesses as well as the adequacy of stacking space in dedicated turn lanes at the study intersections to accommodate additional queuing due to adding project-generated trips and need for additional right-of-way controls. This section addresses the third bullet on the CEQA checklist which is whether or not the project would substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Site Access

The development site would be accessed via a new north-south street that would extend from Olympic Drive on the south to Burns Valley Road on the north and a new east-west street would be constructed to the north of the Safeway commercial property and would extend from the proposed City corporation yard on the west to Burns Valley Road on the east. Both new streets would be public streets with one lane of vehicle travel in each direction along with Class II bike lanes. Within the development site, the project streets would provide full access to the various components of the development, including parking lots and associated driveways.

The Oak Valley Villas project would be accessed via a new driveway on Burns Valley Road approximately 125 feet west of the intersection with Rumsey Road and a connection to the proposed east-west project street. The driveway on the new east-west street would be positioned approximately 450 feet west of its intersection with Burns Valley Road.

Sight Distance

Sight distances along Burns Valley Road and Olympic Drive at the proposed intersections and driveways were evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans. The recommended sight distance at intersections of public streets is based on corner sight distances, while recommended sight distances for minor street approaches that are either a private road or a driveway are based on stopping sight distance. Both use the approach travel speeds as the basis for determining the recommended sight distance. Additionally, the stopping sight distance needed for a following driver to stop if there is a vehicle waiting to turn into a side street or driveway is evaluated based on stopping sight distance criterion and the approach speed on the major street.

Field measurements were obtained at the locations of the proposed intersections and driveways.

Burns Valley Road/North-South Project Street Intersection

For the posted speed limit of 35 mph on the east-west segment of Burns Valley Road, the minimum corner sight distance needed at the proposed intersection is 385 feet. Sight lines were field measured to extend more than 400 feet in each direction, which is adequate to accommodate the anticipated travel speeds.

Oak Valley Villas Driveway

For the posted speed limit of 35 mph, the minimum stopping sight distance needed is 250 feet. Based on a review of field conditions, sight lines to and from the project driveway location were measured to extend more than 300 feet to the west, which would be more than adequate for the posted speed limit. While the project driveway would be located within about 125 feet of the intersection with Rumsey Road, clear sight lines of more than 300 feet are available from the driveway to the southbound and westbound approaches of the intersection and sight lines of approximately 150 feet would be available between a motorist on the driveway and a northbound motorist turning left onto the east-west section of Burns Valley Road. Those completing this turning movement

would likely be traveling in the 15 to 20 mph range for which only 100 to 125 feet of stopping sight distance would be needed and is available. Therefore, existing sight lines are adequate.

To preserve existing adequate sight lines, it is recommended that any new signage or other structures to be installed along the Oak Valley Villas project frontage be placed outside of the vision triangle of a driver waiting on the driveway. Additionally, it is recommended that planting of trees be avoided near the northeast corner of the project site near the intersection of Burns Valley Road/Rumsey Road.

Burns Valley Road/East-West Project Street Intersection

For the posted speed limit of 30 mph on the north-south segment of Burns Valley Road, the minimum corner sight distance needed is 330 feet. Sight lines were field measured to extend more than 400 feet in each direction, which is more than adequate for the posted speed limit.

Olympic Drive/North-South Project Street Intersection

For the posted speed limit of 35 mph on Olympic Drive, the minimum corner sight distance needed at the proposed intersection is 385 feet. Based on a review of field conditions, sight lines extend more than 400 feet in each direction, which is adequate for the posted speed limit.

Additionally, given the straight and flat alignments of Burns Valley Road and Olympic Drive adjacent to the proposed intersections and driveways, adequate stopping sight distances are available for following drivers to notice and react to a preceding motorist slowing to turn right or stopped waiting to turn left into any of the access points. While sight lines are currently clear, care should be taken to maintain unobstructed sight lines during the design and construction of the proposed development and placement of signage, monuments, or other structures should be avoided within the sight triangles at the access points, which are denoted graphically in Plate 1. The Intersection Sight Distance (ISD) lengths should be based on corner sight distance for the new intersections and stopping sight distance for the Oak Valley Villas driveway.

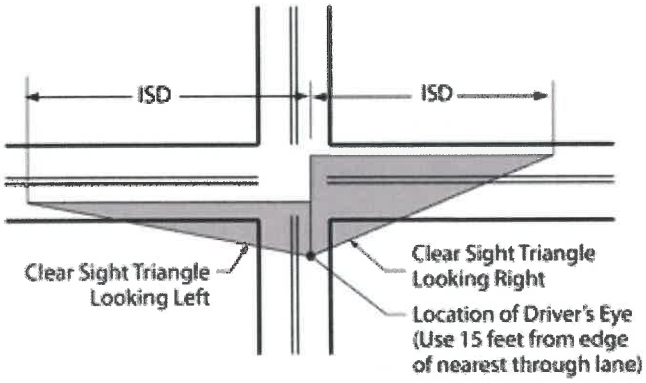


Plate 1 Vision Triangle Graphic

Finding – Sight lines on Burns Valley Road and Olympic Drive are adequate to accommodate all turns into and out of the proposed intersections and driveways.

Recommendation – To maintain adequate sight lines, any new signage, monuments, or other structures should be kept out of the vision triangles at the access points. Additionally, the planting of trees should be avoided near the northeast corner of the project site near the intersection of Burns Valley Road/Bowers Avenue-Rumsey Road.

Access Analysis

Left-Turn Lane Warrants

The need for left-turn lanes on Burns Valley Road and Olympic Drive at the proposed intersections and Oak Valley Villas driveway were evaluated based on criteria contained in the *Intersection Channelization Design Guide*, National Cooperative Highway Research Program (NCHRP) Report No. 279, Transportation Research Board, 1985, as well as an update of the methodology developed by the Washington State Department of Transportation and published in the *Method for Prioritizing Intersection Improvements*, January 1997. The NCHRP report references a methodology developed by M. D. Harmelink that includes equations that can be applied to expected or actual traffic volumes to determine the need for a left-turn pocket based on safety issues.

Using Future plus Project volumes, which represents worst-case conditions, it was determined that left-turn lanes would not be warranted on Burns Valley Road at any of the intersections with the project streets or the Oak Valley Villas driveway. However, a left-turn lane would be warranted under Baseline plus Project and Future plus Project volumes on Olympic Drive at the intersection with the project street. Copies of the turn lane warrant spreadsheets are provided in Appendix D.

There is an existing two-way left-turn lane (TWLTL) on Olympic Drive to the east of the proposed intersection along the commercial shopping center frontage so it is recommended that the TWLTL be extended to the west to facilitate left-turn movements into and out of the development site. In order to determine how far the existing TWLTL would need to be extended to the west, the projected maximum left-turn queue length was determined using a methodology contained in "Estimating Maximum Queue Length at Unsignalized Intersections," John T. Gard, *ITE Journal*, November 2001. Using Future plus Project volumes, the maximum eastbound left-turn queue on Olympic Drive would be no more than three vehicles. Therefore, it is recommended that the storage be based on three passenger cars, or 75 feet. Copies of the queue length calculations are contained in Appendix E.

Finding – Volumes would not be sufficient to warrant installation of a left-turn lane on Burns Valley Road at any of the access points to the development; however, volumes would be sufficient to meet the warrant at the Olympic Drive/North-South Project Street intersection.

Recommendation – The existing TWLTL on Olympic Drive which terminates east of the proposed intersection with the North-South Project Street should be extended to the west to provide a minimum of 75 feet of storage on the west leg of the proposed intersection, as is currently proposed and shown on the site plan.

Queuing

The City of Clearlake does not prescribe thresholds of significance regarding queue lengths. However, an increase in queue length due to project traffic was considered a potentially significant impact if the increase would cause the queue to extend out of a dedicated turn lane into a through traffic lane where moving traffic would be impeded, or the back of queue into a visually restricted area, such as a blind corner.

Unsignalized Intersections

The only existing unsignalized study intersection with a dedicated turn lane is Lakeshore Drive/Olympic Drive, which has a left-turn lane on the westbound approach. However, this approach terminates at the intersection so all traffic is slowing to be able to stop. Hence there is not a safety concern associated with the back of a queue potentially extending into the adjacent travel lane.

Signalized Intersection

Under each scenario, the projected 95th percentile queues in dedicated turn lanes at the signalized intersection of Olympic Drive/Burns Valley Road-Old Highway 53 were determined using the Vistro software. As summarized in

Table 7 and Table 8, the existing turn lanes are expected to have adequate storage capacity to accommodate queuing under all scenarios. It should be noted that while the southbound left-turn lane channelizing line is only 55 feet in length, the turn lane is preceded by a two-way left-turn lane (TWLTL) so the effective storage capacity would extend to the driveway to the commercial center before creating safety concerns; therefore, the storage length was considered to be 160 feet. Copies of the queuing projections are contained in Appendix F in the Vistro output.

Table 7 – 95th Percentile Queues (Weekday)

Study Intersection Turn Lane	Available Storage	95th Percentile Queues											
		Weekday AM Peak Hour						Weekday PM Peak Hour					
		E	E+P	B	B+P	F	F+P	E	E+P	B	B+P	F	F+P
Olympic Dr/Burns Valley Rd-Old Hwy 53													
Northbound Left Turn	95	11	12	15	17	33	35	32	36	41	52	75	86
Northbound Right Turn	95	4	5	8	8	12	13	8	9	19	25	35	38
Eastbound Left Turn	50	7	7	8	8	12	13	8	8	11	12	23	26
Southbound Left Turn	160*	18	19	20	22	48	51	35	40	38	48	80	93
Westbound Left Turn	105	11	12	16	17	27	28	19	21	36	42	47	51

Notes: Maximum Queue based on Vistro output; all distances are measured in feet; E = Existing Conditions; E+P = Existing plus Project Conditions; B = Baseline Conditions; B+P = Baseline plus Project Conditions; F = Future Conditions; F+P = Future plus Project Conditions; * turn lane length includes adjacent TWLTL

Table 8 – 95th Percentile Queues (Weekend)

Study Intersection Turn Lane	Available Storage	95th Percentile Queues					
		Weekend PM Peak Hour					
		E	E+P	B	B+P	F	F+P
Olympic Dr/Burns Valley Rd-Old Hwy 53							
Northbound Left Turn	96	19	26	41	46	46	55
Northbound Right Turn	96	5	5	22	19	14	16
Eastbound Left Turn	48	6	7	11	11	13	16
Southbound Left Turn	160*	23	5	36	44	51	65
Westbound Left Turn	106	9	10	37	39	20	23

Notes: Maximum Queue based on Vistro output; all distances are measured in feet; E = Existing Conditions; E+P = Existing plus Project Conditions; B = Baseline Conditions; B+P = Baseline plus Project Conditions; F = Future Conditions; F+P = Future plus Project Conditions; * turn lane length includes adjacent TWLTL

Finding – The project would not be expected to cause any queues to exceed available storage or extend into an adjacent intersection, so the impact is considered less than significant.

Emergency Access

The final bullet on the CEQA checklist requires an evaluation as to whether the project would result in inadequate emergency access or not.

Adequacy of Site Access

Access to the Oak Valley Villas project site for emergency response vehicles would be facilitated via the northern driveway on Burns Valley Road and southern driveway along the new east-west street, both of which would have a width of 26 feet; this would be adequate to satisfy the required minimum driveway width of 24 feet set forth in the City of Clearlake's *Design and Construction Standards*. On-site circulation includes a 26-foot drive aisle, which also exceeds the minimum width of 24 feet.

While the site plan for the rest of the Burns Valley Development is still preliminary, it is anticipated that all aspects of the site including street and driveway widths and parking lot circulation would be designed in accordance with applicable standards; therefore, access would be expected to function acceptably for emergency response vehicles. It should also be noted that the development site would have multiple access points so should one means of access be compromised during an emergency, responders would be able to use another access point to reach the various aspects of the development.

Off-Site Impacts

While the development would be expected to result in a minor increase in delay for traffic on Burns Valley Road and Olympic Drive, emergency response vehicles can claim the right-of-way by using their lights and sirens; therefore, the project would be expected to have a nominal effect on emergency response times.

Finding – Emergency access and circulation are anticipated to function acceptably with incorporation of applicable design standards into the site layout and traffic from the proposed development would be expected to have a less-than-significant impact on emergency response times.

Capacity Analysis

Though not relevant to the CEQA review process, in keeping with General Plan policies, the potential for the project to effect traffic operation was evaluated.

Intersection Level of Service Methodologies

Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free flow conditions and Level of Service F represents forced flow or breakdown conditions. A unit of measure that indicates a level of delay generally accompanies the LOS designation.

The study intersections were analyzed using methodologies published in the *Highway Capacity Manual* (HCM), Transportation Research Board, 2018. This source contains methodologies for various types of intersection control, all of which are related to a measurement of delay in average number of seconds per vehicle.

The Levels of Service for the existing and proposed intersections with side street stop controls, or those which are unsignalized and have one or two approaches stop controlled, were analyzed using the "Two-Way Stop-Controlled" intersection capacity method from the HCM. This methodology determines a level of service for each minor turning movement by estimating the level of average delay in seconds per vehicle. Results are presented for individual movements together with the weighted overall average delay for the intersection.

The study intersection of the East-West and North-South Project Streets is proposed to have stop signs on all approaches so was analyzed using the "All-Way Stop-Controlled" Intersection methodology from the HCM. This methodology evaluates delay for each approach based on turning movements, opposing and conflicting traffic volumes, and the number of lanes. Average vehicle delay is computed for the intersection as a whole, and is then related to a Level of Service.

The study intersection of Olympic Drive/Burns Valley Road-Old Highway 53 is controlled by a traffic signal so was evaluated using the signalized methodology from the HCM. This methodology is based on factors including traffic volumes, green time for each movement, phasing, whether the signals are coordinated or not, truck traffic, and pedestrian activity. Average stopped delay per vehicle in seconds is used as the basis for evaluation in this LOS methodology. For purposes of this study, delays were calculated using optimized signal timing.

The study intersection of Lakeshore Drive/Olympic Drive is programmed to be controlled by a modern roundabout in the future according to the City's Development Impact Fee Program so was evaluated using the Federal Highway Administration (FHWA) Roundabout Method, also contained within the Unsignalized Methodology of the HCM 6th Edition, Transportation Research Board, 2016. This methodology determines intersection operation using a gap acceptance method along with basic geometric and volume data to calculate entering and circulating flows. This information is then translated to average vehicle delays, with LOS break points at the same delays as used in the two-way stop-controlled methodology.

The ranges of delay associated with the various levels of service are indicated in Table 9.

Table 9 – Intersection Level of Service Criteria				
LOS	**Two-Way Stop-Controlled**	**All-Way Stop-Controlled**	**Signalized**	**Roundabout**
A	Delay of 0 to 10 seconds. Gaps in traffic are readily available for drivers exiting the minor street.	Delay of 0 to 10 seconds. Upon stopping, drivers are immediately able to proceed.	Delay of 0 to 10 seconds. Most vehicles arrive during the green phase, so do not stop at all.	Delay of 0 to 10 seconds.
B	Delay of 10 to 15 seconds. Gaps in traffic are somewhat less readily available than with LOS A, but no queuing occurs on the minor street.	Delay of 10 to 15 seconds. Drivers may wait for one or two vehicles to clear the intersection before proceeding from a stop.	Delay of 10 to 20 seconds. More vehicles stop than with LOS A, but many drivers still do not have to stop.	Delay of 10 to 15 seconds.
C	Delay of 15 to 25 seconds. Acceptable gaps in traffic are less frequent, and drivers may approach while another vehicle is already waiting to exit the side street.	Delay of 15 to 25 seconds. Drivers will enter a queue of one or two vehicles on the same approach, and wait for vehicle to clear from one or more approaches prior to entering the intersection.	Delay of 20 to 35 seconds. The number of vehicles stopping is significant, although many still pass through without stopping.	Delay of 15 to 25 seconds.
D	Delay of 25 to 35 seconds. There are fewer acceptable gaps in traffic, and drivers may enter a queue of one or two vehicles on the side street.	Delay of 25 to 35 seconds. Queues of more than two vehicles are encountered on one or more approaches.	Delay of 35 to 55 seconds. The influence of congestion is noticeable, and most vehicles have to stop.	Delay of 25 to 35 seconds.
E	Delay of 35 to 50 seconds. Few acceptable gaps in traffic are available, and longer queues may form on the side street.	Delay of 35 to 50 seconds. Longer queues are encountered on more than one approach to the intersection.	Delay of 55 to 80 seconds. Most, if not all, vehicles must stop and drivers consider the delay excessive.	Delay of 35 to 50 seconds.
F	Delay of more than 50 seconds. Drivers may wait for long periods before there is an acceptable gap in traffic for exiting the side streets, creating long queues.	Delay of more than 50 seconds. Drivers enter long queues on all approaches.	Delay of more than 80 seconds. Vehicles may wait through more than one cycle to clear the intersection.	Delay of more than 50 seconds.

Reference: *Highway Capacity Manual,* Transportation Research Board, 2018

Traffic Operation Standards

City of Clearlake

The City of Clearlake established a standard of LOS D for all intersections and roadways in Policy CI 1.3.4 of *City of Clearlake 2040 General Plan Update,* City of Clearlake, 2017. Exceptions to this may be considered by the City Council when an unacceptable LOS (E or F) would result in clear public benefit. Such circumstances may include when improvements to achieve the LOS standard would result in impacts to unique historic resources or highly sensitive environmental areas; if right-of-way acquisition is infeasible; and/or if there are overriding economic or social circumstances.

Existing Conditions

The Existing Conditions scenario provides an evaluation of current operation based on existing traffic volumes during the weekday a.m., weekday p.m., and weekend p.m. peak periods. This condition does not include project-generated traffic volumes. Volume data was collected in January 2022 during typical traffic conditions and while local schools were in session. Peak hour factors (PHFs) were calculated based on the counts obtained and used in the analysis.

The three existing study intersections are currently operating acceptably at LOS A or B overall and on the minor street approaches. The existing traffic volumes are shown in Figure 3. A summary of the intersection Level of Service calculations is contained in Table 10, and copies of the calculations for all evaluated scenarios are provided in Appendix F.

Table 10 – Existing Peak Hour Intersection Levels of Service

Study Intersection *Approach*	Weekday AM Peak		Weekday PM Peak		Weekend PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS
2. Burns Valley Rd/Bowers Ave-Rumsey Rd	6.8	A	5.7	A	6.1	A
Eastbound (Burns Valley Rd) Approach	*9.4*	*A*	*9.3*	*A*	*9.2*	*A*
Westbound (Bowers Ave) Approach	*13.4*	*B*	*12.6*	*B*	*11.5*	*B*
5. Olympic Dr/Lakeshore Dr	2.8	A	4.8	A	4.3	A
Westbound (Olympic Dr) Approach	*12.5*	*B*	*13.2*	*B*	*13.8*	*B*
7. Olympic Dr/Burns Valley Rd-Old Hwy 53	11.2	B	13.3	B	11.7	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*.

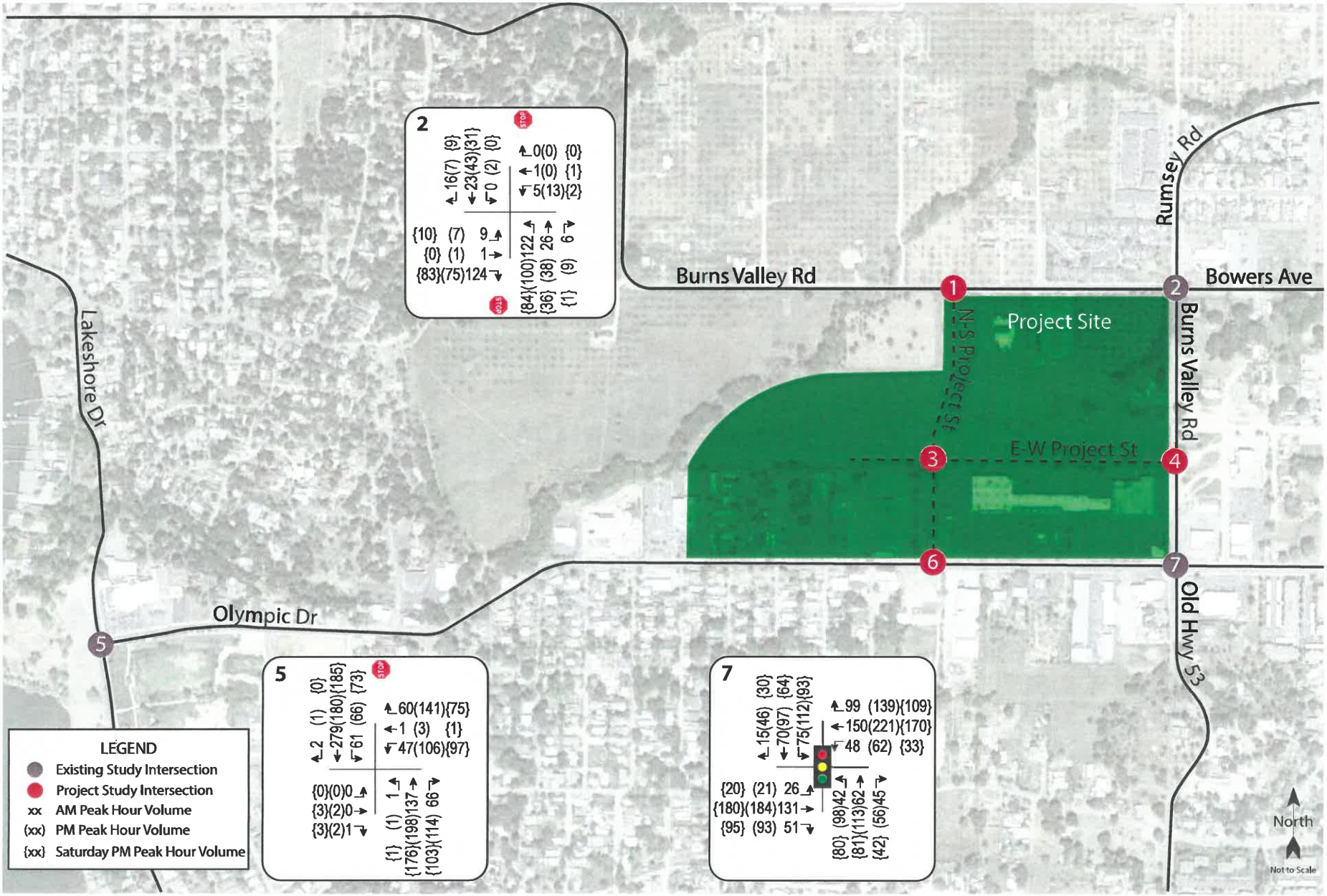
Baseline Conditions

Baseline (Existing plus Approved) operating conditions were determined with traffic from approved or pending projects in the study area that could be operational within the next five-year horizon added to the existing volumes. The following projects were identified for inclusion in the Baseline scenario through coordination with City staff.

- Konocti Gardens is a 102-unit multi-family affordable housing project that would be located at 3930 Old Highway 53. Based on standard rates published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual*, 11th Edition, 2021, the project would be expected to generate an average of 491 daily trips on weekdays and 1,224 daily trips on weekend days, including 37 trips during the weekday a.m. peak hour, 47 trips during the weekday p.m. peak hour, and 131 trips during the weekend p.m. peak hour.

- A tribal health clinic of approximately 24,000 square feet is approved and will be located at 14440 and 14480 Olympic Drive. As evaluated in the *Traffic Impact Study for the Lake County Tribal Health Clinic*, W-Trans, 2019, the project is expected to generate 906 daily trips on average, including 88 trips during the weekday a.m. peak hour and 78 trips during the weekday p.m. peak hour. Trip rates for the weekday p.m. peak period were applied to the weekend p.m. peak hour. The same trip distribution assumptions as were applied in the project's traffic study were also applied in this analysis.

- Four Corners is an approved cannabis project consisting of 8,000 square feet of dispensary retail space, 4,300 square feet of storage space, and 20,000 square feet of cultivation and processing space to be located on the southwest corner of the Olympic Drive/Old Highway 53-Burns Valley Road intersection. Over the last three



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Transportation Impact Study for the Burns Valley Development

Figure 3 – Existing Traffic Volumes

W-Trans

years, W-Trans has collected data at several dispensaries in the North Bay Area, which was used to estimate the trip generation potential of the retail portion of the project. This data collection effort has identified that local dispensaries are expected to generate about 95 vehicle trips per day per 1,000 square feet of gross floor area, including two trips per 1,000 square feet during the weekday a.m. peak hour and 22 trips per 1,000 square feet during the weekday p.m. peak hour. Standard ITE rates for "Warehousing" and "Marijuana Cultivation and Processing Facility" were applied to the non-retail components of the project. Trip rates for the weekday p.m. peak period were applied to the weekend p.m. peak hour. Based on these rates, the project would be expected to generate an average of 32 trips during the weekday a.m. peak hour, 190 trips during the weekday p.m. peak hour, and 190 trips during the weekend p.m. peak hour.

- The addition of a drive-through window to an existing 1,600 square-foot Subway restaurant located at 15060 Lakeshore Drive has been approved. Based on standard ITE rates, the addition would be expected to generate an average of three new trips during the weekday a.m. peak hour, 10 new trips during the weekday p.m. peak hour, and one new trip during the weekend p.m. peak hour.

- The remodel and expansion of an existing Shell gasoline service station located at 15105 Lakeshore Drive has been approved. Based on standard ITE rates with pass-by trips deducted, the project would be expected to generate an average of 15 new trips during the weekday a.m. peak hour, 24 new trips during the weekday p.m. peak hour, and 26 new trips during the weekend p.m. peak hour.

Upon adding trips from approved or pending projects in the study area to existing volumes, all existing study intersections would continue to operate acceptably. These results are summarized in Table 11, and Baseline volumes are shown in Figure 4.

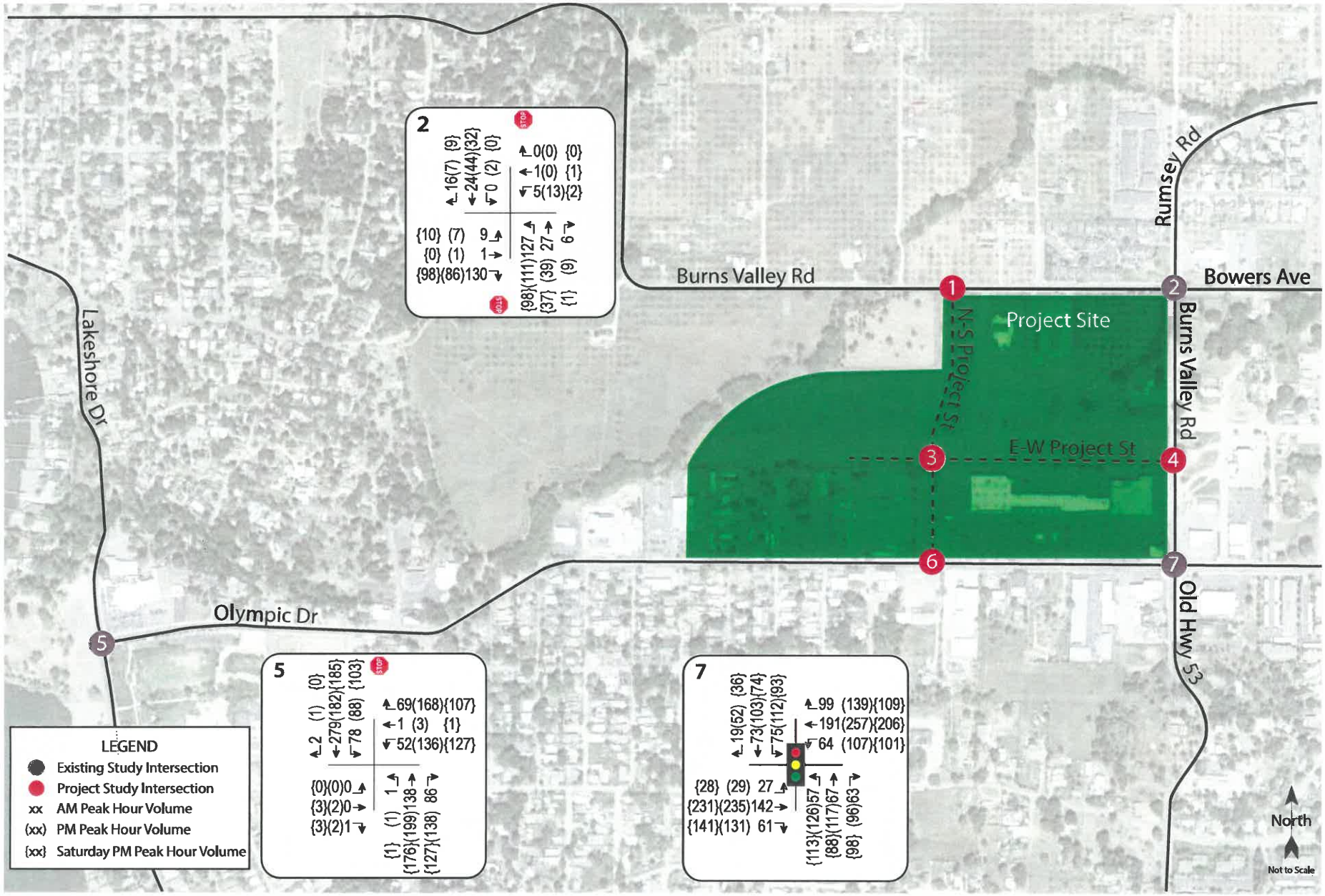
Table 11 – Baseline Peak Hour Intersection Levels of Service

Study Intersection *Approach*	Weekday AM Peak		Weekday PM Peak		Weekend PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS
2. Burns Valley Rd/Bowers Ave-Rumsey Rd	6.8	A	5.9	A	6.3	A
Eastbound (Burns Valley Rd) Approach	*9.5*	*A*	*9.3*	*A*	*9.3*	*A*
Westbound (Bowers Ave) Approach	*13.7*	*B*	*13.2*	*B*	*12.1*	*B*
5. Olympic Dr/Lakeshore Dr	3.1	A	5.5	A	5.7	A
Westbound (Olympic Dr) Approach	*13.0*	*B*	*13.9*	*B*	*16.1*	*C*
7. Olympic Dr/Burns Valley Rd-Old Hwy 53	11.8	B	14.3	B	14.2	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics.*

Future Conditions

Future volumes for the horizon year 2040, as developed for the traffic analysis that was prepared for the *City of Clearlake 2040 General Plan Update*, were used to project future operating conditions at the study intersections. For the study intersections that were not evaluated in the General Plan Update a growth factor was calculated based on the increase between existing and future volume projections for the nearest intersection that was analyzed in the General Plan analysis and then applied to the existing volumes at the study intersection in order to project likely future volumes. This same methodology was used to project future turning movement volumes for the Saturday afternoon peak hour since this period was not analyzed for the General Plan. The City's Development Impact Fee program includes funding for installation of a single-lane modern roundabout at the intersection of Lakeshore Drive/Olympic Drive so this improvement was assumed to be in place for the evaluation of future operating conditions.



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Transportation Impact Study for the Burns Valley Development

Figure 4 – Baseline Traffic Volumes

Under the anticipated future volumes that would be expected upon buildout of the City's General Plan, and with installation of a roundabout at the Lakeshore Drive/Olympic Drive intersection, the study intersections are expected to operate acceptably overall as well as on the minor street approaches.

Future volumes are shown in Figure 5 and operating conditions are summarized in Table 12.

Table 12 – Future Peak Hour Intersection Levels of Service

Study Intersection *Approach*	Weekday AM Peak		Weekday PM Peak		Weekend PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS
2. Burns Valley Rd/Bowers Ave-Rumsey Rd	7.3	A	6.1	A	6.1	A
Eastbound (Burns Valley Rd) Approach	*10.4*	*A*	*9.8*	*A*	*9.7*	*A*
Westbound (Bowers Ave) Approach	*18.3*	*C*	*15.6*	*C*	*13.3*	*B*
5. Olympic Dr/Lakeshore Dr (Roundabout)	5.7	A	4.9	A	4.6	A
7. Olympic Dr/Burns Valley Rd-Old Hwy 53	14.4	B	19.4	B	14.8	B

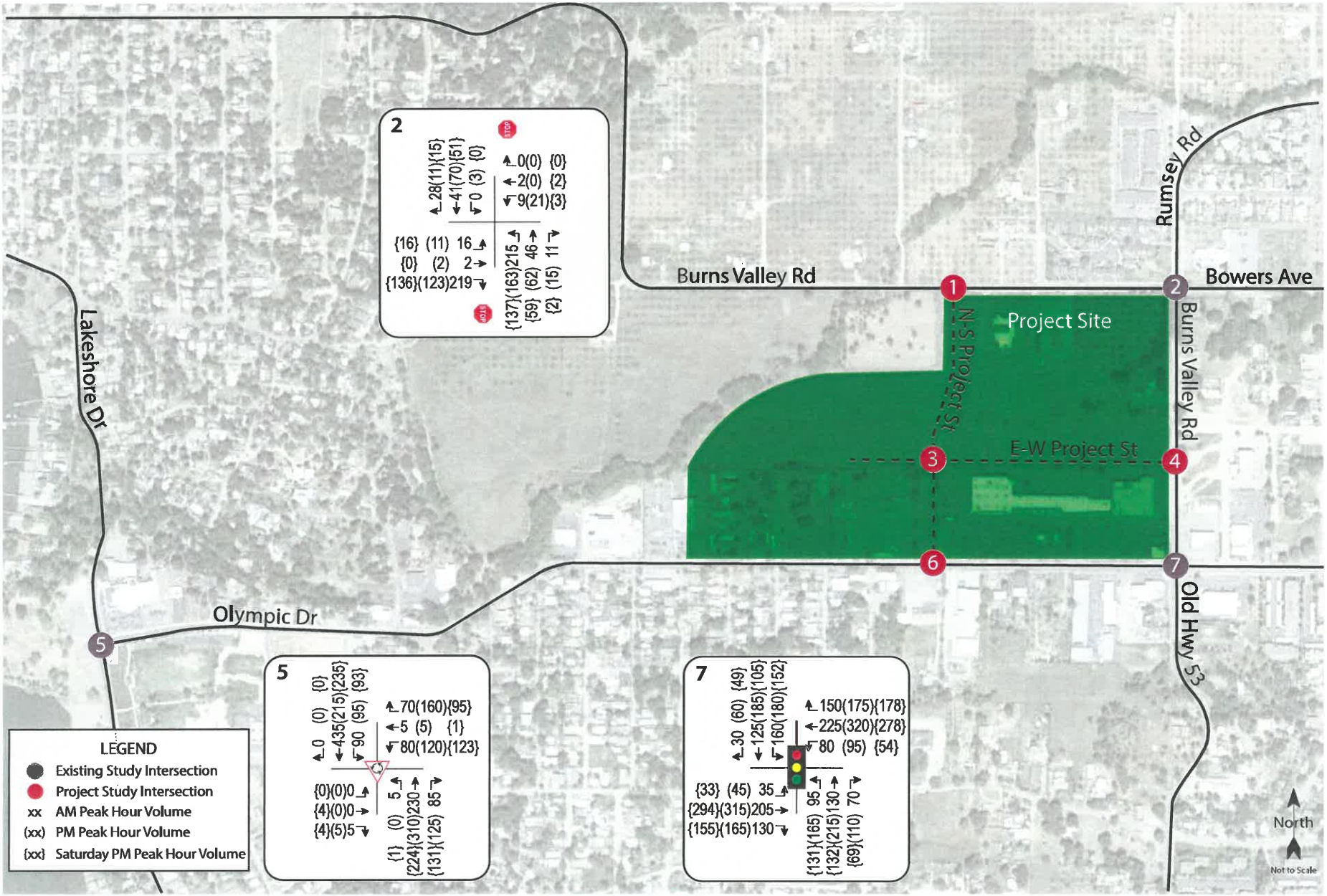
Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*.

Project Conditions

Existing plus Project Conditions

The new North-South Project Street would be expected to redistribute some of the existing traffic in the area by allowing motorists to pass through the Burns Valley Development site, which would likely result in a faster route than traveling around the site using the north-south segment of Burns Valley Road for trips between the northwestern part of the City and the Safeway shopping center. Therefore, for Project Conditions, it was assumed that 10 percent of the existing traffic traveling along the north-south segment of Burns Valley Road would be redistributed to the North-South Project Street. To result in a conservative analysis, rerouted traffic was not deducted from the volumes at the north-south Burns Valley Road study intersections.

Upon the addition of trips associated with the entire Burns Valley Development, including the proposed Oak Valley Villas, the study intersections would be expected to continue operating acceptably during all three peak hours. These results are summarized in Table 13. Project-only traffic volumes are shown in Figure 6, and Existing plus Project volumes are shown in Figure 7.



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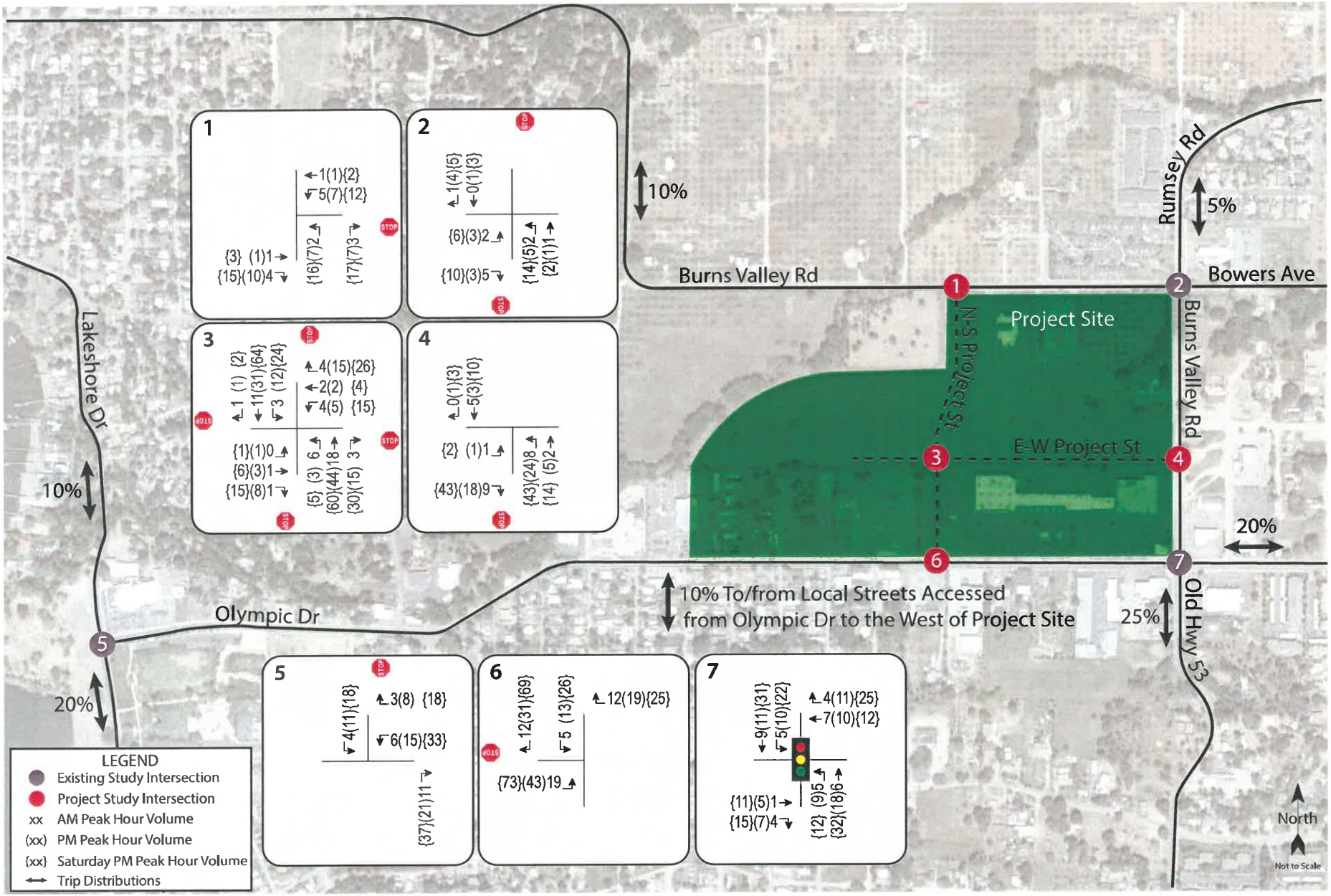
Transportation Impact Study for the Burns Valley Development

Figure 5 – Future Traffic Volumes

W-Trans



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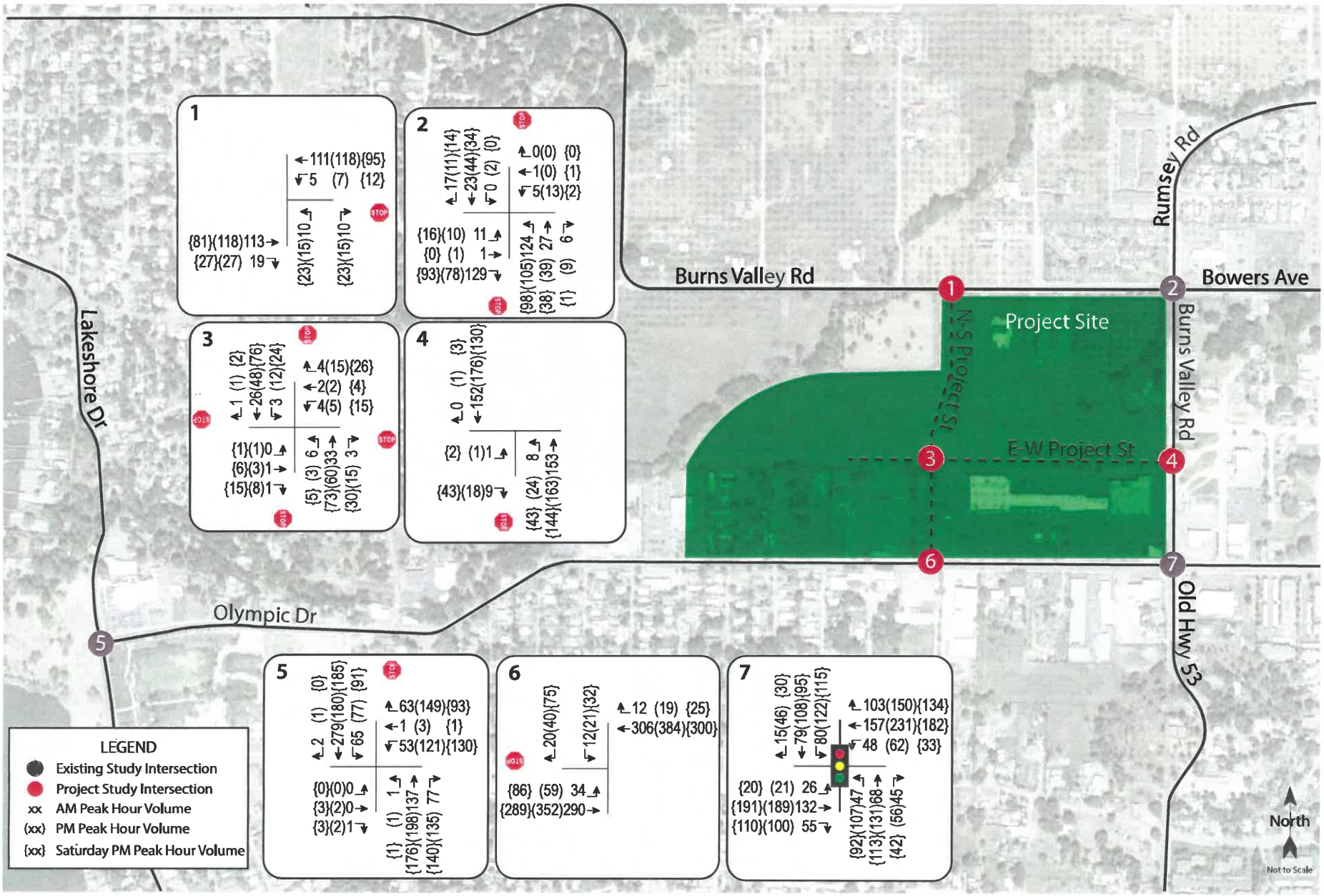
Transportation Impact Study for the Burns Valley Development

Figure 6 – Project Traffic Volumes and Trip Distributions

W-Trans



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Transportation Impact Study for the Burns Valley Development

Figure 7 – Existing plus Project Traffic Volumes

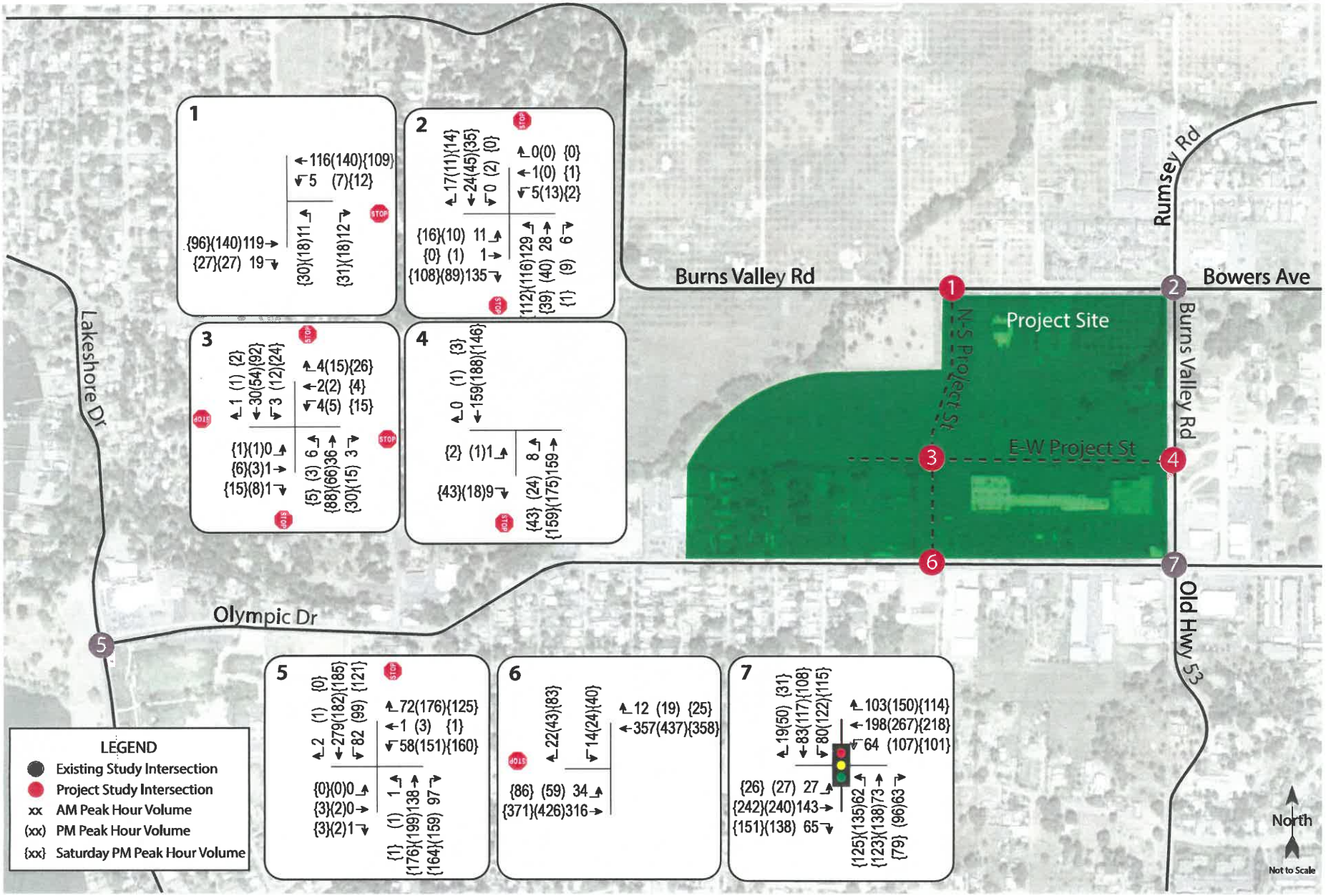
Table 13 – Existing plus Project Peak Hour Intersection Levels of Service						
Study Intersection *Approach*	**Weekday AM**		**Weekday PM**		**Weekend PM**	
	Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
1. Burns Valley Rd/N-S Project St	0.9	A	1.2	A	2.0	A
NB (Project St) Approach	*9.6*	*A*	*9.8*	*A*	*9.6*	*A*
2. Burns Valley Rd/Bowers Ave-Rumsey Rd	6.9	A	5.8	A	6.3	A
EB (Burns Valley Rd) Approach	*9.5*	*A*	*9.5*	*A*	*9.5*	*A*
WB (Bowers Ave) Approach	*13.6*	*B*	*12.9*	*B*	*12.1*	*B*
3. N-S Project St/E-W Project St	7.2	A	7.4	A	7.6	A
4. Burns Valley Rd/E-W Project St	0.5	A	0.9	A	2.0	A
EB (Project St) Approach	*9.4*	*A*	*9.5*	*A*	*9.3*	*A*
5. Olympic Dr/Lakeshore Dr	3.0	A	5.2	A	5.3	A
WB (Olympic Dr) Approach	*12.9*	*B*	*14.0*	*B*	*15.9*	*C*
6. Olympic Dr/N-S Project St	1.0	A	1.7	A	2.1	A
SB (Project St) Approach	*12.8*	*B*	*16.1*	*C*	*15.5*	*C*
7. Olympic Dr/Burns Valley Rd-Old Hwy 53	11.4	B	13.8	B	12.7	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in italics.

Finding – The study intersections would continue to operate acceptably upon the addition of traffic associated with the Burns Valley Development (including the Oak Valley Villas) to existing volumes; therefore, the project would have an acceptable effect on operation of the surrounding roadway network.

Baseline plus Project Conditions

With project-related traffic added to the near-term Baseline volumes and including the redistribution of trips along the new North-South Project Street as detailed above, the study intersections are expected to operate acceptably. Baseline plus Project volumes are shown in Figure 8 and these results are summarized in Table 14.



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Transportation Impact Study for the Burns Valley Development

Figure 8 – Baseline plus Project Traffic Volumes

W-Trans

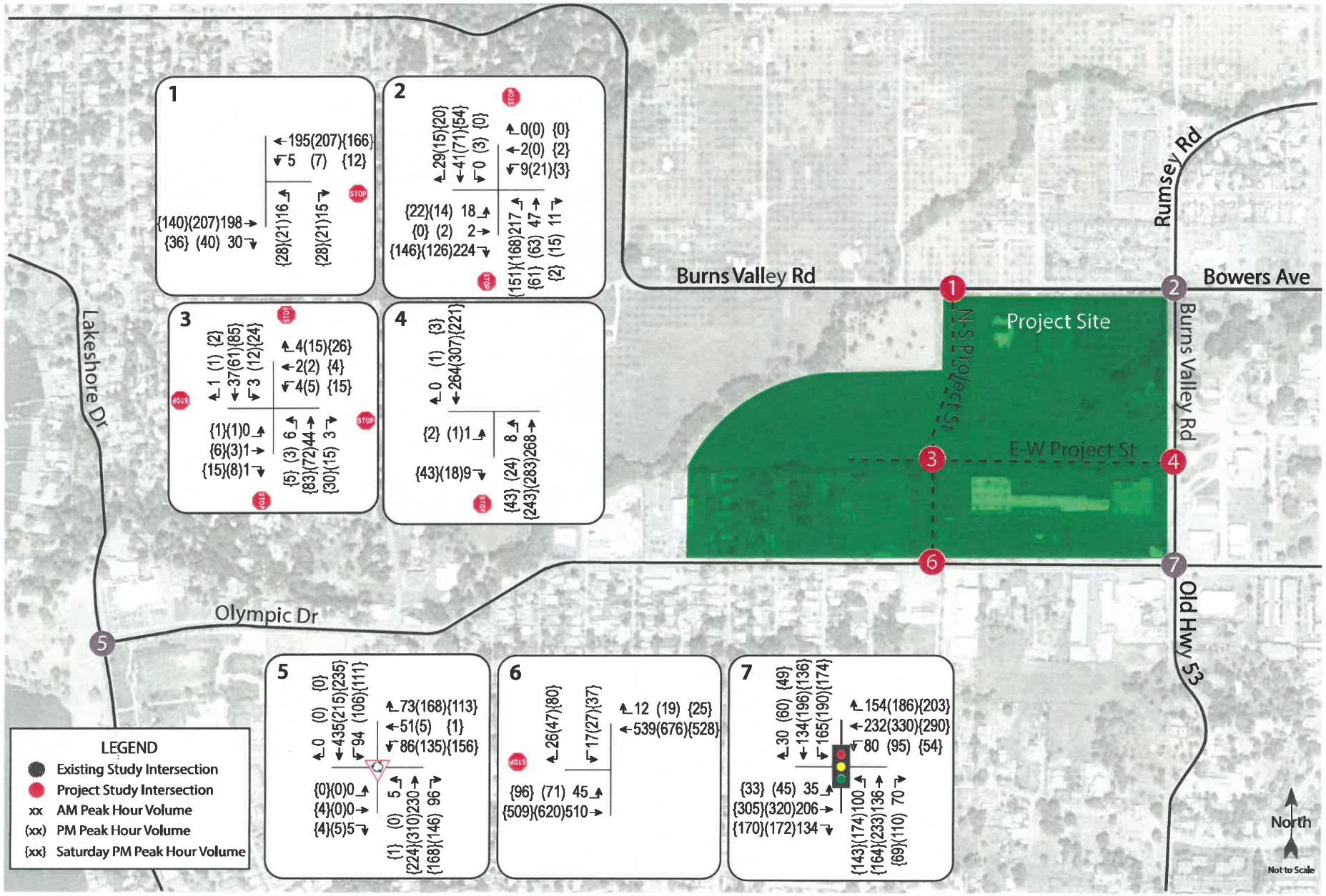
Table 14 – Baseline plus Project Peak Hour Intersection Levels of Service						
Study Intersection *Approach*	**Weekday AM**		**Weekday PM**		**Weekend PM**	
	Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
1. Burns Valley Rd/N-S Project St	0.9	A	1.2	A	2.3	A
NB (Project St) Approach	*9.7*	*A*	*10.1*	*B*	*9.8*	*A*
2. Burns Valley Rd/Bowers Ave-Rumsey Rd	6.9	A	6.0	A	6.5	A
EB (Burns Valley Rd) Approach	*9.6*	*A*	*9.5*	*A*	*9.6*	*A*
WB (Bowers Ave) Approach	*13.9*	*B*	*13.5*	*B*	*12.7*	*B*
3. N-S Project St/E-W Project St	7.2	A	7.4	A	7.8	A
4. Burns Valley Rd/E-W Project St	0.5	A	0.9	A	1.9	A
EB (Project St) Approach	*9.4*	*A*	*9.6*	*A*	*9.4*	*A*
5. Olympic Dr/Lakeshore Dr	3.3	A	6.4	A	7.3	A
WB (Olympic Dr) Approach	*13.4*	*B*	*16.3*	*C*	*19.9*	*C*
6. Olympic Dr/N-S Project St	1.0	A	1.8	A	3.3	A
SB (Project St) Approach	*13.9*	*B*	*19.0*	*C*	*19.9*	*C*
7. Olympic Dr/Burns Valley Rd-Old Hwy 53	12.1	B	15.4	B	14.8	B

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in italics.

Finding – The study intersections are expected to continue operating acceptably overall upon the addition of traffic from the Burns Valley Development (including the Oak Valley Villas) to near-term Baseline volumes; therefore, the project's near-term effect on operation of the surrounding roadway network would be considered acceptable.

Future plus Project Conditions

Upon the addition of project-generated traffic to the anticipated future volumes, and with the planned roundabout at Olympic Drive/Lakeshore Drive, the study intersections are expected to operate acceptably. It should be noted that the land use assumptions developed for the General Plan Update analysis included some level of development on the proposed site so at least a portion of project trips would reasonably be expected to be included in the buildout volumes, though project trips were added to the projected future volumes to result in a conservative assessment of the project's potential effect on operations. The Future plus Project volumes are shown in Figure 9 and operating conditions are summarized in Table 15.



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Transportation Impact Study for the Burns Valley Development

Figure 9 – Future plus Project Traffic Volumes

W-Trans

Table 15 – Future plus Project Peak Hour Intersection Levels of Service

Study Intersection *Approach*	Weekday AM		Weekday PM		Weekend PM	
	Delay	LOS	Delay	LOS	Delay	LOS
1. Burns Valley Rd/N-S Project St	0.8	A	1.0	A	1.6	A
NB (Project St) Approach	*10.5*	*B*	*10.8*	*B*	*10.2*	*B*
2. Burns Valley Rd/Bowers Ave-Rumsey Rd	7.4	A	6.2	A	6.3	A
EB (Burns Valley Rd) Approach	*10.5*	*B*	*10.0*	*B*	*10.0*	*B*
WB (Bowers Ave) Approach	*18.6*	*C*	*16.0*	*C*	*14.0*	*B*
3. N-S Project St/E-W Project St	7.2	A	7.4	A	7.7	A
4. Burns Valley Rd/E-W Project St	0.3	A	0.6	A	1.4	A
EB (Project St) Approach	*10.0*	*B*	*10.2*	*B*	*9.8*	*A*
5. Olympic Dr/Lakeshore Dr (Roundabout)	5.7	A	5.0	A	4.8	A
WB (Olympic Dr) Approach	*1.6*	*A*	*2.4*	*A*	*3.8*	*A*
6. Olympic Dr/N-S Project St	1.0	A	1.8	A	2.8	B
SB (Project St) Approach	*17.6*	*C*	*27.4*	*D*	*22.8*	*C*
7. Olympic Dr/Burns Valley Rd-Old Hwy 53	0.5	A	0.7	A	1.0	A

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in italics.

Finding – The study intersections are expected to operate acceptably under Future plus Project conditions; therefore, the project's cumulative effect on operation of the surrounding roadway network would be considered acceptable.

Parking

The proposed development was analyzed to determine whether the proposed parking supply would be sufficient to satisfy applicable requirements. The project site as proposed would provide a total of 507 parking spaces. Of these 507 spaces, 144 would be dedicated to the Oak Valley Villas.

Jurisdiction parking supply requirements are based on the City of Clearlake Municipal Code, Chapter 18-20.090; Parking Space Requirements. Vehicle parking for multifamily housing is required at a rate of one and one-half spaces for each one- or two-bedroom unit and two spaces for each unit with three or more bedrooms. The Oak Valley Villas project is also expected to qualify for a Density Bonus due to 100 percent of the units being affordable housing units, resulting in a reduction of required on-site parking for the residential project. Vehicle parking is required at a rate of one space per 750 square feet for light industrial uses, which was applied to the corporation yard, one space per 400 square feet for a community recreation center, 30 spaces per athletic field, and one space per 60 square feet for a drive-through restaurant.

The proposed parking supply and City and State requirements are shown in Table 16.

Table 16 – Parking Analysis Summary

Land Use	Units	Supply (spaces)	City Requirements		Density Bonus Requirements	
			Rate	Spaces Required	Rate	Spaces Required
Affordable Housing	20 1-bdr 36 2-bdr 18 3-bdr 6 4-bdr		1.5 for 1-2 bdr 2.0 for 3+ bdr	84 48	1 for 1 bdr 1.5 for 2-3 bdr 2.5 for 4+ bdr	20 81 15
Oak Valley Villas Total		*144*		*132*		*116*
Corporation Yard	12,000 sf		1 per 750 sf	16	n/a	-
Recreation Center	15,000 sf		1 per 400 sf	38	n/a	-
Athletic Fields	6 fields		30 per field	180	n/a	-
Drive-Through Coffee Shop	160 sf		1 per 60 sf	3	n/a	-
Non-Residential Total		*363*		*237*		
Development Total		**507**		**369**		**116**

Notes: bdr = bedrooms; sf = square feet; n/a = not applicable.

For the Oak Valley Villas, the City requires one covered parking space per dwelling unit. The residential site plan indicates provision of 80 covered parking spaces, meeting the City requirements. The site plan also shows that out of the 144 spaces proposed, there are ten accessible stalls with two of those accessible stalls being van accessible. Based on requirements stipulated by the Federal Accessibility Guidelines, the required number of accessible stalls is five stalls, so the proposed supply is adequate. For the non-residential uses, eight accessible stalls are required, and a total of 12 accessible stalls would be provided, including five van accessible stalls.

Finding – The proposed parking supply would be more than sufficient to meet the applicable requirements.

Conclusions and Recommendations

Conclusions

CEQA Issues

- The proposed development (including the Oak Valley Villas) has the potential to result in an average of 1,332 new trips on local streets per day, with 77 new trips during the weekday a.m. peak hour, 182 new trips during the weekday p.m. peak hour, and 353 new trips during the Saturday p.m. peak hour.

- Calculated collision rates for the existing study intersections were all determined to be lower than the statewide average rates, indicating that there are no readily apparent safety issues for motorists in the vicinity of the development site. Nor were there any collisions reported involving a pedestrian or bicyclist.

- Upon constructing sidewalks along the project frontages with Burns Valley Road and along the new project streets, and the provision of a new crossing on Olympic Drive and the North-South Project Street, the development would be connected to the existing pedestrian network and circulation for pedestrians would be acceptable.

- Access for bicyclists would be adequate with the planned Class II bike lanes on the new project streets. Existing transit facilities are adequate.

- The entire Burns Valley Development, including the Oak Valley Villas, is anticipated to result in a less-than-significant transportation impact on VMT.

    - The Oak Valley Villas can be presumed to result in a less-than-significant impact as it would consist of 100 percent affordable housing.

    - Employees of the development, including those for the coffee shop, City corporation yard, and recreational facilities would be expected to have a less-than-significant impact on VMT based on data contained within the Lake County *Senate Bill 743 Vehicle Miles Traveled Regional Baseline Study* and the Wine Country Travel Demand Model.

    - The retail and recreational land uses would be expected to have less-than-significant impacts on VMT as local-serving uses.

- Sight lines on Burns Valley Road and Olympic Drive are adequate to accommodate all turns into and out of the proposed intersections and driveways.

- A left-turn lane would be warranted on Olympic Drive at the intersection with the North-South Project Street.

- The project would have a less-than-significant impact on queues in dedicated turn lanes at the existing study intersections.

- Emergency access and circulation are anticipated to function acceptably with incorporation of applicable design standards into the site layout and traffic from the proposed development would be expected to have a less-than-significant impact on emergency response times.

Policy Issues

- All existing and proposed study intersections are expected to operate at acceptable Levels of Service under Existing, near-term Baseline, and Future buildout volumes without and with the addition of trips from the proposed development. This evaluation was based on implementation of side-street stop controls at the intersections that the project streets would form with Olympic Drive and Burns Valley Road and all-way stop controls at the intersection of the north-south and east-west project streets, as shown on the preliminary site plan.

- The proposed parking supply satisfies City and State requirements.

Recommendations

CEQA Issues

- As proposed and indicated on the site plan, a crosswalk with high-visibility continental crosswalk markings, ADA-compliant curb ramps, pedestrian crossing signage, and advance yield line markings should be provided on Olympic Drive at the North-South Project Street intersection. Crosswalks should also be striped on the project street legs of the new street connections to Burns Valley Road and Olympic Drive.

- Long-term bicycle storage supply in the Oak Valley Villas should be increased from four spaces to seven spaces. A supply of 19 bicycle parking spaces should be provided throughout the non-residential portions of the project site.

- Sight lines at driveways and project street intersections should be clear of obstructions such as vegetation and signing within the vision triangles. The planting of tall vegetation should be avoided near the northeast corner of the project site near the intersection of Burns Valley Road/Bowers Avenue-Rumsey Road.

- Consistent with the site plan, the existing two-way left-turn lane which terminates east of the proposed Olympic Drive/North-South Project Street intersection should be extended to provide 75 feet of stacking at the proposed intersection.

Study Participants and References

Study Participants

Principal in Charge	Dalene J. Whitlock, PE, PTOE
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Editing/Formatting	Hannah Yung-Boxdell
Quality Control	Dalene J. Whitlock, PE, PTOE

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Appendix A

Collision Rate Calculations

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Intersection Collision Rate Worksheet

Burns Valley Development

Intersection # 2: Burns Valley Rd & Bowers Ave-Rumsey Rd
Date of Count: Thursday, January 20, 2022

Number of Collisions: 1
Number of Injuries: 1
Number of Fatalities: 0
Average Daily Traffic (ADT): 4200
Start Date: August 1, 2016
End Date: July 31, 2021
Number of Years: 5

Intersection Type: Four-Legged
Control Type: Stop & Yield Controls
Area: Urban

$$\text{Collision Rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times \text{Days per Year} \times \text{Number of Years}}$$

$$\text{Collision Rate} = \frac{1 \times 1{,}000{,}000}{4{,}200 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.13 c/mve**	**0.0%**	**100.0%**
Statewide Average*	**0.14 c/mve**	**1.1%**	**46.2%**

Notes
ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2018 Collision Data on California State Highways, Caltrans

Intersection # 5: Olympic Dr & Lakeshore Dr
Date of Count: Thursday, January 20, 2022

Number of Collisions: 1
Number of Injuries: 0
Number of Fatalities: 0
Average Daily Traffic (ADT): 8200
Start Date: August 1, 2016
End Date: July 31, 2021
Number of Years: 5

Intersection Type: Tee
Control Type: Stop & Yield Controls
Area: Urban

$$\text{Collision Rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times \text{Days per Year} \times \text{Number of Years}}$$

$$\text{Collision Rate} = \frac{1 \times 1{,}000{,}000}{8{,}200 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.07 c/mve**	**0.0%**	**0.0%**
Statewide Average*	**0.09 c/mve**	**1.2%**	**46.9%**

Notes
ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2018 Collision Data on California State Highways, Caltrans

Intersection Collision Rate Worksheet

Burns Valley Development

Intersection # 7: Olympic Dr & Burns Valley Rd-Old Hwy 53
Date of Count: Thursday, January 20, 2022

Number of Collisions: 4
Number of Injuries: 3
Number of Fatalities: 0
Average Daily Traffic (ADT): 10200
Start Date: August 1, 2016
End Date: July 31, 2021
Number of Years: 5

Intersection Type: Four-Legged
Control Type: Signals
Area: Urban

$$\text{Collision Rate} = \frac{\text{Number of Collisions x 1 Million}}{\text{ADT x Days per Year x Number of Years}}$$

$$\text{Collision Rate} = \frac{4 \times 1{,}000{,}000}{10{,}200 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.21 c/mve**	**0.0%**	**75.0%**
Statewide Average*	**0.24 c/mve**	**0.5%**	**46.9%**

Notes
ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2018 Collision Data on California State Highways, Caltrans

Appendix B

NCHRP Pedestrian Crossing Treatment Worksheet

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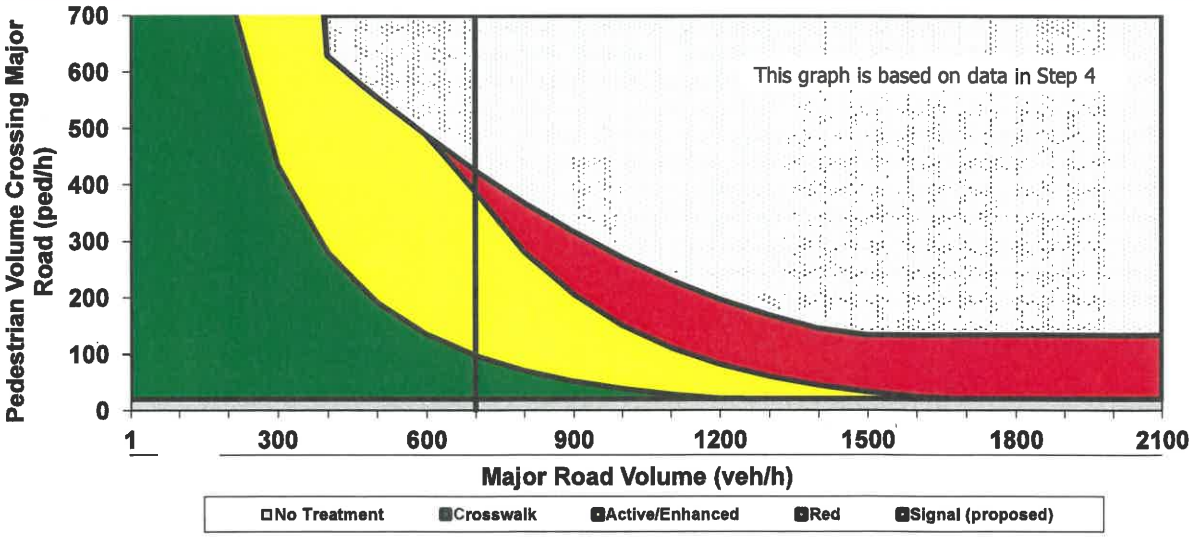
GUIDELINES FOR PEDESTRIAN CROSSING TREATMENTS

This spreadsheet combines Worksheet 1 and Worksheet 2 (Appendix A, pages 69-70) of TCRP Report 112/NCHRP Report 562 (*Improving Pedestrian Safety at Unsignalized Intersections*) into an electronic format. This spreadsheet should be used in conjunction with, and not independent of, Appendix A documentation.

Key

Blue fields contain descriptive information.
Green fields are required and must be completed.
Tan fields are adjustments that are filled out only under certain conditions (follow instructions to the left of the cell).
Gray fields are automatically calculated and should not be edited.

Analyst and Site Information					
Analyst	W-Trans	Major Street	Olympic Drive		
Analysis Date	April 26, 2022	Minor Street or Location	North-South Project Street		
Data Collection Date	January 20, 2022	Peak Hour	Weekday PM		
Step 1: Select worksheet:					
Posted or statutory speed limit (or 85th percentile speed) on the major street (mph)				*1a*	30
Is the population of the surrounding area <10,000? (enter ***YES*** or ***NO***)				*1b*	NO
Step 2: Does the crossing meet minimum pedestrian volumes to be considered for a traffic control device?					
Peak-hour pedestrian volume (ped/h), V_p				*2a*	20
Result: Go to step 3.					
Step 3: Does the crossing meet the pedestrian warrant for a traffic signal?					
Major road volume, total of both approaches during peak hour (veh/h), $V_{maj\text{-}s}$				*3a*	700
[Calculated automatically] Preliminary (before min. threshold) peak hour pedestrian volume to meet warrant				*3b*	425
[Calculated automatically] Minimum required peak hour pedestrian volume to meet traffic signal warrant				*3c*	425
Is 15th percentile crossing speed of pedestrians less than 3.5 ft/s (1.1 m/s)? (enter ***YES*** or ***NO***)				*3d*	NO
If 15th percentile crossing speed of pedestrians is less than 3.5 ft/s (1.1 m/s), then reduce *3c* by up to 50%.		% rate of reduction for *3c* (up to 50%)		*3e*	
		Reduced value or *3c*		*3f*	425
Result: The signal warrant is not met. Go to step 4.					
Step 4: Estimate pedestrian delay.					
Pedestrian crossing distance, curb to curb (ft), L				*4a*	36
Pedestrian walking speed (ft/s), S_p (suggested speed = 3.5 ft/s)				*4b*	3.5
Pedestrian start-up time and end clearance time (s), t_s (suggested start-up time = 3 sec)				*4c*	3
[Calculated automatically] Critical gap required for crossing pedestrian (s), t_c				*4d*	13.2
Major road volume, total both approaches OR approach being crossed if raised median island is present, during peak hour (veh/h), $V_{maj\text{-}d}$				*4e*	700
Major road flow rate (veh/s), v				*4f*	0.19
Average pedestrian delay (s/person), d_p				*4g*	46
Total pedestrian delay (h), D_p The value in 4h is the calculated estimated delay for all pedestrians crossing the major roadway without a crossing treatment (assumes 0% compliance). If the actual total pedestrian delay has been measured at the site, that value can be entered in 4i to replace the calculated value in 4h.				*4h*	0.3
				4i	
Step 5: Select treatment based up on total pedestrian delay and expected motorist compliance.					
Expected motorist compliance at pedestrian crossings in region: enter ***HIGH for High Compliance*** or ***LOW for Low Compliance***				*5a*	LOW
Treatment Category:	**CROSSWALK**				



This worksheet provides general recommendations on pedestrian crossing treatments to consider at unsignalized intersections; in all cases, engineering judgment should be used in selecting a specific treatment for installation. This worksheet does not apply to school crossings. In addition to the results provided by this worksheet, users should consider whether a pedestrian treatment could present an increased safety risk to pedestrians, such as where there is poor sight distance, complex geometrics, or nearby traffic signals.

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Appendix C

VMT Screening Tool Output

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Screening Results

Screening Inputs

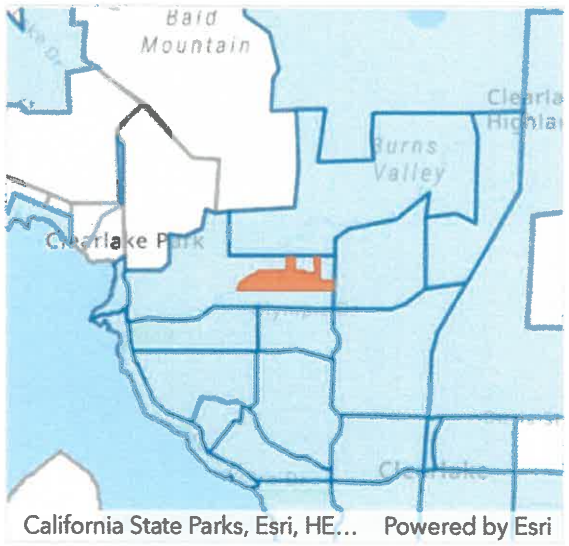
Criteria	Input
VMT Metric	Home-based Work VMT per Worker
Baseline Year	2022
Threshold (% reduction from Baseline Year)	Countywide Benchmark (-15%)

Legend

Category	Color
Selected Project Area	
Traffic Analysis Zone ID	
Low VMT Generating TAZs	

Project Location

Project Proximity to Output Low VMT Generating TAZs



Passed

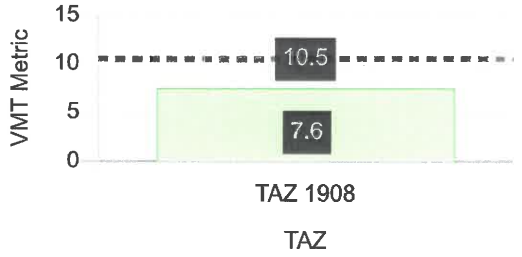
Screening Questions	Results
Within a low VMT generating TAZ?	Yes (Pass)

Screening results are based on location of parcel centroids. If results are desired considering the full parcel, please refer to the associated map layers to visually review parcel and TAZ boundary relationship.

Traffic Analysis Zone (TAZ) Details

TAZ Questions	TAZ ID: 1908
Jurisdiction	Clearlake
TAZ VMT	7.6
Countywide Average VMT	12.3
% Difference	-38.2%
VMT Metric	Home-based Work VMT per Worker
Threshold	10.5

Threshold Evaluation



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Appendix D

Turn Lane Warrant Spreadsheets

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Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Olympic Dr/N-S Project St
Study Scenario: E+P Weekday AM

Direction of Analysis Street: East/West

Cross Street Intersects: From the North

Westbound Speed Limit: 35 mph
Westbound Configuration: 2 Lanes - Undivided

Eastbound Speed Limit: 35 mph
Eastbound Configuration: 2 Lanes - Undivided

Westbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	960.1
Advancing Volume	Va =	318
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Westbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

NOT WARRANTED - Less than 20 vehicles

2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	318
If AV<Va then warrant is met		-

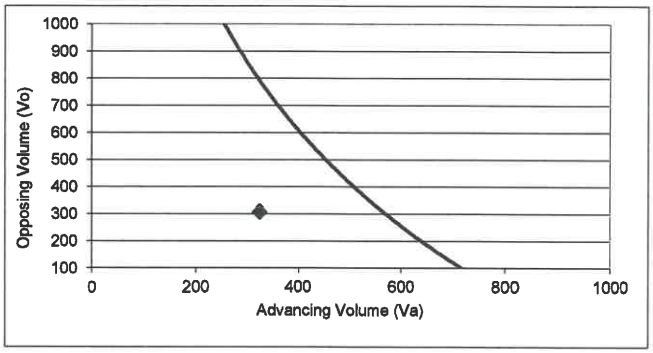
Right Turn Taper Warranted: **NO**

Eastbound Left Turn Lane Warrants

Percentage Left Turns %lt 10.5 %

Advancing Volume Threshold AV 566 veh/hr

If AV<Va then warrant is met



◆ Study Intersection

Two lane roadway warrant threshold for: 35 mph

Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: **NO**

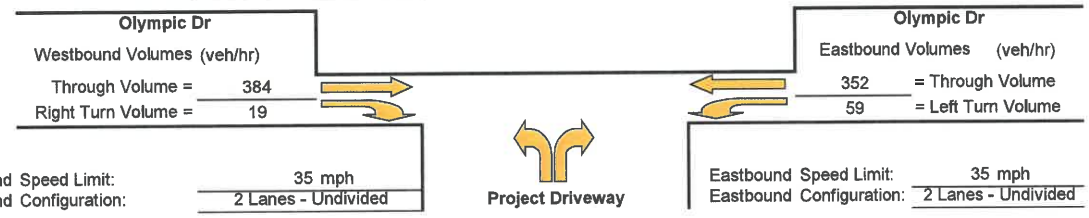
Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Olympic Dr/N-S Project St
Study Scenario: E+P Weekday PM

Direction of Analysis Street: East/West

Cross Street Intersects: From the North



Westbound Speed Limit: 35 mph
Westbound Configuration: 2 Lanes - Undivided

Eastbound Speed Limit: 35 mph
Eastbound Configuration: 2 Lanes - Undivided

Westbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	907.6
Advancing Volume	Va =	403
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Westbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

NOT WARRANTED - Less than 20 vehicles

2. Check advance volume threshold criteria for taper

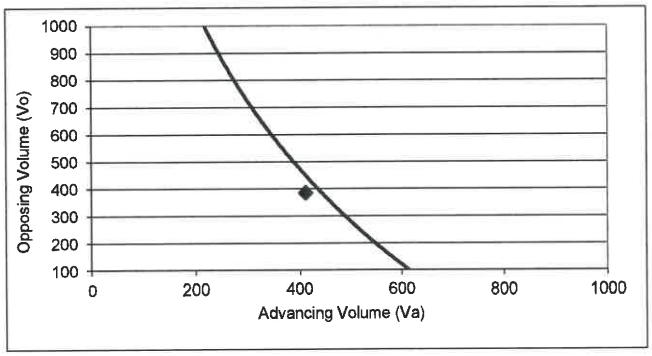
Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	403
If AV<Va then warrant is met		-

Right Turn Taper Warranted: **NO**

Eastbound Left Turn Lane Warrants

Percentage Left Turns	%lt	14.4 %
Advancing Volume Threshold	AV	443 veh/hr

If AV<Va then warrant is met



◆ Study Intersection
——— Two lane roadway warrant threshold for: 35 mph
Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: **NO**

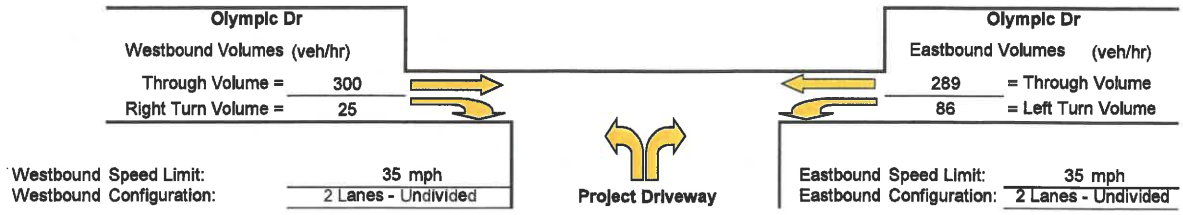
Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Olympic Dr/N-S Project St
Study Scenario: E+P Weekend PM

Direction of Analysis Street: East/West

Cross Street Intersects: From the North



Westbound Speed Limit: 35 mph
Westbound Configuration: 2 Lanes - Undivided

Eastbound Speed Limit: 35 mph
Eastbound Configuration: 2 Lanes - Undivided

Westbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	862.6
Advancing Volume	Va =	325
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Westbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	650
Advancing Volume	Va =	325
If AV<Va then warrant is met		No

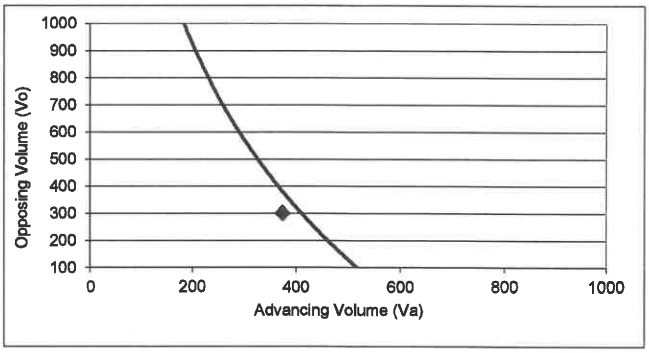
Right Turn Taper Warranted: **NO**

Eastbound Left Turn Lane Warrants

Percentage Left Turns %lt 22.9 %

Advancing Volume Threshold AV 411 veh/hr

If AV<Va then warrant is met



◆ Study Intersection

Two lane roadway warrant threshold for: 35 mph

Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Olympic Dr/N-S Project St
Study Scenario: B+P Weekday AM

Direction of Analysis Street: East/West

Cross Street Intersects: From the North

Olympic Dr

Westbound Volumes (veh/hr)

Through Volume = 357

Right Turn Volume = 12

Westbound Speed Limit: 35 mph

Westbound Configuration: 2 Lanes - Undivided

Project Driveway

Olympic Dr

Eastbound Volumes (veh/hr)

316 = Through Volume

34 = Left Turn Volume

Eastbound Speed Limit: 35 mph

Eastbound Configuration: 2 Lanes - Undivided

Westbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	960.1
Advancing Volume	Va =	369
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Westbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

NOT WARRANTED - Less than 20 vehicles

2. Check advance volume threshold criteria for taper

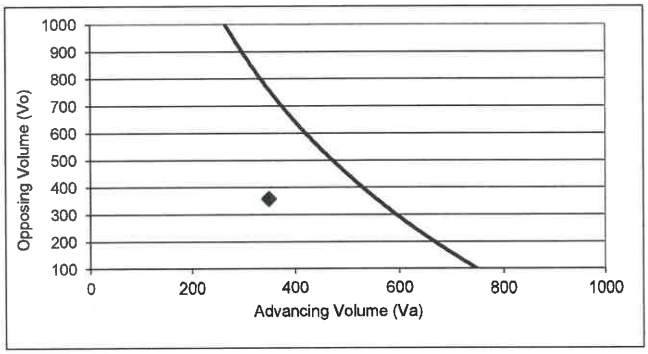
Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	369
If AV<Va then warrant is met		-

Right Turn Taper Warranted: **NO**

Eastbound Left Turn Lane Warrants

Percentage Left Turns	%lt	9.7 %
Advancing Volume Threshold	AV	556 veh/hr

If AV<Va then warrant is met



◆ Study Intersection

——— Two lane roadway warrant threshold for: 35 mph

Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Olympic Dr/N-S Project St
Study Scenario: B+P Weekday PM

Direction of Analysis Street: East/West
Cross Street Intersects: From the North

Olympic Dr

Westbound Volumes (veh/hr)
Through Volume = 437
Right Turn Volume = 19

Westbound Speed Limit: 35 mph
Westbound Configuration: 2 Lanes - Undivided

Project Driveway

Olympic Dr

Eastbound Volumes (veh/hr)
426 = Through Volume
59 = Left Turn Volume

Eastbound Speed Limit: 35 mph
Eastbound Configuration: 2 Lanes - Undivided

Westbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	907.6
Advancing Volume	Va =	456
If AV<Va then warrant is met		No

Right Turn Lane Warranted: NO

Westbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

NOT WARRANTED - Less than 20 vehicles

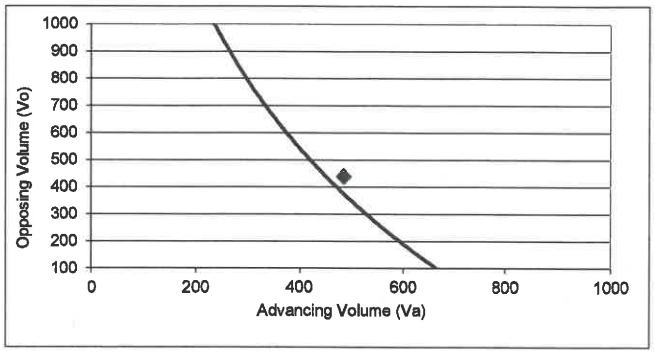
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	456
If AV<Va then warrant is met		-

Right Turn Taper Warranted: NO

Eastbound Left Turn Lane Warrants

Percentage Left Turns %lt 12.2 %
Advancing Volume Threshold AV 451 veh/hr
If AV<Va then warrant is met



◆ Study Intersection
Two lane roadway warrant threshold for: 35 mph
Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: YES

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Olympic Dr/N-S Project St
Study Scenario: B+P Weekend PM

Direction of Analysis Street: East/West

Cross Street Intersects: From the North

Olympic Dr

Westbound Volumes (veh/hr)

Through Volume = 358

Right Turn Volume = 25

Westbound Speed Limit: 35 mph
Westbound Configuration: 2 Lanes - Undivided

Project Driveway

Olympic Dr

Eastbound Volumes (veh/hr)

371 = Through Volume

86 = Left Turn Volume

Eastbound Speed Limit: 35 mph
Eastbound Configuration: 2 Lanes - Undivided

Westbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	862.6
Advancing Volume	Va =	383
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Westbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper

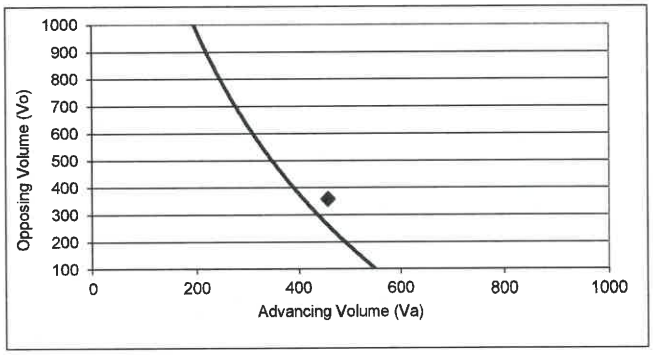
Advancing Volume Threshold	AV =	650
Advancing Volume	Va =	383
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Eastbound Left Turn Lane Warrants

Percentage Left Turns	%lt	18.8 %
Advancing Volume Threshold	AV	409 veh/hr

If AV<Va then warrant is met



◆ Study Intersection

——— Two lane roadway warrant threshold for: 35 mph

Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Burns Valley Rd/N-S Project St
Study Scenario: Weekday AM F+P

Direction of Analysis Street: East/West

Cross Street Intersects: From the South

Burns Valley Road

Eastbound Volumes (veh/hr)

Through Volume = 198

Right Turn Volume = 30

Eastbound Speed Limit: 35 mph

Eastbound Configuration: 2 Lanes - Undivided

Burns Valley Road

Westbound Volumes (veh/hr)

195 = Through Volume

5 = Left Turn Volume

Westbound Speed Limit: 35 mph

Westbound Configuration: 2 Lanes - Undivided

Project Driveway

Eastbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	825.1
Advancing Volume	Va =	228
If AV<Va then warrant is met		No

Right Turn Lane Warranted: NO

Eastbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	600
Advancing Volume	Va =	228
If AV<Va then warrant is met		No

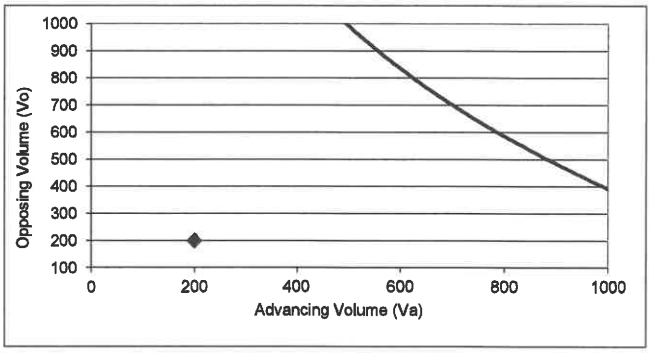
Right Turn Taper Warranted: NO

Westbound Left Turn Lane Warrants

Percentage Left Turns %lt 2.5 %

Advancing Volume Threshold AV 1249 veh/hr

If AV<Va then warrant is met



◆ Study Intersection

Two lane roadway warrant threshold for: 35 mph

Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: NO

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Burns Valley Rd / Oak Valley Villas Northern Driveway
Study Scenario: Weekday AM F+P

Direction of Analysis Street: East/West
Cross Street Intersects: From the South

Burns Valley Rd

Eastbound Volumes (veh/hr)

Through Volume = 237
Right Turn Volume = 3

Eastbound Speed Limit: 35 mph
Eastbound Configuration: 2 Lanes - Undivided

Project Driveway

Burns Valley Rd

Westbound Volumes (veh/hr)

245 = Through Volume
2 = Left Turn Volume

Westbound Speed Limit: 35 mph
Westbound Configuration: 2 Lanes - Undivided

Eastbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	1027.6
Advancing Volume	Va =	240
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Eastbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

NOT WARRANTED - Less than 20 vehicles

2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	240
If AV<Va then warrant is met		-

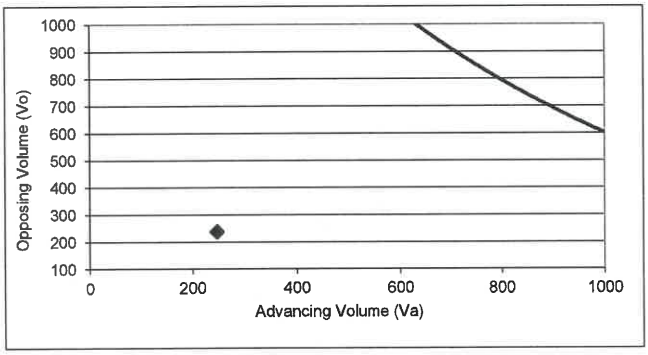
Right Turn Taper Warranted: **NO**

Westbound Left Turn Lane Warrants

Percentage Left Turns %lt 0.8 %

Advancing Volume Threshold AV 1520 veh/hr

If AV<Va then warrant is met



◆ Study Intersection

——— Two lane roadway warrant threshold for: 35 mph

Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Burns Valley Rd/E-W Project St
Study Scenario: F+P Weekday PM

Direction of Analysis Street: North/South

Cross Street Intersects: From the West

Burns Valley Road
Southbound Volumes (veh/hr)
Through Volume = 307
Right Turn Volume = 1

Burns Valley Road
Northbound Volumes (veh/hr)
283 = Through Volume
24 = Left Turn Volume

Project Driveway

Southbound Speed Limit: 30 mph
Southbound Configuration: 2 Lanes - Undivided

Northbound Speed Limit: 30 mph
Northbound Configuration: 2 Lanes - Undivided

Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	1042.6
Advancing Volume	Va =	308
If AV<Va then warrant is met		No

Right Turn Lane Warranted: NO

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

NOT WARRANTED - Less than 20 vehicles

2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	308
If AV<Va then warrant is met		-

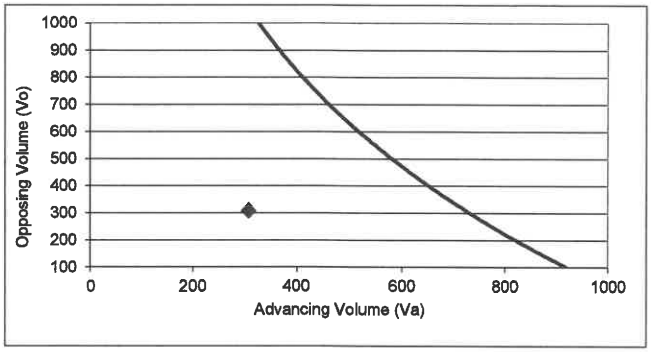
Right Turn Taper Warranted: NO

Northbound Left Turn Lane Warrants

Percentage Left Turns %lt 7.8 %

Advancing Volume Threshold AV 725 veh/hr

If AV<Va then warrant is met



◆ Study Intersection

Two lane roadway warrant threshold for: 30 mph

Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: NO

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Olympic Dr/N-S Project St
Study Scenario: F+P Weekday AM

Direction of Analysis Street: East/West

Cross Street Intersects: From the North

Olympic Dr

Westbound Volumes (veh/hr)

Through Volume = 539

Right Turn Volume = 12

Westbound Speed Limit: 35 mph
Westbound Configuration: 2 Lanes - Undivided

Project Driveway

Olympic Dr

Eastbound Volumes (veh/hr)

510 = Through Volume

45 = Left Turn Volume

Eastbound Speed Limit: 35 mph
Eastbound Configuration: 2 Lanes - Undivided

Westbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	960.1
Advancing Volume	Va =	551
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Westbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

NOT WARRANTED - Less than 20 vehicles

2. Check advance volume threshold criteria for taper

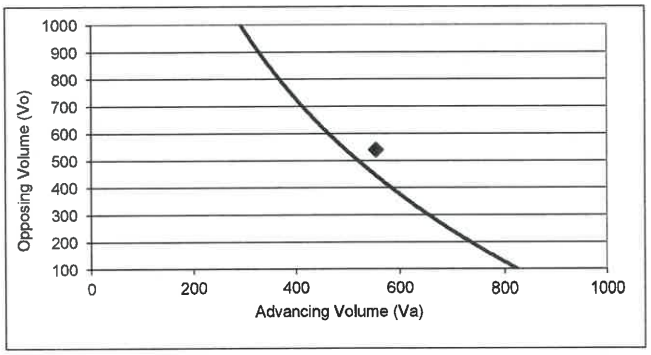
Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	551
If AV<Va then warrant is met		-

Right Turn Taper Warranted: **NO**

Eastbound Left Turn Lane Warrants

Percentage Left Turns	%lt	8.1 %
Advancing Volume Threshold	AV	497 veh/hr

If AV<Va then warrant is met



◆ Study Intersection

——— Two lane roadway warrant threshold for: 35 mph

Turn lane warranted if point falls to right of warrant threshold line

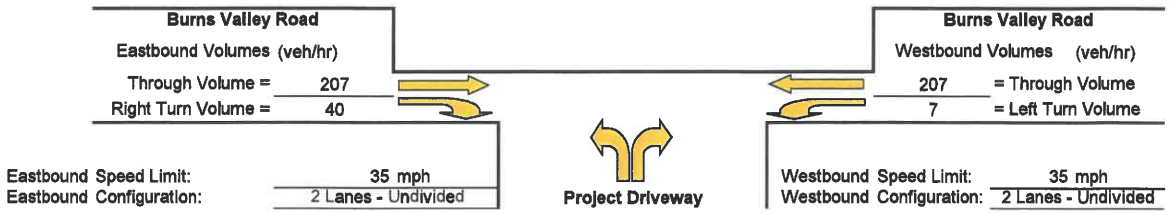
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Burns Valley Rd/N-S Project St
Study Scenario: Weekday PM F+P

Direction of Analysis Street: East/West
Cross Street Intersects: From the South



Eastbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	750
Advancing Volume	Va =	247
If AV<Va then warrant is met		No

Right Turn Lane Warranted: NO

Eastbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper

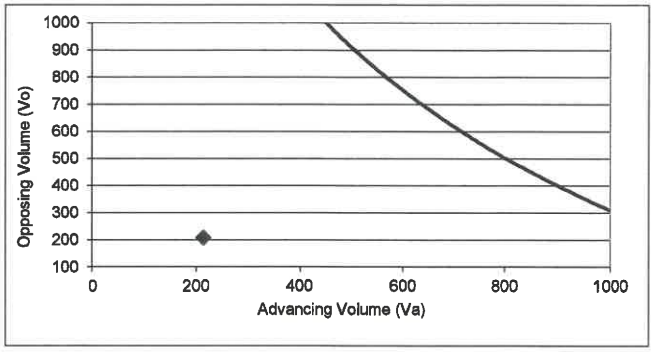
Advancing Volume Threshold	AV =	500
Advancing Volume	Va =	247
If AV<Va then warrant is met		No

Right Turn Taper Warranted: NO

Westbound Left Turn Lane Warrants

Percentage Left Turns %lt	3.3 %
Advancing Volume Threshold AV	1124 veh/hr

If AV<Va then warrant is met



◆ Study Intersection
Two lane roadway warrant threshold for: 35 mph
Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: NO

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Burns Valley Rd / Oak Valley Villas Northern Driveway
Study Scenario: Weekday PM F+P

Direction of Analysis Street: East/West

Cross Street Intersects: From the South

Burns Valley Rd

Eastbound Volumes (veh/hr)

Through Volume = 142

Right Turn Volume = 6

Eastbound Speed Limit: 35 mph
Eastbound Configuration: 2 Lanes - Undivided

Project Driveway

Burns Valley Rd

Westbound Volumes (veh/hr)

183 = Through Volume

7 = Left Turn Volume

Westbound Speed Limit: 35 mph
Westbound Configuration: 2 Lanes - Undivided

Eastbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	1005.1
Advancing Volume	Va =	148
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Eastbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

NOT WARRANTED - Less than 20 vehicles

2. Check advance volume threshold criteria for taper

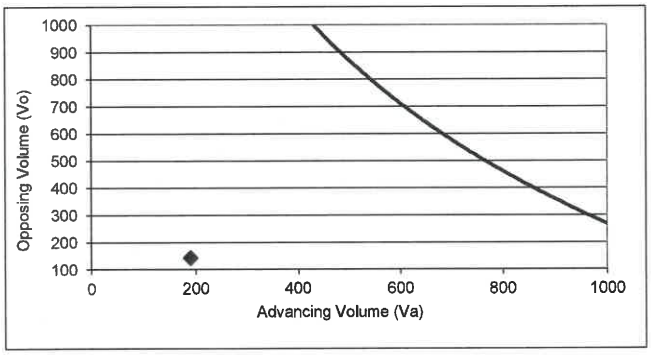
Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	148
If AV<Va then warrant is met		-

Right Turn Taper Warranted: **NO**

Westbound Left Turn Lane Warrants

Percentage Left Turns	%lt	3.7 %
Advancing Volume Threshold	AV	1155 veh/hr

If AV<Va then warrant is met



◆ Study Intersection

——— Two lane roadway warrant threshold for: 35 mph

Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Burns Valley Rd/E-W Project St
Study Scenario: F+P Weekday PM

Direction of Analysis Street: North/South

Cross Street Intersects: From the West

Burns Valley Road

Southbound Volumes (veh/hr)

Through Volume = 307

Right Turn Volume = 1

Southbound Speed Limit: 30 mph

Southbound Configuration: 2 Lanes - Undivided

Burns Valley Road

Northbound Volumes (veh/hr)

283 = Through Volume

24 = Left Turn Volume

Northbound Speed Limit: 30 mph

Northbound Configuration: 2 Lanes - Undivided

Project Driveway

Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	1042.6
Advancing Volume	Va =	308
If AV<Va then warrant is met		No

Right Turn Lane Warranted: NO

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

NOT WARRANTED - Less than 20 vehicles

2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	308
If AV<Va then warrant is met		-

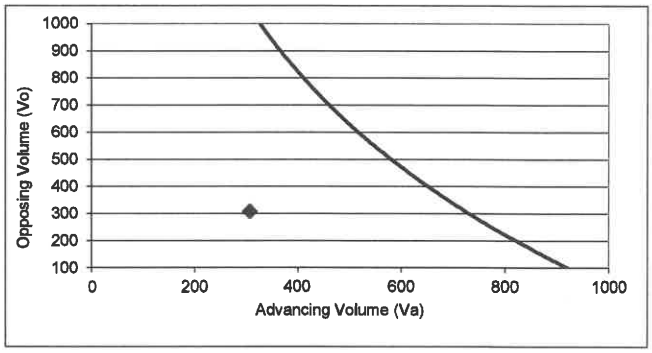
Right Turn Taper Warranted: NO

Northbound Left Turn Lane Warrants

Percentage Left Turns %lt: 7.8 %

Advancing Volume Threshold AV: 725 veh/hr

If AV<Va then warrant is met



◆ Study Intersection

Two lane roadway warrant threshold for: 30 mph

Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: NO

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Olympic Dr/N-S Project St
Study Scenario: F+P Weekday PM

Direction of Analysis Street: East/West

Cross Street Intersects: From the North

Olympic Dr

Westbound Volumes (veh/hr)

Through Volume = 676

Right Turn Volume = 19

Westbound Speed Limit: 35 mph

Westbound Configuration: 2 Lanes - Undivided

Project Driveway

Olympic Dr

Eastbound Volumes (veh/hr)

620 = Through Volume

71 = Left Turn Volume

Eastbound Speed Limit: 35 mph

Eastbound Configuration: 2 Lanes - Undivided

Westbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	907.6
Advancing Volume	Va =	695
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Westbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

NOT WARRANTED - Less than 20 vehicles

2. Check advance volume threshold criteria for taper

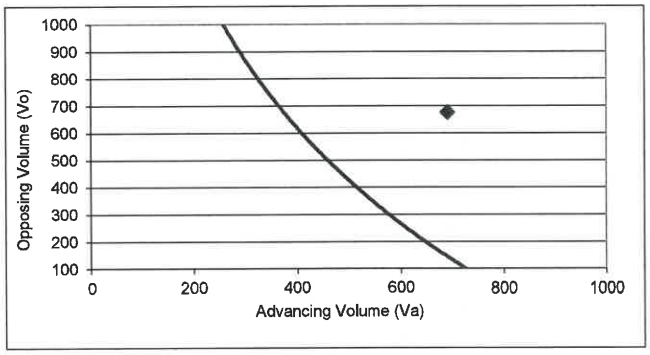
Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	695
If AV<Va then warrant is met		-

Right Turn Taper Warranted: **NO**

Eastbound Left Turn Lane Warrants

Percentage Left Turns	%lt	10.3 %
Advancing Volume Threshold	AV	374 veh/hr

If AV<Va then warrant is met



◆ Study Intersection

——— Two lane roadway warrant threshold for: 35 mph

Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Burns Valley Rd/N-S Project St
Study Scenario: Weekend PM F+P

Direction of Analysis Street: East/West

Cross Street Intersects: From the South

Burns Valley Road

Eastbound Volumes (veh/hr)

Through Volume = 140

Right Turn Volume = 36

Eastbound Speed Limit: 35 mph

Eastbound Configuration: 2 Lanes - Undivided

Project Driveway

Burns Valley Road

Westbound Volumes (veh/hr)

166 = Through Volume

12 = Left Turn Volume

Westbound Speed Limit: 35 mph

Westbound Configuration: 2 Lanes - Undivided

Eastbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	780
Advancing Volume	Va =	176
If AV<Va then warrant is met		No

Right Turn Lane Warranted: NO

Eastbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	540
Advancing Volume	Va =	176
If AV<Va then warrant is met		No

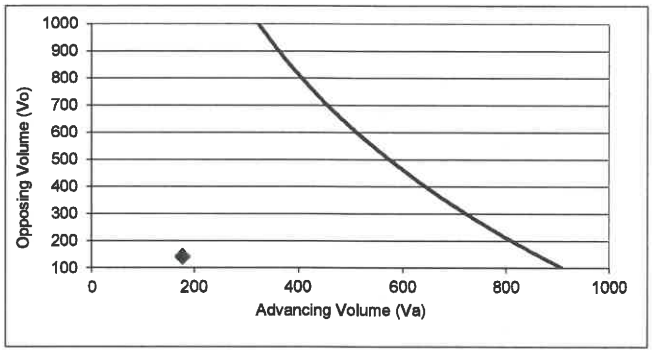
Right Turn Taper Warranted: NO

Westbound Left Turn Lane Warrants

Percentage Left Turns %lt 6.7 %

Advancing Volume Threshold AV 869 veh/hr

If AV<Va then warrant is met



◆ Study Intersection

Two lane roadway warrant threshold for: 35 mph

Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: NO

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Burns Valley Rd / Oak Valley Villas Northern Driveway
Study Scenario: Weekend PM F+P

Direction of Analysis Street: East/West

Cross Street Intersects: From the South

Burns Valley Rd

Eastbound Volumes (veh/hr)

Through Volume = 332

Right Turn Volume = 17

Eastbound Speed Limit: 35 mph

Eastbound Configuration: 2 Lanes - Undivided

Project Driveway

Burns Valley Rd

Westbound Volumes (veh/hr)

349 = Through Volume

17 = Left Turn Volume

Westbound Speed Limit: 35 mph

Westbound Configuration: 2 Lanes - Undivided

Eastbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	922.6
Advancing Volume	Va =	349
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Eastbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

NOT WARRANTED - Less than 20 vehicles

2. Check advance volume threshold criteria for taper

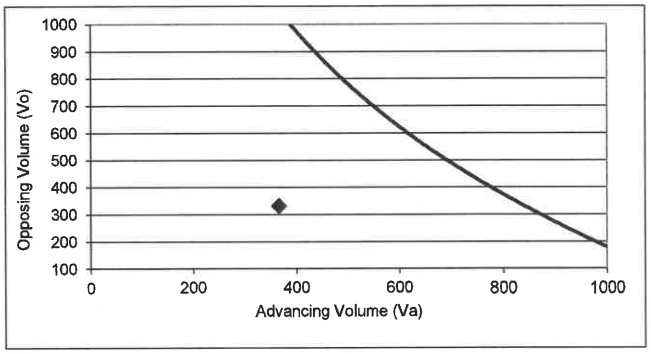
Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	349
If AV<Va then warrant is met		-

Right Turn Taper Warranted: **NO**

Westbound Left Turn Lane Warrants

Percentage Left Turns	%lt	4.6 %
Advancing Volume Threshold	AV	839 veh/hr

If AV<Va then warrant is met



◆ Study Intersection

——— Two lane roadway warrant threshold for: 35 mph

Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Burns Valley Rd/E-W Project St
Study Scenario: F+P Weekend PM

Direction of Analysis Street: North/South

Cross Street Intersects: From the West

Burns Valley Road

Southbound Volumes (veh/hr)

Through Volume = 221

Right Turn Volume = 3

Southbound Speed Limit: 30 mph

Southbound Configuration: 2 Lanes - Undivided

Project Driveway

Burns Valley Road

Northbound Volumes (veh/hr)

243 = Through Volume

43 = Left Turn Volume

Northbound Speed Limit: 30 mph

Northbound Configuration: 2 Lanes - Undivided

Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	1027.6
Advancing Volume	Va =	224
If AV<Va then warrant is met		No

Right Turn Lane Warranted: NO

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

NOT WARRANTED - Less than 20 vehicles

2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	224
If AV<Va then warrant is met		-

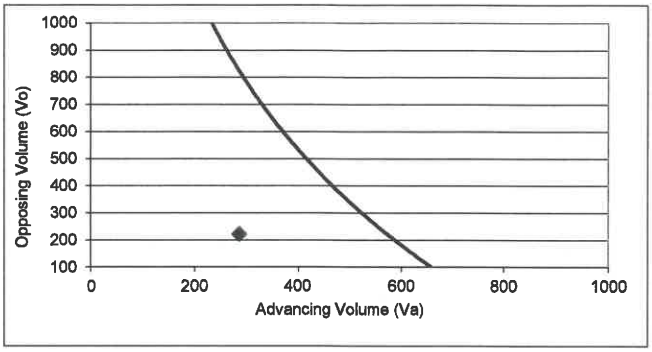
Right Turn Taper Warranted: NO

Northbound Left Turn Lane Warrants

Percentage Left Turns %lt 15.0 %

Advancing Volume Threshold AV 573 veh/hr

If AV<Va then warrant is met



◆ Study Intersection

Two lane roadway warrant threshold for: 30 mph

Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: NO

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Olympic Dr/N-S Project St
Study Scenario: F+P Weekend PM

Direction of Analysis Street: East/West

Cross Street Intersects: From the North

Olympic Dr

Westbound Volumes (veh/hr)

Through Volume = 528

Right Turn Volume = 25

Westbound Speed Limit: 35 mph

Westbound Configuration: 2 Lanes - Undivided

Project Driveway

Olympic Dr

Eastbound Volumes (veh/hr)

509 = Through Volume

96 = Left Turn Volume

Eastbound Speed Limit: 35 mph

Eastbound Configuration: 2 Lanes - Undivided

Westbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	862.6
Advancing Volume	Va =	553
If AV<Va then warrant is met		No

Right Turn Lane Warranted: NO

Westbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper

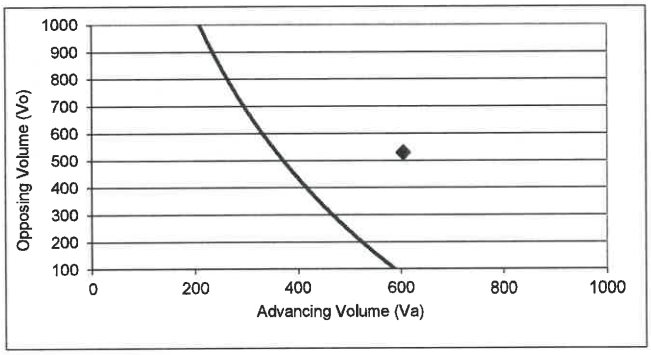
Advancing Volume Threshold	AV =	650
Advancing Volume	Va =	553
If AV<Va then warrant is met		No

Right Turn Taper Warranted: NO

Eastbound Left Turn Lane Warrants

Percentage Left Turns	%lt	15.9 %
Advancing Volume Threshold	AV	359 veh/hr

If AV<Va then warrant is met



◆ Study Intersection

——— Two lane roadway warrant threshold for: 35 mph

Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: YES

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Appendix E

Maximum Left-Turn Queue Length Calculations

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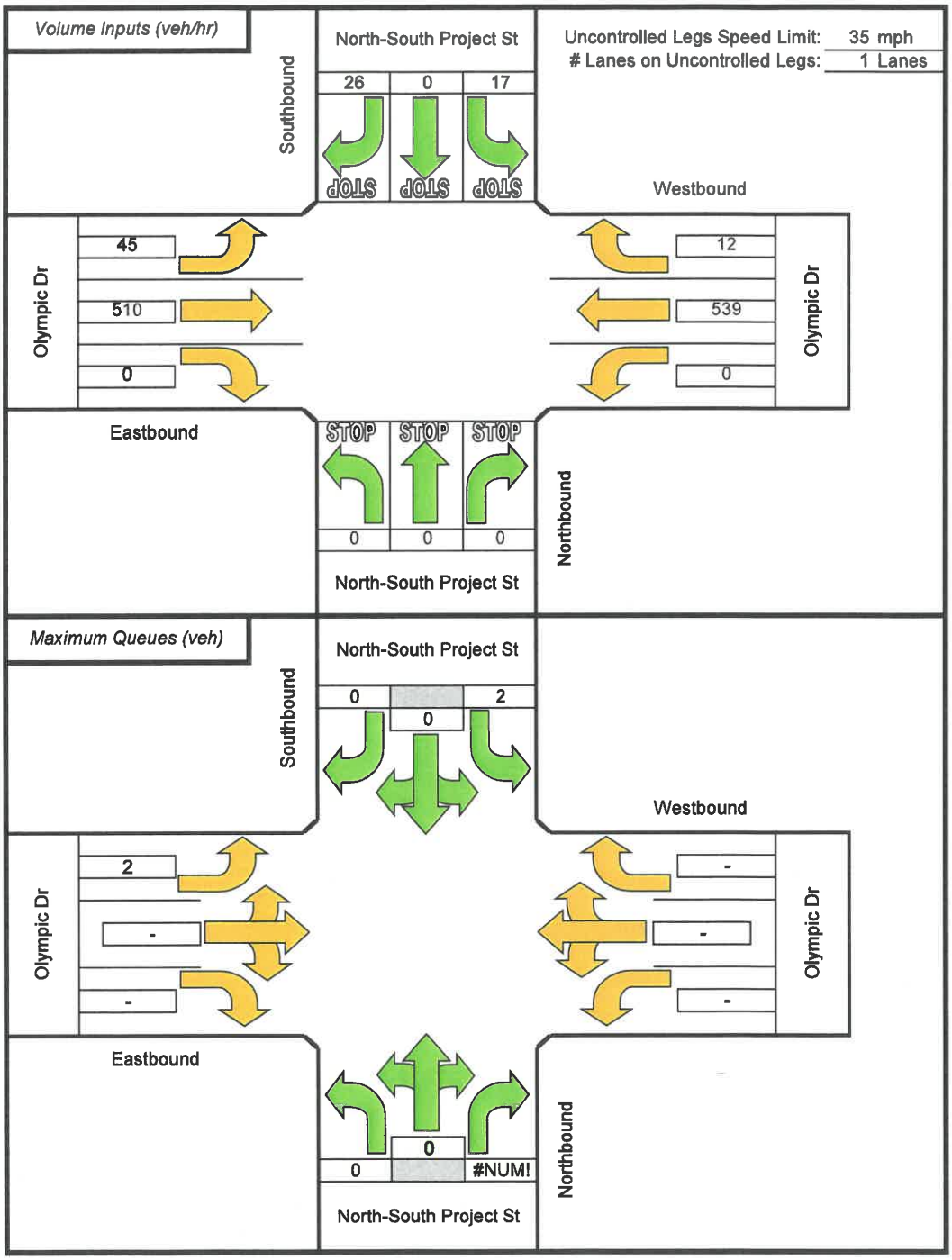
Maximum Queue Length
Two-Way Stop-Controlled Intersections

Through Street: Olympic Dr
Side Street: North-South Project St

Scenario: F+P Weekday AM
Stop Controlled Legs: North/South

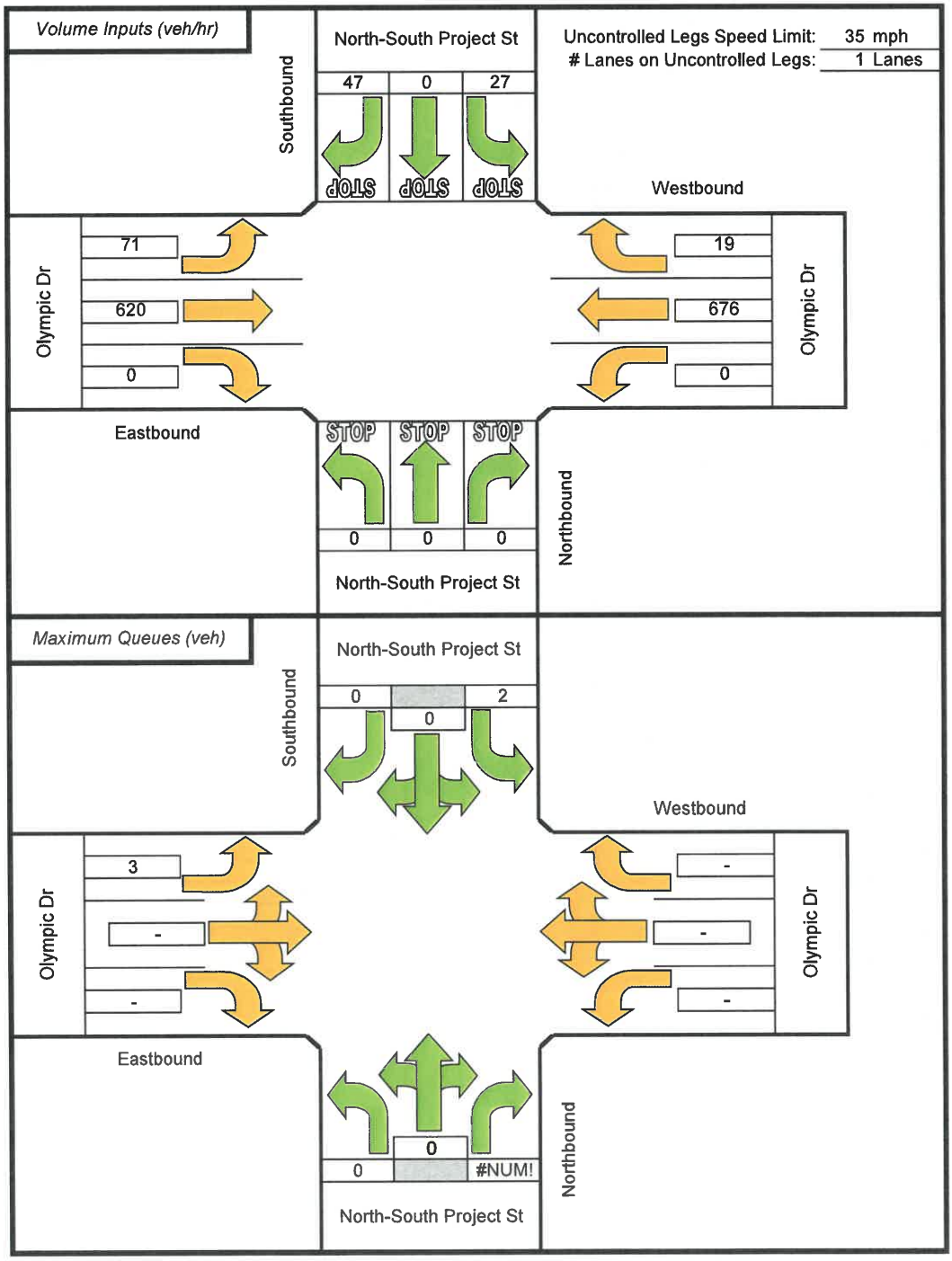


Source: John T. Gard, ITE Journal, November 2001, "Estimating Maximum Queue Length at Unsignalized Intersections"

Maximum Queue Length
Two-Way Stop-Controlled Intersections

Through Street: Olympic Dr
Side Street: North-South Project St

Scenario: F+P Weekday PM
Stop Controlled Legs: North/South

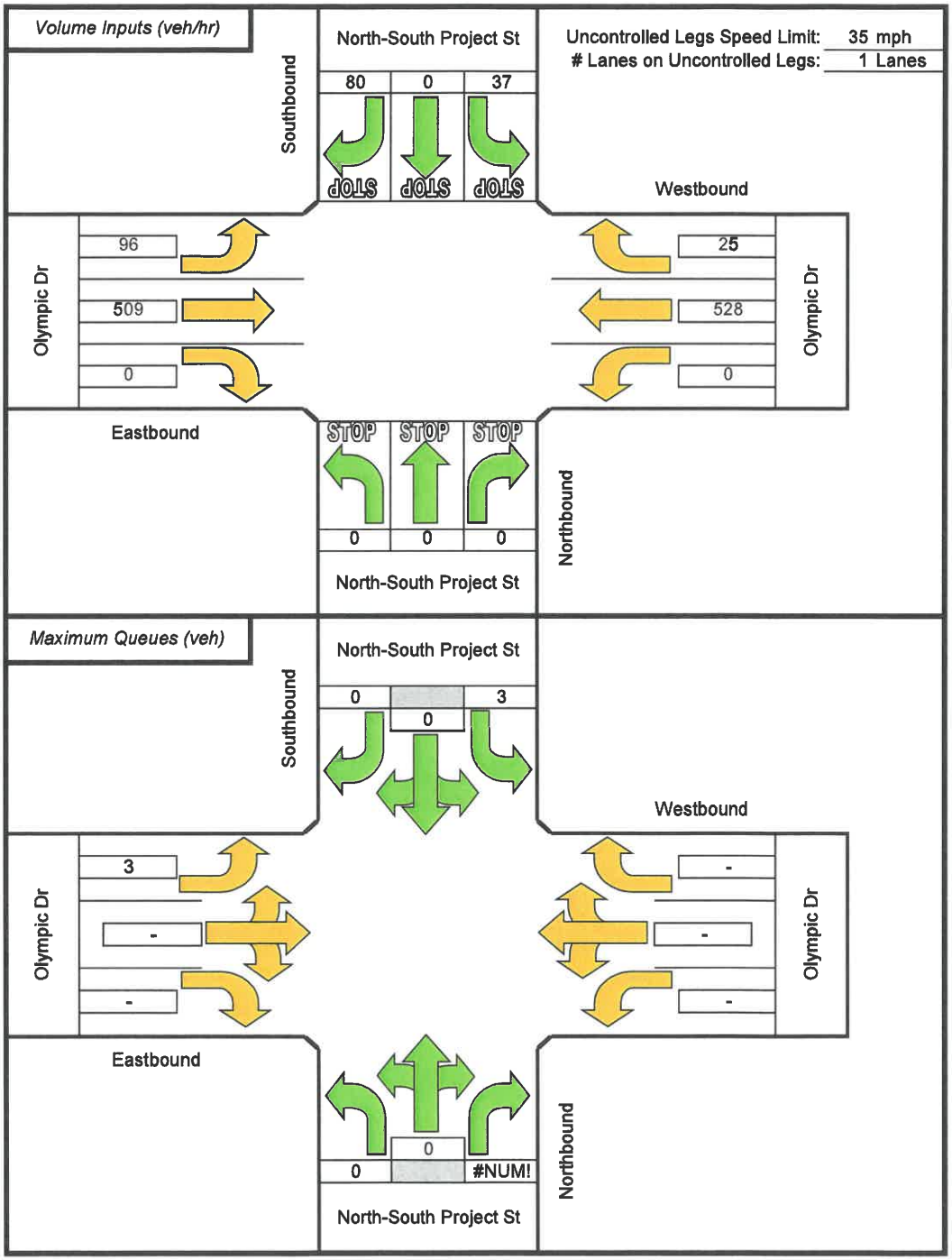


Source: John T. Gard, ITE Journal, November 2001, "Estimating Maximum Queue Length at Unsignalized Intersections"

Maximum Queue Length
Two-Way Stop-Controlled Intersections

Through Street: Olympic Dr
Side Street: North-South Project St

Scenario: F+P Weekend PM
Stop Controlled Legs: North/South



Source: John T. Gard, ITE Journal, November 2001, "Estimating Maximum Queue Length at Unsignalized Intersections"

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Appendix F

Intersection Level of Service and Queuing Calculations

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Intersection Level Of Service Report
Intersection 2: Burns Valley Rd/Bowers Ave-Rumsey Rd

Control Type:	Two-way stop	Delay (sec / veh):	13.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Base Volume Input [veh/h]	122	26	6	0	23	16	9	1	124	5	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	122	26	6	0	23	16	9	1	124	5	1	0
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	8	2	0	7	5	3	0	36	1	0	0
Total Analysis Volume [veh/h]	144	31	7	0	27	19	11	1	146	6	1	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.14	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.54	0.00	0.00	7.29	0.00	0.00	12.24	12.75	9.20	13.62	12.22	8.60
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.30	0.30	0.30	0.00	0.00	0.00	0.58	0.58	0.58	0.05	0.05	0.05
95th-Percentile Queue Length [ft/ln]	7.60	7.60	7.60	0.00	0.00	0.00	14.50	14.50	14.50	1.23	1.23	1.23
d_A, Approach Delay [s/veh]	5.96			0.00			9.43			13.42		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	6.79											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 5: Olympic Dr/Lakeshore Dr

Control Type:	Two-way stop	Delay (sec / veh):	16.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.147

Intersection Setup

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

Volumes

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Base Volume Input [veh/h]	1	137	66	61	279	2	0	0	1	47	1	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	137	66	61	279	2	0	0	1	47	1	60
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	40	19	18	81	1	0	0	0	14	0	17
Total Analysis Volume [veh/h]	1	159	77	71	324	2	0	0	1	55	1	70
Pedestrian Volume [ped/h]	0			0			0			1		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.08
d_M, Delay for Movement [s/veh]	7.92	0.00	0.00	7.86	0.00	0.00	16.76	15.71	10.03	16.29	15.05	9.44
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.17	0.17	0.17	0.00	0.00	0.00	0.51	0.27	0.27
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	4.23	4.23	4.23	0.10	0.10	0.10	12.78	6.67	6.67
d_A, Approach Delay [s/veh]	0.03			1.41			10.03			12.47		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	2.82											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 7: Olympic Dr/Burns Valley Rd-Old Hwy 53

Control Type:	Signalized	Delay (sec / veh):	11.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.655

Intersection Setup

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	50.00	100.00	100.00	40.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Base Volume Input [veh/h]	42	62	45	75	70	15	26	131	51	48	150	99
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	19	0	0	3	0	0	5	0	0	20
Total Hourly Volume [veh/h]	42	62	26	75	70	12	26	131	46	48	150	79
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	17	7	21	20	3	7	37	13	13	42	22
Total Analysis Volume [veh/h]	47	70	29	84	79	13	29	147	52	54	169	89
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			1			1		
v_di, Inbound Pedestrian Volume crossing major street	1			1			0			1		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	109
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	6	0	4	6	0	4	6	0	4	6	0
Maximum Green [s]	20	25	0	20	25	0	20	30	0	20	20	0
Amber [s]	3.0	3.3	0.0	3.0	3.3	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Split [s]	23	29	0	23	29	0	23	34	0	23	34	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	9	0	0	14	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
l2, Clearance Lost Time [s]	1.0	1.6	0.0	1.0	1.6	0.0	1.0	1.9	0.0	1.0	1.9	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C
C, Cycle Length [s]	24	24	24	24	24	24	24	24	24
L, Total Lost Time per Cycle [s]	3.00	3.60	3.60	3.00	3.60	3.00	3.90	3.00	3.90
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.60	1.60	1.00	1.60	1.00	1.90	1.00	1.90
g_i, Effective Green Time [s]	1	3	3	2	4	1	5	1	5
g / C, Green / Cycle	0.05	0.13	0.13	0.07	0.16	0.03	0.19	0.05	0.21
(v / s)_i Volume / Saturation Flow Rate	0.03	0.04	0.02	0.05	0.06	0.02	0.12	0.03	0.16
s, saturation flow rate [veh/h]	1603	1683	1419	1603	1641	1603	1608	1603	1573
c, Capacity [veh/h]	76	218	184	119	257	50	306	85	334
d1, Uniform Delay [s]	11.42	9.65	9.44	11.04	9.20	11.67	9.13	11.33	9.06
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.08	0.31	0.15	2.82	0.31	3.94	0.87	2.94	1.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.62	0.32	0.16	0.70	0.36	0.58	0.65	0.64	0.77
d, Delay for Lane Group [s/veh]	14.50	9.97	9.59	13.85	9.51	15.61	10.00	14.27	10.51
Lane Group LOS	B	A	A	B	A	B	A	B	B
Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.24	0.24	0.10	0.39	0.29	0.16	0.61	0.25	0.81
50th-Percentile Queue Length [ft/ln]	5.89	5.91	2.39	9.75	7.37	3.88	15.15	6.29	20.31
95th-Percentile Queue Length [veh/ln]	0.42	0.43	0.17	0.70	0.53	0.28	1.09	0.45	1.46
95th-Percentile Queue Length [ft/ln]	10.60	10.65	4.31	17.55	13.27	6.99	27.27	11.32	36.57

Movement, Approach, & Intersection Results

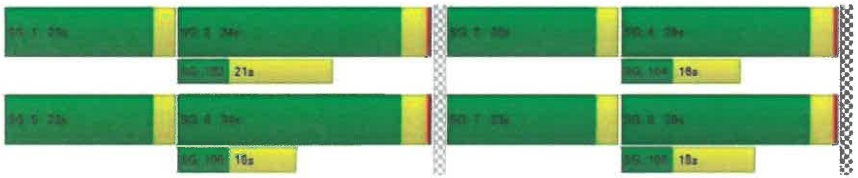
d_M, Delay for Movement [s/veh]	14.50	9.97	9.59	13.85	9.51	9.51	15.61	10.00	10.00	14.27	10.51	10.51
Movement LOS	B	A	A	B	A	A	B	A	A	B	B	B
d_A, Approach Delay [s/veh]	11.35			11.58			10.71			11.16		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.16											
Intersection LOS	B											
Intersection V/C	0.655											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	3.60	3.60	3.60	3.60
I_p,int, Pedestrian LOS Score for Intersection	2.153	1.979	2.032	2.109
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2098	2098	2487	2487
d_b, Bicycle Delay [s]	0.03	0.03	0.72	0.72
I_b,int, Bicycle LOS Score for Intersection	1.832	1.855	1.944	2.107
Bicycle LOS	A	A	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Burns Valley Rd/Bowers Ave-Rumsey Rd

Control Type:	Two-way stop	Delay (sec / veh):	12.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.031

Intersection Setup

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Base Volume Input [veh/h]	100	38	9	2	43	7	7	1	75	13	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	38	9	2	43	7	7	1	75	13	0	0
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	11	3	1	13	2	2	0	22	4	0	0
Total Analysis Volume [veh/h]	118	45	11	2	51	8	8	1	88	15	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.09	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	7.52	0.00	0.00	7.33	0.00	0.00	11.74	12.26	9.00	12.63	12.05	8.77
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.25	0.25	0.25	0.00	0.00	0.00	0.34	0.34	0.34	0.10	0.10	0.10
95th-Percentile Queue Length [ft/ln]	6.19	6.19	6.19	0.10	0.10	0.10	8.57	8.57	8.57	2.38	2.38	2.38
d_A, Approach Delay [s/veh]	5.10			0.24			9.25			12.63		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	5.73											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 5: Olympic Dr/Lakeshore Dr

Control Type:	Two-way stop	Delay (sec / veh):	16.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.273

Intersection Setup

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

Volumes

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Base Volume Input [veh/h]	1	198	114	66	180	1	0	2	2	106	3	141
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	198	114	66	180	1	0	2	2	106	3	141
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	53	31	18	48	0	0	1	1	28	1	38
Total Analysis Volume [veh/h]	1	213	123	71	194	1	0	2	2	114	3	152
Pedestrian Volume [ped/h]	0			0			0			1		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.01	0.00	0.27	0.01	0.18
d_M, Delay for Movement [s/veh]	7.61	0.00	0.00	8.13	0.00	0.00	15.07	15.34	9.31	16.84	14.80	10.41
Movement LOS	A	A	A	A	A	A	C	C	A	C	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.18	0.18	0.18	0.02	0.02	0.02	1.10	0.70	0.70
95th-Percentile Queue Length [ft/ln]	0.05	0.05	0.00	4.62	4.62	4.62	0.51	0.61	0.61	27.41	17.61	17.61
d_A, Approach Delay [s/veh]	0.02			2.17			12.32			13.19		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	4.77											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 7: Olympic Dr/Burns Valley Rd-Old Hwy 53

Control Type:	Signalized	Delay (sec / veh):	13.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.759

Intersection Setup

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	56.00	100.00	100.00	48.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Base Volume Input [veh/h]	98	113	56	112	97	46	21	184	93	62	221	139
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	18	0	0	11	0	0	14	0	0	25
Total Hourly Volume [veh/h]	98	113	38	112	97	35	21	184	79	62	221	114
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	31	10	30	26	10	6	50	21	17	60	31
Total Analysis Volume [veh/h]	107	123	41	122	105	38	23	200	86	67	240	124
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			1			1		
v_di, Inbound Pedestrian Volume crossing major street	1			1			0			1		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	109
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	6	0	4	6	0	4	6	0	4	6	0
Maximum Green [s]	20	25	0	20	25	0	20	30	0	20	20	0
Amber [s]	3.0	3.3	0.0	3.0	3.3	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Split [s]	23	29	0	23	29	0	23	34	0	23	34	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	9	0	0	14	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
l2, Clearance Lost Time [s]	1.0	1.6	0.0	1.0	1.6	0.0	1.0	1.9	0.0	1.0	1.9	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C
C, Cycle Length [s]	30	30	30	30	30	30	30	30	30
L, Total Lost Time per Cycle [s]	3.00	3.60	3.60	3.00	3.60	3.00	3.90	3.00	3.90
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.60	1.60	1.00	1.60	1.00	1.90	1.00	1.90
g_i, Effective Green Time [s]	2	5	5	3	5	1	7	2	8
g / C, Green / Cycle	0.08	0.16	0.16	0.09	0.17	0.02	0.24	0.06	0.27
(v / s)_i Volume / Saturation Flow Rate	0.07	0.07	0.03	0.08	0.09	0.01	0.18	0.04	0.23
s, saturation flow rate [veh/h]	1603	1683	1421	1603	1606	1603	1597	1603	1575
c, Capacity [veh/h]	129	261	221	149	269	38	386	94	435
d1, Uniform Delay [s]	13.52	11.50	10.97	13.30	11.37	14.44	10.46	13.82	10.18
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.00	0.49	0.15	4.18	0.61	5.45	1.06	3.77	1.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.47	0.19	0.82	0.53	0.60	0.74	0.72	0.84
d, Delay for Lane Group [s/veh]	18.53	11.99	11.12	17.49	11.97	19.89	11.52	17.59	11.85
Lane Group LOS	B	B	B	B	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.72	0.58	0.18	0.78	0.67	0.17	1.21	0.42	1.56
50th-Percentile Queue Length [ft/ln]	17.99	14.45	4.54	19.54	16.80	4.34	30.33	10.60	39.05
95th-Percentile Queue Length [veh/ln]	1.30	1.04	0.33	1.41	1.21	0.31	2.18	0.76	2.81
95th-Percentile Queue Length [ft/ln]	32.38	26.02	8.18	35.17	30.24	7.81	54.60	19.08	70.29

Movement, Approach, & Intersection Results

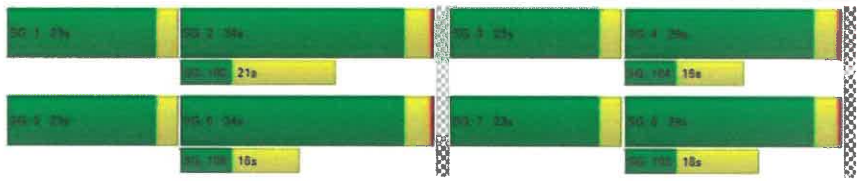
d_M, Delay for Movement [s/veh]	18.53	11.99	11.12	17.49	11.97	11.97	19.89	11.52	11.52	17.59	11.85	11.85
Movement LOS	B	B	B	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	14.44			14.51			12.14			12.74		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	13.33											
Intersection LOS	B											
Intersection V/C	0.759											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	5.89	5.89	5.89	5.89
l_p,int, Pedestrian LOS Score for Intersection	2.222	2.070	2.161	2.222
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1710	1710	2026	2026
d_b, Bicycle Delay [s]	0.31	0.31	0.00	0.00
l_b,int, Bicycle LOS Score for Intersection	2.036	2.015	2.093	2.312
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Burns Valley Rd/Bowers Ave-Rumsey Rd

Control Type:	Two-way stop	Delay (sec / veh):	11.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Base Volume Input [veh/h]	84	36	1	0	31	9	10	0	83	2	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	84	36	1	0	31	9	10	0	83	2	1	0
Peak Hour Factor	0.8500	0.9600	0.9600	0.9600	0.9600	0.8500	0.8500	0.8500	0.8500	0.9600	0.8500	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	9	0	0	8	3	3	0	24	1	0	0
Total Analysis Volume [veh/h]	99	38	1	0	32	11	12	0	98	2	1	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.09	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.45	0.00	0.00	7.28	0.00	0.00	11.07	11.58	8.95	11.68	11.16	8.52
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.20	0.20	0.20	0.00	0.00	0.00	0.38	0.38	0.38	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	5.06	5.06	5.06	0.00	0.00	0.00	9.56	9.56	9.56	0.41	0.41	0.41
d_A, Approach Delay [s/veh]	5.35			0.00			9.18			11.50		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	6.06											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 5: Olympic Dr/Lakeshore Dr

Control Type:	Two-way stop	Delay (sec / veh):	16.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.262

Intersection Setup

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

Volumes

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Base Volume Input [veh/h]	1	176	103	73	185	0	0	3	3	97	1	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	176	103	73	185	0	0	3	3	97	1	75
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	48	28	20	51	0	0	1	1	27	0	21
Total Analysis Volume [veh/h]	1	193	113	80	203	0	0	3	3	107	1	82
Pedestrian Volume [ped/h]	0			0			0			1		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.01	0.00	0.26	0.00	0.10
d_M, Delay for Movement [s/veh]	7.63	0.00	0.00	8.07	0.00	0.00	15.29	15.40	9.39	16.90	14.36	9.73
Movement LOS	A	A	A	A	A	A	C	C	A	C	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.20	0.20	0.20	0.04	0.04	0.04	1.04	0.33	0.33
95th-Percentile Queue Length [ft/ln]	0.05	0.05	0.00	5.11	5.11	5.11	0.92	0.92	0.92	25.89	8.24	8.24
d_A, Approach Delay [s/veh]	0.02			2.28			12.39			13.79		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	4.26											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 7: Olympic Dr/Burns Valley Rd-Old Hwy 53

Control Type:	Signalized	Delay (sec / veh):	11.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.682

Intersection Setup

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	50.00	100.00	100.00	48.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Base Volume Input [veh/h]	80	81	42	93	64	30	20	180	95	33	170	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	15	0	0	12	0	0	25	0	0	29
Total Hourly Volume [veh/h]	80	81	27	93	64	18	20	180	70	33	170	80
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	22	7	25	17	5	5	48	19	9	46	22
Total Analysis Volume [veh/h]	86	87	29	100	69	19	22	194	75	35	183	86
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			1			1		
v_di, Inbound Pedestrian Volume crossing major street	1			1			0			1		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	109
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	6	0	4	6	0	4	6	0	4	6	0
Maximum Green [s]	20	25	0	20	25	0	20	30	0	20	20	0
Amber [s]	3.0	3.3	0.0	3.0	3.3	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Split [s]	23	29	0	23	29	0	23	34	0	23	34	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	9	0	0	14	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest in Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.6	0.0	1.0	1.6	0.0	1.0	1.9	0.0	1.0	1.9	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C
C, Cycle Length [s]	25	25	25	25	25	25	25	25	25
L, Total Lost Time per Cycle [s]	3.00	3.60	3.60	3.00	3.60	3.00	3.90	3.00	3.90
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.60	1.60	1.00	1.60	1.00	1.90	1.00	1.90
g_i, Effective Green Time [s]	2	4	4	2	4	1	5	1	6
g / C, Green / Cycle	0.07	0.14	0.14	0.08	0.15	0.02	0.21	0.04	0.22
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.02	0.06	0.05	0.01	0.17	0.02	0.17
s, saturation flow rate [veh/h]	1603	1683	1420	1603	1620	1603	1603	1603	1581
c, Capacity [veh/h]	118	235	198	132	240	38	338	57	353
d1, Uniform Delay [s]	11.52	9.92	9.60	11.42	9.76	12.28	9.50	12.07	9.24
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.14	0.36	0.12	3.35	0.35	5.10	1.62	3.82	1.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	0.37	0.15	0.76	0.37	0.58	0.79	0.61	0.76
d, Delay for Lane Group [s/veh]	14.66	10.28	9.72	14.77	10.10	17.38	11.12	15.90	10.53
Lane Group LOS	B	B	A	B	B	B	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.43	0.31	0.10	0.50	0.31	0.14	0.94	0.19	0.89
50th-Percentile Queue Length [ft/ln]	10.79	7.82	2.50	12.54	7.78	3.43	23.46	4.79	22.19
95th-Percentile Queue Length [veh/ln]	0.78	0.56	0.18	0.90	0.56	0.25	1.69	0.34	1.60
95th-Percentile Queue Length [ft/ln]	19.42	14.07	4.51	22.57	14.00	6.17	42.24	8.62	39.94

Movement, Approach, & Intersection Results

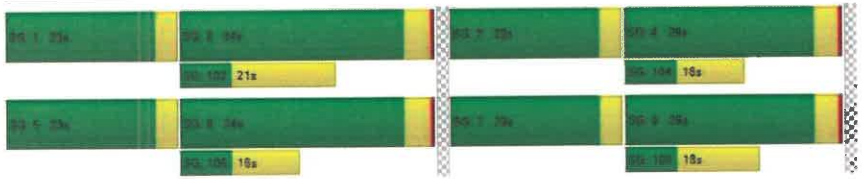
d_M, Delay for Movement [s/veh]	14.66	10.28	9.72	14.77	10.10	10.10	17.38	11.12	11.12	15.90	10.53	10.53
Movement LOS	B	B	A	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	12.06			12.59			11.60			11.15		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.74											
Intersection LOS	B											
Intersection V/C	0.682											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	4.01	4.01	4.01	4.01
l_p,int, Pedestrian LOS Score for Intersection	2.168	2.008	2.122	2.149
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2013	2013	2386	2386
d_b, Bicycle Delay [s]	0.00	0.00	0.47	0.47
l_b,int, Bicycle LOS Score for Intersection	1.918	1.890	2.081	2.109
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Burns Valley Rd/Bowers Ave-Rumsey Rd

Control Type:	Two-way stop	Delay (sec / veh):	13.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

Intersection Setup

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Base Volume Input [veh/h]	122	26	6	0	23	16	9	1	124	5	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	1	0	0	1	0	0	0	6	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	127	27	6	0	24	16	9	1	130	5	1	0
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	8	2	0	7	5	3	0	38	1	0	0
Total Analysis Volume [veh/h]	149	32	7	0	28	19	11	1	153	6	1	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.15	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.55	0.00	0.00	7.29	0.00	0.00	12.42	12.93	9.24	13.92	12.37	8.52
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.32	0.32	0.32	0.00	0.00	0.00	0.61	0.61	0.61	0.05	0.05	0.05
95th-Percentile Queue Length [ft/ln]	7.90	7.90	7.90	0.00	0.00	0.00	15.29	15.29	15.29	1.27	1.27	1.27
d_A, Approach Delay [s/veh]	5.98			0.00			9.47			13.70		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	6.84											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 5: Olympic Dr/Lakeshore Dr

Control Type:	Two-way stop	Delay (sec / veh):	17.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.174

Intersection Setup

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

Volumes

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Base Volume Input [veh/h]	1	137	66	61	279	2	0	0	1	47	1	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	20	17	0	0	0	0	0	5	0	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	138	86	78	279	2	0	0	1	52	1	69
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	40	25	23	81	1	0	0	0	15	0	20
Total Analysis Volume [veh/h]	1	160	100	91	324	2	0	0	1	60	1	80
Pedestrian Volume [ped/h]	0			0			0			1		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.09
d_M, Delay for Movement [s/veh]	7.92	0.00	0.00	7.97	0.00	0.00	18.17	16.92	10.03	17.61	15.87	9.50
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.23	0.23	0.23	0.00	0.00	0.00	0.62	0.31	0.31
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	5.63	5.63	5.63	0.00	0.00	0.00	15.51	7.71	7.71
d_A, Approach Delay [s/veh]	0.03			1.74			10.03			13.00		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	3.14											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 7: Olympic Dr/Burns Valley Rd-Old Hwy 53

Control Type:	Signalized	Delay (sec / veh):	11.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.677

Intersection Setup

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	50.00	100.00	100.00	48.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Base Volume Input [veh/h]	42	62	45	75	70	15	26	131	51	48	150	99
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	5	18	0	3	4	1	11	10	16	41	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	19	0	0	3	0	0	5	0	0	20
Total Hourly Volume [veh/h]	57	67	44	75	73	16	27	142	56	64	191	79
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	19	12	21	21	4	8	40	16	18	54	22
Total Analysis Volume [veh/h]	64	75	49	84	82	18	30	160	63	72	215	89
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			1			1		
v_di, Inbound Pedestrian Volume crossing major street	1			1			0			1		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	109
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	6	0	4	6	0	4	6	0	4	6	0
Maximum Green [s]	20	25	0	20	25	0	20	30	0	20	20	0
Amber [s]	3.0	3.3	0.0	3.0	3.3	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Split [s]	23	29	0	23	29	0	23	34	0	23	34	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	9	0	0	14	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.6	0.0	1.0	1.6	0.0	1.0	1.9	0.0	1.0	1.9	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C
C, Cycle Length [s]	26	26	26	26	26	26	26	26	26
L, Total Lost Time per Cycle [s]	3.00	3.60	3.60	3.00	3.60	3.00	3.90	3.00	3.90
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.60	1.60	1.00	1.60	1.00	1.90	1.00	1.90
g_i, Effective Green Time [s]	2	4	4	2	4	1	5	2	6
g / C, Green / Cycle	0.06	0.14	0.14	0.07	0.16	0.03	0.20	0.06	0.23
(v / s)_i Volume / Saturation Flow Rate	0.04	0.04	0.03	0.05	0.06	0.02	0.14	0.04	0.19
s, saturation flow rate [veh/h]	1603	1683	1421	1603	1630	1603	1602	1603	1589
c, Capacity [veh/h]	94	242	204	115	256	50	324	103	374
d1, Uniform Delay [s]	12.04	10.01	9.90	11.86	9.88	12.48	9.64	11.96	9.42
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.18	0.27	0.22	3.25	0.36	4.24	0.97	3.17	1.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.31	0.24	0.73	0.39	0.60	0.69	0.70	0.81
d, Delay for Lane Group [s/veh]	15.21	10.28	10.13	15.11	10.24	16.72	10.61	15.13	11.05
Lane Group LOS	B	B	B	B	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.34	0.28	0.18	0.44	0.37	0.18	0.77	0.36	1.07
50th-Percentile Queue Length [ft/ln]	8.57	6.90	4.48	11.03	9.14	4.43	19.29	9.11	26.83
95th-Percentile Queue Length [veh/ln]	0.62	0.50	0.32	0.79	0.66	0.32	1.39	0.66	1.93
95th-Percentile Queue Length [ft/ln]	15.43	12.41	8.07	19.85	16.45	7.97	34.73	16.39	48.30

Movement, Approach, & Intersection Results

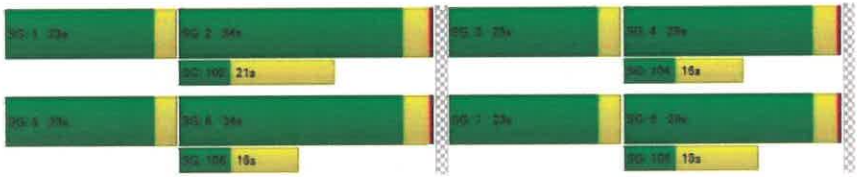
d_M, Delay for Movement [s/veh]	15.21	10.28	10.13	15.11	10.24	10.24	16.72	10.61	10.61	15.13	11.05	11.05
Movement LOS	B	B	B	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	11.92			12.46			11.33			11.83		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.84											
Intersection LOS	B											
Intersection V/C	0.677											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	4.29	4.29	4.29	4.29
l_p,int, Pedestrian LOS Score for Intersection	2.178	1.991	2.075	2.153
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1960	1960	2323	2323
d_b, Bicycle Delay [s]	0.01	0.01	0.34	0.34
l_b,int, Bicycle LOS Score for Intersection	1.901	1.868	1.985	2.213
Bicycle LOS	A	A	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Burns Valley Rd/Bowers Ave-Rumsey Rd

Control Type:	Two-way stop	Delay (sec / veh):	13.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.033

Intersection Setup

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Base Volume Input [veh/h]	100	38	9	2	43	7	7	1	75	13	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	11	1	0	0	1	0	0	0	11	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	111	39	9	2	44	7	7	1	86	13	0	0
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	11	3	1	13	2	2	0	25	4	0	0
Total Analysis Volume [veh/h]	131	46	11	2	52	8	8	1	101	15	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.10	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	7.55	0.00	0.00	7.33	0.00	0.00	12.12	12.65	9.07	13.23	12.49	8.81
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.28	0.28	0.28	0.00	0.00	0.00	0.39	0.39	0.39	0.10	0.10	0.10
95th-Percentile Queue Length [ft/ln]	6.94	6.94	6.94	0.10	0.10	0.10	9.87	9.87	9.87	2.57	2.57	2.57
d_A, Approach Delay [s/veh]	5.26			0.24			9.32			13.23		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	5.94											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 5: Olympic Dr/Lakeshore Dr

Control Type:	Two-way stop	Delay (sec / veh):	18.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.334

Intersection Setup

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

Volumes

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Base Volume Input [veh/h]	1	198	114	66	180	1	0	2	2	106	3	141
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	24	22	2	0	0	0	0	30	0	27
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	199	138	88	182	1	0	2	2	136	3	168
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	50	35	22	46	0	0	1	1	34	1	42
Total Analysis Volume [veh/h]	1	199	138	88	182	1	0	2	2	136	3	168
Pedestrian Volume [ped/h]	0			0			0			1		

Generated with PTV VISTRO
Version 2021 (SP 0-6)
Burns Valley Development
4/22/2022

Intersection Settings

Priority Scheme	Free		Free		Stop		Stop	
Flared Lane					No		No	
Storage Area [veh]	0		0		0		0	
Two-Stage Gap Acceptance					No		No	
Number of Storage Spaces in Median	0		0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.01	0.00	0.33	0.01	0.20
d_M, Delay for Movement [s/veh]	7.59	0.00	0.00	8.18	0.00	0.00	18.89	15.83	9.25	18.22	15.12	10.42
Movement LOS	A	A	A	A	A	A	C	C	A	C	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.23	0.23	0.23	0.03	0.03	0.03	1.44	0.78	0.78
95th-Percentile Queue Length [ft/ln]	0.05	0.05	0.00	5.82	5.82	5.82	0.83	0.63	0.63	36.10	19.45	19.45
d_A, Approach Delay [s/veh]	0.02			2.66			12.54			13.92		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	5.49											
Intersection LOS	C											

Weekday PM Baseline
W-Trans

Intersection Level Of Service Report
Intersection 7: Olympic Dr/Burns Valley Rd-Old Hwy 53

Control Type:	Signalized	Delay (sec / veh):	14.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.815

Intersection Setup

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	50.00	100.00	100.00	40.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Base Volume Input [veh/h]	98	113	56	112	97	46	21	184	93	62	221	139
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	28	4	40	0	6	6	8	51	38	45	36	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	19	0	0	3	0	0	5	0	0	20
Total Hourly Volume [veh/h]	126	117	77	112	103	49	29	235	126	107	257	119
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	29	19	28	26	12	7	59	32	27	64	30
Total Analysis Volume [veh/h]	126	117	77	112	103	49	29	235	126	107	257	119
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			1			1		
v_di, Inbound Pedestrian Volume crossing major street	1			1			0			1		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	109
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	6	0	4	6	0	4	6	0	4	6	0
Maximum Green [s]	20	25	0	20	25	0	20	30	0	20	20	0
Amber [s]	3.0	3.3	0.0	3.0	3.3	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Split [s]	23	29	0	23	29	0	23	34	0	23	34	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	9	0	0	14	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.6	0.0	1.0	1.6	0.0	1.0	1.9	0.0	1.0	1.9	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

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Version 2021 (SP 0-6)
Burns Valley Development
4/22/2022

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C
C, Cycle Length [s]	33	33	33	33	33	33	33	33	33
L, Total Lost Time per Cycle [s]	3.00	3.60	3.60	3.00	3.60	3.00	3.90	3.00	3.90
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.60	1.60	1.00	1.60	1.00	1.90	1.00	1.90
g_i, Effective Green Time [s]	3	5	5	3	5	1	9	3	11
g / C, Green / Cycle	0.10	0.16	0.16	0.08	0.14	0.03	0.27	0.08	0.32
(v / s)_i Volume / Saturation Flow Rate	0.08	0.07	0.05	0.07	0.10	0.02	0.23	0.07	0.24
s, saturation flow rate [veh/h]	1603	1683	1421	1603	1590	1603	1584	1603	1582
c, Capacity [veh/h]	154	262	221	136	229	46	429	129	511
d1, Uniform Delay [s]	14.66	12.67	12.46	14.90	13.39	15.89	11.38	14.98	9.95
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.99	0.44	0.35	4.72	1.23	5.14	1.73	5.05	0.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.45	0.35	0.83	0.66	0.63	0.84	0.83	0.74
d, Delay for Lane Group [s/veh]	18.65	13.11	12.81	19.62	14.62	21.02	13.12	20.04	10.73
Lane Group LOS	B	B	B	B	B	C	B	C	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.91	0.64	0.42	0.84	0.91	0.24	1.87	0.79	1.64
50th-Percentile Queue Length [ft/ln]	22.71	16.03	10.39	21.00	22.74	5.91	46.87	19.75	40.96
95th-Percentile Queue Length [veh/ln]	1.63	1.15	0.75	1.51	1.64	0.43	3.37	1.42	2.95
95th-Percentile Queue Length [ft/ln]	40.87	28.85	18.69	37.80	40.93	10.64	84.36	35.55	73.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.65	13.11	12.81	19.62	14.62	14.62	21.02	13.12	13.12	20.04	10.73	10.73
Movement LOS	B	B	B	B	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	15.22			16.74			13.71			12.79		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.29											
Intersection LOS	B											
Intersection V/C	0.815											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	7.31	7.31	7.31	7.31
l_p,int, Pedestrian LOS Score for Intersection	2.261	2.061	2.199	2.264
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1542	1542	1827	1827
d_b, Bicycle Delay [s]	0.86	0.86	0.12	0.12
l_b,int, Bicycle LOS Score for Intersection	2.119	2.000	2.211	2.390
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Burns Valley Rd/Bowers Ave-Rumsey Rd

Control Type:	Two-way stop	Delay (sec / veh):	12.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Base Volume Input [veh/h]	84	36	1	0	31	9	10	0	83	2	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	1	0	0	1	0	0	0	15	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	98	37	1	0	32	9	10	0	98	2	1	0
Peak Hour Factor	0.8500	0.9600	0.9600	0.9600	0.9600	0.8500	0.8500	0.8500	0.8500	0.9600	0.8500	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	10	0	0	8	3	3	0	29	1	0	0
Total Analysis Volume [veh/h]	115	39	1	0	33	11	12	0	115	2	1	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.00	0.00	0.02	0.00	0.02	0.00	0.11	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.48	0.00	0.00	7.29	0.00	0.00	11.50	11.99	9.04	12.32	11.51	8.53
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.24	0.24	0.24	0.00	0.00	0.00	0.45	0.45	0.45	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	5.94	5.94	5.94	0.00	0.00	0.00	11.27	11.27	11.27	0.44	0.44	0.44
d_A, Approach Delay [s/veh]	5.55			0.00			9.28			12.05		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	6.31											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 5: Olympic Dr/Lakeshore Dr

Control Type:	Two-way stop	Delay (sec / veh):	21.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.390

Intersection Setup

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

Volumes

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Base Volume Input [veh/h]	1	176	103	73	185	0	0	3	3	97	1	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	24	30	0	0	0	0	0	30	0	32
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	176	127	103	185	0	0	3	3	127	1	107
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	48	35	28	51	0	0	1	1	35	0	29
Total Analysis Volume [veh/h]	1	193	140	113	203	0	0	3	3	140	1	118
Pedestrian Volume [ped/h]	0			0			0			1		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.07	0.00	0.09	0.00	0.00	0.00	0.01	0.00	0.39	0.00	0.14
d_M, Delay for Movement [s/veh]	7.63	0.00	0.00	8.24	0.00	0.00	19.10	17.19	9.41	21.27	15.74	9.96
Movement LOS	A	A	A	A	A	A	C	C	A	C	C	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.30	0.30	0.30	0.04	0.04	0.04	1.80	0.49	0.49
95th-Percentile Queue Length [ft/ln]	0.05	0.05	0.00	7.61	7.61	7.61	1.04	1.04	1.04	44.93	12.36	12.36
d_A, Approach Delay [s/veh]	0.02			2.95			13.30			16.10		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	5.67											
Intersection LOS	C											

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Version 2021 (SP 0-6)

Intersection Level Of Service Report
Intersection 7: Olympic Dr/Burns Valley Rd-Old Hwy 53

Control Type:	Signalized	Delay (sec / veh):	14.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.799

Intersection Setup

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	56.00	100.00	100.00	48.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Base Volume Input [veh/h]	80	81	42	93	64	30	20	180	95	33	170	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	33	7	56	0	10	6	8	51	46	68	36	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	19	0	0	3	0	0	5	0	0	20
Total Hourly Volume [veh/h]	113	88	79	93	74	33	28	231	136	101	206	89
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	24	21	25	20	9	8	62	37	27	55	24
Total Analysis Volume [veh/h]	122	95	85	100	80	35	30	248	146	109	222	96
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			1			1		
v_di, Inbound Pedestrian Volume crossing major street	1			1			0			1		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	109
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	6	0	4	6	0	4	6	0	4	6	0
Maximum Green [s]	20	25	0	20	25	0	20	30	0	20	20	0
Amber [s]	3.0	3.3	0.0	3.0	3.3	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Split [s]	23	29	0	23	29	0	23	34	0	23	34	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	9	0	0	14	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
l2, Clearance Lost Time [s]	1.0	1.6	0.0	1.0	1.6	0.0	1.0	1.9	0.0	1.0	1.9	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C
C, Cycle Length [s]	34	34	34	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	3.00	3.60	3.60	3.00	3.60	3.00	3.90	3.00	3.90
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.60	1.60	1.00	1.60	1.00	1.90	1.00	1.90
g_i, Effective Green Time [s]	3	5	5	2	4	1	10	3	12
g / C, Green / Cycle	0.09	0.15	0.15	0.07	0.13	0.03	0.29	0.08	0.34
(v / s)_i Volume / Saturation Flow Rate	0.08	0.06	0.06	0.06	0.07	0.02	0.25	0.07	0.20
s, saturation flow rate [veh/h]	1603	1683	1421	1603	1595	1603	1579	1603	1586
c, Capacity [veh/h]	149	252	213	120	210	47	461	132	547
d1, Uniform Delay [s]	15.00	12.90	12.94	15.37	13.68	16.16	11.24	15.22	9.03
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.18	0.35	0.45	5.61	0.83	5.12	1.77	4.92	0.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.38	0.40	0.83	0.55	0.63	0.85	0.83	0.58
d, Delay for Lane Group [s/veh]	19.18	13.25	13.39	20.98	14.51	21.29	13.01	20.14	9.40
Lane Group LOS	B	B	B	C	B	C	B	C	A
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.91	0.53	0.48	0.80	0.69	0.25	2.06	0.82	1.25
50th-Percentile Queue Length [ft/ln]	22.73	13.29	12.05	19.98	17.34	6.22	51.52	20.43	31.25
95th-Percentile Queue Length [veh/ln]	1.64	0.96	0.87	1.44	1.25	0.45	3.71	1.47	2.25
95th-Percentile Queue Length [ft/ln]	40.91	23.93	21.69	35.97	31.22	11.20	92.73	36.78	56.24

Generated with PTV VISTRO Burns Valley Development 4/22/2022
Version 2021 (SP 0-6)

Movement, Approach, & Intersection Results

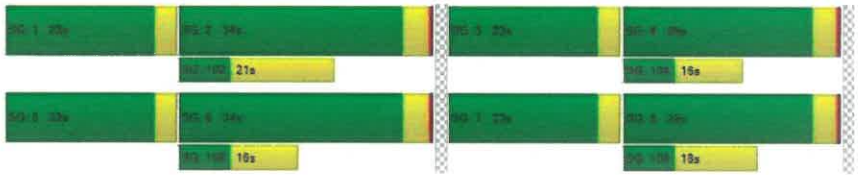
d_M, Delay for Movement [s/veh]	19.18	13.25	13.39	20.98	14.51	14.51	21.29	13.01	13.01	20.14	9.40	9.40
Movement LOS	B	B	B	C	B	B	C	B	B	C	A	A
d_A, Approach Delay [s/veh]	15.68			17.52			13.60			12.14		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.22											
Intersection LOS	B											
Intersection V/C	0.799											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	7.58	7.58	7.58	7.58
I_p,int, Pedestrian LOS Score for Intersection	2.258	2.032	2.193	2.248
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1514	1514	1794	1794
d_b, Bicycle Delay [s]	0.99	0.99	0.18	0.18
I_b,int, Bicycle LOS Score for Intersection	2.089	1.919	2.267	2.297
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Weekend PM Baseline

Intersection Level Of Service Report
Intersection 2: Burns Valley Rd/Bowers Ave-Rumsey Rd

Control Type:	Two-way stop	Delay (sec / veh):	19.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.034

Intersection Setup

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Base Volume Input [veh/h]	215	46	11	0	41	28	16	2	219	9	2	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	215	46	11	0	41	28	16	2	219	9	2	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	54	12	3	0	10	7	4	1	55	2	1	0
Total Analysis Volume [veh/h]	215	46	11	0	41	28	16	2	219	9	2	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.22	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	7.73	0.00	0.00	7.35	0.00	0.00	15.35	15.81	9.96	19.03	15.04	9.06
Movement LOS	A	A	A	A	A	A	C	C	A	C	C	A
95th-Percentile Queue Length [veh/ln]	0.49	0.49	0.49	0.00	0.00	0.00	1.05	1.05	1.05	0.12	0.12	0.12
95th-Percentile Queue Length [ft/ln]	12.21	12.21	12.21	0.00	0.00	0.00	26.22	26.22	26.22	3.04	3.04	3.04
d_A, Approach Delay [s/veh]	6.11			0.00			10.37			18.31		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	7.34											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 5: Olympic Dr/Lakeshore Dr

Control Type:	Roundabout	Delay (sec / veh):	5.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

Volumes

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Base Volume Input [veh/h]	5	230	85	90	435	0	0	0	5	80	5	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	230	85	90	435	0	0	0	5	80	5	70
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	58	21	23	109	0	0	0	1	20	1	18
Total Analysis Volume [veh/h]	5	230	85	90	435	0	0	0	5	80	5	70
Pedestrian Volume [ped/h]	0			0			0			1		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	92			92			617			240		
Exiting Flow Rate [veh/h]	530			306			10			179		
Demand Flow Rate [veh/h]	5	230	85	90	435	0	0	0	5	80	5	70
Adjusted Demand Flow Rate [veh/h]	5	230	85	90	435	0	0	0	5	80	5	70

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1380.00	1380.00	1420.00	1420.00
B (coefficient)	0.00091	0.00091	0.00102	0.00102	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	240	87	536	6	82	77
Capacity of Entry and Bypass Lanes [veh/h]	1307	1307	1257	736	1142	1142
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1281	1281	1233	721	1119	1119
X, volume / capacity	0.18	0.07	0.43	0.01	0.07	0.07

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.67	0.21	2.17	0.02	0.23	0.22
95th-Percentile Queue Length [ft]	16.77	5.32	54.36	0.52	5.77	5.38
Approach Delay [s/veh]	4.09		7.20	5.06	3.81	
Approach LOS	A		A	A	A	
Intersection Delay [s/veh]	5.68					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Olympic Dr/Burns Valley Rd-Old Hwy 53

Control Type:	Signalized	Delay (sec / veh):	14.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.757

Intersection Setup

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	56.00	100.00	100.00	48.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Base Volume Input [veh/h]	95	130	70	160	125	30	35	205	130	80	225	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	19	0	0	3	0	0	5	0	0	20
Total Hourly Volume [veh/h]	95	130	51	160	125	27	35	205	125	80	225	130
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	33	13	40	31	7	9	51	31	20	56	33
Total Analysis Volume [veh/h]	95	130	51	160	125	27	35	205	125	80	225	130
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			1			1		
v_di, Inbound Pedestrian Volume crossing major street	1			1			0			1		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	109
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	6	0	4	6	0	4	6	0	4	6	0
Maximum Green [s]	20	25	0	20	25	0	20	30	0	20	20	0
Amber [s]	3.0	3.3	0.0	3.0	3.3	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Split [s]	23	29	0	23	29	0	23	34	0	23	34	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	9	0	0	14	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.6	0.0	1.0	1.6	0.0	1.0	1.9	0.0	1.0	1.9	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C
C, Cycle Length [s]	33	33	33	33	33	33	33	33	33
L, Total Lost Time per Cycle [s]	3.00	3.60	3.60	3.00	3.60	3.00	3.90	3.00	3.90
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.60	1.60	1.00	1.60	1.00	1.90	1.00	1.90
g_i, Effective Green Time [s]	2	5	5	4	7	1	8	2	9
g / C, Green / Cycle	0.07	0.15	0.15	0.12	0.20	0.03	0.25	0.06	0.28
(v / s)_i Volume / Saturation Flow Rate	0.06	0.08	0.04	0.10	0.09	0.02	0.21	0.05	0.23
s, saturation flow rate [veh/h]	1603	1683	1421	1603	1631	1603	1576	1603	1567
c, Capacity [veh/h]	115	256	216	200	334	55	399	103	443
d1, Uniform Delay [s]	15.21	12.95	12.39	14.14	11.59	15.85	11.73	15.32	11.05
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.44	0.58	0.21	2.79	0.36	4.55	1.70	4.67	1.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.51	0.24	0.80	0.46	0.64	0.83	0.78	0.80
d, Delay for Lane Group [s/veh]	20.65	13.53	12.60	16.94	11.95	20.40	13.43	19.99	12.33
Lane Group LOS	C	B	B	B	B	C	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.74	0.73	0.27	1.07	0.77	0.28	1.76	0.60	1.76
50th-Percentile Queue Length [ft/ln]	18.59	18.28	6.79	26.80	19.35	6.88	43.91	14.88	43.91
95th-Percentile Queue Length [veh/ln]	1.34	1.32	0.49	1.93	1.39	0.50	3.16	1.07	3.16
95th-Percentile Queue Length [ft/ln]	33.46	32.91	12.21	48.24	34.84	12.38	79.04	26.78	79.04

Movement, Approach, & Intersection Results

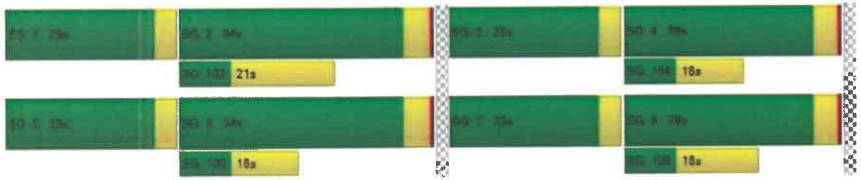
d_M, Delay for Movement [s/veh]	20.65	13.53	12.60	16.94	11.95	11.95	20.40	13.43	13.43	19.99	12.33	12.33
Movement LOS	C	B	B	B	B	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]		15.81			14.51			14.10			13.74	
Approach LOS		B			B			B			B	
d_I, Intersection Delay [s/veh]	14.42											
Intersection LOS	B											
Intersection V/C	0.757											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	7.35	7.35	7.35	7.35
l_p,int, Pedestrian LOS Score for Intersection	2.249	2.087	2.158	2.243
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1537	1537	1822	1822
d_b, Bicycle Delay [s]	0.88	0.88	0.13	0.13
l_b,int, Bicycle LOS Score for Intersection	2.046	2.079	2.170	2.310
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Burns Valley Rd/Bowers Ave-Rumsey Rd

Control Type:	Two-way stop	Delay (sec / veh):	15.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.058

Intersection Setup

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Base Volume Input [veh/h]	163	62	15	3	70	11	11	2	123	21	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	163	62	15	3	70	11	11	2	123	21	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	16	4	1	18	3	3	1	31	5	0	0
Total Analysis Volume [veh/h]	163	62	15	3	70	11	11	2	123	21	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.12	0.06	0.00	0.00
d_M, Delay for Movement [s/veh]	7.66	0.00	0.00	7.37	0.00	0.00	13.65	14.16	9.39	15.60	14.62	5.24
Movement LOS	A	A	A	A	A	A	B	B	A	C	B	A
95th-Percentile Queue Length [veh/ln]	0.36	0.36	0.36	0.01	0.01	0.01	0.54	0.54	0.54	0.18	0.18	0.18
95th-Percentile Queue Length [ft/ln]	9.01	9.01	9.01	0.15	0.15	0.15	13.54	13.54	13.54	4.62	4.62	4.62
d_A, Approach Delay [s/veh]		5.20			0.26			9.80			15.60	
Approach LOS		A			A			A			C	
d_I, Intersection Delay [s/veh]	6.09											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 5: Olympic Dr/Lakeshore Dr

Control Type:	Roundabout	Delay (sec / veh):	4.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

Volumes

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Base Volume Input [veh/h]	0	310	125	95	215	0	0	0	5	120	5	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	310	125	95	215	0	0	0	5	120	5	160
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	78	31	24	54	0	0	0	1	30	1	40
Total Analysis Volume [veh/h]	0	310	125	95	215	0	0	0	5	120	5	160
Pedestrian Volume [ped/h]	0			0			0			1		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	97			128			439			316		
Exiting Flow Rate [veh/h]	347			479			5			224		
Demand Flow Rate [veh/h]	0	310	125	95	215	0	0	0	5	120	5	160
Adjusted Demand Flow Rate [veh/h]	0	310	125	95	215	0	0	0	5	120	5	160

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1380.00	1380.00	1420.00	1420.00
B (coefficient)	0.00091	0.00091	0.00102	0.00102	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	317	128	317	6	123	169
Capacity of Entry and Bypass Lanes [veh/h]	1301	1301	1212	883	1065	1065
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1275	1275	1188	865	1044	1044
X, volume / capacity	0.24	0.10	0.26	0.01	0.12	0.16

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.96	0.33	1.05	0.02	0.39	0.56
95th-Percentile Queue Length [ft]	23.91	8.14	26.23	0.44	9.72	14.02
Approach Delay [s/veh]	4.57		5.40	4.22	4.71	
Approach LOS	A		A	A	A	
Intersection Delay [s/veh]	4.86					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Olympic Dr/Burns Valley Rd-Old Hwy 53

Control Type:	Signalized	Delay (sec / veh):	19.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.866

Intersection Setup

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	50.00	100.00	100.00	48.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Base Volume Input [veh/h]	165	215	110	180	185	60	45	315	165	95	320	175
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	18	0	0	11	0	0	14	0	0	25
Total Hourly Volume [veh/h]	165	215	92	180	185	49	45	315	151	95	320	150
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	54	23	45	46	12	11	79	38	24	80	38
Total Analysis Volume [veh/h]	165	215	92	180	185	49	45	315	151	95	320	150
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			1			1		
v_di, Inbound Pedestrian Volume crossing major street [	1			1			0			1		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	109
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	6	0	4	6	0	4	6	0	4	6	0
Maximum Green [s]	20	25	0	20	25	0	20	30	0	20	20	0
Amber [s]	3.0	3.3	0.0	3.0	3.3	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Split [s]	23	29	0	23	29	0	23	34	0	23	34	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	9	0	0	14	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.6	0.0	1.0	1.6	0.0	1.0	1.9	0.0	1.0	1.9	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C
C, Cycle Length [s]	45	45	45	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]	3.00	3.60	3.60	3.00	3.60	3.00	3.90	3.00	3.90
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.60	1.60	1.00	1.60	1.00	1.90	1.00	1.90
g_i, Effective Green Time [s]	6	8	8	6	8	2	15	3	16
g / C, Green / Cycle	0.13	0.17	0.17	0.14	0.18	0.04	0.33	0.07	0.36
(v / s)_i Volume / Saturation Flow Rate	0.10	0.13	0.06	0.11	0.14	0.03	0.29	0.06	0.30
s, saturation flow rate [veh/h]	1603	1683	1422	1603	1622	1603	1591	1603	1581
c, Capacity [veh/h]	205	281	237	222	289	62	519	116	569
d1, Uniform Delay [s]	19.37	18.16	16.93	19.08	18.02	21.72	14.67	20.88	13.30
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.84	1.64	0.38	2.67	2.07	6.02	2.33	5.20	4.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.76	0.39	0.81	0.81	0.73	0.90	0.82	0.83
d, Delay for Lane Group [s/veh]	22.21	19.80	17.31	21.74	20.10	27.74	17.00	26.07	17.56
Lane Group LOS	C	B	B	C	C	C	B	C	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.66	2.01	0.78	1.79	2.22	0.52	3.90	1.04	4.01
50th-Percentile Queue Length [ft/ln]	41.49	50.32	19.43	44.69	55.47	13.04	97.56	25.94	100.15
95th-Percentile Queue Length [veh/ln]	2.99	3.62	1.40	3.22	3.99	0.94	7.02	1.87	7.21
95th-Percentile Queue Length [ft/ln]	74.68	90.58	34.97	80.44	99.85	23.48	175.61	46.70	180.26

Movement, Approach, & Intersection Results

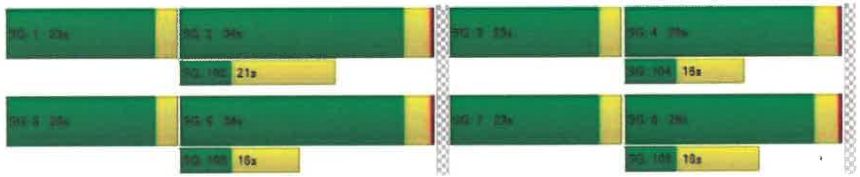
d_M, Delay for Movement [s/veh]	22.21	19.80	17.31	21.74	20.10	20.10	27.74	17.00	17.00	26.07	17.56	17.56
Movement LOS	C	B	B	C	C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	20.16			20.81			17.94			18.99		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	19.38											
Intersection LOS	B											
Intersection V/C	0.866											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	13.08	13.08	13.08	13.08
l_p,int, Pedestrian LOS Score for Intersection	2.345	2.196	2.326	2.389
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1117	1117	1323	1323
d_b, Bicycle Delay [s]	4.44	4.44	2.61	2.61
l_b,int, Bicycle LOS Score for Intersection	2.368	2.261	2.426	2.533
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Burns Valley Rd/Bowers Ave-Rumsey Rd

Control Type:	Two-way stop	Delay (sec / veh):	13.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Base Volume Input [veh/h]	137	59	2	0	51	15	16	0	136	3	2	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	137	59	2	0	51	15	16	0	136	3	2	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	15	1	0	13	4	4	0	34	1	1	0
Total Analysis Volume [veh/h]	137	59	2	0	51	15	16	0	136	3	2	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.14	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.57	0.00	0.00	7.33	0.00	0.00	12.64	13.08	9.35	13.86	12.46	8.58
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.29	0.29	0.29	0.00	0.00	0.00	0.59	0.59	0.59	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	7.33	7.33	7.33	0.00	0.00	0.00	14.78	14.78	14.78	0.86	0.86	0.86
d_A, Approach Delay [s/veh]	5.24			0.00			9.70			13.30		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	6.12											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 5: Olympic Dr/Lakeshore Dr

Control Type:	Roundabout	Delay (sec / veh):	4.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

Volumes

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Base Volume Input [veh/h]	1	224	131	93	235	0	0	4	4	123	1	95
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	224	131	93	235	0	0	4	4	123	1	95
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	56	33	23	59	0	0	1	1	31	0	24
Total Analysis Volume [veh/h]	1	224	131	93	235	0	0	4	4	123	1	95
Pedestrian Volume [ped/h]	0			0			0			1		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	99			128			460			230		
Exiting Flow Rate [veh/h]	369			325			2			233		
Demand Flow Rate [veh/h]	1	224	131	93	235	0	0	4	4	123	1	95
Adjusted Demand Flow Rate [veh/h]	1	224	131	93	235	0	0	4	4	123	1	95

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1380.00	1380.00	1420.00	1420.00
B (coefficient)	0.00091	0.00091	0.00102	0.00102	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	230	134	335	9	126	98
Capacity of Entry and Bypass Lanes [veh/h]	1298	1298	1212	864	1153	1153
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1273	1273	1188	847	1129	1129
X, volume / capacity	0.18	0.10	0.28	0.01	0.11	0.09

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.64	0.34	1.13	0.03	0.37	0.28
95th-Percentile Queue Length [ft]	16.03	8.59	28.31	0.72	9.15	6.96
Approach Delay [s/veh]	4.08		5.56	4.34	4.03	
Approach LOS	A		A	A	A	
Intersection Delay [s/veh]	4.60					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Olympic Dr/Burns Valley Rd-Old Hwy 53

Control Type:	Signalized	Delay (sec / veh):	14.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.783

Intersection Setup

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	56.00	100.00	100.00	48.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Base Volume Input [veh/h]	131	132	69	152	105	49	33	294	155	54	278	178
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	15	0	0	12	0	0	25	0	0	28
Total Hourly Volume [veh/h]	131	132	54	152	105	37	33	294	130	54	278	149
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	33	14	38	26	9	8	74	33	14	70	37
Total Analysis Volume [veh/h]	131	132	54	152	105	37	33	294	130	54	278	149
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			1			1		
v_di, Inbound Pedestrian Volume crossing major street	1			1			0			1		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	109
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	6	0	4	6	0	4	6	0	4	6	0
Maximum Green [s]	20	25	0	20	25	0	20	30	0	20	20	0
Amber [s]	3.0	3.3	0.0	3.0	3.3	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Split [s]	23	29	0	23	29	0	23	34	0	23	34	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	9	0	0	14	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.6	0.0	1.0	1.6	0.0	1.0	1.9	0.0	1.0	1.9	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C
C, Cycle Length [s]	35	35	35	35	35	35	35	35	35
L, Total Lost Time per Cycle [s]	3.00	3.60	3.60	3.00	3.60	3.00	3.90	3.00	3.90
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	1.00	1.60	1.60	1.00	1.60	1.00	1.90	1.00	1.90
g_i, Effective Green Time [s]	4	5	5	4	6	1	11	2	11
g / C, Green / Cycle	0.10	0.15	0.15	0.12	0.16	0.03	0.31	0.05	0.32
(v / s)_i Volume / Saturation Flow Rate	0.08	0.08	0.04	0.09	0.09	0.02	0.27	0.03	0.27
s, saturation flow rate [veh/h]	1603	1683	1421	1603	1608	1603	1596	1603	1572
c, Capacity [veh/h]	162	247	209	189	263	51	491	76	508
d1, Uniform Delay [s]	15.62	14.01	13.42	15.25	13.61	16.97	11.58	16.66	11.16
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.65	0.67	0.24	3.05	0.64	4.99	1.80	4.56	1.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.53	0.26	0.81	0.54	0.65	0.86	0.71	0.84
d, Delay for Lane Group [s/veh]	19.26	14.68	13.66	18.30	14.25	21.97	13.38	21.22	12.62
Lane Group LOS	B	B	B	B	B	C	B	C	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.01	0.83	0.32	1.13	0.88	0.29	2.38	0.44	2.28
50th-Percentile Queue Length [ft/ln]	25.30	20.80	8.05	28.27	21.90	7.16	59.45	11.12	57.06
95th-Percentile Queue Length [veh/ln]	1.82	1.50	0.58	2.04	1.58	0.52	4.28	0.80	4.11
95th-Percentile Queue Length [ft/ln]	45.55	37.44	14.49	50.89	39.42	12.88	107.00	20.01	102.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.26	14.68	13.66	18.30	14.25	14.25	21.97	13.38	13.38	21.22	12.62	12.62
Movement LOS	B	B	B	B	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	16.40			16.35			14.00			13.59		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.81											
Intersection LOS	B											
Intersection V/C	0.783											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	8.38	8.38	8.38	8.38
I_p,int, Pedestrian LOS Score for Intersection	2.252	2.111	2.275	2.313
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1438	1438	1704	1704
d_b, Bicycle Delay [s]	1.40	1.40	0.39	0.39
I_b,int, Bicycle LOS Score for Intersection	2.107	2.065	2.355	2.401
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 1: Burns Valley Rd/N-S Project Street

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

Intersection Setup

Name	N-S Project Street		Burns Valley Rd		Burns Valley Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	N-S Project Street		Burns Valley Rd		Burns Valley Rd	
Base Volume Input [veh/h]	8	7	112	15	0	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	3	1	4	5	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	10	113	19	5	111
Peak Hour Factor	0.8890	0.8890	0.8890	0.8890	0.8890	0.8890
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	3	32	5	1	31
Total Analysis Volume [veh/h]	11	11	127	21	6	125
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.18	9.08	0.00	0.00	7.52	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.08	0.08	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	2.12	2.12	0.00	0.00	0.32	0.32
d_A, Approach Delay [s/veh]	9.63		0.00		0.34	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.85					
Intersection LOS	B					

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Version 2021 (SP 0-6)
Burns Valley Development
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Intersection Level Of Service Report
Intersection 2: Burns Valley Rd/Bowers Ave-Rumsey Rd

Control Type:	Two-way stop	Delay (sec / veh):	13.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Base Volume Input [veh/h]	122	26	6	0	23	16	9	1	124	5	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	1	0	0	0	1	2	0	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	124	27	6	0	23	17	11	1	129	5	1	0
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	8	2	0	7	5	3	0	38	1	0	0
Total Analysis Volume [veh/h]	146	32	7	0	27	20	13	1	152	6	1	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.15	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.54	0.00	0.00	7.29	0.00	0.00	12.36	12.87	9.26	13.80	12.30	8.61
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.31	0.31	0.31	0.00	0.00	0.00	0.62	0.62	0.62	0.05	0.05	0.05
95th-Percentile Queue Length [ft/ln]	7.73	7.73	7.73	0.00	0.00	0.00	15.54	15.54	15.54	1.25	1.25	1.25
d_A, Approach Delay [s/veh]	5.95			0.00			9.52			13.59		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	6.86											
Intersection LOS	B											

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Intersection Level Of Service Report
Intersection 3: N-S Project Street/E-W Project Street

Control Type:	All-way stop	Delay (sec / veh):	7.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.055

Intersection Setup

Name	N-S Project Street			N-S Project Street			E-W Project Street			E-W Project Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	N-S Project Street			N-S Project Street			E-W Project Street			E-W Project Street		
Base Volume Input [veh/h]	0	15	0	0	15	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	18	3	3	11	1	0	1	1	4	2	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	33	3	3	26	1	0	1	1	4	2	4
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	10	1	1	8	0	0	0	0	1	1	1
Total Analysis Volume [veh/h]	7	39	4	4	31	1	0	1	1	5	2	5
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	906	896	941	911
Degree of Utilization, x	0.06	0.04	0.00	0.01

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.18	0.13	0.01	0.04
95th-Percentile Queue Length [ft]	4.38	3.13	0.16	1.00
Approach Delay [s/veh]	7.21	7.18	6.84	7.00
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.17			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 4: Burns Valley Rd/E-W Project Street

Control Type:	Two-way stop	Delay (sec / veh):	10.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Burns Valley Rd		Burns Valley Rd		E-W Project Street	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Burns Valley Rd		Burns Valley Rd		E-W Project Street	
Base Volume Input [veh/h]	0	151	147	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	2	5	0	1	9
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	153	152	0	1	9
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	45	45	0	0	3
Total Analysis Volume [veh/h]	9	180	179	0	1	11
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	7.59	0.00	0.00	0.00	10.87	9.23
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.04	0.04
95th-Percentile Queue Length [ft/ln]	0.49	0.49	0.00	0.00	1.09	1.09
d_A, Approach Delay [s/veh]	0.36		0.00		9.37	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.48					
Intersection LOS	B					

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Version 2021 (SP 0-6)

Intersection Level Of Service Report
Intersection 5: Olympic Dr/Lakeshore Dr

Control Type:	Two-way stop	Delay (sec / veh):	16.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.169

Intersection Setup

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

Volumes

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Base Volume Input [veh/h]	1	137	66	61	279	2	0	0	1	47	1	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	11	4	0	0	0	0	0	6	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	137	77	65	279	2	0	0	1	53	1	63
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	40	22	19	81	1	0	0	0	15	0	18
Total Analysis Volume [veh/h]	1	159	90	76	324	2	0	0	1	62	1	73
Pedestrian Volume [ped/h]	0			0			0			1		

Weekday AM E+P

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.08
d_M, Delay for Movement [s/veh]	7.92	0.00	0.00	7.91	0.00	0.00	12.13	10.11	10.03	16.82	15.25	9.46
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.18	0.18	0.18	0.00	0.00	0.00	0.60	0.28	0.28
95th-Percentile Queue Length [ft/ln]	0.06	0.06	0.00	4.60	4.60	4.60	0.10	0.10	0.10	15.04	6.97	6.97
d_A, Approach Delay [s/veh]	0.03			1.49			10.03			12.85		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	3.00											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 6: Olympic Dr/N-S Project Street

Control Type:	Two-way stop	Delay (sec / veh):	16.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.041

Intersection Setup

Name	N-S Project Street		Olympic Dr		Olympic Dr	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	N-S Project Street		Olympic Dr		Olympic Dr	
Base Volume Input [veh/h]	7	8	15	290	306	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	12	19	0	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	20	34	290	306	12
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	6	10	85	90	4
Total Analysis Volume [veh/h]	14	24	40	341	360	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.04	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	16.03	10.90	8.15	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.25	0.25	0.10	0.10	0.00	0.00
95th-Percentile Queue Length [ft/ln]	6.14	6.14	2.62	2.62	0.00	0.00
d_A, Approach Delay [s/veh]	12.79		0.86		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.02					
Intersection LOS	C					

Generated with PTV VISTRO Burns Valley Development 5/2/2022
Version 2021 (SP 0-5)

Intersection Level Of Service Report
Intersection 7: Olympic Dr/Burns Valley Rd-Old Hwy 53

Control Type:	Signalized	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.668

Intersection Setup

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	56.00	100.00	100.00	48.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Base Volume Input [veh/h]	42	62	45	75	70	15	26	131	51	48	150	99
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	6	0	5	9	0	0	1	4	0	7	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	18	0	0	11	0	0	14	0	0	25
Total Hourly Volume [veh/h]	47	68	27	80	79	4	26	132	41	48	157	78
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	19	8	22	22	1	7	37	12	13	44	22
Total Analysis Volume [veh/h]	53	76	30	90	89	4	29	148	46	54	176	88
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			1			1		
v_di, Inbound Pedestrian Volume crossing major street	1			1			0			1		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Generated with PTV VISTRO
Version 2021 (SP 0-6)
Burns Valley Development
5/2/2022

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	109
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	6	0	4	6	0	4	6	0	4	6	0
Maximum Green [s]	20	25	0	20	25	0	20	30	0	20	20	0
Amber [s]	3.0	3.3	0.0	3.0	3.3	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Split [s]	23	29	0	23	29	0	23	34	0	23	34	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	9	0	0	14	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.6	0.0	1.0	1.6	0.0	1.0	1.9	0.0	1.0	1.9	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C
C, Cycle Length [s]	25	25	25	25	25	25	25	25	25
L, Total Lost Time per Cycle [s]	3.00	3.60	3.60	3.00	3.60	3.00	3.90	3.00	3.90
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.60	1.60	1.00	1.60	1.00	1.90	1.00	1.90
g_i, Effective Green Time [s]	1	3	3	2	4	1	5	1	5
g / C, Green / Cycle	0.05	0.13	0.13	0.08	0.16	0.03	0.19	0.05	0.21
(v / s)_i Volume / Saturation Flow Rate	0.03	0.05	0.02	0.06	0.06	0.02	0.12	0.03	0.17
s, saturation flow rate [veh/h]	1603	1683	1420	1603	1670	1603	1614	1603	1576
c, Capacity [veh/h]	83	227	191	125	269	50	305	85	332
d1, Uniform Delay [s]	11.51	9.71	9.47	11.15	9.23	11.84	9.25	11.50	9.26
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.95	0.32	0.14	2.88	0.28	3.92	0.82	2.94	1.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.33	0.16	0.72	0.35	0.58	0.64	0.64	0.79
d, Delay for Lane Group [s/veh]	14.46	10.03	9.61	14.03	9.52	15.76	10.07	14.43	10.90
Lane Group LOS	B	B	A	B	A	B	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.26	0.26	0.10	0.43	0.30	0.16	0.60	0.26	0.88
50th-Percentile Queue Length [ft/ln]	6.62	6.52	2.50	10.63	7.53	3.94	15.12	6.41	21.88
95th-Percentile Queue Length [veh/ln]	0.48	0.47	0.18	0.77	0.54	0.28	1.09	0.46	1.58
95th-Percentile Queue Length [ft/ln]	11.92	11.73	4.50	19.13	13.56	7.10	27.22	11.53	39.38

Movement, Approach, & Intersection Results

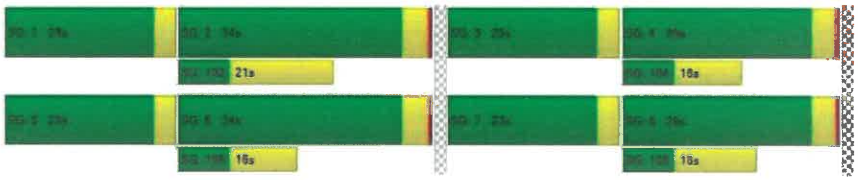
d_M, Delay for Movement [s/veh]	14.46	10.03	9.61	14.03	9.52	9.52	15.76	10.07	10.07	14.43	10.90	10.90
Movement LOS	B	B	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	11.43			11.74			10.81			11.50		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	11.36											
Intersection LOS	B											
Intersection V/C	0.668											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	3.73	3.73	3.73	3.73
I_p,int, Pedestrian LOS Score for Intersection	2.159	2.000	2.053	2.124
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2070	2070	2453	2453
d_b, Bicycle Delay [s]	0.02	0.02	0.63	0.63
I_b,int, Bicycle LOS Score for Intersection	1.852	1.880	1.951	2.126
Bicycle LOS	A	A	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: Burns Valley Rd/N-S Project Street

Control Type:	Two-way stop	Delay (sec / veh):	10.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.025

Intersection Setup

Name	N-S Project Street		Burns Valley Rd		Burns Valley Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	N-S Project Street		Burns Valley Rd		Burns Valley Rd	
Base Volume Input [veh/h]	8	8	117	17	0	117
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	7	1	10	7	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	15	118	27	7	118
Peak Hour Factor	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	4	33	8	2	33
Total Analysis Volume [veh/h]	17	17	132	30	8	132
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.02	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	10.41	9.21	0.00	0.00	7.56	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.14	0.14	0.00	0.00	0.02	0.02
95th-Percentile Queue Length [ft/ln]	3.40	3.40	0.00	0.00	0.43	0.43
d_A, Approach Delay [s/veh]	9.81		0.00		0.43	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.17					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 2: Burns Valley Rd/Bowers Ave-Rumsey Rd

Control Type:	Two-way stop	Delay (sec / veh):	12.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.032

Intersection Setup

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Base Volume Input [veh/h]	100	38	9	2	43	7	7	1	75	13	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	1	0	0	1	4	3	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	105	39	9	2	44	11	10	1	78	13	0	0
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	11	3	1	13	3	3	0	23	4	0	0
Total Analysis Volume [veh/h]	124	46	11	2	52	13	12	1	92	15	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free		Free		Stop		Stop	
Flared Lane					No		No	
Storage Area [veh]	0		0		0		0	
Two-Stage Gap Acceptance					No		No	
Number of Storage Spaces in Median	0		0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.09	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	7.55	0.00	0.00	7.33	0.00	0.00	11.99	12.52	9.08	12.92	12.27	8.79
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.26	0.26	0.26	0.00	0.00	0.00	0.39	0.39	0.39	0.10	0.10	0.10
95th-Percentile Queue Length [ft/ln]	6.57	6.57	6.57	0.10	0.10	0.10	9.70	9.70	9.70	2.47	2.47	2.47
d_A, Approach Delay [s/veh]	5.17			0.22			9.45			12.92		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	5.81											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: N-S Project Street/E-W Project Street

Control Type:	All-way stop	Delay (sec / veh):	7.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.097

Intersection Setup

Name	N-S Project Street			N-S Project Street			E-W Project Street			E-W Project Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	N-S Project Street			N-S Project Street			E-W Project Street			E-W Project Street		
Base Volume Input [veh/h]	0	16	0	0	17	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	44	15	12	31	1	1	3	8	5	2	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	60	15	12	48	1	1	3	8	5	2	15
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	17	4	3	14	0	0	1	2	1	1	4
Total Analysis Volume [veh/h]	3	68	17	14	55	1	1	3	9	6	2	17
Pedestrian Volume [ped/h]	0			0			0			0		

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Version 2021 (SP 0-6)
Burns Valley Development
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Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	907	872	924	918
Degree of Utilization, x	0.10	0.08	0.01	0.03

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.32	0.26	0.04	0.08
95th-Percentile Queue Length [ft]	8.04	6.52	1.07	2.10
Approach Delay [s/veh]	7.40	7.48	6.95	7.03
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.35			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 4: Burns Valley Rd/E-W Project Street

Control Type:	Two-way stop	Delay (sec / veh):	11.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Burns Valley Rd		Burns Valley Rd		E-W Project Street	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Burns Valley Rd		Burns Valley Rd		E-W Project Street	
Base Volume Input [veh/h]	0	158	173	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	24	5	3	1	1	18
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	163	176	1	1	18
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	46	50	0	0	5
Total Analysis Volume [veh/h]	27	185	200	1	1	20
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	7.68	0.00	0.00	0.00	11.52	9.40
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft/ln]	1.51	1.51	0.00	0.00	1.97	1.97
d_A, Approach Delay [s/veh]	0.98		0.00		9.50	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.94					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 5: Olympic Dr/Lakeshore Dr

Control Type:	Two-way stop	Delay (sec / veh):	18.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.327

Intersection Setup

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

Volumes

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Base Volume Input [veh/h]	1	198	114	66	180	1	0	2	2	106	3	141
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	21	11	0	0	0	0	0	15	0	8
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	198	135	77	180	1	0	2	2	121	3	149
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	53	36	21	48	0	0	1	1	33	1	40
Total Analysis Volume [veh/h]	1	213	145	83	194	1	0	2	2	130	3	160
Pedestrian Volume [ped/h]	0			0			0			1		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.01	0.00	0.33	0.01	0.19
d_M, Delay for Movement [s/veh]	7.61	0.00	0.00	8.23	0.00	0.00	19.20	16.14	9.32	18.38	15.27	10.48
Movement LOS	A	A	A	A	A	A	C	C	A	C	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.22	0.22	0.22	0.03	0.03	0.03	1.40	0.75	0.75
95th-Percentile Queue Length [ft/ln]	0.05	0.05	0.00	5.57	5.57	5.57	0.84	0.64	0.64	34.94	18.75	18.75
d_A, Approach Delay [s/veh]	0.02			2.46			12.73			14.03		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	5.20											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 6: Olympic Dr/N-S Project Street

Control Type:	Two-way stop	Delay (sec / veh):	21.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.103

Intersection Setup

Name	N-S Project Street		Olympic Dr		Olympic Dr	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	N-S Project Street		Olympic Dr		Olympic Dr	
Base Volume Input [veh/h]	8	9	16	352	384	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	31	43	0	0	19
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	40	59	352	384	19
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	12	17	104	113	6
Total Analysis Volume [veh/h]	25	47	69	414	452	22
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.08	0.06	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	21.87	13.02	8.53	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.66	0.66	0.20	0.20	0.00	0.00
95th-Percentile Queue Length [ft/ln]	16.38	16.38	5.07	5.07	0.00	0.00
d_A, Approach Delay [s/veh]	16.09		1.22		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.70					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 7: Olympic Dr/Burns Valley Rd-Old Hwy 53

Control Type:	Signalized	Delay (sec / veh):	13.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.772

Intersection Setup

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	50.00	100.00	100.00	40.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Base Volume Input [veh/h]	98	113	56	112	97	46	21	184	93	62	221	139
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	18	0	10	11	0	0	5	7	0	10	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	18	0	0	11	0	0	14	0	0	25
Total Hourly Volume [veh/h]	107	131	38	122	108	35	21	189	86	62	231	125
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	36	10	33	29	10	6	51	23	17	63	34
Total Analysis Volume [veh/h]	116	142	41	133	117	38	23	205	93	67	251	136
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			1			1		
v_di, Inbound Pedestrian Volume crossing major street	1			1			0			1		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	109
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	6	0	4	6	0	4	6	0	4	6	0
Maximum Green [s]	20	25	0	20	25	0	20	30	0	20	20	0
Amber [s]	3.0	3.3	0.0	3.0	3.3	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Split [s]	23	29	0	23	29	0	23	34	0	23	34	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	9	0	0	14	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.6	0.0	1.0	1.6	0.0	1.0	1.9	0.0	1.0	1.9	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Generated with PTV VISTRO Burns Valley Development 5/2/2022
Version 2021 (SP 0-6)

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C
C, Cycle Length [s]	32	32	32	32	32	32	32	32	32
L, Total Lost Time per Cycle [s]	3.00	3.60	3.60	3.00	3.60	3.00	3.90	3.00	3.90
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.60	1.60	1.00	1.60	1.00	1.90	1.00	1.90
g_i, Effective Green Time [s]	3	5	5	3	5	1	8	2	9
g / C, Green / Cycle	0.09	0.16	0.16	0.10	0.17	0.02	0.26	0.06	0.29
(v / s)_i Volume / Saturation Flow Rate	0.07	0.08	0.03	0.08	0.10	0.01	0.19	0.04	0.25
s, saturation flow rate [veh/h]	1603	1683	1421	1603	1612	1603	1594	1603	1571
c, Capacity [veh/h]	142	264	223	164	276	38	410	92	457
d1, Uniform Delay [s]	14.19	12.29	11.59	13.92	12.04	15.31	10.76	14.68	10.58
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.35	0.63	0.15	3.60	0.67	5.57	0.93	4.04	1.71
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.54	0.18	0.81	0.56	0.60	0.73	0.73	0.85
d, Delay for Lane Group [s/veh]	18.54	12.92	11.73	17.51	12.71	20.88	11.69	18.73	12.29
Lane Group LOS	B	B	B	B	B	C	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.81	0.74	0.20	0.89	0.80	0.19	1.35	0.46	1.81
50th-Percentile Queue Length [ft/ln]	20.23	18.58	4.97	22.15	20.02	4.64	33.83	11.57	45.33
95th-Percentile Queue Length [veh/ln]	1.46	1.34	0.36	1.60	1.44	0.33	2.44	0.83	3.26
95th-Percentile Queue Length [ft/ln]	36.42	33.44	8.94	39.88	36.04	8.36	60.89	20.83	81.59

Movement, Approach, & Intersection Results

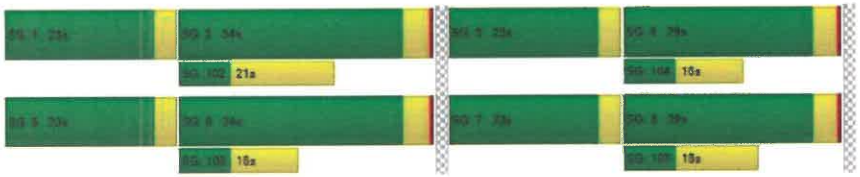
d_M, Delay for Movement [s/veh]	18.54	12.92	11.73	17.51	12.71	12.71	20.88	11.69	11.69	18.73	12.29	12.29
Movement LOS	B	B	B	B	B	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	14.94			14.93			12.35			13.24		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	13.76											
Intersection LOS	B											
Intersection V/C	0.772											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	6.67	6.67	6.67	6.67
I_p,int, Pedestrian LOS Score for Intersection	2.238	2.092	2.178	2.241
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1612	1612	1911	1911
d_b, Bicycle Delay [s]	0.59	0.59	0.03	0.03
I_b,int, Bicycle LOS Score for Intersection	2.083	2.053	2.112	2.350
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: Burns Valley Rd/N-S Project Street

Control Type:	Two-way stop	Delay (sec / veh):	10.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.033

Intersection Setup

Name	N-S Project Street		Burns Valley Rd		Burns Valley Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	N-S Project Street		Burns Valley Rd		Burns Valley Rd	
Base Volume Input [veh/h]	7	6	78	12	0	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	17	3	15	12	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	23	81	27	12	95
Peak Hour Factor	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	6	22	7	3	26
Total Analysis Volume [veh/h]	25	25	89	30	13	104
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.03	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	10.09	9.06	0.00	0.00	7.47	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.19	0.19	0.00	0.00	0.03	0.03
95th-Percentile Queue Length [ft/ln]	4.76	4.76	0.00	0.00	0.67	0.67
d_A, Approach Delay [s/veh]	9.58		0.00		0.83	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.01					
Intersection LOS	B					

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Intersection Level Of Service Report
Intersection 2: Burns Valley Rd/Bowers Ave-Rumsey Rd

Control Type:	Two-way stop	Delay (sec / veh):	12.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Base Volume Input [veh/h]	84	36	1	0	31	9	10	0	83	2	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	2	0	0	3	5	6	0	10	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	98	38	1	0	34	14	16	0	93	2	1	0
Peak Hour Factor	0.8500	0.9600	0.9600	0.9600	0.9600	0.8500	0.8500	0.8500	0.8500	0.9600	0.8500	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	10	0	0	9	4	5	0	27	1	0	0
Total Analysis Volume [veh/h]	115	40	1	0	35	16	19	0	109	2	1	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.11	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.50	0.00	0.00	7.30	0.00	0.00	11.61	12.09	9.12	12.31	11.58	8.63
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.24	0.24	0.24	0.00	0.00	0.00	0.48	0.48	0.48	0.02	0.02	0.00
95th-Percentile Queue Length [ft/ln]	5.98	5.98	5.98	0.00	0.00	0.00	11.92	11.92	11.92	0.44	0.44	0.44
d_A, Approach Delay [s/veh]	5.53			0.00			9.49			12.06		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	6.25											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: N-S Project Street/E-W Project Street

Control Type:	All-way stop	Delay (sec / veh):	7.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.124

Intersection Setup

Name	N-S Project Street			N-S Project Street			E-W Project Street			E-W Project Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	N-S Project Street			N-S Project Street			E-W Project Street			E-W Project Street		
Base Volume Input [veh/h]	0	13	0	0	12	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	60	30	24	64	2	1	6	15	15	4	26
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	73	30	24	76	2	1	6	15	15	4	26
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	19	8	6	20	1	0	2	4	4	1	7
Total Analysis Volume [veh/h]	5	75	31	25	78	2	1	6	15	15	4	27
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	894	852	889	870
Degree of Utilization, x	0.12	0.12	0.02	0.05

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.42	0.42	0.08	0.17
95th-Percentile Queue Length [ft]	10.60	10.50	1.90	4.18
Approach Delay [s/veh]	7.60	7.82	7.15	7.37
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.61			
Intersection LOS	A			

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Intersection Level Of Service Report
Intersection 4: Burns Valley Rd/E-W Project Street

Control Type:	Two-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Burns Valley Rd		Burns Valley Rd		E-W Project Street	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Burns Valley Rd		Burns Valley Rd		E-W Project Street	
Base Volume Input [veh/h]	0	130	120	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	43	14	10	3	2	43
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	43	144	130	3	2	43
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	37	33	1	1	11
Total Analysis Volume [veh/h]	44	148	134	3	2	44
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.05
d_M, Delay for Movement [s/veh]	7.57	0.00	0.00	0.00	11.14	9.16
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.09	0.09	0.00	0.00	0.16	0.16
95th-Percentile Queue Length [ft/ln]	2.35	2.35	0.00	0.00	4.06	4.06
d_A, Approach Delay [s/veh]	1.73		0.00		9.25	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.02					
Intersection LOS	B					

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Intersection Level Of Service Report
Intersection 5: Olympic Dr/Lakeshore Dr

Control Type:	Two-way stop	Delay (sec / veh):	20.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.379

Intersection Setup

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

Volumes

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Base Volume Input [veh/h]	1	176	103	73	185	0	0	3	3	97	1	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	37	18	0	0	0	0	0	33	0	18
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	176	140	91	185	0	0	3	3	130	1	93
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	48	38	25	51	0	0	1	1	36	0	26
Total Analysis Volume [veh/h]	1	193	154	100	203	0	0	3	3	143	1	102
Pedestrian Volume [ped/h]	0			0			0			1		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.01	0.00	0.38	0.00	0.12
d_M, Delay for Movement [s/veh]	7.63	0.00	0.00	8.24	0.00	0.00	13.13	16.85	9.41	20.24	15.18	9.86
Movement LOS	A	A	A	A	A	A	C	C	A	C	C	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.27	0.27	0.27	0.04	0.04	0.04	1.73	0.42	0.42
95th-Percentile Queue Length [ft/ln]	0.05	0.05	0.00	6.75	6.75	6.75	1.02	1.02	1.02	43.20	10.48	10.48
d_A, Approach Delay [s/veh]	0.02			2.72			13.13			15.91		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	5.34											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 6: Olympic Dr/N-S Project Street

Control Type:	Two-way stop	Delay (sec / veh):	21.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.139

Intersection Setup

Name	N-S Project Street		Olympic Dr		Olympic Dr	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	N-S Project Street		Olympic Dr		Olympic Dr	
Base Volume Input [veh/h]	6	6	13	289	300	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	69	73	0	0	25
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	75	86	289	300	25
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	22	25	85	88	7
Total Analysis Volume [veh/h]	38	88	101	340	353	29
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.13	0.09	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	21.00	13.12	8.35	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.08	1.08	0.28	0.28	0.00	0.00
95th-Percentile Queue Length [ft/ln]	26.94	26.94	7.03	7.03	0.00	0.00
d_A, Approach Delay [s/veh]	15.50		1.91		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	2.95					
Intersection LOS	C					

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Version 2021 (SP 0-6)
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Intersection Level Of Service Report
Intersection 7: Olympic Dr/Burns Valley Rd-Old Hwy 53

Control Type:	Signalized	Delay (sec / veh):	12.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.732

Intersection Setup

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	56.00	100.00	100.00	48.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Base Volume Input [veh/h]	80	81	42	93	64	30	20	180	95	33	170	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	32	0	22	31	0	0	11	15	0	12	25
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	15	0	0	12	0	0	25	0	0	29
Total Hourly Volume [veh/h]	92	113	27	115	95	18	20	191	85	33	182	105
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	30	7	31	26	5	5	51	23	9	49	28
Total Analysis Volume [veh/h]	99	122	29	124	102	19	22	205	91	35	196	113
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			1			1		
v_di, Inbound Pedestrian Volume crossing major street	1			1			0			1		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	109
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	6	0	4	6	0	4	6	0	4	6	0
Maximum Green [s]	20	25	0	20	25	0	20	30	0	20	20	0
Amber [s]	3.0	3.3	0.0	3.0	3.3	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Split [s]	23	29	0	23	29	0	23	34	0	23	34	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	9	0	0	14	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.6	0.0	1.0	1.6	0.0	1.0	1.9	0.0	1.0	1.9	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C
C, Cycle Length [s]	28	28	28	28	28	28	28	28	28
L, Total Lost Time per Cycle [s]	3.00	3.60	3.60	3.00	3.60	3.00	3.90	3.00	3.90
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.60	1.60	1.00	1.60	1.00	1.90	1.00	1.90
g_i, Effective Green Time [s]	2	4	4	3	5	1	6	1	7
g / C, Green / Cycle	0.08	0.15	0.15	0.09	0.17	0.02	0.23	0.03	0.24
(v / s)_i Volume / Saturation Flow Rate	0.06	0.07	0.02	0.08	0.07	0.01	0.19	0.02	0.20
s, saturation flow rate [veh/h]	1603	1683	1421	1603	1637	1603	1595	1603	1567
c, Capacity [veh/h]	126	261	220	151	279	37	366	56	378
d1, Uniform Delay [s]	12.56	10.68	10.11	12.35	10.31	13.42	10.11	13.21	9.95
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.03	0.48	0.10	4.23	0.40	5.47	1.63	4.14	1.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.47	0.13	0.82	0.43	0.59	0.81	0.62	0.82
d, Delay for Lane Group [s/veh]	16.58	11.17	10.21	16.58	10.71	18.89	11.74	17.35	11.61
Lane Group LOS	B	B	B	B	B	B	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.58	0.51	0.11	0.72	0.49	0.15	1.18	0.22	1.22
50th-Percentile Queue Length [ft/ln]	14.55	12.70	2.81	18.09	12.14	3.85	29.62	5.45	30.49
95th-Percentile Queue Length [veh/ln]	1.05	0.91	0.20	1.30	0.87	0.28	2.13	0.39	2.20
95th-Percentile Queue Length [ft/ln]	26.20	22.86	5.06	32.57	21.85	6.93	53.32	9.81	54.88

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Movement, Approach, & Intersection Results

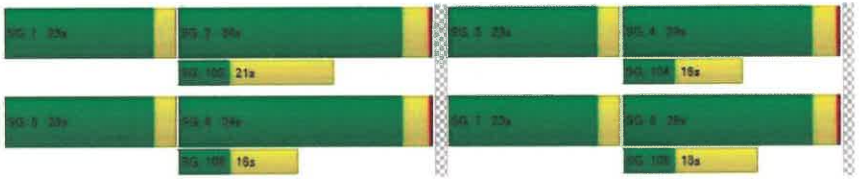
d_M, Delay for Movement [s/veh]	16.58	11.17	10.21	16.58	10.71	10.71	18.89	11.74	11.74	17.35	11.61	11.61
Movement LOS	B	B	B	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	13.20			13.68			12.24			12.19		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.74											
Intersection LOS	B											
Intersection V/C	0.732											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	4.99	4.99	4.99	4.99
l_p,int, Pedestrian LOS Score for Intersection	2.200	2.056	2.151	2.186
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1841	1841	2182	2182
d_b, Bicycle Delay [s]	0.09	0.09	0.11	0.11
l_b,int, Bicycle LOS Score for Intersection	1.997	1.984	2.126	2.175
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: Burns Valley Rd/N-S Project Street

Control Type:	Two-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	N-S Project Street		Burns Valley Rd		Burns Valley Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	N-S Project Street		Burns Valley Rd		Burns Valley Rd	
Base Volume Input [veh/h]	8	7	112	15	0	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	1	2	6	0	0	5
Site-Generated Trips [veh/h]	2	3	1	4	5	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	12	119	19	5	116
Peak Hour Factor	0.8890	0.8890	0.8890	0.8890	0.8890	0.8890
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	3	33	5	1	33
Total Analysis Volume [veh/h]	12	13	134	21	6	130
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.29	9.14	0.00	0.00	7.54	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.10	0.10	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	2.44	2.44	0.00	0.00	0.32	0.32
d_A, Approach Delay [s/veh]	9.69		0.00		0.33	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.91					
Intersection LOS	B					

Weekday AM B+P

Intersection Level Of Service Report
Intersection 2: Burns Valley Rd/Bowers Ave-Rumsey Rd

Control Type:	Two-way stop	Delay (sec / veh):	14.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

Intersection Setup

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Base Volume Input [veh/h]	127	27	6	0	24	16	9	1	130	5	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	1	0	0	0	1	2	0	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	129	28	6	0	24	17	11	1	135	5	1	0
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	8	2	0	7	5	3	0	40	1	0	0
Total Analysis Volume [veh/h]	152	33	7	0	28	20	13	1	159	6	1	0
Pedestrian Volume [ped/h]	0			0			0			0		

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Version 2021 (SP 0-6)
Burns Valley Development
5/2/2022

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.15	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.56	0.00	0.00	7.29	0.00	0.00	12.57	13.08	9.30	14.15	12.47	8.53
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.32	0.32	0.32	0.00	0.00	0.00	0.65	0.65	0.65	0.05	0.05	0.05
95th-Percentile Queue Length [ft/ln]	8.09	8.09	8.09	0.00	0.00	0.00	16.37	16.37	16.37	1.30	1.30	1.30
d_A, Approach Delay [s/veh]	5.98			0.00			9.57			13.91		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	6.91											
Intersection LOS	B											

Weekday AM B+P
W-Trans

Intersection Level Of Service Report
Intersection 3: N-S Project Street/E-W Project Street

Control Type:	All-way stop	Delay (sec / veh):	7.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.059

Intersection Setup

Name	N-S Project Street			N-S Project Street			E-W Project Street			E-W Project Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	N-S Project Street			N-S Project Street			E-W Project Street			E-W Project Street		
Base Volume Input [veh/h]	0	18	0	0	19	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	18	3	3	11	1	0	1	1	4	2	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	36	3	3	30	1	0	1	1	4	2	4
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	11	1	1	9	0	0	0	0	1	1	1
Total Analysis Volume [veh/h]	7	42	4	4	35	1	0	1	1	5	2	5
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	905	897	937	908
Degree of Utilization, x	0.06	0.04	0.00	0.01

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.19	0.14	0.01	0.04
95th-Percentile Queue Length [ft]	4.66	3.50	0.16	1.00
Approach Delay [s/veh]	7.23	7.20	6.85	7.02
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.19			
Intersection LOS	A			

Weekday AM B+P

Intersection Level Of Service Report
Intersection 4: Burns Valley Rd/E-W Project Street

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Burns Valley Rd		Burns Valley Rd		E-W Project Street	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Burns Valley Rd		Burns Valley Rd		E-W Project Street	
Base Volume Input [veh/h]	0	157	154	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	2	5	0	1	9
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	159	159	0	1	9
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	47	47	0	0	3
Total Analysis Volume [veh/h]	9	187	187	0	1	11
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	7.61	0.00	0.00	0.00	10.99	9.27
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.04	0.04
95th-Percentile Queue Length [ft/ln]	0.49	0.49	0.00	0.00	1.10	1.10
d_A, Approach Delay [s/veh]	0.35		0.00		9.42	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.46					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 5: Olympic Dr/Lakeshore Dr

Control Type:	Two-way stop	Delay (sec / veh):	18.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.197

Intersection Setup

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

Volumes

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Base Volume Input [veh/h]	1	138	86	78	279	2	0	0	1	52	1	69
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	11	4	0	0	0	0	0	6	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	138	97	82	279	2	0	0	1	58	1	72
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	40	28	24	81	1	0	0	0	17	0	21
Total Analysis Volume [veh/h]	1	160	113	95	324	2	0	0	1	67	1	84
Pedestrian Volume [ped/h]	0			0			0			1		

Intersection Settings

Priority Scheme	Free		Free		Stop		Stop	
Flared Lane					No		No	
Storage Area [veh]	0		0		0		0	
Two-Stage Gap Acceptance					No		No	
Number of Storage Spaces in Median	0		0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.10
d_M, Delay for Movement [s/veh]	7.92	0.00	0.00	8.02	0.00	0.00	18.62	17.32	10.03	18.19	16.06	9.53
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.24	0.24	0.24	0.00	0.00	0.00	0.72	0.33	0.33
95th-Percentile Queue Length [ft/ln]	0.06	0.06	0.00	5.96	5.96	5.96	0.10	0.10	0.10	18.05	8.13	8.13
d_A, Approach Delay [s/veh]	0.03			1.81			10.03			13.39		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	3.32											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 6: Olympic Dr/N-S Project Street

Control Type:	Two-way stop	Delay (sec / veh):	17.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.053

Intersection Setup

Name	N-S Project Street		Olympic Dr		Olympic Dr	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	N-S Project Street		Olympic Dr		Olympic Dr	
Base Volume Input [veh/h]	7	8	15	290	308	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	2	2	0	26	51	0
Site-Generated Trips [veh/h]	5	12	19	0	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	22	34	316	357	12
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	6	10	93	105	4
Total Analysis Volume [veh/h]	16	26	40	372	420	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.04	0.04	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	17.69	11.57	8.32	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.31	0.31	0.11	0.11	0.00	0.00
95th-Percentile Queue Length [ft/ln]	7.74	7.74	2.76	2.76	0.00	0.00
d_A, Approach Delay [s/veh]	13.90		0.81		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.03					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 7: Olympic Dr/Burns Valley Rd-Old Hwy 53

Control Type:	Signalized	Delay (sec / veh):	12.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.693

Intersection Setup

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	50.00	100.00	100.00	40.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

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Volumes

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Base Volume Input [veh/h]	57	67	63	75	74	19	27	142	61	64	191	99
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	6	0	5	9	0	0	1	4	0	7	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	19	0	0	3	0	0	5	0	0	20
Total Hourly Volume [veh/h]	62	73	44	80	83	16	27	143	60	64	198	83
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	21	12	22	23	4	8	40	17	18	56	23
Total Analysis Volume [veh/h]	70	82	49	90	93	18	30	161	67	72	222	93
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			1			1		
v_di, Inbound Pedestrian Volume crossing major street	1			1			0			1		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Weekday AM B+P

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	109
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	6	0	4	6	0	4	6	0	4	6	0
Maximum Green [s]	20	25	0	20	25	0	20	30	0	20	20	0
Amber [s]	3.0	3.3	0.0	3.0	3.3	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Split [s]	23	29	0	23	29	0	23	34	0	23	34	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	9	0	0	14	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.6	0.0	1.0	1.6	0.0	1.0	1.9	0.0	1.0	1.9	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

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Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C
C, Cycle Length [s]	27	27	27	27	27	27	27	27	27
L, Total Lost Time per Cycle [s]	3.00	3.60	3.60	3.00	3.60	3.00	3.90	3.00	3.90
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	1.00	1.60	1.60	1.00	1.60	1.00	1.90	1.00	1.90
g_i, Effective Green Time [s]	2	4	4	2	4	1	6	2	6
g / C, Green / Cycle	0.06	0.15	0.15	0.07	0.16	0.03	0.21	0.06	0.24
(v / s)_i Volume / Saturation Flow Rate	0.04	0.05	0.03	0.06	0.07	0.02	0.14	0.04	0.20
s, saturation flow rate [veh/h]	1603	1683	1421	1603	1635	1603	1599	1603	1588
c, Capacity [veh/h]	100	247	208	120	260	50	337	102	387
d1, Uniform Delay [s]	12.31	10.25	10.10	12.14	10.16	12.82	9.74	12.29	9.57
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.26	0.29	0.21	3.46	0.41	4.29	0.89	3.26	1.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.33	0.24	0.75	0.43	0.60	0.68	0.70	0.81
d, Delay for Lane Group [s/veh]	15.57	10.54	10.31	15.61	10.57	17.11	10.63	15.55	11.18
Lane Group LOS	B	B	B	B	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.39	0.32	0.19	0.49	0.43	0.18	0.81	0.38	1.15
50th-Percentile Queue Length [ft/ln]	9.68	7.89	4.66	12.33	10.68	4.58	20.28	9.51	28.84
95th-Percentile Queue Length [veh/ln]	0.70	0.57	0.34	0.89	0.77	0.33	1.46	0.68	2.08
95th-Percentile Queue Length [ft/ln]	17.42	14.20	8.38	22.19	19.22	8.25	36.51	17.11	51.91

Movement, Approach, & Intersection Results

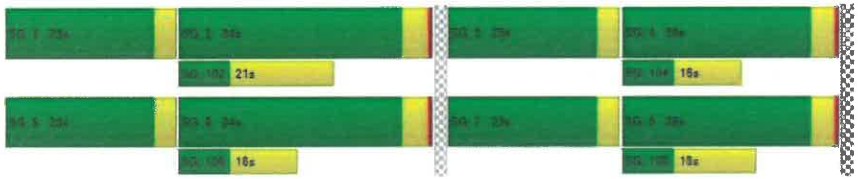
d_M, Delay for Movement [s/veh]	15.57	10.54	10.31	15.61	10.57	10.57	17.11	10.63	10.63	15.55	11.18	11.18
Movement LOS	B	B	B	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	12.24			12.83			11.38			11.99		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.05											
Intersection LOS	B											
Intersection V/C	0.693											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	4.58	4.58	4.58	4.58
l_p,int, Pedestrian LOS Score for Intersection	2.188	2.002	2.084	2.162
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1909	1909	2262	2262
d_b, Bicycle Delay [s]	0.03	0.03	0.23	0.23
l_b,int, Bicycle LOS Score for Intersection	1.923	1.896	1.994	2.231
Bicycle LOS	A	A	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: Burns Valley Rd/N-S Project Street

Control Type:	Two-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.031

Intersection Setup

Name	N-S Project Street		Burns Valley Rd		Burns Valley Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	N-S Project Street		Burns Valley Rd		Burns Valley Rd	
Base Volume Input [veh/h]	8	8	117	17	0	117
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	3	3	11	0	0	11
Site-Generated Trips [veh/h]	7	7	1	10	7	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	11	0	0	11
Total Hourly Volume [veh/h]	18	18	140	27	7	140
Peak Hour Factor	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	5	39	8	2	39
Total Analysis Volume [veh/h]	20	20	157	30	8	157
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.02	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	10.84	9.41	0.00	0.00	7.61	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.17	0.17	0.00	0.00	0.02	0.02
95th-Percentile Queue Length [ft/ln]	4.26	4.26	0.00	0.00	0.43	0.43
d_A, Approach Delay [s/veh]	10.12		0.00		0.37	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.19					
Intersection LOS	B					

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Intersection Level Of Service Report
Intersection 2: Burns Valley Rd/Bowers Ave-Rumsey Rd

Control Type:	Two-way stop	Delay (sec / veh):	13.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.034

Intersection Setup

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Base Volume Input [veh/h]	111	39	9	2	44	7	7	1	86	13	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	1	0	0	1	4	3	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	116	40	9	2	45	11	10	1	89	13	0	0
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	12	3	1	13	3	3	0	26	4	0	0
Total Analysis Volume [veh/h]	136	47	11	2	53	13	12	1	105	15	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.10	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	7.57	0.00	0.00	7.33	0.00	0.00	12.37	12.89	9.16	13.52	12.81	9.84
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.29	0.29	0.29	0.00	0.00	0.00	0.44	0.44	0.44	0.11	0.11	0.11
95th-Percentile Queue Length [ft/ln]	7.27	7.27	7.27	0.10	0.10	0.10	11.06	11.06	11.06	2.66	2.66	2.66
d_A, Approach Delay [s/veh]	5.31			0.22			9.52			13.52		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	6.00											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: N-S Project Street/E-W Project Street

Control Type:	All-way stop	Delay (sec / veh):	7.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.105

Intersection Setup

Name	N-S Project Street			N-S Project Street			E-W Project Street			E-W Project Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	N-S Project Street			N-S Project Street			E-W Project Street			E-W Project Street		
Base Volume Input [veh/h]	0	22	0	0	23	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	44	15	12	31	1	1	3	8	5	2	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	66	15	12	54	1	1	3	8	5	2	15
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	19	4	3	15	0	0	1	2	1	1	4
Total Analysis Volume [veh/h]	3	75	17	14	61	1	1	3	9	6	2	17
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	903	872	918	911
Degree of Utilization, x	0.11	0.09	0.01	0.03

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.35	0.29	0.04	0.08
95th-Percentile Queue Length [ft]	8.78	7.14	1.08	2.11
Approach Delay [s/veh]	7.45	7.52	6.98	7.06
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.40			
Intersection LOS	A			

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Intersection Level Of Service Report
Intersection 4: Burns Valley Rd/E-W Project Street

Control Type:	Two-way stop	Delay (sec / veh):	11.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Burns Valley Rd		Burns Valley Rd		E-W Project Street	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Burns Valley Rd		Burns Valley Rd		E-W Project Street	
Base Volume Input [veh/h]	0	170	185	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	24	5	3	1	1	18
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	175	188	1	1	18
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	50	53	0	0	5
Total Analysis Volume [veh/h]	27	199	214	1	1	20
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	7.71	0.00	0.00	0.00	11.77	9.48
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft/ln]	1.52	1.52	0.00	0.00	2.01	2.01
d_A, Approach Delay [s/veh]	0.92		0.00		9.59	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.89					
Intersection LOS	B					

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Intersection Level Of Service Report
Intersection 5: Olympic Dr/Lakeshore Dr

Control Type:	Two-way stop	Delay (sec / veh):	22.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.448

Intersection Setup

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

Volumes

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Base Volume Input [veh/h]	1	199	138	88	182	1	0	2	2	136	3	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	21	11	0	0	0	0	0	15	0	8
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	199	159	99	182	1	0	2	2	151	3	176
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	53	43	27	49	0	0	1	1	41	1	47
Total Analysis Volume [veh/h]	1	214	171	106	196	1	0	2	2	162	3	189
Pedestrian Volume [ped/h]	0			0			0			1		

Weekday PM B+P

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.01	0.00	0.45	0.01	0.23
d_M, Delay for Movement [s/veh]	7.62	0.00	0.00	8.38	0.00	0.00	22.09	17.64	9.34	22.79	16.40	10.75
Movement LOS	A	A	A	A	A	A	C	C	A	C	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.30	0.30	0.30	0.03	0.03	0.03	2.23	0.92	0.92
95th-Percentile Queue Length [ft/ln]	0.05	0.05	0.00	7.45	7.45	7.45	0.71	0.71	0.71	55.87	23.11	23.11
d_A, Approach Delay [s/veh]	0.02			2.93			13.49			16.31		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	6.42											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 6: Olympic Dr/N-S Project Street

Control Type:	Two-way stop	Delay (sec / veh):	26.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.144

Intersection Setup

Name	N-S Project Street		Olympic Dr		Olympic Dr	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	N-S Project Street		Olympic Dr		Olympic Dr	
Base Volume Input [veh/h]	8	9	16	352	384	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	3	3	0	74	53	0
Site-Generated Trips [veh/h]	13	31	43	0	0	19
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	43	59	426	437	19
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	13	17	125	129	6
Total Analysis Volume [veh/h]	28	51	69	501	514	22
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.09	0.07	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	26.74	14.80	8.74	0.00	0.00	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.90	0.90	0.21	0.21	0.00	0.00
95th-Percentile Queue Length [ft/ln]	22.52	22.52	5.36	5.36	0.00	0.00
d_A, Approach Delay [s/veh]	19.04		1.06		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.78					
Intersection LOS	D					

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Intersection Level Of Service Report
Intersection 7: Olympic Dr/Burns Valley Rd-Old Hwy 53

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.838

Intersection Setup

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	56.00	100.00	100.00	48.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Weekday PM B+P
W-Trans

Volumes

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Base Volume Input [veh/h]	126	120	96	112	106	50	27	235	131	107	257	139
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	18	0	10	11	0	0	5	7	0	10	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	18	0	0	11	0	0	14	0	0	25
Total Hourly Volume [veh/h]	135	138	78	122	117	39	27	240	124	107	267	125
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	38	21	33	32	11	7	65	34	29	73	34
Total Analysis Volume [veh/h]	147	150	85	133	127	42	29	261	135	116	290	136
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			1			1		
v_di, Inbound Pedestrian Volume crossing major street	1			1			0			1		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	109
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	6	0	4	6	0	4	6	0	4	6	0
Maximum Green [s]	20	25	0	20	25	0	20	30	0	20	20	0
Amber [s]	3.0	3.3	0.0	3.0	3.3	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Split [s]	23	29	0	23	29	0	23	34	0	23	34	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	9	0	0	14	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.6	0.0	1.0	1.6	0.0	1.0	1.9	0.0	1.0	1.9	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C
C, Cycle Length [s]	37	37	37	37	37	37	37	37	37
L, Total Lost Time per Cycle [s]	3.00	3.60	3.60	3.00	3.60	3.00	3.90	3.00	3.90
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.60	1.60	1.00	1.60	1.00	1.90	1.00	1.90
g_i, Effective Green Time [s]	4	6	6	4	5	1	11	3	13
g / C, Green / Cycle	0.11	0.15	0.15	0.10	0.14	0.03	0.29	0.09	0.35
(v / s)_i Volume / Saturation Flow Rate	0.09	0.09	0.06	0.08	0.10	0.02	0.25	0.07	0.27
s, saturation flow rate [veh/h]	1603	1683	1421	1603	1611	1603	1586	1603	1581
c, Capacity [veh/h]	182	256	217	164	227	45	460	142	554
d1, Uniform Delay [s]	15.94	14.54	14.08	16.19	15.19	17.72	12.37	16.50	10.64
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.18	0.79	0.43	3.58	1.80	5.45	1.87	4.28	0.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.58	0.39	0.81	0.74	0.64	0.86	0.82	0.77
d, Delay for Lane Group [s/veh]	19.12	15.32	14.51	19.77	16.99	23.17	14.24	20.78	11.49
Lane Group LOS	B	B	B	B	B	C	B	C	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.16	1.00	0.55	1.07	1.22	0.27	2.42	0.94	2.19
50th-Percentile Queue Length [ft/ln]	28.96	25.12	13.66	26.84	30.58	6.74	60.54	23.58	54.66
95th-Percentile Queue Length [veh/ln]	2.09	1.81	0.98	1.93	2.20	0.49	4.36	1.70	3.94
95th-Percentile Queue Length [ft/ln]	52.13	45.21	24.59	48.32	55.04	12.13	108.97	42.44	98.39

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.12	15.32	14.51	19.77	16.99	16.99	23.17	14.24	14.24	20.78	11.49	11.49
Movement LOS	B	B	B	B	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	16.60			18.22			14.85			13.48		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.42											
Intersection LOS	B											
Intersection V/C	0.838											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	9.01	9.01	9.01	9.01
l_p,int, Pedestrian LOS Score for Intersection	2.295	2.114	2.258	2.325
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1383	1383	1639	1639
d_b, Bicycle Delay [s]	1.75	1.75	0.60	0.60
l_b,int, Bicycle LOS Score for Intersection	2.220	2.076	2.284	2.495
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Weekday PM B+P

Intersection Level Of Service Report
Intersection 1: Burns Valley Rd/N-S Project Street

Control Type:	Two-way stop	Delay (sec / veh):	10.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.046

Intersection Setup

Name	N-S Project Street		Burns Valley Rd		Burns Valley Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	N-S Project Street		Burns Valley Rd		Burns Valley Rd	
Base Volume Input [veh/h]	7	6	78	12	0	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	7	8	15	0	0	14
Site-Generated Trips [veh/h]	16	17	3	15	12	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	31	96	27	12	109
Peak Hour Factor	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	8	26	7	3	30
Total Analysis Volume [veh/h]	33	34	105	30	13	119
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.04	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	10.42	9.26	0.00	0.00	7.51	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.27	0.27	0.00	0.00	0.03	0.03
95th-Percentile Queue Length [ft/ln]	6.73	6.73	0.00	0.00	0.68	0.68
d_A, Approach Delay [s/veh]	9.83		0.00		0.74	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.26					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 2: Burns Valley Rd/Bowers Ave-Rumsey Rd

Control Type:	Two-way stop	Delay (sec / veh):	13.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Base Volume Input [veh/h]	98	37	1	0	32	9	10	0	98	2	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	2	0	0	3	5	6	0	10	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	112	39	1	0	35	14	16	0	108	2	1	0
Peak Hour Factor	0.8500	0.9600	0.9600	0.9600	0.9600	0.8500	0.8500	0.8500	0.8500	0.9600	0.8500	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	10	0	0	9	4	5	0	32	1	0	0
Total Analysis Volume [veh/h]	132	41	1	0	36	16	19	0	127	2	1	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free		Free		Stop		Stop	
Flared Lane					No		No	
Storage Area [veh]	0		0		0		0	
Two-Stage Gap Acceptance					No		No	
Number of Storage Spaces in Median	0		0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.12	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.53	0.00	0.00	7.32	0.00	0.00	12.11	12.59	9.23	13.06	11.98	9.65
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.28	0.28	0.28	0.00	0.00	0.00	0.56	0.56	0.56	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	6.95	6.95	6.95	0.00	0.00	0.00	13.94	13.94	13.94	0.48	0.48	0.48
d_A, Approach Delay [s/veh]	5.71			0.00			9.61			12.70		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	6.49											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: N-S Project Street/E-W Project Street

Control Type:	All-way stop	Delay (sec / veh):	7.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.144

Intersection Setup

Name	N-S Project Street			N-S Project Street			E-W Project Street			E-W Project Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	N-S Project Street			N-S Project Street			E-W Project Street			E-W Project Street		
Base Volume Input [veh/h]	0	28	0	0	28	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	60	30	24	64	2	1	6	15	15	4	26
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	88	30	24	92	2	1	6	15	15	4	26
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	23	8	6	24	1	0	2	4	4	1	7
Total Analysis Volume [veh/h]	5	91	31	25	95	2	1	6	15	15	4	27
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	885	849	873	855
Degree of Utilization, x	0.14	0.14	0.03	0.05

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.50	0.50	0.08	0.17
95th-Percentile Queue Length [ft]	12.51	12.52	1.94	4.26
Approach Delay [s/veh]	7.75	7.95	7.23	7.45
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.75			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 4: Burns Valley Rd/E-W Project Street

Control Type:	Two-way stop	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Burns Valley Rd		Burns Valley Rd		E-W Project Street	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Burns Valley Rd		Burns Valley Rd		E-W Project Street	
Base Volume Input [veh/h]	0	145	136	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	43	14	10	3	2	43
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	43	159	146	3	2	43
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	41	38	1	1	11
Total Analysis Volume [veh/h]	44	164	150	3	2	44
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.05
d_M, Delay for Movement [s/veh]	7.60	0.00	0.00	0.00	11.41	9.25
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.10	0.10	0.00	0.00	0.17	0.17
95th-Percentile Queue Length [ft/ln]	2.38	2.38	0.00	0.00	4.16	4.16
d_A, Approach Delay [s/veh]	1.61		0.00		9.35	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.88					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 5: Olympic Dr/Lakeshore Dr

Control Type:	Two-way stop	Delay (sec / veh):	27.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.532

Intersection Setup

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

Volumes

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Base Volume Input [veh/h]	1	176	127	103	185	0	0	3	3	127	1	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	37	18	0	0	0	0	0	33	0	18
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	176	164	121	185	0	0	3	3	160	1	125
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	48	45	33	51	0	0	1	1	44	0	34
Total Analysis Volume [veh/h]	1	193	180	133	203	0	0	3	3	176	1	137
Pedestrian Volume [ped/h]	0			0			0			1		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.01	0.00	0.53	0.00	0.16
d_M, Delay for Movement [s/veh]	7.63	0.00	0.00	8.43	0.00	0.00	21.45	18.92	9.44	27.56	16.70	10.10
Movement LOS	A	A	A	A	A	A	C	C	A	D	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.38	0.38	0.38	0.05	0.05	0.05	2.95	0.59	0.59
95th-Percentile Queue Length [ft/ln]	0.05	0.05	0.00	9.47	9.47	9.47	1.15	1.15	1.15	73.85	14.70	14.70
d_A, Approach Delay [s/veh]	0.02			3.34			14.18			19.91		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	7.25											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 6: Olympic Dr/N-S Project Street

Control Type:	Two-way stop	Delay (sec / veh):	27.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.219

Intersection Setup

Name	N-S Project Street		Olympic Dr		Olympic Dr	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	N-S Project Street		Olympic Dr		Olympic Dr	
Base Volume Input [veh/h]	6	6	13	289	300	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	8	8	0	82	58	0
Site-Generated Trips [veh/h]	26	69	73	0	0	25
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	83	86	371	358	25
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	24	25	109	105	7
Total Analysis Volume [veh/h]	47	98	101	436	421	29
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.22	0.16	0.09	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	27.35	16.36	8.57	0.00	0.00	0.00
Movement LOS	D	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.72	1.72	0.30	0.30	0.00	0.00
95th-Percentile Queue Length [ft/ln]	42.95	42.95	7.49	7.49	0.00	0.00
d_A, Approach Delay [s/veh]	19.92		1.61		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	3.32					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 7: Olympic Dr/Burns Valley Rd-Old Hwy 53

Control Type:	Signalized	Delay (sec / veh):	14.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.802

Intersection Setup

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	50.00	100.00	100.00	48.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Generated with PTV VISTRO
Version 2021 (SP 0-6)
Burns Valley Development
5/2/2022

Volumes

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Base Volume Input [veh/h]	113	91	79	93	77	31	26	231	136	101	206	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	32	0	22	31	0	0	11	15	0	12	25
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	15	0	0	12	0	0	25	0	0	29
Total Hourly Volume [veh/h]	125	123	64	115	108	19	26	242	126	101	218	85
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	33	17	31	29	5	7	65	34	27	59	23
Total Analysis Volume [veh/h]	134	132	69	124	116	20	28	260	135	109	234	91
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			1			1		
v_di, Inbound Pedestrian Volume crossing major street	1			1			0			1		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	
Cycle Length [s]	109
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	6	0	4	6	0	4	6	0	4	6	0
Maximum Green [s]	20	25	0	20	25	0	20	30	0	20	20	0
Amber [s]	3.0	3.3	0.0	3.0	3.3	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Split [s]	23	29	0	23	29	0	23	34	0	23	34	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	9	0	0	14	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.6	0.0	1.0	1.6	0.0	1.0	1.9	0.0	1.0	1.9	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Generated with PTV VISTRO Burns Valley Development 5/2/2022
Version 2021 (SP 0-6)

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C
C, Cycle Length [s]	35	35	35	35	35	35	35	35	35
L, Total Lost Time per Cycle [s]	3.00	3.60	3.60	3.00	3.60	3.00	3.90	3.00	3.90
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.60	1.60	1.00	1.60	1.00	1.90	1.00	1.90
g_i, Effective Green Time [s]	4	5	5	3	5	1	10	3	12
g / C, Green / Cycle	0.10	0.15	0.15	0.09	0.14	0.03	0.29	0.08	0.34
(v / s)_i Volume / Saturation Flow Rate	0.08	0.08	0.05	0.08	0.08	0.02	0.25	0.07	0.20
s, saturation flow rate [veh/h]	1603	1683	1421	1603	1639	1603	1586	1603	1593
c, Capacity [veh/h]	165	253	214	152	233	44	461	132	551
d1, Uniform Delay [s]	15.54	13.86	13.42	15.71	14.20	17.03	11.86	15.98	9.52
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.61	0.62	0.32	3.99	0.86	5.43	1.82	4.78	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.52	0.32	0.82	0.58	0.63	0.86	0.82	0.59
d, Delay for Lane Group [s/veh]	19.15	14.48	13.74	19.70	15.05	22.46	13.68	20.76	9.90
Lane Group LOS	B	B	B	B	B	C	B	C	A
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.03	0.82	0.41	0.97	0.87	0.25	2.26	0.86	1.41
50th-Percentile Queue Length [ft/ln]	25.73	20.55	10.33	24.33	21.84	6.24	56.38	21.59	35.21
95th-Percentile Queue Length [veh/ln]	1.85	1.48	0.74	1.75	1.57	0.45	4.06	1.55	2.54
95th-Percentile Queue Length [ft/ln]	46.32	37.00	18.59	43.79	39.31	11.23	101.48	38.85	63.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.15	14.48	13.74	19.70	15.05	15.05	22.46	13.68	13.68	20.76	9.90	9.90
Movement LOS	B	B	B	B	B	B	C	B	B	C	A	A
d_A, Approach Delay [s/veh]	16.19			17.27			14.26			12.62		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.76											
Intersection LOS	B											
Intersection V/C	0.802											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	8.35	8.35	8.35	8.35
l_p,int, Pedestrian LOS Score for Intersection	2.274	2.079	2.240	2.277
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1440	1440	1707	1707
d_b, Bicycle Delay [s]	1.38	1.38	0.38	0.38
l_b,int, Bicycle LOS Score for Intersection	2.137	2.008	2.299	2.324
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 1: Burns Valley Rd/N-S Project Street

Control Type:	Two-way stop	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name	N-S Project Street		Burns Valley Rd		Burns Valley Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	N-S Project Street		Burns Valley Rd		Burns Valley Rd	
Base Volume Input [veh/h]	8	7	112	15	0	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	3	1	4	5	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	15	198	30	5	195
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	4	50	8	1	49
Total Analysis Volume [veh/h]	16	15	198	30	5	195
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane	No					
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	No					
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.02	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.36	9.60	0.00	0.00	7.70	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.14	0.14	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	3.55	3.55	0.00	0.00	0.28	0.28
d_A, Approach Delay [s/veh]	10.51		0.00		0.19	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.79					
Intersection LOS	B					

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Version 2021 (SP 0-6)

Intersection Level Of Service Report
Intersection 2: Burns Valley Rd/Bowers Ave-Rumsey Rd

Control Type:	Two-way stop	Delay (sec / veh):	19.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.034

Intersection Setup

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Base Volume Input [veh/h]	215	46	11	0	41	28	16	2	219	9	2	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	1	0	0	0	1	2	0	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	217	47	11	0	41	29	18	2	224	9	2	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	54	12	3	0	10	7	5	1	56	2	1	0
Total Analysis Volume [veh/h]	217	47	11	0	41	29	18	2	224	9	2	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.00	0.00	0.00	0.00	0.00	0.05	0.01	0.22	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	7.74	0.00	0.00	7.33	0.00	0.00	15.53	15.99	10.05	19.33	15.15	9.09
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	A
95th-Percentile Queue Length [veh/ln]	0.49	0.49	0.49	0.00	0.00	0.00	1.11	1.11	1.11	0.12	0.12	0.12
95th-Percentile Queue Length [ft/ln]	12.35	12.35	12.35	0.00	0.00	0.00	27.65	27.65	27.65	3.10	3.10	3.10
d_A, Apprcach Delay [s/veh]	6.11			0.00			10.51			18.57		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	7.41											
Intersection LOS	C											

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Burns Valley Development
5/2/2022

Intersection Level Of Service Report
Intersection 3: N-S Project Street/E-W Project Street

Control Type:	All-way stop	Delay (sec / veh):	7.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.059

Intersection Setup

Name	N-S Project Street			N-S Project Street			E-W Project Street			E-W Project Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	N-S Project Street			N-S Project Street			E-W Project Street			E-W Project Street		
Base Volume Input [veh/h]	0	15	0	0	15	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	18	3	3	11	1	0	1	1	4	2	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	44	3	3	37	1	0	1	1	4	2	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	11	1	1	9	0	0	0	0	1	1	1
Total Analysis Volume [veh/h]	6	44	3	3	37	1	0	1	1	4	2	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	903	899	937	906
Degree of Utilization, x	0.06	0.05	0.00	0.01

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.19	0.14	0.01	0.03
95th-Percentile Queue Length [ft]	4.67	3.58	0.16	0.84
Approach Delay [s/veh]	7.23	7.20	6.85	7.02
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.19			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 4: Burns Valley Rd/E-W Project Street

Control Type:	Two-way stop	Delay (sec / veh):	12.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Burns Valley Rd		Burns Valley Rd		E-W Project Street	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Burns Valley Rd		Burns Valley Rd		E-W Project Street	
Base Volume Input [veh/h]	0	151	147	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	2	5	0	1	9
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	268	264	0	1	9
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	67	66	0	0	2
Total Analysis Volume [veh/h]	8	268	264	0	1	9
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	7.79	9.00	0.00	0.00	12.36	9.72
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.04	0.04
95th-Percentile Queue Length [ft/ln]	0.46	0.46	0.00	0.00	1.04	1.04
d_A, Approach Delay [s/veh]	0.23		0.00		9.98	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.29					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 5: Olympic Dr/Lakeshore Dr

Control Type:	Roundabout	Delay (sec / veh):	5.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

Volumes

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Base Volume Input [veh/h]	5	230	85	90	435	0	0	0	5	80	5	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	11	4	0	0	0	0	0	6	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	230	96	94	435	0	0	0	5	86	5	73
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	58	24	24	109	0	0	0	1	22	1	18
Total Analysis Volume [veh/h]	5	230	96	94	435	0	0	0	5	86	5	73
Pedestrian Volume [ped/h]	0			0			0			1		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	96			98			627			240		
Exiting Flow Rate [veh/h]	537			309			10			194		
Demand Flow Rate [veh/h]	5	230	96	94	435	0	0	0	5	86	5	73
Adjusted Demand Flow Rate [veh/h]	5	230	96	94	435	0	0	0	5	86	5	73

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1380.00	1380.00	1420.00	1420.00
B (coefficient)	0.00091	0.00091	0.00102	0.00102	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	240	98	540	6	88	80
Capacity of Entry and Bypass Lanes [veh/h]	1302	1302	1249	728	1142	1142
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1276	1276	1225	714	1119	1119
X, volume / capacity	0.18	0.08	0.43	0.01	0.08	0.07

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.67	0.24	2.23	0.02	0.25	0.22
95th-Percentile Queue Length [ft]	16.85	6.09	55.63	0.53	6.24	5.61
Approach Delay [s/veh]	4.10		7.32	5.12	3.84	
Approach LOS	A		A	A	A	
Intersection Delay [s/veh]	5.72					
Intersection LOS	A					

Generated with PTV VISTRO Burns Valley Development 5/2/2022
Version 2021 (SP 0-6)

Intersection Level Of Service Report
Intersection 6: Olympic Dr/N-S Project Street

Control Type:	Two-way stop	Delay (sec / veh):	24.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.082

Intersection Setup

Name	N-S Project Street		Olympic Dr		Olympic Dr	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	N-S Project Street		Olympic Dr		Olympic Dr	
Base Volume Input [veh/h]	7	8	15	290	306	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	12	19	0	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	26	45	510	539	12
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	7	11	128	135	3
Total Analysis Volume [veh/h]	17	26	45	510	539	12
Pedestrian Volume [ped/h]	0		0		0	

Weekday AM F+P

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.05	0.04	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	24.01	13.32	8.70	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.44	0.44	0.14	0.14	0.00	0.00
95th-Percentile Queue Length [ft/ln]	11.11	11.11	3.46	3.46	0.00	0.00
d_A, Approach Delay [s/veh]	17.55		0.71		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.00					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 7: Olympic Dr/Burns Valley Rd-Old Hwy 53

Control Type:	Signalized	Delay (sec / veh):	14.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.765

Intersection Setup

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	56.00	100.00	100.00	48.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Base Volume Input [veh/h]	95	130	70	160	125	30	35	205	130	80	225	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	6	0	5	9	0	0	1	4	0	7	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	19	0	0	3	0	0	5	0	0	20
Total Hourly Volume [veh/h]	100	136	51	165	134	27	35	206	129	80	232	134
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	34	13	41	34	7	9	52	32	20	58	34
Total Analysis Volume [veh/h]	100	136	51	165	134	27	35	206	129	80	232	134
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree		1			0			1			1	
v_di, Inbound Pedestrian Volume crossing major street[		1			1			0			1	
v_co, Outbound Pedestrian Volume crossing minor stree		1			0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor street[		0			0			1			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			1	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	109
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	6	0	4	6	0	4	6	0	4	6	0
Maximum Green [s]	20	25	0	20	25	0	20	30	0	20	20	0
Amber [s]	3.0	3.3	0.0	3.0	3.3	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Split [s]	23	29	0	23	29	0	23	34	0	23	34	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	9	0	0	14	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
l2, Clearance Lost Time [s]	1.0	1.6	0.0	1.0	1.6	0.0	1.0	1.9	0.0	1.0	1.9	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C
C, Cycle Length [s]	34	34	34	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	3.00	3.60	3.60	3.00	3.60	3.00	3.90	3.00	3.90
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.60	1.60	1.00	1.60	1.00	1.90	1.00	1.90
g_i, Effective Green Time [s]	3	5	5	4	7	1	9	2	10
g / C, Green / Cycle	0.08	0.15	0.15	0.13	0.20	0.03	0.25	0.06	0.28
(v / s)_i Volume / Saturation Flow Rate	0.06	0.08	0.04	0.10	0.10	0.02	0.21	0.05	0.23
s, saturation flow rate [veh/h]	1603	1683	1421	1603	1634	1603	1575	1603	1567
c, Capacity [veh/h]	122	256	216	207	335	55	403	102	448
d1, Uniform Delay [s]	15.41	13.23	12.61	14.31	11.86	16.14	11.89	15.60	11.25
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.15	0.64	0.21	2.69	0.40	4.59	1.71	4.81	1.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.53	0.24	0.80	0.48	0.64	0.83	0.78	0.82
d, Delay for Lane Group [s/veh]	20.56	13.87	12.82	17.00	12.25	20.73	13.60	20.41	12.66
Lane Group LOS	C	B	B	B	B	C	B	C	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.79	0.79	0.28	1.12	0.85	0.28	1.83	0.61	1.88
50th-Percentile Queue Length [ft/ln]	19.70	19.76	6.97	28.06	21.21	7.03	45.74	15.28	47.01
95th-Percentile Queue Length [veh/ln]	1.42	1.42	0.50	2.02	1.53	0.51	3.29	1.10	3.39
95th-Percentile Queue Length [ft/ln]	35.46	35.56	12.54	50.50	38.18	12.66	82.33	27.51	84.63

Movement, Approach, & Intersection Results

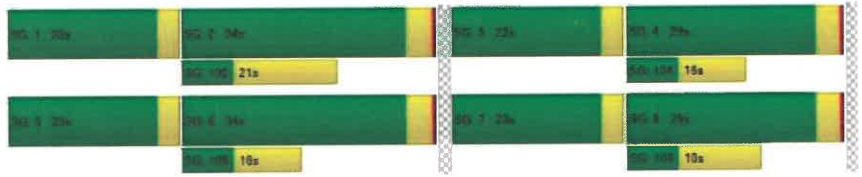
d_M, Delay for Movement [s/veh]	20.56	13.87	12.82	17.00	12.25	12.25	20.73	13.60	13.60	20.41	12.66	12.66
Movement LOS	C	B	B	B	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	16.01			14.65			14.27			14.05		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.64											
Intersection LOS	B											
Intersection V/C	0.765											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	7.61	7.61	7.61	7.61
l_p,int, Pedestrian LOS Score for Intersection	2.256	2.096	2.165	2.251
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1511	1511	1790	1790
d_b, Bicycle Delay [s]	1.01	1.01	0.19	0.19
l_b,int, Bicycle LOS Score for Intersection	2.065	2.102	2.178	2.329
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: Burns Valley Rd/N-S Project Street

Control Type:	Two-way stop	Delay (sec / veh):	11.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.037

Intersection Setup

Name	N-S Project Street		Burns Valley Rd		Burns Valley Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	N-S Project Street		Burns Valley Rd		Burns Valley Rd	
Base Volume Input [veh/h]	8	8	117	17	0	117
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	7	1	10	7	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	21	207	40	7	207
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	5	52	10	2	52
Total Analysis Volume [veh/h]	21	21	207	40	7	207
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane	No					
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	No					
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.03	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	11.74	9.79	0.00	0.00	7.74	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.20	0.20	0.00	0.00	0.02	0.02
95th-Percentile Queue Length [ft/ln]	5.03	5.03	0.00	0.00	0.40	0.40
d_A, Approach Delay [s/veh]	10.76		0.00		0.25	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.01					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 2: Burns Valley Rd/Bowers Ave-Rumsey Rd

Control Type:	Two-way stop	Delay (sec / veh):	16.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.060

Intersection Setup

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Base Volume Input [veh/h]	163	62	15	3	70	11	11	2	123	21	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	1	0	0	1	4	3	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	168	63	15	3	71	15	14	2	126	21	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	16	4	1	18	4	4	1	32	5	0	0
Total Analysis Volume [veh/h]	168	63	15	3	71	15	14	2	126	21	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.13	0.06	0.00	0.00
d_M, Delay for Movement [s/veh]	7.68	0.00	0.00	7.37	0.00	0.00	13.94	14.44	9.49	15.96	14.28	9.29
Movement LOS	A	A	A	A	A	A	B	B	A	C	B	A
95th-Percentile Queue Length [veh/ln]	0.37	0.37	0.37	0.01	0.01	0.01	0.59	0.59	0.59	0.19	0.19	0.19
95th-Percentile Queue Length [ft/ln]	9.37	9.37	9.37	0.15	0.15	0.15	14.69	14.69	14.69	4.77	4.77	4.77
d_A, Approach Delay [s/veh]	5.25			0.25			10.00			15.96		
Approach LOS	A			A			A			C		
d_I, Intersection Delay [s/veh]	6.16											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: N-S Project Street/E-W Project Street

Control Type:	All-way stop	Delay (sec / veh):	7.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.100

Intersection Setup

Name	N-S Project Street			N-S Project Street			E-W Project Street			E-W Project Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	N-S Project Street			N-S Project Street			E-W Project Street			E-W Project Street		
Base Volume Input [veh/h]	0	16	0	0	17	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	44	15	12	31	1	1	3	8	5	2	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	72	15	12	61	1	1	3	8	5	2	15
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	18	4	3	15	0	0	1	2	1	1	4
Total Analysis Volume [veh/h]	3	72	15	12	61	1	1	3	8	5	2	15
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	905	876	919	916
Degree of Utilization, x	0.10	0.08	0.01	0.02

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.33	0.28	0.04	0.07
95th-Percentile Queue Length [ft]	8.26	6.91	0.99	1.84
Approach Delay [s/veh]	7.42	7.49	6.97	7.03
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.38			
Intersection LOS	A			

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Intersection Level Of Service Report
Intersection 4: Burns Valley Rd/E-W Project Street

Control Type:	Two-way stop	Delay (sec / veh):	13.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Burns Valley Rd		Burns Valley Rd		E-W Project Street	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Burns Valley Rd		Burns Valley Rd		E-W Project Street	
Base Volume Input [veh/h]	0	158	173	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	24	5	3	1	1	18
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	283	307	1	1	18
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	71	77	0	0	5
Total Analysis Volume [veh/h]	24	283	307	1	1	18
Pedestrian Volume [ped/h]	0		0		0	

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Version 2021 (SP 0-6)
Burns Valley Development
5/2/2022

Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane					No	
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance					No	
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	7.93	0.00	0.00	0.00	13.50	10.06
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft/ln]	1.46	1.46	0.00	0.00	2.07	2.07
d_A, Approach Delay [s/veh]	0.62		0.00		10.24	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.61					
Intersection LOS	B					

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Intersection Level Of Service Report
Intersection 5: Olympic Dr/Lakeshore Dr

Control Type:	Roundabout	Delay (sec / veh):	5.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

Volumes

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Base Volume Input [veh/h]	0	310	125	95	215	0	0	0	5	120	5	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	21	11	0	0	0	0	0	15	0	8
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	310	146	106	215	0	0	0	5	135	5	168
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	78	37	27	54	0	0	0	1	34	1	42
Total Analysis Volume [veh/h]	0	310	146	106	215	0	0	0	5	135	5	168
Pedestrian Volume [ped/h]	0			0			0			1		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	108			143			465			316		
Exiting Flow Rate [veh/h]	362			488			5			257		
Demand Flow Rate [veh/h]	0	310	146	106	215	0	0	0	5	135	5	168
Adjusted Demand Flow Rate [veh/h]	0	310	146	106	215	0	0	0	5	135	5	168

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1380.00	1380.00	1420.00	1420.00
B (coefficient)	0.00091	0.00091	0.00102	0.00102	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	317	149	328	6	138	177
Capacity of Entry and Bypass Lanes [veh/h]	1287	1287	1193	859	1065	1065
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1262	1262	1170	842	1044	1044
X, volume / capacity	0.25	0.12	0.27	0.01	0.13	0.17

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.97	0.39	1.12	0.02	0.44	0.59
95th-Percentile Queue Length [ft]	24.23	9.79	28.07	0.45	11.11	14.63
Approach Delay [s/veh]	4.62		5.61	4.33	4.81	
Approach LOS	A		A	A	A	
Intersection Delay [s/veh]	4.97					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 6: Olympic Dr/N-S Project Street

Control Type:	Two-way stop	Delay (sec / veh):	40.3
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.212

Intersection Setup

Name	N-S Project Street		Olympic Dr		Olympic Dr	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	N-S Project Street		Olympic Dr		Olympic Dr	
Base Volume Input [veh/h]	8	9	16	352	384	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	31	43	0	0	19
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	47	71	620	676	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	12	18	155	169	5
Total Analysis Volume [veh/h]	27	47	71	620	676	19
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane	No					
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	No					
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.21	0.10	0.08	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	40.28	20.04	9.34	0.00	0.00	0.00
Movement LOS	E	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.31	1.31	0.26	0.26	0.00	0.00
95th-Percentile Queue Length [ft/ln]	32.68	32.68	6.40	6.40	0.00	0.00
d_A, Approach Delay [s/veh]	27.43		0.96		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	1.84					
Intersection LOS	E					

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Intersection Level Of Service Report
Intersection 7: Olympic Dr/Burns Valley Rd-Old Hwy 53

Control Type:	Signalized	Delay (sec / veh):	21.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.867

Intersection Setup

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	56.00	100.00	100.00	48.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Base Volume Input [veh/h]	165	215	110	180	185	60	45	315	165	95	320	175
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	18	0	10	11	0	0	5	7	0	10	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	18	0	0	11	0	0	14	0	0	25
Total Hourly Volume [veh/h]	174	233	92	190	196	49	45	320	158	95	330	161
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	58	23	48	49	12	11	80	40	24	83	40
Total Analysis Volume [veh/h]	174	233	92	190	196	49	45	320	158	95	330	161
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			1			1		
v_di, Inbound Pedestrian Volume crossing major street	1			1			0			1		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	109
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	6	0	4	6	0	4	6	0	4	6	0
Maximum Green [s]	20	25	0	20	25	0	20	30	0	20	20	0
Amber [s]	3.0	3.3	0.0	3.0	3.3	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Split [s]	23	29	0	23	29	0	23	34	0	23	34	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	9	0	0	14	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.6	0.0	1.0	1.6	0.0	1.0	1.9	0.0	1.0	1.9	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

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Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C
C, Cycle Length [s]	49	49	49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]	3.00	3.60	3.60	3.00	3.60	3.00	3.90	3.00	3.90
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	1.00	1.60	1.60	1.00	1.60	1.00	1.90	1.00	1.90
g_i, Effective Green Time [s]	7	9	9	7	9	2	16	4	18
g / C, Green / Cycle	0.13	0.18	0.18	0.15	0.19	0.04	0.33	0.07	0.37
(v / s)_i Volume / Saturation Flow Rate	0.11	0.14	0.06	0.12	0.15	0.03	0.30	0.06	0.31
s, saturation flow rate [veh/h]	1603	1683	1422	1603	1625	1603	1589	1603	1579
c, Capacity [veh/h]	215	295	250	233	304	60	527	117	579
d1, Uniform Delay [s]	20.68	19.40	17.85	20.36	19.13	23.42	15.71	22.46	14.31
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.22
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.77	1.79	0.34	2.63	1.93	6.59	2.52	5.04	7.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.79	0.37	0.81	0.81	0.75	0.91	0.81	0.85
d, Delay for Lane Group [s/veh]	23.44	21.19	18.20	22.99	21.07	30.01	18.23	27.50	21.31
Lane Group LOS	C	C	B	C	C	C	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.90	2.40	0.84	2.06	2.52	0.57	4.46	1.12	5.06
50th-Percentile Queue Length [ft/ln]	47.57	60.04	21.08	51.39	63.09	14.32	111.60	28.09	126.39
95th-Percentile Queue Length [veh/ln]	3.42	4.32	1.52	3.70	4.54	1.03	7.93	2.02	8.74
95th-Percentile Queue Length [ft/ln]	85.62	108.07	37.94	92.50	113.56	25.77	198.23	50.57	218.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.44	21.19	18.20	22.99	21.07	21.07	30.01	18.23	18.23	27.50	21.31	21.31
Movement LOS	C	C	B	C	C	C	C	B	B	C	C	C
d_A, Approach Delay [s/veh]		21.42			21.91			19.25			22.32	
Approach LOS		C			C			B			C	
d_I, Intersection Delay [s/veh]	21.22											
Intersection LOS	C											
Intersection V/C	0.867											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	14.73	14.73	14.73	14.73
I_p,int, Pedestrian LOS Score for Intersection	2.361	2.217	2.343	2.408
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1037	1037	1229	1229
d_b, Bicycle Delay [s]	5.68	5.68	3.84	3.84
I_b,int, Bicycle LOS Score for Intersection	2.413	2.296	2.446	2.568
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 1: Burns Valley Rd/N-S Project Street

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.044

Intersection Setup

Name	N-S Project Street		Burns Valley Rd		Burns Valley Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	N-S Project Street		Burns Valley Rd		Burns Valley Rd	
Base Volume Input [veh/h]	7	6	78	12	0	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	17	3	15	12	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	28	140	36	12	166
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	7	35	9	3	42
Total Analysis Volume [veh/h]	28	28	140	36	12	166
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.03	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	10.99	9.45	0.00	0.00	7.59	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.24	0.24	0.00	0.00	0.03	0.03
95th-Percentile Queue Length [ft/ln]	6.07	6.07	0.00	0.00	0.65	0.65
d_A, Approach Delay [s/veh]	10.22		0.00		0.51	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.62					
Intersection LOS	B					

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Intersection Level Of Service Report
Intersection 2: Burns Valley Rd/Bowers Ave-Rumsey Rd

Control Type:	Two-way stop	Delay (sec / veh):	14.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Burns Valley Rd			Rumsey Rd			Burns Valley Rd			Bowers Ave		
Base Volume Input [veh/h]	137	59	2	0	51	15	16	0	136	3	2	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	2	0	0	3	5	6	0	10	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	151	61	2	0	54	20	22	0	146	3	2	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	15	1	0	14	5	6	0	37	1	1	0
Total Analysis Volume [veh/h]	151	61	2	0	54	20	22	0	146	3	2	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.15	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.62	0.00	0.00	7.34	0.00	0.00	13.27	13.70	9.56	14.63	12.94	8.70
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.33	0.33	0.33	0.00	0.00	0.00	0.70	0.70	0.70	0.04	0.04	0.04
95th-Percentile Queue Length [ft/ln]	8.22	8.22	8.22	0.00	0.00	0.00	17.53	17.53	17.53	0.93	0.93	0.93
d_A, Approach Delay [s/veh]	5.38			0.00			10.04			13.95		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	6.31											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: N-S Project Street/E-W Project Street

Control Type:	All-way stop	Delay (sec / veh):	7.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.133

Intersection Setup

Name	N-S Project Street			N-S Project Street			E-W Project Street			E-W Project Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	N-S Project Street			N-S Project Street			E-W Project Street			E-W Project Street		
Base Volume Input [veh/h]	0	13	0	0	12	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	60	30	24	64	2	1	6	15	15	4	26
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	83	30	24	85	2	1	6	15	15	4	26
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	21	8	6	21	1	0	2	4	4	1	7
Total Analysis Volume [veh/h]	5	83	30	24	85	2	1	6	15	15	4	26
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	889	851	883	863
Degree of Utilization, x	0.13	0.13	0.02	0.05

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.46	0.45	0.08	0.16
95th-Percentile Queue Length [ft]	11.43	11.19	1.92	4.12
Approach Delay [s/veh]	7.67	7.86	7.18	7.40
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.66			
Intersection LOS	A			

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Intersection Level Of Service Report
Intersection 4: Burns Valley Rd/E-W Project Street

Control Type:	Two-way stop	Delay (sec / veh):	12.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Burns Valley Rd		Burns Valley Rd		E-W Project Street	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Burns Valley Rd		Burns Valley Rd		E-W Project Street	
Base Volume Input [veh/h]	0	130	120	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	43	14	10	3	2	43
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	43	243	221	3	2	43
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	61	55	1	1	11
Total Analysis Volume [veh/h]	43	243	221	3	2	43
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.05
d_M, Delay for Movement [s/veh]	7.77	0.00	0.00	0.00	12.82	9.68
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.10	0.10	0.00	0.00	0.18	0.18
95th-Percentile Queue Length [ft/ln]	2.48	2.48	0.00	0.00	4.51	4.51
d_A, Approach Delay [s/veh]	1.17		0.00		9.82	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.40					
Intersection LOS	B					

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Intersection Level Of Service Report
Intersection 5: Olympic Dr/Lakeshore Dr

Control Type:	Roundabout	Delay (sec / veh):	4.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

Volumes

Name	Lakeshore Dr			Lakeshore Dr						Olympic Dr		
Base Volume Input [veh/h]	1	224	131	93	235	0	0	4	4	123	1	95
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	37	18	0	0	0	0	0	33	0	18
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	224	168	111	235	0	0	4	4	156	1	113
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	56	42	28	59	0	0	1	1	39	0	28
Total Analysis Volume [veh/h]	1	224	168	111	235	0	0	4	4	156	1	113
Pedestrian Volume [ped/h]		0			0			0			1	

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Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	117			161			512			230		
Exiting Flow Rate [veh/h]	403			344			2			289		
Demand Flow Rate [veh/h]	1	224	168	111	235	0	0	4	4	156	1	113
Adjusted Demand Flow Rate [veh/h]	1	224	168	111	235	0	0	4	4	156	1	113

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1380.00	1380.00	1420.00	1420.00
B (coefficient)	0.00091	0.00091	0.00102	0.00102	0.00091	0.00091
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	230	172	353	9	160	117
Capacity of Entry and Bypass Lanes [veh/h]	1277	1277	1171	819	1153	1153
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1252	1252	1148	803	1129	1129
X, volume / capacity	0.18	0.13	0.30	0.01	0.14	0.10

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.65	0.46	1.28	0.03	0.48	0.34
95th-Percentile Queue Length [ft]	16.36	11.59	31.95	0.75	11.98	8.40
Approach Delay [s/veh]	4.23		5.99	4.58	4.25	
Approach LOS	A		A	A	A	
Intersection Delay [s/veh]	4.84					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 6: Olympic Dr/N-S Project Street

Control Type:	Two-way stop	Delay (sec / veh):	32.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.221

Intersection Setup

Name	N-S Project Street		Olympic Dr		Olympic Dr	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	N-S Project Street		Olympic Dr		Olympic Dr	
Base Volume Input [veh/h]	6	6	13	289	300	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.7600	1.7600	1.7600	1.7600	1.7600	1.7600
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	69	73	0	0	25
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	80	96	509	528	25
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	20	24	127	132	6
Total Analysis Volume [veh/h]	37	80	96	509	528	25
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.22	0.15	0.09	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	32.95	18.12	8.91	0.00	0.00	0.00
Movement LOS	D	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.64	1.64	0.31	0.31	0.00	0.00
95th-Percentile Queue Length [ft/ln]	41.07	41.07	7.80	7.80	0.00	0.00
d_A, Approach Delay [s/veh]	22.81		1.41		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	2.76					
Intersection LOS	D					

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Intersection Level Of Service Report
Intersection 7: Olympic Dr/Burns Valley Rd-Old Hwy 53

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.834

Intersection Setup

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	56.00	100.00	100.00	48.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Old Hwy 53			Burns Valley Rd			Olympic Dr			Old Hwy 53		
Base Volume Input [veh/h]	131	132	69	152	105	49	33	294	155	54	278	178
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	32	0	22	31	0	0	11	15	0	12	25
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	19	0	0	3	0	0	5	0	0	20
Total Hourly Volume [veh/h]	143	164	50	174	136	46	33	305	165	54	290	183
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	41	13	44	34	12	8	76	41	14	73	46
Total Analysis Volume [veh/h]	143	164	50	174	136	46	33	305	165	54	290	183
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	1			0			1			1		
v_di, Inbound Pedestrian Volume crossing major street	1			1			0			1		
v_co, Outbound Pedestrian Volume crossing minor stree	1			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			1		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	109
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	6	0	4	6	0	4	6	0	4	6	0
Maximum Green [s]	20	25	0	20	25	0	20	30	0	20	20	0
Amber [s]	3.0	3.3	0.0	3.0	3.3	0.0	3.0	3.6	0.0	3.0	3.6	0.0
All red [s]	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Split [s]	23	29	0	23	29	0	23	34	0	23	34	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	9	0	0	14	0	0	9	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.6	0.0	1.0	1.6	0.0	1.0	1.9	0.0	1.0	1.9	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	L	C
C, Cycle Length [s]	39	39	39	39	39	39	39	39	39
L, Total Lost Time per Cycle [s]	3.00	3.60	3.60	3.00	3.60	3.00	3.90	3.00	3.90
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.60	1.60	1.00	1.60	1.00	1.90	1.00	1.90
g_i, Effective Green Time [s]	4	6	6	5	7	1	13	2	14
g / C, Green / Cycle	0.11	0.14	0.14	0.13	0.17	0.03	0.33	0.05	0.35
(v / s)_i Volume / Saturation Flow Rate	0.09	0.10	0.04	0.11	0.11	0.02	0.30	0.03	0.30
s, saturation flow rate [veh/h]	1603	1683	1420	1603	1610	1603	1584	1603	1561
c, Capacity [veh/h]	178	239	202	216	267	50	530	74	545
d1, Uniform Delay [s]	17.10	16.08	15.04	16.54	15.46	18.89	12.41	18.57	11.97
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.08
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.21	1.31	0.24	2.65	1.14	5.37	2.05	5.17	3.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.69	0.25	0.80	0.68	0.66	0.89	0.73	0.87
d, Delay for Lane Group [s/veh]	20.31	17.39	15.27	19.19	16.60	24.25	14.45	23.74	15.32
Lane Group LOS	C	B	B	B	B	C	B	C	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.23	1.26	0.35	1.44	1.36	0.33	3.08	0.51	3.22
50th-Percentile Queue Length [ft/ln]	30.73	31.58	8.72	35.98	33.98	8.15	76.95	12.84	80.44
95th-Percentile Queue Length [veh/ln]	2.21	2.27	0.63	2.59	2.45	0.59	5.54	0.92	5.79
95th-Percentile Queue Length [ft/ln]	55.32	56.84	15.69	64.76	61.17	14.67	138.51	23.11	144.79

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Movement, Approach, & Intersection Results

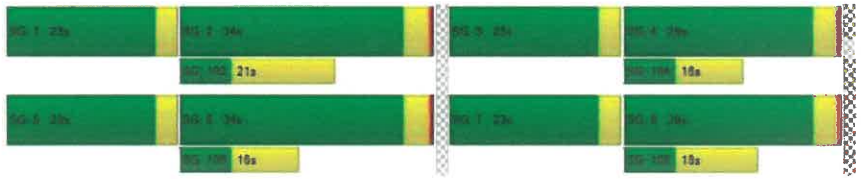
d_M, Delay for Movement [s/veh]	20.31	17.39	15.27	19.19	16.60	16.60	24.25	14.45	14.45	23.74	15.32	15.32
Movement LOS	C	B	B	B	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	18.26			17.86			15.09			16.18		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.64											
Intersection LOS	B											
Intersection V/C	0.634											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	10.18	10.18	10.18	10.18
l_p,int, Pedestrian LOS Score for Intersection	2.288	2.141	2.273	2.334
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1294	1294	1533	1533
d_b, Bicycle Delay [s]	2.45	2.45	1.07	1.07
l_b,int, Bicycle LOS Score for Intersection	2.180	2.152	2.398	2.462
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Weekend PM F+P