

August 20, 2018

Mr. Dominic Mauriello
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RE: **Response to Review Comments on TIS**
Reserve at Hockett Gulch
Eagle, Colorado

Dominic:

McDowell Engineering has reviewed Fox Tuttle Hernandez's July 5th, 2018 comments related to the Reserve at Hockett Gulch in Eagle, Colorado. Please find below our comments addressing their concerns.

General Comments:

1. The report is well organized and generally well written. However, I do have a number of comments that are presented based on the location within the report as follows:

McDowell Engineering: Thank you. Our responses and referenced revisions are detailed in italics below.

Comments on Text, Tables and Figures:

2. Page 7, Figure 2 Conceptual Development Plan: This figure appears to be outdated, illustrating 465 dwelling units and no commercial land use, rather than the 500 dwelling units and 30,000 square feet of commercial development described in the report text. It would be helpful to have a current site plan to understand where the residential and commercial uses are and how they relate to the site accesses onto adjacent roadways.

*McDowell Engineering: **Figure 1** shows the zoning and development plan. The proposed PUD submittal allows up to 500 dwelling units and 30,000sf of commercial space. The residential can exist in any zone, but HD/PUD-2 and HD/PUD-1 can allow up to 400 units, and the remaining 100 units can be located in HD/PUD-3. Commercial can total a maximum of 30,000sf in zone HD/PUD-1 or HD/PUD-3. Additionally, for the HD/PUD-1 zone, any commercial use here would need to be approved with a special use permit.*



Our traffic study is based upon these maximum 'worst-case scenario' capacities for the PUD. Based up the PUD verbiage, we assumed that the commercial development would occur on the western portion of the site. Therefore, the directional distribution assumes 80% of the commercial trips would use the north entrance to Grand Avenue, and the remaining 20% would use Sylvan Lake, based upon the HD/PUD-3 parcel being the primary development area for commercial.

If there is a future special use permit submittal that contains a significant amount of commercial use in the HD/PUD-1 zone and would shift the assumed traffic distribution, a revised traffic study would need to be submitted. This determination for a revised traffic study can be a part of the special use review process.

A description of the PUD and recommendation for an updated traffic study with modifications to the commercial development has been included in **Section 4.1** and **Section 5.0** of the revised report.

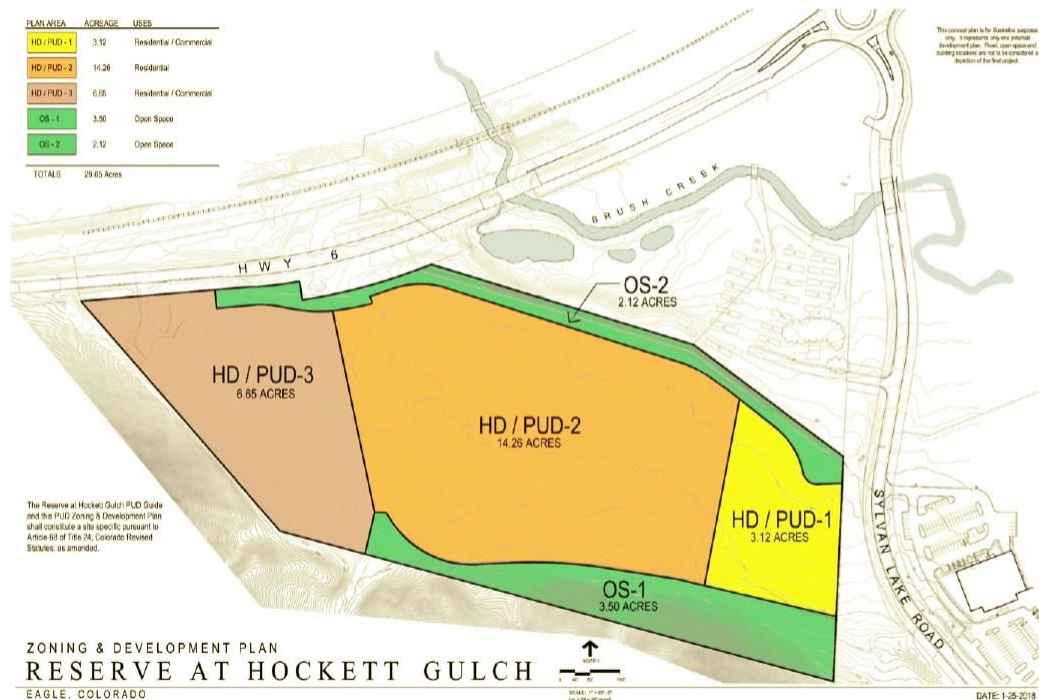


Figure 1: Zoning and Development Plan

- Page 8, Section 2.1 Description of Existing Transportation Facilities: The report indicates that the existing speed limit on Grand Avenue at the north site access is 35 – 55 MPH. Based on a review in Google Earth Street View, it appears that the posted speed limit is 45 MPH in both directions in the vicinity of the northern site access on Grand Avenue. This is significant since the posted speed limit is used when calculating the configuration of auxiliary lanes (discussed later in the report). The



eastbound speed limit is reduced to 35 MPH on the approach to Sylvan Lake Road and the westbound speed limit is increased to 55 MPH just west of the proposed north site access.

McDowell Engineering: In Section 2.1, McDowell Engineering has specified the location of the speed limit signs near the north site access.

4. Page 9, Section 2.2 Traffic Data Collection: The traffic counts used to document existing conditions were collected in the Fall of 2015 and were just over 2 years old when the report was written. Some agencies require traffic counts to be less than two years old for use in a TIS. These counts may still be representative of existing traffic conditions and I am not suggesting that they need to be recounted, but it would be helpful to have some means of verifying that they are still representative.

McDowell Engineering: Traffic data was collected in October 2015. McDowell Engineering initially completed the study analysis in January of 2016 when the project was known as the "JHY Property." Since then, the project has changed per the client's request and traffic counts were not re-taken.

*There has no major construction or development that would impact the analysis area since the time when the traffic counts were taken. The October 2015 traffic counts were forecasted to accurately reflect the Town of Eagle's current and forecasted growth that will impact the traffic network. Therefore, updated counts are not considered necessary. A statement to this point has been included in **Section 2.2** and **Section 3.2** of the revised report.*

5. Figures 3 – 15: These figures illustrate traffic volumes or trip distribution percentages at the 8 intersections included in the analysis and the intersections are keyed to an aerial photograph for orientation. It would be helpful to reorder posting of the traffic data in Intersections 1 – 4 across the top of the page so that the intersections are located consistent with their position on the aerial photograph. This would allow the reader to review the traffic from intersection to intersection in the direction that traffic would be traveling (post Intersection 4 on the left, then 3, then 2 and then 1 on the right).

McDowell Engineering: McDowell Engineering revised the layout of Figures 3 – 15 to read easier. These are included in the revised study.

6. Page 11, Section 3.2 Background Traffic Growth: The report lists a 2.00% growth rate for local movements and 20-year CDOT growth factors for Grande Avenue. Just to be clear to the reader, the "2.00%" growth rate should be called out as an "annual" growth rate.



McDowell Engineering: McDowell Engineering added the word “annual” in **Section 3.2** of the revised study.

7. Page 16, Figure 6 Year 2040 Background Traffic: The weekday morning and evening peak hour traffic flow between intersections along Sylvan Lake Road should be reviewed for consistency with anticipated time of day traffic patterns and adjacent land uses. For example, given the predominant residential nature of the land uses along Sylvan Lake Road, I would expect there to be more traffic in the morning toward Grand Avenue than away from Grand Avenue and the reverse in the evening peak hour. The southbound flow at Intersection 6 is the reverse of this pattern. In addition, the southbound flow between Intersection 6 (east site access) and 7 (Capitol Street) along Sylvan Lake Road does not seem to track from one intersection to the next. This should be reviewed and/or some explanation should be provided, as it effects future intersection evaluations.

McDowell Engineering: We reviewed the background model and found that some of the SAT/AM/PM volumes were transposed. The figures have been updated in the revised study. All Synchro and Rodel analyses have been updated.

8. Page 18, Section 3.4 Background Traffic Operations Summary: The report describes the likely deterioration of traffic operations in the future and the need for additional intersection capacity improvements or access restrictions. It would be helpful to provide more specifics on potential mitigation measures at these study area intersections, even if the project traffic has not been added yet. The report also references future roundabouts at Sylvan Lake Road/Capitol Street and Sylvan Lake Road/Eagle Ranch Road. It would seem appropriate to mention the potential for traffic signals or roundabouts at these two intersections, as there may not be room to construct a roundabout, particularly at the Eagle Ranch Road intersection given existing adjacent development.

McDowell Engineering: McDowell Engineering has added potential mitigation strategies to **Sections 3.4 and 4.4**. These descriptions include the construction of roundabouts or signals at the Sylvan Lake Road/Capitol Street and Sylvan Lake Road/Eagle Ranch Road intersections. We have also included a list of assumed/modeled Year 2040 roadway improvements in **Section 3.1**.

9. Page 19, Section 4.1 Trip Generation: The commercial development described in the text totals to only 25,000 square feet, where the initial project description includes 30,000 square feet. The 5,000 square feet of shopping center use appears to have been overlooked in this text description. Also, the footnote reference on the Trip Generation Manual should be 9 rather than 4. Lastly, the trip generation calculations in Table 3 include a 5% trip reduction for multimodal access (likely bicycle and/or pedestrian trips). While I do not disagree with this trip reduction, it



should be described in the text, along with the on-site and off-site transportation facilities that will help it occur.

McDowell Engineering: McDowell Engineering has added the 5,000 square-feet of shopping center to the project description in Section 4.1 of the revised study.

McDowell Engineering updated the footnote reference for the Trip Generation Manual in the revised study.

*McDowell Engineering has added a paragraph in **Section 4.1** of the revised study explaining the five percent (5%) multimodal trip reduction.*

10. Page 20, Table 3 Project Trip Generation: The trip generation calculations have routinely used the average trip rates in the ITE Trip Generation Manual for each land use, even when there are fitted curve equations available. Normally the use of fitted curve equations is recommended. In some cases, the fitted curve equations would result in significantly higher trip generation results. If the average rates are to be used, then a case should be made in the report text as to why that is appropriate at this location for these land use types. This is particularly important in the event that trip generation is used as the measure for determining the cost sharing of needed off-site transportation system improvements in the area.

McDowell Engineering: McDowell Engineering reviewed our trip generation analysis. Figure 4.2 of the Trip Generation Handbook gives the process for selecting the appropriate use of the average rate of the equation for determining project trip generation. The results of this flow chart for ITE Land Use #220 (Multifamily Housing) with 500 dwelling units are:

- *Average Weekday – Use Fitted Curve Equation*
- *Average Saturday – Not within data extremes. Collect local data.*
- *Saturday Peak Hour – Not within data extremes. Collect local data.*
- *Morning Peak Hour – Not within data extremes. Collect local data.*
- *Evening Peak Hour - Not within data extremes. Collect local data.*

As the Eagle Valley does not have a comparable shared land use, it was determined that using the average rate was appropriate for all analysis periods for Land Use #220. The weekday volume increase resulting from using the fitted curve equation is 2.2%, which is considered minimal in traffic analysis.

The average rate method was also deemed appropriate for all commercial land uses since the square-footage of each land use is relatively low for each use – 5,000sf to 15,000sf. The fitted curve equation typically overestimates the anticipated number of trips for small commercial uses.



*An explanation for the trip generation methodology determination has been added to **Section 4.1** of the revised traffic study.*

11. Page 22, Figure 7 Residential Directional Distribution: There appears to be an error in the directional distribution of site traffic in Intersection 6. This figure distributes 5% of the inbound site traffic to a northbound right turn, which would access the property across Sylvan Lake Road. I believe this should be a northbound left turn into the site. Unfortunately, this distribution is then applied to all of the near term and long-term traffic assignment scenarios detailed in Figures 10 through 15. This small amount of traffic assigned to the other side of Sylvan Lake Road is not going to change any of the findings of the study, but it should be corrected if the analysis is redone.

McDowell Engineering: McDowell Engineering has revised the distribution and dependent figures and calculations to reflect the five percent (5%) inbound distribution as a northbound left at Intersection 6 in the revised study.

12. Page 23 - 24, Figures 8 and 9 Commercial Directional Distribution: The study assumes that the commercial land uses will not generate any traffic to and from town on Capitol Street. It seems that there would be some small percentage of commercial traffic that would use Capitol Street for site access. If so, this would influence the traffic assignment in Figures 10 through 15. If the analysis is redone, this should be reconsidered. Also, on Figure 9 only, there appears to be an error in Intersection 4. It shows 5% of the traffic on the northbound approach turning left to go west on Grand Avenue. I believe the intent was for this 5% of the traffic to turn right onto Grand Avenue toward downtown. This is the case on Figure 8. This small distribution error is then perpetuated in the traffic assignment on Figures 12 and 15. Again, this should be corrected if the analysis is redone or updated.

McDowell Engineering: McDowell Engineering accounted for a percentage of traffic traveling in and out of downtown Eagle as seen in Figures 9A and 9B. It is most likely that egressing site traffic will disperse between 5th, 4th, 3rd, or 2nd Streets before reaching Capitol Street. The northbound left movement is restricted at Capitol Street. Therefore, it is also likely that commercial patrons will utilize the east-west streets to access the Reserves at Hockett Gulch site from downtown Eagle as shown in our previous submittal.

McDowell Engineering did reallocate 5% of the project-generated traffic at Sylvan Lake Road and Capitol Street to access Eagle Ranch Village per the reviewer's direction.

*Refer to the revised commercial distribution **Figure 9A** and **Figure 9B**. All associated figures and calculations have been updated accordingly.*

13. Page 32, Section 4.4 Operations and HCM Analysis: The reference to Table 2 should be changed to Table 1.

Page 34, Section 4.4 Operations and HCM Analysis: The report highlights the congestion and deteriorating Level of Service on Grand Avenue at Eby Creek Road and Capitol Street and recommends that the Town monitor these intersections. While much of the traffic growth over time comes from other sources, this project will add at least 240 trips to these intersections in the evening peak hour. It would be helpful to identify what the congestion mitigation measures could be and potentially what percentage of the future traffic is attributed to this development, should a cost sharing mechanism be needed.

The discussion about the Grand Avenue/Brush Creek Road intersection indicates that a future roundabout at this location will operate acceptably. However, Table 4 indicates that the westbound approach to the intersection will operate at Level of Service F in the Year 2040 evening peak hour. This apparent discrepancy should be clarified and if mitigation measures are needed, they should be identified.

The discussion about the north site access on Grand Avenue indicates that the northbound left turning movement will have excessive delays and traffic may turn right and make a U-turn at the Sylvan Lake Road roundabout. This diversion would cause over 4,000 feet of out of direction travel. It does not appear that this U-turning traffic has been accounted for in the roundabout analysis that was done for the Grand Avenue/Sylvan Lake Road roundabout. Table 4 shows a roundabout at this location. Is this being considered to mitigate the “excessive delays”? Was a traffic signal warrant evaluation conducted? This topic should receive additional discussion.

***McDowell Engineering:** McDowell Engineering has changed the reference in **Section 4.4** from Table 2 to Table 1 in the revised study.*

*McDowell Engineering has added potential mitigation strategies to **Section 3.4** and **Section 4.4** of the revised study.*

*McDowell Engineering has added a percentage of Year 2040 traffic volume impact for the Grand Avenue/Eby Creek Road and Grand Avenue/Capitol Street intersections in **Section 4.4.1** and **4.4.2** of the revised report, respectively.*

The Town of Eagle has adopted a transportation impact fee which it calls a “Street Improvement Fee.” Pursuant to the Municipal Code this fee is used to offset the growth-related costs incurred by the Town and to provide for new and expanded facilities necessary to address expanded population and economic activity. This impact fee system provides an equitable system for fairly distributing the costs of future improvements to the roadway system directly related to development



activities. The comment suggests that the PUD should contribute its fair share to the improvement of Grand Avenue. The Town's Street Improvement Fee provides this fair share. A new **Section 4.10** has been added to the revised report to address the Town's Street Improvement Fee.

As described in **Section 3.1**, McDowell Engineering assumed that the Grand Avenue/Brush Creek Road Extension roundabout would be constructed as a two-lane roundabout with two entry lanes and two circulating lanes. The northbound movement will only require one approach lane. This modification results in acceptable Levels of Service through the Year 2040 planning horizon, as shown in **Table 4**.

A cursory travel time analysis was done to compare the amount of time it would take a driver leaving the north site access to make a U-turn at the Sylvan Lake Road roundabout. The result was approximately 90 seconds. Refer to the North Access U-Turn Travel Time Analysis in the Appendix. This is comparable to the anticipated Year 2040 delay for the northbound left movement.

- Saturday HCM LOS F with 86.5 seconds of delay
- Morning HCM LOS F with 130 seconds of delay
- Evening HCM LOS F with 502 seconds of delay

Therefore, it was determined that 50-60% of the vehicles wanting to make a northbound left movement out of the north site access may use the Sylvan Lake Road roundabout to make the movement in Year 2040. This is described in **Section 4.2** and reflected in **Figure 8B** and **Figure 9B**. The calculations and table have been updated accordingly.

14. Page 35, Section 4.8 Sight Distance: The report documents acceptable intersection sight distance at the north site access on Grand Avenue but neglects to evaluate the sight distance at the proposed east site access on Sylvan Lake Road. This should be addressed.

McDowell Engineering: McDowell Engineering has added sight distance analysis for the Sylvan Lake Road access to **Section 4.8** of the revised study.

15. Page 37, Table 5 Auxiliary Turn Lane Requirements: The assumed design speed for the north site access on Grand Avenue appears to be 55 MPH. Given the current posted speed limit of 45 MPH, this may result in longer turn lanes than warranted. That said, if the goal is to be consistent with the approach outline in the *State Highway Access Code*, the analysis should use the "NR-B > 40 MPH" criteria. The turn lane designs detailed in Table 5 should be updated using these criteria.

McDowell Engineering: McDowell Engineering has updated **Table 5 – Auxiliary Turn Lane Requirements**. Please note that we have broken the table into three sections for ease of reading.



- *Table 5A: Auxiliary Turn Lane Requirements in Year 2020*
- *Table 5B: Auxiliary Turn Lane Requirements in Year 2022*
- *Table 5C: Auxiliary Turn Lane Requirements in Year 2040*

16. Page 38, Section 5.0 Recommendations and Conclusions: The traffic study concludes that the project traffic can be “accommodated into the greater Town of Eagle roadway network.” However, the study does not identify what role this project will have in funding any off- site improvements, even though the need for future off-site improvements has been identified. Clearly there will be the need to fund roadway capacity improvements in the Grand Avenue corridor as the Town of Eagle approaches build-out and the background traffic continues to grow. In this context, it would seem logical to develop a “percent contribution cost sharing model” where this development can help fund needed improvements consistent with its additional traffic demand on Grand Avenue. For example, using CDOT’s 20-year growth factor and existing counts, it is projected that Grand Avenue may carry over 23,000 vehicles per day between Eby Creek Road and Sylvan Lake Road in 20 years. The Reserve at Hockett Gulch project may add approximately 3,900 trips per day to this portion of Grand Avenue. This would suggest that this project will contribute approximately 17% of the traffic in the area. This may be helpful in determining a reasonable cost sharing for off-site improvements.

*McDowell Engineering: The Town of Eagle has adopted a transportation impact fee which it calls a “Street Improvement Fee.” Pursuant to the Municipal Code this fee is used to offset the growth-related costs incurred by the Town and to provide for new and expanded facilities necessary to address expanded population and economic activity. This impact fee system provides an equitable system for fairly distributing the costs of future improvements to the roadway system directly related to development activities. The comment suggests that the PUD should contribute its fair share to the improvement of Grand Avenue. The Town’s Street Improvement Fee provides this fair share. A new **Section 4.10** has been added to the revised report to address the Town’s Street Improvement Fee.*

We look forward to working with the Reserve at Hockett Gulch developers & planners and Town of Eagle to ensure that the traffic concerns for this project are sufficiently addressed.

Sincerely,
McDowell Engineering



Kari McDowell Schroeder, PE, PTOE
Traffic/Transportation Engineer



Transportation Impact Study

for

The Reserve at Hockett Gulch Eagle, Colorado



January 30, 2018

Revised August 20, 2018

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Statement of Engineering Qualifications

Kari J. McDowell Schroeder, PE, PTOE is a Transportation and Traffic Engineer for McDowell Engineering, LLC. Ms. McDowell Schroeder has over twenty-one years of extensive traffic and transportation engineering experience. She has completed numerous transportation studies and roadway design projects throughout the State of Colorado. Ms. McDowell Schroeder is a licensed Professional Engineer in the State of Colorado and has her certification as a Professional Traffic Operations Engineer from the Institute of Transportation Engineers.

Traffic Impact Study for the Reserve at Hockett Gulch

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1.0 Project Description

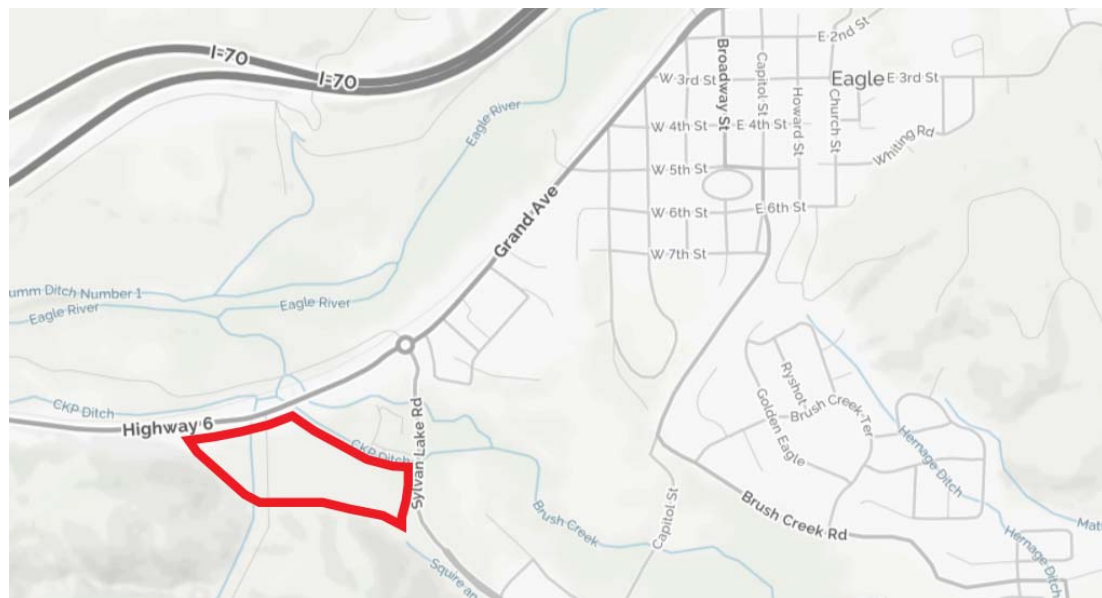
McDowell Engineering has prepared this Transportation Impact Study for the proposed Reserve at Hockett Gulch residential and commercial development. The purpose of this study is to forecast and analyze the impacts of the additional traffic volumes associated with the proposed project. Recommendations to mitigate any traffic impacts are also included. The analysis complies with the Town of Eagle standards.

The applicant is proposing to construct 30,000 square-feet of commercial property and 500 residential dwelling units on the 30-acre site. The project is planned for Phase 1 construction to start in Year 2020 and Phase 2 construction to start in Year 2022.

- Phase 1: 200 Apartments in Year 2020
- Phase 2: 200 Apartments in Year 2020
- Phase 3: 100 Multifamily Units & 30,000sf Commercial Use in Year 2022

The Reserve at Hockett Gulch property is located on the south side of Grand Avenue, and approximately 2,000 feet west of the Sylvan Lake Road roundabout. Refer to the Area Map in **Figure 1**.

Figure 1: Area Map



1.1 Project Access

The site is currently accessed from Grand Avenue (Highway 6). The historic site access is located 2,000 feet west of the Sylvan Lake Road roundabout.

The applicant is proposing to improve the current (northern) site access to Grand Avenue. Any remaining field accesses to Grand Avenue will be removed. An additional, secondary access to Sylvan Lake Road will be constructed opposite of the medical center's north site access. In this concept plan scenario, an internal roadway connects the two site accesses. A trail will connect the site to a new trailhead at Hockett Gulch.

The access locations are depicted in the Zoning and Development Plan - **Figure 2**.

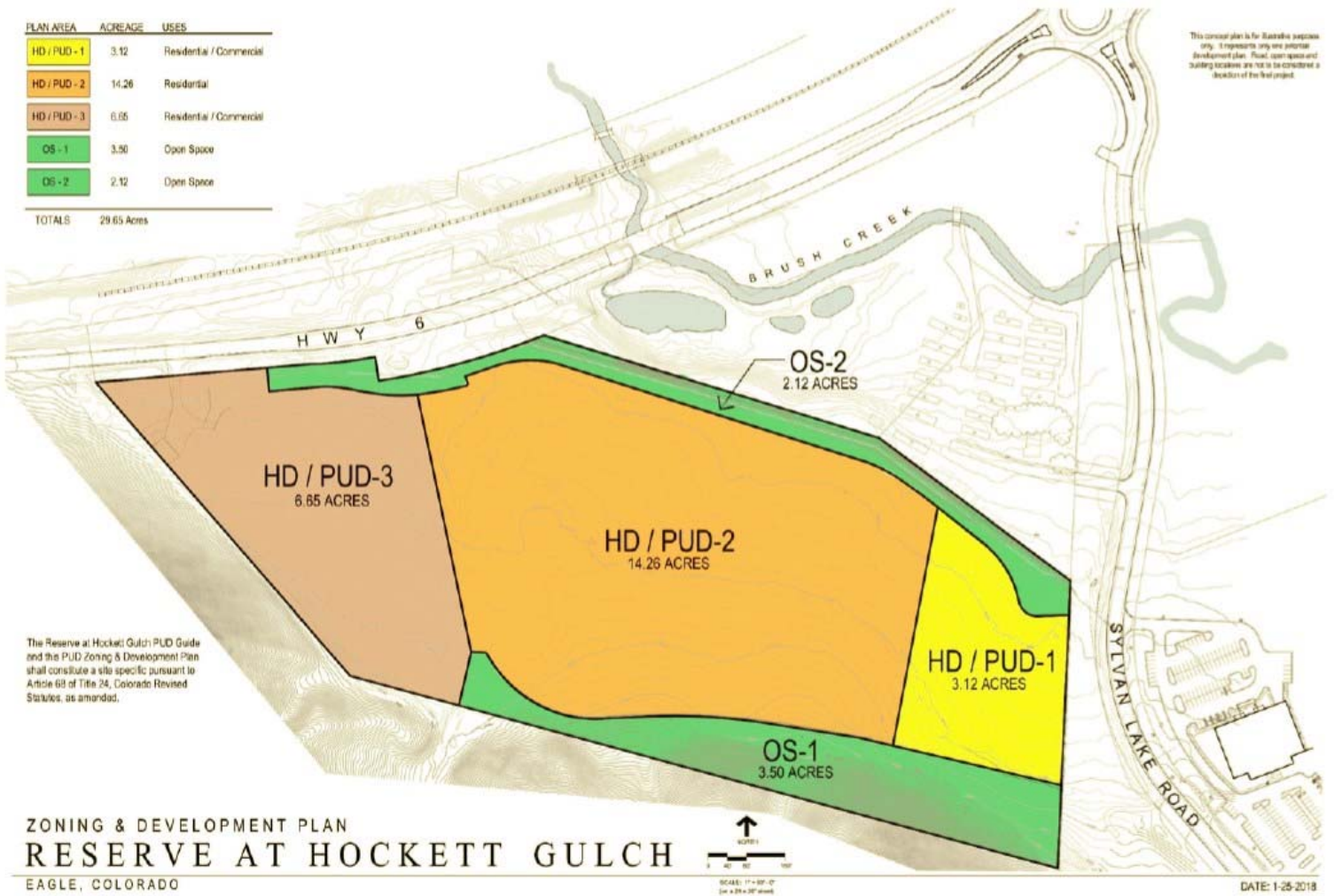
1.2 Traffic Study Scope

This traffic study evaluates peak hour traffic operations at the following intersections:

- Grand Avenue (US 6) & Eby Creek Road
- Grand Avenue (US 6) & Capitol Street
- Grand Avenue (US 6) & Brush Creek Road
- Grand Avenue (US 6) & Sylvan Lake Road
- Grand Avenue (US 6) & West Site Access
- Sylvan Lake Road & East Site Access
- Sylvan Lake Road & Capitol Street
- Sylvan Lake Road & Eagle Ranch Road

The traffic study scope was reviewed with Town of Eagle staff prior to the completion of this study. The traffic study scoping form can be found in the **Appendix**.

Figure 2: Zoning and Development Plan



2.0 Existing Conditions

2.1 Description of Existing Transportation System

Grand Avenue (Highway 6) is a two-lane, paved highway through the Town of Eagle. It connects to the communities of Gypsum/Dotsero to the west and Edwards/Avon to the east. CDOT devolved US 6 to the Town of Eagle in 2017. Therefore, Highway 6 is referred to as Grand Avenue in this report. CDOT previously classified this roadway as an R-A, regional highway near the project site and an NR-B highway, non-rural arterial in the area of historic downtown Eagle.

The posted speed limit of Grand Avenue is 35 - 55mph. At the north site access, the posted speed limit in both directions is 45 mph. The eastbound speed limit reduces to 35mph on the approach to Sylvan Lake Road. The westbound speed limit increases to 55mph just west of the proposed north site access.

Sylvan Lake Road connects Grand Avenue to Brush Creek Road, extending through the Eagle Ranch commercial area. In the vicinity of the project site, it is a two-lane, paved collector street with a posted speed limit of 25 - 35mph. The posted speed limit at the proposed east site access is 35mph. The posted speed limit at on Sylvan Lake Road at Capitol Street in Eagle Ranch Village is 25mph. The roadway section is wider in the Eagle Ranch commercial area to accommodate future capacity needs. The intersection of US 6 and Sylvan Lake Road is controlled by a full movement roundabout.

Capitol Street extends south from Grand Avenue (US 6) and downtown Eagle to Sylvan Lake Road. It is a two-lane, paved roadway with on-street parking in the developed areas at both ends. In downtown, there are drainage dips that cross the roadway and regulate traffic speed. The intersections at both ends are controlled by stop signs on Capitol Street. Northbound traffic approaching Grand Avenue is limited to a right-out only movement. Signage restricts trucks from using Capitol Street and directs them to use alternate routes.

Brush Creek Road is currently a paved, two-lane major collector with a posted speed limit of 35mph. There are plans for a Brush Creek Road extension that will extend Brush Creek Road west of the Capitol Street intersection. This extension will connect through to Grand Avenue. It is proposed to be a paved, two-lane road. The intersection with Capitol Street is currently controlled by an all-way (3-way) stop. It is assumed that the Brush Creek Road extension will be constructed by Year 2040 and have a roundabout at the intersection with Grand Avenue.

2.2 Traffic Data Collection

Traffic data was collected at the following intersections in late September and early October of 2015.

- Grand Avenue (US 6) & Eby Creek Road
- Grand Avenue (US 6) & Capitol Street
- Grand Avenue (US 6) & Sylvan Lake Road / Violet Lane
- Sylvan Lake Road & Capitol Street
- Sylvan Lake Road & Eagle Ranch Road

Turning movement counts were collected from 7:00 – 9:00am and 4:00 – 6:00pm on a weekday and from 11:00am – 1:00pm on a Saturday. School was in session.

There has been no major construction or development that would impact the analysis area since the time when the traffic counts were taken. Refer to **Section 3.1** for additional detail on the background growth forecasts. Historic growth rates were applied to future volumes to account for ancillary growth to the roadway network.

There was construction activity on the Brush Creek Bridge, west of the US 6/Sylvan Lake Road roundabout throughout the count period. However, a fully functioning and traffic-controlled temporary bridge was in place. Therefore, the traffic data collected is considered accurate.

There were mountain bike events in the Town of Eagle on two of the Saturdays that were counted. However, similar sporting events occur frequently in the Town, and are considered typical weekend traffic.

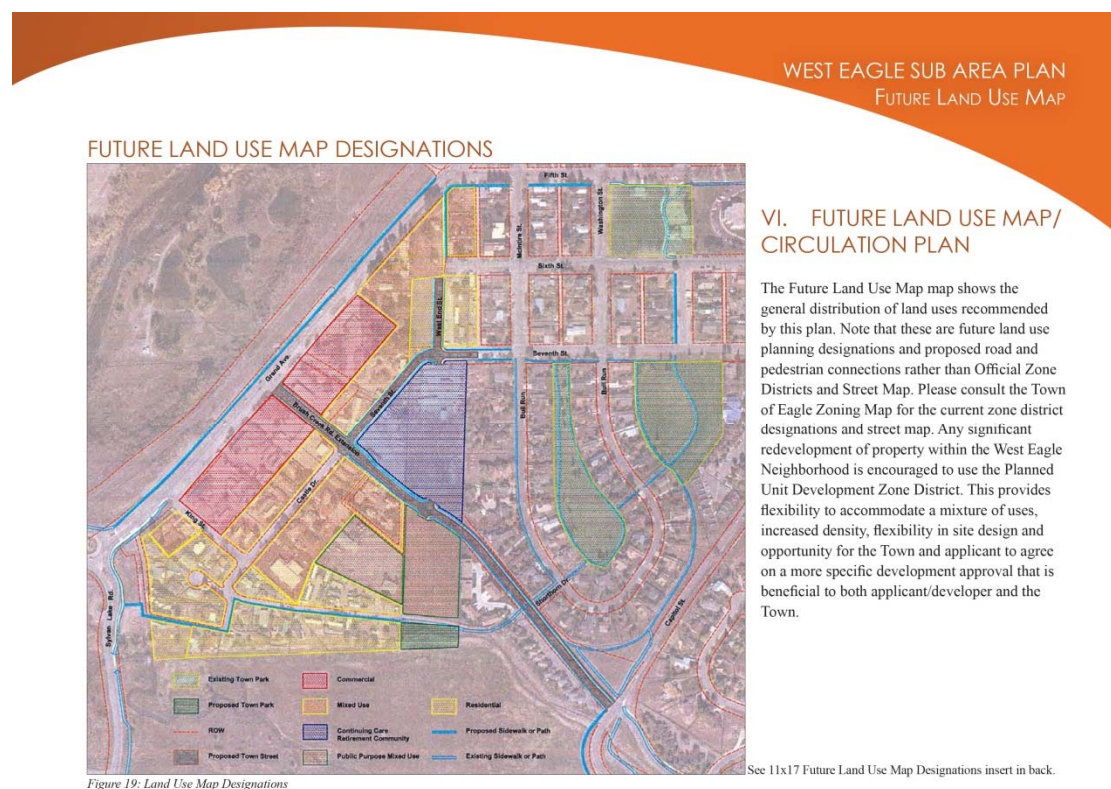
It was noted that there were several illegal northbound left turn movements observed at the intersection of US 6 and Capitol Street. This movement was as high as 6 vehicles per hour (vph) during the Saturday peak hour. The movement is restricted by a small median island on Capitol Street. However, it is physically possible to make an illegal left turn onto US 6 from this location.

3.0 Future Traffic Projections

3.1 Background Infrastructure Assumptions

Brush Creek Road Extension: The Town of Eagle has plans to construct the Brush Creek Road extension from Capitol Street to US 6 in the future. This will not be completed by Year 2022, but is anticipated prior to the long range planning Year 2040. An excerpt from the Town of Eagle's *West Eagle Sub Area Plan*² is shown in **Reference 1**. Per the *Haymeadow Traffic Study*³, the intersections on either end of the Brush Creek Road extension will require a roundabout.

Reference 1: Haymeadow Development's Proposed Brush Creek Road/Sylvan Lake Road



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Grand Avenue Capacity Improvements: Similar to the *Haymeadow Traffic Study*³, it has been assumed that Grand Avenue between Eby Creek Road and Sylvan Lake Road will have been widened to two through lanes in each direction by Year 2032 or improved with roundabouts at key intersections to accommodate future traffic projections.

Sylvan Lake Road Improvements: Per the *Haymeadow Traffic Study*³, it is anticipated that Sylvan Lake Road will function adequately as a two-lane roadway in areas without intersections. The same was not found to be true in the Year 2040 analysis included in this report. Rather, Sylvan Lake Road functions well, but the side streets do not. Refer to **Section 3.4**.

The area around Capitol Street and Eagle Ranch Road will likely need to be widened to accommodate two through lanes in each direction and/or auxiliary turn lanes. The paved width is already available, but may require the removal of existing on-street parking in some spots. It is understood that this was planned when the roadway was originally designed and constructed. A roundabout or intersection capacity improvements may be required at the Sylvan Lake Road intersections with Capitol Street and Eagle Ranch Road.

Additional Road Improvements: By Year 2040 background traffic conditions, the following roadway improvements are anticipated and were modeled in the long-term traffic model:

Grand Avenue & Eby Creek Road: (Year 2040 Modified Intersection Analyses)

- Add a second eastbound approach lane into the roundabout
- Add a second northbound entry lane into the roundabout
- Stripe two circulating lanes through the entire roundabout.
- The addition of a free southbound right bypass lane was not considered. This improvement would require ROW acquisition and bridge widening, yet still not improve intersection operations to acceptable Levels of Service through Year 2040 traffic conditions.

Grand Avenue & Capitol Street: (Year 2040 Intersection Analyses)

- Widen Grand Avenue to a 4-lane roadway from Sylvan Lake Road to Eby Creek Road.
- Construct this future intersection as a two-lane roundabout with two entry lanes and two circulating lanes. The northbound movement will only require one approach lane.

Grand Avenue & Brush Creek Road Extension: (Year 2040 Intersection Analyses)

- Widen Grand Avenue to a 4-lane roadway from Sylvan Lake Road to Eby Creek Road.

Grand Avenue & Sylvan Lake Road/Violet Lane: (Year 2040 Modified Intersection Analyses)

- Stripe the eastbound through movement to accommodate two circulatory lanes within the roundabout. Add appropriate signing and striping to accommodate the operational change. Reconstruction of the roundabout's curb and gutter is not anticipated.
- Widen Grand Avenue to a 4-lane roadway from Sylvan Lake Road to Eby Creek Road.

3.2 Background Traffic Growth

The Year 2040 has been selected as the long-term planning horizon for this study. Estimates of daily and peak background traffic conditions have been made for the study area. These background traffic estimates do not include any project traffic.

Study Comparisons: It was noted that several of the current Year 2015 traffic volumes at the US 6 and Eby Creek roundabout were higher than the *Interchange Feasibility Study's*⁴ projections for Year 2035. Therefore, CDOT's current 20-year growth factor⁵ of 1.57 west of the Eby Creek roundabout and 1.80 east of the roundabout were used to determine appropriate forecasting for this intersection. A 2.00% annual growth rate was used on the local movements.

A similar scenario occurred on the Sylvan Lake Roundabout projections from the *Haymeadow Traffic Study*³. Therefore, CDOT's 20-year growth factor⁵ of 1.57 west of the Eby Creek roundabout was used to determine appropriate forecasting for this intersection. A 2.00% annual growth rate was used on the local movements.

On other occasions where a singular movement's existing traffic exceeded the *Haymeadow Traffic Study*³, a 2.00% annual growth rate was used on the local movements.

Traffic Forecasting: The Town of Eagle has a well-developed traffic forecasting matrix for the Brush Creek Valley. The *Projected Brush Creek Growth Model*⁶ was updated by the Town in November of 2015 to reflect the anticipated future growth and buildout rates along Brush Creek Road. The Town's updated model was used to analyze the Year 2040 long-term impacts on the roadway network. Year 2020 and Year 2022 background forecasting was determined by interpolating between the existing 2015 data and Year 2040 projections.

The Town's *Projected Brush Creek Growth Model*⁶ includes growth projections for several areas along Brush Creek Road: Eagle Ranch, Haymeadow, Charlie Ridgeway, Moser Lane, Bruce Creek and Other Brush Creek Development. The sale of Hardscrabble Ranch to the Town of Eagle Open Space removes the development rights for several properties: Adams Rib Lower, Adams Rib Upper, Adam's Rib Ridgeway, Salt Creek; taking 64 dwelling units off the model. The Eagle Landing at Brush Creek project, located on the southwest corner of Grand Avenue and Sylvan Lake Road add back in 42 dwelling units in the vicinity of the Sylvan Lake Road roundabout.

In addition to inclusion of the Town's *Projected Brush Creek Growth Model*⁶, the traffic from the proposed Haymeadow development and recent Frost Creek PUD amendment were included. The Haymeadow study assumed that all future buildout on Brush Creek Road had occurred by Year 2035. However, the Town's traffic model predicts that the growth will reach buildout at Year 2055.

Overall, the October 2015 traffic counts were forecasted to accurately reflect the Town of Eagle's current and forecasted growth that will impact the traffic network. Therefore, updated counts are not considered necessary.

The resulting Year 2015 existing traffic volumes can be found in **Figure 3**. Year 2020, 2022, and 2040 background traffic volumes can be found in **Figure 4**, **Figure 5** and **Figure 6** respectively.

3.3 Background Operations and HCM Analysis

Traffic Operations Evaluation: Year 2015, Year 2020, Year 2022, and Year 2040 background traffic were evaluated at all study intersections using the forecasting methodologies described above and *Highway Capacity Manual*⁷ (HCM) analysis procedures.

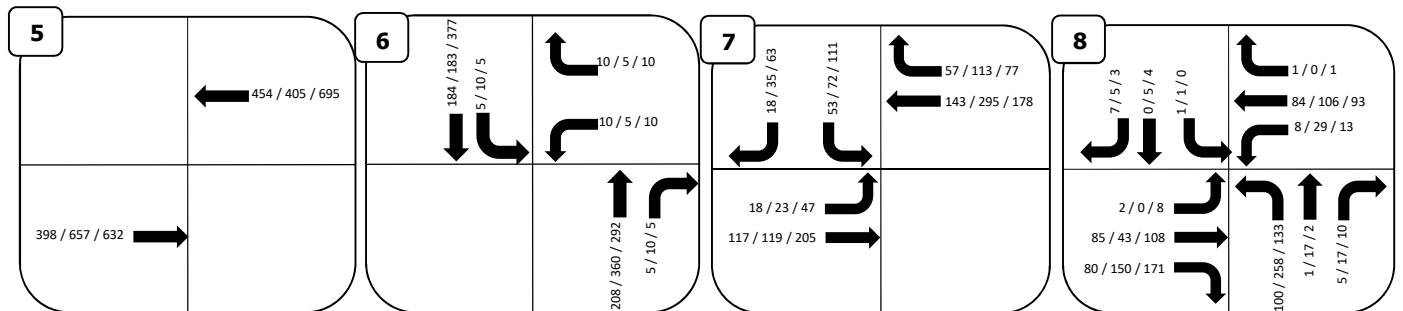
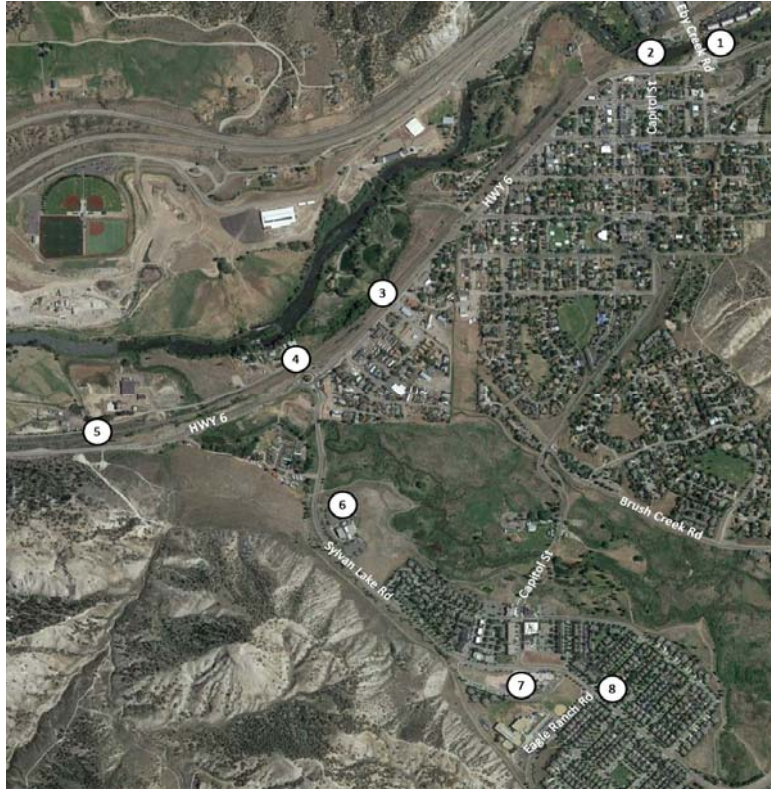
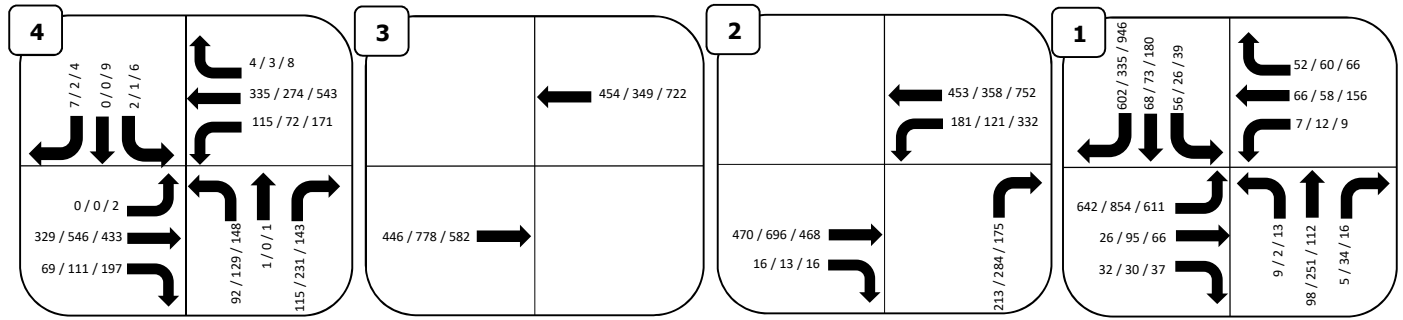
Intersection Level of Service: Using *Highway Capacity Manual 2010*⁷ (HCM) methodology, Synchro Version 8 software was used to determine the delay and Level-of-Service (LOS) at the stop-controlled intersections. Similarly, Rodel roundabout analysis software was used to model the HCM roundabout capacity. HCM Level of Service is defined by the following criteria in **Table 1**.

Table 1: HCM Level of Service Criteria

LOS	Expected Delay to Minor Street Traffic	Average Signal Delay (Seconds/Vehicle)	Average Stop-Controlled Delay (Seconds/Vehicle)
A	Little or no delay.	0-10	0-10
B	Short traffic delays.	>10-20	>10-15
C	Average traffic delays.	>20-35	>15-25
D	Long traffic delays.	>35-55	>25-35
E	Very long traffic delays.	>55-80	>35-50
F	When volume exceeds the capacity of the lane extreme delays will be encountered with queuing that may cause severe congestion affecting other traffic movements in the intersection. This condition usually warrants improving the intersection.	>80	>50

A table summarizing the background traffic Level of Service for each intersection analyzed can be found in **Table 2**.

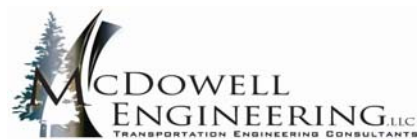
Figure 3: Year 2015 Existing Traffic



LEGEND :

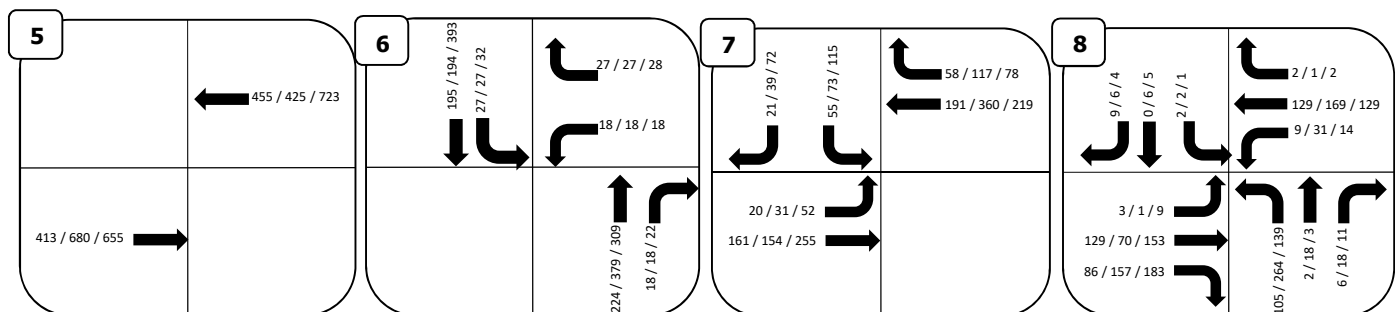
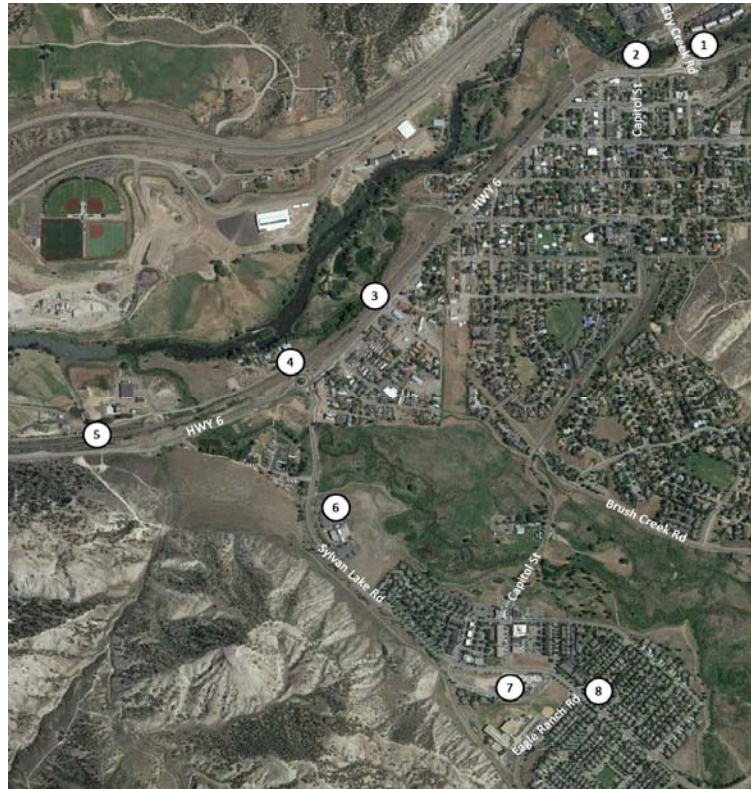
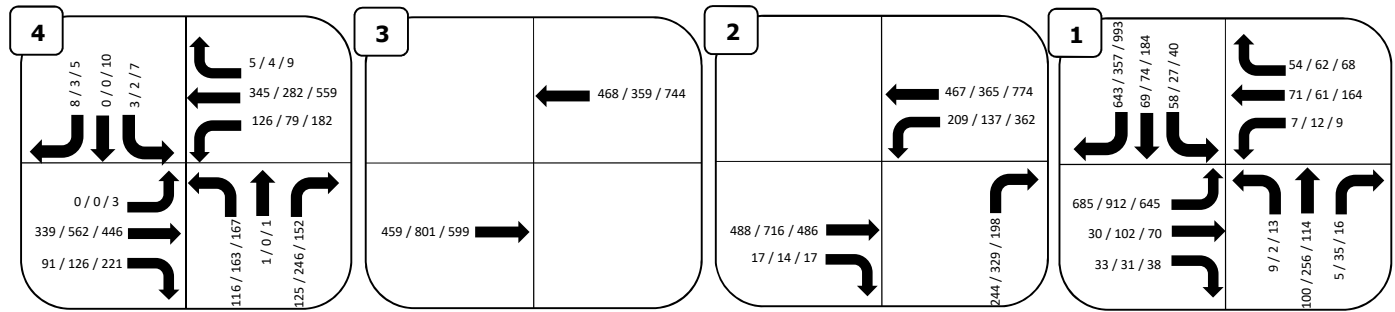
SAT / AM / PM Peak Hour Volumes: XX / XX / XX (VPH)

Turning Movements



Project Number: M1313
 Prepared by: KJS
 Date: 8/14/2018
 Reserve at Hockett Gulch
 Eagle, CO

Figure 4: Year 2020 Background Traffic



LEGEND :

SAT / AM / PM Peak Hour Volumes: XX / XX / XX (VPH)

Turning Movements



Project Number: M1313
Prepared by: KJS
Date: 8/14/2018
Reserve at Hockett Gulch
Eagle, CO

Figure 5: Year 2022 Background Traffic

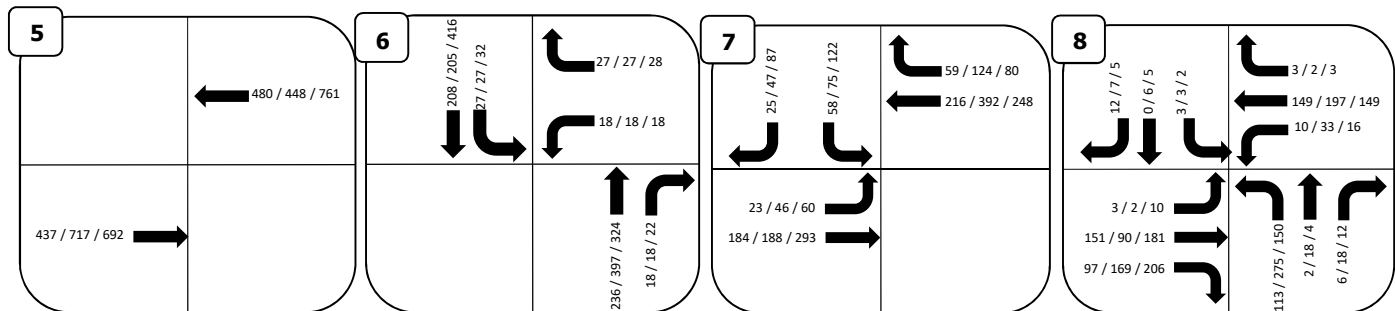
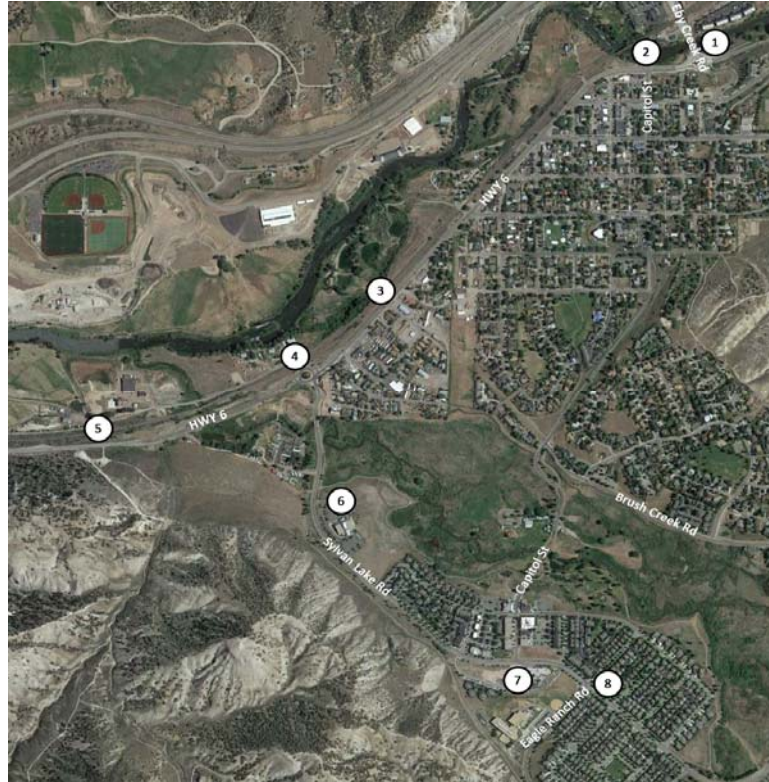
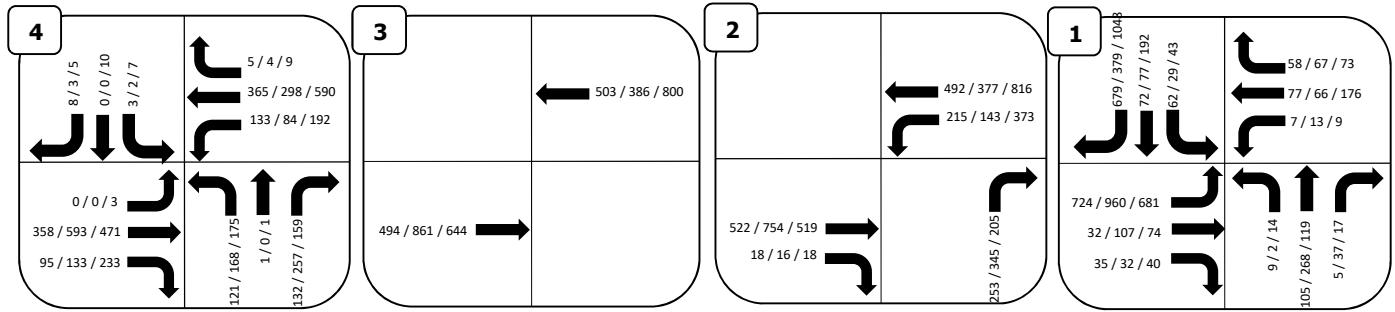
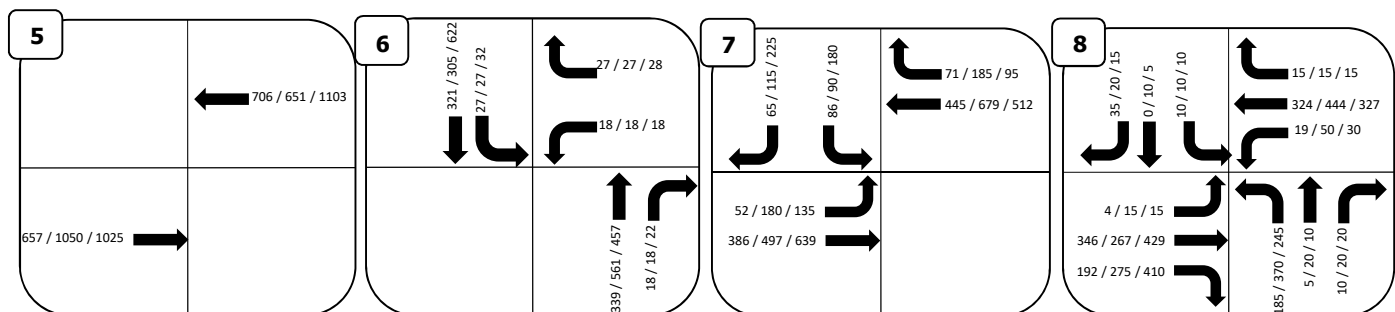
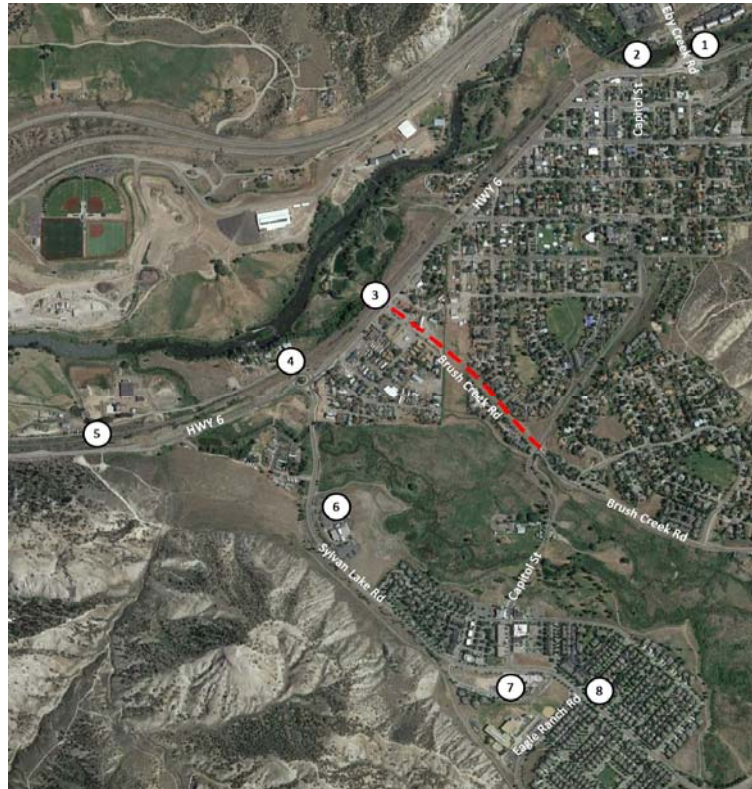
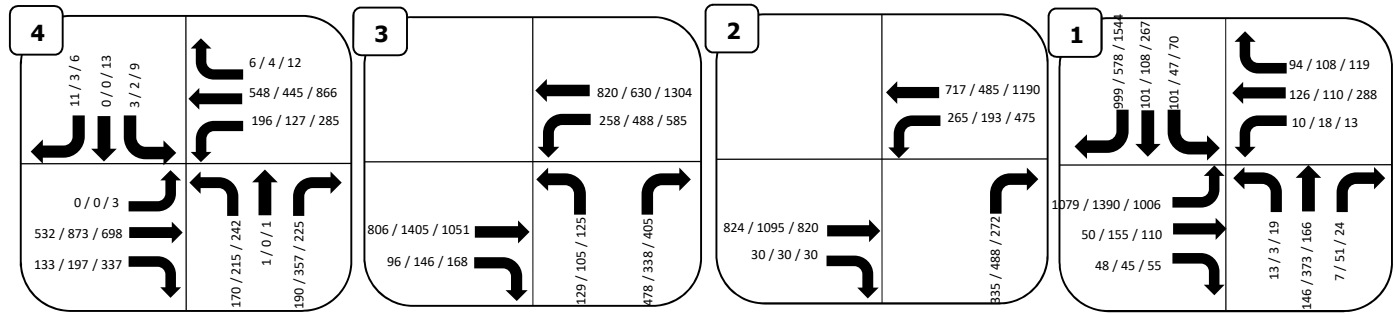


Figure 6: Year 2040 Background Traffic



LEGEND :

SAT / AM / PM Peak Hour Volumes: XX/ XX/ XX (VPH)

Turning Movements



Project Number: M1313
 Prepared by: KJS
 Date: 8/14/2018
 Reserve at Hockett Gulch
 Eagle, CO

Table 2: Background Traffic Level of Service

			Background Traffic									
			Year 2020			Year 2022			Year 2040			
			Level of Service			Level of Service			Level of Service			
Intersection		Traffic Control	Approach	(Delay in Seconds)			(Delay in Seconds)			(Delay in Seconds)		
#	Name			SAT	AM	PM	SAT	AM	PM	SAT	AM	PM
1	Grand Ave (US 6)/Eby Creek	Roundabout	SB	A (5.0)	A (4.2)	A (8.1)	A (5.2)	A (4.3)	A (8.9)	A (7.4)	A (5.2)	F (293.0)
			EB	A (3.5)	A (5.0)	A (4.0)	A (3.7)	A (5.4)	A (4.2)	A (7.5)	E (43.6)	A (8.9)
			NB	A (4.0)	A (6.2)	A (4.1)	A (4.1)	A (6.7)	A (4.2)	A (5.8)	C (21.8)	A (5.9)
			WB	A (4.9)	A (6.0)	A (5.5)	A (5.0)	A (3.3)	A (5.8)	A (7.1)	B (11.6)	B (10.3)
		Roundabout - Modified	SB	-	-	-	-	-	-	A (7.1)	A (5.1)	F (255.4)
			EB	-	-	-	-	-	-	A (4.2)	A (8.4)	A (4.6)
			NB	-	-	-	-	-	-	A (4.4)	B (12.1)	A (4.4)
2	Grand Ave (US 6)/Capitol	NB Stop	WB	-	-	-	-	-	-	A (7.1)	B (12.0)	B (10.3)
			EBTR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			WBL	A (9.5)	B (10.3)	B (10.7)	A (9.8)	B (10.6)	B (11.1)	B (13.1)	C (15.1)	C (20.6)
			WBT	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
3	Grand Ave (US 6)/ Brush Creek Extension	NB Stop	NBR	C (17.8)	F (58.8)	C (15.9)	C (19.7)	F (83.7)	C (17.1)	C (23.9)	F (144.5)	C (19.1)
			EB	-	-	-	-	-	-	A (0.0)	A (0.0)	A (0.0)
			WBL	-	-	-	-	-	-	B (13.5)	F (229.1)	F (144.4)
			WBTR	-	-	-	-	-	-	A (0.0)	A (0.0)	A (0.0)
			NBL	-	-	-	-	-	-	F (ERR)	F (ERR)	F (ERR)
		Roundabout	NBR	-	-	-	-	-	-	E (47.2)	F (100.5)	F (60.0)
			EB	-	-	-	-	-	-	A (2.8)	A (8.7)	A (5.2)
			NB	-	-	-	-	-	-	A (5.0)	A (8.0)	A (5.8)
			WB	-	-	-	-	-	-	A (3.0)	A (3.0)	A (9.9)
			SB	-	-	-	-	-	-	-	-	-
4	Grand Ave(US 6)/ Sylvan Lake	Roundabout	EB	-	-	-	-	-	-	-	-	-
			WB	B (11.1)	B (12.8)	B (13.4)	B (11.3)	B (13.1)	B (13.8)	B (13.1)	C (16.6)	C (18.8)
			NBL	-	-	-	-	-	-	-	-	-
			NBTR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		Roundabout - Modified	SBTL	A (1.1)	A (1.2)	A (0.9)	A (1.1)	A (1.2)	A (0.9)	A (0.9)	A (1.0)	A (0.9)
			SBR	-	-	-	-	-	-	-	-	-
			NB	-	-	-	-	-	-	-	-	-
5	Grand Ave(US 6)/ North Site Access	NB Stop	EB	-	-	-	-	-	-	-	-	-
			NB	-	-	-	-	-	-	-	-	-
			WB	-	-	-	-	-	-	-	-	-
			EBT	-	-	-	-	-	-	-	-	-
			EBR	-	-	-	-	-	-	-	-	-
		Roundabout	WBL	-	-	-	-	-	-	-	-	-
			WBT	-	-	-	-	-	-	-	-	-
6	Sylvan Lake/ East Site Access	EB/WB Stop	NBL	-	-	-	-	-	-	-	-	-
			NBR	-	-	-	-	-	-	-	-	-
			SBTL	A (1.1)	A (1.2)	A (0.9)	A (1.1)	A (1.2)	A (0.9)	A (0.9)	A (1.0)	A (0.9)
			SBR	-	-	-	-	-	-	-	-	-
			NB	-	-	-	-	-	-	-	-	-
		Roundabout	EB	-	-	-	-	-	-	-	-	-
			WB	-	-	-	-	-	-	-	-	-
			SB	-	-	-	-	-	-	-	-	-
			EB	-	-	-	-	-	-	-	-	-
			WB	-	-	-	-	-	-	-	-	-
7	Sylvan Lake/ Capitol	SB Stop	SB	B (11.6)	B (14.7)	C (16.3)	B (12.2)	C (16.7)	C (19.3)	C (21.1)	F (305.5)	F (622.3)
			WBR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			WBT	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			EBT	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			EBL	A (7.8)	A (8.6)	A (8.0)	A (7.9)	A (8.7)	A (8.2)	A (8.8)	B (11.7)	A (9.6)
8	Sylvan Lake/ Eagle Ranch	NB/SB Stop	EB	-	-	-	-	-	-	-	-	-
			EBR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			WBL	A (7.7)	A (7.8)	A (8.1)	A (7.8)	A (7.9)	A (8.2)	A (8.7)	A (8.9)	B (10.0)
			WBTR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			NBL	B (12.0)	C (16.7)	B (13.5)	B (12.9)	C (19.8)	C (15.0)	E (47.3)	F (464.0)	F (171.6)
			NBTR	A (9.5)	B (10.2)	A (9.7)	A (9.7)	B (10.6)	B (10.1)	B (12.7)	C (15.9)	B (14.6)
			SB	A (9.4)	B (11.2)	B (11.5)	A (9.6)	B (11.7)	B (11.9)	B (12.6)	C (20.3)	C (19.3)

The modified conditions for intersections 1 and 4 are described in detail in **Section 3.1**.

3.4 Background Traffic Operations Summary

The following Section describes the background traffic conditions that are anticipated to occur at each study intersection, without the addition of the Reserve at Hockett Gulch project.

- 3.4.1 Grand Avenue & Eby Creek Road: The intersection is currently operating at an acceptable LOS. Peak commuter traffic volumes in the morning and evening peak hours will deteriorate to unacceptable levels of service with the anticipated background traffic growth. This will occur with or without the addition of the Reserve at Hockett Gulch project's traffic. This has been a known condition since the Eby Creek roundabout was designed in 2008.

PBS&J, the engineering designers of the Eby Creek roundabout, detailed the design parameters in a memo dated October 8, 2008. The memo states that the roundabout was designed with the assumption that either the East Eagle Interchange or the Eagle Airport Interchange would be constructed by Year 2035. A copy of this memo is included in the **Appendix**.

It is recommended that the Town continues to monitor this roundabout as growth occurs.

Potential Mitigation Measures: The following recommended mitigation measures will slightly improve the operations of the current roundabout. However, a major undertaking such as widening the Eagle River Bridge, constructing a secondary Eagle interchange, or constructing an alternate Eagle River crossing to access I-70 will likely be necessary by Year 2035 or Year 2040.

- Add a second eastbound approach lane into the roundabout
- Add a second northbound entry lane into the roundabout
- Stripe two circulating lanes through the entire roundabout.
- The addition of a free southbound right bypass lane was not considered. This improvement would require ROW acquisition and bridge widening, yet still not improve intersection operations to acceptable Levels of Service through Year 2040 traffic conditions.

- 3.4.2 Grand Avenue & Capitol Street: The intersection will see the northbound right and westbound left movements continue to deteriorate as traffic increases on Grand Avenue. It is recommended that the Town monitors this intersection for possible future access restrictions.

Potential Mitigation Measures:

- Widen Grand Avenue to a 4-lane roadway from Sylvan Lake Road to Eby Creek Road.
- Determine if future access restriction of the westbound left movement is required at this intersection when the Brush Creek Road extension is constructed.

3.4.3 Grand Avenue & Brush Creek Road Extension: The intersection is anticipated to be constructed in the future by the Town of Eagle. Based upon a comparison of anticipated operations for a northbound stop-controlled intersection vs. a roundabout, it is recommended that the intersection of US 6 and the Brush Creek Road extension is constructed as a roundabout. With this implementation, the intersection is anticipated to operate at acceptable Levels of Service through Year 2040.

Potential Mitigation Measures:

- Widen Grand Avenue to a 4-lane roadway from Sylvan Lake Road to Eby Creek Road.
- Construct this future intersection as a two-lane roundabout with two entry lanes and two circulating lanes. The northbound movement will only require one approach lane, but two entry lanes.

3.4.4 Grand Avenue & Sylvan Lake Road / Violet Lane: The intersection is currently operating at an acceptable LOS. It is expected to continue to operate at an acceptable Level of Service through Year 2040 once the Brush Creek Road extension is completed.

Potential Mitigation Measures:

- Stripe the eastbound through movement to accommodate two circulatory lanes within the roundabout. Add appropriate signing and striping to accommodate the operational change. Reconstruction of the roundabout's curb and gutter is not anticipated.
- Widen Grand Avenue to a 4-lane roadway from Sylvan Lake Road to Eby Creek Road.

3.4.5 Grand Avenue / North Site Access: N/A in background conditions.

3.4.6 Sylvan Lake Road / Colorado Mountain Medical: This intersection is anticipated to operate at acceptable Levels of Services through Year 2040 background traffic conditions.

The Medical Center has an agreement with the Town of Eagle to construct a southbound left turn lane at this location when their facility meets traffic volumes that require this construction.

- 3.4.7 Sylvan Lake Road & Capitol Street: The intersection will see the southbound stop-controlled movements continue to deteriorate as traffic increases on Sylvan Lake Road, with or without the project-generated traffic. Without improvements, southbound queues are anticipated to reach 935' by Year 2040 traffic conditions.

Even with a four-lane Sylvan Lake Road and separate southbound left and right turn lanes, this intersection is anticipated to operate at a poor level of service by Year 2040 traffic conditions.

It is recommended that the Town monitors this intersection for the possible construction of intersection capacity improvements.

Potential Mitigation Measures:

- Construct a roundabout at this intersection. Consider a smaller or mini roundabout.

-or-

- Install a traffic signal when MUTCD warrants are met.

- 3.4.8 Sylvan Lake Road & Eagle Ranch Road: The intersection will continue to deteriorate as traffic increases on Sylvan Lake Road, with or without the addition of the Reserve at Hockett Gulch project traffic. It is recommended that the Town continues to monitor this intersection for the possible construction of intersection capacity improvements.

Potential Mitigation Measures:

- Construct a roundabout at this intersection. Consider a smaller or mini roundabout.

-or-

- Install a traffic signal when MUTCD warrants are met.

4.0 Project Traffic

4.1 Trip Generation

The applicant is proposing to construct both residential and commercial uses on-site.

Error! Reference source not found. shows the zoning and development plan. The proposed PUD submittal allows up to 500 dwelling units and 30,000sf of commercial space. The residential can exist in any zone, but HD/PUD-2 and HD/PUD-1 can allow up to 400 units, and the remaining 100 units can be located in HD/PUD-3. Commercial can total a maximum of 30,000sf in zone HD/PUD-1 or HD/PUD-3. Additionally, for the HD/PUD-1 zone, any commercial use here would need to be approved with a special use permit.

Our traffic study is based upon these maximum 'worst-case scenario' capacities for the PUD. Based up the PUD verbiage, we assumed that the commercial development would occur on the western portion of the site. Therefore, the directional distribution assumes 80% of the commercial trips would use the north entrance to Grand Avenue, and the remaining 20% would use Sylvan Lake, based upon the HD/PUD-3 parcel being the primary development area for commercial.

If there is a future special use permit submittal that contains a significant amount of commercial use in the HD/PUD-1 zone and would shift the assumed traffic distribution, a revised traffic study would need to be submitted. This determination for a revised traffic study can be a part of the special use review process.

For the traffic analysis, the land use is anticipated to include:

Phase 1+2:

- Supermarket = 15,000 Square Feet
- Hardware/Paint Store = 5,000 Square Feet
- Shopping Center = 5,000 Square Feet
- Quality Restaurant = 5,000 Square Feet
- Multifamily Residential = 400 Dwelling Units

Phase 3:

- Multifamily Residential = 100 Dwelling Units

The Institute of Transportation Engineers' *Trip Generation Manual*⁴ was used to determine the anticipated trip generation for the proposed development. Figure 4.2 of the Trip Generation Handbook gives the process for selecting the appropriate use of the average rate of the equation for determining project trip generation. The results of this flow chart for ITE Land Use #220 (Multifamily Housing) with 500 dwelling units are:

- Average Weekday – Use Fitted Curve Equation
- Average Saturday – Not within data extremes. Collect local data.
- Saturday Peak Hour – Not within data extremes. Collect local data.
- Morning Peak Hour – Not within data extremes. Collect local data.
- Evening Peak Hour - Not within data extremes. Collect local data.

As the Eagle Valley does not have a comparable shared land use, it was determined that using the average rate was appropriate for all analysis periods for Land Use #220. The weekday volume increase resulting from using the fitted curve equation is 2.2%, which is considered minimal in traffic analysis.

The average rate method was also deemed appropriate for all commercial land uses since the square-footage of each land use is relatively low for each use – 5,000sf to 15,000sf. The fitted curve equation typically overestimates the anticipated number of trips for small commercial uses.

A five percent multimodal reduction was applied due to the close proximity of ECO Transit’s Sylvan Lake Road bus stop and the site’s access to Eagle’s trail network. It is recommended that the project include the necessary site improvements to provide connectivity from the site to the adjacent bicycle and pedestrian facilities.

Internal trip capture is anticipated on the mixed-use property. An internal capture rate can generally be defined as a percentage reduction that can be applied to trip generation estimates for individual land uses to account for trips internal to the site. The internal capture rates were calculated for each land use category using ITE’s *Trip Generation Handbook*⁸ methodology. The internal capture calculations are included in the **Appendix**.

Based upon the applicant’s proposed land uses, the project can be anticipated to generate 5,190 vehicle trips on the average weekday and 6,477 on the average Saturday. Peak hour traffic on a weekday at project buildout is anticipated to be 387 vehicles during the morning peak hour, 457 vehicle trips during the evening peak hour, and 514 vehicle trips during the Saturday peak hour. Refer to the calculations in **Table 3**.

Per the applicant, this project is likely to be phased over a span of four years.

- Phase 1+2 = Years 2018 - 2020: 30,000 Square-Feet Commercial / 400 Residential Dwelling Units
- Phase 3 = Year 2020 – 2022: 100 Additional Residential Dwelling Units

The project is anticipated to be fully built out and occupied by Year 2022. The Town requires that traffic impacts are mitigated for the 20-year long range planning horizon. Therefore, the 20-year traffic projections include full buildout of the site.



Table 3 - Project Trip Generation
Reserve at Hockett Gulch
Eagle, Colorado
Estimated Project-Generated Traffic¹

Project Number: M1313
Prepared By: MLH
Date: 9-Jan-18
Revised: 25-Jan-18

ITE Code			Units		Avg. Weekday			Avg. Saturday			Average Weekday			Average Saturday			Saturday Peak Hour Traffic				AM Peak Hour Traffic				PM Peak Hour Traffic			
											Inbound		Outbound		Inbound		Outbound		Inbound		Outbound		Inbound		Outbound			
Proposed Land Use:																												
Phase 1 + 2																												
Residential																												
#220 Multifamily Housing (Low-Rise)			400	DU	7.32	8.14	0.70	0.56	0.67	2,928	3,256	50%	140	50%	140	28%	63	72%	161	59%	158	41%	110					
Phase 1 + 2 Residential Internal Capture Calculation ³									-226	-344		-14		-12		-4		-4		-10		-9						
Phase 1 + 2 Residential Subtotal									2,702	2,912		126		128		59		157		148		101						
Multimodal Reduction			-5%						-135	-146		-6		-6		-3		-8		-7		-5						
Phase 1 + 2 Residential Total									2,567	2,766		120		122		56		149		141		96						
Retail																												
#850 Supermarket			15	kSF	106.78	177.62	10.34	6.67	7.60	1,602	2,664	51%	79	49%	76	52%	52	48%	48	52%	59	48%	55					
#816 Hardware/Paint Store			5	kSF	9.14	18.20	2.25	1.36	1.13	46	91	56%	6	44%	5	52%	4	48%	3	50%	3	50%	3					
#820 Shopping Center			5	kSF	37.75	46.12	4.50	3.00	4.21	189	231	52%	12	48%	11	54%	8	46%	7	50%	11	50%	11					
#931 Quality Restaurant			5	kSF	83.84	90.04	10.68	4.47	8.28	419	450	59%	32	41%	22	80%	18	20%	4	61%	25	39%	16					
Phase 1 + 2 Retail Internal Capture Calculation ³									-226	-344		-12		-14		-4		-4		-9		-10						
Phase 1 + 2 Retail Subtotal									2,030	3,092		117		100		78		58		89		75						
Multimodal Reduction			-5%						-102	-155		-6		-5		-4		-3		-4		-4						
Phase 1 + 2 Retail Total									1,928	2,937		111		95		74		55		85		71						
Total Vehicular Trips (Phase 1 + 2)									4,495	5,703		231		217		130		204		226		167						
Proposed Land Use:																												
Phase 1 + 2 + 3 ²																												
Residential																												
#220 Multifamily Housing (Low-Rise) - Constructed in Phase 1 + 2			400	DU	7.32	8.14	0.70	0.56	0.67	2,928	3,256	50%	140	50%	140	28%	63	72%	161	59%	158	41%	110					
#220 Multifamily Housing (Low-Rise) - Constructed in Phase 3			100	DU	7.32	8.14	0.70	0.56	0.67	732	814	50%	35	50%	35	28%	16	72%	40	59%	40	41%	27					
Phase 1 + 2 + 3 Residential Internal Capture Calculation ³									-226	-344		-14		-12		-4		-4		-10		-9						
Phase 1 + 2 + 3 Residential Subtotal									3,434	3,726		161		163		75		197		188		128						
Multimodal Reduction			-5%						-172	-186		-8		-8		-4		-10		-9		-6						
Phase 1 + 2 + 3 Residential Total									3,262	3,540		153		155		71		187		179		122						
Retail																												
Retail - Constructed in Phase 1 + 2 (See above.)			30	kSF						2,256	3,436		129		114		82		62		98		85					
Phase 1 + 2 + 3 Retail Internal Capture Calculation ³									-226	-344		-12		-14		-4		-4		-9		-10						
Phase 1 + 2 + 3 Retail Subtotal									2,030	3,092		117		100		78		58		89		75						
Multimodal Reduction			-5%						-102	-155		-6		-5		-4		-3		-4		-4						
Phase 1 + 2 + 3 Retail Total									1,928	2,937		111		95		74		55		85		71						
Total Vehicular Trips (Phase 1 + Phase 2 + Phase 3)									5,190	6,477		264		250		145		242		264		193						

¹ Values obtained from *Trip Generation Manual, 10th Edition*, Institute of Transportation Engineers, 2017.⁹

² Phase 1 + 2 + 3 includes the traffic generation from Phase 1 + 2. Phase 3 traffic is added to this and is inclusive of Phase 1 + 2. Total buildout traffic is shown here in Phase 1 + 2 + 3.

³ Refer to Internal Trip Reduction Calculations in the Appendix.

4.2 Directional Distribution

Directional trip distribution estimates are used to assign the new site traffic to the existing roadway network. For this study, a detailed estimate of the trip distribution pattern for the Reserve at Hockett Gulch has been prepared as illustrated in **Figure 7** for the near-term residential directional distribution. The anticipated residential directional distribution at Year 2040 is depicted in **Figure 8**.

Figure 9A depicts the short-term commercial directional distribution for Year 2020 and 2022. **Figure 9B** depicts the long-term commercial directional distribution and assumes that the Brush Creek Road extension has been constructed from Capitol Street to US 6, as described in *Section 3.1*.

The anticipated delay for the northbound left movement at the north site access is anticipated to be excessive. A cursory travel time analysis was done to compare the amount of time it would take a driver leaving the north site access to make a U-turn at the Sylvan Lake Road roundabout. The result was approximately 90 seconds. Refer to the North Access U-Turn Travel Time Analysis in the Appendix. This is comparable to the anticipated Year 2040 delay for the northbound left movement.

- Saturday HCM LOS F with 86.5 seconds of delay
- Morning HCM LOS F with 130 seconds of delay
- Evening HCM LOS F with 502 seconds of delay

Therefore, it was determined that 50-60% of the vehicles wanting to make a northbound left movement out of the north site access may use the Sylvan Lake Road roundabout to make the movement in Year 2040.

Figure 7: Residential Directional Distribution (Short Term Distribution)

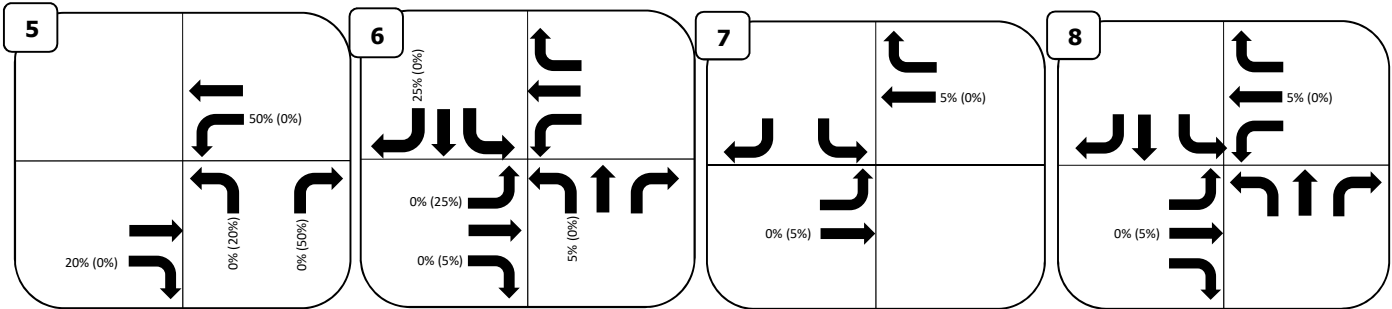
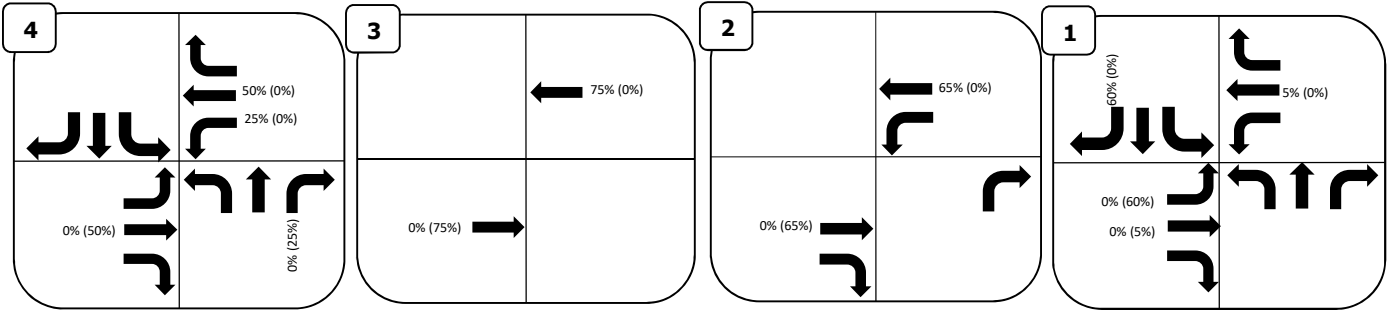


Figure 8: Residential Directional Distribution (Year 2040 with Brush Creek Road Extension)

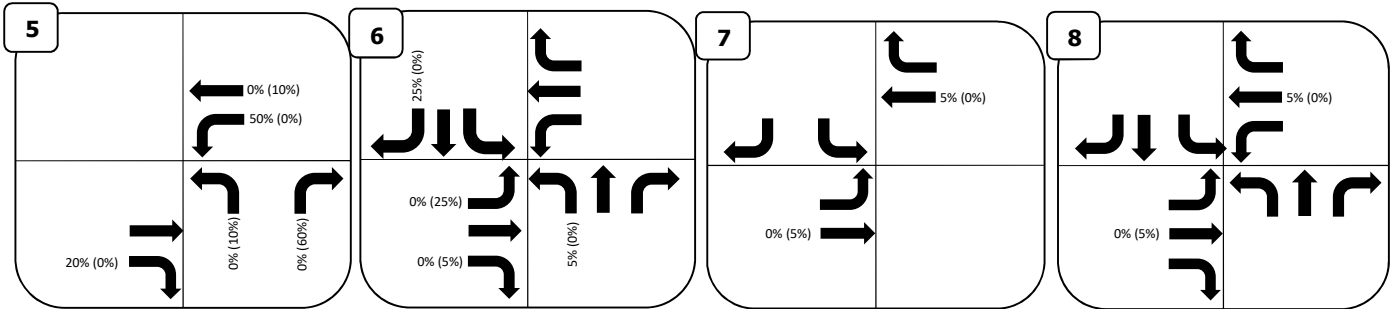
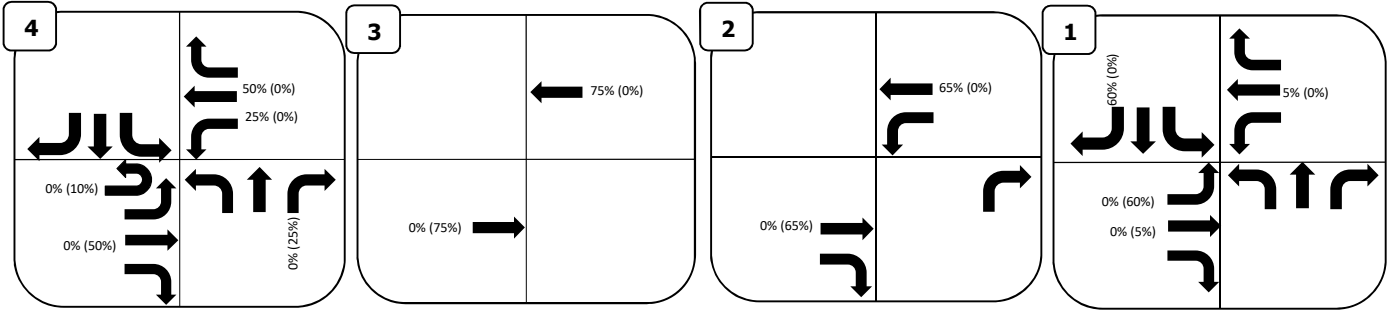
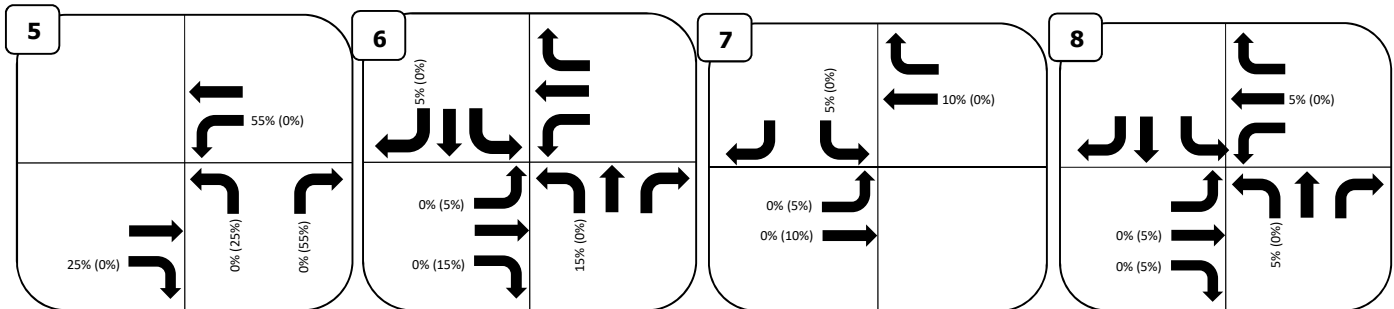
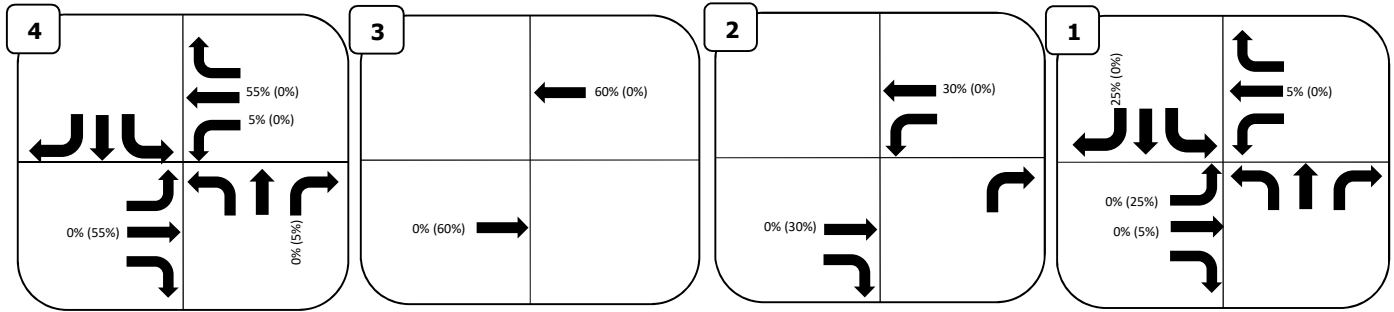


Figure 9A: Commercial Directional Distribution (Short Term Distribution)



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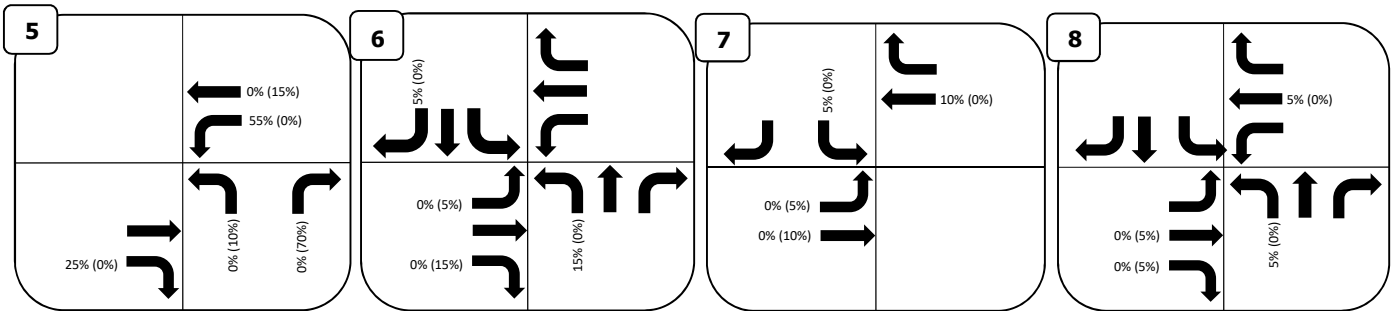
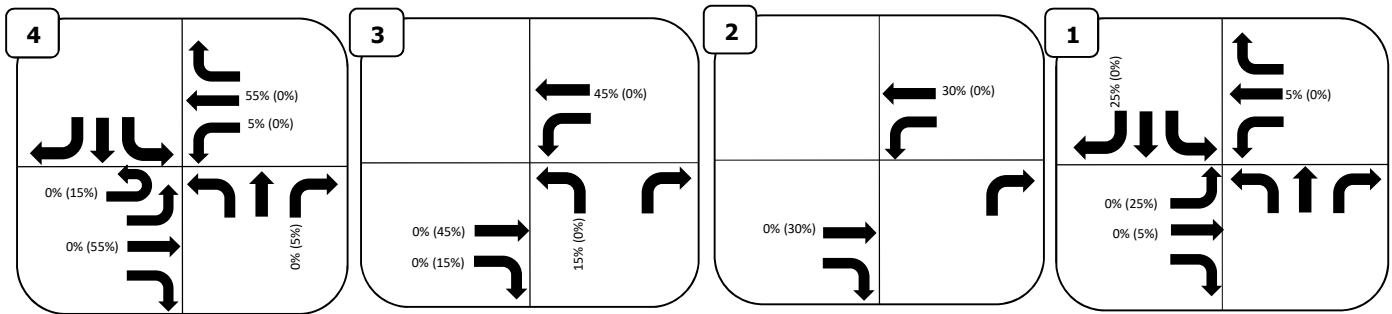
LEGEND :

SAT / AM / PM Peak Hour Volumes: XX/ XX / XX (VPH)

Turning Movements



Figure 9B: Commercial Directional Distribution (Year 2040 with Brush Creek Road Extension)



4.3 Traffic Assignment and Total Traffic

When the trip generation expected for this site is applied to the estimated trip distribution, the result is the anticipated assignment of trips on the roadway system.

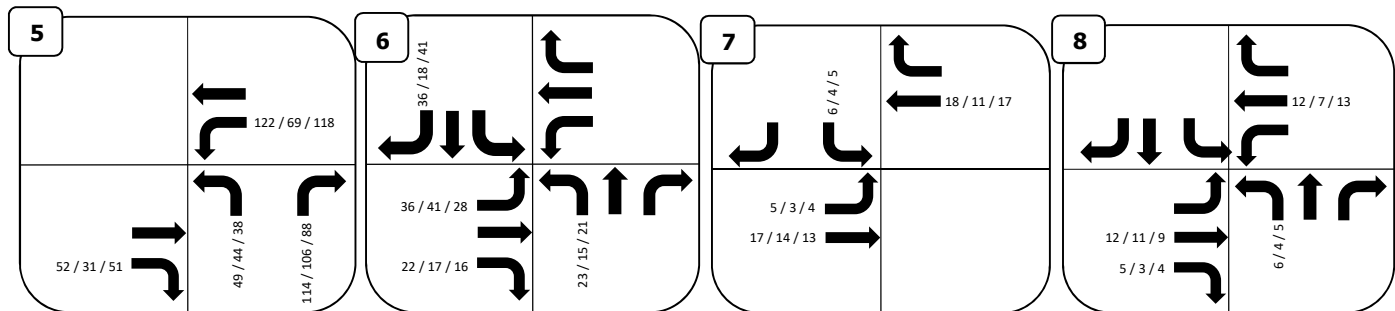
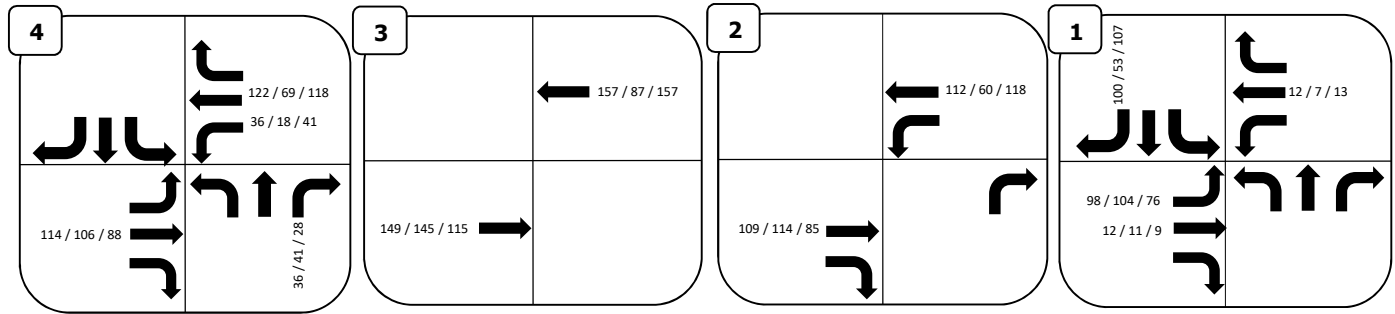
Figure 10 depicts the Phase 1 + 2 vehicle trips on the greater roadway network that are anticipated from the Reserve at Hockett Gulch development. **Figure 11** shows the total Reserve at Hockett Gulch traffic assignment for Phase 1 + 2 + 3 for Year 2022. Similarly, **Figure 12** shows the total Reserve at Hockett Gulch traffic assignment for Phase 1 + 2 + 3 for Year 2040.

The Year 2020 total traffic is the sum of Year 2020 background traffic (**Figure 4**) with the project-generated traffic for Phase 1 + 2 (**Figure 10**) and can be seen in **Figure 13**.

The Year 2022 total traffic is the sum of Year 2022 background traffic (**Figure 5**) with the buildout of the project-generated traffic (**Figure 11**) and can be seen in **Figure 14**.

Similarly, Year 2040 total traffic is the sum of Year 2040 background traffic (**Figure 6**) with buildout of the project-generated traffic (**Figure 12**) and can be seen in **Figure 15**.

Figure 10: Phase 1 + 2 Project Traffic Assignment



LEGEND :

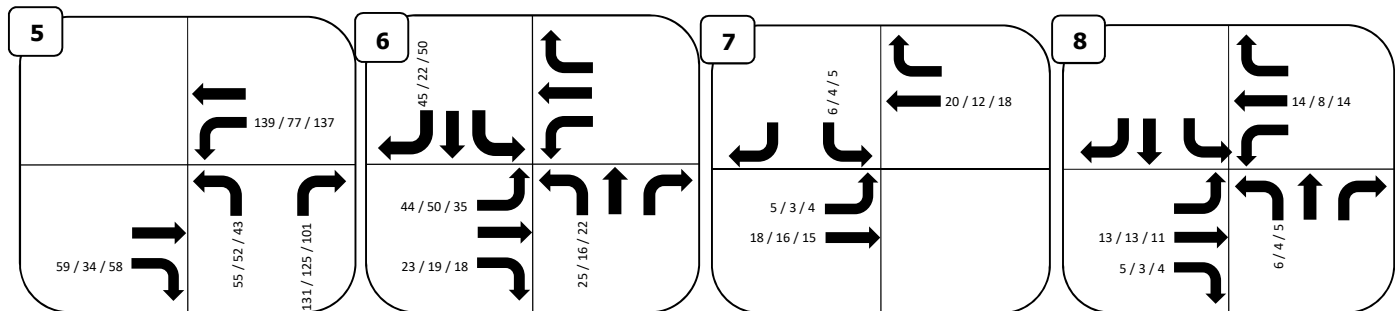
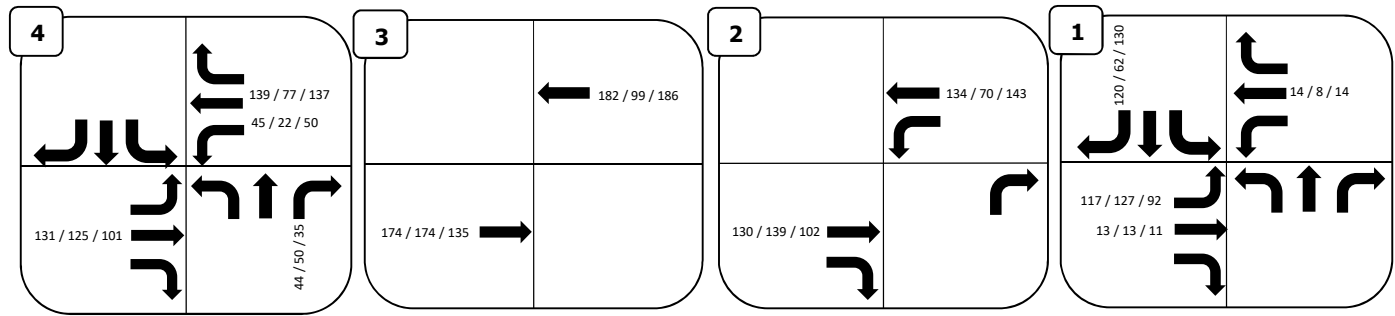
SAT / AM / PM Peak Hour Volumes: XX / XX / XX (VPH)

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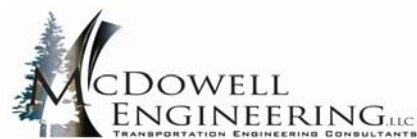
Figure 11: Phase 1 + 2 + 3 Project Traffic Assignment



LEGEND :

SAT / AM / PM Peak Hour Volumes: XX / XX / XX (VPH)

Turning Movements



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 Reserve at Hockett Gulch
 Eagle, CO

Figure 12: Phase 1 + 2 + 3 Project Traffic Assignment (Long Term)

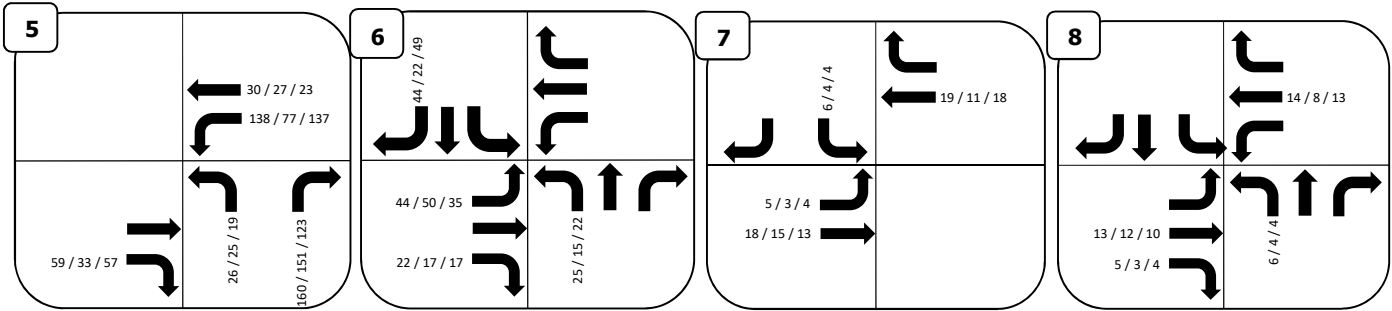
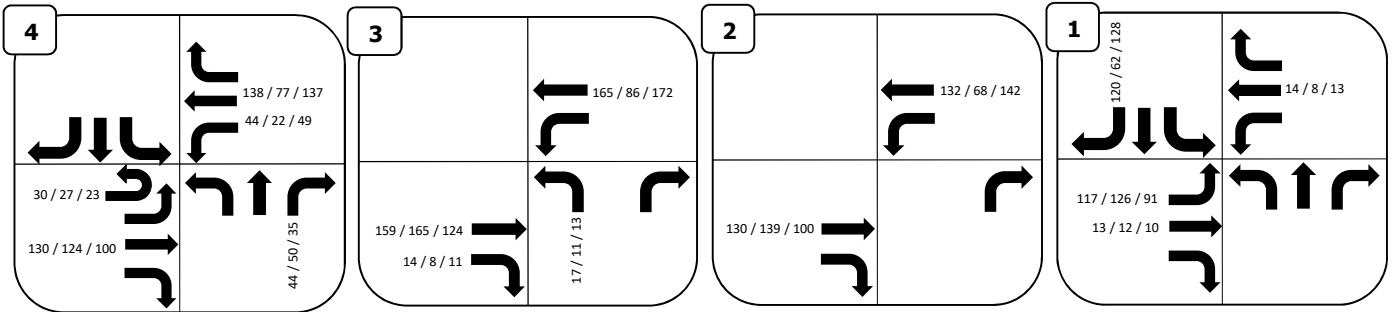
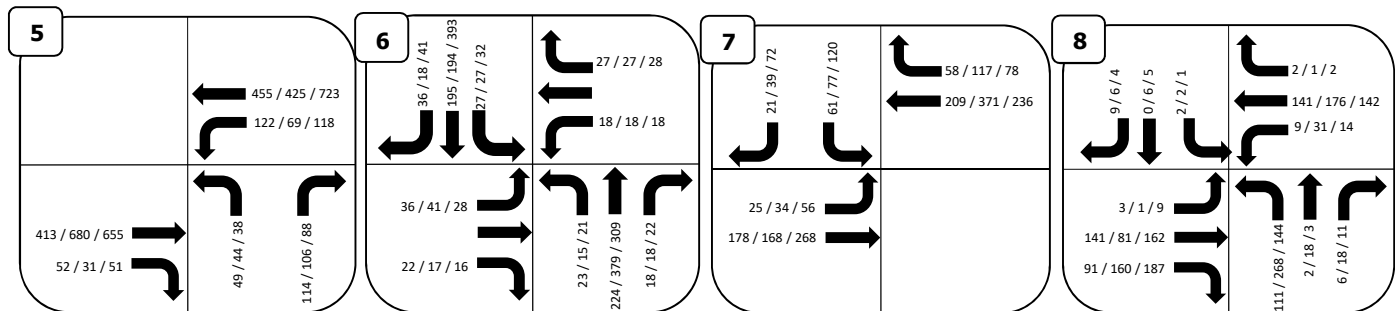
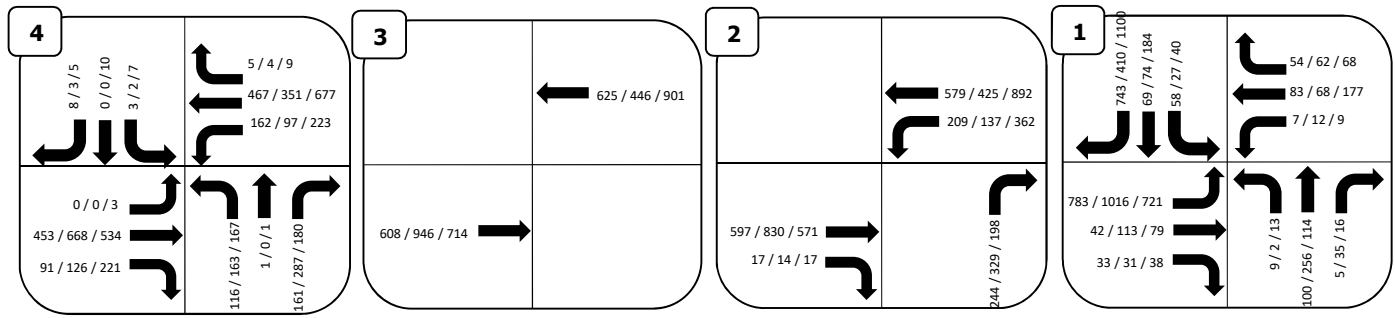


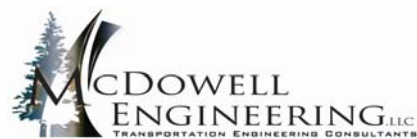
Figure 13: Year 2020 Total Traffic



LEGEND :

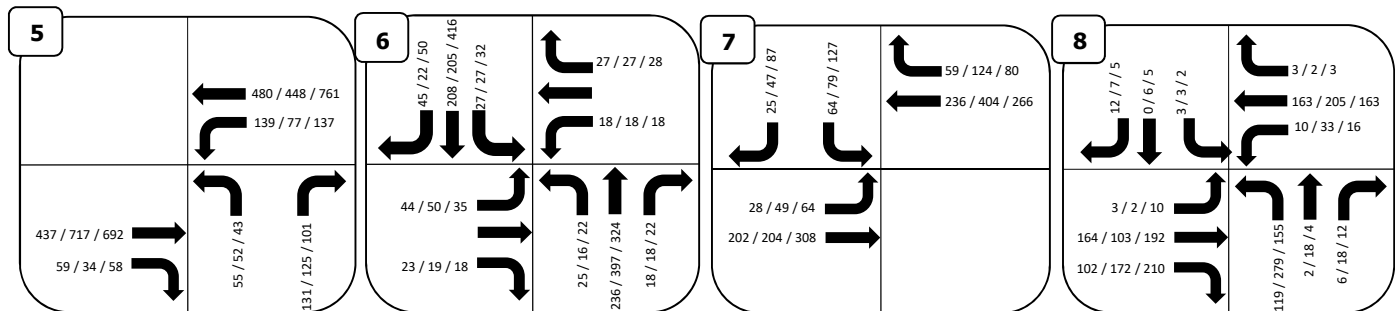
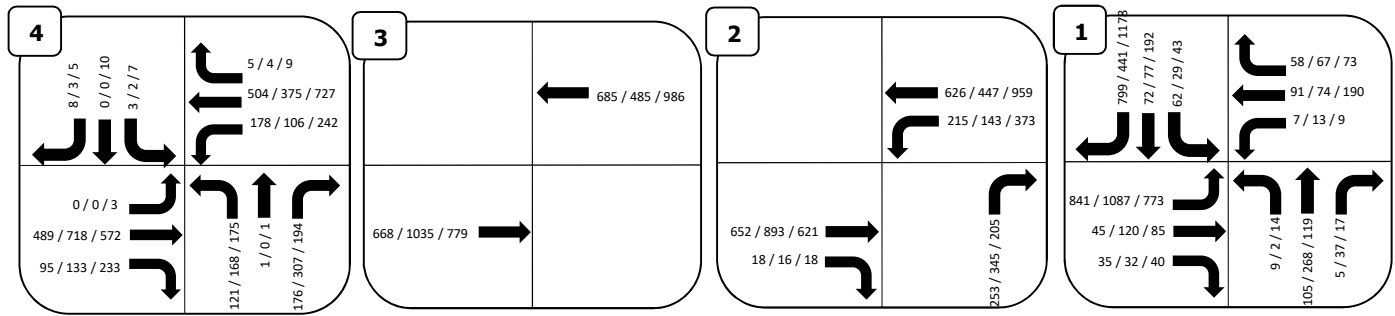
SAT / AM / PM Peak Hour Volumes: XX / XX / XX (VPH)

Turning Movements



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 Prepared by: KJS
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Figure 14: Year 2022 Total Traffic



LEGEND :

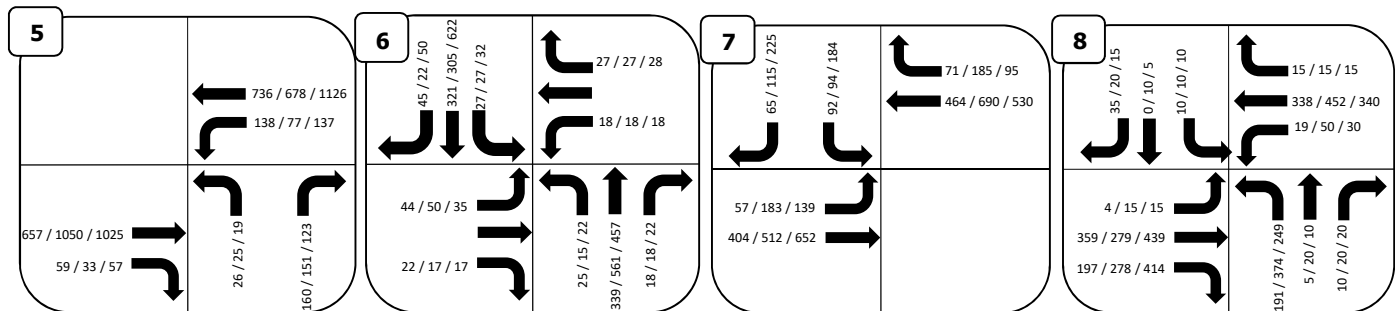
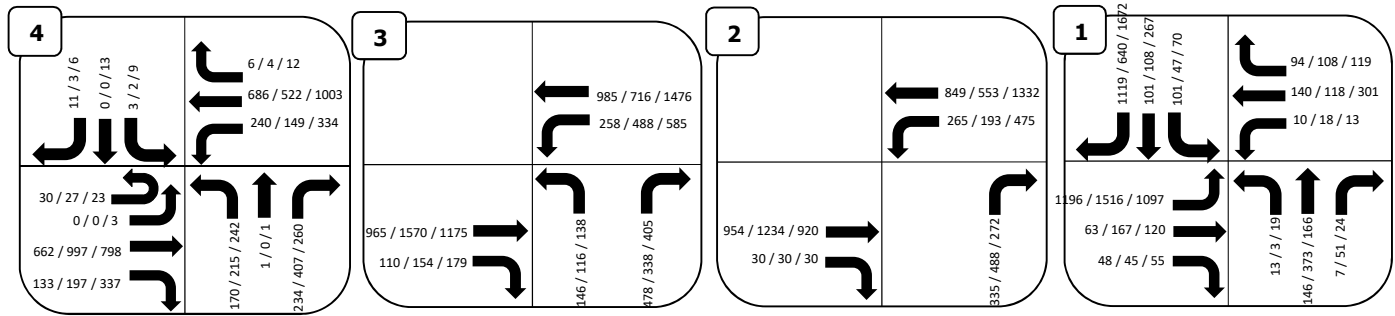
SAT / AM / PM Peak Hour Volumes: XX / XX / XX (VPH)

Turning Movements



Project Number: M1313
 Prepared by: KJS
 Date: 8/14/2018
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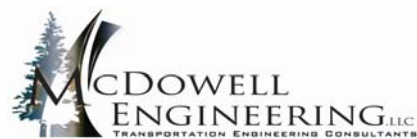
Figure 15: Year 2040 Total Traffic



LEGEND :

SAT / AM / PM Peak Hour Volumes: XX/ XX / XX (VPH)

Turning Movements



Project Number: M1313
Prepared by: KJS
Date: 8/14/2018
Reserve at Hockett Gulch
Eagle, CO

4.4 Operations and HCM Analysis

Intersection Level of Service: Using *Highway Capacity Manual 2010*⁷ (HCM) methodology, Synchro Version 8 software was used to determine the delay and Level-of-Service (LOS) at the stop-controlled intersections. Similarly, Rodel roundabout analysis software was used to model the HCM roundabout capacity. HCM Level of Service is defined by the following criteria in **Table 1**.

A table summarizing the total traffic Level of Service for each intersection analyzed can be found in **Table 4**.

Table 4: Total Traffic Level of Service

			Total Traffic									
			Year 2020			Year 2022			Year 2040			
			Level of Service			Level of Service			Level of Service			
Intersection		Traffic Control	Approach	(Delay in Seconds)			(Delay in Seconds)			(Delay in Seconds)		
#	Name			SAT	AM	PM	SAT	AM	PM	SAT	AM	PM
1	Grand Ave (US 6)/Eby Creek	Roundabout	SB	A (5.4)	A (4.4)	A (9.2)	A (5.5)	A (4.4)	B (11.5)	A (8.3)	A (5.4)	F (384.0)
			EB	A (4.1)	A (6.2)	A (4.5)	A (4.3)	A (7.1)	A (4.8)	B (10.9)	F (113.0)	B (11.6)
			NB	A (4.3)	A (7.0)	A (4.3)	A (4.4)	A (7.7)	A (4.5)	A (6.4)	C (24.7)	A (6.5)
			WB	A (5.3)	A (6.7)	A (6.0)	A (5.5)	A (7.1)	A (6.3)	A (8.1)	C (21.6)	B (12.1)
		Roundabout - Modified	SB	-	-	-	-	-	-	A (7.8)	A (5.2)	F (343.8)
			EB	-	-	-	-	-	-	A (5.1)	B (13.3)	A (5.2)
			NB	-	-	-	-	-	-	A (4.9)	C (18.0)	A (4.8)
			WB	-	-	-	-	-	-	A (8.1)	C (15.1)	B (12.1)
2	Grand Ave (US 6)/Capitol	NB Stop	EBTR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			WBL	B (10.2)	B (11.0)	B (11.5)	B (10.6)	B (11.6)	B (12.2)	B (14.9)	C (17.5)	D (26.2)
			WBT	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			NBR	C (22.6)	F (106.8)	C (18.4)	D (27.2)	F (167.1)	C (20.7)	D (30.7)	F (206.7)	C (21.8)
3	Grand Ave (US 6)/ Brush Creek Extension	NB Stop	EB	-	-	-	-	-	-	A (0.0)	A (0.0)	A (0.0)
			WBL	-	-	-	-	-	-	C (16.4)	F (345.3)	F (217.4)
			WBTR	-	-	-	-	-	-	A (0.0)	A (0.0)	A (0.0)
			NBL	-	-	-	-	-	-	F (ERR)	F (ERR)	F (ERR)
			NBR	-	-	-	-	-	-	F (81.3)	F (159.4)	F (89.8)
		Roundabout	EB	-	-	-	-	-	-	A (3.3)	C (15.8)	A (6.6)
			NB	-	-	-	-	-	-	A (6.1)	B (11.2)	A (7.0)
			WB	-	-	-	-	-	-	A (3.5)	A (3.3)	C (19.6)
4	Grand Ave(US 6)/ Sylvan Lake	Roundabout	SB	A (3.6)	A (3.4)	A (4.2)	A (3.7)	A (3.4)	A (4.3)	A (4.3)	A (3.8)	A (5.6)
			EB	A (5.7)	A (8.1)	A (7.1)	A (3.5)	A (9.4)	A (7.9)	B (10.7)	F (65.6)	D (27.8)
			NB	A (4.5)	A (5.8)	A (5.2)	A (3.6)	A (6.1)	A (5.4)	A (5.9)	A (9.5)	A (7.9)
			WB	A (2.7)	A (2.5)	A (3.7)	A (2.9)	A (2.5)	A (4.0)	A (3.9)	A (3.1)	A (9.0)
		Roundabout - Modified	SB	-	-	-	-	-	-	A (4.3)	A (3.8)	A (5.6)
			EB	-	-	-	-	-	-	A (3.2)	A (4.5)	A (5.7)
			NB	-	-	-	-	-	-	A (5.1)	A (6.9)	A (6.2)
			WB	-	-	-	-	-	-	A (3.9)	A (3.1)	A (9.1)
5	Grand Ave(US 6)/ North Site Access	NB Stop	EBT	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			EBR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			WBL	A (8.9)	A (9.7)	B (10.0)	A (9.1)	A (9.9)	B (10.4)	B (10.2)	B (12.1)	B (13.1)
			WBT	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			NBL	D (33.9)	E (39.6)	F (91.5)	E (43.2)	F (51.1)	F (148.8)	F (86.5)	F (130.0)	F (502.5)
			NBR	B (12.4)	C (16.9)	C (15.7)	B (13.0)	C (18.8)	C (17.0)	C (18.9)	E (45.5)	D (34.1)
		Roundabout	EB	-	-	-	-	-	-	A (3.9)	A (6.0)	A (6.6)
			NB	-	-	-	-	-	-	A (5.1)	A (6.3)	A (5.9)
6	Sylvan Lake/ East Site Access	EB/WB Stop	EB	B (13.9)	C (16.9)	C (19.8)	B (14.4)	C (17.9)	C (21.1)	C (19.3)	D (28.4)	E (39.7)
			WB	B (12.2)	B (14.1)	C (15.6)	B (12.4)	B (14.4)	C (16.0)	C (15.1)	C (19.3)	C (24.5)
			NBL	-	-	-	A (7.9)	A (7.8)	A (8.5)	A (8.2)	A (8.0)	A (9.2)
			NBTR	A (0.8)	A (0.4)	A (0.7)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			SBTL	A (1.0)	A (1.2)	A (0.9)	A (1.1)	A (1.2)	A (0.9)	A (0.9)	A (1.0)	A (0.9)
			SBR	-	-	-	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		Roundabout	SB	-	-	-	-	-	-	A (5.1)	A (4.8)	A (9.5)
			EB	-	-	-	-	-	-	A (4.2)	A (4.2)	A (5.2)
7	Sylvan Lake/ Capitol	SB Stop	NB	-	-	-	-	-	-	A (5.2)	A (7.6)	A (6.2)
			WB	-	-	-	-	-	-	A (4.2)	A (4.9)	A (4.6)
			EBL	A (7.9)	A (8.6)	A (8.1)	A (8.0)	A (8.8)	A (8.2)	A (8.9)	B (11.9)	A (9.7)
			EBT	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			WBT	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			WBR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
8	Sylvan Lake/ Eagle Ranch	NB/SB Stop	SB	B (12.2)	C (15.4)	C (17.6)	B (12.9)	C (17.8)	C (21.4)	C (23.9)	F (375.2)	F (711.0)
			EBTL	A (0.2)	A (0.1)	A (0.5)	A (0.2)	A (0.2)	A (0.4)	A (0.1)	A (0.6)	A (0.4)
			EBR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			WBL	A (7.8)	A (7.8)	A (8.1)	A (7.9)	A (7.9)	A (8.3)	A (8.8)	A (8.9)	B (10.1)
			WBTR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			NBL	B (12.5)	C (17.6)	B (14.0)	B (13.5)	C (21.3)	C (15.8)	F (56.6)	F (506.5)	F (200.3)
			NBTR	A (9.6)	B (10.4)	A (9.8)	A (9.8)	B (10.8)	B (10.2)	B (12.9)	C (16.3)	B (14.9)
			SB	A (9.5)	B (11.4)	B (11.8)	A (9.7)	B (11.9)	B (12.2)	B (12.8)	C (20.8)	C (19.9)

The modified conditions for intersections 1 and 4 are described in detail in **Section 3.1**.

- 4.4.1 Grand Avenue & Eby Creek Road: The intersection is currently operating at an acceptable LOS. Peak commuter traffic volumes in the morning and evening peak hours will deteriorate to unacceptable levels of service with the anticipated background traffic growth. This will occur with or without the addition of the Reserve at Hockett Gulch project's traffic. This has been a known condition since the Eby Creek roundabout was designed in 2008.

PBS&J, the engineering designers of the Eby Creek roundabout, detailed the design parameters in a memo dated October 8, 2008. The memo states that the roundabout was designed with the assumption that either the East Eagle Interchange or the Eagle Airport Interchange would be constructed by Year 2035. A copy of this memo is included in the **Appendix**.

The addition of the Reserve at Hockett Gulch traffic is anticipated to add an average of 7% traffic volume to this intersection and does not significantly impact the operations of this roundabout.

It is recommended that the Town continues to monitor this roundabout as growth occurs.

Potential Mitigation Measures: The following recommended mitigation measures will slightly improve the operations of the current roundabout. However, a major undertaking such as widening the Eagle River Bridge, constructing a secondary Eagle interchange, or constructing an alternate Eagle River crossing to access I-70 will likely be necessary by Year 2035 or Year 2040.

- Add a second eastbound approach lane into the roundabout
- Add a second northbound entry lane into the roundabout
- Stripe two circulating lanes through the entire roundabout.
- The addition of a free southbound right bypass lane was not considered. This improvement would require ROW acquisition and bridge widening, yet still not improve intersection operations to acceptable Levels of Service through Year 2040 traffic conditions.

- 4.4.2 Grand Avenue & Capitol Street: The intersection will see the northbound right and westbound left movements continue to deteriorate as traffic increases on US 6. It is recommended that the Town monitors this intersection for possible future access restrictions.

The addition of the Reserve at Hockett Gulch traffic is anticipated to add an average of 9% traffic volume to this intersection and does not significantly impact the operations of this intersection.

Potential Mitigation Measures:

- Widen Grand Avenue to a 4-lane roadway from Sylvan Lake Road to Eby Creek Road.
- Determine if future access restriction of the westbound left movement is required at this intersection when the Brush Creek Road extension is constructed.

4.4.3 Grand Avenue & Brush Creek Road Extension: The intersection is anticipated to be constructed in the future by the Town of Eagle. It is recommended that the intersection of US 6 and the Brush Creek Road extension is constructed as a roundabout at the time of construction. With this implementation, the intersection is anticipated to operate at acceptable Levels of Service through Year 2040.

Potential Mitigation Measures:

- Widen Grand Avenue to a 4-lane roadway from Sylvan Lake Road to Eby Creek Road.
- Construct this future intersection as a two-lane roundabout with two entry lanes and two circulating lanes. The northbound movement will only require one approach lane.

4.4.4 Grand Avenue & Sylvan Lake Road / Violet Lane: The intersection is currently operating at an acceptable LOS. It is expected to continue to operate at an acceptable Level of Service through Year 2040 once the Brush Creek Road extension is completed.

Potential Mitigation Measures:

- Stripe the eastbound through movement to accommodate two circulatory lanes within the roundabout. Add appropriate signing and striping to accommodate the operational change. Reconstruction of the roundabout's curb and gutter is not anticipated.
- Widen Grand Avenue to a 4-lane roadway from Sylvan Lake Road to Eby Creek Road.

4.4.5 Grand Avenue / North Site Access: The north access will see excessive levels of delay for the northbound left movement. The 95th percentile queue for the northbound left movement is not anticipated to exceed five vehicles at the site egress through Year 2040.

Similar to all accesses on Grand Avenue, the north access will eventually see excessive levels of delay for the northbound left movement. At that time, it is likely that drivers will prefer to turn right and utilize the Sylvan Lake Road roundabout to return towards Gypsum. It was assumed that

50% to 60% of the northbound left traffic egressing the site would utilize the Grand Avenue and Sylvan Lake Road roundabout to make a U-turn by Year 2040 traffic conditions.

The proposed site traffic volumes warrant the installation of three auxiliary lanes on Highway 6, specifically, a right turn acceleration, a right turn deceleration lane, and a left turn deceleration lane. The north site access will need separate left and right turn lanes leaving the site. This scenario will still leave excessive levels of delay for egressing left turns.

Potential Mitigation Measures:

- Construct auxiliary turn lanes at the north site access per Table 5C.

-or-

- Construct a roundabout.

- 4.4.6 Sylvan Lake Road / East Site Access/Colorado Mountain Medical: This intersection is anticipated to operate at acceptable Levels of Services through Year 2040 t traffic conditions.

The intersection is anticipated to operate at an acceptable Level of Service through Year 2040 if Sylvan Lake Road is constructed as a 4-lane roadway. Without the widening, the left turn out of the site can be expected to experience extended periods of delay during the Year 2040 evening peak hour.

The project's traffic volumes at this access will warrant the construction of a southbound right and northbound left turn lane with the buildout of Phase 3.

The medical center is responsible for the construction of a southbound left turn lane into their facility.

The 95th percentile queue is not anticipated to exceed two vehicles at the site egress through Year 2040.

- 4.4.7 Sylvan Lake Road & Capitol Street: The intersection will see the southbound stop-controlled movements continue to deteriorate as traffic increases on Sylvan Lake Road, with or without the project-generated traffic. It is recommended that the Town monitors this intersection for the possible construction of intersection capacity improvements or the construction of a roundabout.

Potential Mitigation Measures:

- Construct a roundabout at this intersection. Consider a smaller or mini roundabout.

-or-

- Install a traffic signal when MUTCD warrants are met.

4.4.8 Sylvan Lake Road & Eagle Ranch Road: The intersection will continue to deteriorate as traffic increases on Sylvan Lake Road, with or without the addition of the Reserve at Hockett Gulch project traffic. It is recommended that the Town continues to monitor this intersection for the possible construction of intersection capacity improvements or the construction of a roundabout.

Potential Mitigation Measures:

- Construct a roundabout at this intersection. Consider a smaller or mini roundabout.

-or-

- Install a traffic signal when MUTCD warrants are met.

4.5 State Highway Access Permits

CDOT devolved US 6 to the Town of Eagle in 2017. Therefore, the highway is no longer under CDOT's control. A State Highway Access Permit is not required for the north site access.

4.6 Auxiliary Turn Lane Analysis

The Town of Eagle refers to the *State Highway Access Code*¹⁰ to provide regulation for auxiliary lanes. Grand Avenue was assumed to have an access category classification of NR-B, similar to CDOT's previous categorization for downtown Eagle. It is currently posted with a 45mph speed limit in both directions at the site access. The westbound speed limit changes to 55mph just west of the site access. With the devolution of US 6, the Town has stated that it will consider reducing the speed limit to align with the commercial uses and act as the western entry to Eagle.

Table 5 depicts the necessary turn lane requirements at the analysis intersections.

4.7 Access Design Criteria

The proposed site accesses need to be constructed per the Town of Eagle's engineering standards.

4.8 Sight Distance

The proposed north site access location has adequate sight distance to the east and west that exceeds the 450-foot passenger car requirement and 585-foot single unit truck requirement in Table 4-2 of the *Access Code* for a two-lane, 45mph roadway.

The proposed east site access location has adequate sight distance to the north and south that exceeds the 350-foot passenger car requirement and 455-foot single unit truck requirement in Table 4-2 of the *Access Code* for a two-lane, 35mph roadway. The native vegetation on the northeast side of Sylvan Lake Road will need to be maintained to ensure adequate sight distance to the south and at the Sylvan Lake Road pedestrian crossing adjacent to the medical center.

4.9 Internal Circulation and Travel Speeds

The internal roadway shall be considered a commercial collector roadway and have a posted speed of 25mph. It will connect Grand Avenue to Sylvan Lake Road.

The 95th percentile queue at the north site egress may reach eleven vehicles, with excessive delays by Year 2040. At that time, it is likely that drivers will prefer to turn right and utilize the roundabout to turn return towards Gypsum.

4.10 Town of Eagle Street Improvement Fee

The Town of Eagle has adopted a transportation impact fee which it calls a “Street Improvement Fee.” Pursuant to the Municipal Code this fee is used to offset the growth-related costs incurred by the Town and to provide for new and expanded facilities necessary to address expanded population and economic activity. This impact fee system provides an equitable system for fairly distributing the costs of future improvements to the roadway system directly related to development activities. The Town’s Street Improvement Fee provides the project’s fair share contribution towards the improvement of Grand Avenue and Eagle’s roadway network.

Table 5A: Auxiliary Turn Lane Requirements in Year 2020

Phase 1 + 2 (Year 2020) Auxiliary Turn Lane Requirements									
Intersection	Movement	Type of Lane	Year 2020 Total Traffic (VPH)			SHAC Trigger Volume (VPH)	Existing Turn Lane (Storage + Taper)	Required Turn Lane	Condition & Notes
			SAT	AM	PM				
Capitol St & Grand Ave	EBR	Decel.	17	14	17	> 50 ¹	None	None	N/A
	WBL	Decel.	209	137	362	> 25 ¹	260'	10:1 Taper + 365' Storage ¹	Turn Lane at Maximum Length - Improvement Not Possible
	NBR	Decel.	244	329	198	Based on 95 th % Queue	275'	N/A	Right Turn Only
N. Site Access & Grand Ave	EBR	Decel.	52	31	51	> 25 ¹	None	13.5:1 Taper + 373' Decel = 435' ¹	Triggered with Initial Phase. Construct to Year 2040 Requirements ²
	WBL	Decel.	122	69	118	> 10 ¹	None	13.5:1 Taper + 373' Decel + 140' Storage = 575' ¹	Triggered with Initial Phase. Construct to Year 2040 Requirements ²
	NBL	Decel.	49	44	38	Based on 95 th % Queue	None	7.5:1 Taper + 55' Storage ¹	Triggered with Initial Phase. Construct to Year 2040 Requirements ²
	NBL	Accel.	49	44	38	Safety & Operation ¹	None	None	N/A
	NBR	Decel.	114	106	88	Based on 95 th % Queue	None	7.5:1 Taper + 30' Storage ¹	Triggered with Initial Phase. Construct to Year 2040 Requirements ²
	NBR	Accel.	114	106	88	> 50 ¹	None	550' Accel. Length ¹	Triggered with Initial Phase. Construct to Year 2040 Requirements ²
Sylvan Lake Rd & E. Site Access	EBL	Decel.	36	41	28	Based on 95 th % Queue	None	EBLTR has 12' queue	N/A
	EBR	Decel.	22	17	16	Based on 95 th % Queue	None	None	N/A
	EBR	Accel.	22	17	16	Safety & Operation ¹	None	None	N/A
	WBL	Decel.	18	18	18	Based on 95th% Queue	None	WBLTR has 15' queue	N/A
	WBR	Decel.	27	27	28	Based on 95th% Queue	None	None	N/A
	NBL	Decel.	23	15	21	> 25 ¹	None	None	Not required for Phase 1 + 2.
Capitol St & Sylvan Lake Rd	NBR	Decel.	18	18	22	> 50 ¹	None	None	N/A
	SBL	Decel.	27	27	32	> 25 ¹	None	10:1 Taper + 50' Storage	Per CMM's Development Agreement with the Town of Eagle - Same as Year 2022 & 2040
	SBR	Decel.	36	18	41	> 50 ¹	None	None	Not required for Phase 1 + 2.
	EBL	Decel.	25	34	56	> 25 ¹	150'	7.5:1 Taper + 50' Storage	Existing Satisfies
	WBR	Decel.	58	117	78	> 50 ¹	180'	7.5:1 Taper + 120' Storage	Existing Satisfies
	SBL	Decel.	61	77	120	Based on 95 th % Queue	50'	SBLR has 55' queue	Existing Satisfies
Eagle Ranch Rd & Sylvan Lake Rd	SBR	Decel.	21	39	72	Based on 95 th % Queue	50'	SBLR has 55' queue	Existing Satisfies
	EBL	Decel.	3	1	9	> 25 ¹	None	None	N/A
	EBR	Decel.	91	160	187	> 50 ¹	120'	7.5:1 Taper + 190' Storage	Ex. Turn Lane at Maximum Length to MacDonald Street Access
	WBL	Decel.	9	31	14	> 25 ¹	120'	7.5:1 Taper + 40' Storage	Existing Satisfies
	WBR	Decel.	2	1	2	> 50 ¹	None	None	N/A
	NBL	Decel.	111	268	144	> 25 ¹	250'	7.5:1 Taper + 270' Storage	Ex. Turn Lane at Maximum Length to Brush Creek Elementary's North Access
SBL	NBR	Decel.	6	18	11	> 50 ¹	None	None	N/A
	SBR	Decel.	2	2	1	> 25 ¹	None	None	N/A
SBL	Decel.	Decel.	9	6	4	> 50 ¹	None	None	N/A
	Decel.	Decel.	9	6	4	> 50 ¹	None	None	N/A

¹ Per State Highway Access Code.

² Acceleration/Deceleration lanes not required if a roundabout is constructed at the site access.

³ Year 2040 conditions require additional turn lane lengths. Consider constructing the full length with the initial implementation as to avoid reconstruction.

⁴ Assumes southbound stop at Capitol St & Sylvan Lake Rd. Town should consider installing a roundabout at this intersection.

Table 5B: Auxiliary Turn Lane Requirements in Year 2022

Phase 1 + 2 + 3 (Year 2022) Auxiliary Turn Lane Requirements										
Intersection	Movement	Type of Lane	Year 2022 Total Traffic (VPH)			SHAC Trigger Volume (VPH)	Existing Turn Lane (Storage + Taper)	Required Turn Lane	Condition & Notes	
			SAT	AM	PM					
Capitol St & Grand Ave	EBR	Decel.	18	16	18	> 50 ¹	None	None	N/A	
	WBL	Decel.	215	143	373	> 25 ¹	260'	10:1 Taper + 365' Storage ¹	Turn Lane at Maximum Length - Improvement Not Possible	
	NBR	Decel.	253	345	205	Based on 95 th % Queue	275'	N/A	Right Turn Only	
N. Site Access & Grand Ave	EBR	Decel.	59	34	58	> 25 ¹	None	13.5:1 Taper + 373' Decel = 435' ¹	Triggered with Initial Phase. Construct to Year 2040 Requirements ²	
	WBL	Decel.	139	77	137	> 10 ¹	None	13.5:1 Taper + 373' Decel + 140' Storage = 575' ¹	Triggered with Initial Phase. Construct to Year 2040 Requirements ²	
	NBL	Decel.	55	52	43	Based on 95 th % Queue	None	7.5:1 Taper + 80' Storage ¹	Triggered with Initial Phase. Construct to Year 2040 Requirements ²	
	NBL	Accel.	55	52	43	Safety & Operation ¹	None	None	N/A	
	NBR	Decel.	131	125	101	Based on 95 th % Queue	None	7.5:1 Taper + 40' Storage ¹	Triggered with Initial Phase. Construct to Year 2040 Requirements ²	
Sylvan Lake Rd & E. Site Access	NBR	Accel.	131	125	101	> 50 ¹	None	550' Accel. Length ¹	Triggered with Initial Phase. Construct to Year 2040 Requirements ²	
	EBL	Decel.	44	50	35	Based on 95 th % Queue	None	EBLTR has 20' queue	N/A	
	EBR	Decel.	23	19	18	Based on 95 th % Queue	None	None	N/A	
	EBR	Accel.	23	19	18	Safety & Operation ¹	None	None	N/A	
	WBL	Decel.	18	18	18	Based on 95th% Queue	None	WBLTR has 15' queue	N/A	
Capitol St & Sylvan Lake Rd	WBL	Decel.	27	27	28	Based on 95th% Queue	None	None	N/A	
	NBL	Decel.	25	16	22	> 25 ¹	None	10:1 Taper + 25' Storage	Triggered with Phase 3. Construct to Year 2040 Requirements ²	
	NBR	Decel.	18	18	22	> 50 ¹	None	None	N/A	
	SBL	Decel.	27	27	32	> 25 ¹	None	10:1 Taper + 50' Storage	Per CMM's Development Agreement with the Town of Eagle - Same as Year 2022 & 2040	
	SBR	Decel.	45	22	50	> 50 ¹	None	10:1 Taper + 50' Storage	Triggered with Phase 3. Construct to Year 2040 Requirements ²	
Eagle Ranch Rd & Sylvan Lake Rd	EBL	Decel.	28	49	64	> 25 ¹	150'	7.5:1 Taper + 50' Storage	Existing Satisfies	
	WBL	Decel.	59	124	80	> 50 ¹	180'	7.5:1 Taper + 120' Storage	Existing Satisfies	
	SBL	Decel.	64	79	127	Based on 95 th % Queue	50'	SBLR has 75' queue	Existing Satisfies	
	SBR	Decel.	25	47	87	Based on 95 th % Queue	50'	SBLR has 75' queue	Existing Satisfies	
	EBL	Decel.	3	2	10	> 25 ¹	None	None	N/A	
Eagle Ranch Rd & Sylvan Lake Rd	EBR	Decel.	102	172	210	> 50 ¹	120'	7.5:1 Taper + 190' Storage	Ex. Turn Lane at Maximum Length to MacDonald Street Access	
	WBL	Decel.	10	33	16	> 25 ¹	120'	7.5:1 Taper + 50' Storage	Existing Satisfies	
	WBR	Decel.	3	2	3	> 50 ¹	None	None	N/A	
	NBL	Decel.	119	279	155	> 25 ¹	250'	7.5:1 Taper + 270' Storage	Ex. Turn Lane at Maximum Length to Brush Creek Elementary's North Access	
	NBR	Decel.	6	18	12	> 50 ¹	None	None	N/A	
Per State Highway Access Code.	SBL	Decel.	3	3	2	> 25 ¹	None	None	N/A	
	SBR	Decel.	12	7	5	> 50 ¹	None	None	N/A	

¹ Per State Highway Access Code.

² Acceleration/Deceleration lanes not required if a roundabout is constructed at the site access.

³ Year 2040 conditions require additional turn lane lengths. Consider constructing the full length with the initial implementation as to avoid reconstruction.

⁴ Assumes southbound stop at Capitol St & Sylvan Lake Rd. Town should consider installing a roundabout at this intersection.

Table 5C: Auxiliary Turn Lane Requirements in Year 2040

Phase 1 + 2 + 3 (Year 2040) Auxiliary Turn Lane Requirements									
Intersection	Movement	Type of Lane	Year 2040 Total Traffic (VPH)			SHAC Trigger Volume (VPH)	Existing Turn Lane (Storage + Taper)	Required Turn Lane	Condition & Notes
			SAT	AM	PM				
Capitol St & Grand Ave	EBR	Decel.	30	30	30	> 50 ¹	None	None	N/A
	WBL	Decel.	265	193	475	> 25 ¹	260'	10:1 Taper + 365' Storage ¹	Turn Lane at Maximum Length - Improvement Not Possible
	NBR	Decel.	335	488	272	Based on 95 th % Queue	275'	N/A	Right Turn Only
N. Site Access & Grand Ave	EBR	Decel.	59	33	57	> 25 ¹	None	13.5:1 Taper + 373' Decel = 435 ¹	Triggered with Initial Phase. Construct to Year 2040 Requirements ²
	WBL	Decel.	138	77	137	> 10 ¹	None	13.5:1 Taper + 373' Decel + 140' Storage = 575 ¹	Triggered with Initial Phase. Construct to Year 2040 Requirements ²
	NBL	Decel.	26	25	19	Based on 95 th % Queue	None	7.5:1 Taper + 75' Storage ¹	Triggered with Initial Phase. Construct to Year 2040 Requirements ²
	NBL	Accel.	26	25	19	Safety & Operation ¹	None	None	N/A
	NBR	Decel.	160	151	123	Based on 95 th % Queue	None	7.5:1 Taper + 110' Storage ¹	Triggered with Initial Phase. Construct to Year 2040 Requirements ²
	NBR	Accel.	160	151	123	> 50 ¹	None	550' Accel. Length ¹	Triggered with Initial Phase. Construct to Year 2040 Requirements ²
Sylvan Lake Rd & E. Site Access	EBL	Decel.	44	50	35	Based on 95 th % Queue	None	EBLTR has 40' queue	N/A
	EBR	Decel.	22	17	17	Based on 95 th % Queue	None	None	N/A
	EBR	Accel.	22	17	17	Safety & Operation ¹	None	None	N/A
	WBL	Decel.	18	18	18	Based on 95 th % Queue	None	WBLTR has 20' queue	N/A
	WBR	Decel.	27	27	28	Based on 95 th % Queue	None	None	N/A
	NBL	Decel.	25	15	22	> 25 ¹	None	10:1 Taper + 25' Storage	Triggered with Phase 3. Construct to Year 2040 Requirements ²
Capitol St & Sylvan Lake Rd	NBR	Decel.	18	18	22	> 50 ¹	None	None	N/A
	SBL	Decel.	27	27	32	> 25 ¹	None	10:1 Taper + 50' Storage	Per CMM's Development Agreement with the Town of Eagle - Same as Year 2022 & 2040
	SBR	Decel.	45	22	50	> 50 ¹	None	10:1 Taper + 50' Storage	Triggered with Phase 3. Construct to Year 2040 Requirements ²
	EBL	Decel.	57	183	139	> 25 ¹	150'	7.5:1 Taper + 50' Storage	Existing Satisfies
	WBR	Decel.	71	185	95	> 50 ¹	180'	7.5:1 Taper + 120' Storage	Existing Satisfies
	SBL	Decel.	92	94	184	Based on 95 th % Queue	50'	SBL and SBR have 935' anticipated queue without other improvements	Existing Satisfies
Eagle Ranch Rd & Sylvan Lake Rd	SBR	Decel.	65	115	225	Based on 95 th % Queue	50'	SBL and SBR have 935' anticipated queue without other improvements	Existing Satisfies
	EBL	Decel.	4	15	15	> 25 ¹	None	None	N/A
	EBR	Decel.	197	278	414	> 50 ¹	120'	7.5:1 Taper + 190' Storage	Ex. Turn Lane at Maximum Length to MacDonald Street Access
	WBL	Decel.	19	50	30	> 25 ¹	120'	7.5:1 Taper + 50' Storage	Existing Satisfies
	WBR	Decel.	15	15	15	> 50 ¹	None	None	N/A
	NBL	Decel.	191	374	249	> 25 ¹	250'	7.5:1 Taper + 270' Storage	Ex. Turn Lane at Maximum Length to Brush Creek Elementary's North Access
	NBR	Decel.	10	20	20	> 50 ¹	None	None	N/A
	SBL	Decel.	10	10	10	> 25 ¹	None	None	N/A
Per State Highway Access Code.			SBR	35	20	> 50 ¹	None	None	N/A

¹ Per State Highway Access Code.

² Acceleration/Deceleration lanes not required if a roundabout is constructed at the site access.

³ Year 2040 Conditions require additional turn lane lengths. Consider constructing the full length with the initial implementation as to avoid reconstruction.

⁴ Assumes southbound stop at Capitol St & Sylvan Lake Rd. Town should consider installing a roundabout at this intersection.

5.0 Recommendations and Conclusions

McDowell Engineering has prepared this Transportation Impact Study for the proposed residential and commercial development of the Reserve at Hockett Gulch. The purpose of this study is to forecast and analyze the impacts of the additional traffic volumes associated with the proposed project.

Trip Generation: Based upon the applicant's proposed land uses, the project can be anticipated to generate 5,190 vehicle trips on the average weekday and 6,477 on the average Saturday. Peak hour traffic on a weekday at project buildout is anticipated to be 387 vehicles during the morning peak hour, 457 vehicle trips during the evening peak hour, and 514 vehicle trips during the Saturday peak hour.

If there is a future special use permit submittal that contains a significant amount of commercial use in the HD/PUD-1 zone and would shift the assumed traffic distribution, a revised traffic study would need to be submitted. This determination for a revised traffic study can be a part of the special use review process.

Data Collection: Traffic data was collected in late September and early October of 2015. This information was used to forecast Year 2020, Year 2022, and Year 2040 traffic volumes on Eagle's roadway network.

Background Traffic Projections: The existing traffic counts were forecasted to accurately reflect the Town of Eagle's current and forecasted growth that will impact the traffic network. The Year 2040 traffic projections were analyzed at six key intersections, as well as the two proposed site accesses.

Background Infrastructure Improvements: The Town of Eagle has plans to construct the Brush Creek Road extension from Capitol Street to US 6 in the future. These infrastructure improvements have been modelled in the Year 2040 analysis. The anticipated background traffic improvements and potential mitigation measures are described in **Section 3.1** and **Section 3.4**, respectively.

Necessary Infrastructure Improvements: The proposed site accesses will require the construction of several auxiliary turn lanes. Refer to **Table 5** for specific details.

Grand Avenue / North Site Access: The north access will see excessive levels of delay for the northbound left movement. The 95th percentile queue for the northbound left movement is not anticipated to exceed five vehicles at the site egress through Year 2040.

Similar to all accesses on Grand Avenue, the north access will eventually see excessive levels of delay for the northbound left movement. At that time, it is likely that drivers will prefer to turn right and utilize the Sylvan Lake Road roundabout to return towards Gypsum. It was assumed that 50% to 60% of the

northbound left traffic egressing the site would utilize the Grand Avenue and Sylvan Lake Road roundabout to make a U-turn by Year 2040 traffic conditions.

The proposed site traffic volumes warrant the installation of three auxiliary lanes on Highway 6, specifically, a right turn acceleration, a right turn deceleration lane, and a left turn deceleration lane. The north site access will need separate left and right turn lanes leaving the site. This scenario will still leave excessive levels of delay for egressing left turns.

Sylvan Lake Road / East Site Access: This intersection is anticipated to operate at acceptable Levels of Services through Year 2040 t traffic conditions.

The intersection is anticipated to operate at an acceptable Level of Service through Year 2040 if Sylvan Lake Road is constructed as a 4-lane roadway. Without the widening, the left turn out of the site can be expected to experience extended periods of delay during the Year 2040 evening peak hour.

The project's traffic volumes at this access will warrant the construction of a southbound right and northbound left turn lane with the buildout of Phase 3.

The medical center is responsible for the construction of a southbound left turn lane into their facility.

The 95th percentile queue is not anticipated to exceed two vehicles at the site egress through Year 2040.

Grand Avenue Corridor Recommendation: Given the changing characteristic of the Grand Avenue corridor west of the Sylvan Lake Road roundabout, the Town should consider lowering the posted speed limit to 35mph.

Town of Eagle Street Improvement Fee: The Town of Eagle has adopted a transportation impact fee which it calls a "Street Improvement Fee." Pursuant to the Municipal Code this fee is used to offset the growth-related costs incurred by the Town and to provide for new and expanded facilities necessary to address expanded population and economic activity. This impact fee system provides an equitable system for fairly distributing the costs of future improvements to the roadway system directly related to development activities. The Town's Street Improvement Fee provides the project's fair share contribution towards the improvement of Grand Avenue and Eagle's roadway network.

Conclusion: The proposed development of the Reserve at Hockett Gulch is anticipated to be successfully accommodated into the greater Town of Eagle roadway network with the above recommendations.

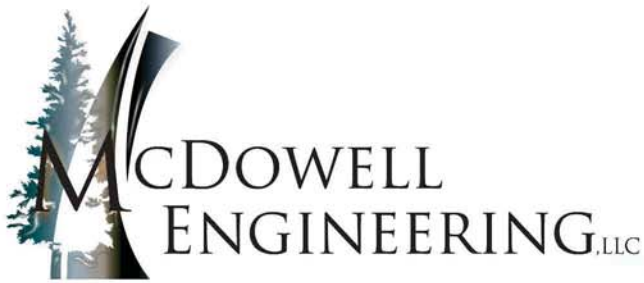
6.0 Appendix

Reference Documents

1. *Frost Creek Transportation Impact Study*. McDowell Engineering, October 2016.
2. *West Eagle Sub Area Plan*. Town of Eagle, September 2011.
3. *Haymeadow Traffic Impact Study*. Fox Tuttle Transportation Group, August 2013.
4. *I-70 Eagle Interchange Upgrade Feasibility Study*. PBS&J, April 2009.
5. OTIS Traffic Data. Colorado Department of Transportation.
<http://apps.coloradodot.info/dataaccess/>
6. *Projected Brush Creek Growth Model*. Town of Eagle, Updated November 2015.
7. *Highway Capacity Manual*. Transportation Research Board, 2010.
8. *Trip Generation Handbook*. Institute of Transportation Engineers, 2012.
9. *Trip Generation, 10th Edition*. Institute of Transportation Engineers, 2017.
10. *State Highway Access Code*. State of Colorado, 2002.

Included Documents

1. Traffic Study Scoping Correspondence with Eagle County and the Town of Eagle
2. *I-70 Eagle Interchange Upgrade Project Leadership Team Technical Memorandum*. PBS&J. October 8, 2008.
3. Internal Trip Reduction Calculations
4. Cursory North Site Access U-turn Travel Time Analysis
5. Traffic Counts
6. HCM and Rodel Reports by Intersection



Traffic Study Scoping Form

Contact Information	
Consultant Name: Tele: E-mail:	McDowell Engineering; Kari McDowell Schroeder, PE, PTOE 970-623-0788 kari@mcdowelleng.com
Developer/Owner Name:	Brue Bakoul Capital Partners

Project Information <i>(Attach proposed Site Plan)</i>					
Project Name:	Reserve at Hockett Gulch				
Project Location:	South of US 6 & 2,000 feet West of the Sylvan Lake Road Roundabout in Eagle, CO				
Project Description: Application type (rezoning, subdivision), acreage, new or re-development, etc.	500 Multi-Family Residential DU & 30 kSF of Retail				
Existing / Proposed Land Uses	ITE Code	#units or Size	Existing / Proposed Land Uses	ITE Code	#units or Size
See Attached					

Please attach Trip Generation Summary table for large or mixed use projects

Assumptions			
Study Horizons	Current Year: <u>2017</u>	Build-out : <u>2020 & 2022</u>	Long Term : <u>2040</u>
Study Area Boundaries <i>(Attach map if needed)</i>	North: HWY 6		South: Capitol St.
	East: Eby Creek Rd.		West: North Site Access
Intersections and Road Segments to be Evaluated <i>(Attach map if needed)</i>	1. All Site entrances		5. HWY 6 / Sylvan Lake Rd
	2. HWY 6 / Eby Creek Rd		6. Sylvan Lake Rd / Capitol St
	3. HWY 6 / Capitol St		7. Sylvan Lake Rd / Eagle Ranch Rd
	4. HWY 6 / Brush Creek Rd Extension		8.
Trip Distribution	<i>See Attached Sketch</i>		

Assumptions (continued)			
Trip Reductions (include in Trip Generation table if provided)	Internal Capture	Use: Per ITE (See Attached) _____ % Use: _____ %	Pass By Use: Per ITE _____ % Use: _____ %
Anticipated Future Traffic Growth Rates (Describe methodology)	Per Town of Eagle's 11/2015 Background Traffic Projections, including the 2013 Haymeadow TIS & 2015 Frost Creek TIS	Study Time Periods (circle all that apply)	AM (7-9) PM (4-6) SAT (noon) Other
Other Factors proposed/assumed transp. improvements, other studies, nearby proposed developments, etc.	- No Seasonal Adjustment Factor with August Counts - Using September 2015 count data - Study will evaluate the feasibility of stop control vs roundabout for both site accesses - Site plan not available yet		
Analysis Methods & Issues (check all that apply)	☒ Synchro ☐ HCS ☒ aaSidra or Rodel ☒ Intersections ☐ Roadway Sections ☐ Signal Warrants ☒ Safety/Sight Distance ☒ Queuing & Storage ☐ CDOT (Access Permit, other) ☒ Identify Bicycle, Pedestrian & Transit Accommodations ☐ TDM ☐ Neighborhood Impacts ☐ Other _____		

ATTACHMENTS, NOTES, & other ASSUMPTIONS:

SIGNED: Kari McDowell Schroeder
Applicant or Consultant

PRINT NAME: Kari McDowell Schroeder, PE, PTOE
Applicant or Consultant

DATE: 1/10/2018

REVIEW AGENCY: _____

DEPARTMENT: _____

SIGNED: _____

PRINT NAME: _____

DATE: _____



Table - Project Trip Generation
Reserve at Hockett Gulch
Eagle, Colorado
Estimated Project-Generated Traffic¹

Project Number: M1313
Prepared By: MLH
Date: 9-Jan-18
Revised:

ITE Code		Units		Avg. Weekday		Avg. Saturday		SAT Peak Hour		AM Peak Hour		PM Peak Hour		Average Weekday		Average Saturday		Saturday Peak Hour Traffic				AM Peak Hour Traffic				PM Peak Hour Traffic			
														Trips		Trips		% Trips		Trips		% Trips		Trips		% Trips		Trips	
<u>Proposed Land Use:</u>																													
Phase 1																													
<u>Residential</u>																													
#220 Multifamily Housing (Low-Rise)		400	DU	7.32	8.14	0.70	0.56	0.67	2,928	3,256	50%	140	50%	140	28%	63	72%	161	59%	158	41%	110							
Phase 1 Residential Internal Capture Calculation									-226	-344		-14		-12		-4		-4		-10		-9							
Phase 1 Residential Subtotal									2,702	2,912		126		128		59		157		148		101							
<u>Retail</u>																													
#850 Supermarket		15	kSF	106.78	177.62	10.34	6.67	7.60	1,602	2,664	51%	79	49%	76	52%	52	48%	48	52%	59	48%	55							
#816 Hardware/Paint Store		5	kSF	9.14	18.20	2.25	1.36	1.13	46	91	56%	6	44%	5	52%	4	48%	3	50%	3	50%	3							
#820 Shopping Center		5	kSF	37.75	46.12	4.50	3.00	4.21	189	231	52%	12	48%	11	54%	8	46%	7	50%	11	50%	11							
#931 Quality Restaurant		5	kSF	83.84	90.04	10.68	4.47	8.28	419	450	59%	32	41%	22	80%	18	20%	4	61%	25	39%	16							
Phase 1 Retail Internal Capture Calculation									-226	-344		-12		-14		-4		-4		-9		-10							
Phase 1 Retail Subtotal									2,030	3,092		117		100		78		58		89		75							
Phase 1 Total									4,732	6,004		243		228		137		215		237		176							
Multimodal Trip Reduction		-5	%						-237	-300		-12		-11		-7		-11		-12		-9							
Total Vehicular Trips (Phase 1)									4,495	5,704		231		217		130		204		225		167							
Phase 1 + 2²																													
<u>Residential</u>																													
#220 Multifamily Housing (Low-Rise) - Constructed in Phase 1		400	DU	7.32	8.14	0.70	0.56	0.67	2,928	3,256	50%	140	50%	140	28%	63	72%	161	59%	158	41%	110							
#220 Multifamily Housing (Low-Rise)		100	DU	7.32	8.14	0.70	0.56	0.67	732	814	50%	35	50%	35	28%	16	72%	40	59%	40	41%	27							
Phase 1 + 2 Residential Internal Capture Calculation									-226	-344		-14		-12		-4		-4		-10		-9							
Phase 1 + 2 Residential Subtotal									3,434	3,726		161		163		75		197		188		128							
<u>Retail</u>																													
#850 Supermarket - Constructed in Phase 1		15	kSF	106.78	177.62	10.34	6.67	7.60	1,602	2,664	51%	79	49%	76	52%	52	48%	48	52%	59	48%	55							
#816 Hardware/Paint Store - Constructed in Phase 1		5	kSF	9.14	18.20	2.25	1.36	1.13	46	91	56%	6	44%	5	52%	4	48%	3	50%	3	50%	3							
#820 Shopping Center - Constructed in Phase 1		5	kSF	37.75	46.12	4.50	3.00	4.21	189	231	52%	12	48%	11	54%	8	46%	7	50%	11	50%	11							
#931 Quality Restaurant - Constructed in Phase 1		5	kSF	83.84	90.04	10.68	4.47	8.28	419	450	59%	32	41%	22	80%	18	20%	4	61%	25	39%	16							
'Phase 1 + 2 Retail Internal Capture Calculation									-226	-344		-12		-14		-4		-4		-9		-10							
Phase 1 + 2 Retail Subtotal									2,030	3,092		117		100		78		58		89		75							
Phase 1+ 2 Total									5,464	6,818		278		263		153		255		277		203							
Multimodal Trip Reduction		-5	%						-273	-341		-14		-13		-8		-13		-14		-10							
Total Vehicular Trips (Phase 1 + Phase 2)									5,191	6,477		264		250		145		242		263		193							

¹ Values obtained from *Trip Generation Manual, 10th Edition*, Institute of Transportation Engineers, 2017.

² Phase 1 + 2 includes the traffic generation from Phase 1. Phase 2 traffic is added to this and is inclusive of Phase 1. Total buildout traffic is shown here in Phase 1 + 2.

Multi-Use Trip Generation Calculation

Analyst: MLH

Date: 1/9/2018

LAND USE A

ITE LU Code		#816, #820, #850 & #931 Retail	
Size		30 kSF	
	Total	Internal	External
Enter	1128	102	1026
Exit	1128	124	1004
Total	2256	226	2030
%	100%	10%	90%

Name of Dvlpt.: Reserve at Hockett Gulch - Phase 1

Time Period: Daily

Exit to External
1004

1026
Enter from External

0% 0
Demand

0
Balanced

0% 0
Demand

0% 0 11% 124
Demand

0
Balanced

0% 0
Demand

124
Balanced

33% 483
Demand

9% 102
Demand

102
Balanced

38% 556
Demand

LAND USE B

ITE LU Code		N/A	
Size			
	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%	#DIV/0!	#DIV/0!	#DIV/0!

Exit to External
0

0
Enter from External

Demand Balanced Demand

0% 0 0 0% 0

Demand Balanced Demand

0% 0 0 0% 0

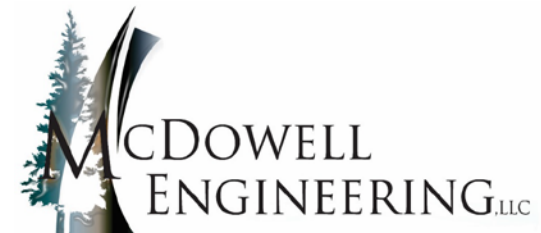
LAND USE C

ITE LU Code		#220 Residential	
Size		400 DU	
	Total	Internal	External
Enter	1464	124	1340
Exit	1464	102	1362
Total	2928	226	2702
%	100%	8%	92%

Exit to External
1340

1362
Enter from External

Net External Trips for Multi-Use Development					
	LAND A	LAND B	LAND C	Total	
Enter	1026	0	1340	2366	
Exit	1004	0	1362	2366	
Total	2030	0	2702	4732	
Single Use Trip Gen.	2256	0	2928	5184	7.7%



Internal Trip Reduction Calculation Model

Analyst: MLH

Date: 1/9/2018

LAND USE A

ITE LU Code		#816, #820, #850 & #931 Retail	
Size		30 kSF	
	Total	Internal	External
Enter	1718	155	1563
Exit	1718	189	1529
Total	3436	344	3092
%	100%	10%	90%

Name of Dvpt.: Reserve at Hockett Gulch - Phase 1

Time Period: Average Saturday

Exit to External
1529

1563
Enter from External

0% 0
Demand

0
Balanced

0% 0
Demand

0% 0 11% 189
Demand

0
Balanced

0% 0
Demand

188.98
Balanced

33% 537
Demand

9% 155
Demand

154.62
Balanced

38% 619
Demand

LAND USE B

ITE LU Code		N/A	
Size			
	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%	#DIV/0!	#DIV/0!	#DIV/0!

Exit to External
0

0
Enter from External

Demand Balanced Demand

0% 0 0 0% 0

Demand Balanced Demand

0% 0 0 0% 0

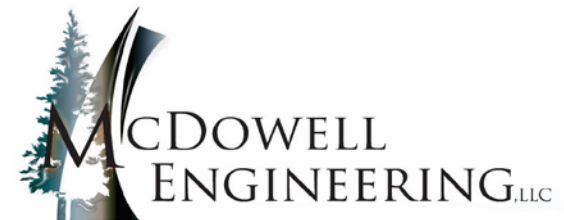
LAND USE C

ITE LU Code		#220 Residential	
Size		400 DU	
	Total	Internal	External
Enter	1628	189	1439
Exit	1628	155	1473
Total	3256	344	2912
%	100%	11%	89%

Exit to External
1439

1473
Enter from External

Net External Trips for Multi-Use Development				
	LAND A	LAND B	LAND C	Total
Enter	1563	0	1439	3002
Exit	1529	0	1473	3002
Total	3092	0	2912	6004
Single Use Trip Gen.	3436	0	3256	6692
				10.6%



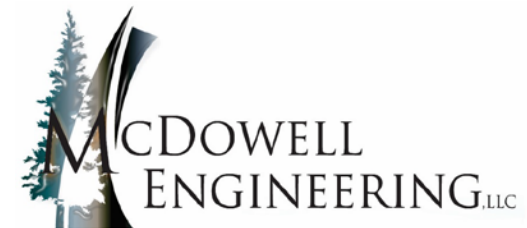
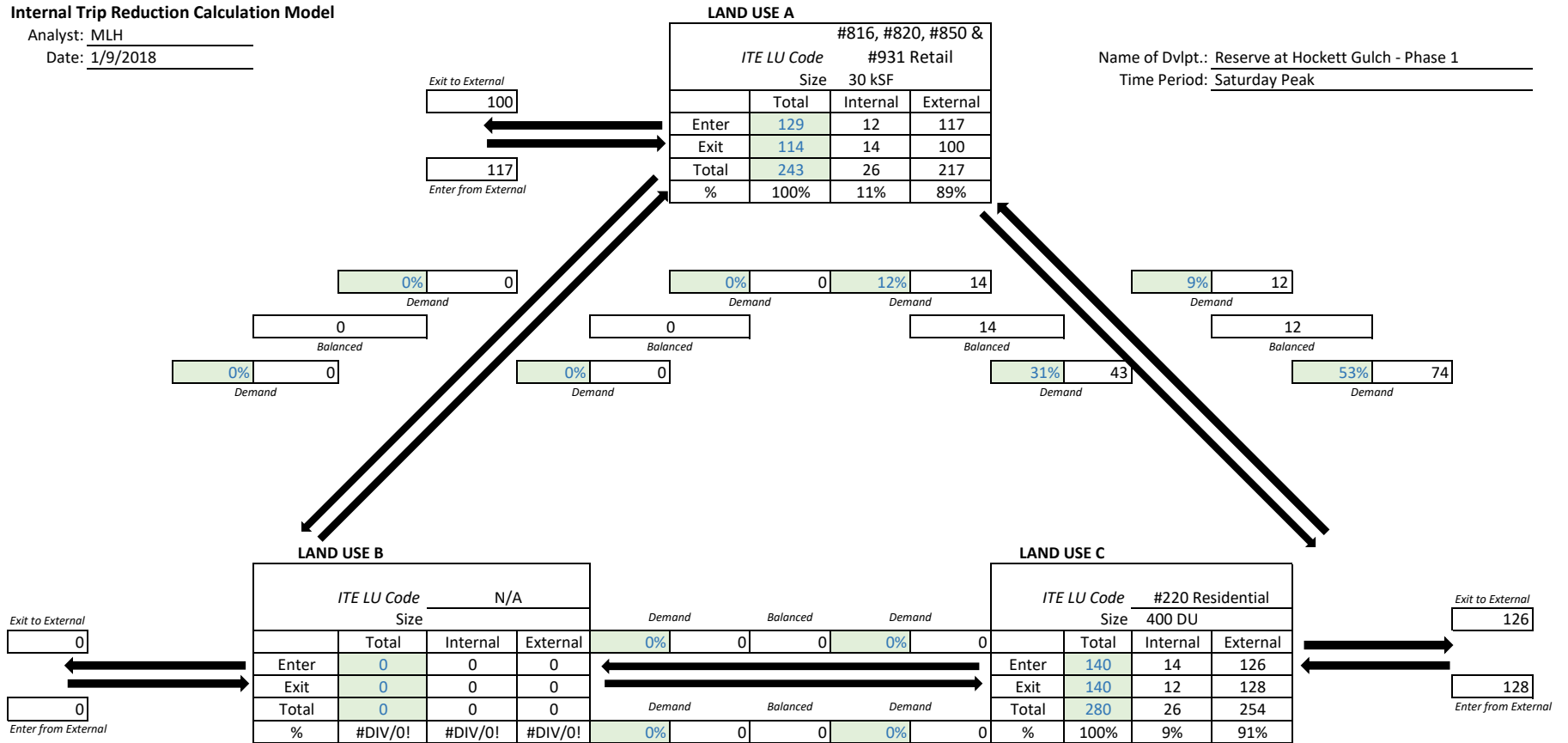
Internal Trip Reduction Calculation Model

Analyst: MLH

Date: 1/9/2018

Name of Dvpt.: Reserve at Hockett Gulch - Phase 1

Time Period: Saturday Peak



Internal Trip Reduction Calculation Model

Analyst: MLH

Date: 1/9/2018

LAND USE A

ITE LU Code		#816, #820, #850 & #931 Retail	
Size		30 kSF	
	Total	Internal	External
Enter	82	4	78
Exit	62	4	58
Total	144	8	136
%	100%	6%	94%

Name of Dvpt.: Reserve at Hockett Gulch - Phase 1

Time Period: AM Peak

Exit to External
58

78
Enter from External

0% 0
Demand

0
Balanced

0% 0
Demand

0% 0 7% 4
Demand

0
Balanced

0% 0
Demand

4.34
Balanced

37% 23
Demand

5% 4
Demand

4.1
Balanced

34% 55
Demand

LAND USE B

ITE LU Code		N/A	
Size			
	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%	#DIV/0!	#DIV/0!	#DIV/0!

Exit to External
0

0
Enter from External

Demand Balanced Demand

0% 0 0 0% 0

Demand Balanced Demand

0% 0 0 0% 0

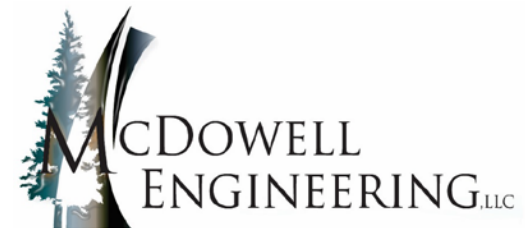
LAND USE C

ITE LU Code		#220 Residential	
Size		400 DU	
	Total	Internal	External
Enter	63	4	59
Exit	161	4	157
Total	224	8	216
%	100%	4%	96%

Exit to External
59

157
Enter from External

Net External Trips for Multi-Use Development				
	LAND A	LAND B	LAND C	Total
Enter	78	0	59	137
Exit	58	0	157	215
Total	136	0	216	352
Single Use Trip Gen.	144	0	224	368
				3.6%



Internal Trip Reduction Calculation Model

Analyst: MLH

Date: 1/9/2018

LAND USE A

ITE LU Code		#816, #820, #850 & #931 Retail	
Size		30 kSF	
	Total	Internal	External
Enter	98	9	89
Exit	85	10	75
Total	183	19	164
%	100%	10%	90%

Name of Dvpt.: Reserve at Hockett Gulch - Phase 1

Time Period: PM Peak

Exit to External
75

Enter from External
89

0% 0
Demand

0
Balanced

0% 0
Demand

0% 0 12% 10
Demand

0
Balanced

0% 0
Demand

9% 9
Demand

9
Balanced

31% 49
Demand

53% 58
Demand

LAND USE B

ITE LU Code		N/A	
Size			
	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%	#DIV/0!	#DIV/0!	#DIV/0!

Exit to External
0

Enter from External
0

Demand Balanced Demand

0% 0 0 0% 0

Demand Balanced Demand

0% 0 0 0% 0

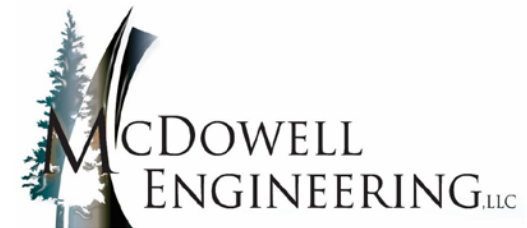
LAND USE C

ITE LU Code		#220 Residential	
Size		400 DU	
	Total	Internal	External
Enter	158	10	148
Exit	110	9	101
Total	268	19	249
%	100%	7%	93%

Exit to External
148

Enter from External
101

Net External Trips for Multi-Use Development				
	LAND A	LAND B	LAND C	Total
Enter	89	0	148	237
Exit	75	0	101	176
Total	164	0	249	413
Single Use Trip Gen.	183	0	268	451
				7.1%



Multi-Use Trip Generation Calculation

Analyst: MLH

Date: 1/9/2018

LAND USE A

ITE LU Code		#816, #820, #850 & #931 Retail	
Size		30 kSF	
	Total	Internal	External
Enter	1128	102	1026
Exit	1128	124	1004
Total	2256	226	2030
%	100%	10%	90%

Name of Dvlpt.: Reserve at Hockett Gulch - Phase 1 + 2

Time Period: Daily

Exit to External
1004

1026
Enter from External

0% 0
Demand

0
Balanced

0% 0
Demand

0% 0 11% 124
Demand

0
Balanced

0% 0
Demand

124
Balanced

33% 604
Demand

9% 102
Demand

102
Balanced

38% 695
Demand

LAND USE B

ITE LU Code		N/A	
Size			
	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%	#DIV/0!	#DIV/0!	#DIV/0!

Exit to External
0

0
Enter from External

Demand Balanced Demand

0% 0 0 0% 0

Demand Balanced Demand

0% 0 0 0% 0

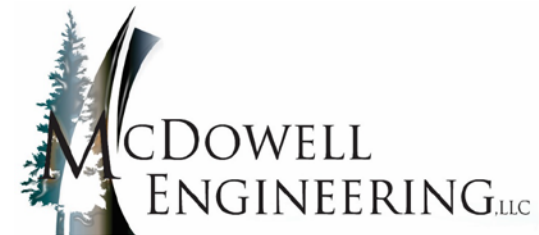
LAND USE C

ITE LU Code		#220 Residential	
Size		500 DU	
	Total	Internal	External
Enter	1830	124	1706
Exit	1830	102	1728
Total	3660	226	3434
%	100%	6%	94%

Exit to External
1706

1728
Enter from External

Net External Trips for Multi-Use Development					
	LAND A	LAND B	LAND C	Total	
Enter	1026	0	1706	2732	
Exit	1004	0	1728	2732	
Total	2030	0	3434	5464	
Single Use Trip Gen.	2256	0	3660	5916	6.2%



Internal Trip Reduction Calculation Model

Analyst: MLH

Date: 1/9/2018

LAND USE A

ITE LU Code		#816, #820, #850 & #931 Retail	
Size		30 kSF	
	Total	Internal	External
Enter	1718	155	1563
Exit	1718	189	1529
Total	3436	344	3092
%	100%	10%	90%

Name of Dvpt.: Reserve at Hockett Gulch - Phase 1 + 2

Time Period: Average Saturday

Exit to External
1529

1563
Enter from External

0% 0
Demand

0
Balanced

0% 0
Demand

0% 0 11% 189
Demand

0
Balanced

0% 0
Demand

188.98
Balanced

9% 155
Demand

154.62
Balanced

38% 773
Demand

33% 672
Demand

LAND USE B

ITE LU Code		N/A	
Size			
	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%	#DIV/0!	#DIV/0!	#DIV/0!

Exit to External
0

0
Enter from External

Demand Balanced Demand

0% 0 0 0% 0

Demand Balanced Demand

0% 0 0 0% 0

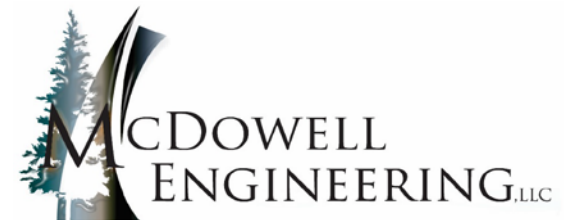
LAND USE C

ITE LU Code		#220 Residential	
Size		500 DU	
	Total	Internal	External
Enter	2035	189	1846
Exit	2035	155	1880
Total	4070	344	3726
%	100%	8%	92%

Exit to External
1846

1880
Enter from External

Net External Trips for Multi-Use Development				
	LAND A	LAND B	LAND C	Total
Enter	1563	0	1846	3409
Exit	1529	0	1880	3409
Total	3092	0	3726	6818
Single Use Trip Gen.	3436	0	4070	7506
				8.5%



Internal Trip Reduction Calculation Model

Analyst: MLH

Date: 1/9/2018

LAND USE A

ITE LU Code		#816, #820, #850 & #931 Retail	
Size		30 kSF	
	Total	Internal	External
Enter	129	12	117
Exit	114	14	100
Total	243	26	217
%	100%	11%	89%

Name of Dvpt.: Reserve at Hockett Gulch - Phase 1 + 2

Time Period: Saturday Peak

Exit to External
100

117
Enter from External

0% 0
Demand

0
Balanced

0% 0
Demand

0% 0 12% 14
Demand

0
Balanced

0% 0
Demand

9% 12
Demand

12
Balanced

53% 93
Demand

14
Balanced

31% 54
Demand

LAND USE B

ITE LU Code		N/A	
Size			
	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%	#DIV/0!	#DIV/0!	#DIV/0!

Exit to External
0

0
Enter from External

Demand Balanced Demand

0% 0 0 0% 0

Demand Balanced Demand

0% 0 0 0% 0

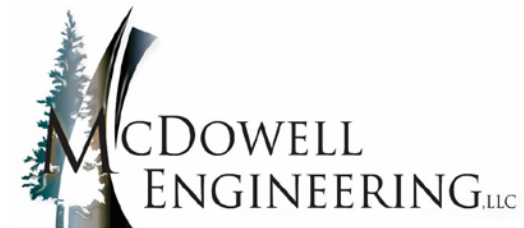
LAND USE C

ITE LU Code		#220 Residential	
Size		500 DU	
	Total	Internal	External
Enter	175	14	161
Exit	175	12	163
Total	350	26	324
%	100%	7%	93%

Exit to External
161

163
Enter from External

Net External Trips for Multi-Use Development				
	LAND A	LAND B	LAND C	Total
Enter	117	0	161	278
Exit	100	0	163	263
Total	217	0	324	541
Single Use Trip Gen.	243	0	350	593
				7.4%



Internal Trip Reduction Calculation Model

Analyst: MLH

Date: 1/9/2018

LAND USE A

ITE LU Code		#816, #820, #850 & #931 Retail	
Size		30 kSF	
	Total	Internal	External
Enter	82	4	78
Exit	62	4	58
Total	144	8	136
%	100%	6%	94%

Name of Dvpt.: Reserve at Hockett Gulch - Phase 1 + 2

Time Period: AM Peak

Exit to External
58

78
Enter from External

0% 0
Demand

0
Balanced

0% 0
Demand

0% 0 7% 4
Demand

0
Balanced

0% 0
Demand

4.34
Balanced

37% 29
Demand

5% 4
Demand

4.1
Balanced

34% 68
Demand

LAND USE B

ITE LU Code		N/A	
Size			
	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%	#DIV/0!	#DIV/0!	#DIV/0!

Exit to External
0

0
Enter from External

Demand Balanced Demand

0% 0 0 0% 0

Demand Balanced Demand

0% 0 0 0% 0

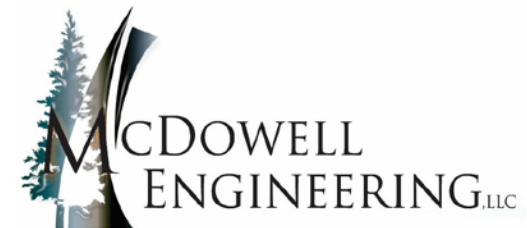
LAND USE C

ITE LU Code		#220 Residential	
Size		500 DU	
	Total	Internal	External
Enter	79	4	75
Exit	201	4	197
Total	280	8	272
%	100%	3%	97%

Exit to External
75

197
Enter from External

Net External Trips for Multi-Use Development				
	LAND A	LAND B	LAND C	Total
Enter	78	0	75	153
Exit	58	0	197	255
Total	136	0	272	408
Single Use Trip Gen.	144	0	280	424
				2.9%



Internal Trip Reduction Calculation Model

Analyst: MLH

Date: 1/9/2018

LAND USE A

ITE LU Code		#816, #820, #850 & #931 Retail	
Size		30 kSF	
	Total	Internal	External
Enter	98	9	89
Exit	85	10	75
Total	183	19	164
%	100%	10%	90%

Name of Dvpt.: Reserve at Hockett Gulch - Phase 1 + 2

Time Period: PM Peak

Exit to External
75

89
Enter from External

0% 0
Demand

0
Balanced

0% 0
Demand

0% 0 12% 10
Demand

0
Balanced

0% 0
Demand

9% 9
Demand

9
Balanced

53% 73
Demand

10
Balanced

31% 61
Demand

LAND USE B

ITE LU Code		N/A	
Size			
	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%	#DIV/0!	#DIV/0!	#DIV/0!

Exit to External
0

0
Enter from External

Demand Balanced Demand

0% 0 0 0% 0

Demand Balanced Demand

0% 0 0 0% 0

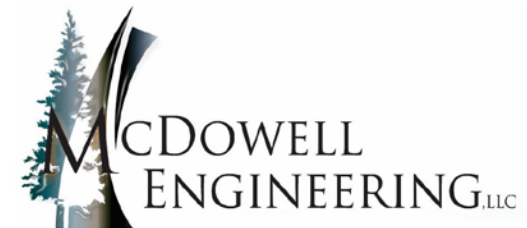
LAND USE C

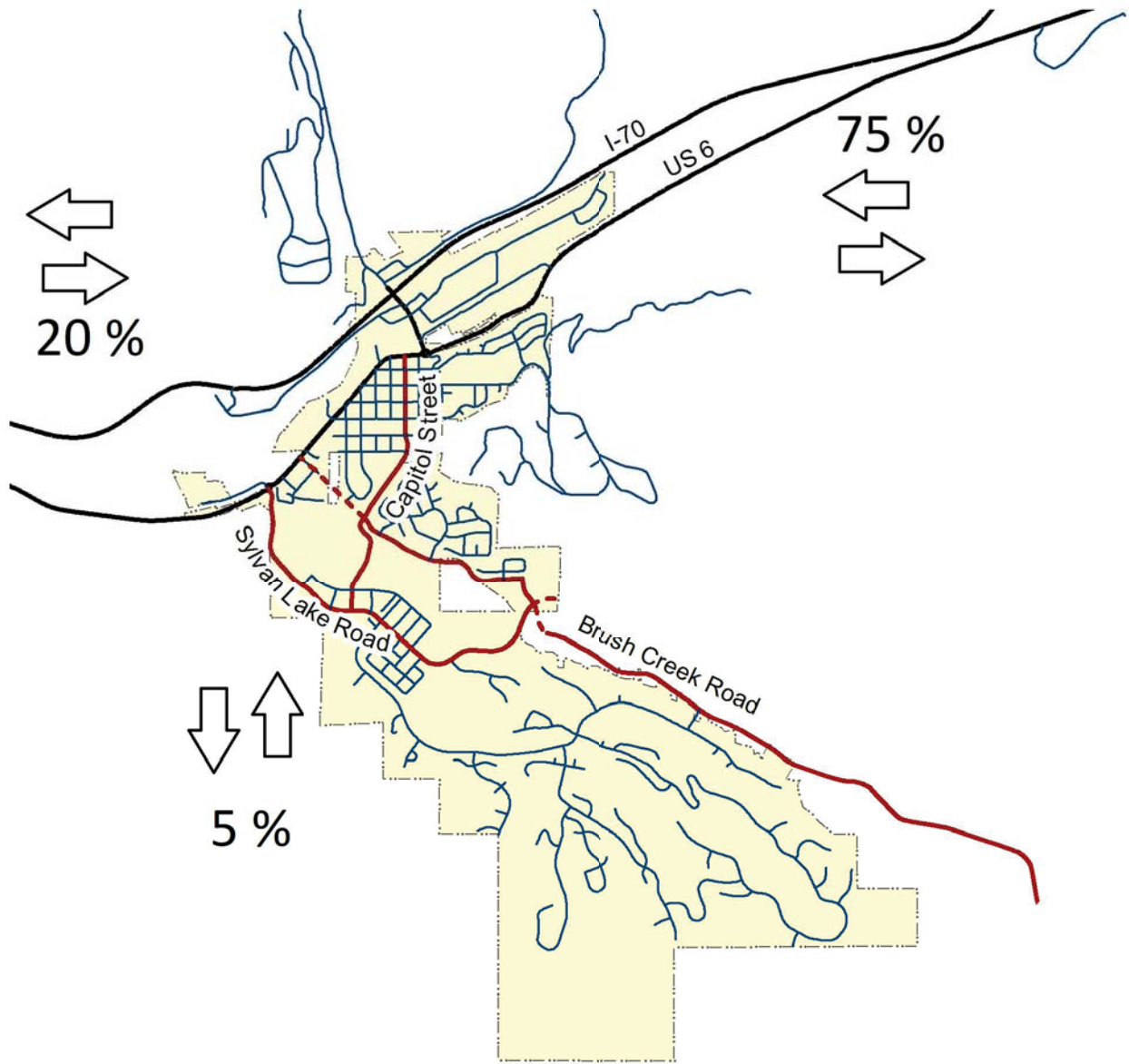
ITE LU Code		#220 Residential	
Size		500 DU	
	Total	Internal	External
Enter	198	10	188
Exit	137	9	128
Total	335	19	316
%	100%	6%	94%

Exit to External
188

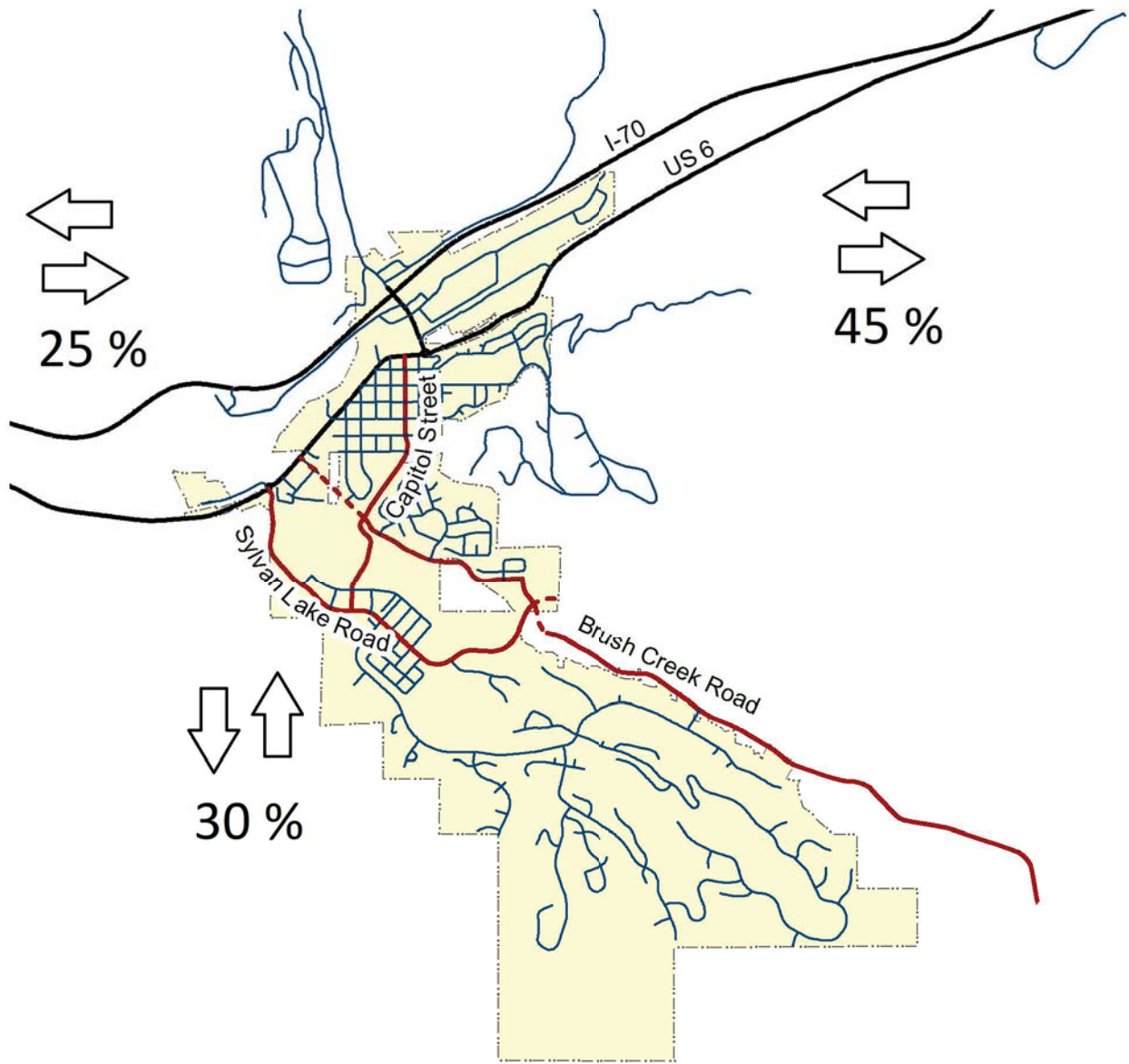
128
Enter from External

Net External Trips for Multi-Use Development				
	LAND A	LAND B	LAND C	Total
Enter	89	0	188	277
Exit	75	0	128	203
Total	164	0	316	480
Single Use Trip Gen.	183	0	335	518
				5.7%





Eagle, Colorado
Reserve at Hockett Gulch
Residential Directional Distribution
10-Jan-2018



Eagle, Colorado
Reserve at Hockett Gulch
Commercial Directional Distribution
10-Jan-2018



TECHNICAL MEMORANDUM

TO: I-70 Eagle Interchange Upgrade Project Leadership Team
FROM: Jamie Archambeau, P.E. and Dave Millar, P.E., PTOE
DATE: October 8, 2008
SUBJECT: I-70 Eagle Interchange Upgrade Traffic Analysis Approach

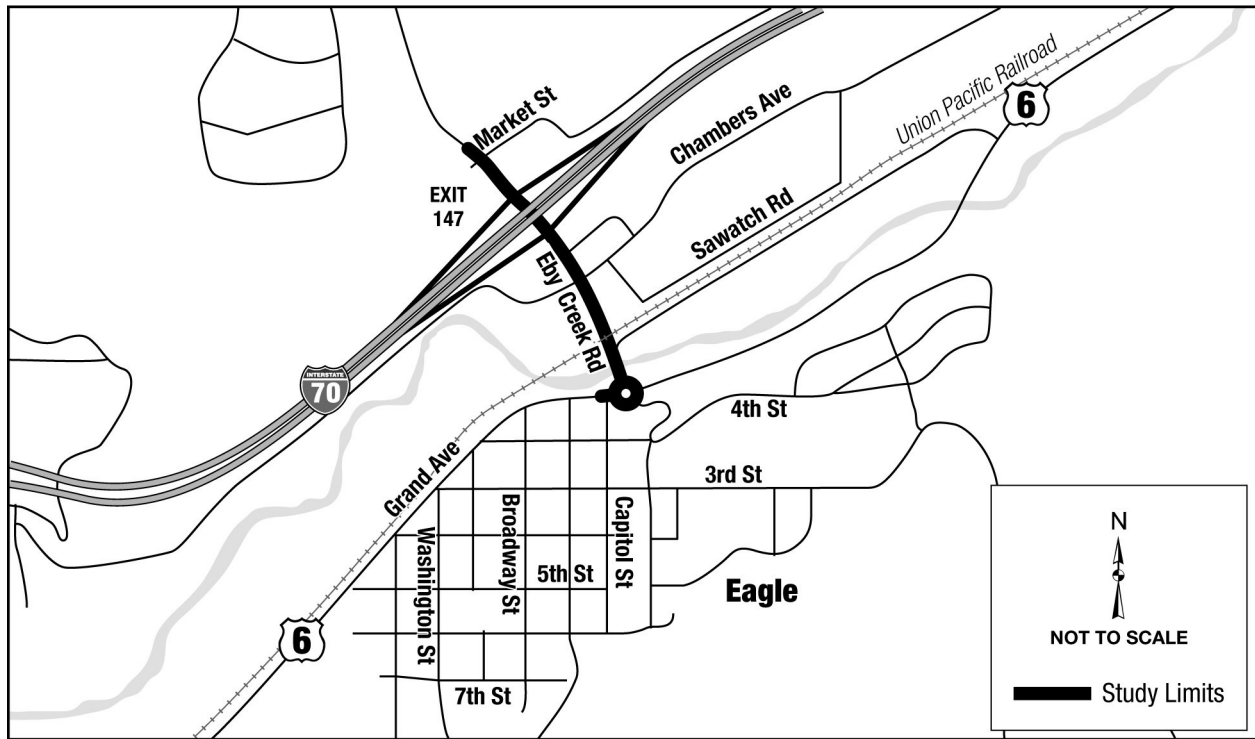
1.0 INTRODUCTION

The Colorado Department of Transportation (CDOT) in cooperation with the Town of Eagle (Town) is conducting a Feasibility Study for the I-70 Eagle Interchange including the Eby Creek Road Corridor from Market Street continuing through the roundabout at US 6 to the US 6/Capitol Street intersection on the west. The purpose of this study is to evaluate transportation improvements that would result in improved mobility and safety for all users and provide effective access to local businesses on the Eby Creek Road study corridor.

The I-70 Eagle Interchange (Eby Creek Road) is located at milepost (MP) 147, as shown in Figure 1. The Town is located just south of I-70 between the Town of Gypsum and unincorporated Edwards. The Town of Eagle has one interchange that connects the Town to I-70. The nearest adjacent interchanges are in Gypsum to the West at MP 140 and at Wolcott to the East at MP 157.

This memorandum will discuss previous studies in the project area, existing and forecast traffic volumes, the potential development scenarios, and the proposed threshold analysis for the project.

Figure 1
Project Location

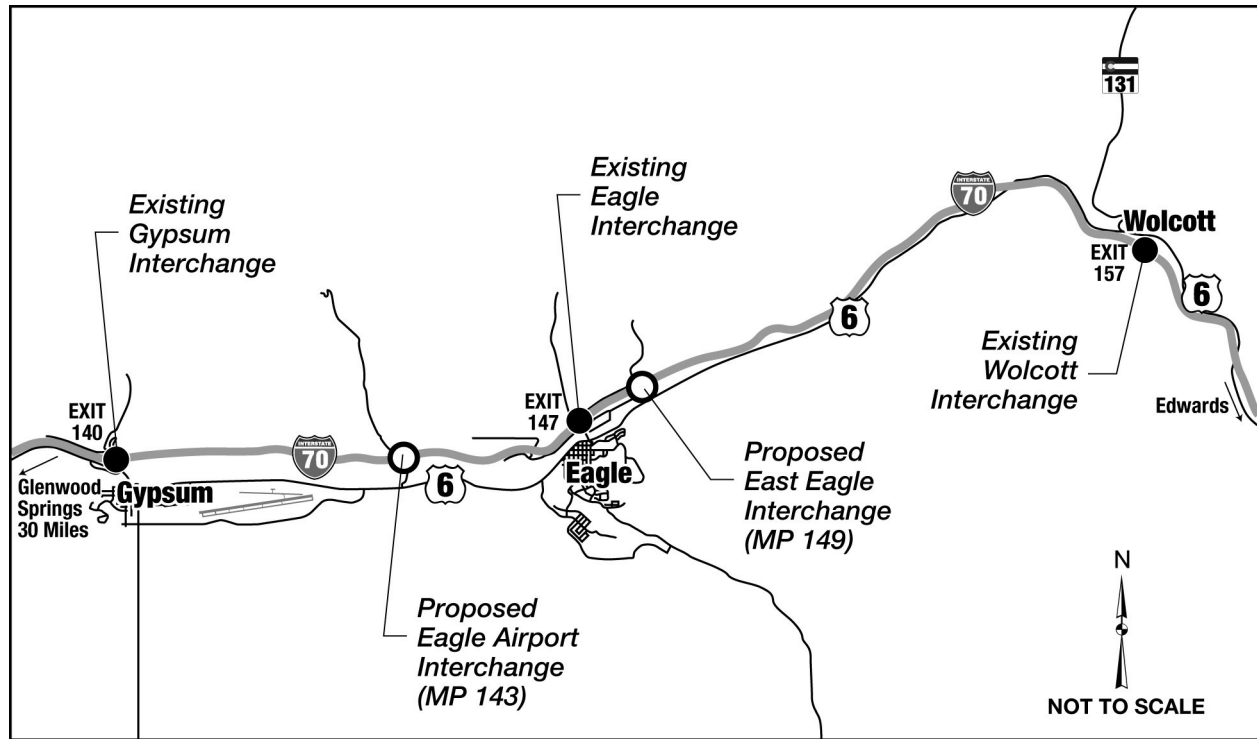


2.0 BACKGROUND INFORMATION

The study corridor currently experiences heavy congestion during the morning and evening peak periods that frequently result in queues spilling back onto I-70 from the westbound off-ramp. Previous studies, data, and recommendations for transportation improvements in Eagle near the project area were analyzed as a starting point for the traffic analysis.

The two primary studies that were used are the *Eagle County Airport Interchange and Connector Road Environmental Assessment (EA)* (J.F. Sato and Associates, August 2004) and the *Draft I-70/East Eagle FHWA Interstate Access Request (IAR), Version 10.0* (Leigh, Scott, and Cleary, July 2008). The Federal Highway Administration (FHWA) approved the Eagle County Airport Interchange, and it would be located at approximately MP 143. However, funding for this interchange has not yet been identified. The East Eagle IAR is currently undergoing FHWA review. If approved, this interchange would be located at approximately MP 149 and would be constructed with local funding. Figure 2 shows the location of the existing and proposed interchanges.

Figure 2
Proposed Interchange Locations



3.0 EXISTING TRAFFIC VOLUMES

Prior to forecasting future traffic volumes, existing volumes were collected on Eby Creek Road to develop a thorough understanding of the congestion levels and travel patterns. Turning movement counts (TMC) and daily traffic volumes were collected along the study corridor in early July 2008 by PBS&J. Initial review of these counts revealed that the existing volume on Eby Creek Road south of Chambers was 22 percent lower than those collected in 2006 for the East Eagle Interchange project. The East Eagle Interchange study forecasted the 2008 volume as 41 percent higher than the July 2008 counts. CDOT traffic counts collected in late June 2008 and the counts conducted by the Town from mid-August 2008 were used for relative comparison, and to show the level of variability in traffic at this location. Table 1 displays the traffic volumes by source in order to illustrate the variation in traffic volumes collected on the study corridor.

Table 1
Daily Traffic on Eby Creek Road South of Chambers

Date	Volume	Source
2006	23,565	East Eagle Interchange
2008*	27,255	East Eagle Interchange
6/2008	21,165	CDOT
7/2008	19,270	PBS&J
8/2008	23,640	Town of Eagle

Note: *Projected Traffic Volume

The lack of growth in traffic volumes from 2006 to 2008 is most likely the result of several factors. In 2006 there were numerous construction projects that generated substantial levels of construction traffic. Since 2006, the Town has experienced a significant reduction in the number of building permits issued resulting in less construction traffic than in 2006. In addition, rising fuel prices have generally resulted in less travel nationwide in 2008, suggesting that more people are using alternate modes or eliminating unnecessary trips altogether. The Town of Gypsum has also experienced a similar reduction (approximately 5 percent) in traffic volumes over the same time period.

The project technical team concluded that a volume of 22,000 represented a typical daily 2008 traffic volume for Eby Creek south of Chambers. This volume was selected because it represents an approximate average of volumes collected during the summer of 2008. Consequently, the peak hour TMC will be adjusted to be consistent with a daily volume of 22,000.

4.0 FORECAST TRAFFIC VOLUMES

FHWA and CDOT have requested the traffic forecasting methods for the I-70 Eagle Interchange Feasibility Study be consistent with previous studies completed in the area. In order to maintain this consistency, the Eagle Airport EA and the East Eagle IAR were reviewed to identify the methods used to forecast future traffic volumes. After reviewing the documents, the projected volumes for a No New Interchanges scenario from each study were compared to determine whether the studies had consistent projected volumes. These volumes are presented in Figure 3.

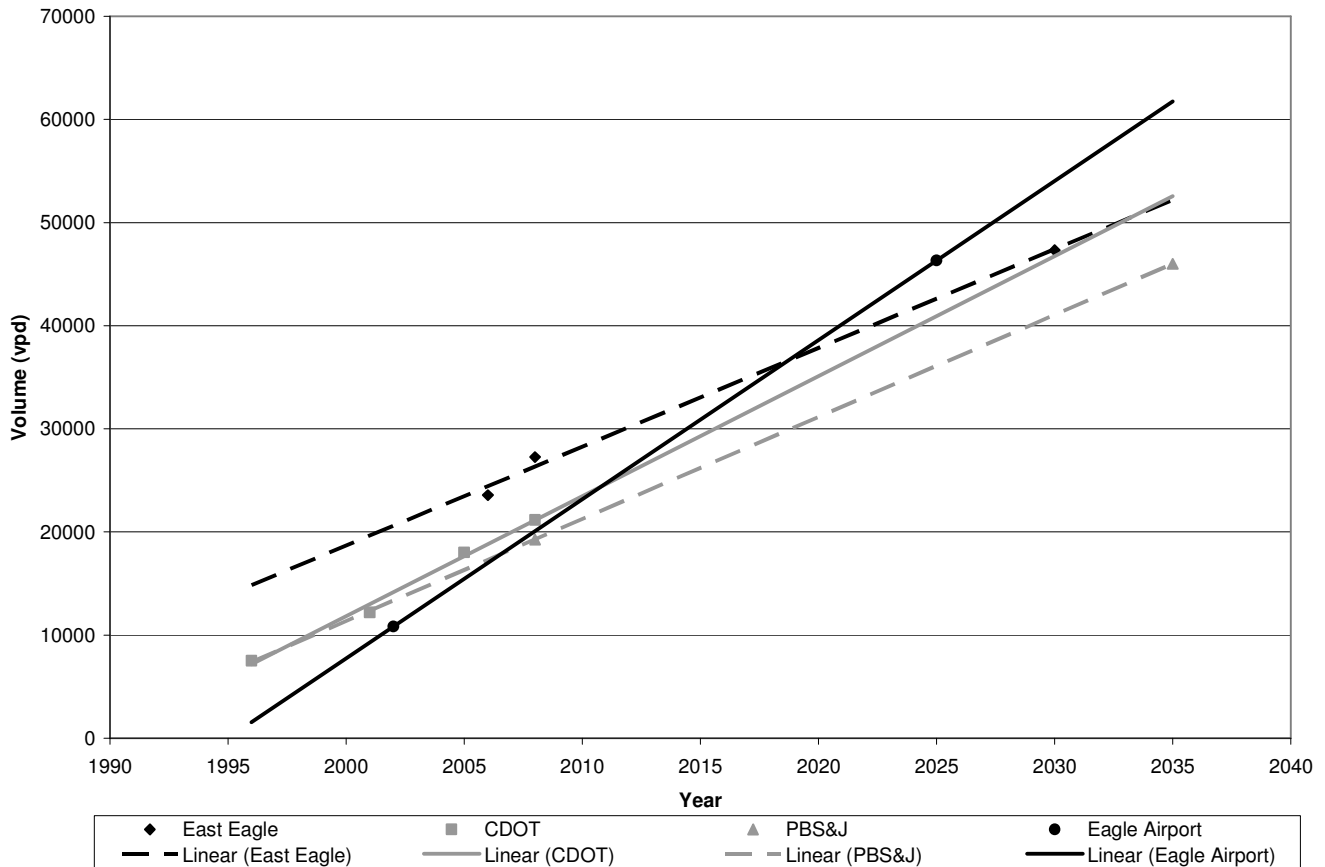
The East Eagle IAR forecasted volumes for 2008 by applying a 5 percent annual growth rate to 2006 traffic volumes to achieve their 2008 baseline scenario. From the forecasted 2008 traffic volume, future development traffic was added by using assumptions based on land use data to achieve 2030 volumes. The East Eagle IAR projected a volume on Eby Creek Road south of Chambers for 2030 of 47,325 vehicles per day (vpd) under the No New Interchanges scenario. By comparison, the Eagle Airport EA projected a volume of 46,325 vpd in 2025 at the same location.

The project team is proposing that the East Eagle IAR be used as a starting point to develop 2035 forecast traffic volumes for the Eby Creek Feasibility Study. However, with the drop in traffic volumes from 2006 to 2008, there are some adjustments to be made to the forecasted traffic volumes for the I-70 Eagle Interchange Feasibility Study.

Because the I-70 Eagle Interchange Feasibility Study has true 2008 traffic volumes, these volumes will replace the estimated 2008 volumes projected by the East Eagle IAR. The development traffic based on land use data will be added to the 2008 traffic counts to determine forecast traffic volumes. The resulting forecasted volumes will be somewhat lower than those in the East Eagle IAR using the same method. The difference in the projected traffic volumes between the East Eagle IAR and the I-70 Eagle Interchange Feasibility Study is approximately equal to the difference in the 2008 traffic volumes. For the purposes of this feasibility study, forecasted traffic volumes on Eby Creek Road south of Chambers with no new interchanges are estimated to be approximately 46,000 vpd by the year 2035. This volume forecast is displayed in Figure 3. This land use forecasting method would be applied to each potential scenario outlined in the next section.

It is important to note that a best-fit line was applied to data points in order to create this figure. This line does not necessarily indicate that growth will occur at a linear rate, but rather was used to illustrate forward projections of traffic. Figure 3 also includes a linear extrapolation of recent CDOT counts.

Figure 3
No New Interchanges Projected Volumes



5.0 POTENTIAL SCENARIOS

When developing future scenarios, there are several factors to consider. While the Eagle airport interchange has been approved by FHWA, it currently does not have identified funding. However, it is included in the I-70 Mountain Corridor, which has identified funding for improvements, but must compete for funding with other projects on the I-70 corridor. Conversely, the East Eagle interchange will be privately funded pending local development and 1601 approval from FHWA. Based on these factors, there are four potential scenarios to be considered as part of the I-70 Eagle Interchange Feasibility Study.

- I. No New Interchanges - Assumes no new interchanges are constructed within the project area
- II. Eagle Airport Interchange - Assumes only the Eagle airport interchange is constructed
- III. East Eagle Interchange - Assumes only the East Eagle interchange is constructed

IV. Eagle Airport and East Eagle Interchanges - Assumes both the Eagle airport interchange and the East Eagle interchange are constructed

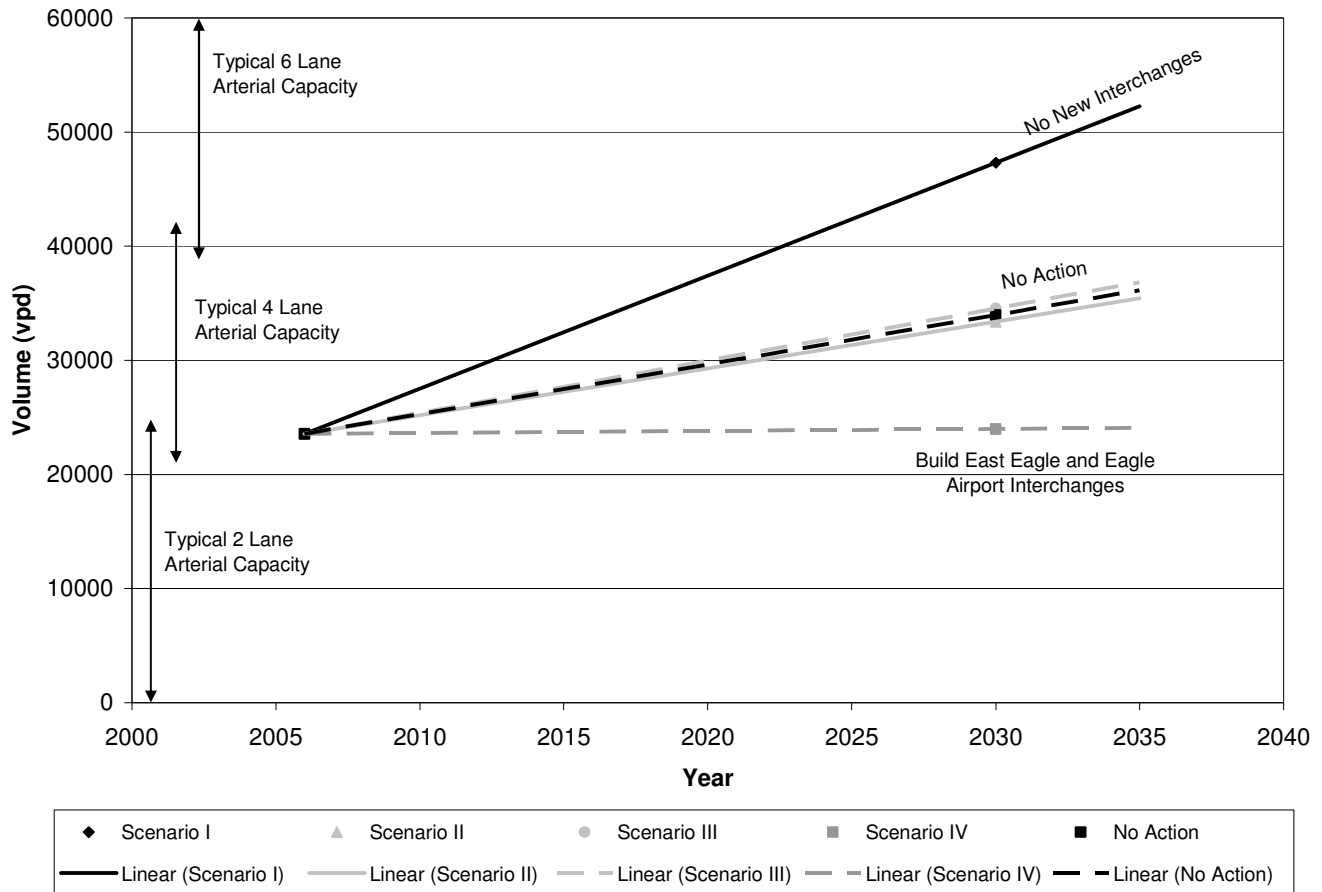
Figure 4 displays the forecasted traffic volumes on Eby Creek Road south of Chambers from the East Eagle IAR. The East Eagle IAR used a land use based forecasting method to develop future traffic volumes for each scenario. The figure also shows typical capacities for two-, four-, and six-lane arterials. This figure illustrates the large range of forecasted volumes created by each scenario listed previously.

It is important to note that a best-fit line was applied to data points in order to create this figure. This line does not necessarily indicate that growth will occur at a linear rate, but rather was used to illustrate forward projections of traffic. The process described in Section 4.0 would be used to forecast new traffic volumes for each of these scenarios.

Because the Eagle Airport interchange is in competition for funding as part of the I-70 Mountain Corridor, for the purposes of this study, it will be assumed that the No-Action condition assumes one interchange will be built by 2035. Both Scenarios II and III include the addition of one new interchange. Resultant traffic forecasts indicate that the addition of one new interchange (whether it be the Eagle Airport or East Eagle) would result in approximately the same volume on Eby Creek Road south of Chambers. Figure 4 displays the proposed No-Action traffic volume forecast which is the average of Scenarios II and III.

Based on Figure 4, the East Eagle IAR indicates that under the No New Interchanges scenario (Scenario I), a six-lane cross section would ultimately be required on Eby Creek Road. It has been documented in the East Eagle IAR that a six-lane cross section would not be acceptable to the Town. Scenarios II and III would require a four-lane cross section, and Scenario IV would require a two- to four-lane cross section. However, under Scenario IV, traffic will continue to increase on Eby Creek Road and the volumes may create an interim need of a four-lane cross section. In this scenario, the interim conditions on the study corridor may have more impacts than the ultimate condition. The following section describes the proposed method for analyzing the different interchange scenarios.

Figure 4
Forecasted Traffic Volumes (2035)
Eby Creek Road South of Chambers



Source: I-70/East Eagle IAR

6.0 PROPOSED THRESHOLD ANALYSIS

The projected volumes for the scenarios indicate that the ultimate footprint for Eby Creek Road could range anywhere from a two to six-lane cross section. Due to the large range of forecasted traffic volumes associated with the uncertainty of future interchange improvements, it is recommended that a threshold analysis approach be used for the I-70 Eagle Interchange Feasibility Study. For example, if a four-lane cross-section was designed to accommodate 34,000 vpd, using Figure 4, the section would accommodate Scenario I for eight years, Scenarios II and III for 20 years, and Scenario IV beyond 27 years. This approach will allow volume thresholds to be assigned to design concepts that can then be related to all scenarios in terms of years of service life. The benefit to the threshold analysis is that it allows CDOT and the Town to be proactive in addressing the current traffic problems but builds in flexibility to account for the uncertainties with future growth scenarios.

While this threshold analysis provides greatest benefit to CDOT and the Town for planning purposes, this feasibility study will also examine an ultimate design that would accommodate Scenario II or III.

Please indicate your concurrence with this method by signing below and returning to us at your earliest convenience.

CDOT Traffic

Date

CDOT Planning and Environmental

Date

Town of Eagle

Date

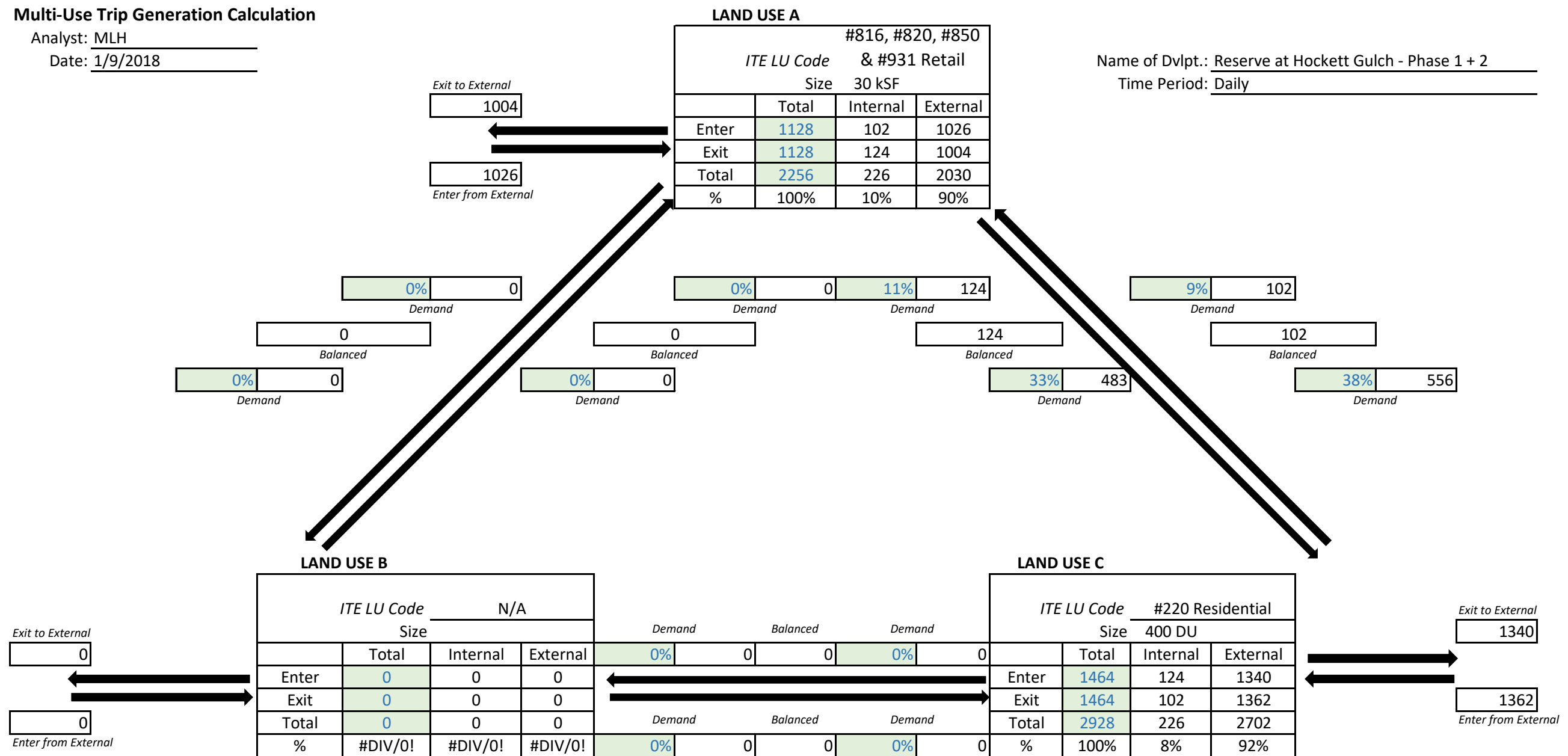
Eagle County

Date

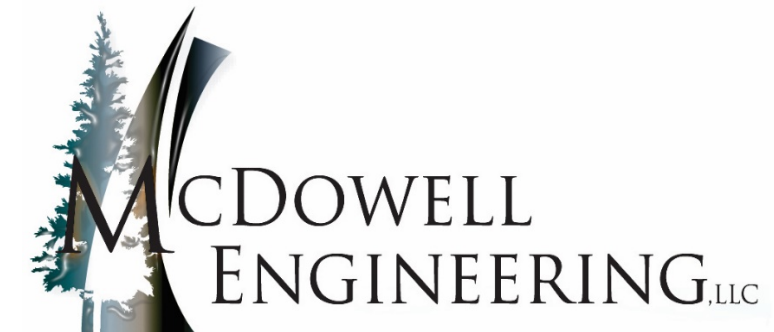
Multi-Use Trip Generation Calculation

Analyst: MLH

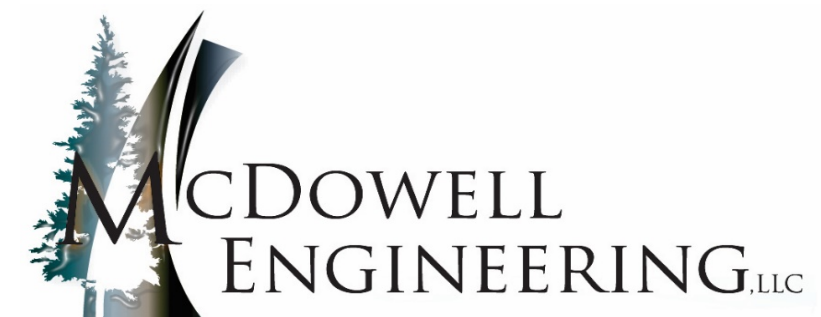
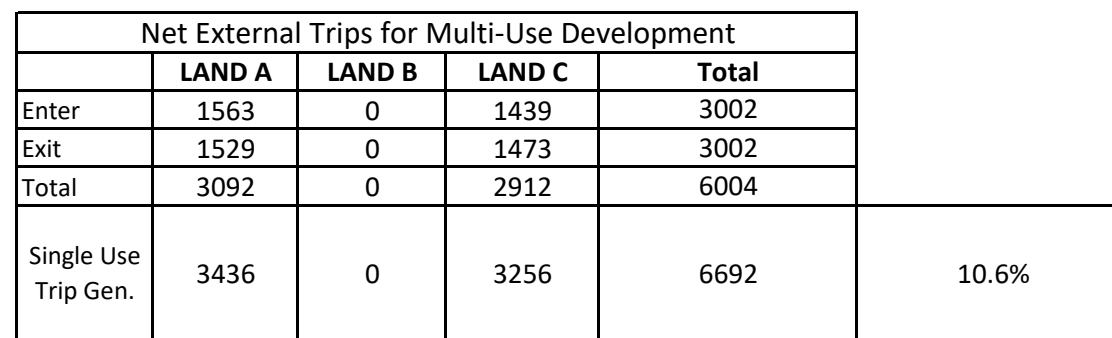
Date: 1/9/2018



Net External Trips for Multi-Use Development					
	LAND A	LAND B	LAND C	Total	
Enter	1026	0	1340	2366	
Exit	1004	0	1362	2366	
Total	2030	0	2702	4732	
Single Use Trip Gen.	2256	0	2928	5184	7.7%

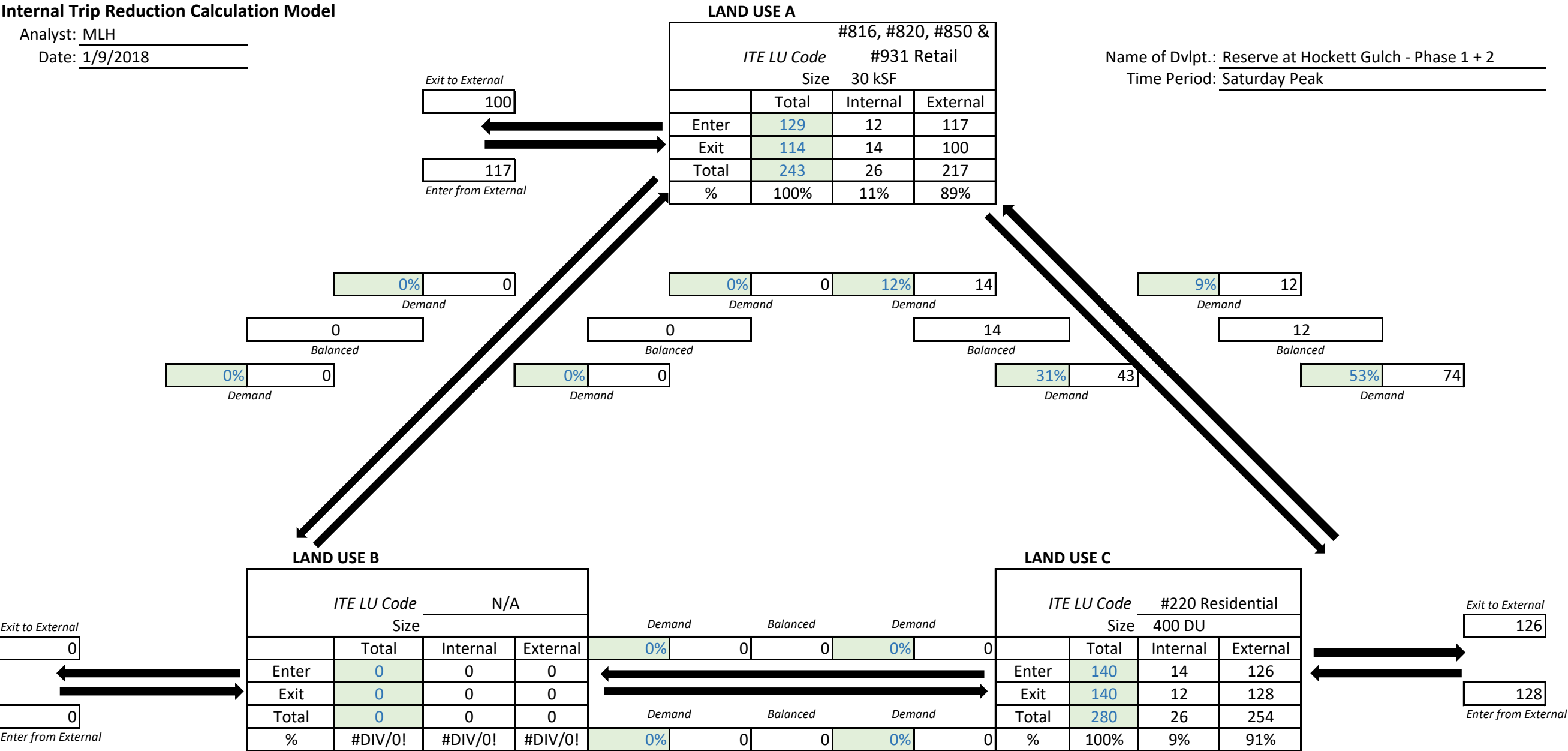


Analyst: MLH
Date: 1/9/2018

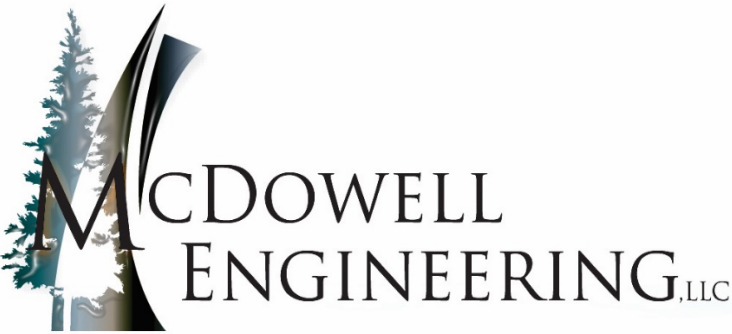


Internal Trip Reduction Calculation Model

Analyst: MLH
Date: 1/9/2018

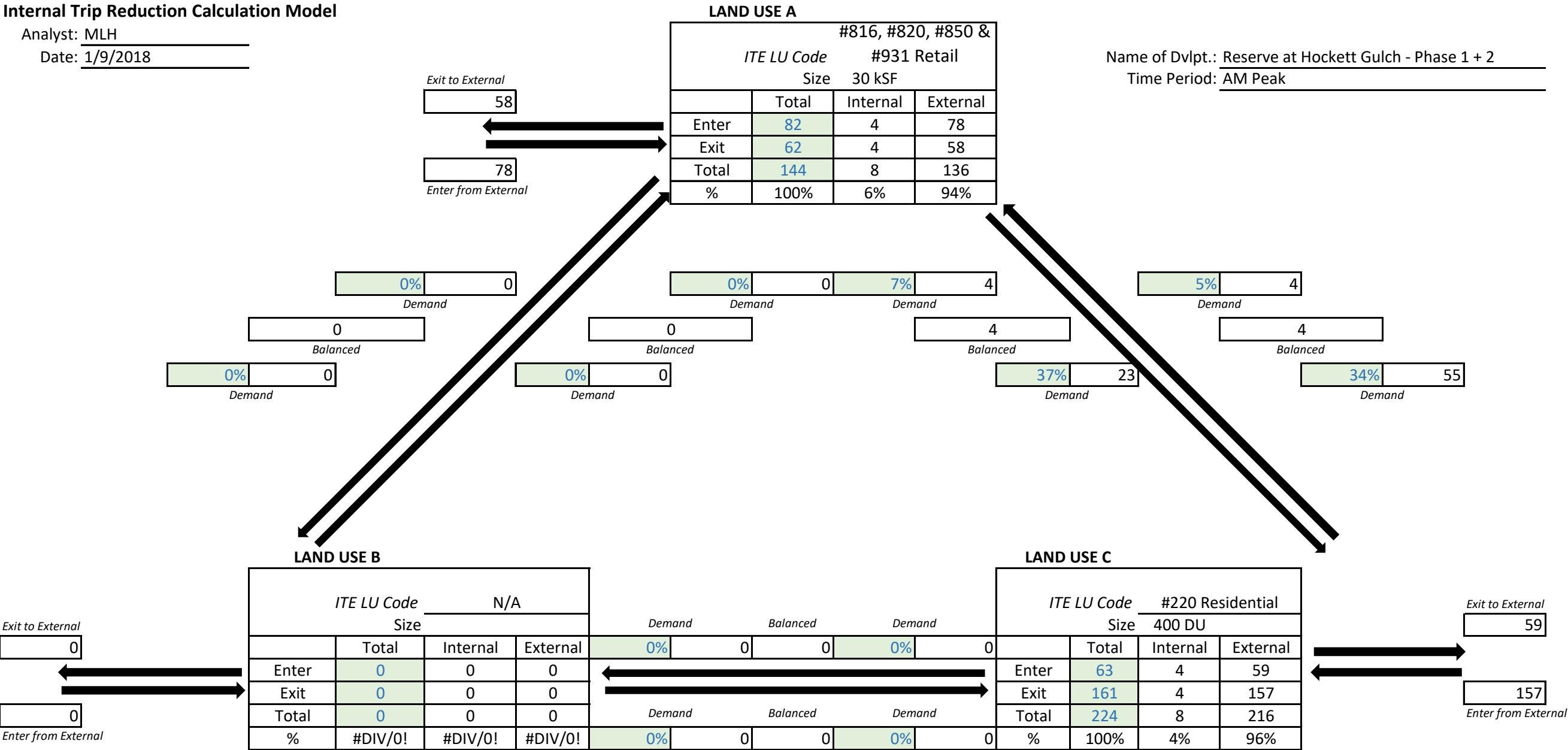


Net External Trips for Multi-Use Development					
	LAND A	LAND B	LAND C	Total	
Enter	117	0	126	243	
Exit	100	0	128	228	
Total	217	0	254	471	
Single Use Trip Gen.	243	0	280	523	9.3%

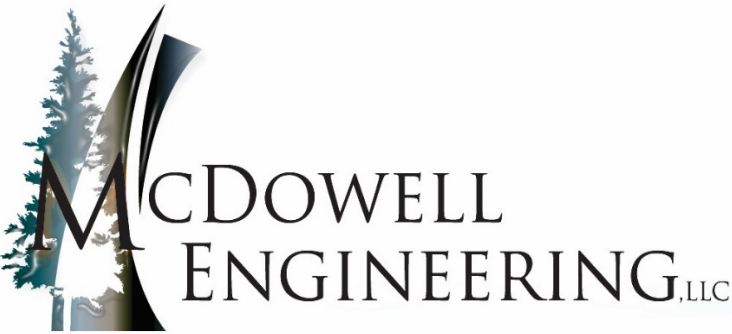


Internal Trip Reduction Calculation Model

Analyst: MLH
Date: 1/9/2018

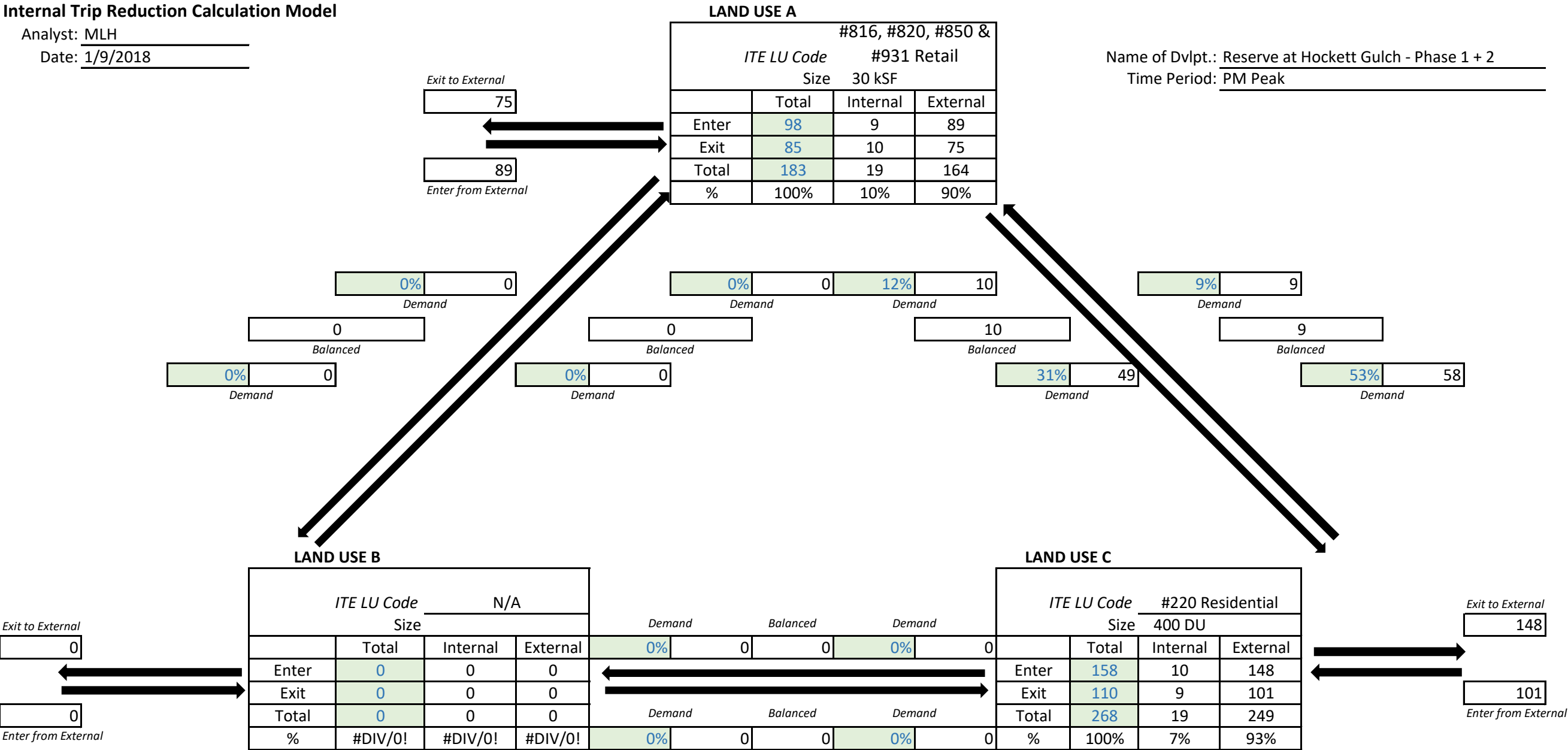


Net External Trips for Multi-Use Development					
	LAND A	LAND B	LAND C	Total	
Enter	78	0	59	137	
Exit	58	0	157	215	
Total	136	0	216	352	
Single Use Trip Gen.	144	0	224	368	3.6%

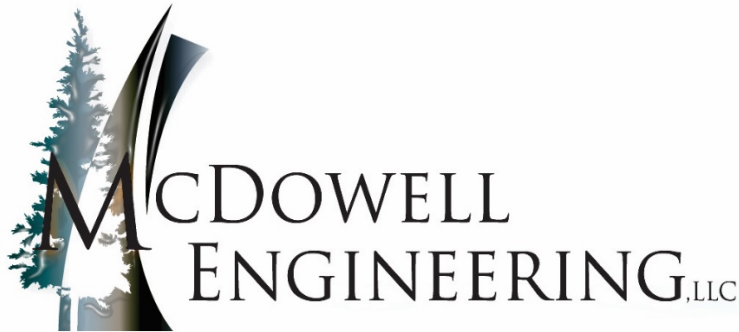


Internal Trip Reduction Calculation Model

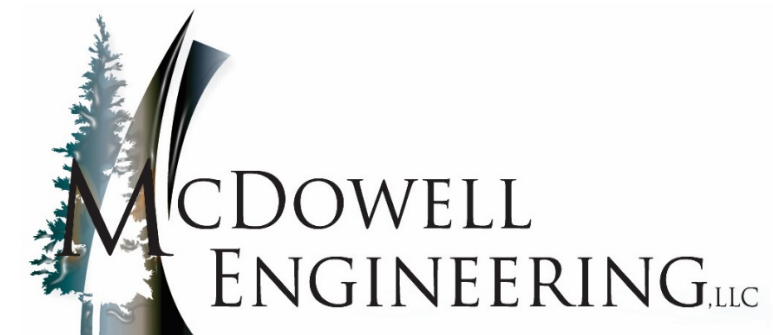
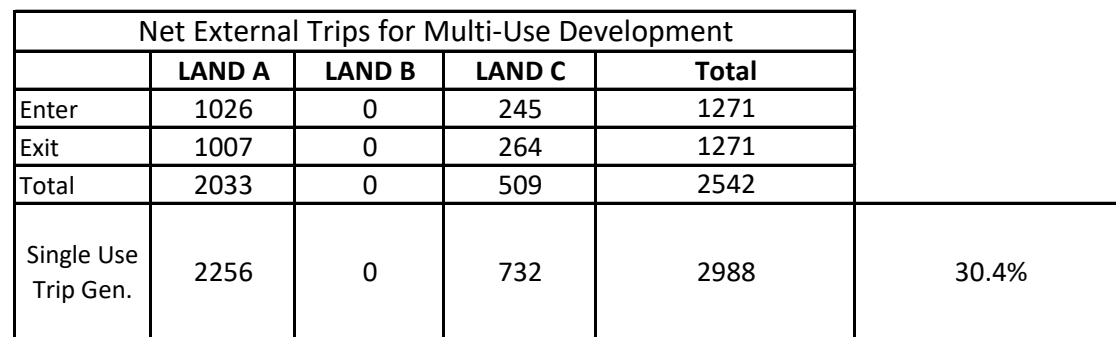
Analyst: MLH
Date: 1/9/2018



Net External Trips for Multi-Use Development					
	LAND A	LAND B	LAND C	Total	
Enter	89	0	148	237	
Exit	75	0	101	176	
Total	164	0	249	413	
Single Use Trip Gen.	183	0	268	451	7.1%

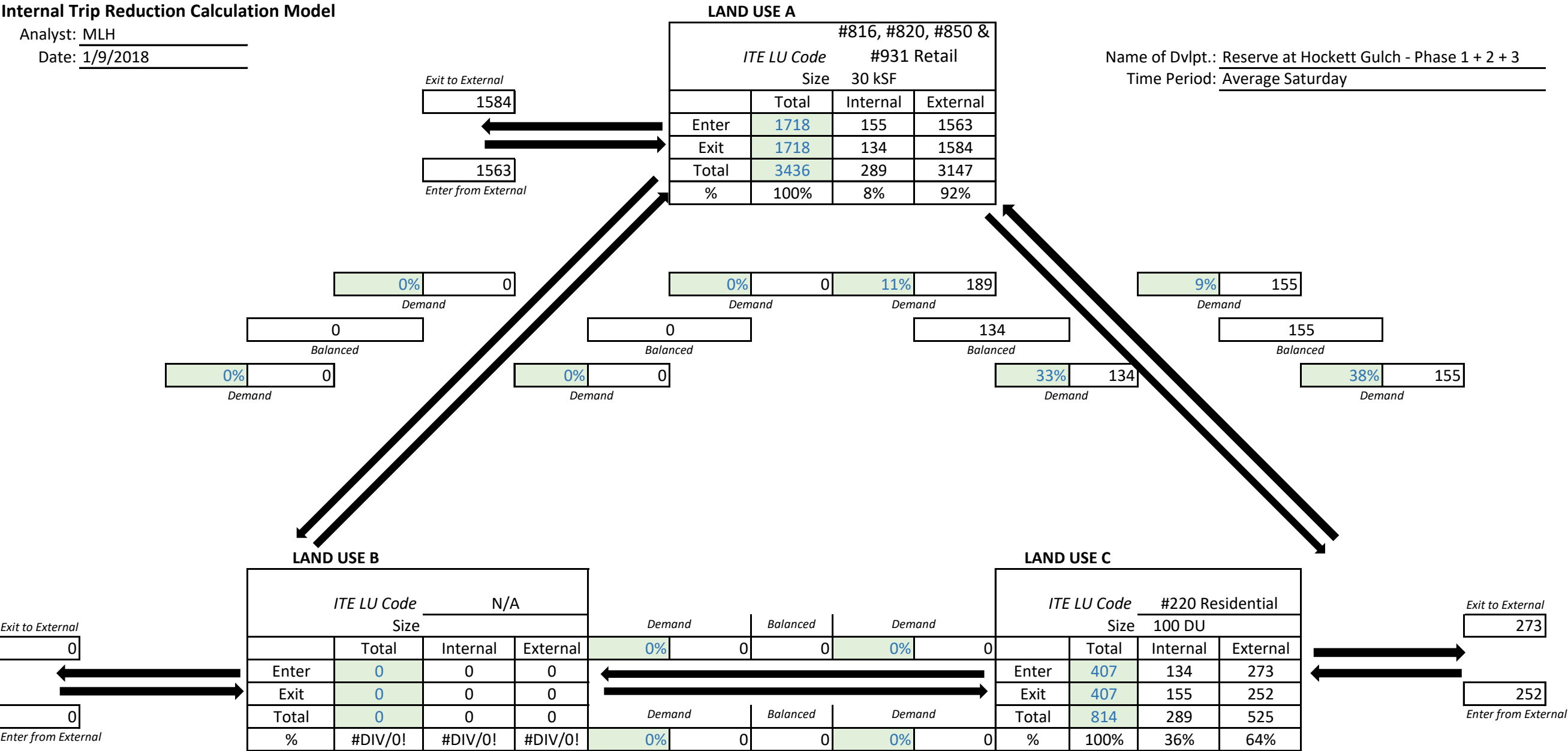


Analyst: MLH
Date: 1/9/2018

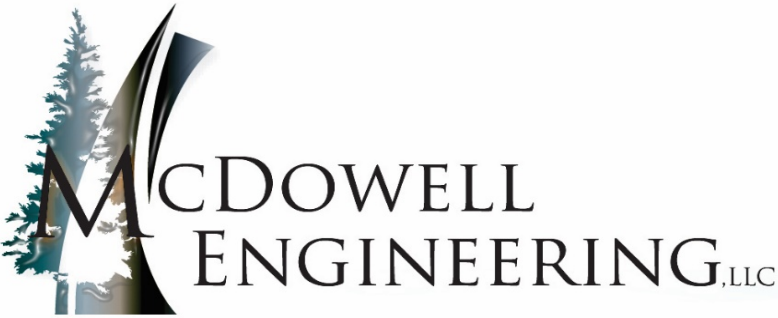


Internal Trip Reduction Calculation Model

Analyst: MLH
Date: 1/9/2018



Net External Trips for Multi-Use Development					
	LAND A	LAND B	LAND C	Total	
Enter	1563	0	273	1836	
Exit	1584	0	252	1836	
Total	3147	0	525	3672	
Single Use Trip Gen.	3436	0	814	4250	35.5%



Internal Trip Reduction Calculation Model

Analyst: MLH

Date: 1/9/2018

LAND USE A

#816, #820, #850 & #931 Retail			
ITE LU Code		Size 30 kSF	
	Total	Internal	External
Enter	129	12	117
Exit	114	11	103
Total	243	23	220
%	100%	9%	91%

Name of Dvlpt.: Reserve at Hockett Gulch - Phase 1 + 2 + 3

Time Period: Saturday Peak

Exit to External
103

Enter from External
117

0% 0
Demand

0
Balanced

0% 0
Demand

0% 0
Demand

0
Balanced

0% 0
Demand

12% 14
Demand

11
Balanced

31% 11
Demand

9% 12
Demand

12
Balanced

53% 19
Demand

LAND USE B

ITE LU Code N/A			
Size			
	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%	#DIV/0!	#DIV/0!	#DIV/0!

LAND USE C

ITE LU Code #220 Residential			
Size 100 DU			
	Total	Internal	External
Enter	35	11	24
Exit	35	12	23
Total	70	23	47
%	100%	33%	67%

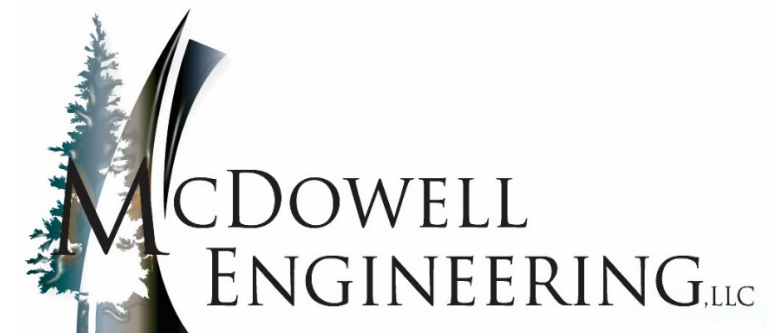
Exit to External
0

Enter from External
0

Exit to External
24

Enter from External
23

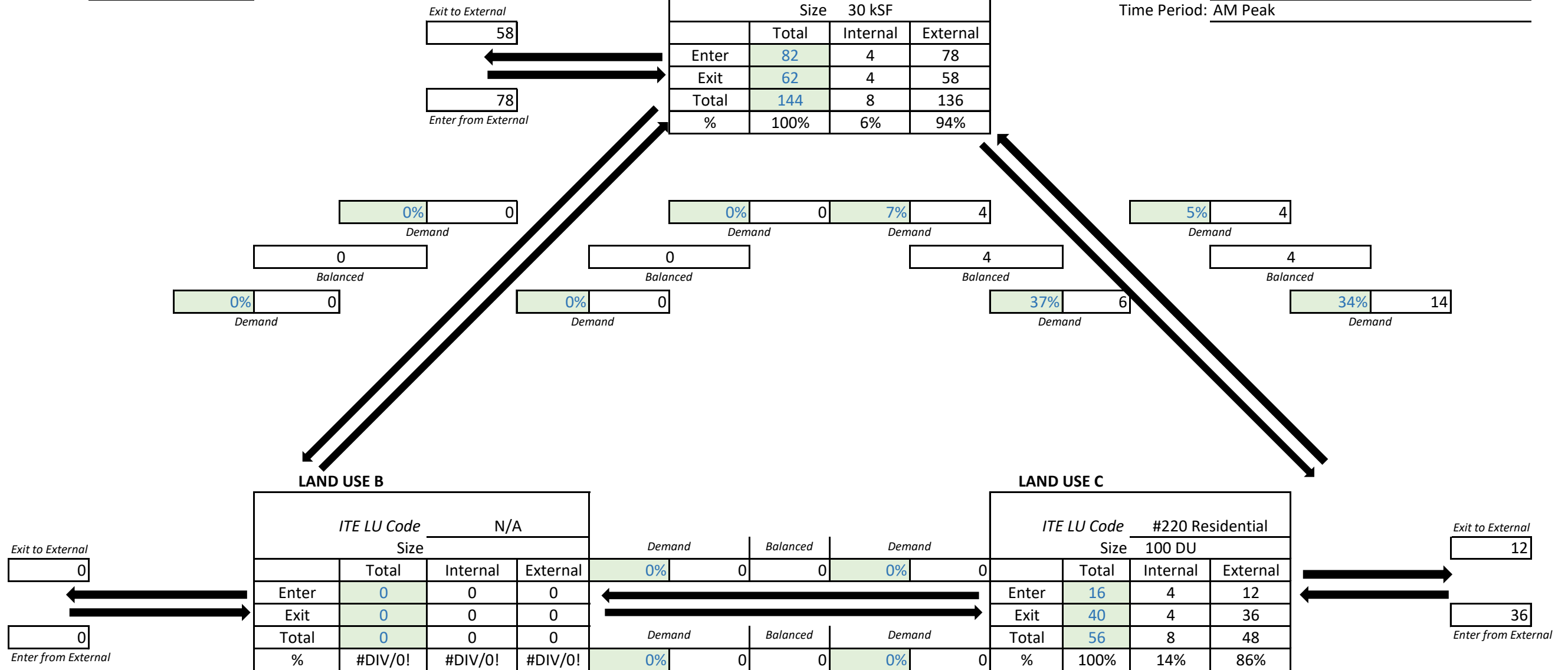
Net External Trips for Multi-Use Development					
	LAND A	LAND B	LAND C	Total	
Enter	117	0	24	141	
Exit	103	0	23	126	
Total	220	0	47	267	
Single Use Trip Gen.	243	0	70	313	32.5%



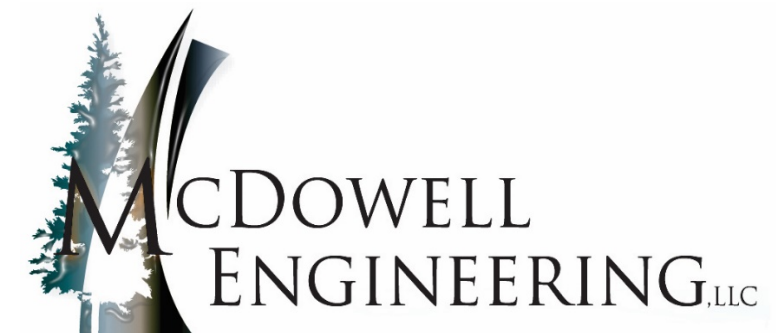
Analyst: MLH
Date: 1/9/2018

#816, #820, #850 & #931 Retail ITE LU Code Size 30 kSF			
	Total	Internal	External
Enter	82	4	78
Exit	62	4	58
Total	144	8	136
%	100%	6%	94%

Name of Dvlpt.: Reserve at Hockett Gulch - Phase 1 + 2 + 3
Time Period: AM Peak

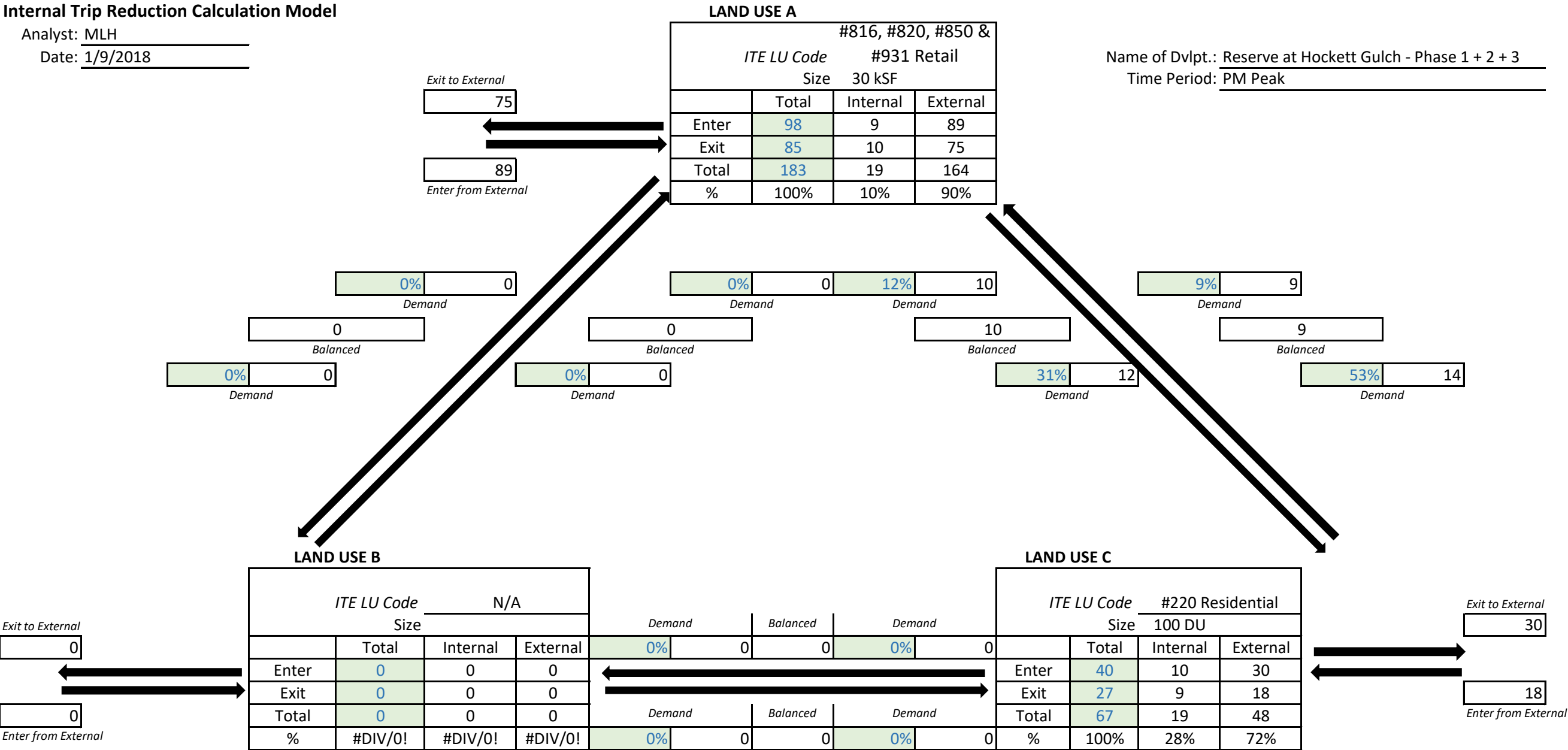


Net External Trips for Multi-Use Development					
	LAND A	LAND B	LAND C	Total	
Enter	78	0	12	90	
Exit	58	0	36	94	
Total	136	0	48	184	
Single Use Trip Gen.	144	0	56	200	14.1%

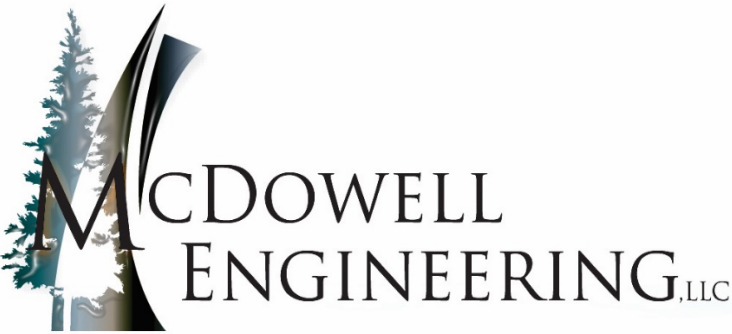


Internal Trip Reduction Calculation Model

Analyst: MLH
Date: 1/9/2018



Net External Trips for Multi-Use Development					
	LAND A	LAND B	LAND C	Total	
Enter	89	0	30	119	
Exit	75	0	18	93	
Total	164	0	48	212	
Single Use Trip Gen.	183	0	67	250	28.1%





Project Number: M1313
 Prepared By: GWS
 Date: 2018-08-21
 Revised: 2018-08-21

Travel Time Analysis - North Site Access for U-Turn through Sylvan Lake Roundabout

Reserve at Hockett Gulch
 Eagle, Colorado

ID	Segment Start	Segment End	Speed (mph)	Speed (ft/sec)	Length (ft)	Travel Time (sec)
1	North Site Access (EB)	Hwy 6 Brush Creek Bridge	45	66.00	650	9.8
2	Hwy 6 Brush Creek Bridge	Roundabout West Entry	35	51.33	1,300	25.3
3	Roundabout West Entry	Roundabout West Exit	15	22.00	425	19.3
4	Roundabout West Exit	Hwy 6 Brush Creek Bridge	35	51.33	1,300	25.3
5	Hwy 6 Brush Creek Bridge	North Site Access (WB)	45	66.00	650	9.8
Total					4,325	89.7



Eby Cr Rd/Church at Hwy 6, NB & EB legs

Eagle, Colorado

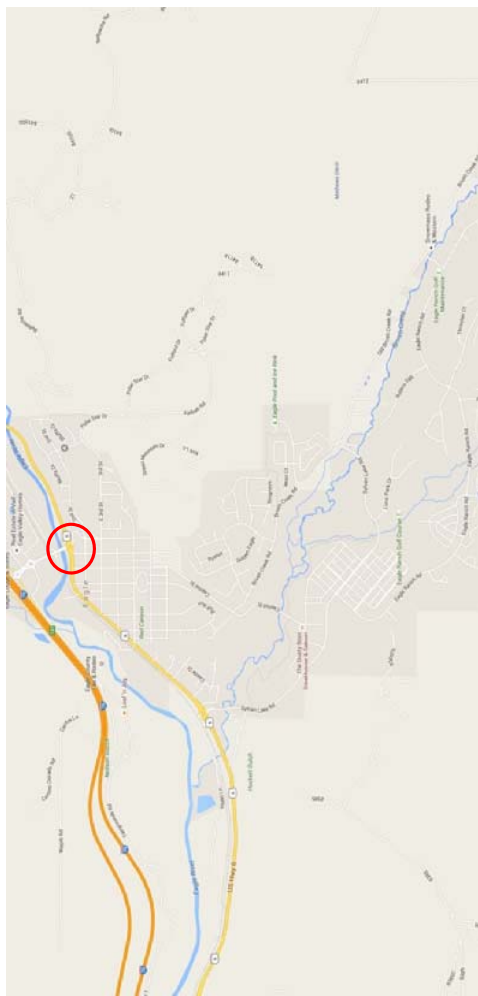
Data Collection Date: Tuesday, September 22, 2015

Weather: Partly Cloudy



Weekday Traffic Counts

Start Time	Hwy 6 Eastbound						Hwy 6 Westbound						Eby Cr Rd/Church Northbound						Eby Cr Rd/Church Southbound					
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		Left		Thru		Right	
	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks
7:00 AM	112	9	11	1	6	0	1	3	0	6	0	16	1	0	5	0	41	0	6	0	4	1	7	2
7:15 AM	186	4	18	1	5	0	0	2	0	10	2	15	2	1	1	0	59	0	4	0	1	4	0	20
7:30 AM	248	10	17	3	7	0	0	1	0	11	1	25	0	15	0	0	57	1	8	0	1	4	0	20
7:45 AM	195	13	24	4	14	0	0	4	0	18	1	19	0	28	1	0	78	0	4	0	2	6	1	24
8:00 AM	186	15	22	1	5	0	0	6	0	16	1	5	0	4	1	0	65	0	14	0	0	6	2	15
8:15 AM	177	10	16	8	4	0	0	1	0	7	3	9	2	0	0	0	50	0	8	0	0	4	3	10
8:30 AM	165	14	16	3	4	0	0	0	0	3	0	6	0	0	0	0	40	0	2	0	0	4	1	16
8:45 AM	142	14	10	0	1	0	0	1	0	9	1	8	0	0	4	0	15	1	0	0	1	3	1	13
Total	1411	89	134	21	46	0	1	18	0	80	9	103	5	48	12	0	405	2	46	0	9	40	11	107
Peak Hour Total	806	48	79	16	30	0	0	12	0	52	6	58	2	47	2	0	250	1	34	0	3	20	6	69
Peak Hour Total	854		95		30		0	12		58		60		47	2		251		34		3	26		73
Peak Hour Total																								



Eby Creek Road at Hwy 6

Eagle, Colorado

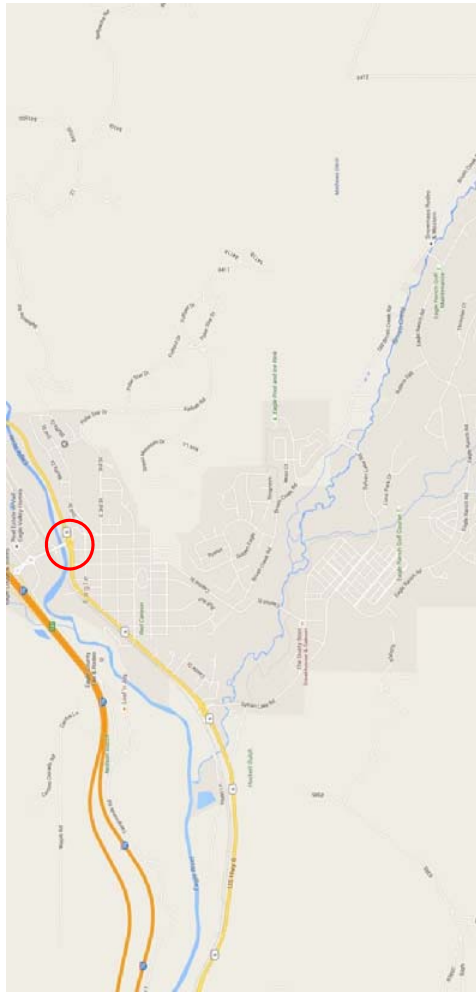
Data Collection Date: Tuesday, September 22, 2015

Weather:

Weekday Traffic Counts



Start Time	Hwy 6 Eastbound						Hwy 6 Westbound						Eby Cr Rd Northbound						Eby Cr Rd Southbound						Peds/ Bikes						
	Left			Thru			Right			Peds/ Bikes	Left			Thru			Right			Peds/ Bikes	Left			Thru			Right			Peds/ Bikes	
	Cars	Trucks		Cars	Trucks		Cars	Trucks			Cars	Trucks		Cars	Trucks		Cars	Trucks			Cars	Trucks		Cars		Trucks		Cars	Trucks		
4:00 PM	129	9	7	2	7	0	4	3	0	17	1	12	3	0	4	0	21	1	1	0	7	15	0	18	0	145	4	0			
4:15 PM	116	3	19	2	11	0	0	2	0	21	1	9	0	3	3	0	15	0	0	3	15	0	34	1	162	7	7				
4:30 PM	128	5	13	0	6	0	0	4:30 PM	128	5	13	0	6	0	0	2	0	11	0	1	0	3	10	0	34	0	203	9	1		
4:45 PM	140	5	15	2	9	0	1	4:45 PM	140	5	15	2	9	0	1	0	22	3	20	3	0	5	1	41	0	193	10	3			
5:00 PM	141	4	15	2	6	0	0	5:00 PM	141	4	15	2	6	0	0	0	33	4	12	1	2	5	0	34	1	244	9	4			
5:15 PM	182	2	18	1	15	1	0	5:15 PM	182	2	18	1	15	1	0	1	0	29	3	14	0	1	0	44	2	229	12	1			
5:30 PM	146	2	17	0	9	0	1	5:30 PM	146	2	17	0	9	0	1	4	0	32	4	18	0	1	5	0	49	0	225	7	4		
5:45 PM	132	2	12	1	6	0	0	5:45 PM	132	2	12	1	6	0	0	4	0	49	2	19	2	0	2	50	0	215	5	3			
Total	1114	32	116	10	69	1	6	14	1	225	22	116	12	6	31	0	182	1	21	0	23	81	4	304	4	1616	63	23			
Peak Hour Total	601	10	62	4	36	1	1	9	0	143	13	63	3	3	13	0	112	0	16	0	10	36	3	177	3	913	33	12			
Peak Hour Total	611		66		37	1		9		156		66		3	13		112		16		10	39		180		946		12			



Eby Creek RD at Hwy 6

Eagle, Colorado

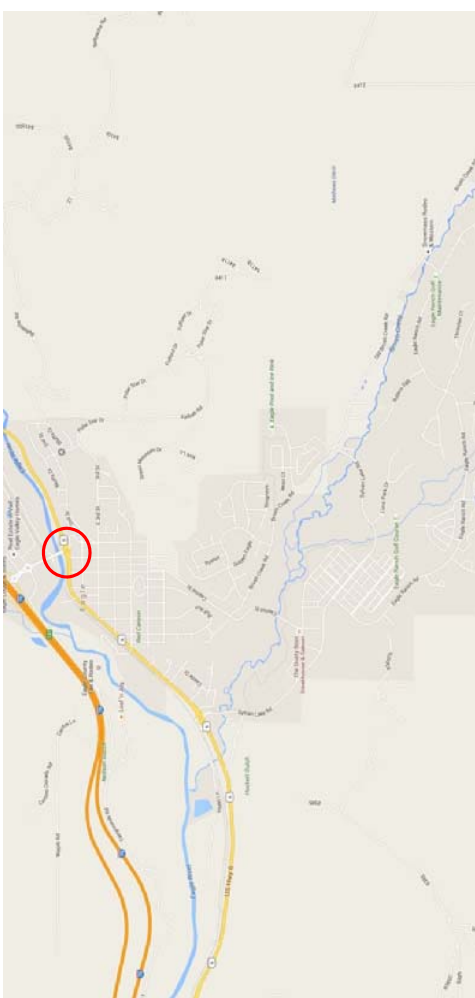
Data Collection Date: Saturday September 26, 2015

Weather: Sunny

Weekday Traffic Counts



Start Time	Hwy 6 Eastbound						Hwy 6 Westbound						Church Street Northbound						Eby Creek Road Southbound					
	Left	Thru	Cars	Trucks	Right	Peds/ Bikes	Left	Thru	Cars	Trucks	Right	Peds/ Bikes	Left	Thru	Cars	Trucks	Right	Peds/ Bikes	Left	Thru	Cars	Trucks	Right	Peds/ Bikes
11:00 AM	129	6	16	0	3	0	1	1	0	19	1	10	0	0	6	0	19	1	2	1	1	1	1	1
11:15 AM	152	3	5	1	9	1	4	1	0	15	2	10	0	6	2	0	25	0	1	0	12	2	18	1
11:30 AM	164	0	6	1	9	1	0	1	0	14	1	15	2	1	5	0	22	1	1	0	4	7	1	16
11:45 AM	169	3	7	0	3	0	3	3	0	11	3	17	1	1	2	0	33	1	2	0	3	16	2	17
12:00 PM	150	1	6	0	9	0	0	2	0	20	0	7	0	13	0	0	16	0	1	0	0	13	2	16
12:15 PM	161	1	10	0	2	0	2	1	0	16	0	14	0	2	1	0	17	1	1	0	2	7	2	13
12:30 PM	164	1	11	0	1	0	6	1	0	17	0	11	1	2	1	0	14	1	0	0	2	6	2	14
12:45 PM	150	1	6	0	2	0	0	0	0	25	1	13	0	1	3	0	20	0	0	0	1	8	1	15
Total	1239	16	67	2	38	2	16	10	0	137	8	97	4	26	20	0	166	5	8	1	25	82	12	125
Peak Hour Total	635	7	24	2	30	2	7	7	0	60	6	49	3	21	9	0	96	2	5	0	19	49	7	67
Peak Hour Total	642		26		32		7	7		66		52		21	9		98		5		19	56		68
Peak Hour Total																								



Capitol Street at Hwy 6/Grand Ave

Eagle, Colorado

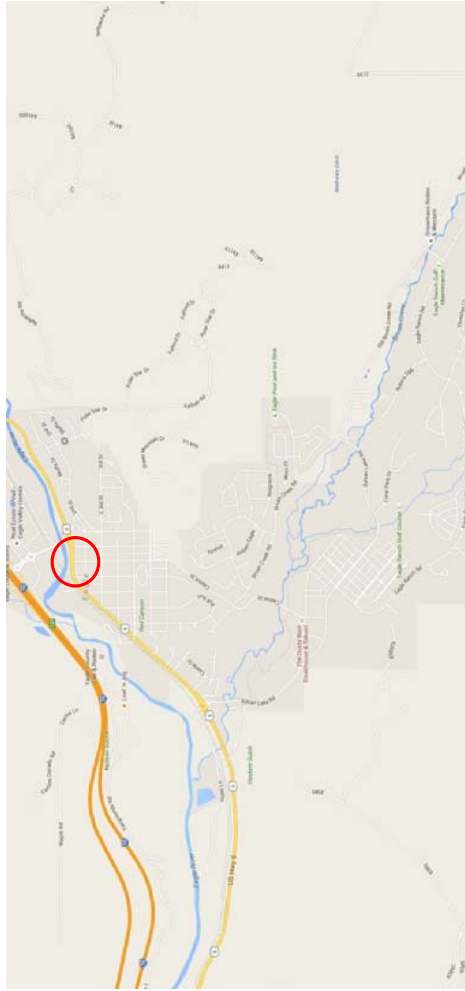
Data Collection Date: Thursday, September 24, 2015

Weather: Sunny



Weekday Traffic Counts

Start Time	Hwy 6/Grand Ave Eastbound						Hwy 6/Grand Ave Westbound						Capitol St Northbound						Capitol St Southbound					
	Left	Thru	Cars	Trucks	Right	Peds/ Bikes	Left	Thru	Cars	Trucks	Right	Peds/ Bikes	Left	Thru	Cars	Trucks	Right	Peds/ Bikes	Left	Thru	Cars	Trucks	Right	Peds/ Bikes
7:00 AM			118	7	1	0	7	0	54	5		0	0	0	0	0	42	6	0	0	0	0	0	0
7:15 AM			141	4	1	0	16	2	45	3		1	1	0	0	0	56	1	0	0	0	0	0	0
7:30 AM			196	14	3	1	23	0	93	5		1	0	0	0	0	72	1	0	0	0	0	0	0
7:45 AM			153	10	3	1	33	0	96	3		0	0	0	0	0	74	1	0	0	0	0	0	0
8:00 AM			152	21	2	0	31	2	72	7		1	2	0	0	0	66	2	0	0	0	0	0	0
8:15 AM			135	15	3	0	30	2	78	4		1	0	0	0	0	67	1	0	0	0	0	0	0
8:30 AM			102	8	2	3	31	3	57	6		0	0	0	0	0	56	1	0	0	0	0	0	0
8:45 AM			94	10	5	0	22	2	83	13		0	2	0	0	0	57	1	0	0	0	0	1	1
Total	0	0	1091	89	20	5	193	11	578	46	0	4	5	0	0	0	490	14	0	0	0	0	0	1
Peak Hour Total	0	0	636	60	11	2	117	4	339	19	0	3	2	0	0	0	279	5	0	0	0	0	0	0
Peak Hour Total	0	696	13	0			121	358	0	3	2	284	0	0	0	0	0	0	0	0	0	0	0	0



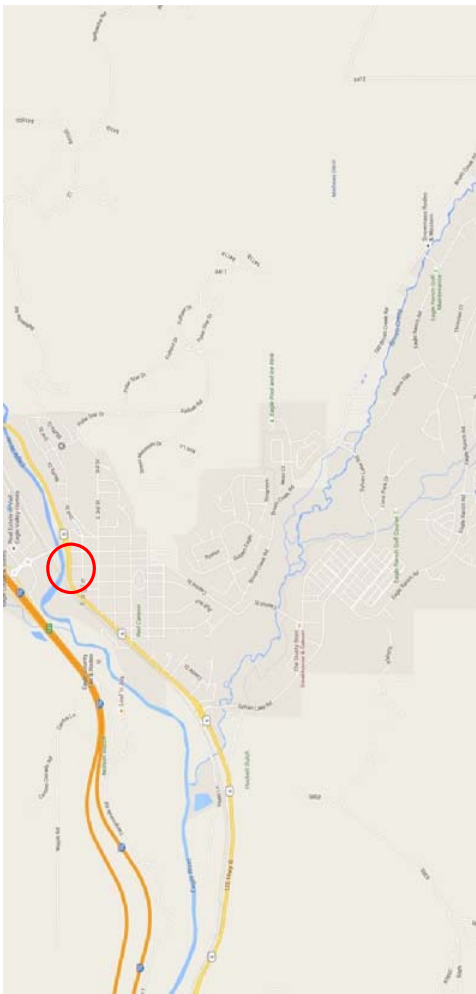
Capitol Street at Hwy 6/Grand Ave

Eagle, Colorado
Data Collection Date: Thursday, September 24, 2015
Weather: Sunny



Weekday Traffic Counts

Start Time	Hwy 6/Grand Ave Eastbound						Hwy 6/Grand Ave Westbound						Capitol Street Northbound						Capitol Street Southbound					
	Left	Thru	Cars	Trucks	Right	Peds/ Bikes	Left	Thru	Cars	Trucks	Right	Peds/ Bikes	Left	Thru	Cars	Trucks	Right	Peds/ Bikes	Left	Thru	Cars	Trucks	Right	Peds/ Bikes
4:00 PM		87	0	0	0	0	52	1	103	2	3	3						0						0
4:15 PM		96	3	3	0	4	60	3	111	5	0	0					49	1						0
4:30 PM		138	4	4	0	0	62	1	149	14	1	1					48	1						0
4:45 PM		117	2	2	0	1	61	0	149	9	1	1					38	4						0
5:00 PM		109	4	4	0	2	78	5	191	12	3	3					48	3						0
5:15 PM		127	6	7	0	0	85	5	169	12	2	2					48	1						0
5:30 PM		111	5	2	0	0	71	1	205	11	0	0					36	1						0
5:45 PM		103	3	2	1	0	87	0	147	5	3	3					38	0						0
Total	0	888	27	24	1	7	556	16	1224	70	0	13	0	0	0	0	337	11	0	0	0	0	0	0
Peak Hour Total	0	450	18	15	1	2	321	11	712	40	0	8	0	0	0	0	170	5	0	0	0	0	0	0
Peak Hour Total	0	468		16		2	332		752		0	8	0	0	0	0	175	0	0	0	0	0	0	0



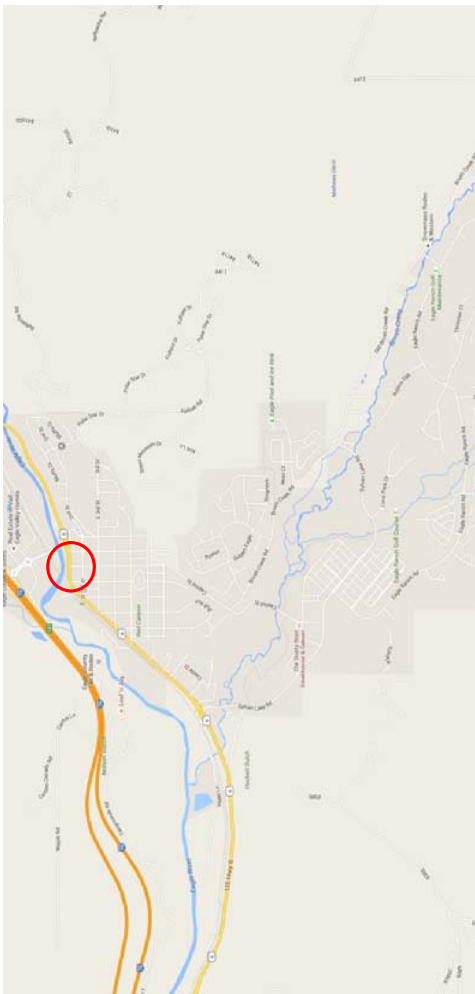
Capitol Street at Hwy 6/Grand Ave

Eagle, Colorado
Data Collection Date: Saturday, September 26, 2015
Weather: Sunny



Saturday Traffic Counts

Start Time	Hwy 6/Grand Ave Eastbound						Hwy 6/Grand Ave Westbound						Capitol Street Northbound						Capitol Street Southbound						Peds/ Bikes
	Left	Thru	Cars	Trucks	Right	Peds/ Bikes	Left	Thru	Cars	Trucks	Right	Peds/ Bikes	Left	Thru	Cars	Trucks	Right	Peds/ Bikes	Left	Thru	Cars	Trucks	Right	Peds/ Bikes	
11:00 AM			80	6	2	0	3		47	2	108	4			1	0		0							0
11:15 AM			101	2	3	0	0		46	2	114	2			2	0		0							5
11:30 AM			126	1	4	0	1		52	2	97	5			1	3	0	1							0
11:45 AM			112	2	3	0	1		42	0	120	6			1	0	0	0							6
12:00 PM			105	1	6	0	0		44	1	113	1			3	2	0	0							5
12:15 PM			123	0	3	0	4		38	2	111	0			1	1	0	0							0
12:30 PM			102	1	6	0	2		49	3	126	1			2	1	0	0							0
12:45 PM			92	4	5	0	4		50	0	111	5			1	1	0	0							1
Total	0	0	841	17	32	0	15	368	12	900	24	0	0	0	0	0	415	4	1	0	0	0	0	0	17
Peak Hour Total	0	0	466	4	16	0	6	176	5	441	12	0	0	0	0	0	212	1	1	0	0	0	0	0	11
Peak Hour Total	0		470		16		6	181		453		0			6		213		1	0		0		0	11



Capitol Street and Brush Creek Road

Eagle, Colorado

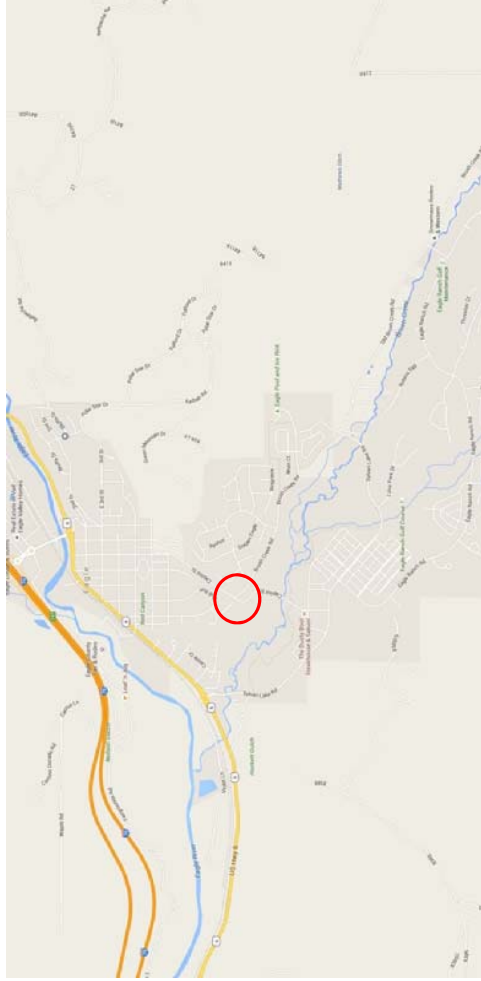
Data Collection Date: Wednesday, September 23, 2015

Weather: Sunny

Weekday Traffic Counts



Start Time	Brush Creek Road Eastbound						Brush Creek Road Westbound						Capitol Street Northbound						Capitol Street Southbound						Peds/ Bikes						
	Left			Right			N/A			Peds/ Bikes			Left			Thru			N/A Right			Peds/ Bikes				Thru			Right		
	Cars	Trucks		Cars	Trucks		Cars	Trucks	N/A	Cars	Trucks	Peds/ Bikes	Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks	Peds/ Bikes		Cars	Trucks		Cars	Trucks	
7:00 AM	1						9	0			32	1	2				18	0	0	0	0	0	0	6	1	5	1				0
7:15 AM	5						7	1			52	0	1				21	0	0	0	0	0	0	6	2	8	0				4
7:30 AM	1						25	0			80	1	0				41	0	2	0	0	0	7	1	19	1				4	
7:45 AM	18						16	0			58	0	0				85	0	1	0	0	0	23	0	20	0				0	
8:00 AM	10						8	0			58	0	0				68	0	4	0	0	0	14	1	19	1				0	
8:15 AM	8						6	0			37	1	0				36	1	0	0	0	0	19	1	12	0				0	
8:30 AM	0						15	1			44	0	1				42	1	5	0	4	4	13	1	11	0				6	
8:45 AM	2						9	0			41	0	13				38	0	2	0	0	0	19	1	20	0				0	
Total	0	0	0	0	0	45	95	2	0	0	402	3	17	0	0	349	2	14	0	4	4	107	8	114	3	0	0	0	14		
Peak Hour Total	0	0	0	0	0	37	55	0	0	0	233	2	0	0	0	230	1	7	0	0	63	3	70	2	0	0	0	4			
Peak Hour Total	0	0	0	0	0	37	55	0	0	0	235	0	0	0	0	231	7	0	0	66	72	0	0	4							



Capitol Street and Brush Creek Road

Eagle, Colorado

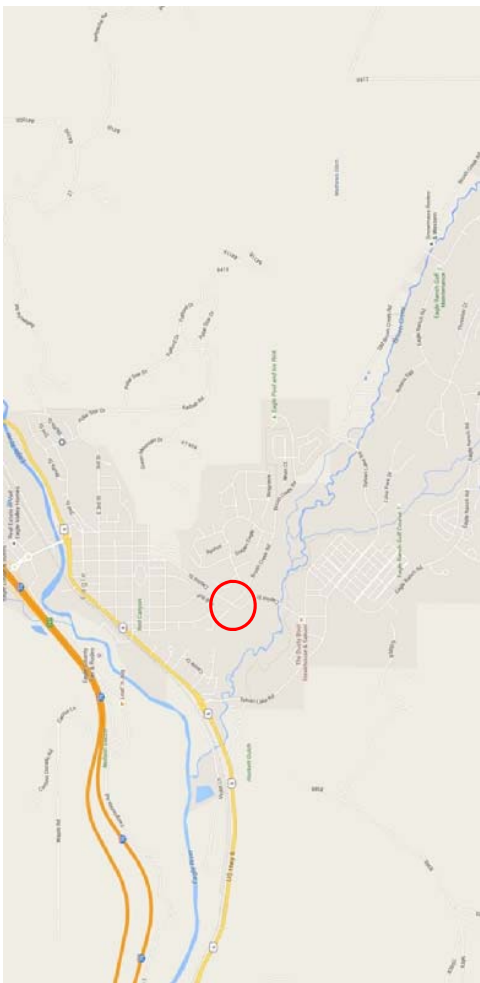
Data Collection Date: Wednesday, September 23, 2015

Weather: Sunny



Weekday Traffic Counts

Start Time	Brush Creek Road Eastbound						Brush Creek Road Westbound						Capitol Street Northbound						Capitol Street Southbound						Peds/ Bikes								
	Left			Right			N/A Thru			N/A Left			N/A Right			Thru			Left			Thru					N/A Left			Thru			Right
	Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks	
4:00 PM						6						3	0			25	1	3				29	0	5	0	0		39	1	40	0		0
4:15 PM						4						2	0			20	2	0				24	0	4	0	5		47	1	32	0		0
4:30 PM						14						3	0			22	2	2				17	0	3	0	0		43	0	31	1		0
4:45 PM						14						8	0			29	0	2				22	0	1	0	0		56	0	48	0		0
5:00 PM						8						9	0			37	0	2				38	1	10	0	0		60	1	49	1		0
5:15 PM						5						12	0			39	0	7				34	0	8	0	0		69	0	55	0		0
5:30 PM						4						7	0			25	0	5				24	1	4	0	0		60	1	50	1		0
5:45 PM						2						12	1			20	1	6				22	0	10	0	0		69	1	69	0		0
Total	0	0	0	0	0	57	56	1	0	0	217	6	27	0	0	210	2	45	0	5	443	5	374	3	0	0	0	0	0	0	0	0	0
Peak Hour Total	0	0	0	0	0	19	40	1	0	0	121	1	20	0	0	118	2	32	0	0	258	3	223	2	0	0	0	0	0	0	0	0	0
Peak Hour Total	0	0	0	0	0	19	41	0	0	122	20	20	0	0	120	32	0	261	225	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Capitol Street At Brush Creek Road

Eagle, Colorado
Data Collection Date: Saturday, September 26, 2015
Weather: Sunny



Saturday Traffic Counts

Start Time	N/A Eastbound						Brush Creek Road Westbound						Capitol Street Northbound						Capitol Street Southbound						Peds/ Bikes		
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		Left		Thru		Right				
	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks			
11:00 AM							4	0	0	0	30	0	0				16	0	2	0	0	44	2	32	0	2	
11:15 AM							3	6	1	29	2	5				30	1	7	0	5		41	1	21	0	11	
11:30 AM							11	12	0	30	1	6				17	0	9	0	1		47	3	23	0	4	
11:45 AM							3	7	0	54	0	6				22	0	6	1	0		41	0	22	1	2	
12:00 PM							3	10	0	40	0	7				22	0	3	0	0		30	1	20	0	3	
12:15 PM							4	8	0	35	0	6				22	0	10	0	3		28	0	24	1	3	
12:30 PM							0	8	0	28	0	10				20	0	6	0	0		37	1	24	1	3	
12:45 PM							1	13	0	37	1	16				17	0	8	0	29		40	1	27	0	1	
Total	0	0	0	0	0	0	68	1	0	0	283	4	56	0	0	166	1	51	1	38	308	9	193	3	0	0	29
Peak Hour Total	0	0	0	0	0	0	35	1	0	0	153	3	24	0	0	91	1	25	1	6	159	5	86	1	0	0	20
Peak Hour Total	0	0	0	0	0	0	36	0	0	0	156	24	24	0	0	92	26	26	6	164	87	0	0	0	0	20	



Sylvan Lake Road at Eagle Ranch Road

Eagle, Colorado
Data Collection Date: Wednesday, September 23, 2015
Weather: Partly Cloudy



Weekday Traffic Counts

Start Time	Sylvan Lake Road Eastbound						Sylvan Lake Road Westbound						Eagle Ranch Rd Northbound						Eagle Ranch Rd Southbound						Peds/ Bikes	
	Left		Thru		Right		Peds/ Bikes		Left		Thru		Right		Peds/ Bikes		Left		Thru		Right		Peds/ Bikes			
Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	
7:00 AM	0	0	5	0	8	1	0	0	0	23	0	0	0	0	0	0	0	19	0	0	0	0	0	0	0	
7:15 AM	0	0	2	0	9	1	0	0	0	29	0	0	0	0	0	0	0	40	1	0	0	1	0	2	0	
7:30 AM	0	0	6	0	35	0	3	7	0	24	1	0	0	3	0	0	0	56	2	2	0	3	0	0	1	
7:45 AM	0	0	12	0	65	1	7	19	0	37	0	0	0	0	0	0	0	85	1	11	0	10	0	1	0	
8:00 AM	0	0	11	2	27	0	4	2	0	28	0	0	0	3	0	0	0	69	1	4	0	2	0	3	0	
8:15 AM	0	0	10	2	22	0	0	1	0	16	0	0	0	0	0	0	0	44	0	0	0	2	0	0	0	
8:30 AM	0	0	9	1	14	1	0	0	0	22	0	1	0	1	0	0	0	43	0	1	0	2	0	2	0	
8:45 AM	0	0	15	0	14	0	1	0	0	21	1	0	0	1	0	0	0	31	0	1	0	1	0	0	0	
Total	0	0	70	5	194	4	15	29	0	200	2	1	0	8	387	5	19	0	21	0	21	0	10	5	0	48
Peak Hour Total	0	0	39	4	149	1	14	29	0	105	1	0	0	6	254	4	17	0	17	0	17	0	4	5	0	47
Peak Hour Total	0	43	150	14				29	106	0	6	258	17	17	4	1	5	5	5	5	5	5	47			



Sylvan Lake Road at Eagle Ranch Road

Eagle, Colorado

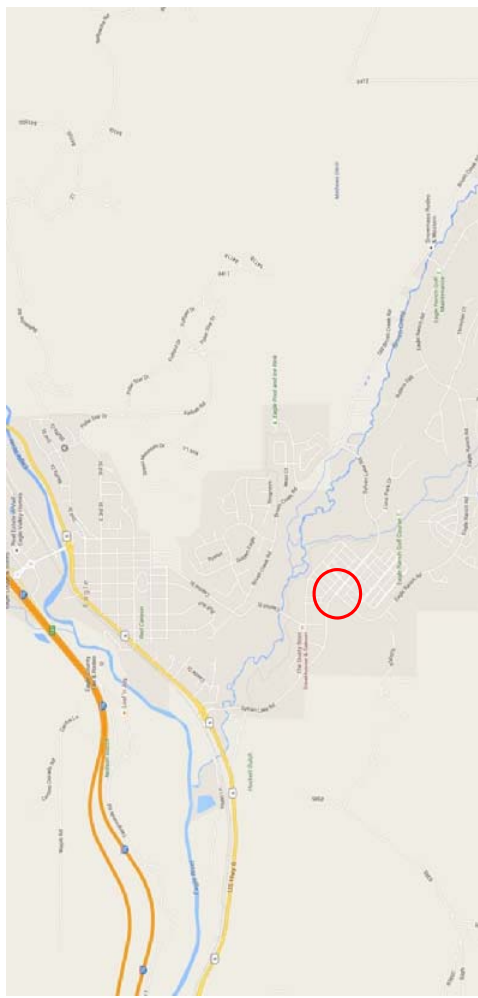
Data Collection Date: Wednesday, September 23, 2015

Weather: Sunny

Weekday Traffic Counts



Start Time	Sylvan Lake Road Eastbound						Sylvan Lake Road Westbound						Eagle Ranch Rd Northbound						Eagle Ranch Rd Southbound						Peds/ Bikes									
	Left			Thru			Right			Peds/ Bikes			Left			Thru			Right			Peds/ Bikes				Left			Thru			Right		
	Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks			Cars	Trucks		Cars	Trucks				
4:00 PM	0	0	29	1	37	1	0	2	1	17	2	0	0	0	39	0	1	0	3	0	3	0	3	0	3	1	0	0	0	0	2			
4:15 PM	1	0	23	0	37	2	2	1	0	15	0	1	0	0	27	1	0	0	2	0	1	0	1	0	0	0	0	0	2	0	0			
4:30 PM	0	0	18	1	28	2	0	1	0	18	3	0	0	0	23	0	0	0	2	0	1	0	1	0	0	0	1	0	0	2	0			
4:45 PM	1	0	34	1	32	0	0	6	0	22	0	0	0	1	29	1	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0			
5:00 PM	3	0	21	0	42	0	0	3	1	27	2	0	2	0	44	1	0	0	1	0	1	0	1	0	0	0	0	2	0	0	0			
5:15 PM	2	0	24	2	41	0	0	3	0	24	2	1	0	1	36	1	1	0	2	0	1	0	1	0	0	0	2	0	0	0	0			
5:30 PM	2	0	26	0	56	0	2	0	0	16	0	0	0	0	20	1	1	0	1	0	1	0	0	0	0	0	2	0	1	0	0			
5:45 PM	4	0	21	0	58	0	1	3	0	17	1	0	0	0	18	0	2	0	2	0	0	0	0	0	0	0	1	0	3	0	0			
Total	13	0	196	5	331	5	5	19	2	156	10	2	0	4	236	5	5	0	19	0	7	1	0	6	0	8	0	4	0	4	0	4		
Peak Hour Total	8	0	105	3	171	0	2	12	1	89	4	1	0	4	129	4	2	0	10	0	2	0	0	4	0	3	0	0	0	0	0	0		
Peak Hour Total	8	108	171	2				13	93	1	4				133	2	10	2			0	4	3		0						0			



Sylvan Lake Road at Eagle Ranch Road

Eagle, Colorado
Data Collection Date: Saturday/October 3, 2015
Weather:



Saturday Traffic Counts

Start Time	Sylvan Lake Road Eastbound						Sylvan Lake Road Westbound						Eagle Ranch Rd Northbound						Eagle Ranch Rd Southbound						Peds/ Bikes				
	Left		Thru		Right		Peds/ Bikes		Left		Thru		Right		Peds/ Bikes		Left		Thru		Right		Peds/ Bikes						
Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks	Cars	Trucks		
11:00 AM	0	0	16	0	17	1	1	1	0	0	18	1	2	0	0	22	1	2	0	1	0	1	1	0	0	0	5	0	2
11:15 AM	0	0	17	1	20	0	5	0	0	0	11	0	0	0	0	25	0	1	0	2	0	0	0	0	0	0	0	0	0
11:30 AM	2	0	23	1	25	0	1	1	1	0	31	1	0	0	0	30	0	0	0	1	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	21	0	17	0	0	4	0	0	21	0	1	0	0	24	0	0	0	1	0	1	0	0	0	0	4	0	1
12:00 PM	0	0	22	0	18	0	6	3	0	0	20	0	0	0	0	19	2	0	0	1	0	2	1	0	0	0	2	0	0
12:15 PM	0	0	14	1	19	1	1	1	0	7	0	0	0	0	0	22	0	0	0	1	0	2	0	0	0	0	1	0	2
12:30 PM	0	0	22	0	16	0	0	1	0	22	0	1	0	1	1	29	0	0	0	3	0	1	0	0	1	0	1	0	0
12:45 PM	1	0	13	0	16	1	0	3	0	10	0	0	0	0	0	20	0	0	0	2	1	0	0	0	1	0	1	0	0
Total	3	0	148	3	148	3	14	13	0	140	2	4	0	1	191	3	3	0	12	1	7	2	0	2	0	15	0	5	
Peak Hour Total	2	0	83	2	80	0	12	8	0	83	1	1	0	0	98	2	1	0	5	0	3	1	0	0	0	7	0	1	
Peak Hour Total	2		85		80	12		8		84		1		0	100		1		5		3	1		0		7		1	



Capitol Street At Sylvan Lake Road

Eagle, Colorado
Data Collection Date: Wednesday, September 30, 2015
Weather: Cloudy



Weekday Traffic Counts

Start Time	Sylvan Lake Road Eastbound						Sylvan Lake Road Westbound						Capitol Street Northbound						Capitol Street Southbound																	
	Left			Thru			Right			Peds/ Bikes			Left			Thru			Right			Peds/ Bikes			Left			Thru			Right			Peds/ Bikes		
	Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks				
7:00 AM	1	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:15 AM	4	0	11	1	0	0	0	65	1	14	0	0	0	0	0	0	0	0	0	6	1	7	0	4	0	0	0	0	0	0	0	0	0	0		
7:30 AM	7	0	25	0	0	0	0	67	1	25	0	0	0	0	0	0	0	0	0	26	0	13	0	2	0	0	0	0	0	0	0	0	0	0		
7:45 AM	7	0	44	2	0	0	0	89	3	44	0	0	0	0	0	0	0	0	0	28	0	7	0	6	0	0	0	0	0	0	0	0	0	0		
8:00 AM	5	0	33	3	0	0	0	67	2	30	0	0	0	0	0	0	0	0	0	11	0	8	0	0	0	0	0	0	0	0	0	0	0	0		
8:15 AM	0	1	20	2	0	0	0	51	2	16	0	0	0	0	0	0	0	0	0	6	0	9	0	0	0	0	0	0	0	0	0	0	0	0		
8:30 AM	5	0	27	3	0	0	0	48	2	15	0	0	0	0	0	0	0	0	0	13	2	14	1	0	0	0	0	0	0	0	0	0	0	0		
8:45 AM	5	0	22	2	0	0	0	35	1	16	0	0	0	0	0	0	0	0	0	11	1	12	0	0	0	0	0	0	0	0	0	0	0	0		
Total	34	1	188	13	0	0	0	0	462	12	170	0	0	0	0	0	0	0	8	111	5	0	0	78	1	12										
Peak Hour Total	23	0	113	6	0	0	0	1	0	288	7	113	0	0	0	0	0	0	3	71	1	0	0	35	0	12										
Peak Hour Total	23		119	0	0	0	1		295		113	0	3							72		0		35	12											



Capitol Street At Sylvan Lake Road

Eagle, Colorado
Data Collection Date: Wednesday, September 30, 2015
Weather: Cloudy



Weekday Traffic Counts

Start Time	Sylvan Lake Road Eastbound						Sylvan Lake Road Westbound						Capitol Street Northbound						Capitol Street Southbound						Peds/ Bikes
	Left		Thru		Right		Peds/ Bikes		Left		Thru		Right		Peds/ Bikes		Left		Thru		Right		Peds/ Bikes		
4:00 PM	8	0	30	2	0	0	0	0	15	2	15	0	0	0	0	0	24	1	12	0	9				
4:15 PM	6	0	40	1	0	0	0	0	41	0	20	0	0	1	20	0	0	0	5	0	0				
4:30 PM	5	0	37	1	0	2	0	0	21	4	15	0	0	4	20	0	0	0	10	0	0				
4:45 PM	14	0	45	2	0	0	0	0	41	1	24	0	0	0	20	0	0	0	10	0	1				
5:00 PM	11	0	54	0	0	0	0	0	57	6	20	1	0	0	1	23	0	17	1	0	0				
5:15 PM	9	1	52	0	0	0	0	0	48	2	17	0	0	1	30	0	0	14	0	0	0				
5:30 PM	12	0	52	0	1	1	0	0	23	0	15	0	0	2	37	1	21	0	0	0	0				
5:45 PM	13	0	44	0	0	0	1	1	24	1	24	0	1	0	31	0	16	0	2	0	2				
Total	78	1	354	6	0	3	1	1	270	16	150	1	1	9	205	2	0	0	105	1	12				
Peak Hour Total	46	1	203	2	0	1	0	0	169	9	76	1	0	4	110	1	0	0	62	1	1				
Peak Hour Total	47	0	205	0	1	0	0	0	178	77	0	4	0	0	111	0	0	63	1	0	1				



Sylvan Lake Road at Capitol Street

Eagle, Colorado
Data Collection Date: Saturday, October 3, 2015
Weather: Sunny



Saturday Traffic Counts

Start Time	Sylvan Lake Road Eastbound						Sylvan Lake Road Westbound						Capitol Street Northbound						Capitol Street Southbound						Peds/ Bikes												
	Left			Thru			Right			Peds/ Bikes			Left			Thru			Right			Peds/ Bikes				Left			Thru			Right			Peds/ Bikes		
	Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks			Cars	Trucks		Cars	Trucks		Cars	Trucks				
11:00 AM	3	0	24	1		0			32	1	18	1	3					0	12	0					0	16	0					3	0	0			
11:15 AM	4	0	26	1		0			30	0	9	0	2					0	16	0					0	14	0				5	0	6				
11:30 AM	3	0	38	0		0			44	1	14	0	0					0	14	0					0	2	0			2	0	1					
11:45 AM	8	0	27	0		0			35	0	15	0	1					1	11	0					1	8	0			8	0	0					
12:00 PM	10	0	30	0		0			25	1	13	0	0					0	9	0					0	5	0			5	0	4					
12:15 PM	5	0	29	2		1			24	0	8	0	1					1	8	0					1	6	0			6	0	0					
12:30 PM	3	0	27	0		0			40	0	10	0	1					0	12	0					0	10	0			10	0	1					
12:45 PM	7	0	26	1		0			24	0	8	0	0					0	4	0					0	6	1			6	1	1					
Total	43	0	227	5	0	1	0	0	254	3	95	1	8	0	0	0	0	2	86	0	0	0	0	45	1	13											
Peak Hour Total	18	0	115	2	0	0	0	0	141	2	56	1	6	0	0	0	0	1	53	0	0	0	0	18	0	7											
Peak Hour Total	18		117	0	0	0	0	0	143		57	6		0	0	0	0	1	53		0	0	18		7												



Sylvan Lake Rd at Hwy 6, EB & NB legs

Eagle, Colorado

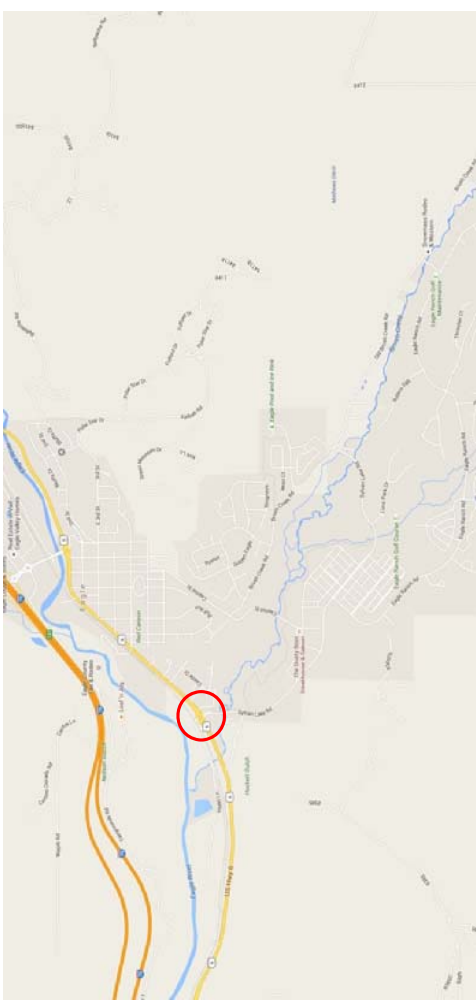
Data Collection Date: Wednesday, September 30, 2015

Weather: Partly Cloudy



Weekday Traffic Counts

Start Time	Hwy 6 Eastbound						Hwy 6 Westbound						Sylvan Lake Rd Northbound						Sylvan Lake Rd Southbound																				
	Left			Thru			Right			Peds/ Bikes			Left			Thru			Right			Peds/ Bikes			Left			Thru			Right			Peds/ Bikes					
	Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks							
7:00 AM	0	0		80	5		7	11		1	2		0	0		10	0		47	2		1	0		0	0		15	0		0	39		0	1		0	0	
7:15 AM	0	0		112	7		11	1		1	2		0	0		11	1		60	4		1	0		0	0		22	1		0	51		0	1		0	0	
7:30 AM	0	0		103	17		25	0		0	9		0	0		9	0		59	8		0	0		0	0		33	0		0	61		2	1		0	0	
7:45 AM	0	0		153	23		35	2		1	22		3	78		6	0		0	0		0	0		0	0		48	1		0	59		3	0		0	1	
8:00 AM	0	0		107	24		30	7		3	19		0	61		2	2		2	0		0	0		0	0		23	1		0	53		2	2		0	0	
8:15 AM	0	0		70	20		15	1		0	16		3	52		8	1		0	0		0	0		0	0		28	1		0	37		4	0		0	0	
8:30 AM	0	0		85	13		19	0		2	20		3	65		11	1		0	1		0	1		0	0		32	1		0	34		3	0		0	1	
8:45 AM	0	0		79	9		11	1		2	25		4	66		9	1		0	1		0	1		0	0		32	2		0	31		0	0		0	0	
Total	0	0		789	118		153	12		10	132		14	488		50	7		2	2		233	7		0	0		365	14		4	3		0	0		5	0	2
Peak Hour Total	0	0		475	71		101	10		4	66		6	250		24	3		0	0		126	3		0	0		224	7		3	1		0	0		2	0	1
Peak Hour Total	0	546		111	4						72		274	3		0						129			0	231	3		1		0	2		1		1			



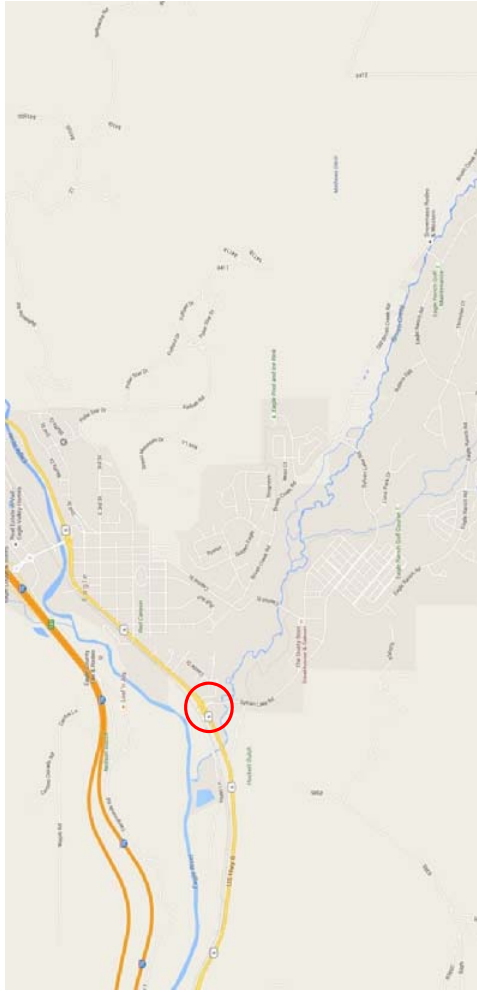
Sylvan Lake Rd Roundabout at HWY 6

Eagle, Colorado
Data Collection Date: Wednesday September 30, 2015
Weather:



Weekday Traffic Counts

Start Time	Hwy 6 Eastbound						Hwy 6 Westbound						Sylvan Lake Road Northbound						Sylvan Lake Road Southbound																	
	Left			Thru			Right			Peds/ Bikes			Left			Thru			Right			Peds/ Bikes			Left			Thru			Right			Peds/ Bikes		
	Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks		Cars	Trucks				
4:00 PM	0	0	74	4	27	5	0	39	3	130	6	1	0	2	17	1	1	0	21	0	0	1	0	1	0	1	0	1	0	1	0	0				
4:15 PM	1	0	112	4	47	0	0	31	1	83	6	1	0	0	19	0	1	0	34	0	0	3	0	0	2	0	0	0	0	0	0	0				
4:30 PM	0	0	96	7	30	1	0	44	0	127	9	1	0	0	18	4	0	0	23	0	0	1	0	0	1	0	0	1	0	0	0	0				
4:45 PM	0	0	101	7	46	2	2	37	2	98	7	1	0	1	27	0	1	0	33	2	1	2	0	0	0	0	0	0	0	0	1	1				
5:00 PM	0	0	123	4	48	2	0	41	1	142	10	1	0	0	47	5	0	0	51	2	0	2	0	0	0	0	0	0	0	0	0	0				
5:15 PM	0	1	82	6	53	2	0	42	1	121	8	3	0	0	36	0	0	0	44	2	0	2	0	2	1	2	0	0	0	0	0	0				
5:30 PM	0	0	112	2	49	2	1	51	0	126	8	4	0	1	30	0	0	0	22	0	1	1	0	2	0	0	0	0	0	0	2	2				
5:45 PM	1	0	96	8	40	1	0	35	0	123	5	0	0	0	29	1	1	0	22	0	2	1	0	4	0	2	0	0	2	0	3	3				
Total	2	1	796	42	340	15	3	320	8	950	59	12	0	4	223	11	4	0	250	6	4	13	0	9	1	8	0	0	6	6	6	6				
Peak Hour Total	1	1	413	20	190	7	1	169	2	512	31	8	0	1	142	6	1	0	139	4	3	6	0	8	1	4	0	0	5	5	5	5				
Peak Hour Total	2	433	197	1	1	171	543	8	1	148	1	143	3	6	9	4	5																			



Sylvan Lake Rd at Hwy 6

Eagle, Colorado

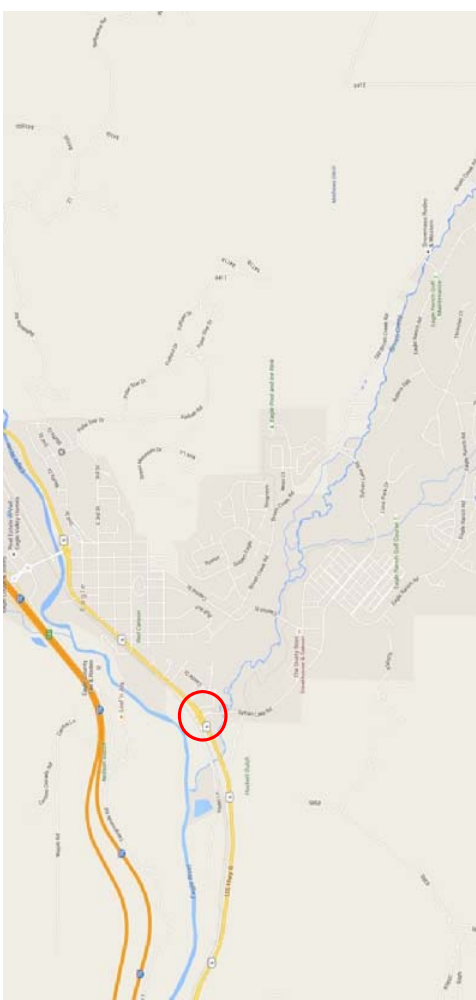
Data Collection Date: Saturday, October 3, 2015

Weather:



Saturday Traffic Counts

Start Time	Hwy 6 Eastbound						Hwy 6 Westbound						Sylvan Lake Rd Northbound						Eagle Ranch Rd Southbound						Peds/ Bikes			
	Left		Thru		Right		Peds/ Bikes		Left		Thru		Right		Peds/ Bikes		Left		Thru		Right		Peds/ Bikes					
11:00 AM	0	0	63	2	27	0	1	25	0	70	4	1	0	1	10	0	2	0	30	2	0	0	0	2	0	0		
11:15 AM	0	0	74	3	19	0	0	21	0	67	2	0	0	0	16	0	1	1	34	0	0	1	0	0	5	0		
11:30 AM	0	0	86	2	20	0	0	19	1	73	4	1	0	0	16	0	3	0	25	0	1	0	0	2	0	3		
11:45 AM	0	0	92	3	18	2	0	24	0	78	2	2	0	0	18	0	3	0	32	2	1	1	0	0	0	0		
12:00 PM	0	0	78	0	18	0	0	21	1	77	4	3	0	0	25	1	0	0	25	1	2	0	1	0	2	0		
12:15 PM	0	0	87	0	15	0	1	27	4	85	1	1	0	0	22	0	0	0	35	0	2	0	0	0	1	0		
12:30 PM	0	0	76	1	14	0	0	26	0	78	3	0	0	0	13	0	1	0	27	1	0	1	0	0	2	1		
12:45 PM	0	0	85	2	22	0	0	36	0	85	2	0	0	1	30	1	0	0	22	4	1	0	0	0	1	0		
Total	0	0	641	13	153	2	2	199	6	613	22	8	0	2	150	2	10	1	230	10	7	3	1	2	0	16	1	8
Peak Hour Total	0	0	326	3	69	0	1	110	5	325	10	4	0	1	90	2	1	0	109	6	5	1	1	0	0	6	1	3
Peak Hour Total	0	329	69	1	115	335	4	1	92	1	115	5	2	0	7	3	2	0	115	5	2	0	0	7	3			



Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2020 BG SAT - Ex. Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Eby Creek - SB (North Leg)	0	0	24.00	2
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Church St - NB (South Leg)	200	0	18.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	15.00	1
2	24.00	2	100.00	90.00	20.00	160.00	15.00	1
3	18.00	1	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	58	69	214	429
2	0	685	30	33	0
3	0	9	100	5	0
4	0	7	71	0	54

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	1345	507	1852
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4903	1874	6777
3	Church St - NB (South Leg)	Average Delay	sec/veh	4.05	5.51	4.45
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	358	91.4	1114.2	0.321	0.369	5.0	5.8	0.6	1.5	A	A
2	785	140.7	1862.6	0.422	0.484	3.5	4.2	0.9	2.4	A	A
3	120	811.7	1067.8	0.112	0.134	4.0	4.6	0.2	0.4	A	A
4	82	833.7	858.1	0.095	0.114	4.9	5.6	0.1	0.3	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	1162.2	2213.8	0.5250
2	Grand Ave - EB (West Leg)	2001.7	2025.3	0.9883
3	Church St - NB (South Leg)	1451.4	3070.9	0.4726
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	91.4	1114.2
2	140.7	1862.6
3	811.7	1067.8
4	833.7	858.1

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	358.1	358.1	91.4	824.3
2	785.4	785.4	140.7	308.7
3	119.7	119.7	811.7	114.5
4	81.9	81.9	833.7	97.7

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2020 BG AM - Ex. Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry					
	Leg Name	Bearing	G	V	nv	
1	Eby Creek - SB (North Leg)	0	0	24.00	2	
2	Grand Ave - EB (West Leg)	90	0	12.00	1	
3	Church St - NB (South Leg)	200	0	18.00	1	
4	Grand Ave - WB (East Leg)	270	0	12.00	1	

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	15.00	1
2	24.00	2	100.00	90.00	20.00	160.00	15.00	1
3	18.00	1	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	27	74	119	238
2	0	912	102	31	0
3	0	2	256	35	0
4	0	12	61	0	62

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	1713	315	2028
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4650	1740	6390
3	Church St - NB (South Leg)	Average Delay	sec/veh	5.12	4.57	5.04
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	231	78.7	1120.8	0.206	0.236	4.2	4.9	0.3	0.8	A	A
2	1097	118.6	1884.5	0.582	0.670	5.0	6.2	1.9	4.8	A	A
3	308	1092.9	934.8	0.329	0.406	6.2	7.5	0.7	1.7	A	A
4	77	1228.3	709.5	0.108	0.135	6.0	7.1	0.2	0.4	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	1162.2	2213.8	0.5250
2	Grand Ave - EB (West Leg)	2001.7	2025.3	0.9883
3	Church St - NB (South Leg)	1451.4	3070.9	0.4726
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	78.7	1120.8
2	118.6	1884.5
3	1092.9	934.8
4	1228.3	709.5

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	231.0	231.0	78.7	1226.2
2	1097.3	1097.1	118.6	191.1
3	307.7	307.6	1092.9	122.8
4	76.7	76.6	1228.3	172.2

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2020 BG PM - Ex. Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Eby Creek - SB (North Leg)	0	0	24.00	2
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Church St - NB (South Leg)	200	0	18.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	15.00	1
2	24.00	2	100.00	90.00	20.00	160.00	15.00	1
3	18.00	1	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	40	184	331	662
2	0	645	70	38	0
3	0	13	114	16	0
4	0	9	164	0	68

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	1705	767	2472
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4763	1831	6594
3	Church St - NB (South Leg)	Average Delay	sec/veh	5.56	11.83	7.50
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	B	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	583	195.3	1059.6	0.550	0.641	8.1	10.1	1.6	4.1	A	A
2	791	244.6	1760.0	0.449	0.521	4.0	4.7	1.1	2.7	A	A
3	150	792.7	1076.7	0.139	0.166	4.1	4.7	0.2	0.5	A	A
4	182	810.5	866.8	0.210	0.251	5.5	6.5	0.3	0.9	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	1162.2	2213.8	0.5250
2	Grand Ave - EB (West Leg)	2001.7	2025.3	0.9883
3	Church St - NB (South Leg)	1451.4	3070.9	0.4726
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	195.3	1059.6
2	244.6	1760.0
3	792.7	1076.7
4	810.5	866.8

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	582.8	582.6	195.3	796.9
2	790.7	790.6	244.6	533.3
3	150.1	150.1	792.7	242.5
4	181.7	181.6	810.5	132.3

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2022 BG SAT - Ex. Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Eby Creek - SB (North Leg)	0	0	24.00	2
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Church St - NB (South Leg)	200	0	18.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	15.00	1
2	24.00	2	100.00	90.00	20.00	160.00	15.00	1
3	18.00	1	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	62	72	226	453
2	0	724	32	35	0
3	0	9	105	5	0
4	0	7	77	0	58

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	1422	537	1958
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4852	1855	6707
3	Church St - NB (South Leg)	Average Delay	sec/veh	4.23	5.78	4.65
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	378	97.6	1110.9	0.340	0.391	5.2	6.0	0.6	1.6	A	A
2	831	148.0	1855.4	0.448	0.515	3.7	4.4	1.0	2.6	A	A
3	125	858.8	1045.5	0.120	0.143	4.1	4.8	0.2	0.4	A	A
4	88	879.8	840.7	0.105	0.126	5.0	5.8	0.1	0.4	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	1162.2	2213.8	0.5250
2	Grand Ave - EB (West Leg)	2001.7	2025.3	0.9883
3	Church St - NB (South Leg)	1451.4	3070.9	0.4726
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	97.6	1110.9
2	148.0	1855.4
3	858.8	1045.5
4	879.8	840.7

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	378.0	378.0	97.6	870.4
2	830.6	830.5	148.0	327.6
3	125.0	124.9	858.8	119.7
4	88.2	88.2	879.8	103.9

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2022 BG AM - Ex. Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Eby Creek - SB (North Leg)	0	0	24.00	2
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Church St - NB (South Leg)	200	0	18.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	15.00	1
2	24.00	2	100.00	90.00	20.00	160.00	15.00	1
3	18.00	1	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	29	77	126	253
2	0	960	107	32	0
3	0	2	268	37	0
4	0	13	66	0	67

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	1803	336	2139
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4589	1714	6303
3	Church St - NB (South Leg)	Average Delay	sec/veh	5.54	4.87	5.44
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	244	85.0	1117.5	0.218	0.250	4.3	5.0	0.3	0.9	A	A
2	1154	124.9	1878.2	0.614	0.709	5.4	6.9	2.3	5.6	A	A
3	322	1150.6	907.6	0.355	0.441	6.7	8.2	0.8	2.0	A	A
4	83	1291.3	685.8	0.121	0.152	6.3	7.5	0.2	0.5	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	1162.2	2213.8	0.5250
2	Grand Ave - EB (West Leg)	2001.7	2025.3	0.9883
3	Church St - NB (South Leg)	1451.4	3070.9	0.4726
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	85.0	1117.5
2	124.9	1878.2
3	1150.6	907.6
4	1291.3	685.8

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	243.6	243.6	85.0	1289.2
2	1154.0	1153.8	124.9	203.7
3	322.3	322.3	1150.6	128.1
4	83.0	82.9	1291.3	181.6

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2022 BG PM - Ex. Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Eby Creek - SB (North Leg)	0	0	24.00	2
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Church St - NB (South Leg)	200	0	18.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	15.00	1
2	24.00	2	100.00	90.00	20.00	160.00	15.00	1
3	18.00	1	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	43	192	349	699
2	0	681	74	40	0
3	0	14	119	17	0
4	0	9	176	0	73

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	1800	811	2610
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4707	1808	6515
3	Church St - NB (South Leg)	Average Delay	sec/veh	5.97	14.21	8.53
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	B	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	613	208.9	1052.5	0.583	0.681	8.9	11.2	1.9	4.8	A	A
2	835	256.1	1748.6	0.477	0.554	4.2	5.1	1.2	3.1	A	A
3	158	837.8	1055.4	0.149	0.179	4.2	4.9	0.2	0.6	A	A
4	194	854.6	850.2	0.228	0.275	5.8	6.8	0.4	1.0	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	1162.2	2213.8	0.5250
2	Grand Ave - EB (West Leg)	2001.7	2025.3	0.9883
3	Church St - NB (South Leg)	1451.4	3070.9	0.4726
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	208.9	1052.5
2	256.1	1748.6
3	837.8	1055.4
4	854.6	850.2

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	613.2	613.0	208.9	839.9
2	834.8	834.6	256.1	565.8
3	157.5	157.5	837.8	253.0
4	194.3	194.2	854.6	140.7

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2040 BG SAT - Ex. Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Eby Creek - SB (North Leg)	0	0	24.00	2
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Church St - NB (South Leg)	200	0	18.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	15.00	1
2	24.00	2	100.00	90.00	20.00	160.00	15.00	1
3	18.00	1	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	101	101	333	666
2	0	1079	50	48	0
3	0	13	146	7	0
4	0	10	126	0	94

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	2115	798	2913
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4386	1676	6062
3	Church St - NB (South Leg)	Average Delay	sec/veh	7.34	11.44	8.46
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	B	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	562	156.4	1080.0	0.520	0.603	7.4	9.1	1.4	3.6	A	A
2	1236	222.5	1781.8	0.694	0.812	7.5	10.5	3.7	8.8	A	A
3	174	1291.2	841.1	0.207	0.261	5.8	7.0	0.3	0.9	A	A
4	143	1299.6	682.6	0.209	0.264	7.1	8.6	0.3	0.9	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	1162.2	2213.8	0.5250
2	Grand Ave - EB (West Leg)	2001.7	2025.3	0.9883
3	Church St - NB (South Leg)	1451.4	3070.9	0.4726
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	156.4	1080.0
2	222.5	1781.8
3	1291.2	841.1
4	1299.6	682.6

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	561.8	561.6	156.4	1285.9
2	1235.9	1235.5	222.5	495.5
3	174.3	174.3	1291.2	166.9
4	142.8	142.8	1299.6	165.9

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2040 BG AM - Ex. Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry					
	Leg Name	Bearing	G	V	nv	
1	Eby Creek - SB (North Leg)	0	0	24.00	2	
2	Grand Ave - EB (West Leg)	90	0	12.00	1	
3	Church St - NB (South Leg)	200	0	18.00	1	
4	Grand Ave - WB (East Leg)	270	0	12.00	1	

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	15.00	1
2	24.00	2	100.00	90.00	20.00	160.00	15.00	1
3	18.00	1	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	47	108	193	385
2	0	1390	155	45	0
3	0	3	373	51	0
4	0	18	110	0	108

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	2618	518	3135
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4048	1488	5536
3	Church St - NB (South Leg)	Average Delay	sec/veh	32.88	7.22	28.64
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	C	A	C

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	365	137.4	1090.0	0.335	0.386	5.2	6.1	0.6	1.6	A	A
2	1670	181.6	1822.2	0.916	1.176	43.6	85.8	40.5	79.2	E	D
3	448	1670.3	661.9	0.677	0.886	21.8	34.5	4.2	9.9	C	C
4	134	1852.6	474.4	0.283	0.373	11.6	15.2	0.6	1.4	B	B

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	1162.2	2213.8	0.5250
2	Grand Ave - EB (West Leg)	2001.7	2025.3	0.9883
3	Church St - NB (South Leg)	1451.4	3070.9	0.4726
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	137.4	1090.0
2	181.6	1822.2
3	1670.3	661.9
4	1852.6	474.4

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	365.4	365.3	137.4	1849.5
2	1669.5	1668.2	181.6	321.2
3	448.3	447.7	1670.3	179.5
4	134.4	134.3	1852.6	265.4

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2040 BG PM - Ex. Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Eby Creek - SB (North Leg)	0	0	24.00	2
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Church St - NB (South Leg)	200	0	18.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	15.00	1
2	24.00	2	100.00	90.00	20.00	160.00	15.00	1
3	18.00	1	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	70	267	515	1029
2	0	1006	110	55	0
3	0	19	166	24	0
4	0	13	288	0	119

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	2660	1205	3865
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4040	1560	5600
3	Church St - NB (South Leg)	Average Delay	sec/veh	104.41	317.61	170.90
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	F	F	F

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	895	335.9	782.9	1.143	2.407	293.0	618.0	131.8	257.1	F	F
2	1230	317.3	1688.1	0.728	0.842	8.9	12.3	4.3	10.2	A	A
3	219	1234.4	868.0	0.253	0.315	5.9	7.2	0.4	1.2	A	A
4	316	1250.0	701.3	0.451	0.571	10.3	13.5	1.2	3.1	B	B

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	945.3	1954.9	0.4836
2	Grand Ave - EB (West Leg)	2001.7	2025.3	0.9883
3	Church St - NB (South Leg)	1451.4	3070.9	0.4726
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	335.9	782.9
2	317.3	1688.1
3	1234.4	868.0
4	1250.0	701.3

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	894.6	767.7	335.9	1230.1
2	1229.6	1229.0	317.3	786.3
3	219.5	219.4	1234.4	312.0
4	316.1	315.9	1250.0	203.7

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2040 Background SAT - Modified Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Eby Creek - SB (North Leg)	0	0	24.00	2
2	Grand Ave - EB (West Leg)	90	0	24.00	2
3	Church St - NB (South Leg)	200	0	18.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	33.00	2
2	24.00	2	100.00	90.00	20.00	160.00	33.00	2
3	24.00	2	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	101	101	333	666
2	0	1079	50	48	0
3	0	13	146	7	0
4	0	10	126	0	94

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	2115	798	2913
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4998	1698	6696
3	Church St - NB (South Leg)	Average Delay	sec/veh	5.19	10.68	6.69
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	B	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	562	156.4	1103.7	0.509	0.588	7.1	8.6	1.3	3.4	A	A
2	1236	222.6	2158.1	0.573	0.659	4.2	5.3	1.8	4.6	A	A
3	174	1291.3	1053.7	0.165	0.208	4.4	5.2	0.3	0.7	A	A
4	143	1299.7	682.6	0.209	0.264	7.1	8.6	0.3	0.9	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	1162.2	3112.2	0.3734
2	Grand Ave - EB (West Leg)	2324.3	3112.2	0.7468
3	Church St - NB (South Leg)	1831.0	3042.0	0.6019
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	156.4	1103.7
2	222.6	2158.1
3	1291.3	1053.7
4	1299.7	682.6

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	561.8	561.6	156.4	1286.1
2	1235.9	1235.7	222.6	495.5
3	174.3	174.3	1291.3	166.9
4	142.8	142.8	1299.7	165.9

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2040 Background AM - Modified Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Eby Creek - SB (North Leg)	0	0	24.00	2
2	Grand Ave - EB (West Leg)	90	0	24.00	2
3	Church St - NB (South Leg)	200	0	18.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	33.00	2
2	24.00	2	100.00	90.00	20.00	160.00	33.00	2
3	24.00	2	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	47	108	193	385
2	0	1390	155	45	0
3	0	3	373	51	0
4	0	18	110	0	108

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	2618	518	3135
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4599	1508	6107
3	Church St - NB (South Leg)	Average Delay	sec/veh	8.73	7.16	8.47
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	365	137.5	1110.8	0.329	0.378	5.1	5.9	0.6	1.5	A	A
2	1670	181.6	2188.7	0.763	0.889	8.4	12.6	6.0	13.6	A	A
3	448	1671.2	825.1	0.543	0.752	12.1	19.0	2.4	6.0	B	B
4	134	1853.7	474.0	0.284	0.406	12.0	16.4	0.6	1.6	B	B

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	1162.2	3112.2	0.3734
2	Grand Ave - EB (West Leg)	2324.3	3112.2	0.7468
3	Church St - NB (South Leg)	1831.0	3042.0	0.6019
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	137.5	1110.8
2	181.6	2188.7
3	1671.2	825.1
4	1853.7	474.0

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	365.4	365.3	137.5	1850.5
2	1669.5	1669.0	181.6	321.2
3	448.3	448.1	1671.2	179.5
4	134.4	134.3	1853.7	265.6

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2040 Background PM - Modified Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Eby Creek - SB (North Leg)	0	0	24.00	2
2	Grand Ave - EB (West Leg)	90	0	24.00	2
3	Church St - NB (South Leg)	200	0	18.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	33.00	2
2	24.00	2	100.00	90.00	20.00	160.00	33.00	2
3	24.00	2	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	70	267	515	1029
2	0	1006	110	55	0
3	0	19	166	24	0
4	0	13	288	0	119

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	2660	1205	3865
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4675	1636	6311
3	Church St - NB (South Leg)	Average Delay	sec/veh	89.61	224.44	131.66
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	F	F	F

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	895	335.9	805.4	1.111	2.186	255.4	528.1	114.2	222.6	F	F
2	1230	325.2	2081.4	0.591	0.675	4.6	5.6	2.0	4.9	A	A
3	219	1236.3	1086.9	0.202	0.251	4.4	5.3	0.3	0.9	A	A
4	316	1250.3	701.2	0.451	0.571	10.3	13.5	1.2	3.1	B	B

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	915.0	2804.7	0.3262
2	Grand Ave - EB (West Leg)	2324.3	3112.2	0.7468
3	Church St - NB (South Leg)	1831.0	3042.0	0.6019
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	335.9	805.4
2	325.2	2081.4
3	1236.3	1086.9
4	1250.3	701.2

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	894.6	787.7	335.9	1230.4
2	1229.6	1229.3	325.2	798.4
3	219.5	219.4	1236.3	318.2
4	316.1	315.9	1250.3	205.4

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2020 Total SAT - Ex. Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Eby Creek - SB (North Leg)	0	0	24.00	2
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Church St - NB (South Leg)	200	0	18.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	15.00	1
2	24.00	2	100.00	90.00	20.00	160.00	15.00	1
3	18.00	1	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	58	69	254	509
2	0	802	43	33	0
3	0	9	100	5	0
4	0	7	85	0	54

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	1538	591	2129
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4784	1823	6607
3	Church St - NB (South Leg)	Average Delay	sec/veh	4.51	6.64	5.10
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	400	106.0	1106.5	0.362	0.416	5.4	6.3	0.7	1.8	A	A
2	922	140.7	1862.6	0.495	0.569	4.1	4.9	1.3	3.3	A	A
3	120	948.1	1003.3	0.119	0.144	4.3	5.0	0.2	0.4	A	A
4	97	956.5	811.8	0.119	0.144	5.3	6.2	0.2	0.4	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	1162.2	2213.8	0.5250
2	Grand Ave - EB (West Leg)	2001.7	2025.3	0.9883
3	Church St - NB (South Leg)	1451.4	3070.9	0.4726
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	106.0	1106.5
2	140.7	1862.6
3	948.1	1003.3
4	956.5	811.8

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	400.1	400.0	106.0	947.1
2	921.9	921.9	140.7	365.4
3	119.7	119.7	948.1	114.4
4	96.6	96.6	956.5	111.3

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2020 Total AM - Ex. Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry					
	Leg Name	Bearing	G	V	nv	
1	Eby Creek - SB (North Leg)	0	0	24.00	2	
2	Grand Ave - EB (West Leg)	90	0	12.00	1	
3	Church St - NB (South Leg)	200	0	18.00	1	
4	Grand Ave - WB (East Leg)	270	0	12.00	1	

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	15.00	1
2	24.00	2	100.00	90.00	20.00	160.00	15.00	1
3	18.00	1	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	27	74	140	279
2	0	1039	115	31	0
3	0	2	256	35	0
4	0	12	69	0	62

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	1890	358	2248
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4526	1688	6214
3	Church St - NB (South Leg)	Average Delay	sec/veh	6.14	5.03	5.96
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	253	87.1	1116.4	0.227	0.260	4.4	5.1	0.3	0.9	A	A
2	1244	118.6	1884.5	0.660	0.763	6.2	8.2	2.9	7.1	A	A
3	308	1239.9	865.4	0.356	0.447	7.0	8.8	0.8	2.0	A	A
4	85	1361.6	659.3	0.129	0.164	6.7	8.0	0.2	0.5	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	1162.2	2213.8	0.5250
2	Grand Ave - EB (West Leg)	2001.7	2025.3	0.9883
3	Church St - NB (South Leg)	1451.4	3070.9	0.4726
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	87.1	1116.4
2	118.6	1884.5
3	1239.9	865.4
4	1361.6	659.3

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	253.1	253.0	87.1	1359.5
2	1244.2	1244.1	118.6	221.5
3	307.7	307.6	1239.9	122.8
4	85.1	85.0	1361.6	185.8

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2020 Total PM - Ex. Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Eby Creek - SB (North Leg)	0	0	24.00	2
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Church St - NB (South Leg)	200	0	18.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	15.00	1
2	24.00	2	100.00	90.00	20.00	160.00	15.00	1
3	18.00	1	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	40	184	374	749
2	0	737	81	38	0
3	0	13	114	16	0
4	0	9	178	0	68

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	1873	858	2731
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4668	1789	6457
3	Church St - NB (South Leg)	Average Delay	sec/veh	6.22	18.58	10.10
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	B	B

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	628	210.0	1051.9	0.597	0.699	9.2	11.7	2.1	5.2	A	A
2	899	244.6	1760.0	0.511	0.593	4.5	5.5	1.4	3.5	A	A
3	150	900.8	1025.6	0.146	0.176	4.3	5.1	0.2	0.6	A	A
4	196	907.1	830.4	0.236	0.286	6.0	7.1	0.4	1.0	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	1162.2	2213.8	0.5250
2	Grand Ave - EB (West Leg)	2001.7	2025.3	0.9883
3	Church St - NB (South Leg)	1451.4	3070.9	0.4726
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	210.0	1051.9
2	244.6	1760.0
3	900.8	1025.6
4	907.1	830.4

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	627.9	627.7	210.0	893.4
2	898.8	898.7	244.6	593.1
3	150.1	150.1	900.8	242.5
4	196.4	196.3	907.1	143.8

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2022 Total SAT - Ex. Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Eby Creek - SB (North Leg)	0	0	24.00	2
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Church St - NB (South Leg)	200	0	18.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	15.00	1
2	24.00	2	100.00	90.00	20.00	160.00	15.00	1
3	18.00	1	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	62	72	266	533
2	0	841	45	35	0
3	0	9	105	5	0
4	0	7	91	0	58

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	1615	621	2235
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4734	1804	6538
3	Church St - NB (South Leg)	Average Delay	sec/veh	4.74	7.27	5.44
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	420	112.3	1103.2	0.381	0.438	5.5	6.5	0.8	1.9	A	A
2	967	148.0	1855.4	0.521	0.600	4.3	5.3	1.4	3.7	A	A
3	125	995.3	981.0	0.127	0.155	4.4	5.2	0.2	0.5	A	A
4	103	1002.6	794.5	0.130	0.158	5.5	6.4	0.2	0.5	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	1162.2	2213.8	0.5250
2	Grand Ave - EB (West Leg)	2001.7	2025.3	0.9883
3	Church St - NB (South Leg)	1451.4	3070.9	0.4726
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	112.3	1103.2
2	148.0	1855.4
3	995.3	981.0
4	1002.6	794.5

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	420.0	419.9	112.3	993.2
2	967.0	966.9	148.0	384.2
3	125.0	124.9	995.3	119.7
4	102.9	102.9	1002.6	117.6

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2022 Total AM - Ex. Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry					
	Leg Name	Bearing	G	V	nv	
1	Eby Creek - SB (North Leg)	0	0	24.00	2	
2	Grand Ave - EB (West Leg)	90	0	12.00	1	
3	Church St - NB (South Leg)	200	0	18.00	1	
4	Grand Ave - WB (East Leg)	270	0	12.00	1	

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	15.00	1
2	24.00	2	100.00	90.00	20.00	160.00	15.00	1
3	18.00	1	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	29	77	147	294
2	0	1087	120	32	0
3	0	2	268	37	0
4	0	13	74	0	67

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	1980	379	2359
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4465	1663	6128
3	Church St - NB (South Leg)	Average Delay	sec/veh	6.80	5.20	6.54
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	266	93.4	1113.1	0.239	0.273	4.4	5.2	0.4	1.0	A	A
2	1301	124.9	1878.2	0.693	0.803	7.1	9.6	3.6	8.5	A	A
3	322	1297.5	838.1	0.385	0.488	7.7	9.8	0.9	2.3	A	A
4	91	1424.5	635.6	0.144	0.185	7.1	8.5	0.2	0.6	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	1162.2	2213.8	0.5250
2	Grand Ave - EB (West Leg)	2001.7	2025.3	0.9883
3	Church St - NB (South Leg)	1451.4	3070.9	0.4726
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	93.4	1113.1
2	124.9	1878.2
3	1297.5	838.1
4	1424.5	635.6

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	265.7	265.6	93.4	1422.4
2	1301.0	1300.6	124.9	234.1
3	322.3	322.3	1297.5	128.1
4	91.4	91.3	1424.5	195.3

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2022 Total PM - Ex. Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry					
	Leg Name	Bearing	G	V	nv	
1	Eby Creek - SB (North Leg)	0	0	24.00	2	
2	Grand Ave - EB (West Leg)	90	0	12.00	1	
3	Church St - NB (South Leg)	200	0	18.00	1	
4	Grand Ave - WB (East Leg)	270	0	12.00	1	

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	15.00	1
2	24.00	2	100.00	90.00	20.00	160.00	15.00	1
3	18.00	1	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	43	192	393	785
2	0	773	85	40	0
3	0	14	119	17	0
4	0	9	190	0	73

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	1969	901	2870
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4572	1766	6338
3	Church St - NB (South Leg)	Average Delay	sec/veh	7.20	24.83	12.73
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	C	B

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	659	223.6	1005.3	0.656	0.774	11.5	15.2	2.8	7.0	B	B
2	943	256.1	1748.6	0.539	0.627	4.8	6.0	1.6	4.0	A	A
3	158	945.9	1004.3	0.157	0.189	4.5	5.3	0.2	0.6	A	A
4	209	951.1	813.8	0.257	0.311	6.3	7.5	0.4	1.1	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	1120.9	2167.8	0.5171
2	Grand Ave - EB (West Leg)	2001.7	2025.3	0.9883
3	Church St - NB (South Leg)	1451.4	3070.9	0.4726
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	223.6	1005.3
2	256.1	1748.6
3	945.9	1004.3
4	951.1	813.8

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	659.4	659.1	223.6	936.4
2	942.9	942.7	256.1	626.6
3	157.5	157.5	945.9	253.0
4	208.9	208.9	951.1	152.2

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2040 Total SAT - Ex. Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Eby Creek - SB (North Leg)	0	0	24.00	2
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Church St - NB (South Leg)	200	0	18.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	15.00	1
2	24.00	2	100.00	90.00	20.00	160.00	15.00	1
3	18.00	1	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	101	101	373	746
2	0	1196	63	48	0
3	0	13	146	7	0
4	0	10	140	0	94

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	2308	882	3190
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4267	1625	5892
3	Church St - NB (South Leg)	Average Delay	sec/veh	9.67	16.54	11.57
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	B	B

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	604	171.1	1072.3	0.563	0.655	8.3	10.3	1.7	4.4	A	A
2	1372	222.5	1781.8	0.770	0.912	10.9	16.9	6.6	14.9	B	B
3	174	1427.5	776.7	0.224	0.289	6.4	7.9	0.4	1.0	A	A
4	158	1422.3	636.4	0.247	0.318	8.1	10.0	0.4	1.2	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	1162.2	2213.8	0.5250
2	Grand Ave - EB (West Leg)	2001.7	2025.3	0.9883
3	Church St - NB (South Leg)	1451.4	3070.9	0.4726
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	171.1	1072.3
2	222.5	1781.8
3	1427.5	776.7
4	1422.3	636.4

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	603.8	603.6	171.1	1408.6
2	1372.3	1371.9	222.5	552.1
3	174.3	174.3	1427.5	166.9
4	157.5	157.5	1422.3	179.5

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2040 Total AM - Ex. Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry					
	Leg Name	Bearing	G	V	nv	
1	Eby Creek - SB (North Leg)	0	0	24.00	2	
2	Grand Ave - EB (West Leg)	90	0	12.00	1	
3	Church St - NB (South Leg)	200	0	18.00	1	
4	Grand Ave - WB (East Leg)	270	0	12.00	1	

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	15.00	1
2	24.00	2	100.00	90.00	20.00	160.00	15.00	1
3	18.00	1	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	47	108	213	427
2	0	1516	167	45	0
3	0	3	373	51	0
4	0	18	118	108	94

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	2905	547	3452
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	3974	1456	5430
3	Church St - NB (South Leg)	Average Delay	sec/veh	76.99	7.44	65.97
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	E	A	E

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	386	145.6	1085.7	0.356	0.410	5.4	6.4	0.7	1.7	A	A
2	1814	181.6	1822.2	0.996	1.492	113.0	222.0	106.3	207.3	F	F
3	448	1756.4	621.3	0.722	0.904	24.7	38.0	4.5	10.6	C	C
4	256	1931.4	444.7	0.576	0.742	21.6	31.0	2.1	5.3	C	C

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	1162.2	2213.8	0.5250
2	Grand Ave - EB (West Leg)	2001.7	2025.3	0.9883
3	Church St - NB (South Leg)	1451.4	3070.9	0.4726
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	145.6	1085.7
2	181.6	1822.2
3	1756.4	621.3
4	1931.4	444.7

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	386.4	386.3	145.6	2041.4
2	1814.4	1752.7	181.6	350.4
3	448.3	447.1	1756.4	177.9
4	256.2	255.6	1931.4	272.1

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2040 Total PM - Ex. Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry					
	Leg Name	Bearing	G	V	nv	
1	Eby Creek - SB (North Leg)	0	0	24.00	2	
2	Grand Ave - EB (West Leg)	90	0	12.00	1	
3	Church St - NB (South Leg)	200	0	18.00	1	
4	Grand Ave - WB (East Leg)	270	0	12.00	1	

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	15.00	1
2	24.00	2	100.00	90.00	20.00	160.00	15.00	1
3	18.00	1	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	70	267	557	1115
2	0	1097	120	55	0
3	0	19	166	24	0
4	0	13	301	0	119

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	2823	1296	4119
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	3956	1531	5487
3	Church St - NB (South Leg)	Average Delay	sec/veh	135.05	409.36	221.33
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	F	F	F

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	939	349.5	763.8	1.229	2.978	384.0	861.7	180.7	352.4	F	F
2	1336	298.5	1706.7	0.783	0.911	11.6	17.2	6.5	14.8	B	B
3	219	1336.5	819.7	0.268	0.338	6.5	7.9	0.5	1.3	A	A
4	330	1345.5	665.3	0.496	0.639	12.1	16.5	1.5	3.9	B	B

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	931.9	1937.4	0.4810
2	Grand Ave - EB (West Leg)	2001.7	2025.3	0.9883
3	Church St - NB (South Leg)	1451.4	3070.9	0.4726
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	349.5	763.8
2	298.5	1706.7
3	1336.5	819.7
4	1345.5	665.3

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	938.7	755.7	349.5	1325.6
2	1335.6	1335.0	298.5	806.7
3	219.5	219.4	1336.5	297.1
4	329.7	329.6	1345.5	210.3

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2040 Total SAT - Modified Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Eby Creek - SB (North Leg)	0	0	24.00	2
2	Grand Ave - EB (West Leg)	90	0	24.00	2
3	Church St - NB (South Leg)	200	0	18.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	33.00	2
2	24.00	2	100.00	90.00	20.00	160.00	33.00	2
3	24.00	2	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	101	101	373	746
2	0	1196	63	48	0
3	0	13	146	7	0
4	0	10	140	0	94

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	2308	882	3190
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4864	1649	6513
3	Church St - NB (South Leg)	Average Delay	sec/veh	5.97	14.77	8.40
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	B	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	604	171.1	1098.3	0.550	0.637	7.8	9.6	1.6	4.1	A	A
2	1372	222.5	2158.1	0.636	0.734	5.1	6.6	2.6	6.3	A	A
3	174	1427.8	971.6	0.179	0.231	4.9	5.9	0.3	0.8	A	A
4	158	1422.6	636.3	0.248	0.319	8.1	10.0	0.4	1.2	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	1162.2	3112.2	0.3734
2	Grand Ave - EB (West Leg)	2324.3	3112.2	0.7468
3	Church St - NB (South Leg)	1831.0	3042.0	0.6019
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	171.1	1098.3
2	222.5	2158.1
3	1427.8	971.6
4	1422.6	636.3

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	603.8	603.6	171.1	1408.9
2	1372.3	1372.2	222.5	552.2
3	174.3	174.3	1427.8	166.9
4	157.5	157.5	1422.6	179.5

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2040 Total AM - Modified Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Eby Creek - SB (North Leg)	0	0	24.00	2
2	Grand Ave - EB (West Leg)	90	0	24.00	2
3	Church St - NB (South Leg)	200	0	18.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	33.00	2
2	24.00	2	100.00	90.00	20.00	160.00	33.00	2
3	24.00	2	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	47	108	213	427
2	0	1516	167	45	0
3	0	3	373	51	0
4	0	18	118	0	108

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	2792	562	3354
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4459	1458	5917
3	Church St - NB (South Leg)	Average Delay	sec/veh	13.01	7.90	12.15
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	B	A	B

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	386	145.9	1107.7	0.349	0.401	5.2	6.2	0.6	1.7	A	A
2	1814	181.6	2188.7	0.829	0.983	13.3	23.0	11.9	25.1	B	B
3	448	1815.8	738.0	0.607	0.884	18.0	32.0	4.1	9.8	C	B
4	143	1985.8	424.2	0.337	0.503	15.1	21.7	0.9	2.3	C	B

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	1162.2	3112.2	0.3734
2	Grand Ave - EB (West Leg)	2324.3	3112.2	0.7468
3	Church St - NB (South Leg)	1831.0	3042.0	0.6019
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	145.9	1107.7
2	181.6	2188.7
3	1815.8	738.0
4	1985.8	424.2

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	386.4	386.3	145.9	1982.7
2	1814.4	1813.7	181.6	350.6
3	448.3	448.1	1815.8	179.5
4	142.8	142.7	1985.8	278.2

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	01: Hwy 6 & Ey Creek - 2040 Total PM - Modified Geometry	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Eby Creek - SB (North Leg)	0	0	24.00	2
2	Grand Ave - EB (West Leg)	90	0	24.00	2
3	Church St - NB (South Leg)	200	0	18.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	12.00	1	60.00	90.00	20.00	160.00	33.00	2
2	24.00	2	100.00	90.00	20.00	160.00	33.00	2
3	24.00	2	70.00	30.00	50.00	160.00	33.00	2
4	12.00	1	90.00	120.00	20.00	160.00	33.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	24.00	2	24.00	2
2	24.00	2	24.00	2
3	14.00	1	12.00	1
4	14.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Eby Creek - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Church St - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	70	267	557	1115
2	0	1097	120	55	0
3	0	19	166	24	0
4	0	13	301	0	119

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Eby Creek - SB (North Leg)	Arrive Flows	pcs/hr	2823	1296	4119
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4573	1610	6183
3	Church St - NB (South Leg)	Average Delay	sec/veh	118.56	305.65	177.41
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	F	F	F

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	939	349.5	786.9	1.193	2.719	343.8	759.8	161.5	315.0	F	F
2	1336	306.6	2095.3	0.637	0.729	5.2	6.6	2.5	6.2	A	A
3	219	1338.4	1025.4	0.214	0.270	4.8	5.8	0.4	0.9	A	A
4	330	1345.8	665.2	0.496	0.640	12.1	16.6	1.6	3.9	B	B

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Eby Creek - SB (North Leg)	899.9	2783.1	0.3233
2	Grand Ave - EB (West Leg)	2324.3	3112.2	0.7468
3	Church St - NB (South Leg)	1831.0	3042.0	0.6019
4	Grand Ave - WB (East Leg)	1172.0	3112.2	0.3766

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	349.5	786.9
2	306.6	2095.3
3	1338.4	1025.4
4	1345.8	665.2

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	938.7	777.1	349.5	1325.9
2	1335.6	1335.3	306.6	820.0
3	219.5	219.4	1338.4	303.5
4	329.7	329.6	1345.8	212.0

2020 BG SAT.syn
2: Capitol St & Grand Ave

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	488	17	209	467	0	244
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	530	18	227	508	0	265
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			549		1502	540
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			549		1502	540
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			78		100	51
cM capacity (veh/h)			1021		104	542
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	549	227	508	265		
Volume Left	0	227	0	0		
Volume Right	18	0	0	265		
cSH	1700	1021	1700	542		
Volume to Capacity	0.32	0.22	0.30	0.49		
Queue Length 95th (ft)	0	21	0	67		
Control Delay (s)	0.0	9.5	0.0	17.8		
Lane LOS		A		C		
Approach Delay (s)	0.0	2.9		17.8		
Approach LOS				C		
Intersection Summary						
Average Delay			4.5			
Intersection Capacity Utilization			48.5%		ICU Level of Service	A
Analysis Period (min)			15			

2020 BG AM.syn
2: Capitol St & Grand Ave

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	716	14	137	365	0	329
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	778	15	149	397	0	358
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			793		1480	786
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			793		1480	786
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			82		100	9
cM capacity (veh/h)			828		113	392
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	793	149	397	358		
Volume Left	0	149	0	0		
Volume Right	15	0	0	358		
cSH	1700	828	1700	392		
Volume to Capacity	0.47	0.18	0.23	0.91		
Queue Length 95th (ft)	0	16	0	240		
Control Delay (s)	0.0	10.3	0.0	58.8		
Lane LOS		B		F		
Approach Delay (s)	0.0	2.8		58.8		
Approach LOS				F		
Intersection Summary						
Average Delay			13.3			
Intersection Capacity Utilization			65.6%	ICU Level of Service		C
Analysis Period (min)			15			

2020 BG PM.syn
2: Capitol St & Grand Ave

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗		↘	↗		↗
Volume (veh/h)	486	17	362	774	0	198
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	528	18	393	841	0	215
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			547		2166	538
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			547		2166	538
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			62		100	60
cM capacity (veh/h)			1023		32	544
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	547	393	841	215		
Volume Left	0	393	0	0		
Volume Right	18	0	0	215		
cSH	1700	1023	1700	544		
Volume to Capacity	0.32	0.38	0.49	0.40		
Queue Length 95th (ft)	0	46	0	47		
Control Delay (s)	0.0	10.7	0.0	15.9		
Lane LOS		B		C		
Approach Delay (s)	0.0	3.4		15.9		
Approach LOS				C		
Intersection Summary						
Average Delay			3.8			
Intersection Capacity Utilization			53.3%		ICU Level of Service	A
Analysis Period (min)			15			

2020 T SAT.syn
2: Capitol St & Grand Ave

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	597	17	209	579	0	244
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	649	18	227	629	0	265
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			667		1742	658
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			667		1742	658
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			75		100	43
cM capacity (veh/h)			922		72	464
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	667	227	629	265		
Volume Left	0	227	0	0		
Volume Right	18	0	0	265		
cSH	1700	922	1700	464		
Volume to Capacity	0.39	0.25	0.37	0.57		
Queue Length 95th (ft)	0	24	0	88		
Control Delay (s)	0.0	10.2	0.0	22.6		
Lane LOS		B		C		
Approach Delay (s)	0.0	2.7		22.6		
Approach LOS				C		
Intersection Summary						
Average Delay			4.6			
Intersection Capacity Utilization			54.2%	ICU Level of Service		A
Analysis Period (min)			15			

2020 T AM.syn
2: Capitol St & Grand Ave

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	830	14	137	425	0	329
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	902	15	149	462	0	358
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			917		1670	910
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			917		1670	910
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			80		100	0
cM capacity (veh/h)			744		85	333
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	917	149	462	358		
Volume Left	0	149	0	0		
Volume Right	15	0	0	358		
cSH	1700	744	1700	333		
Volume to Capacity	0.54	0.20	0.27	1.07		
Queue Length 95th (ft)	0	19	0	331		
Control Delay (s)	0.0	11.0	0.0	106.8		
Lane LOS		B		F		
Approach Delay (s)	0.0	2.7		106.8		
Approach LOS				F		
Intersection Summary						
Average Delay		21.1				
Intersection Capacity Utilization		71.6%		ICU Level of Service	C	
Analysis Period (min)		15				

2020 T PM.syn
2: Capitol St & Grand Ave

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	571	17	362	892	0	198
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	621	18	393	970	0	215
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			639		2386	630
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			639		2386	630
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			58		100	55
cM capacity (veh/h)			945		22	482
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	639	393	970	215		
Volume Left	0	393	0	0		
Volume Right	18	0	0	215		
cSH	1700	945	1700	482		
Volume to Capacity	0.38	0.42	0.57	0.45		
Queue Length 95th (ft)	0	52	0	57		
Control Delay (s)	0.0	11.5	0.0	18.4		
Lane LOS		B		C		
Approach Delay (s)	0.0	3.3		18.4		
Approach LOS				C		
Intersection Summary						
Average Delay			3.8			
Intersection Capacity Utilization			57.8%		ICU Level of Service	B
Analysis Period (min)			15			

2022 BG SAT.syn
2: Capitol St & Grand Ave

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	522	18	215	492	0	253
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	567	20	234	535	0	275
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			587		1579	577
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			587		1579	577
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			76		100	47
cM capacity (veh/h)			988		92	516
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	587	234	535	275		
Volume Left	0	234	0	0		
Volume Right	20	0	0	275		
cSH	1700	988	1700	516		
Volume to Capacity	0.35	0.24	0.31	0.53		
Queue Length 95th (ft)	0	23	0	78		
Control Delay (s)	0.0	9.8	0.0	19.7		
Lane LOS		A		C		
Approach Delay (s)	0.0	3.0		19.7		
Approach LOS				C		
Intersection Summary						
Average Delay			4.7			
Intersection Capacity Utilization			50.9%		ICU Level of Service	A
Analysis Period (min)			15			

2022 BG AM.syn
2: Capitol St & Grand Ave

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗		↘	↗		↗
Volume (veh/h)	754	16	143	377	0	345
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	820	17	155	410	0	375
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			837		1549	828
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			837		1549	828
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			81		100	0
cM capacity (veh/h)			797		101	371
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	837	155	410	375		
Volume Left	0	155	0	0		
Volume Right	17	0	0	375		
cSH	1700	797	1700	371		
Volume to Capacity	0.49	0.19	0.24	1.01		
Queue Length 95th (ft)	0	18	0	303		
Control Delay (s)	0.0	10.6	0.0	83.7		
Lane LOS		B		F		
Approach Delay (s)	0.0	2.9		83.7		
Approach LOS				F		
Intersection Summary						
Average Delay		18.6				
Intersection Capacity Utilization		68.7%		ICU Level of Service	C	
Analysis Period (min)		15				

2022 BG PM.syn
2: Capitol St & Grand Ave

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗		↘	↗		↗
Volume (veh/h)	519	18	373	816	0	205
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	564	20	405	887	0	223
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			584		2272	574
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			584		2272	574
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			59		100	57
cM capacity (veh/h)			991		26	518
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	584	405	887	223		
Volume Left	0	405	0	0		
Volume Right	20	0	0	223		
cSH	1700	991	1700	518		
Volume to Capacity	0.34	0.41	0.52	0.43		
Queue Length 95th (ft)	0	51	0	53		
Control Delay (s)	0.0	11.1	0.0	17.1		
Lane LOS		B		C		
Approach Delay (s)	0.0	3.5		17.1		
Approach LOS				C		
Intersection Summary						
Average Delay			4.0			
Intersection Capacity Utilization			55.7%		ICU Level of Service	B
Analysis Period (min)			15			

2022 T SAT.syn
2: Capitol St & Grand Ave

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	652	18	215	626	0	253
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	709	20	234	680	0	275
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			728		1866	718
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			728		1866	718
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			73		100	36
cM capacity (veh/h)			875		58	429
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	728	234	680	275		
Volume Left	0	234	0	0		
Volume Right	20	0	0	275		
cSH	1700	875	1700	429		
Volume to Capacity	0.43	0.27	0.40	0.64		
Queue Length 95th (ft)	0	27	0	109		
Control Delay (s)	0.0	10.6	0.0	27.2		
Lane LOS		B		D		
Approach Delay (s)	0.0	2.7		27.2		
Approach LOS				D		
Intersection Summary						
Average Delay			5.2			
Intersection Capacity Utilization			57.7%		ICU Level of Service	B
Analysis Period (min)			15			

2022 T AM.syn
2: Capitol St & Grand Ave

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	893	16	143	447	0	345
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	971	17	155	486	0	375
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			988		1776	979
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			988		1776	979
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			78		100	0
cM capacity (veh/h)			699		71	303
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	988	155	486	375		
Volume Left	0	155	0	0		
Volume Right	17	0	0	375		
cSH	1700	699	1700	303		
Volume to Capacity	0.58	0.22	0.29	1.24		
Queue Length 95th (ft)	0	21	0	429		
Control Delay (s)	0.0	11.6	0.0	167.1		
Lane LOS		B		F		
Approach Delay (s)	0.0	2.8		167.1		
Approach LOS				F		
Intersection Summary						
Average Delay		32.2				
Intersection Capacity Utilization		76.0%		ICU Level of Service		D
Analysis Period (min)		15				

2022 T PM.syn
2: Capitol St & Grand Ave

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	621	18	373	959	0	205
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	675	20	405	1042	0	223
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			695		2538	685
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			695		2538	685
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			55		100	50
cM capacity (veh/h)			901		16	448
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	695	405	1042	223		
Volume Left	0	405	0	0		
Volume Right	20	0	0	223		
cSH	1700	901	1700	448		
Volume to Capacity	0.41	0.45	0.61	0.50		
Queue Length 95th (ft)	0	59	0	68		
Control Delay (s)	0.0	12.2	0.0	20.7		
Lane LOS		B		C		
Approach Delay (s)	0.0	3.4		20.7		
Approach LOS				C		
Intersection Summary						
Average Delay			4.0			
Intersection Capacity Utilization			61.1%		ICU Level of Service	B
Analysis Period (min)			15			

2040 BG SAT.syn
2: Capitol St & Grand Ave

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	824	30	265	717	0	335
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	896	33	288	779	0	364
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			928		1878	464
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			928		1878	464
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			61		100	33
cM capacity (veh/h)			732		38	545
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	597	331	288	390	390	364
Volume Left	0	0	288	0	0	0
Volume Right	0	33	0	0	0	364
cSH	1700	1700	732	1700	1700	545
Volume to Capacity	0.35	0.19	0.39	0.23	0.23	0.67
Queue Length 95th (ft)	0	0	47	0	0	124
Control Delay (s)	0.0	0.0	13.1	0.0	0.0	23.9
Lane LOS			B			C
Approach Delay (s)	0.0		3.5			23.9
Approach LOS						C
Intersection Summary						
Average Delay			5.3			
Intersection Capacity Utilization			51.1%		ICU Level of Service	A
Analysis Period (min)			15			

2040 BG AM.syn
2: Capitol St & Grand Ave

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑		↗
Volume (veh/h)	1095	30	193	485	0	488
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1190	33	210	527	0	530
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1223		1890	611
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1223		1890	611
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			63		100	0
cM capacity (veh/h)			566		39	436
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	793	429	210	264	264	530
Volume Left	0	0	210	0	0	0
Volume Right	0	33	0	0	0	530
cSH	1700	1700	566	1700	1700	436
Volume to Capacity	0.47	0.25	0.37	0.16	0.16	1.22
Queue Length 95th (ft)	0	0	43	0	0	529
Control Delay (s)	0.0	0.0	15.1	0.0	0.0	144.5
Lane LOS			C			F
Approach Delay (s)	0.0		4.3			144.5
Approach LOS						F
Intersection Summary						
Average Delay			32.0			
Intersection Capacity Utilization			68.1%		ICU Level of Service	C
Analysis Period (min)			15			

2040 BG PM.syn
2: Capitol St & Grand Ave

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↘		↙	↑↑		↗
Volume (veh/h)	820	30	475	1190	0	272
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	891	33	516	1293	0	296
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			924		2587	462
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			924		2587	462
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			30		100	46
cM capacity (veh/h)			735		6	547
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	594	330	516	647	647	296
Volume Left	0	0	516	0	0	0
Volume Right	0	33	0	0	0	296
cSH	1700	1700	735	1700	1700	547
Volume to Capacity	0.35	0.19	0.70	0.38	0.38	0.54
Queue Length 95th (ft)	0	0	146	0	0	80
Control Delay (s)	0.0	0.0	20.6	0.0	0.0	19.1
Lane LOS			C			C
Approach Delay (s)	0.0		5.9			19.1
Approach LOS						C
Intersection Summary						
Average Delay			5.4			
Intersection Capacity Utilization			56.6%		ICU Level of Service	B
Analysis Period (min)			15			

2040 T SAT.syn
2: Capitol St & Grand Ave

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	954	30	265	849	0	335
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1037	33	288	923	0	364
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1070		2091	535
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1070		2091	535
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			56		100	26
cM capacity (veh/h)			647		25	490
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	691	378	288	461	461	364
Volume Left	0	0	288	0	0	0
Volume Right	0	33	0	0	0	364
cSH	1700	1700	647	1700	1700	490
Volume to Capacity	0.41	0.22	0.44	0.27	0.27	0.74
Queue Length 95th (ft)	0	0	57	0	0	156
Control Delay (s)	0.0	0.0	14.9	0.0	0.0	30.7
Lane LOS			B			D
Approach Delay (s)	0.0		3.6			30.7
Approach LOS						D
Intersection Summary						
Average Delay			5.9			
Intersection Capacity Utilization			54.7%		ICU Level of Service	A
Analysis Period (min)			15			

2040 T AM.syn
2: Capitol St & Grand Ave

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑		↗
Volume (veh/h)	1234	30	193	553	0	488
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1341	33	210	601	0	530
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1374		2078	687
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1374		2078	687
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			58		100	0
cM capacity (veh/h)			495		27	389
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	894	480	210	301	301	530
Volume Left	0	0	210	0	0	0
Volume Right	0	33	0	0	0	530
cSH	1700	1700	495	1700	1700	389
Volume to Capacity	0.53	0.28	0.42	0.18	0.18	1.36
Queue Length 95th (ft)	0	0	52	0	0	636
Control Delay (s)	0.0	0.0	17.5	0.0	0.0	206.7
Lane LOS			C			F
Approach Delay (s)	0.0		4.5			206.7
Approach LOS						F
Intersection Summary						
Average Delay			41.7			
Intersection Capacity Utilization			71.9%		ICU Level of Service	C
Analysis Period (min)			15			

2040 T PM.syn
2: Capitol St & Grand Ave

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑		↗
Volume (veh/h)	920	30	475	1332	0	272
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1000	33	516	1448	0	296
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1033		2773	516
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1033		2773	516
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			23		100	41
cM capacity (veh/h)			669		3	504
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	667	366	516	724	724	296
Volume Left	0	0	516	0	0	0
Volume Right	0	33	0	0	0	296
cSH	1700	1700	669	1700	1700	504
Volume to Capacity	0.39	0.22	0.77	0.43	0.43	0.59
Queue Length 95th (ft)	0	0	183	0	0	93
Control Delay (s)	0.0	0.0	26.2	0.0	0.0	21.8
Lane LOS			D			C
Approach Delay (s)	0.0		6.9			21.8
Approach LOS						C
Intersection Summary						
Average Delay			6.1			
Intersection Capacity Utilization			59.4%		ICU Level of Service	B
Analysis Period (min)			15			

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑		
Volume (veh/h)	806	96	258	820	129	478		
Sign Control	Free			Free	Stop			
Grade	0%			0%	0%			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly flow rate (vph)	876	104	280	891	140	520		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type	None		None					
Median storage (veh)								
Upstream signal (ft)								
pX, platoon unblocked								
vC, conflicting volume			980			1883	438	
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol			980			1883	438	
tC, single (s)			4.1			6.8	6.9	
tC, 2 stage (s)								
tF (s)			2.2			3.5	3.3	
p0 queue free %			60			0	8	
cM capacity (veh/h)			700			37	566	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	438	438	104	280	446	446	140	520
Volume Left	0	0	0	280	0	0	140	0
Volume Right	0	0	104	0	0	0	0	520
cSH	1700	1700	1700	700	1700	1700	37	566
Volume to Capacity	0.26	0.26	0.06	0.40	0.26	0.26	3.74	0.92
Queue Length 95th (ft)	0	0	0	48	0	0	Err	283
Control Delay (s)	0.0	0.0	0.0	13.5	0.0	0.0	Err	47.2
Lane LOS				B			F	E
Approach Delay (s)	0.0			3.2			2162.2	
Approach LOS						F		
Intersection Summary								
Average Delay			508.7					
Intersection Capacity Utilization			58.5%	ICU Level of Service			B	
Analysis Period (min)			15					

									
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑			
Volume (veh/h)	1405	146	488	630	105	338			
Sign Control	Free			Free	Stop				
Grade	0%			0%	0%				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92			
Hourly flow rate (vph)	1527	159	530	685	114	367			
Pedestrians									
Lane Width (ft)									
Walking Speed (ft/s)									
Percent Blockage									
Right turn flare (veh)									
Median type	None		None						
Median storage (veh)									
Upstream signal (ft)									
pX, platoon unblocked									
vC, conflicting volume			1686			2930	764		
vC1, stage 1 conf vol									
vC2, stage 2 conf vol									
vCu, unblocked vol			1686			2930	764		
tC, single (s)			4.1			6.8	6.9		
tC, 2 stage (s)									
tF (s)			2.2			3.5	3.3		
p0 queue free %			0			0	0		
cM capacity (veh/h)			375			0	347		
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	
Volume Total	764	764	159	530	342	342	114	367	
Volume Left	0	0	0	530	0	0	114	0	
Volume Right	0	0	159	0	0	0	0	367	
cSH	1700	1700	1700	375	1700	1700	0	347	
Volume to Capacity	0.45	0.45	0.09	1.41	0.20	0.20	Err	1.06	
Queue Length 95th (ft)	0	0	0	670	0	0	Err	328	
Control Delay (s)	0.0	0.0	0.0	229.1	0.0	0.0	Err	100.5	
Lane LOS				F			F	F	
Approach Delay (s)	0.0			100.0			Err		
Approach LOS							F		
Intersection Summary									
Average Delay			Err						
Intersection Capacity Utilization			81.7%	ICU Level of Service			D		
Analysis Period (min)			15						

2040 BG PM.syn
3: Brush Creek Rd Extension & Grand Ave

												
Movement	EBT	EBR	WBL	WBT	NBL	NBR						
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑						
Volume (veh/h)	1051	168	585	1304	125	405						
Sign Control	Free			Free	Stop							
Grade	0%			0%	0%							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92						
Hourly flow rate (vph)	1142	183	636	1417	136	440						
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None		None									
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume			1325			3123	571					
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol			1325			3123	571					
tC, single (s)			4.1			6.8	6.9					
tC, 2 stage (s)												
tF (s)			2.2			3.5	3.3					
p0 queue free %			0			0	5					
cM capacity (veh/h)			517			0	464					
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2				
Volume Total	571	571	183	636	709	709	136	440				
Volume Left	0	0	0	636	0	0	136	0				
Volume Right	0	0	183	0	0	0	0	440				
cSH	1700	1700	1700	517	1700	1700	0	464				
Volume to Capacity	0.34	0.34	0.11	1.23	0.42	0.42	Err	0.95				
Queue Length 95th (ft)	0	0	0	614	0	0	Err	286				
Control Delay (s)	0.0	0.0	0.0	144.4	0.0	0.0	Err	60.0				
Lane LOS				F			F	F				
Approach Delay (s)	0.0			44.7			Err					
Approach LOS							F					
Intersection Summary												
Average Delay				Err								
Intersection Capacity Utilization	78.4%			ICU Level of Service			D					
Analysis Period (min)	15											

													
Movement	EBT	EBR	WBL	WBT	NBL	NBR							
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑							
Volume (veh/h)	965	110	258	985	146	478							
Sign Control	Free			Free	Stop								
Grade	0%			0%	0%								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92							
Hourly flow rate (vph)	1049	120	280	1071	159	520							
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type	None		None										
Median storage (veh)													
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume			1168			2145	524						
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol			1168			2145	524						
tC, single (s)			4.1			6.8	6.9						
tC, 2 stage (s)													
tF (s)			2.2			3.5	3.3						
p0 queue free %			53			0	0						
cM capacity (veh/h)			594			22	498						
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2					
Volume Total	524	524	120	280	535	535	159	520					
Volume Left	0	0	0	280	0	0	159	0					
Volume Right	0	0	120	0	0	0	0	520					
cSH	1700	1700	1700	594	1700	1700	22	498					
Volume to Capacity	0.31	0.31	0.07	0.47	0.31	0.31	7.24	1.04					
Queue Length 95th (ft)	0	0	0	63	0	0	Err	385					
Control Delay (s)	0.0	0.0	0.0	16.4	0.0	0.0	Err	81.3					
Lane LOS				C			F	F					
Approach Delay (s)	0.0			3.4			2401.8						
Approach LOS									F				
Intersection Summary													
Average Delay			510.9										
Intersection Capacity Utilization			62.9%	ICU Level of Service			B						
Analysis Period (min)			15										

2040 T AM.syn
3: Brush Creek Rd Extension & Grand Ave

									
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑			
Volume (veh/h)	1570	154	488	716	116	338			
Sign Control	Free			Free	Stop				
Grade	0%			0%	0%				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92			
Hourly flow rate (vph)	1707	167	530	778	126	367			
Pedestrians									
Lane Width (ft)									
Walking Speed (ft/s)									
Percent Blockage									
Right turn flare (veh)									
Median type	None		None						
Median storage (veh)									
Upstream signal (ft)									
pX, platoon unblocked									
vC, conflicting volume			1874			3157	853		
vC1, stage 1 conf vol									
vC2, stage 2 conf vol									
vCu, unblocked vol			1874			3157	853		
tC, single (s)			4.1			6.8	6.9		
tC, 2 stage (s)									
tF (s)			2.2			3.5	3.3		
p0 queue free %			0			0	0		
cM capacity (veh/h)			317			0	302		
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	
Volume Total	853	853	167	530	389	389	126	367	
Volume Left	0	0	0	530	0	0	126	0	
Volume Right	0	0	167	0	0	0	0	367	
cSH	1700	1700	1700	317	1700	1700	0	302	
Volume to Capacity	0.50	0.50	0.10	1.67	0.23	0.23	Err	1.22	
Queue Length 95th (ft)	0	0	0	819	0	0	Err	412	
Control Delay (s)	0.0	0.0	0.0	345.3	0.0	0.0	Err	159.4	
Lane LOS				F			F	F	
Approach Delay (s)	0.0			140.0			Err		
Approach LOS							F		
Intersection Summary									
Average Delay			Err						
Intersection Capacity Utilization			86.9%	ICU Level of Service			E		
Analysis Period (min)			15						

2040 T PM.syn
3: Brush Creek Rd Extension & Grand Ave

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑		
Volume (veh/h)	1175	179	585	1476	138	405		
Sign Control	Free			Free	Stop			
Grade	0%			0%	0%			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly flow rate (vph)	1277	195	636	1604	150	440		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type	None		None					
Median storage (veh)								
Upstream signal (ft)								
pX, platoon unblocked								
vC, conflicting volume			1472			3351	639	
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol			1472			3351	639	
tC, single (s)			4.1			6.8	6.9	
tC, 2 stage (s)								
tF (s)			2.2			3.5	3.3	
p0 queue free %			0			0	0	
cM capacity (veh/h)			454			0	419	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	639	639	195	636	802	802	150	440
Volume Left	0	0	0	636	0	0	150	0
Volume Right	0	0	195	0	0	0	0	440
cSH	1700	1700	1700	454	1700	1700	0	419
Volume to Capacity	0.38	0.38	0.11	1.40	0.47	0.47	Err	1.05
Queue Length 95th (ft)	0	0	0	763	0	0	Err	356
Control Delay (s)	0.0	0.0	0.0	217.4	0.0	0.0	Err	89.8
Lane LOS				F			F	F
Approach Delay (s)	0.0			61.7			Err	
Approach LOS						F		
Intersection Summary								
Average Delay			Err					
Intersection Capacity Utilization			82.5%	ICU Level of Service			E	
Analysis Period (min)			15					

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Peak hour factor
Scheme	03: Hwy 6 & Brush Creek Rd Ext. - 2040 Background Traffic SAT	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Hwy 6/Grand Ave. EB (West Leg)	90	0	24.00	2
2	Brush Creek Ext. NB (South Leg)	180	0	12.00	1
3	US 6/Grand Ave. WB (East Leg)	270	0	24.00	2

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	28.00	2	60.00	70.00	20.00	150.00	32.00	2
2	28.00	2	60.00	70.00	20.00	150.00	32.00	2
3	28.00	2	60.00	70.00	20.00	150.00	32.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	30.00	2	12.00	1
2	16.00	1	12.00	1
3	30.00	2	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Hwy 6/Grand Ave. EB (West Leg)	5.00	1.00	0	0
2	Brush Creek Ext. NB (South Leg)	2.00	1.00	0	0
3	US 6/Grand Ave. WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)			
	U-Turn	Exit-2	Exit-1	Bypass
1	0	806	96	0
2	0	129	478	0
3	0	258	820	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Hwy 6/Grand Ave. EB (West Leg)	Arrive Flows	pcs/hr	2698		2698
2	Brush Creek Ext. NB (South Leg)	Capacity	pcs/hr	6018		6018
3	US 6/Grand Ave. WB (East Leg)	Average Delay	sec/veh	3.40		3.40

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	947	270.9	2278.7	0.416	0.470	2.8	3.6	0.9	2.2	A	A
2	619	846.2	1350.7	0.458	0.542	5.0	6.9	1.1	2.9	A	A
3	1132	131.5	2388.8	0.474	0.533	3.0	3.9	1.1	2.9	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Hwy 6/Grand Ave. EB (West Leg)	2492.8	3152.6	0.7907
2	Brush Creek Ext. NB (South Leg)	1926.6	2830.8	0.6806
3	US 6/Grand Ave. WB (East Leg)	2492.8	3152.6	0.7907

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	270.9	2278.7
2	846.2	1350.7
3	131.5	2388.8

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	947.1	946.9	270.9	992.4
2	619.1	618.9	846.2	371.6
3	1131.9	1131.7	131.5	1333.6

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Peak hour factor
Scheme	03: Hwy 6 & Brush Creek Rd Ext. - 2040 Background Traffic AM	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Hwy 6/Grand Ave. EB (West Leg)	90	0	24.00	2
2	Brush Creek Ext. NB (South Leg)	180	0	12.00	1
3	US 6/Grand Ave. WB (East Leg)	270	0	24.00	2

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	28.00	2	60.00	70.00	20.00	150.00	32.00	2
2	28.00	2	60.00	70.00	20.00	150.00	32.00	2
3	28.00	2	60.00	70.00	20.00	150.00	32.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	30.00	2	12.00	1
2	16.00	1	12.00	1
3	30.00	2	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Hwy 6/Grand Ave. EB (West Leg)	5.00	1.00	0	0
2	Brush Creek Ext. NB (South Leg)	2.00	1.00	0	0
3	US 6/Grand Ave. WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)			
	U-Turn	Exit-2	Exit-1	Bypass
1	0	1405	146	0
2	0	105	338	0
3	0	488	630	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Hwy 6/Grand Ave. EB (West Leg)	Arrive Flows	pcs/hr	3254		3254
2	Brush Creek Ext. NB (South Leg)	Capacity	pcs/hr	5419		5419
3	US 6/Grand Ave. WB (East Leg)	Average Delay	sec/veh	6.57		6.57

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	1629	512.3	2087.7	0.780	0.911	8.7	16.1	6.8	15.4	A	A
2	452	1474.0	923.4	0.489	0.631	8.0	12.9	1.5	3.9	A	A
3	1174	107.0	2408.2	0.487	0.548	3.0	3.9	1.2	3.0	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Hwy 6/Grand Ave. EB (West Leg)	2492.8	3152.6	0.7907
2	Brush Creek Ext. NB (South Leg)	1926.6	2830.8	0.6806
3	US 6/Grand Ave. WB (East Leg)	2492.8	3152.6	0.7907

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	512.3	2087.7
2	1474.0	923.4
3	107.0	2408.2

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	1628.6	1627.1	512.3	768.4
2	451.9	451.5	1474.0	665.5
3	1173.9	1173.7	107.0	1818.4

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Peak hour factor
Scheme	03: Hwy 6 & Brush Creek Rd Ext. - 2040 Background Traffic PM	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Hwy 6/Grand Ave. EB (West Leg)	90	0	24.00	2
2	Brush Creek Ext. NB (South Leg)	180	0	12.00	1
3	US 6/Grand Ave. WB (East Leg)	270	0	24.00	2

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	28.00	2	60.00	70.00	20.00	150.00	32.00	2
2	28.00	2	60.00	70.00	20.00	150.00	32.00	2
3	28.00	2	60.00	70.00	20.00	150.00	32.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	30.00	2	12.00	1
2	16.00	1	12.00	1
3	30.00	2	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Hwy 6/Grand Ave. EB (West Leg)	5.00	1.00	0	0
2	Brush Creek Ext. NB (South Leg)	2.00	1.00	0	0
3	US 6/Grand Ave. WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)			
	U-Turn	Exit-2	Exit-1	Bypass
1	0	1051	168	0
2	0	125	405	0
3	0	585	1304	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Hwy 6/Grand Ave. EB (West Leg)	Arrive Flows	pcs/hr	3804		3804
2	Brush Creek Ext. NB (South Leg)	Capacity	pcs/hr	5576		5576
3	US 6/Grand Ave. WB (East Leg)	Average Delay	sec/veh	7.72		7.72

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	1280	613.6	2007.6	0.638	0.738	5.2	7.9	2.6	6.4	A	A
2	541	1103.0	1175.9	0.460	0.559	5.8	8.4	1.2	3.1	A	A
3	1983	127.4	2392.1	0.829	0.957	9.9	19.2	10.0	21.4	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Hwy 6/Grand Ave. EB (West Leg)	2492.8	3152.6	0.7907
2	Brush Creek Ext. NB (South Leg)	1926.6	2830.8	0.6806
3	US 6/Grand Ave. WB (East Leg)	2492.8	3152.6	0.7907

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	613.6	2007.6
2	1103.0	1175.9
3	127.4	2392.1

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	1280.0	1279.4	613.6	1495.3
2	540.6	540.3	1103.0	789.9
3	1983.5	1981.5	127.4	1515.9

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Peak hour factor
Scheme	03: Hwy 6 & Brush Creek Rd Ext. - 2040 Total Traffic SAT	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Hwy 6/Grand Ave. EB (West Leg)	90	0	24.00	2
2	Brush Creek Ext. NB (South Leg)	180	0	12.00	1
3	US 6/Grand Ave. WB (East Leg)	270	0	24.00	2

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	28.00	2	60.00	70.00	20.00	150.00	32.00	2
2	28.00	2	60.00	70.00	20.00	150.00	32.00	2
3	28.00	2	60.00	70.00	20.00	150.00	32.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	30.00	2	12.00	1
2	16.00	1	12.00	1
3	30.00	2	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Hwy 6/Grand Ave. EB (West Leg)	5.00	1.00	0	0
2	Brush Creek Ext. NB (South Leg)	2.00	1.00	0	0
3	US 6/Grand Ave. WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)			
	U-Turn	Exit-2	Exit-1	Bypass
1	0	965	110	0
2	0	146	478	0
3	0	258	985	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Hwy 6/Grand Ave. EB (West Leg)	Arrive Flows	pcs/hr	3070		3070
2	Brush Creek Ext. NB (South Leg)	Capacity	pcs/hr	5891		5891
3	US 6/Grand Ave. WB (East Leg)	Average Delay	sec/veh	3.98		3.98

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	1129	270.8	2278.7	0.495	0.561	3.3	4.3	1.2	3.2	A	A
2	636	1013.0	1237.1	0.514	0.620	6.1	9.1	1.5	3.9	A	A
3	1305	148.9	2375.1	0.550	0.619	3.5	4.7	1.6	4.0	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Hwy 6/Grand Ave. EB (West Leg)	2492.8	3152.6	0.7907
2	Brush Creek Ext. NB (South Leg)	1926.6	2830.8	0.6806
3	US 6/Grand Ave. WB (East Leg)	2492.8	3152.6	0.7907

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	270.8	2278.7
2	1013.0	1237.1
3	148.9	2375.1

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	1128.8	1128.5	270.8	1182.9
2	636.5	636.2	1013.0	386.3
3	1305.1	1304.9	148.9	1500.4

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Peak hour factor
Scheme	03: Hwy 6 & Brush Creek Rd Ext. - 2040 Total Traffic AM	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Hwy 6/Grand Ave. EB (West Leg)	90	0	24.00	2
2	Brush Creek Ext. NB (South Leg)	180	0	12.00	1
3	US 6/Grand Ave. WB (East Leg)	270	0	24.00	2

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	28.00	2	60.00	70.00	20.00	150.00	32.00	2
2	28.00	2	60.00	70.00	20.00	150.00	32.00	2
3	28.00	2	60.00	70.00	20.00	150.00	32.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	30.00	2	12.00	1
2	16.00	1	12.00	1
3	30.00	2	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Hwy 6/Grand Ave. EB (West Leg)	5.00	1.00	0	0
2	Brush Creek Ext. NB (South Leg)	2.00	1.00	0	0
3	US 6/Grand Ave. WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)			
	U-Turn	Exit-2	Exit-1	Bypass
1	0	1570	154	0
2	0	116	338	0
3	0	488	716	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Hwy 6/Grand Ave. EB (West Leg)	Arrive Flows	pcs/hr	3537		3537
2	Brush Creek Ext. NB (South Leg)	Capacity	pcs/hr	5294		5294
3	US 6/Grand Ave. WB (East Leg)	Average Delay	sec/veh	10.72		10.72

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	1810	512.3	2087.7	0.867	1.042	15.8	37.7	18.5	37.3	C	B
2	463	1645.9	806.4	0.574	0.756	11.2	20.0	2.5	6.1	B	B
3	1264	118.2	2399.4	0.527	0.593	3.3	4.4	1.4	3.6	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Hwy 6/Grand Ave. EB (West Leg)	2492.8	3152.6	0.7907
2	Brush Creek Ext. NB (South Leg)	1926.6	2830.8	0.6806
3	US 6/Grand Ave. WB (East Leg)	2492.8	3152.6	0.7907

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	512.3	2087.7
2	1645.9	806.4
3	118.2	2399.4

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	1810.2	1807.4	512.3	869.8
2	463.1	462.6	1645.9	673.7
3	1264.2	1263.9	118.2	1990.3

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Peak hour factor
Scheme	03: Hwy 6 & Brush Creek Rd Ext. - 2040 Total Traffic PM	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Hwy 6/Grand Ave. EB (West Leg)	90	0	24.00	2
2	Brush Creek Ext. NB (South Leg)	180	0	12.00	1
3	US 6/Grand Ave. WB (East Leg)	270	0	24.00	2

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	28.00	2	60.00	70.00	20.00	150.00	32.00	2
2	28.00	2	60.00	70.00	20.00	150.00	32.00	2
3	28.00	2	60.00	70.00	20.00	150.00	32.00	2

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	30.00	2	12.00	1
2	16.00	1	12.00	1
3	30.00	2	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Hwy 6/Grand Ave. EB (West Leg)	5.00	1.00	0	0
2	Brush Creek Ext. NB (South Leg)	2.00	1.00	0	0
3	US 6/Grand Ave. WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)			
	U-Turn	Exit-2	Exit-1	Bypass
1	0	1175	179	0
2	0	138	405	0
3	0	585	1476	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Hwy 6/Grand Ave. EB (West Leg)	Arrive Flows	pcs/hr	4140		4140
2	Brush Creek Ext. NB (South Leg)	Capacity	pcs/hr	5477		5477
3	US 6/Grand Ave. WB (East Leg)	Average Delay	sec/veh	13.40		13.40

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	1422	612.9	2008.2	0.708	0.817	6.6	10.5	3.8	9.1	A	A
2	554	1232.9	1087.5	0.509	0.631	7.0	10.7	1.6	4.0	A	A
3	2164	140.7	2381.6	0.909	1.086	19.6	48.8	29.1	57.3	C	B

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Hwy 6/Grand Ave. EB (West Leg)	2492.8	3152.6	0.7907
2	Brush Creek Ext. NB (South Leg)	1926.6	2830.8	0.6806
3	US 6/Grand Ave. WB (East Leg)	2492.8	3152.6	0.7907

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	612.9	2008.2
2	1232.9	1087.5
3	140.7	2381.6

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	1421.7	1420.8	612.9	1687.1
2	553.9	553.5	1232.9	800.7
3	2164.1	2159.3	140.7	1645.8

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2020 BG SAT	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	13.00	1	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	15.00	1
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	3	0	8	0
2	0	0	339	0	91
3	0	116	1	12	113
4	0	126	345	5	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	1003	214	1217
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	5375	2369	7744
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	3.48	0.99	3.04
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	12	616.4	1123.8	0.010	0.012	3.4	4.0	0.0	0.0	A	A
2	356	135.5	1162.3	0.306	0.352	4.7	5.5	0.5	1.4	A	A
3	135	359.1	1035.6	0.131	0.152	4.2	4.9	0.2	0.5	A	A
4	500	122.8	2053.3	0.243	0.278	2.4	2.8	0.4	1.0	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	1232.0	2395.8	0.5142
3	Sylvan Lake Rd - NB (South Leg)	1218.3	2394.9	0.5087
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	616.4	1123.8
2	135.5	1162.3
3	359.1	1035.6
4	122.8	2053.3

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	11.6	11.6	616.4	6.3
2	355.9	355.9	135.5	492.4
3	135.4	135.4	359.1	132.3
4	499.8	499.8	122.8	371.7

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2022 BG AM	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	13.00	1	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	15.00	1
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	2	0	3	0
2	0	0	562	0	126
3	0	163	0	24	222
4	0	79	282	4	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	1175	365	1540
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	5261	2393	7654
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	4.86	1.46	4.05
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	5	550.2	1149.6	0.005	0.005	3.3	3.8	0.0	0.0	A	A
2	590	85.0	1188.3	0.497	0.571	6.4	7.7	1.3	3.2	A	A
3	196	592.1	917.1	0.214	0.255	5.3	6.2	0.3	0.9	A	A
4	383	171.1	2006.3	0.191	0.219	2.3	2.7	0.3	0.7	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	1232.0	2395.8	0.5142
3	Sylvan Lake Rd - NB (South Leg)	1218.3	2394.9	0.5087
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	550.2	1149.6
2	85.0	1188.3
3	592.1	917.1
4	171.1	2006.3

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	5.2	5.2	550.2	4.2
2	590.1	590.0	85.0	470.4
3	196.3	196.3	592.1	82.9
4	383.3	383.2	171.1	617.3

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2020 BG PM	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	13.00	1	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	15.00	1
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	7	10	5	0
2	0	3	446	0	221
3	0	167	1	15	137
4	0	182	559	9	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	1474	376	1850
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	5090	2333	7423
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	4.24	3.00	3.99
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	23	953.4	992.7	0.023	0.028	3.9	4.5	0.0	0.1	A	A
2	471	209.0	1124.5	0.419	0.485	5.8	7.0	0.9	2.3	A	A
3	192	478.8	974.7	0.197	0.232	4.8	5.6	0.3	0.8	A	A
4	788	179.6	1998.0	0.394	0.453	3.1	3.7	0.8	2.1	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	1232.0	2395.8	0.5142
3	Sylvan Lake Rd - NB (South Leg)	1218.3	2394.9	0.5087
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	953.4	992.7
2	209.0	1124.5
3	478.8	974.7
4	179.6	1998.0

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	23.1	23.1	953.4	13.7
2	471.5	471.5	209.0	767.6
3	192.2	192.2	478.8	201.6
4	787.5	787.5	179.6	491.4

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2020 Total SAT	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	13.00	1	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	15.00	1
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	3	0	8	0
2	0	0	453	0	91
3	0	116	1	16	145
4	0	162	467	5	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	1293	248	1540
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	5230	2351	7581
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	4.03	0.88	3.52
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	12	782.3	1059.3	0.011	0.013	3.6	4.2	0.0	0.0	A	A
2	476	173.3	1142.9	0.416	0.481	5.7	6.8	0.9	2.3	A	A
3	140	478.8	974.7	0.143	0.169	4.5	5.2	0.2	0.5	A	A
4	666	122.9	2053.3	0.324	0.371	2.7	3.2	0.6	1.5	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	1232.0	2395.8	0.5142
3	Sylvan Lake Rd - NB (South Leg)	1218.3	2394.9	0.5087
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	782.3	1059.3
2	173.3	1142.9
3	478.8	974.7
4	122.9	2053.3

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	11.6	11.6	782.3	6.3
2	475.6	475.7	173.3	620.6
3	139.6	139.7	478.8	170.1
4	665.7	665.7	122.9	495.6

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2020 Total AM	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	13.00	1	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	15.00	1
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	2	0	3	0
2	0	0	668	0	126
3	0	163	0	29	258
4	0	97	351	4	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	1383	403	1786
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	5159	2384	7543
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	5.83	1.33	4.82
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	5	641.5	1114.0	0.005	0.006	3.4	4.0	0.0	0.0	A	A
2	701	103.9	1178.5	0.595	0.689	8.1	10.2	2.0	5.0	A	A
3	202	703.3	860.5	0.234	0.283	5.8	6.9	0.4	1.0	A	A
4	475	171.1	2006.3	0.237	0.271	2.5	2.9	0.4	1.0	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	1232.0	2395.8	0.5142
3	Sylvan Lake Rd - NB (South Leg)	1218.3	2394.9	0.5087
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	641.5	1114.0
2	103.9	1178.5
3	703.3	860.5
4	171.1	2006.3

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	5.2	5.2	641.5	4.2
2	701.4	701.2	103.9	542.8
3	201.6	201.6	703.3	101.8
4	474.6	474.6	171.1	733.8

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2020 Total PM	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	13.00	1	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	15.00	1
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	7	10	5	0
2	0	3	534	0	221
3	0	167	1	18	162
4	0	223	677	9	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	1737	402	2139
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4956	2313	7269
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	4.98	2.89	4.59
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	23	1120.2	927.8	0.025	0.030	4.2	4.8	0.0	0.1	A	A
2	564	252.0	1102.4	0.511	0.596	7.1	8.8	1.4	3.5	A	A
3	195	571.1	927.8	0.210	0.250	5.2	6.1	0.3	0.9	A	A
4	954	179.5	1998.1	0.478	0.550	3.7	4.4	1.2	3.0	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	1232.0	2395.8	0.5142
3	Sylvan Lake Rd - NB (South Leg)	1218.3	2394.9	0.5087
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	1120.2	927.8
2	252.0	1102.4
3	571.1	927.8
4	179.5	1998.1

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	23.1	23.1	1120.2	13.6
2	563.9	563.7	252.0	891.3
3	195.3	195.3	571.1	244.6
4	954.5	954.3	179.5	586.8

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2022 BG SAT	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	13.00	1	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	15.00	1
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	3	0	8	0
2	0	0	358	0	95
3	0	121	1	13	119
4	0	133	365	5	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	1057	225	1282
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	5343	2365	7708
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	3.57	1.43	3.19
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	12	650.0	1110.7	0.010	0.012	3.4	4.0	0.0	0.0	A	A
2	376	142.8	1158.6	0.324	0.373	4.8	5.6	0.6	1.5	A	A
3	142	379.0	1025.5	0.138	0.161	4.3	5.0	0.2	0.5	A	A
4	528	128.1	2048.2	0.258	0.295	2.5	2.9	0.4	1.1	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	1232.0	2395.8	0.5142
3	Sylvan Lake Rd - NB (South Leg)	1218.3	2394.9	0.5087
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	650.0	1110.7
2	142.8	1158.6
3	379.0	1025.5
4	128.1	2048.2

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	11.6	11.6	650.0	6.3
2	375.9	375.9	142.8	518.7
3	141.7	141.7	379.0	139.7
4	528.2	528.2	128.1	392.7

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2022 BG AM	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	13.00	1	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	15.00	1
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	2	0	3	0
2	0	0	593	0	133
3	0	168	0	26	231
4	0	84	298	4	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	1237	382	1619
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	5226	2391	7617
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	5.12	1.49	4.26
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	5	577.4	1138.9	0.005	0.005	3.3	3.9	0.0	0.0	A	A
2	623	90.3	1185.6	0.525	0.605	6.8	8.3	1.4	3.7	A	A
3	204	624.6	900.6	0.226	0.271	5.5	6.4	0.4	0.9	A	A
4	405	176.4	2001.1	0.203	0.232	2.4	2.7	0.3	0.8	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	1232.0	2395.8	0.5142
3	Sylvan Lake Rd - NB (South Leg)	1218.3	2394.9	0.5087
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	577.4	1138.9
2	90.3	1185.6
3	624.6	900.6
4	176.4	2001.1

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	5.2	5.2	577.4	4.2
2	622.6	622.5	90.3	492.4
3	203.7	203.7	624.6	88.2
4	405.3	405.3	176.4	651.9

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2022 BG PM	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	13.00	1	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	15.00	1
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	7	10	5	0
2	0	3	471	0	233
3	0	175	1	16	143
4	0	192	590	9	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	1553	395	1948
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	5043	2328	7371
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	4.44	3.09	4.16
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	23	1004.7	972.7	0.024	0.028	4.0	4.6	0.0	0.1	A	A
2	498	219.4	1119.2	0.445	0.516	6.1	7.4	1.0	2.6	A	A
3	202	505.0	961.4	0.210	0.248	5.0	5.8	0.3	0.8	A	A
4	831	187.9	1989.9	0.417	0.480	3.3	3.9	0.9	2.3	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	1232.0	2395.8	0.5142
3	Sylvan Lake Rd - NB (South Leg)	1218.3	2394.9	0.5087
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	1004.7	972.7
2	219.4	1119.2
3	505.0	961.4
4	187.9	1989.9

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	23.1	23.1	1004.7	13.6
2	497.7	497.6	219.4	808.4
3	201.6	201.6	505.0	212.1
4	830.6	830.5	187.9	518.6

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2022 Total SAT	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	13.00	1	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	15.00	1
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	3	0	8	0
2	0	0	49	0	95
3	0	121	1	18	158
4	0	178	504	5	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	931	266	1197
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	5409	2342	7751
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	3.02	1.24	2.63
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	12	843.2	1035.6	0.011	0.013	3.7	4.3	0.0	0.0	A	A
2	51	190.1	1134.3	0.045	0.052	3.5	4.1	0.1	0.1	A	A
3	147	54.6	1190.5	0.123	0.141	3.6	4.2	0.2	0.4	A	A
4	721	128.1	2048.2	0.352	0.403	2.9	3.3	0.7	1.7	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	1232.0	2395.8	0.5142
3	Sylvan Lake Rd - NB (South Leg)	1218.3	2394.9	0.5087
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	843.2	1035.6
2	190.1	1134.3
3	54.6	1190.5
4	128.1	2048.2

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	11.6	11.6	843.2	6.3
2	51.5	51.5	190.1	664.7
3	147.0	147.0	54.6	186.9
4	721.4	721.4	128.1	73.5

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2022 Total AM	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	13.00	1	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	15.00	1
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	2	0	3	0
2	0	0	718	0	133
3	0	168	0	31	276
4	0	106	375	4	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	1477	429	1907
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	5107	2380	7487
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	6.53	1.34	5.36
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	5	681.4	1098.5	0.005	0.006	3.4	4.0	0.0	0.0	A	A
2	754	113.4	1173.7	0.642	0.747	9.4	12.1	2.6	6.3	A	A
3	209	755.8	833.8	0.251	0.305	6.1	7.3	0.4	1.1	A	A
4	509	176.4	2001.1	0.254	0.292	2.5	2.9	0.4	1.1	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	1232.0	2395.8	0.5142
3	Sylvan Lake Rd - NB (South Leg)	1218.3	2394.9	0.5087
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	681.4	1098.5
2	113.4	1173.7
3	755.8	833.8
4	176.4	2001.1

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	5.2	5.2	681.4	4.2
2	753.9	753.7	113.4	573.2
3	208.9	208.9	755.8	111.3
4	509.3	509.2	176.4	788.4

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2022 Total PM	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	13.00	1	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	15.00	1
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	7	10	5	0
2	0	3	572	0	233
3	0	175	1	19	175
4	0	242	727	9	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	1859	428	2287
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4886	2303	7189
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	5.45	2.95	4.98
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	23	1201.1	896.4	0.026	0.031	4.3	5.0	0.0	0.1	A	A
2	604	271.9	1092.2	0.553	0.647	7.9	9.9	1.7	4.2	A	A
3	205	611.0	907.5	0.226	0.270	5.4	6.4	0.4	0.9	A	A
4	1027	187.9	1989.9	0.516	0.595	4.0	4.9	1.4	3.6	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	1232.0	2395.8	0.5142
3	Sylvan Lake Rd - NB (South Leg)	1218.3	2394.9	0.5087
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	1201.1	896.4
2	271.9	1092.2
3	611.0	907.5
4	187.9	1989.9

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	23.1	23.1	1201.1	13.6
2	603.8	603.6	271.9	952.2
3	204.8	204.7	611.0	264.6
4	1026.9	1026.8	187.9	627.8

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2040 BG SAT	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	13.00	1	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	15.00	1
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	3	0	11	0
2	0	0	532	0	133
3	0	170	1	19	171
4	0	196	548	6	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	1560	319	1880
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	5046	2333	7379
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	4.71	1.90	4.24
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	15	959.6	990.3	0.015	0.018	3.9	4.5	0.0	0.0	A	A
2	559	208.9	1124.6	0.497	0.577	6.8	8.3	1.3	3.3	A	A
3	200	561.6	932.6	0.214	0.254	5.2	6.1	0.3	0.9	A	A
4	788	179.5	1998.1	0.394	0.453	3.1	3.7	0.8	2.1	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	1232.0	2395.8	0.5142
3	Sylvan Lake Rd - NB (South Leg)	1218.3	2394.9	0.5087
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	959.6	990.3
2	208.9	1124.6
3	561.6	932.6
4	179.5	1998.1

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	14.7	14.7	959.6	7.3
2	558.6	558.5	208.9	765.4
3	199.5	199.5	561.6	205.8
4	787.5	787.4	179.5	581.6

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2040 BG AM	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	13.00	1	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	15.00	1
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	2	0	3	0
2	0	0	873	0	197
3	0	215	0	36	321
4	0	127	445	4	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	1790	544	2334
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4909	2325	7234
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	11.17	1.81	8.99
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	B	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	5	826.2	1042.2	0.005	0.006	3.6	4.2	0.0	0.0	A	A
2	917	135.4	1162.3	0.789	0.942	17.7	26.8	7.0	15.7	C	B
3	264	918.2	751.2	0.351	0.437	8.0	9.9	0.7	1.9	A	A
4	605	225.7	1953.1	0.310	0.357	2.8	3.3	0.5	1.4	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	1232.0	2395.8	0.5142
3	Sylvan Lake Rd - NB (South Leg)	1218.3	2394.9	0.5087
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	826.2	1042.2
2	135.4	1162.3
3	918.2	751.2
4	225.7	1953.1

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	5.2	5.2	826.2	4.2
2	916.6	916.1	135.4	696.0
3	263.6	263.5	918.2	133.3
4	604.8	604.8	225.7	956.0

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2040 BG PM	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	13.00	1	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	15.00	1
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	9	13	6	0
2	0	3	698	0	337
3	0	242	1	23	202
4	0	285	866	12	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	2266	566	2832
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4622	2279	6901
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	8.01	3.97	7.20
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	29	1462.3	794.7	0.037	0.046	5.0	5.9	0.0	0.1	A	A
2	736	322.3	1066.3	0.690	0.822	12.4	17.1	3.6	8.6	B	B
3	279	745.2	839.2	0.333	0.405	6.9	8.3	0.7	1.7	A	A
4	1221	258.2	1921.3	0.636	0.740	5.7	7.5	2.6	6.4	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	1232.0	2395.8	0.5142
3	Sylvan Lake Rd - NB (South Leg)	1218.3	2394.9	0.5087
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	1462.3	794.7
2	322.3	1066.3
3	745.2	839.2
4	258.2	1921.3

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	29.4	29.4	1462.3	16.8
2	736.1	735.7	322.3	1169.5
3	279.3	279.2	745.2	312.8
4	1221.2	1220.9	258.2	766.2

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2040 Background SAT w/ 2nd EBT lane	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	26.00	2	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	30.00	2
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	3	0	11	0
2	0	0	532	133	0
3	0	170	1	19	171
4	0	196	548	6	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	1700	180	1880
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	6097	915	7012
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	3.15	5.14	3.34
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	15	959.7	990.2	0.015	0.018	3.9	4.5	0.0	0.0	A	A
2	698	209.0	2096.6	0.333	0.383	2.7	3.2	0.6	1.6	A	A
3	200	561.8	1012.3	0.197	0.231	4.6	5.4	0.3	0.8	A	A
4	788	179.6	1998.0	0.394	0.453	3.1	3.7	0.8	2.1	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	2305.3	2307.2	0.9992
3	Sylvan Lake Rd - NB (South Leg)	1218.3	3322.5	0.3667
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	959.7	990.2
2	209.0	2096.6
3	561.8	1012.3
4	179.6	1998.0

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	14.7	14.7	959.7	7.4
2	698.3	698.3	209.0	765.5
3	199.5	199.5	561.8	345.5
4	787.5	787.5	179.6	581.7

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2040 Background AM w/ 2nd EBT lane	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	26.00	2	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	30.00	2
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	2	0	3	0
2	0	0	873	197	0
3	0	215	0	36	321
4	0	127	445	4	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	1997	337	2334
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	6047	792	6839
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	3.75	8.51	4.44
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	5	826.3	1042.2	0.005	0.006	3.6	4.2	0.0	0.0	A	A
2	1124	135.4	2170.0	0.518	0.594	3.7	4.4	1.4	3.6	A	A
3	264	918.7	881.5	0.299	0.360	6.2	7.4	0.5	1.4	A	A
4	605	225.7	1953.0	0.310	0.357	2.8	3.3	0.5	1.4	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	2305.3	2307.2	0.9992
3	Sylvan Lake Rd - NB (South Leg)	1218.3	3322.5	0.3667
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	826.3	1042.2
2	135.4	2170.0
3	918.7	881.5
4	225.7	1953.0

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	5.2	5.2	826.3	4.2
2	1123.5	1123.4	135.4	696.1
3	263.6	263.5	918.7	340.2
4	604.8	604.8	225.7	956.4

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2040 Background PM w/ 2nd EBT lane	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	26.00	2	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	30.00	2
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	9	13	6	0
2	0	3	698	337	0
3	0	242	1	22	203
4	0	285	866	12	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	2619	213	2832
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	5644	852	6496
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	5.15	5.94	5.21
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	29	1462.4	794.7	0.037	0.046	5.0	5.9	0.0	0.1	A	A
2	1090	322.3	1983.3	0.550	0.640	4.4	5.5	1.7	4.3	A	A
3	278	745.4	945.0	0.294	0.350	5.7	6.8	0.5	1.4	A	A
4	1221	258.3	1921.3	0.636	0.740	5.7	7.5	2.6	6.4	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	2305.3	2307.2	0.9992
3	Sylvan Lake Rd - NB (South Leg)	1218.3	3322.5	0.3667
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	1462.4	794.7
2	322.3	1983.3
3	745.4	945.0
4	258.3	1921.3

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	29.4	29.4	1462.4	16.8
2	1089.9	1089.8	322.3	1169.5
3	278.2	278.2	745.4	666.7
4	1221.2	1221.0	258.3	765.4

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2040 Total SAT	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	13.00	1	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	15.00	1
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	3	0	11	0
2	30	0	662	0	133
3	0	170	1	23	211
4	0	240	686	6	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	1924	361	2285
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4819	2311	7130
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	6.68	1.72	5.90
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	15	1182.1	903.7	0.016	0.020	4.3	4.9	0.0	0.1	A	A
2	727	255.1	1100.8	0.660	0.778	10.7	14.2	2.9	7.1	B	B
3	204	729.5	847.2	0.240	0.291	5.9	7.1	0.4	1.0	A	A
4	979	211.0	1967.4	0.497	0.574	3.9	4.7	1.3	3.3	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	1232.0	2395.8	0.5142
3	Sylvan Lake Rd - NB (South Leg)	1218.3	2394.9	0.5087
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	1182.1	903.7
2	255.1	1100.8
3	729.5	847.2
4	211.0	1967.4

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	14.7	14.7	1182.1	7.3
2	726.6	726.3	255.1	941.7
3	203.7	203.7	729.5	252.0
4	978.6	978.5	211.0	722.1

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2040 Total AM	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	13.00	1	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	15.00	1
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	2	0	3	0
2	27	0	997	0	197
3	0	215	0	41	366
4	0	149	522	4	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	2058	591	2649
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4738	2149	6887
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	36.59	2.14	28.90
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	D	A	C

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	5	958.4	990.8	0.005	0.006	3.8	4.4	0.0	0.0	A	A
2	1075	158.5	1150.5	0.935	1.259	65.6	124.5	37.0	72.3	F	E
3	269	1075.1	671.4	0.400	0.483	9.5	12.1	0.9	2.2	A	A
4	709	253.9	1925.6	0.368	0.425	3.1	3.7	0.7	1.9	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	1232.0	2395.8	0.5142
3	Sylvan Lake Rd - NB (South Leg)	1218.3	2394.9	0.5087
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	958.4	990.8
2	158.5	1150.5
3	1075.1	671.4
4	253.9	1925.6

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	5.2	5.2	958.4	4.2
2	1075.2	1073.0	158.5	805.1
3	268.8	268.6	1075.1	156.4
4	708.8	708.7	253.9	1089.8

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2040 Total PM	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	13.00	1	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	15.00	1
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	9	13	6	0
2	23	3	798	0	337
3	0	242	1	26	234
4	0	334	1003	12	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	2594	600	3193
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	4421	2154	6575
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	15.15	4.77	13.20
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	B	A	B

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	29	1681.5	709.5	0.041	0.054	5.6	6.7	0.1	0.1	A	A
2	865	373.7	1039.8	0.832	1.041	27.8	47.8	11.8	24.8	D	C
3	282	873.9	773.8	0.365	0.448	7.9	9.8	0.8	2.0	A	A
4	1416	282.3	1897.9	0.746	0.881	9.0	13.6	5.5	12.7	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	1232.0	2395.8	0.5142
3	Sylvan Lake Rd - NB (South Leg)	1218.3	2394.9	0.5087
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	1681.5	709.5
2	373.7	1039.8
3	873.9	773.8
4	282.3	1897.9

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	29.4	29.4	1681.5	16.8
2	865.2	864.4	373.7	1337.2
3	282.4	282.3	873.9	364.2
4	1416.5	1416.0	282.3	873.9

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2040 Total SAT w/ 2nd EBT lane	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	26.00	2	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	30.00	2
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	3	0	11	0
2	30	0	662	133	0
3	0	170	1	23	211
4	0	240	686	6	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	2063	222	2285
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	5872	857	6729
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	3.74	5.97	3.95
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	15	1182.2	903.7	0.016	0.020	4.3	4.9	0.0	0.1	A	A
2	866	255.1	2050.4	0.422	0.488	3.2	3.8	0.9	2.4	A	A
3	204	729.7	950.8	0.214	0.254	5.1	5.9	0.3	0.9	A	A
4	979	211.0	1967.4	0.497	0.574	3.9	4.7	1.3	3.3	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	2305.3	2307.2	0.9992
3	Sylvan Lake Rd - NB (South Leg)	1218.3	3322.5	0.3667
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	1182.2	903.7
2	255.1	2050.4
3	729.7	950.8
4	211.0	1967.4

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	14.7	14.7	1182.2	7.3
2	866.3	866.2	255.1	941.7
3	203.7	203.7	729.7	391.6
4	978.6	978.5	211.0	722.3

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2040 Total AM w/ 2nd EBT lane	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	26.00	2	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	30.00	2
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	2	0	3	0
2	27	0	997	197	0
3	0	215	0	41	366
4	0	149	522	4	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	2265	384	2649
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	5886	738	6624
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	4.38	11.28	5.38
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	B	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	5	958.5	990.7	0.005	0.006	3.8	4.4	0.0	0.0	A	A
2	1282	158.5	2146.9	0.597	0.688	4.5	5.7	2.1	5.2	A	A
3	269	1077.2	823.3	0.326	0.399	6.9	8.4	0.6	1.7	A	A
4	709	254.0	1925.4	0.368	0.425	3.1	3.7	0.7	1.9	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	2305.3	2307.2	0.9992
3	Sylvan Lake Rd - NB (South Leg)	1218.3	3322.5	0.3667
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	958.5	990.7
2	158.5	2146.9
3	1077.2	823.3
4	254.0	1925.4

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	5.2	5.2	958.5	4.2
2	1282.1	1281.9	158.5	805.3
3	268.8	268.7	1077.2	363.3
4	708.8	708.7	254.0	1091.9

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve at Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	04: Hwy 6 & Sylvan Lake Rd - 2040 Total PM w/ 2nd EBT lane	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Violet Ln - SB (North Leg)	0	0	15.00	1
2	Grand Ave - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	12.00	1
4	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	20.00	1	30.00	50.00	30.00	175.00	30.00	2
2	26.00	2	325.00	150.00	30.00	175.00	15.00	1
3	13.00	1	165.00	100.00	30.00	175.00	30.00	2
4	24.00	2	375.00	150.00	30.00	175.00	15.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	15.00	1	13.00	1
2	30.00	2	14.00	1
3	20.00	1	14.00	1
4	24.00	2	24.00	2

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Violet Ln - SB (North Leg)	5.00	1.00	0	0
2	Grand Ave - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	9	13	6	0
2	23	3	798	337	0
3	0	242	1	26	234
4	0	334	1003	12	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Violet Ln - SB (North Leg)	Arrive Flows	pcs/hr	2947	246	3193
2	Grand Ave - EB (West Leg)	Capacity	pcs/hr	5437	808	6245
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	7.34	6.80	7.30
4	Grand Ave - WB (East Leg)	L.O.S. (Signal)	A – F	A	A	A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	29	1681.6	709.4	0.041	0.054	5.6	6.7	0.1	0.1	A	A
2	1219	373.7	1931.9	0.631	0.741	5.7	7.6	2.6	6.4	A	A
3	282	874.5	897.7	0.315	0.377	6.2	7.4	0.6	1.5	A	A
4	1416	282.4	1897.8	0.746	0.881	9.1	13.7	5.5	12.7	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Violet Ln - SB (North Leg)	1363.6	3505.4	0.3890
2	Grand Ave - EB (West Leg)	2305.3	2307.2	0.9992
3	Sylvan Lake Rd - NB (South Leg)	1218.3	3322.5	0.3667
4	Grand Ave - WB (East Leg)	2173.1	2229.2	0.9748

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	1681.6	709.4
2	373.7	1931.9
3	874.5	897.7
4	282.4	1897.8

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	29.4	29.4	1681.6	16.8
2	1219.0	1218.8	373.7	1337.3
3	282.4	282.4	874.5	718.0
4	1416.5	1416.0	282.4	874.5

2020 T SAT.syn
5: N. Site Access & Grand Ave

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	413	52	122	455	49	114
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	449	57	133	495	53	124
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			505		1209	449
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			505		1209	449
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			87		70	80
cM capacity (veh/h)			1059		177	610
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	449	57	133	495	53	124
Volume Left	0	0	133	0	53	0
Volume Right	0	57	0	0	0	124
cSH	1700	1700	1059	1700	177	610
Volume to Capacity	0.26	0.03	0.13	0.29	0.30	0.20
Queue Length 95th (ft)	0	0	11	0	30	19
Control Delay (s)	0.0	0.0	8.9	0.0	33.9	12.4
Lane LOS			A		D	B
Approach Delay (s)	0.0	1.9			18.9	
Approach LOS			C			
Intersection Summary						
Average Delay			3.5			
Intersection Capacity Utilization			41.8%	ICU Level of Service		A
Analysis Period (min)			15			

2020 T AM.syn
5: N. Site Access & Grand Ave

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	680	31	69	425	44	106
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	739	34	75	462	48	115
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			773		1351	739
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			773		1351	739
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			91		68	72
cM capacity (veh/h)			842		151	417
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	739	34	75	462	48	115
Volume Left	0	0	75	0	48	0
Volume Right	0	34	0	0	0	115
cSH	1700	1700	842	1700	151	417
Volume to Capacity	0.43	0.02	0.09	0.27	0.32	0.28
Queue Length 95th (ft)	0	0	7	0	32	28
Control Delay (s)	0.0	0.0	9.7	0.0	39.6	16.9
Lane LOS			A			E
Approach Delay (s)	0.0		1.4		23.5	
Approach LOS						C
Intersection Summary						
Average Delay			3.1			
Intersection Capacity Utilization	52.9%		ICU Level of Service		A	
Analysis Period (min)			15			

2020 T PM.syn
5: N. Site Access & Grand Ave

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	655	51	118	723	38	88
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	712	55	128	786	41	96
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			767	1754		712
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			767	1754		712
tC, single (s)			4.1	6.4		6.2
tC, 2 stage (s)						
tF (s)			2.2	3.5		3.3
p0 queue free %			85	48		78
cM capacity (veh/h)			846	79		432
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	712	55	128	786	41	96
Volume Left	0	0	128	0	41	0
Volume Right	0	55	0	0	0	96
cSH	1700	1700	846	1700	79	432
Volume to Capacity	0.42	0.03	0.15	0.46	0.52	0.22
Queue Length 95th (ft)	0	0	13	0	55	21
Control Delay (s)	0.0	0.0	10.0	0.0	91.5	15.7
Lane LOS			B	F		C
Approach Delay (s)	0.0		1.4	38.5		
Approach LOS	E					
Intersection Summary						
Average Delay			3.6			
Intersection Capacity Utilization			54.3%	ICU Level of Service		A
Analysis Period (min)			15			

2022 T SAT.syn
5: N. Site Access & Grand Ave

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	437	59	139	480	55	131
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	475	64	151	522	60	142
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			539		1299	475
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			539		1299	475
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			85		61	76
cM capacity (veh/h)			1029		152	590
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	475	64	151	522	60	142
Volume Left	0	0	151	0	60	0
Volume Right	0	64	0	0	0	142
cSH	1700	1700	1029	1700	152	590
Volume to Capacity	0.28	0.04	0.15	0.31	0.39	0.24
Queue Length 95th (ft)	0	0	13	0	42	23
Control Delay (s)	0.0	0.0	9.1	0.0	43.2	13.0
Lane LOS			A		E	B
Approach Delay (s)	0.0		2.0		22.0	
Approach LOS					C	
Intersection Summary						
Average Delay	4.1					
Intersection Capacity Utilization	44.0%		ICU Level of Service		A	
Analysis Period (min)	15					

2022 T AM.syn
5: N. Site Access & Grand Ave

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Volume (veh/h)	717	34	77	448	52	125		
Sign Control	Free			Free	Stop			
Grade	0%			0%	0%			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly flow rate (vph)	779	37	84	487	57	136		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type	None		None					
Median storage (veh)								
Upstream signal (ft)								
pX, platoon unblocked								
vC, conflicting volume			816		1434	779		
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol			816		1434	779		
tC, single (s)			4.1		6.4	6.2		
tC, 2 stage (s)								
tF (s)			2.2		3.5	3.3		
p0 queue free %			90		57	66		
cM capacity (veh/h)			811		132	396		
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2		
Volume Total	779	37	84	487	57	136		
Volume Left	0	0	84	0	57	0		
Volume Right	0	37	0	0	0	136		
cSH	1700	1700	811	1700	132	396		
Volume to Capacity	0.46	0.02	0.10	0.29	0.43	0.34		
Queue Length 95th (ft)	0	0	9	0	47	37		
Control Delay (s)	0.0	0.0	9.9	0.0	51.1	18.8		
Lane LOS			A		F	C		
Approach Delay (s)	0.0			1.5	28.3			
Approach LOS					D			
Intersection Summary								
Average Delay			4.0					
Intersection Capacity Utilization			55.3%	ICU Level of Service		B		
Analysis Period (min)			15					

2022 T PM.syn
5: N. Site Access & Grand Ave

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	692	58	137	761	43	101
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	752	63	149	827	47	110
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			815		1877	752
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			815		1877	752
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			82		27	73
cM capacity (veh/h)			812		64	410
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	752	63	149	827	47	110
Volume Left	0	0	149	0	47	0
Volume Right	0	63	0	0	0	110
cSH	1700	1700	812	1700	64	410
Volume to Capacity	0.44	0.04	0.18	0.49	0.73	0.27
Queue Length 95th (ft)	0	0	17	0	81	27
Control Delay (s)	0.0	0.0	10.4	0.0	148.8	17.0
Lane LOS			B		F	C
Approach Delay (s)	0.0		1.6		56.3	
Approach LOS					F	
Intersection Summary						
Average Delay	5.3					
Intersection Capacity Utilization	57.3%		ICU Level of Service		B	
Analysis Period (min)	15					

2040 T SAT.syn
5: N. Site Access & Grand Ave

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	657	59	138	736	26	160
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	714	64	150	800	28	174
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			778		1814	714
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			778		1814	714
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			82		60	60
cM capacity (veh/h)			838		71	431
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	714	64	150	800	28	174
Volume Left	0	0	150	0	28	0
Volume Right	0	64	0	0	0	174
cSH	1700	1700	838	1700	71	431
Volume to Capacity	0.42	0.04	0.18	0.47	0.40	0.40
Queue Length 95th (ft)	0	0	16	0	39	48
Control Delay (s)	0.0	0.0	10.2	0.0	86.5	18.9
Lane LOS			B			F C
Approach Delay (s)	0.0	1.6		28.3		
Approach LOS	D					
Intersection Summary						
Average Delay			3.8			
Intersection Capacity Utilization			55.6%	ICU Level of Service		B
Analysis Period (min)	15					

2040 T AM.syn
5: N. Site Access & Grand Ave

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Volume (veh/h)	1050	33	77	678	25	151		
Sign Control	Free			Free	Stop			
Grade	0%			0%	0%			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly flow rate (vph)	1141	36	84	737	27	164		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type	None		None					
Median storage veh)								
Upstream signal (ft)								
pX, platoon unblocked								
vC, conflicting volume			1177		2046	1141		
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol			1177		2046	1141		
tC, single (s)			4.1		6.4	6.2		
tC, 2 stage (s)								
tF (s)			2.2		3.5	3.3		
p0 queue free %			86		49	33		
cM capacity (veh/h)			593		53	244		
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2		
Volume Total	1141	36	84	737	27	164		
Volume Left	0	0	84	0	27	0		
Volume Right	0	36	0	0	0	164		
cSH	1700	1700	593	1700	53	244		
Volume to Capacity	0.67	0.02	0.14	0.43	0.51	0.67		
Queue Length 95th (ft)	0	0	12	0	49	108		
Control Delay (s)	0.0	0.0	12.1	0.0	130.0	45.5		
Lane LOS			B		F	E		
Approach Delay (s)	0.0		1.2		57.5			
Approach LOS					F			
Intersection Summary								
Average Delay			5.5					
Intersection Capacity Utilization			72.9%		ICU Level of Service			
Analysis Period (min)			15					

2040 T PM.syn
5: N. Site Access & Grand Ave

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1025	57	137	1126	19	123
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1114	62	149	1224	21	134
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1176		2636	1114
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1176		2636	1114
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			75		0	47
cM capacity (veh/h)			594		19	253
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	1114	62	149	1224	21	134
Volume Left	0	0	149	0	21	0
Volume Right	0	62	0	0	0	134
cSH	1700	1700	594	1700	19	253
Volume to Capacity	0.66	0.04	0.25	0.72	1.06	0.53
Queue Length 95th (ft)	0	0	25	0	72	71
Control Delay (s)	0.0	0.0	13.1	0.0	502.5	34.1
Lane LOS			B			F D
Approach Delay (s)	0.0			1.4	96.8	
Approach LOS			F			
Intersection Summary						
Average Delay			6.2			
Intersection Capacity Utilization			74.9%	ICU Level of Service		D
Analysis Period (min)			15			

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve of Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Peak hour factor
Scheme	05: Hwy 6 & West Access - 2040 Total SAT	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Grand Ave - EB (West Leg)	90	0	12.00	1
2	N. Site Access - NB (South Leg)	90	0	12.00	1
3	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	30.00	2	50.00	150.00	30.00	160.00	16.00	1
2	15.00	1	30.00	50.00	30.00	160.00	30.00	2
3	15.00	1	50.00	150.00	30.00	160.00	16.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	16.00	1	12.00	1
2	16.00	1	12.00	1
3	16.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Grand Ave - EB (West Leg)	5.00	1.00	0	0
2	N. Site Access - NB (South Leg)	5.00	1.00	0	0
3	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)			
	U-Turn	Exit-2	Exit-1	Bypass
1	0	659	59	0
2	0	26	160	0
3	0	138	0	736

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Grand Ave - EB (West Leg)	Arrive Flows	pcs/hr	1094	773	1867
2	N. Site Access - NB (South Leg)	Capacity	pcs/hr	3861	1095	4956
3	Grand Ave - WB (East Leg)	Average Delay	sec/veh	4.07	11.60	7.19

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	754	144.9	1709.3	0.441	0.499	3.9	5.0	1.0	2.5	A	A
2	195	691.8	928.0	0.210	0.244	5.1	6.3	0.3	0.8	A	A
3	145	27.3	1223.7	0.118	0.133	3.5	4.1	0.2	0.4	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Grand Ave - EB (West Leg)	1846.4	1950.0	0.9469
2	N. Site Access - NB (South Leg)	1182.7	3212.2	0.3682
3	Grand Ave - WB (East Leg)	1238.3	2320.7	0.5336

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	144.9	1709.3
2	691.8	928.0
3	27.3	1223.7

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	753.9	753.7	144.9	27.3
2	195.3	195.2	691.8	206.8
3	144.9	144.9	27.3	859.7

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve of Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Peak hour factor
Scheme	05: Hwy 6 & West Access - 2040 Total AM	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Grand Ave - EB (West Leg)	90	0	12.00	1
2	N. Site Access - NB (South Leg)	90	0	12.00	1
3	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	30.00	2	50.00	150.00	30.00	160.00	16.00	1
2	15.00	1	30.00	50.00	30.00	160.00	30.00	2
3	15.00	1	50.00	150.00	30.00	160.00	16.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	16.00	1	12.00	1
2	16.00	1	12.00	1
3	16.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Grand Ave - EB (West Leg)	5.00	1.00	0	0
2	N. Site Access - NB (South Leg)	5.00	1.00	0	0
3	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)			
	U-Turn	Exit-2	Exit-1	Bypass
1	0	1050	33	0
2	0	25	151	0
3	0	77	0	678

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Grand Ave - EB (West Leg)	Arrive Flows	pcs/hr	1403	712	2115
2	N. Site Access - NB (South Leg)	Capacity	pcs/hr	3771	1095	4866
3	Grand Ave - WB (East Leg)	Average Delay	sec/veh	5.84	9.73	7.15

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	1137	80.8	1769.9	0.642	0.729	6.0	8.5	2.5	6.1	A	A
2	185	1102.0	776.9	0.238	0.285	6.3	8.2	0.4	1.0	A	A
3	81	26.2	1224.3	0.066	0.074	3.3	3.8	0.1	0.2	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Grand Ave - EB (West Leg)	1846.4	1950.0	0.9469
2	N. Site Access - NB (South Leg)	1182.7	3212.2	0.3682
3	Grand Ave - WB (East Leg)	1238.3	2320.7	0.5336

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	80.8	1769.9
2	1102.0	776.9
3	26.2	1224.3

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	1137.1	1136.7	80.8	26.2
2	184.8	184.7	1102.0	115.5
3	80.8	80.8	26.2	1260.5

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve of Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Peak hour factor
Scheme	05: Hwy 6 & West Access - 2040 Total PM	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Grand Ave - EB (West Leg)	90	0	12.00	1
2	N. Site Access - NB (South Leg)	90	0	12.00	1
3	Grand Ave - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	30.00	2	50.00	150.00	30.00	160.00	16.00	1
2	15.00	1	30.00	50.00	30.00	160.00	30.00	2
3	15.00	1	50.00	150.00	30.00	160.00	16.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	16.00	1	12.00	1
2	16.00	1	12.00	1
3	16.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Grand Ave - EB (West Leg)	5.00	1.00	0	0
2	N. Site Access - NB (South Leg)	5.00	1.00	0	0
3	Grand Ave - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)			
	U-Turn	Exit-2	Exit-1	Bypass
1	0	1025	57	0
2	0	19	123	0
3	0	137	0	1126

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Grand Ave - EB (West Leg)	Arrive Flows	pcs/hr	1429	1182	2611
2	N. Site Access - NB (South Leg)	Capacity	pcs/hr	3429	1099	4528
3	Grand Ave - WB (East Leg)	Average Delay	sec/veh	6.32	174.61	82.51

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	1136	143.8	1710.3	0.664	0.758	6.6	9.7	2.8	6.9	A	A
2	149	1075.7	786.6	0.190	0.226	5.9	7.5	0.3	0.7	A	A
3	144	19.9	931.8	0.154	0.174	4.7	5.6	0.2	0.5	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Grand Ave - EB (West Leg)	1846.4	1950.0	0.9469
2	N. Site Access - NB (South Leg)	1182.7	3212.2	0.3682
3	Grand Ave - WB (East Leg)	941.3	1973.8	0.4769

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	143.8	1710.3
2	1075.7	786.6
3	19.9	931.8

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	1136.1	1135.6	143.8	19.9
2	149.1	149.0	1075.7	203.6
3	143.9	143.8	19.9	1204.9

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	18	27	224	18	27	195
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	29	243	20	29	212
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	524	253			263	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	524	253			263	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	96			98	
cM capacity (veh/h)	502	785			1301	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	49	263	241			
Volume Left	20	0	29			
Volume Right	29	20	0			
cSH	641	1700	1301			
Volume to Capacity	0.08	0.15	0.02			
Queue Length 95th (ft)	6	0	2			
Control Delay (s)	11.1	0.0	1.1			
Lane LOS	B		A			
Approach Delay (s)	11.1	0.0	1.1			
Approach LOS	B					
Intersection Summary						
Average Delay		1.5				
Intersection Capacity Utilization		38.0%	ICU Level of Service	A		
Analysis Period (min)		15				

2020 BG AM.syn
6: Sylvan Lake Rd & Colorado Mountain Medical

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	18	27	379	18	27	194
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	29	412	20	29	211
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	691	422			432	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	691	422			432	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	95			97	
cM capacity (veh/h)	400	632			1128	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	49	432	240			
Volume Left	20	0	29			
Volume Right	29	20	0			
cSH	513	1700	1128			
Volume to Capacity	0.10	0.25	0.03			
Queue Length 95th (ft)	8	0	2			
Control Delay (s)	12.8	0.0	1.2			
Lane LOS	B		A			
Approach Delay (s)	12.8	0.0	1.2			
Approach LOS	B					
Intersection Summary						
Average Delay		1.3				
Intersection Capacity Utilization		42.9%		ICU Level of Service		A
Analysis Period (min)		15				

2020 BG PM.syn
6: Sylvan Lake Rd & Colorado Mountain Medical

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	18	28	309	22	32	393
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	30	336	24	35	427
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	845	348			360	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	845	348			360	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	94	96			97	
cM capacity (veh/h)	324	695			1199	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	50	360	462			
Volume Left	20	0	35			
Volume Right	30	24	0			
cSH	480	1700	1199			
Volume to Capacity	0.10	0.21	0.03			
Queue Length 95th (ft)	9	0	2			
Control Delay (s)	13.4	0.0	0.9			
Lane LOS	B		A			
Approach Delay (s)	13.4	0.0	0.9			
Approach LOS	B					
Intersection Summary						
Average Delay		1.2				
Intersection Capacity Utilization		53.4%		ICU Level of Service		A
Analysis Period (min)		15				

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	0	22	18	0	27	23	224	18	27	195	36
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	39	0	24	20	0	29	25	243	20	29	212	39
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	623	603	232	617	613	253	251			263		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	623	603	232	617	613	253	251			263		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	89	100	97	95	100	96	98			98		
cM capacity (veh/h)	372	396	808	378	391	785	1314			1301		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	63	49	288	280								
Volume Left	39	20	25	29								
Volume Right	24	29	20	39								
cSH	467	549	1314	1301								
Volume to Capacity	0.13	0.09	0.02	0.02								
Queue Length 95th (ft)	12	7	1	2								
Control Delay (s)	13.9	12.2	0.8	1.0								
Lane LOS	B	B	A	A								
Approach Delay (s)	13.9	12.2	0.8	1.0								
Approach LOS	B	B										
Intersection Summary												
Average Delay			2.9									
Intersection Capacity Utilization			31.3%		ICU Level of Service					A		
Analysis Period (min)			15									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	41	0	17	18	0	27	15	379	18	27	194	18
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	45	0	18	20	0	29	16	412	20	29	211	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	763	743	221	752	743	422	230			432		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	763	743	221	752	743	422	230			432		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	85	100	98	94	100	95	99			97		
cM capacity (veh/h)	297	330	819	310	330	632	1337			1128		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	63	49	448	260								
Volume Left	45	20	16	29								
Volume Right	18	29	20	20								
cSH	365	446	1337	1128								
Volume to Capacity	0.17	0.11	0.01	0.03								
Queue Length 95th (ft)	15	9	1	2								
Control Delay (s)	16.9	14.1	0.4	1.2								
Lane LOS	C	B	A	A								
Approach Delay (s)	16.9	14.1	0.4	1.2								
Approach LOS	C	B										
Intersection Summary												
Average Delay			2.7									
Intersection Capacity Utilization			36.3%		ICU Level of Service					A		
Analysis Period (min)			15									

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6: Sylvan Lake Rd & East Site Access/Colorado Mountain Medical

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	28	0	16	18	0	28	21	309	22	32	393	41
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	30	0	17	20	0	30	23	336	24	35	427	45
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	943	924	449	930	935	348	472			360		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	943	924	449	930	935	348	472			360		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	86	100	97	92	100	96	98			97		
cM capacity (veh/h)	223	256	610	231	252	695	1090			1199		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	48	50	383	507								
Volume Left	30	20	23	35								
Volume Right	17	30	24	45								
cSH	290	390	1090	1199								
Volume to Capacity	0.16	0.13	0.02	0.03								
Queue Length 95th (ft)	15	11	2	2								
Control Delay (s)	19.8	15.6	0.7	0.9								
Lane LOS	C	C	A	A								
Approach Delay (s)	19.8	15.6	0.7	0.9								
Approach LOS	C	C										
Intersection Summary												
Average Delay			2.5									
Intersection Capacity Utilization			44.0%		ICU Level of Service					A		
Analysis Period (min)			15									

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	18	27	236	18	27	208
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	29	257	20	29	226
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	551	266			276	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	551	266			276	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	96			98	
cM capacity (veh/h)	484	772			1287	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	49	276	255			
Volume Left	20	0	29			
Volume Right	29	20	0			
cSH	624	1700	1287			
Volume to Capacity	0.08	0.16	0.02			
Queue Length 95th (ft)	6	0	2			
Control Delay (s)	11.3	0.0	1.1			
Lane LOS	B		A			
Approach Delay (s)	11.3	0.0	1.1			
Approach LOS	B					
Intersection Summary						
Average Delay		1.4				
Intersection Capacity Utilization		39.3%		ICU Level of Service		A
Analysis Period (min)		15				

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Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	18	27	397	18	27	205
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	29	432	20	29	223
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	723	441			451	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	723	441			451	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	95			97	
cM capacity (veh/h)	383	616			1109	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	49	451	252			
Volume Left	20	0	29			
Volume Right	29	20	0			
cSH	495	1700	1109			
Volume to Capacity	0.10	0.27	0.03			
Queue Length 95th (ft)	8	0	2			
Control Delay (s)	13.1	0.0	1.2			
Lane LOS	B		A			
Approach Delay (s)	13.1	0.0	1.2			
Approach LOS	B					
Intersection Summary						
Average Delay		1.2				
Intersection Capacity Utilization		43.5%		ICU Level of Service		A
Analysis Period (min)		15				

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Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	18	28	324	22	32	416
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	30	352	24	35	452
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	886	364			376	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	886	364			376	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	94	96			97	
cM capacity (veh/h)	306	681			1182	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	50	376	487			
Volume Left	20	0	35			
Volume Right	30	24	0			
cSH	460	1700	1182			
Volume to Capacity	0.11	0.22	0.03			
Queue Length 95th (ft)	9	0	2			
Control Delay (s)	13.8	0.0	0.9			
Lane LOS	B		A			
Approach Delay (s)	13.8	0.0	0.9			
Approach LOS	B					
Intersection Summary						
Average Delay		1.2				
Intersection Capacity Utilization		55.4%		ICU Level of Service		B
Analysis Period (min)		15				

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	44	0	23	18	0	27	25	236	18	27	208	45
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	48	0	25	20	0	29	27	257	20	29	226	49
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	625	615	226	630	654	266	275			276		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	625	615	226	630	654	266	275			276		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	87	100	97	95	100	96	98			98		
cM capacity (veh/h)	369	389	813	369	369	772	1288			1287		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	73	49	27	276	255	49						
Volume Left	48	20	27	0	29	0						
Volume Right	25	29	0	20	0	49						
cSH	455	538	1288	1700	1287	1700						
Volume to Capacity	0.16	0.09	0.02	0.16	0.02	0.03						
Queue Length 95th (ft)	14	7	2	0	2	0						
Control Delay (s)	14.4	12.4	7.9	0.0	1.1	0.0						
Lane LOS	B	B	A		A							
Approach Delay (s)	14.4	12.4	0.7		0.9							
Approach LOS	B	B										
Intersection Summary												
Average Delay			2.9									
Intersection Capacity Utilization			42.2%		ICU Level of Service				A			
Analysis Period (min)			15									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	0	19	18	0	27	16	397	18	27	205	22
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	0	21	20	0	29	17	432	20	29	223	24
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	777	767	223	778	782	441	247			451		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	777	767	223	778	782	441	247			451		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	81	100	97	93	100	95	99			97		
cM capacity (veh/h)	290	319	817	296	313	616	1319			1109		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	75	49	17	451	252	24						
Volume Left	54	20	17	0	29	0						
Volume Right	21	29	0	20	0	24						
cSH	353	430	1319	1700	1109	1700						
Volume to Capacity	0.21	0.11	0.01	0.27	0.03	0.01						
Queue Length 95th (ft)	20	10	1	0	2	0						
Control Delay (s)	17.9	14.4	7.8	0.0	1.2	0.0						
Lane LOS	C	B	A		A							
Approach Delay (s)	17.9	14.4	0.3		1.1							
Approach LOS	C	B										
Intersection Summary												
Average Delay			2.9									
Intersection Capacity Utilization			47.0%		ICU Level of Service				A			
Analysis Period (min)			15									

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6: Sylvan Lake Rd & East Site Access/Colorado Mountain Medical

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	35	0	18	18	0	28	22	324	22	32	416	50
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	38	0	20	20	0	30	24	352	24	35	452	54
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	952	946	452	953	988	364	507			376		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	952	946	452	953	988	364	507			376		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	83	100	97	91	100	96	98			97		
cM capacity (veh/h)	219	248	607	222	234	681	1058			1182		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	58	50	24	376	487	54						
Volume Left	38	20	24	0	35	0						
Volume Right	20	30	0	24	0	54						
cSH	280	376	1058	1700	1182	1700						
Volume to Capacity	0.21	0.13	0.02	0.22	0.03	0.03						
Queue Length 95th (ft)	19	11	2	0	2	0						
Control Delay (s)	21.1	16.0	8.5	0.0	0.9	0.0						
Lane LOS	C	C	A		A							
Approach Delay (s)	21.1	16.0	0.5		0.8							
Approach LOS	C	C										
Intersection Summary												
Average Delay			2.5									
Intersection Capacity Utilization			57.1%		ICU Level of Service					B		
Analysis Period (min)			15									

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	18	27	339	18	27	321
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	29	368	20	29	349
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	786	378			388	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	786	378			388	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	94	96			97	
cM capacity (veh/h)	352	668			1170	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	49	388	378			
Volume Left	20	0	29			
Volume Right	29	20	0			
cSH	492	1700	1170			
Volume to Capacity	0.10	0.23	0.03			
Queue Length 95th (ft)	8	0	2			
Control Delay (s)	13.1	0.0	0.9			
Lane LOS	B		A			
Approach Delay (s)	13.1	0.0	0.9			
Approach LOS	B					
Intersection Summary						
Average Delay		1.2				
Intersection Capacity Utilization		49.2%		ICU Level of Service		A
Analysis Period (min)		15				

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	18	27	561	18	27	305
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	29	610	20	29	332
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1010	620			629	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1010	620			629	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	94			97	
cM capacity (veh/h)	258	488			953	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	49	629	361			
Volume Left	20	0	29			
Volume Right	29	20	0			
cSH	360	1700	953			
Volume to Capacity	0.14	0.37	0.03			
Queue Length 95th (ft)	12	0	2			
Control Delay (s)	16.6	0.0	1.0			
Lane LOS	C		A			
Approach Delay (s)	16.6	0.0	1.0			
Approach LOS	C					
Intersection Summary						
Average Delay		1.1				
Intersection Capacity Utilization		48.4%		ICU Level of Service		A
Analysis Period (min)		15				

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	18	28	457	22	32	622
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	30	497	24	35	676
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1254	509			521	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1254	509			521	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	89	95			97	
cM capacity (veh/h)	183	564			1046	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	50	521	711			
Volume Left	20	0	35			
Volume Right	30	24	0			
cSH	311	1700	1046			
Volume to Capacity	0.16	0.31	0.03			
Queue Length 95th (ft)	14	0	3			
Control Delay (s)	18.8	0.0	0.9			
Lane LOS	C		A			
Approach Delay (s)	18.8	0.0	0.9			
Approach LOS	C					
Intersection Summary						
Average Delay		1.2				
Intersection Capacity Utilization		68.8%		ICU Level of Service		C
Analysis Period (min)		15				

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	44	0	22	18	0	27	25	339	18	27	321	45
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	48	0	24	20	0	29	27	368	20	29	349	49
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	860	850	349	864	889	378	398			388		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	860	850	349	864	889	378	398			388		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	81	100	97	92	100	96	98			97		
cM capacity (veh/h)	254	283	694	255	269	668	1161			1170		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	72	49	27	388	378	49						
Volume Left	48	20	27	0	29	0						
Volume Right	24	29	0	20	0	49						
cSH	323	406	1161	1700	1170	1700						
Volume to Capacity	0.22	0.12	0.02	0.23	0.03	0.03						
Queue Length 95th (ft)	21	10	2	0	2	0						
Control Delay (s)	19.3	15.1	8.2	0.0	0.9	0.0						
Lane LOS	C	C	A		A							
Approach Delay (s)	19.3	15.1	0.5		0.8							
Approach LOS	C	C										
Intersection Summary												
Average Delay			2.8									
Intersection Capacity Utilization			52.1%		ICU Level of Service					A		
Analysis Period (min)			15									

2040 T AM.syn

6: Sylvan Lake Rd & East Site Access/Colorado Mountain Medical

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	0	17	18	0	27	15	561	18	27	305	22
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	0	18	20	0	29	16	610	20	29	332	24
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1062	1052	332	1061	1066	620	355			629		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1062	1052	332	1061	1066	620	355			629		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	70	100	97	90	100	94	99			97		
cM capacity (veh/h)	183	217	710	190	212	488	1203			953		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	73	49	16	629	361	24						
Volume Left	54	20	16	0	29	0						
Volume Right	18	29	0	20	0	24						
cSH	225	300	1203	1700	953	1700						
Volume to Capacity	0.32	0.16	0.01	0.37	0.03	0.01						
Queue Length 95th (ft)	33	14	1	0	2	0						
Control Delay (s)	28.4	19.3	8.0	0.0	1.0	0.0						
Lane LOS	D	C	A		A							
Approach Delay (s)	28.4	19.3	0.2		1.0							
Approach LOS	D	C										
Intersection Summary												
Average Delay			3.1									
Intersection Capacity Utilization			51.8%		ICU Level of Service				A			
Analysis Period (min)			15									

2040 T PM.syn

6: Sylvan Lake Rd & East Site Access/Colorado Mountain Medical

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	35	0	17	18	0	28	22	457	22	32	622	50
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	38	0	18	20	0	30	24	497	24	35	676	54
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1321	1314	676	1321	1357	509	730			521		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1321	1314	676	1321	1357	509	730			521		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	68	100	96	84	100	95	97			97		
cM capacity (veh/h)	121	149	453	122	140	564	874			1046		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	57	50	24	521	711	54						
Volume Left	38	20	24	0	35	0						
Volume Right	18	30	0	24	0	54						
cSH	159	234	874	1700	1046	1700						
Volume to Capacity	0.36	0.21	0.03	0.31	0.03	0.03						
Queue Length 95th (ft)	37	20	2	0	3	0						
Control Delay (s)	39.7	24.5	9.2	0.0	0.9	0.0						
Lane LOS	E	C	A		A							
Approach Delay (s)	39.7	24.5	0.4		0.8							
Approach LOS	E	C										
Intersection Summary												
Average Delay			3.0									
Intersection Capacity Utilization			70.5%		ICU Level of Service					C		
Analysis Period (min)			15									

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve of Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	06: Sylvan Lake Rd & East Access/North Medical Center Access - 2040 T SAT	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Sylvan Lake Rd - SB (North Leg)	0	0	13.00	1
2	E. Site Access - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	13.00	1
4	CMM - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	16.00	1	30.00	40.00	30.00	120.00	18.00	1
2	16.00	1	30.00	40.00	30.00	120.00	18.00	1
3	16.00	1	30.00	40.00	30.00	120.00	18.00	1
4	16.00	1	30.00	40.00	30.00	120.00	18.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	20.00	1	12.00	1
2	20.00	1	12.00	1
3	20.00	1	12.00	1
4	20.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Sylvan Lake Rd - SB (North Leg)	5.00	1.00	0	0
2	E. Site Access - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	CMM - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	27	321	45	0
2	0	44	0	22	0
3	0	25	339	18	0
4	0	18	0	27	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Sylvan Lake Rd - SB (North Leg)	Arrive Flows	pcs/hr	930		930
2	E. Site Access - EB (West Leg)	Capacity	pcs/hr	4179		4179
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	5.03		5.03
4	CMM - WB (East Leg)	L.O.S. (Signal)	A – F	A		A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	413	45.2	1149.8	0.359	0.411	5.1	6.0	0.7	1.8	A	A
2	69	384.3	959.3	0.072	0.085	4.2	4.9	0.1	0.2	A	A
3	401	74.6	1134.1	0.354	0.405	5.2	6.0	0.7	1.7	A	A
4	47	428.4	935.9	0.050	0.059	4.2	4.9	0.1	0.2	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Sylvan Lake Rd - SB (North Leg)	1173.9	2201.8	0.5331
2	E. Site Access - EB (West Leg)	1163.4	2190.8	0.5310
3	Sylvan Lake Rd - NB (South Leg)	1173.9	2201.8	0.5331
4	CMM - WB (East Leg)	1163.4	2190.8	0.5310

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	45.2	1149.8
2	384.3	959.3
3	74.6	1134.1
4	428.4	935.9

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	412.7	412.7	45.2	430.5
2	69.3	69.3	384.3	73.5
3	401.1	401.1	74.6	379.1
4	47.3	47.3	428.4	47.3

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve of Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	06: Sylvan Lake Rd & East Access/North Medical Center Access - 2040 T AM	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Sylvan Lake Rd - SB (North Leg)	0	0	13.00	1
2	E. Site Access - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	13.00	1
4	CMM - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	16.00	1	30.00	40.00	30.00	120.00	18.00	1
2	16.00	1	30.00	40.00	30.00	120.00	18.00	1
3	16.00	1	30.00	40.00	30.00	120.00	18.00	1
4	16.00	1	30.00	40.00	30.00	120.00	18.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	20.00	1	12.00	1
2	20.00	1	12.00	1
3	20.00	1	12.00	1
4	20.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Sylvan Lake Rd - SB (North Leg)	5.00	1.00	0	0
2	E. Site Access - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	CMM - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	27	305	22	0
2	0	50	0	17	0
3	0	15	561	18	0
4	0	18	0	27	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Sylvan Lake Rd - SB (North Leg)	Arrive Flows	pcs/hr	1113		1113
2	E. Site Access - EB (West Leg)	Capacity	pcs/hr	4069		4069
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	6.34		6.34
4	CMM - WB (East Leg)	L.O.S. (Signal)	A – F	A		A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	372	34.6	1155.4	0.322	0.368	4.8	5.6	0.6	1.5	A	A
2	70	367.5	968.3	0.073	0.085	4.2	4.9	0.1	0.2	A	A
3	624	80.8	1130.8	0.552	0.637	7.6	9.4	1.6	4.1	A	A
4	47	657.2	814.4	0.058	0.070	4.9	5.7	0.1	0.2	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Sylvan Lake Rd - SB (North Leg)	1173.9	2201.8	0.5331
2	E. Site Access - EB (West Leg)	1163.4	2190.8	0.5310
3	Sylvan Lake Rd - NB (South Leg)	1173.9	2201.8	0.5331
4	CMM - WB (East Leg)	1163.4	2190.8	0.5310

Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	34.6	1155.4
2	367.5	968.3
3	80.8	1130.8
4	657.2	814.4

Entry Flows

Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	371.7	371.7	34.6	669.8
2	70.3	70.3	367.5	38.8
3	623.7	623.6	80.8	357.0
4	47.3	47.2	657.2	47.2

Parameters

Parameter	Value	Parameter	Value	Parameter	Value
Project	The Reserve of Hockett Gulch	Delay	Queuing	Mode	Mode2 - Full Geom
Environment	Rural	Capacity	New	Flows	Synthetic flows
Scheme	06: Sylvan Lake Rd & East Access/North Medical Center Access - 2040 T PM	Time slice	7.5	Visibility	Light
Rodel vn.	1.36	Output	pcs/hr	Drive	RHD

Geometry Data

Leg	Approach Geometry				
	Leg Name	Bearing	G	V	nv
1	Sylvan Lake Rd - SB (North Leg)	0	0	13.00	1
2	E. Site Access - EB (West Leg)	90	0	12.00	1
3	Sylvan Lake Rd - NB (South Leg)	180	0	13.00	1
4	CMM - WB (East Leg)	270	0	12.00	1

Leg	Entry Geometry					Circ Geom		
	E	ne	L'	R	Φ	D	C	nc
1	16.00	1	30.00	40.00	30.00	120.00	18.00	1
2	16.00	1	30.00	40.00	30.00	120.00	18.00	1
3	16.00	1	30.00	40.00	30.00	120.00	18.00	1
4	16.00	1	30.00	40.00	30.00	120.00	18.00	1

Leg	Exit Geometry			
	Ex	nex	Vx	nvx
1	20.00	1	12.00	1
2	20.00	1	12.00	1
3	20.00	1	12.00	1
4	20.00	1	12.00	1

Leg	Capacity Modifiers (veh/hr)		
	Cap -+	Conf Level	Xwalk Fact
1	0	50	1.000
2	0	50	1.000
3	0	50	1.000
4	0	50	1.000

Flow Modifiers and Flow Data

Leg	Leg Name	Flow Modifiers			
		%Truck	Factor	Entry SQ	Bypass SQ
1	Sylvan Lake Rd - SB (North Leg)	5.00	1.00	0	0
2	E. Site Access - EB (West Leg)	5.00	1.00	0	0
3	Sylvan Lake Rd - NB (South Leg)	5.00	1.00	0	0
4	CMM - WB (East Leg)	5.00	1.00	0	0

Leg	Arrival Turning Flows (veh/hr)				
	U-Turn	Exit-3	Exit-2	Exit-1	Bypass
1	0	32	622	50	0
2	0	35	0	17	0
3	0	22	457	22	0
4	0	18	0	28	0

Leg	Arrival Flow Profile						
	Ratio1	Ratio2	Ratio3	Time1	Time2	Time3	PHF
1	0.750	1.125	0.750	0	30	60	0.90
2	0.750	1.125	0.750	0	30	60	0.90
3	0.750	1.125	0.750	0	30	60	0.90
4	0.750	1.125	0.750	0	30	60	0.90

Model Results

Global performance

Leg	Leg Name	Global Performance				
		Parameter	Units	Entries	Bypasses	Total
1	Sylvan Lake Rd - SB (North Leg)	Arrive Flows	pcs/hr	1368		1368
2	E. Site Access - EB (West Leg)	Capacity	pcs/hr	3954		3954
3	Sylvan Lake Rd - NB (South Leg)	Average Delay	sec/veh	7.90		7.90
4	CMM - WB (East Leg)	L.O.S. (Signal)	A – F	A		A

Entry Queues and Delays

Leg	Arrive Flow	Opp Flow	Capacity	Ave VCR	Max VCR	Ave Del	Max Del	Max Q	95% Max Q	LOS A-F	
	pcs/hr	pcs/hr	pcs/hr	ratio	ratio	sec/veh	sec/veh	vehs	vehs	Unsig	Sig
1	739	42.0	1151.5	0.642	0.744	9.5	12.2	2.5	6.3	A	A
2	55	705.4	788.8	0.069	0.084	5.2	6.0	0.1	0.2	A	A
3	526	70.3	1136.4	0.463	0.532	6.2	7.5	1.1	2.8	A	A
4	48	539.6	876.9	0.055	0.066	4.6	5.3	0.1	0.2	A	A

Entry Slope and Intercept

Leg	Leg Name	Y Intercept	X Intercept	Slope
		pcs/hr	pcs/hr	tangent
1	Sylvan Lake Rd - SB (North Leg)	1173.9	2201.8	0.5331
2	E. Site Access - EB (West Leg)	1163.4	2190.8	0.5310
3	Sylvan Lake Rd - NB (South Leg)	1173.9	2201.8	0.5331
4	CMM - WB (East Leg)	1163.4	2190.8	0.5310

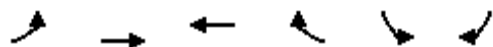
Circulating Flows

Leg	Circ Flow	Capacity
	pcs/hr	pcs/hr
1	42.0	1151.5
2	705.4	788.8
3	70.3	1136.4
4	539.6	876.9

Entry Flows

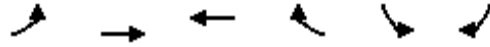
Leg	Arrive Flow	Entry Flow	Circ Flow	Exit Flow
	pcs/hr	pcs/hr	pcs/hr	pcs/hr
1	739.2	739.0	42.0	545.9
2	54.6	54.6	705.4	75.6
3	526.1	526.0	70.3	689.7
4	48.3	48.3	539.6	56.7

2020 BG SAT.syn
7: Sylvan Lake Rd & Capitol St



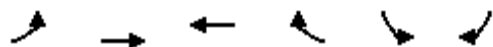
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	20	161	191	58	55	21
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	175	208	63	60	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	271				426	208
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	271				426	208
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				90	97
cM capacity (veh/h)	1293				575	833
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	22	175	208	63	83	
Volume Left	22	0	0	0	60	
Volume Right	0	0	0	63	23	
cSH	1293	1700	1700	1700	629	
Volume to Capacity	0.02	0.10	0.12	0.04	0.13	
Queue Length 95th (ft)	1	0	0	0	11	
Control Delay (s)	7.8	0.0	0.0	0.0	11.6	
Lane LOS	A				B	
Approach Delay (s)	0.9		0.0		11.6	
Approach LOS					B	
Intersection Summary						
Average Delay			2.0			
Intersection Capacity Utilization			27.6%		ICU Level of Service	A
Analysis Period (min)			15			

2020 BG AM.syn
7: Sylvan Lake Rd & Capitol St



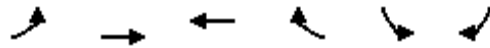
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	31	154	360	117	73	39
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	34	167	391	127	79	42
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	518				626	391
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	518				626	391
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				82	94
cM capacity (veh/h)	1048				434	657
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	34	167	391	127	122	
Volume Left	34	0	0	0	79	
Volume Right	0	0	0	127	42	
cSH	1048	1700	1700	1700	492	
Volume to Capacity	0.03	0.10	0.23	0.07	0.25	
Queue Length 95th (ft)	2	0	0	0	24	
Control Delay (s)	8.6	0.0	0.0	0.0	14.7	
Lane LOS	A				B	
Approach Delay (s)	1.4		0.0		14.7	
Approach LOS					B	
Intersection Summary						
Average Delay			2.5			
Intersection Capacity Utilization			38.7%		ICU Level of Service	A
Analysis Period (min)			15			

2020 BG PM.syn
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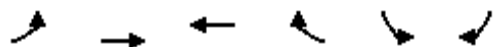
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	52	255	219	78	115	72
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	57	277	238	85	125	78
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	323				628	238
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	323				628	238
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				71	90
cM capacity (veh/h)	1237				426	801
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	57	277	238	85	203	
Volume Left	57	0	0	0	125	
Volume Right	0	0	0	85	78	
cSH	1237	1700	1700	1700	520	
Volume to Capacity	0.05	0.16	0.14	0.05	0.39	
Queue Length 95th (ft)	4	0	0	0	46	
Control Delay (s)	8.0	0.0	0.0	0.0	16.3	
Lane LOS	A				C	
Approach Delay (s)	1.4		0.0		16.3	
Approach LOS					C	
Intersection Summary						
Average Delay			4.4			
Intersection Capacity Utilization			35.6%		ICU Level of Service	A
Analysis Period (min)			15			

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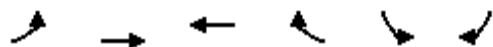
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	25	178	209	58	61	21
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	193	227	63	66	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	290				475	227
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	290				475	227
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				88	97
cM capacity (veh/h)	1272				537	812
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	27	193	227	63	89	
Volume Left	27	0	0	0	66	
Volume Right	0	0	0	63	23	
cSH	1272	1700	1700	1700	588	
Volume to Capacity	0.02	0.11	0.13	0.04	0.15	
Queue Length 95th (ft)	2	0	0	0	13	
Control Delay (s)	7.9	0.0	0.0	0.0	12.2	
Lane LOS	A				B	
Approach Delay (s)	1.0		0.0		12.2	
Approach LOS					B	
Intersection Summary						
Average Delay			2.2			
Intersection Capacity Utilization			29.0%		ICU Level of Service	A
Analysis Period (min)			15			

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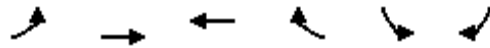
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	34	168	371	117	77	39
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	37	183	403	127	84	42
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	530				660	403
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	530				660	403
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				80	93
cM capacity (veh/h)	1037				413	647
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	37	183	403	127	126	
Volume Left	37	0	0	0	84	
Volume Right	0	0	0	127	42	
cSH	1037	1700	1700	1700	470	
Volume to Capacity	0.04	0.11	0.24	0.07	0.27	
Queue Length 95th (ft)	3	0	0	0	27	
Control Delay (s)	8.6	0.0	0.0	0.0	15.4	
Lane LOS	A				C	
Approach Delay (s)	1.4		0.0		15.4	
Approach LOS					C	
Intersection Summary						
Average Delay			2.6			
Intersection Capacity Utilization			39.5%		ICU Level of Service	A
Analysis Period (min)			15			

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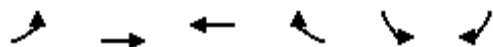
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	56	268	236	78	120	72
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	61	291	257	85	130	78
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	341				670	257
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	341				670	257
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				68	90
cM capacity (veh/h)	1218				401	782
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	61	291	257	85	209	
Volume Left	61	0	0	0	130	
Volume Right	0	0	0	85	78	
cSH	1218	1700	1700	1700	491	
Volume to Capacity	0.05	0.17	0.15	0.05	0.43	
Queue Length 95th (ft)	4	0	0	0	52	
Control Delay (s)	8.1	0.0	0.0	0.0	17.6	
Lane LOS	A				C	
Approach Delay (s)	1.4		0.0		17.6	
Approach LOS					C	
Intersection Summary						
Average Delay			4.6			
Intersection Capacity Utilization			36.8%		ICU Level of Service	A
Analysis Period (min)			15			

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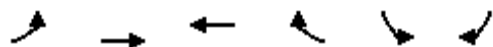
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	23	184	216	59	58	25
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	25	200	235	64	63	27
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	299				485	235
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	299				485	235
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				88	97
cM capacity (veh/h)	1262				530	804
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	25	200	235	64	90	
Volume Left	25	0	0	0	63	
Volume Right	0	0	0	64	27	
cSH	1262	1700	1700	1700	591	
Volume to Capacity	0.02	0.12	0.14	0.04	0.15	
Queue Length 95th (ft)	2	0	0	0	13	
Control Delay (s)	7.9	0.0	0.0	0.0	12.2	
Lane LOS	A				B	
Approach Delay (s)	0.9		0.0		12.2	
Approach LOS					B	
Intersection Summary						
Average Delay			2.1			
Intersection Capacity Utilization			29.4%		ICU Level of Service	A
Analysis Period (min)			15			

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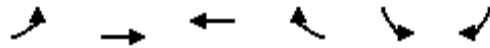
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	46	188	392	124	75	47
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	50	204	426	135	82	51
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	561				730	426
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	561				730	426
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				78	92
cM capacity (veh/h)	1010				370	628
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	50	204	426	135	133	
Volume Left	50	0	0	0	82	
Volume Right	0	0	0	135	51	
cSH	1010	1700	1700	1700	440	
Volume to Capacity	0.05	0.12	0.25	0.08	0.30	
Queue Length 95th (ft)	4	0	0	0	31	
Control Delay (s)	8.7	0.0	0.0	0.0	16.7	
Lane LOS	A				C	
Approach Delay (s)	1.7		0.0		16.7	
Approach LOS					C	
Intersection Summary						
Average Delay			2.8			
Intersection Capacity Utilization			41.0%		ICU Level of Service	A
Analysis Period (min)			15			

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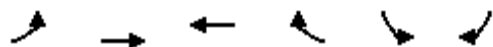
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	60	293	248	80	122	87
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	65	318	270	87	133	95
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	357				718	270
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	357				718	270
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				65	88
cM capacity (veh/h)	1202				374	769
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	65	318	270	87	227	
Volume Left	65	0	0	0	133	
Volume Right	0	0	0	87	95	
cSH	1202	1700	1700	1700	476	
Volume to Capacity	0.05	0.19	0.16	0.05	0.48	
Queue Length 95th (ft)	4	0	0	0	63	
Control Delay (s)	8.2	0.0	0.0	0.0	19.3	
Lane LOS	A				C	
Approach Delay (s)	1.4		0.0		19.3	
Approach LOS					C	
Intersection Summary						
Average Delay			5.1			
Intersection Capacity Utilization			38.5%		ICU Level of Service	A
Analysis Period (min)			15			

2022 T SAT.syn
7: Sylvan Lake Rd & Capitol St



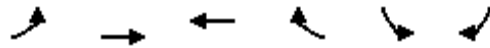
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	28	202	236	59	64	25
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	30	220	257	64	70	27
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	321				537	257
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	321				537	257
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				86	97
cM capacity (veh/h)	1239				492	782
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	30	220	257	64	97	
Volume Left	30	0	0	0	70	
Volume Right	0	0	0	64	27	
cSH	1239	1700	1700	1700	550	
Volume to Capacity	0.02	0.13	0.15	0.04	0.18	
Queue Length 95th (ft)	2	0	0	0	16	
Control Delay (s)	8.0	0.0	0.0	0.0	12.9	
Lane LOS	A				B	
Approach Delay (s)	1.0		0.0		12.9	
Approach LOS					B	
Intersection Summary						
Average Delay			2.2			
Intersection Capacity Utilization			30.8%		ICU Level of Service	A
Analysis Period (min)			15			

2022 T AM.syn
7: Sylvan Lake Rd & Capitol St



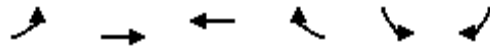
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	49	204	404	124	79	47
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	53	222	439	135	86	51
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	574				767	439
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	574				767	439
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				75	92
cM capacity (veh/h)	999				350	618
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	53	222	439	135	137	
Volume Left	53	0	0	0	86	
Volume Right	0	0	0	135	51	
cSH	999	1700	1700	1700	418	
Volume to Capacity	0.05	0.13	0.26	0.08	0.33	
Queue Length 95th (ft)	4	0	0	0	35	
Control Delay (s)	8.8	0.0	0.0	0.0	17.8	
Lane LOS	A				C	
Approach Delay (s)	1.7		0.0		17.8	
Approach LOS					C	
Intersection Summary						
Average Delay			2.9			
Intersection Capacity Utilization			41.8%		ICU Level of Service	A
Analysis Period (min)			15			

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7: Sylvan Lake Rd & Capitol St



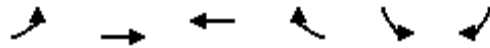
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	64	308	266	80	127	87
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	70	335	289	87	138	95
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	376				763	289
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	376				763	289
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				61	87
cM capacity (veh/h)	1182				350	750
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	70	335	289	87	233	
Volume Left	70	0	0	0	138	
Volume Right	0	0	0	87	95	
cSH	1182	1700	1700	1700	447	
Volume to Capacity	0.06	0.20	0.17	0.05	0.52	
Queue Length 95th (ft)	5	0	0	0	73	
Control Delay (s)	8.2	0.0	0.0	0.0	21.4	
Lane LOS	A				C	
Approach Delay (s)	1.4		0.0		21.4	
Approach LOS					C	
Intersection Summary						
Average Delay			5.5			
Intersection Capacity Utilization			39.9%		ICU Level of Service	A
Analysis Period (min)			15			

2040 BG SAT.syn
7: Sylvan Lake Rd & Capitol St



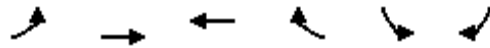
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	52	386	445	71	86	65
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	57	420	484	77	93	71
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	561				1016	484
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	561				1016	484
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				62	88
cM capacity (veh/h)	1010				249	583
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	57	420	484	77	164	
Volume Left	57	0	0	0	93	
Volume Right	0	0	0	77	71	
cSH	1010	1700	1700	1700	437	
Volume to Capacity	0.06	0.25	0.28	0.05	0.38	
Queue Length 95th (ft)	4	0	0	0	43	
Control Delay (s)	8.8	0.0	0.0	0.0	21.1	
Lane LOS	A				C	
Approach Delay (s)	1.0		0.0		21.1	
Approach LOS					C	
Intersection Summary						
Average Delay			3.3			
Intersection Capacity Utilization			41.5%		ICU Level of Service	A
Analysis Period (min)			15			

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7: Sylvan Lake Rd & Capitol St



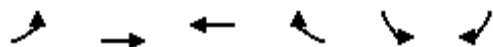
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	180	497	679	185	90	115
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	196	540	738	201	98	125
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	939				1670	738
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	939				1670	738
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	73				0	70
cM capacity (veh/h)	730				77	418
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	196	540	738	201	223	
Volume Left	196	0	0	0	98	
Volume Right	0	0	0	201	125	
cSH	730	1700	1700	1700	150	
Volume to Capacity	0.27	0.32	0.43	0.12	1.49	
Queue Length 95th (ft)	27	0	0	0	369	
Control Delay (s)	11.7	0.0	0.0	0.0	305.5	
Lane LOS	B				F	
Approach Delay (s)	3.1		0.0		305.5	
Approach LOS					F	
Intersection Summary						
Average Delay			37.1			
Intersection Capacity Utilization			60.7%		ICU Level of Service	B
Analysis Period (min)			15			

2040 BG PM.syn
7: Sylvan Lake Rd & Capitol St



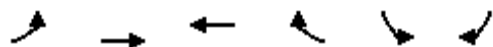
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	135	639	512	95	180	225
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	147	695	557	103	196	245
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	660				1545	557
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	660				1545	557
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	84				0	54
cM capacity (veh/h)	928				106	530
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	147	695	557	103	440	
Volume Left	147	0	0	0	196	
Volume Right	0	0	0	103	245	
cSH	928	1700	1700	1700	195	
Volume to Capacity	0.16	0.41	0.33	0.06	2.26	
Queue Length 95th (ft)	14	0	0	0	884	
Control Delay (s)	9.6	0.0	0.0	0.0	622.3	
Lane LOS	A				F	
Approach Delay (s)	1.7		0.0		622.3	
Approach LOS					F	
Intersection Summary						
Average Delay			141.8			
Intersection Capacity Utilization			54.4%		ICU Level of Service	A
Analysis Period (min)			15			

2040 T SAT.syn
7: Sylvan Lake Rd & Capitol St



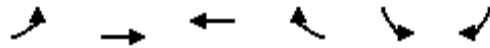
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	57	404	464	71	92	65
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	62	439	504	77	100	71
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	582				1067	504
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	582				1067	504
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				57	88
cM capacity (veh/h)	993				230	568
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	62	439	504	77	171	
Volume Left	62	0	0	0	100	
Volume Right	0	0	0	77	71	
cSH	993	1700	1700	1700	393	
Volume to Capacity	0.06	0.26	0.30	0.05	0.43	
Queue Length 95th (ft)	5	0	0	0	53	
Control Delay (s)	8.9	0.0	0.0	0.0	23.9	
Lane LOS	A				C	
Approach Delay (s)	1.1		0.0		23.9	
Approach LOS					C	
Intersection Summary						
Average Delay			3.7			
Intersection Capacity Utilization			42.9%		ICU Level of Service	A
Analysis Period (min)			15			

2040 T AM.syn
7: Sylvan Lake Rd & Capitol St



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	183	512	690	185	94	115
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	199	557	750	201	102	125
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	951				1704	750
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	951				1704	750
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	72				0	70
cM capacity (veh/h)	722				73	411
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	199	557	750	201	227	
Volume Left	199	0	0	0	102	
Volume Right	0	0	0	201	125	
cSH	722	1700	1700	1700	138	
Volume to Capacity	0.28	0.33	0.44	0.12	1.64	
Queue Length 95th (ft)	28	0	0	0	408	
Control Delay (s)	11.9	0.0	0.0	0.0	375.2	
Lane LOS	B				F	
Approach Delay (s)	3.1		0.0		375.2	
Approach LOS					F	
Intersection Summary						
Average Delay			45.3			
Intersection Capacity Utilization			61.7%		ICU Level of Service	B
Analysis Period (min)			15			

2040 T PM.syn
7: Sylvan Lake Rd & Capitol St



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	139	652	530	95	184	225
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	151	709	576	103	200	245
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	679				1587	576
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	679				1587	576
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	83				0	53
cM capacity (veh/h)	913				99	517
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	151	709	576	103	445	
Volume Left	151	0	0	0	200	
Volume Right	0	0	0	103	245	
cSH	913	1700	1700	1700	181	
Volume to Capacity	0.17	0.42	0.34	0.06	2.45	
Queue Length 95th (ft)	15	0	0	0	935	
Control Delay (s)	9.7	0.0	0.0	0.0	711.0	
Lane LOS	A				F	
Approach Delay (s)	1.7		0.0		711.0	
Approach LOS					F	
Intersection Summary						
Average Delay			160.1			
Intersection Capacity Utilization			55.8%		ICU Level of Service	B
Analysis Period (min)			15			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	129	86	9	129	2	105	2	6	2	0	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	140	93	10	140	2	114	2	7	2	0	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	142			234			316	309	140	315	401	141
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	142			234			316	309	140	315	401	141
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			82	100	99	100	100	99
cM capacity (veh/h)	1440			1334			625	600	908	626	532	907
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	143	93	10	142	114	9	12					
Volume Left	3	0	10	0	114	0	2					
Volume Right	0	93	0	2	0	7	10					
cSH	1440	1700	1334	1700	625	804	838					
Volume to Capacity	0.00	0.05	0.01	0.08	0.18	0.01	0.01					
Queue Length 95th (ft)	0	0	1	0	17	1	1					
Control Delay (s)	0.2	0.0	7.7	0.0	12.0	9.5	9.4					
Lane LOS	A		A		B	A	A					
Approach Delay (s)	0.1		0.5		11.9		9.4					
Approach LOS					B		A					
Intersection Summary												
Average Delay			3.2									
Intersection Capacity Utilization			28.3%		ICU Level of Service					A		
Analysis Period (min)			15									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	70	157	31	169	1	264	18	18	2	6	6
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	76	171	34	184	1	287	20	20	2	7	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	185			247			339	330	76	359	501	184
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	185			247			339	330	76	359	501	184
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			51	97	98	100	99	99
cM capacity (veh/h)	1390			1319			591	573	985	558	460	858
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	77	171	34	185	287	39	15					
Volume Left	1	0	34	0	287	0	2					
Volume Right	0	171	0	1	0	20	7					
cSH	1390	1700	1319	1700	591	725	593					
Volume to Capacity	0.00	0.10	0.03	0.11	0.49	0.05	0.03					
Queue Length 95th (ft)	0	0	2	0	66	4	2					
Control Delay (s)	0.1	0.0	7.8	0.0	16.7	10.2	11.2					
Lane LOS	A		A		C	B	B					
Approach Delay (s)	0.0		1.2		15.9		11.2					
Approach LOS					C		B					
Intersection Summary												
Average Delay			7.0									
Intersection Capacity Utilization			36.9%		ICU Level of Service				A			
Analysis Period (min)			15									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	153	183	14	129	2	139	3	11	1	5	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	166	199	15	140	2	151	3	12	1	5	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	142			365			364	359	166	371	557	141
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	142			365			364	359	166	371	557	141
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			74	99	99	100	99	100
cM capacity (veh/h)	1440			1193			575	557	878	566	430	907
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	176	199	15	142	151	15	11					
Volume Left	10	0	15	0	151	0	1					
Volume Right	0	199	0	2	0	12	4					
cSH	1440	1700	1193	1700	575	781	562					
Volume to Capacity	0.01	0.12	0.01	0.08	0.26	0.02	0.02					
Queue Length 95th (ft)	1	0	1	0	26	1	1					
Control Delay (s)	0.5	0.0	8.1	0.0	13.5	9.7	11.5					
Lane LOS	A		A		B	A	B					
Approach Delay (s)	0.2		0.8		13.1		11.5					
Approach LOS					B		B					
Intersection Summary												
Average Delay			3.5									
Intersection Capacity Utilization			36.4%		ICU Level of Service				A			
Analysis Period (min)			15									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	141	91	9	141	2	111	2	6	2	0	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	153	99	10	153	2	121	2	7	2	0	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	155			252			342	335	153	341	433	154
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	155			252			342	335	153	341	433	154
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			80	100	99	100	100	99
cM capacity (veh/h)	1425			1313			601	580	893	602	511	892
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	157	99	10	155	121	9	12					
Volume Left	3	0	10	0	121	0	2					
Volume Right	0	99	0	2	0	7	10					
cSH	1425	1700	1313	1700	601	787	820					
Volume to Capacity	0.00	0.06	0.01	0.09	0.20	0.01	0.01					
Queue Length 95th (ft)	0	0	1	0	19	1	1					
Control Delay (s)	0.2	0.0	7.8	0.0	12.5	9.6	9.5					
Lane LOS	A		A		B	A	A					
Approach Delay (s)	0.1		0.5		12.3		9.5					
Approach LOS					B		A					
Intersection Summary												
Average Delay			3.2									
Intersection Capacity Utilization			29.3%		ICU Level of Service					A		
Analysis Period (min)			15									

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8: Eagle Ranch Rd & Sylvan Lake Rd

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (veh/h)	1	81	160	31	176	1	268	18	18	2	6	6	
Sign Control		Free				Free				Stop			
Grade		0%				0%				0%			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	1	88	174	34	191	1	291	20	20	2	7	7	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type	None				None								
Median storage veh)													
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	192			262			359	350	88	379	523	192	
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	192			262			359	350	88	379	523	192	
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2	
tC, 2 stage (s)													
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3	
p0 queue free %	100			97			49	96	98	100	99	99	
cM capacity (veh/h)	1381			1302			574	559	970	541	446	850	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1						
Volume Total	89	174	34	192	291	39	15						
Volume Left	1	0	34	0	291	0	2						
Volume Right	0	174	0	1	0	20	7						
cSH	1381	1700	1302	1700	574	709	578						
Volume to Capacity	0.00	0.10	0.03	0.11	0.51	0.06	0.03						
Queue Length 95th (ft)	0	0	2	0	72	4	2						
Control Delay (s)	0.1	0.0	7.8	0.0	17.6	10.4	11.4						
Lane LOS	A		A		C	B	B						
Approach Delay (s)	0.0		1.2		16.7		11.4						
Approach LOS					C		B						
Intersection Summary													
Average Delay			7.2										
Intersection Capacity Utilization			37.5%	ICU Level of Service				A					
Analysis Period (min)			15										

2020 T PM.syn

8: Eagle Ranch Rd & Sylvan Lake Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	162	187	14	142	2	144	3	11	1	5	4
Sign Control		Free				Free				Stop		Stop
Grade		0%				0%				0%		0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	176	203	15	154	2	157	3	12	1	5	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None				None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	157			379			388	383	176	395	585	155
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	157			379			388	383	176	395	585	155
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			72	99	99	100	99	100
cM capacity (veh/h)	1423			1179			554	540	867	546	415	890
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	186	203	15	157	157	15	11					
Volume Left	10	0	15	0	157	0	1					
Volume Right	0	203	0	2	0	12	4					
cSH	1423	1700	1179	1700	554	767	544					
Volume to Capacity	0.01	0.12	0.01	0.09	0.28	0.02	0.02					
Queue Length 95th (ft)	1	0	1	0	29	2	2					
Control Delay (s)	0.5	0.0	8.1	0.0	14.0	9.8	11.8					
Lane LOS	A		A		B	A	B					
Approach Delay (s)	0.2		0.7		13.7		11.8					
Approach LOS					B		B					
Intersection Summary												
Average Delay			3.6									
Intersection Capacity Utilization			37.2%	ICU Level of Service					A			
Analysis Period (min)			15									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	151	97	10	149	3	113	2	6	3	0	12
Sign Control		Free				Free				Stop		Stop
Grade		0%				0%				0%		0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	164	105	11	162	3	123	2	7	3	0	13
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None				None						
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	165			270			367	358	164	364	461	164
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	165			270			367	358	164	364	461	164
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			79	100	99	99	100	99
cM capacity (veh/h)	1413			1294			575	563	880	581	492	881
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	167	105	11	165	123	9	16					
Volume Left	3	0	11	0	123	0	3					
Volume Right	0	105	0	3	0	7	13					
cSH	1413	1700	1294	1700	575	771	799					
Volume to Capacity	0.00	0.06	0.01	0.10	0.21	0.01	0.02					
Queue Length 95th (ft)	0	0	1	0	20	1	2					
Control Delay (s)	0.2	0.0	7.8	0.0	12.9	9.7	9.6					
Lane LOS	A		A		B	A	A					
Approach Delay (s)	0.1		0.5		12.7		9.6					
Approach LOS					B		A					
Intersection Summary												
Average Delay			3.3									
Intersection Capacity Utilization			29.9%		ICU Level of Service					A		
Analysis Period (min)			15									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	90	169	33	197	2	275	18	18	3	6	7
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	98	184	36	214	2	299	20	20	3	7	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	216			282			399	390	98	418	573	215
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	216			282			399	390	98	418	573	215
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			44	96	98	99	98	99
cM capacity (veh/h)	1353			1281			537	529	958	507	417	825
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	100	184	36	216	299	39	17					
Volume Left	2	0	36	0	299	0	3					
Volume Right	0	184	0	2	0	20	8					
cSH	1353	1700	1281	1700	537	682	556					
Volume to Capacity	0.00	0.11	0.03	0.13	0.56	0.06	0.03					
Queue Length 95th (ft)	0	0	2	0	84	5	2					
Control Delay (s)	0.2	0.0	7.9	0.0	19.8	10.6	11.7					
Lane LOS	A		A		C	B	B					
Approach Delay (s)	0.1		1.1		18.7		11.7					
Approach LOS					C		B					
Intersection Summary												
Average Delay			7.7									
Intersection Capacity Utilization			39.1%		ICU Level of Service					A		
Analysis Period (min)			15									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	181	206	16	149	3	150	4	12	2	5	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	197	224	17	162	3	163	4	13	2	5	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	165			421			423	418	197	432	641	164
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	165			421			423	418	197	432	641	164
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			69	99	98	100	99	99
cM capacity (veh/h)	1413			1138			522	514	844	513	384	881
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	208	224	17	165	163	17	13					
Volume Left	11	0	17	0	163	0	2					
Volume Right	0	224	0	3	0	13	5					
cSH	1413	1700	1138	1700	522	727	531					
Volume to Capacity	0.01	0.13	0.02	0.10	0.31	0.02	0.02					
Queue Length 95th (ft)	1	0	1	0	33	2	2					
Control Delay (s)	0.5	0.0	8.2	0.0	15.0	10.1	11.9					
Lane LOS	A		A		B	B	B					
Approach Delay (s)	0.2		0.8		14.5		11.9					
Approach LOS					B		B					
Intersection Summary												
Average Delay			3.7									
Intersection Capacity Utilization			39.3%		ICU Level of Service					A		
Analysis Period (min)			15									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	164	102	10	163	3	119	2	6	3	0	12
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	178	111	11	177	3	129	2	7	3	0	13
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	180			289			397	387	178	393	496	179
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	180			289			397	387	178	393	496	179
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			76	100	99	99	100	98
cM capacity (veh/h)	1395			1273			550	542	865	556	470	864
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	182	111	11	180	129	9	16					
Volume Left	3	0	11	0	129	0	3					
Volume Right	0	111	0	3	0	7	13					
cSH	1395	1700	1273	1700	550	752	778					
Volume to Capacity	0.00	0.07	0.01	0.11	0.24	0.01	0.02					
Queue Length 95th (ft)	0	0	1	0	23	1	2					
Control Delay (s)	0.2	0.0	7.9	0.0	13.5	9.8	9.7					
Lane LOS	A		A		B	A	A					
Approach Delay (s)	0.1		0.4		13.3		9.7					
Approach LOS					B		A					
Intersection Summary												
Average Delay			3.3									
Intersection Capacity Utilization			31.0%	ICU Level of Service				A				
Analysis Period (min)			15									

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8: Eagle Ranch Rd & Sylvan Lake Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	103	172	33	205	2	279	18	18	3	6	7
Sign Control		Free				Free				Stop		Stop
Grade		0%				0%				0%		0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	112	187	36	223	2	303	20	20	3	7	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None				None							
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	225			299			422	413	112	441	599	224
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	225			299			422	413	112	441	599	224
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			42	96	98	99	98	99
cM capacity (veh/h)	1344			1262			518	513	941	489	403	816
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	114	187	36	225	303	39	17					
Volume Left	2	0	36	0	303	0	3					
Volume Right	0	187	0	2	0	20	8					
cSH	1344	1700	1262	1700	518	664	540					
Volume to Capacity	0.00	0.11	0.03	0.13	0.58	0.06	0.03					
Queue Length 95th (ft)	0	0	2	0	93	5	2					
Control Delay (s)	0.2	0.0	7.9	0.0	21.3	10.8	11.9					
Lane LOS	A		A		C	B	B					
Approach Delay (s)	0.1		1.1		20.1		11.9					
Approach LOS					C		B					
Intersection Summary												
Average Delay			8.0									
Intersection Capacity Utilization			39.7%		ICU Level of Service				A			
Analysis Period (min)			15									

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8: Eagle Ranch Rd & Sylvan Lake Rd

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (veh/h)	10	192	210	16	163	3	155	4	12	2	5	5	
Sign Control		Free				Free				Stop			
Grade		0%				0%				0%			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	11	209	228	17	177	3	168	4	13	2	5	5	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type	None				None								
Median storage veh													
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	180			437			451	446	209	459	672	179	
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	180			437			451	446	209	459	672	179	
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2	
tC, 2 stage (s)													
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3	
p0 queue free %	99			98			66	99	98	100	99	99	
cM capacity (veh/h)	1395			1123			501	496	832	492	368	864	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1						
Volume Total	220	228	17	180	168	17	13						
Volume Left	11	0	17	0	168	0	2						
Volume Right	0	228	0	3	0	13	5						
cSH	1395	1700	1123	1700	501	711	512						
Volume to Capacity	0.01	0.13	0.02	0.11	0.34	0.02	0.03						
Queue Length 95th (ft)	1	0	1	0	37	2	2						
Control Delay (s)	0.4	0.0	8.3	0.0	15.8	10.2	12.2						
Lane LOS	A		A		C	B	B						
Approach Delay (s)	0.2		0.7		15.3		12.2						
Approach LOS					C		B						
Intersection Summary													
Average Delay			3.8										
Intersection Capacity Utilization			40.2%	ICU Level of Service				A					
Analysis Period (min)			15										

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	346	192	19	324	15	185	5	10	10	0	35
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	376	209	21	352	16	201	5	11	11	0	38
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	368			585			816	795	376	800	995	360
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	368			585			816	795	376	800	995	360
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			27	98	98	96	100	94
cM capacity (veh/h)	1190			990			274	313	670	289	239	684
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	380	209	21	368	201	16	49					
Volume Left	4	0	21	0	201	0	11					
Volume Right	0	209	0	16	0	11	38					
cSH	1190	1700	990	1700	274	485	525					
Volume to Capacity	0.00	0.12	0.02	0.22	0.73	0.03	0.09					
Queue Length 95th (ft)	0	0	2	0	131	3	8					
Control Delay (s)	0.1	0.0	8.7	0.0	47.3	12.7	12.6					
Lane LOS	A		A		E	B	B					
Approach Delay (s)	0.1		0.5		44.7		12.6					
Approach LOS					E		B					
Intersection Summary												
Average Delay			8.5									
Intersection Capacity Utilization			45.0%		ICU Level of Service					A		
Analysis Period (min)			15									

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8: Eagle Ranch Rd & Sylvan Lake Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	267	275	50	444	15	370	20	20	10	10	20
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	290	299	54	483	16	402	22	22	11	11	22
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	499			589			941	930	290	955	1221	491
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	499			589			941	930	290	955	1221	491
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			94			0	91	97	95	93	96
cM capacity (veh/h)	1065			986			211	248	749	204	167	578
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	307	299	54	499	402	43	43					
Volume Left	16	0	54	0	402	0	11					
Volume Right	0	299	0	16	0	22	22					
cSH	1065	1700	986	1700	211	373	279					
Volume to Capacity	0.02	0.18	0.06	0.29	1.91	0.12	0.16					
Queue Length 95th (ft)	1	0	4	0	728	10	14					
Control Delay (s)	0.6	0.0	8.9	0.0	464.0	15.9	20.3					
Lane LOS	A		A		F	C	C					
Approach Delay (s)	0.3		0.9		420.3		20.3					
Approach LOS					F		C					
Intersection Summary												
Average Delay			114.6									
Intersection Capacity Utilization			75.4%		ICU Level of Service				D			
Analysis Period (min)			15									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	429	410	30	327	15	245	10	20	10	5	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	466	446	33	355	16	266	11	22	11	5	16
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	372			912			939	936	466	955	1373	364
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	372			912			939	936	466	955	1373	364
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			96			0	96	96	95	96	98
cM capacity (veh/h)	1187			747			221	250	596	212	137	681
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	483	446	33	372	266	33	33					
Volume Left	16	0	33	0	266	0	11					
Volume Right	0	446	0	16	0	22	16					
cSH	1187	1700	747	1700	221	408	284					
Volume to Capacity	0.01	0.26	0.04	0.22	1.20	0.08	0.11					
Queue Length 95th (ft)	1	0	3	0	330	6	10					
Control Delay (s)	0.4	0.0	10.0	0.0	171.6	14.6	19.3					
Lane LOS	A		B		F	B	C					
Approach Delay (s)	0.2		0.8		154.4		19.3					
Approach LOS					F		C					
Intersection Summary												
Average Delay			28.4									
Intersection Capacity Utilization			61.6%		ICU Level of Service					B		
Analysis Period (min)			15									

2040 T SAT.syn

8: Eagle Ranch Rd & Sylvan Lake Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	359	197	19	338	15	191	5	10	10	0	35
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	390	214	21	367	16	208	5	11	11	0	38
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	384			604			846	824	390	829	1030	376
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	384			604			846	824	390	829	1030	376
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			21	98	98	96	100	94
cM capacity (veh/h)	1175			973			261	300	658	276	228	671
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	395	214	21	384	208	16	49					
Volume Left	4	0	21	0	208	0	11					
Volume Right	0	214	0	16	0	11	38					
cSH	1175	1700	973	1700	261	471	509					
Volume to Capacity	0.00	0.13	0.02	0.23	0.79	0.03	0.10					
Queue Length 95th (ft)	0	0	2	0	152	3	8					
Control Delay (s)	0.1	0.0	8.8	0.0	56.6	12.9	12.8					
Lane LOS	A		A		F	B	B					
Approach Delay (s)	0.1		0.4		53.4		12.8					
Approach LOS					F		B					
Intersection Summary												
Average Delay			10.0									
Intersection Capacity Utilization			46.0%		ICU Level of Service					A		
Analysis Period (min)			15									

2040 T AM.syn

8: Eagle Ranch Rd & Sylvan Lake Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	279	278	50	452	15	374	20	20	10	10	20
Sign Control		Free				Free				Stop		
Grade		0%				0%				0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	303	302	54	491	16	407	22	22	11	11	22
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None				None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	508			605			963	952	303	977	1246	499
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	508			605			963	952	303	977	1246	499
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			94			0	91	97	94	93	96
cM capacity (veh/h)	1057			973			203	241	736	197	161	571
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	320	302	54	508	407	43	43					
Volume Left	16	0	54	0	407	0	11					
Volume Right	0	302	0	16	0	22	22					
cSH	1057	1700	973	1700	203	363	271					
Volume to Capacity	0.02	0.18	0.06	0.30	2.00	0.12	0.16					
Queue Length 95th (ft)	1	0	4	0	761	10	14					
Control Delay (s)	0.6	0.0	8.9	0.0	506.5	16.3	20.8					
Lane LOS	A		A		F	C	C					
Approach Delay (s)	0.3		0.9		459.1		20.8					
Approach LOS					F		C					
Intersection Summary												
Average Delay	124.1											
Intersection Capacity Utilization	75.6%				ICU Level of Service				D			
Analysis Period (min)	15											

2040 T PM.syn

8: Eagle Ranch Rd & Sylvan Lake Rd

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (veh/h)	15	439	414	30	340	15	249	10	20	10	5	15	
Sign Control		Free				Free				Stop			
Grade		0%				0%				0%			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	16	477	450	33	370	16	271	11	22	11	5	16	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type		None				None							
Median storage veh)													
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	386			927			964	961	477	980	1403	378	
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	386			927			964	961	477	980	1403	378	
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2	
tC, 2 stage (s)													
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3	
p0 queue free %	99			96			0	96	96	95	96	98	
cM capacity (veh/h)	1173			737			212	242	588	204	132	669	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1						
Volume Total	493	450	33	386	271	33	33						
Volume Left	16	0	33	0	271	0	11						
Volume Right	0	450	0	16	0	22	16						
cSH	1173	1700	737	1700	212	398	274						
Volume to Capacity	0.01	0.26	0.04	0.23	1.28	0.08	0.12						
Queue Length 95th (ft)	1	0	3	0	359	7	10						
Control Delay (s)	0.4	0.0	10.1	0.0	200.3	14.9	19.9						
Lane LOS	A		B		F	B	C						
Approach Delay (s)	0.2		0.8		180.4		19.9						
Approach LOS					F		C						
Intersection Summary													
Average Delay			32.9										
Intersection Capacity Utilization			62.4%		ICU Level of Service					B			
Analysis Period (min)			15										