

# Lake Hill Development Traffic Impact Analysis



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## LAKE HILL DEVELOPMENT

### TRAFFIC IMPACT STUDY

#### 1.0 INTRODUCTION

The Fox Tuttle Hernandez Transportation Group prepared this traffic impact study for the Lake Hill development in Frisco, CO. The project proposes to construct a new residential community with a mix of multi-family, townhomes, and single-family homes that will serve the local workforce of Summit County. The 44.8± acre site is currently vacant and located on Dillon Dam Road, northeast of the Lake Forest Condominiums. The property is within the Town of Frisco limits and within unincorporated Summit County. The land is bounded by I-70 to the west, Dillon Dam Road to the east, Lake Forest Condominiums to the south, and National Forest to the north as shown to the right. The original traffic impact study was completed by Michael Baker International in November 2015 (*Lake Hill Residential Development Traffic Study*) and this current report is an update to reflect changes associated with the existing roadway network, existing traffic volumes, and forecasted volumes.



The purpose of this study is to assist in identifying potential traffic impacts within the study area as a result of this project. The traffic study addresses existing, short-term (Year 2026), and long-term (Year 2040) peak hour intersection conditions in the study area with and without the project generated traffic. There are two scenarios for the number of homes within the future Lake Hill community: 436 dwelling units and 536 dwelling units. Both were evaluated within this traffic study. The information contained in this study is anticipated to be used by the Town of Frisco and Summit County in identifying any intersection or roadway deficiencies and potential improvements for both the short-term and long-term future conditions. This study focused on the weekday AM and PM peak hours which historically have been the periods of highest traffic on Dillon Dam Road and for the proposed type of land

uses. This traffic study is consistent with Town of Frisco Unified Development Code (April 2019) and Summit County requirements.

## 2.0 PROJECT DESCRIPTION

The Lake Hill Master Plan<sup>1</sup> was completed in July 2017 and provides guidelines for the development of the new residential community. Lake Hill will be located within the Ten Mile Basin between I-70 and Dillon Dam Road, next to the existing Lake Forest Condominiums and across the street from the existing Heaton Campground. The purpose of Lake Hill is to provide housing for the local workforce within Summit County. The development proposes to construct 300 multi-family units, 85 townhomes, and 51 single-family detached homes for a total of 436 dwelling units. This traffic study also evaluated the scenario of adding another 100 homes (assumed to be 50 townhomes and 50 multi-family units) to Lake Hill to understand the traffic impacts related to a larger community.

Access to the site is planned via two proposed driveways along Dillon Dam Road that are anticipated to be constructed as single-lane roundabouts. The accesses will lead to the internal roadway network to serve the Lake Hill community. A vicinity map is shown on **Figure 1**. The site and access plan is provided on **Figure 2**.

## 3.0 STUDY CONSIDERATIONS

The traffic analysis addressed the signalized and unsignalized intersection operations using the procedures and methodologies set forth by the Highway Capacity Manual (HCM)<sup>2</sup>. Study intersections were evaluated using Synchro (version 10) software for signalized, stop-controlled and roundabout intersections.

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<sup>1</sup> Master Plan was completed in partnership with Summit County, Town of Frisco, Summit Combined Housing Authority, Neighboring Community Stakeholders, and a consultant team.

<sup>2</sup> Highway Capacity Manual, Sixth Edition: A Guide for Multimodal Mobility Analysis, Transportation Research Board, National Research Council, 6<sup>th</sup> Edition (2016).

### 3.1 Data Collection

Traffic counts were collected in late January 2019 at five existing intersections for the weekday AM and PM peak hours. Intersection counts for US Highway 6 at Dillon Dam Road were gathered from the Dillon Medical Center Traffic Impact Study (FTH, November 2018) that were collected in September 2018. Average daily traffic (ADT) counts were collected for 24-hours on Dillon Dam Road, north of N. Ten Mile Road and south of the southmost security gate. Summit County staff provided count data for Dillon Dam Road that was collected in December 2018. Historic and projected traffic volumes for State Highway (SH) 9 and US Highway 6 were gathered from the Colorado Department of Transportation (CDOT) Transportation Data Management System (TDMS) to understand growth in the area.

Concurrently, CDOT has been studying the SH 9 interchange (Exit #203) along I-70 to provide the most appropriate design to accommodate the existing and future volumes on SH 9 through and near the interchange. Preliminary forecasted volumes for the intersection of SH 9 at Dillon Dam Road was provided by CDOT's consultant team (WSP) to inform the growth on Dillon Dam Road for this study. The intersection of SH 9 and Dillon Dam Road was not evaluated within this traffic study since it was included within the CDOT interchange study.

In addition to the existing count data and concurrent CDOT study, the following transportation studies were reviewed and incorporated into this analysis:

- Frisco Whole Foods Traffic Impact Study. Felsburg Holt & Ullevig. October 2012.
- Lake Hill Residential Development Traffic Study. Michael Baker International. November 10, 2015
- Frisco Kum & Go #948 (NWC Lusher & Summit) Traffic Impact Study. Kimley Horn. September 2016.
- Frisco Trail Master Plan. SE Group. March 2017.
- Colorado Highway 9 – Frisco Traffic Study (MP 94.36 to MP 96.25). Stolfus & Associates, Inc. August 2018.
- Dillon Medical Building Traffic Impact Study. Fox Tuttle Hernandez Transportation Group, LLC. November 7, 2018.

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Since intersection and daily counts were collected outside the peak season, the existing data was factored from January to July. Monthly ADT's on SH 9 were gathered from CDOT's TDMS database from Year 2001 to Year 2018. For each year of data, the July count was compared to the January count to calculate the average seasonal factor. It was determined that the seasonal factor is 1.1 along SH 9, which was applied to the existing traffic counts for the Lake Hill study area. This is consistent with the seasonal difference found in the Colorado Highway 9 – Frisco Traffic Study. It should be noted that the intersection of US Highway 6 at Dillon Dam Road was not seasonally adjusted since volumes were greater than the volumes collected at the adjacent intersection of La Bonte Street. Also, the volumes between the two adjacent intersections of US Highway 6 and La Bonte Street were not balanced which provided the most conservative volumes at each of the study intersections.

The seasonally factored existing traffic volumes are illustrated on **Figure 3**. The existing intersection geometry and traffic control are also shown on this figure. Signal timing for the intersection of US Highway 6 at N. Dillon Dam Road was provided by CDOT and utilized within the analysis. Count data is provided in the **Appendix**.

### 3.2 Level-of-Service Criteria

To measure and describe the operational status of the study intersections, transportation engineers and planners commonly use a grading system referred to as "Level-of-Service" (LOS) that is defined by the *HCM*. LOS characterizes the operational conditions of an intersections traffic flow, ranging from LOS A (indicating very good, free flow operations) and LOS F (indicating congested and sometimes oversaturated conditions). These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with traveling through the intersections. The intersection LOS is represented as a delay in seconds per vehicle for the intersection as a whole and for each turning movement. Criteria contained in the *HCM* was applied for these analyses in order to determine peak hour LOS. A more detailed discussion of LOS methodology is contained in the **Appendix** for reference. Typically, an acceptable level-of-service is LOS D or better in the peak hours.



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## 4.0 EXISTING CONDITIONS

### 4.1 Roadways

The study area boundaries are based on the amount of traffic to be generated by the project and potential impact to the existing roadway network. The existing study area street network consists of arterials and local streets. The primary public roadways that serve the project site are discussed in the following text. The existing study area roadway network is illustrated on **Figure 1**.

**US Highway 6** is an east-west principal arterial that connects Dillon to Keystone to the Loveland Ski Area. The highway provides access to I-70 on both sides of the Continental Divide/Eisenhower-Johnson Tunnels. US Highway 6 becomes Loveland Pass between Keystone and Loveland Ski Area, which is the alternative route to I-70 for trucks carrying hazardous materials to bypass the tunnels. West of Dillon Dam Road, US Highway 6 is classified by CDOT as a Non-Rural Arterial (NR-B) with three lanes per direction and services approximately 17,900 vehicles per day (vpd). East of N. Dillon Dam Road, the highway changes classification to Non-Rural Principal Highway (NR-A) with two lanes per direction and services approximately 12,000 vpd. The posted speed limit also changes on either side of Dillon Dam Road; west of the intersection the speed limit is 35 miles per hour (mph) and increases to 45 mph east of the intersection.

**State Highway 9 (Summit Boulevard)** is a north-south principal arterial that connects I-70 to Frisco, Breckenridge, and Park County. The highway continues east on I-70 where it heads north towards Kremmling from the interchange at Silverthorne (Exit #205). Summit Boulevard is a CDOT facility and is classified as NR-B (Non-Rural Arterial) with one lane per direction through the interchange and two lanes per direction south of the intersection with Dillon Dam Road/Lusher Court. The highway currently serves approximately 28,300 vpd just north of Dillon Dam Road and the posted speed limit is 35 mph. Within the study area, SH 9 is 82-feet wide with 12 to 13-foot travel lanes, two per direction; 18-foot median/center turn lane; and 12-foot auxiliary lanes.

**Dillon Dam Road** is a two-lane arterial within the study area that parallels I-70 and serves as a secondary connection between the towns of Frisco and Dillon. The roadway provides access to existing commercial businesses, lodging, multi-family complexes, and recreational areas. Over the dam, Dillon Dam Road is owned and secured by Denver Water with the authority to close the roadway due to threats against the dam and reservoir infrastructure. Adjacent to the Lake Hill property, the roadway width is 36-feet with 12 to 14-foot travel lanes (one per direction) and 6-

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foot shoulders. Dillon Dam Road serves approximately 8,000 vpd north of N. Ten Mile Road and 6,800 vpd south of the dam. The roadway has a posted speed limit of 30 mph south of Beaver Lodge Road and increases to 45 mph north of Beaver Lodge Road. Dillon Dam Road is planned to provide direct access into the proposed Lake Hill community.

**N. Ten Mile Road** is a local two-lane roadway that serves commercial and residential properties along the southwest corner of Dillon Reservoir. N. Ten Mile Road parallels SH 9 and acts as a frontage road for the local businesses with multiple locations that lead to the highway.

**La Bonte Street** is a local two-lane roadway that leads to the center of the Town of Dillon. The roadway serves local, visitor, and marina traffic. The intersection with Dillon Dam Road is a single-lane roundabout and just north of the Denver Water security house.

**Beaver Lodge Road, Prospect Point Drive, and Lake View Terrace** are two-lane local roadways that serve residential properties, both owned and rented.

## 4.2 Intersections

The study area was developed from discussions with Summit County and Town staff and includes six existing intersections as listed below with the current traffic control:

1. Dillon Dam Road at N. Ten Mile Road (side-street stop-controlled)
2. Dillon Dam Road at Beaver Lodge Road (side-street stop-controlled)
3. Dillon Dam Road at Prospect Point Drive (side-street stop-controlled)
4. Dillon Dam Road at Lake View Terrace (side-street stop-controlled)
5. Dillon Dam Road at La Bonte Street (roundabout)
6. US Highway 6 at Dillon Dam Road (signalized)

The lane configuration at each of the study intersections is illustrated on **Figure 3**.

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It should be noted that the State Highway 9 (SH 9) at Dillon Dam Road intersection was not included in the analysis since the intersection is being evaluated as part of the CDOT 203 interchange project. However, it is important to note that westbound queues on Dillon Dam Road from the SH 9 intersection do extend through the N. Ten Mile Road intersection on a regular basis during the peak periods under existing conditions. Those queues create safety and operational issues at the Dillon Dam Road and N. Ten Mile Road intersection that are not shown in the traffic modeling for this traffic study. The CDOT 203 interchange project will evaluate and recommend traffic control and intersection capacity improvements to the SH 9 at Dillon Dam Road intersection. It is assumed that those capacity improvements will reduce the queues along Dillon Dam Road and the likelihood of those queues impacting the N. Ten Mile Road intersection.

#### **4.3 Pedestrian and Bicycle Access**

There are no sidewalks on the study area roadways; however, there is a paved multi-use recreational path that circulates Dillon Reservoir and parallels Dillon Dam Road near the project site. The Dillon Recreational Path provides walking and biking access into the Town of Frisco and Town of Dillon and links to other local and regional recreational facilities.

There are no on-street bike lanes on the study area roadways.

#### **4.4 Transit Access**

Currently, the Town of Frisco and Summit County is served by Summit Stage; however, there is currently no transit services along Dillon Dam Road. The Frisco Station is located on Lusher Court near the new Whole Foods development and it provides park-and-ride services to utilize the Frisco-Breckenridge route, Frisco-Silverthorne route, and Copper Mountain route. Each of these routes link to other transfer stations and adjacent communities.

Recently, Denver Water has approved the use of Dillon Dam Road for transit service. Summit Stage is currently studying the existing routes to understand if there is potential to reroute and/or provide new routes that will travel on Dillon Dam Road. Refer to **Section 10.0** for future transit recommendations to serve Lake Hill.

#### 4.5 Existing Intersection Capacity Analysis

The results of the LOS calculations for the intersections are summarized in **Table 1**. Average and 95<sup>th</sup> percentile<sup>3</sup> queues are summarized in **Table 2**. The intersection level-of-service worksheets are attached in the **Appendix**. **All of the study intersections operate overall at acceptable level-of-service, LOS C or better, with all side-street approaches at LOS D or better.**

The intersection of US Highway 6 at Dillon Dam Road has two movements operating at LOS E: northbound left and northbound left+through during the AM peak hour. The side-street delay is a result of the signal needing to operate as split phasing for the northbound and southbound approaches. The left-turn storage is limited; therefore, both side-street approaches have added left-turn capacity by sharing the through lane with a second left-turn lane. A shared left+through lane requires split phasing for safety purposes.

No mitigation measures are recommended. It is common that side-street movements, especially left-turns, to operate below LOS D during peak hours, and shifting time to accommodate these movements would be at the expense of the heavy through traffic on US Highway 6.

#### 5.0 FUTURE BACKGROUND TRAFFIC CONDITIONS

##### 5.1 Annual Growth Factor and Future Volume Methodology

In order to forecast the future peak hour traffic volumes, background traffic growth assumptions were based on forecasted volumes provided by CDOT's consultants for the SH 9 interchange study. The future volumes included traffic input from the *Frisco Whole Foods Traffic Impact Study* (October 2012) and previous *Lake Hill Residential Development Traffic Study* (November 2015). The Year 2045 forecasted volumes for the intersection of SH 9 at Dillon Dam Road are provided and are include in the **Appendix**.

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<sup>3</sup> It should be noted that the 95<sup>th</sup> percentile queue length is a theoretical queue that is 1.65 standard deviations above the average queue length. In theory, the 95<sup>th</sup> percentile queue would be exceeded 5% of the time based on the average queue length, but it is also possible that a queue this long may not occur.

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The following methodology was used to attain the Year 2026 and Year 2040 background peak hour traffic projections:

1. Previous, trip assignment for Lake Hill (400 units) was subtracted from the projected Year 2045 volumes at the SH 9 and Dillon Dam Road intersection.
2. The existing intersection volumes at SH 9 and Dillon Dam Road were subtracted from the adjusted forecasted volumes [count data gathered from the *Frisco Kum & Go #948 (NWC Lusher & Summit) Traffic Impact Study*].
3. Volumes on Dillon Dam Road from Step 2 were compared to the provided Year 2045 forecasted volumes to calculate the annual growth rate. It was determined that there is an estimated annual growth rate of 0.82% on Dillon Dam Road.
4. Rounded the annual growth rate to 1.0% and grew the seasonally adjusted existing counts to Year 2026 (factor of 1.072) and Year 2040 (factor 1.232).
5. Added the trip assignment for the approved Dillon Medical Building that will be located in the northeast corner of US Highway 6 and N. Dillon Dam Road. Phase 1 was assumed to be complete by Year 2026 and phase 2 was assumed to be complete by Year 2040. Trips obtained from the *Dillon Medical Center Traffic Impact Study* (FTH, November 2018).

The Year 2026 background traffic is summarized on **Figure 4** and the 2040 background traffic is summarized on **Figure 5**.

## 5.2 Year 2026 Background Intersection Capacity Analysis

The study area intersections were evaluated to determine baseline operations for the Year 2026 background scenario and to identify any capacity constraints associated with background traffic. The level-of-service criteria discussed previously was applied to the study area intersections to determine the impacts with the short-term background volumes.

The results of the LOS calculations for the intersections are summarized in **Table 1**. Average and 95<sup>th</sup> percentile queues are summarized in **Table 2**. The intersection level-of-service worksheets are attached in the **Appendix**.

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**All of the study intersections operate overall at acceptable levels-of-service (LOS D or better) and perform similarly to the existing conditions.** The movements that operated at LOS E in the weekday AM peak hour at US Highway 6 and Dillon Dam Road in the existing condition will continue to operate at that level in Year 2026 background. The northbound left-turn will begin to operate at LOS E in the PM peak hour.

### 5.3 Year 2040 Background Intersection Capacity Analysis

The study area intersections were evaluated to determine baseline operations for the Year 2040 background scenario and to identify any capacity constraints associated with background traffic. The level-of-service criteria discussed previously was applied to the study area intersections to determine the impacts with the long-term background volumes.

The results of the LOS calculations for the intersections are summarized in **Table 1**. Average and 95<sup>th</sup> percentile queues are summarized in **Table 2**. The intersection level-of-service worksheets are attached in the **Appendix**.

**All of the study intersections operate overall at acceptable levels-of-service and perform similarly to the existing conditions, except for the Dillon Dam Road at N. Ten Mile Road intersection.** The movements that operated at LOS E at US Highway 6 and Dillon Dam Road in the existing and Year 2026 conditions will continue to operate at that level in the long-term background scenario. The following intersections have a movement or an approach that are estimated to begin to operate below the acceptable threshold of LOS D:

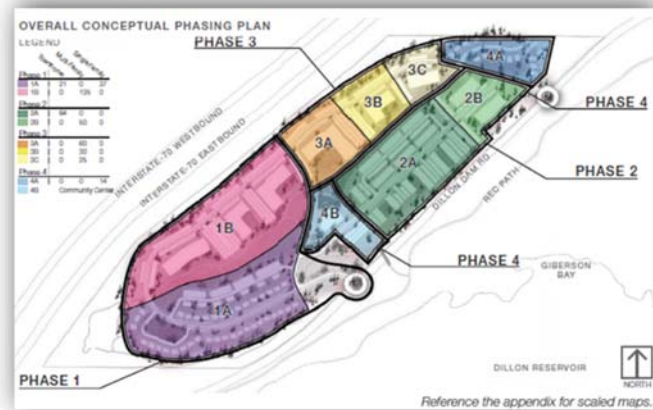
- **Dillon Dam Road at N. Ten Mile Road:** This side-street stop-controlled intersection will operate overall at LOS A in both peak hours; however, the westbound left-turn movement will begin to operate at LOS F (average delay of 55 seconds) during the weekday PM peak hour due to the higher volumes on Dillon Dam Road that reduce the gaps to turn from N. Ten Mile Road. The 95<sup>th</sup> percentile queue for this movement is estimated to be 93 feet (about four vehicles) during the PM peak hour.

**Recommendation:** No mitigation measures are recommended. This level of side-street approach delay during peak hours are typical of an unsignalized approach to an arterial roadway. If/when a traffic control changed is warranted at this intersection, the traffic control should be consistent with the recommendations for the SH 9 and Dillon Dam Road intersection.

A cursory review of the peak hour traffic volumes was performed to identify if the N. Ten Mile Road intersection is expected to meet signal warrants in the future. At this level of evaluation, only the peak hour traffic signal warrant was evaluated to determine if a traffic signal may be needed. The volumes in the PM peak hour will meet the peak hour traffic signal warrant thresholds (only one of nine traffic signal warrants that should be considered based on future traffic volumes). Refer to **Figure 13** for the peak hour signal warrant chart. This intersection should be monitored in the future to determine if a signal or roundabout is needed to reduce delays on the side-street or if traffic is able to reroute to other intersections that lead to SH 9. A signal would be challenging to install at N. Ten Mile Road due to the proximity to SH 9 which is approximately 375 feet south. Left-turn drivers have the option to travel three blocks south on N. Ten Mile Road to a signalized access onto SH 9.

## 6.0 PROPOSED DEVELOPMENT TRAFFIC

The *Lake Hill Master Plan (July 2017)* provides a conceptual phasing plan to construct the community with four phases, as shown to the right. For the purpose of this traffic study, it was assumed that all of the proposed workforce homes in Lake Hill will be completed and occupied by Year 2026. This approach provides the most conservative estimate for traffic impacts associated with the completion of Lake Hill. This traffic study evaluated two scenarios: 436 dwelling units and 536 dwelling units. The *Lake Hill Master Plan (July 2017)* assumed the first scenario; however, the Town and County would like to understand if the roadway network can accommodate trips from 100 additional homes.



Source: Lake Hill Master Plan (July 2017)

## 6.1 Trip Generation

To establish the volume of new trips that will be added to the roadway network from the proposed Lake Hill community, trip generation rates were gathered from the *Institute of Transportation Engineers (ITE) Trip Generation Manual*<sup>4</sup>. A trip generation estimate was performed to determine the traffic increase based on land use types. It is proposed that the first scenario will provide 300 multi-family units, 85 townhomes, and 51 single-family detached homes for a total of 436 dwelling units. The second scenario added 100 homes, which were assumed to be 50 multi-family units and 50 townhomes.

The trip rates contained in the ITE Trip Generation Manual for land uses #210 “Single-Family Detached Housing”, #220 “Multi-Family Housing (Low-Rise)”, and #221 “Multi-Family Housing (Mid-Rise)” were applied to the number of units to estimate the proposed traffic for Lake Hill in each scenario. **Tables 3A and 3B** provides the trip generation estimates for the two scenarios of the proposed Lake Hill development.

### Trip Types

The proposed Lake Hill development will create new trips, also known as ‘primary trips’, which is discussed in detail below:

Primary Trips. These trips are made specifically to travel to/from the residential community and are considered “new” trips. Primary trips would not have been made if the proposed project did not exist. Therefore, this is the only trip type that increases the total number of trips made on a regional basis.

Non-Auto Trips. These trips are completed by walking, biking, or using transit. Non-auto trips do not affect the exterior site access points, nor add any additional traffic volumes to the adjacent street network. Trip generation was performed based on the assumption that 10% of generated trips would be non-auto trips due to primarily future transit services, but also bicyclists and pedestrians. Refer to **Section 10.0** for anticipated transit service that will benefit residents of Lake Hill.

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<sup>4</sup> Trip Generation 10<sup>th</sup> Edition, Institute of Transportation Engineers, 2017.



These assumptions are shown within the trip generation estimates in **Table 3A** (Scenario 1 – 436 units) and **Table 3B** (Scenario 2 – 536 units). The trips are summarized below in **Table 4**:

**Table 4: Summary of Trip Generation**

Period	Scenario 1 (436 units)	Scenario 2 (536 units)	<i>Difference in Scenarios</i>
Weekday Daily	2,462	3,036	+574
Weekday AM	166	203	+37
Weekday PM	207	252	+45

## 6.2 Trip Distribution and Assignment

The distribution percentages are based on regional land use destinations, existing travel patterns, and proximity to neighboring mountain communities. The existing intersection volumes at N. Ten Mile Road, Beaver Lodge Road, Prospect Point Drive, Lake View Terrace, and La Bonte Street were utilized to determine the percentage of trips that will travel north and south on Dillon Dam Road. The directional distributions for the existing side-streets are summarized in **Table 5**:

**Table 5: Distribution Calculations**

Intersection	Peak Period	Volume [Directional Percentage]			
		To North	To South	From North	From South
La Bonte Street	AM	47 [47%]	54 [53%]	56 [56%]	44 [44%]
	PM	111 [54%]	93 [46%]	146 [58%]	106 [42%]
Lake View Terrace	AM	5 [28%]	13 [72%]	2 [33%]	4 [67%]
	PM	0 [0%]	3 [100%]	2 [25%]	6 [75%]
Prospect Point Drive	AM	0 [0%]	16 [100%]	2 [33%]	4 [67%]
	PM	5 [23%]	17 [77%]	5 [23%]	17 [77%]
Beaver Lodge Road	AM	2 [18%]	9 [82%]	0 [0%]	4 [100%]
	PM	1 [14%]	6 [86%]	1 [20%]	4 [80%]
N. Ten Mile Road	AM	35 [37%]	59 [63%]	56 [59%]	39 [41%]
	PM	81 [51%]	79 [49%]	52 [37%]	87 [63%]
Average		27%	73%	34%	66%
Overall Average				31% (North)	69% (South)

It was assumed that 30% of the trips would travel north on Dillon Dam Road towards the Town of Dillon and 70% of the trips would travel south on Dillon Dam Road towards the Town of Frisco. The overall distribution within the study area is as follows, as well as presented on **Figure 6**:

- 65% to/from SH 9 (south)
- 12% to/from east US Highway 6
- 5% to/from N. Ten Mile Road (south)
- 6% to/from north Dillon Dam Road
- 5% to/from La Bonte Street (north)
- 7% to/from west US Highway 6

Using these distribution assumptions, the projected site traffic was assigned to the study area roadway network for the weekday AM and PM peak hour periods. The site-generated volumes for Scenario 1 are shown on **Figure 7** and site-generated volumes for Scenario 2 are shown on **Figure 8**.

### 6.3 Proposed Access

The project proposes to have two accesses on Dillon Dam Road, both full-movement and single-lane roundabouts. The access locations are shown on **Figure 2**.

## 7.0 FUTURE TRAFFIC CONDITIONS WITH SITE DEVELOPMENT

This section discusses impacts associated with the development of the Lake Hill community in the short-term and long-term conditions with both housing scenarios.

### 7.1 Scenario 1 – Year 2026 Background + Project Intersection Capacity Analysis

The site-generated traffic volumes for Scenario 1 (436 homes) were added to the Year 2026 background volumes to analyze potential site impacts in the short-term condition. The Year 2026 background + Scenario 1 site-generated traffic volumes are illustrated on **Figure 9**. The level-of-service criteria discussed in prior sections was applied to the study area intersections to determine impacts with the addition of the Scenario 1 site-build out traffic volumes in the short-term. The results of the LOS calculations for the intersections are summarized in **Table 1**. Average and 95<sup>th</sup> percentile queues are summarized in **Table 2**.

**The project trips do not significantly impact the study intersections for the short-term (Scenario 1), except at the intersections at N. Ten Mile Road and Prospect Point Drive.** The study intersections and movements will operate with the same LOS letter grade or within seven seconds of additional delay when compared to the Year 2026 background scenario, except for the Dillon Dam Road at N. Ten Mile Road intersection. The following intersection has a movement or an approach that is anticipated to begin to operate below the acceptable threshold of LOS D:

- **Dillon Dam Road at N. Ten Mile Road:** This side-street stop-controlled intersection will operate overall at LOS A in both peak hours; however, the westbound left-turn movement will begin to operate at LOS E during the weekday PM peak hour due to the higher volumes on Dillon Dam Road that result in less gaps to turn. The 95<sup>th</sup> percentile queue for this movement is estimated to be 73 feet (about three vehicles).

**Recommendation:** No mitigation measures are recommended. This level of side-street approach delay during peak hours are typical of an unsignalized approach to an arterial roadway. The volumes in the PM peak hour will meet the peak hour traffic signal warrant thresholds. Refer to

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**Figure 13** for the peak hour signal warrant chart. This intersection should be monitored as traffic grows to determine if the traffic control needs to change or if traffic is redirected to other intersections that lead to SH 9.

The proposed roundabout accesses are estimated to operate overall at LOS A with all approaches operating at LOS B or better in both peak hours.

## 7.2 Scenario 2 – Year 2026 Background + Project Intersection Capacity Analysis

The site-generated traffic volumes for Scenario 2 (536 homes) were added to the Year 2026 background volumes to determine if there were additional site impacts in the short-term condition with an increase in homes. The Year 2026 background + Scenario 2 site-generated traffic volumes are illustrated on **Figure 10**. The level-of-service criteria discussed in prior sections was applied to the study area intersections to determine impacts with the addition of the Scenario 2 site-build out traffic volumes in the short-term. The results of the LOS calculations for the intersections are summarized in **Table 1**. Average and 95<sup>th</sup> percentile queues are summarized in **Table 2**.

**The additional project trips associated with 100 more homes do not significantly impact the study intersections when compared to Scenario 1.** The additional traffic will increase side-street delays by up to four seconds and increase 95<sup>th</sup> percentile queues by up to one vehicle. The side-street stop-controlled approaches at the N. Ten Mile Road intersection will continue to operate below LOS D regardless of the number of homes.

The proposed roundabout accesses are estimated to operate overall at LOS A with all approaches operating at LOS A in both peak hours.

## 7.3 Scenario 1 – Year 2040 Background + Project Intersection Capacity Analysis

The site-generated traffic volumes for Scenario 1 (436 homes) were added to the Year 2040 background volumes to analyze potential site impacts in the long-term build-out condition. The Year 2040 background + Scenario 1 site-generated traffic volumes are illustrated on **Figure 11**. The level-of-service criteria discussed in prior sections was applied to the study area intersections to determine impacts with the addition of the Scenario 1 site-build out traffic volumes in the long-term. The results of the LOS calculations for the intersections are summarized in **Table 1**. Average and 95<sup>th</sup> percentile queues are summarized in **Table 2**.

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The project trips do not significantly impact the study intersections for the long-term (Scenario 1), except at the intersections at N. Ten Mile Road and Prospect Point Drive. The study intersections and movements will operate with the same LOS letter grade or within five seconds of additional delay when compared to the Year 2040 background scenario, except the two listed intersections. The following intersections have a movement or an approach that is anticipated to begin to operate below the acceptable threshold:

- **Dillon Dam Road at N. Ten Mile Road:** This side-street stop-controlled intersection will operate overall at LOS A during both peak hours. The westbound left-turn movement will continue to operate at LOS F in the PM peak hour (average delay of 93 seconds). The 95<sup>th</sup> percentile queue for this movement is estimated to be highest in the PM peak hour at 128 feet (about five vehicles).

**Recommendation:** Monitor the intersection as traffic grows to determine if the traffic control needs to change or if traffic is redirected to other intersections that lead to SH 9. As previously mentioned, the ongoing CDOT 203 Interchange Project will recommend traffic control and intersection capacity improvements at the SH 9 and Dillon Dam Road intersection; improvements considered at Dillon Dam Road at N. Ten Mile Road should be determined based on what traffic control is recommended at the SH 9 intersection. The volumes in the PM peak hour will meet the peak hour traffic signal warrant thresholds. Refer to **Figure 13** for the peak hour signal warrant chart.

- **Dillon Dam Road at Prospect Point Drive:** This side-street stop-controlled intersection will operate overall at LOS A in both studied peak hours; however, the westbound approach will begin to operate at LOS E in the PM peak hour. The 95<sup>th</sup> percentile queue for this movement is estimated to be 33 feet (less than two vehicles) during the PM peak hour.

**Recommendation:** No mitigation measures are recommended. This level of side-street approach delay during peak hours are typical of an unsignalized approach to an arterial roadway. The peak hour volumes are not approaching the peak hour traffic signal warrant thresholds.

The proposed roundabout accesses are estimated to operate overall at LOS A with all approaches operating at LOS A in both peak hours.

#### 7.4 Scenario 2 – Year 2040 Background + Project Intersection Capacity Analysis

The site-generated traffic volumes for Scenario 2 (536 homes) were added to the Year 2040 background volumes to determine if there were additional site impacts in the long-term condition with an increase in homes. The Year 2040 background + Scenario 2 site-generated traffic volumes are illustrated on **Figure 12**. The level-of-service criteria discussed in prior sections was applied to the study area intersections to determine impacts with the addition of the Scenario 2 site-build out traffic volumes in the long-term. The results of the LOS calculations for the intersections are summarized in **Table 1**. Average and 95<sup>th</sup> percentile queues are summarized in **Table 2**.

**The additional project trips associated with 100 more homes do not significantly impact the study intersections when compared to Scenario 1.** The additional traffic will increase side-street delays by up to 12 seconds and increase 95<sup>th</sup> percentile queues by up to one vehicle. The two side-street stop-controlled approaches at intersections of N. Ten Mile Road and Prospect Point Drive will continue to operate below LOS D regardless of the number of homes.

The proposed roundabout accesses are estimated to operate overall at LOS A with all approaches operating at LOS B or better in both peak hours.

#### 7.5 Dillon Dam Road at N. Ten Mile Road Improvements

The capacity analysis indicated that delays and queues on N. Ten Mile Road will increase as traffic increases on Dillon Dam Road related to background growth and the Lake Hill development. As discussed previously, the signalized intersection of SH 9 at Dillon Dam Road was not included in the analysis since the intersection is being evaluated as part of the CDOT 203 Interchange Study. The highway is approximately 325 feet south of N. Ten Mile Road and it has been observed that the queues can extend to N. Ten Mile Road, which may impact drivers' ability to turn from N. Ten Mile Road onto Dillon Dam Road. It is recommended that the CDOT 203 Interchange Study include the intersection of Dillon Dam Road at N. Ten Mile Road to better understand the impacts of the adjacent intersections.

To better understand the need for improvement at the intersection of Dillon Dam Road at N. Ten Mile Road, further analysis was conducted to determine when the side-street level of service begins to operate below LOS D and when the peak hour signal warrant would be met. **Table 6** equates operational changes at the N. Ten Mile Road intersection to the number of dwelling units that can be accommodated.

**Table 6: N. Ten Mile Road Improvement Triggers**

Scenario	Dwelling Units			Anticipated Timeline
	Single-Family	Multi-Family	Total	
Begins to Operate at LOS E	37	121	<b>158</b>	2 <sup>nd</sup> Quarter, Year 2024 Phase 1A + 1B 74% of 1B
Begins to Operate at LOS F	51	403	<b>454</b>	3 <sup>rd</sup> Quarter, Year 2027 Phase 1A through 4B + 18 MF
Peak Hour Signal Warrant Met (1 Peak)	37	295	<b>332</b>	2 <sup>nd</sup> Quarter, Year 2025 Phases 1A + 1B + 2A + 2B + 12% 3A
95 <sup>th</sup> Percentile Queue Extends ≥ 5 vehicles	51	485	<b>536</b>	Year 2037 Full Build + 100 MF

It is likely that when queues from SH 9 extend to N. Ten Mile Road that the estimated delays and queues calculated in this traffic study would be worsened. The degree of increase is unknown without further information of the volumes, signal timing, and queuing at SH 9. The improvements at N. Ten Mile Road will need to coincide with the operational and geometric recommendations at SH 9 and Dillon Dam Road from the CDOT 203 Interchange Project. If the intersection at SH 9 is proposed to become a roundabout, then the N. Ten Mile Road intersection could have a roundabout or a traffic signal. However, if the SH 9 intersection is proposed to remain signalized, then it would be recommended that the N. Ten Mile Road be coordinated and signalized, if/when warranted. **Therefore, it is recommended that the intersection of Dillon Dam Road at N. Ten Mile Road be included in the CDOT 203 Interchange Study to ensure the improvements at SH 9 and Dillon Dam Road provide benefits to the intersection at N. Ten Mile Road.**

## 8.0 FUTURE TRAFFIC CONDITIONS WITH SITE DEVELOPMENT – CLOSED DILLON DAM ROAD

This section discusses impacts associated with the potential closure of Dillon Dam Road over the dam. Denver Water has the authority to close the roadway if the dam is a target of a threat. For this condition, it was assumed that all Lake Hill traffic will travel south on Dillon Dam Road to SH 9. The existing and background through traffic on Dillon Dam Road were assumed to travel on I-70 during a closure and side street volumes were redirected to SH 9 as appropriate. The closure of the roadway would decrease the through volume on Dillon Dam Road in the future scenarios by up to 300 vph in the AM peak hour and 560 vph in the PM peak hour.

Reduction in through volume on Dillon Dam Road results in the unsignalized study intersections operating acceptably overall at LOS C or better in both peak periods for the short-term and long-term scenarios and for both housing options. All of the side-street movements and approaches are estimated to operate at LOS C or better in both peak hours, both future horizon years, and both housing scenarios. The signalized intersection of US Highway 6 at Dillon Dam Road will operate similarly to existing conditions for overall and per each movement. The northbound movements will continue to operate at LOS E in the AM peak hour due to the signal timing needed to accommodate the volumes through the intersection and split phasing. **With a dam closure, all of the study intersections will operate similarly or better than the existing conditions in both peak hours, both future horizon years, and both housing scenarios.**



## 9.0 QUEUE ANALYSIS

A queuing analysis was performed to determine if the queues would be accommodated by the existing storage length and if any of the queues impact an upstream intersection/access. **Table 2** provides the existing storage lengths or distance to nearest intersection/access, and the 95<sup>th</sup> percentile<sup>5</sup> and average queues for the two peak hours within each evaluation scenario.

As shown in **Table 2**, the majority of the 95<sup>th</sup> percentile queues are shorter than the provided storage length or nearest upstream intersection/access, except those highlighted with **blue bold** font. The 95<sup>th</sup> percentile queues exceed the existing storage length during the existing and background conditions for the following movements:

- **US Highway 6 at N. Dillon Dam Road**
  - Northbound Left-turn
  - Southbound Left-turn

Both side street movements at US Highway 6 have limited length to accommodate the turn lane storage needs. The northbound and southbound through lanes have become shared lanes with the left-turn to increase turning capacity. The signal timing is constrained by the progression needed on the highway and side street split phase operations. No mitigation measure is recommended.

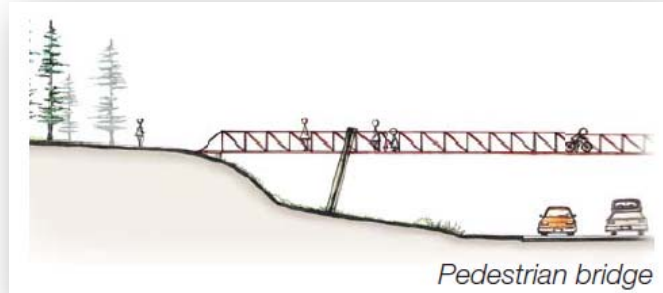
It should be noted that **the project trips only slightly increase queues at the study intersections**. The largest increases related to the trips will be on the westbound left-turn at N. Ten Mile Road and the northbound approach at La Bonte Street. It was estimated that the 95<sup>th</sup> percentile queue for the westbound left-turn at N. Ten Mile Road will be lengthened by up to four vehicles (assumes each vehicle utilizes 25 feet of space) in Year 2040. It was estimated that the 95<sup>th</sup> percentile queue for the northbound approach at La Bonte Street will be lengthened by up to five vehicles in Year 2040 compared to existing conditions.

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<sup>5</sup> It should be noted that the 95<sup>th</sup> percentile queue length is a theoretical queue that is 1.65 standard deviations above the average queue length. In theory, the 95<sup>th</sup> percentile queue would be exceeded 5% of the time based on the average queue length, but it is also possible that a queue this long may not occur.

## 10.0 FUTURE TRANSIT AND PEDESTRIAN/BICYCLIST AMENITIES

The Lake Hill Master Plan emphasizes the desire to have a transit-oriented, bicycle and pedestrian-friendly neighborhood to provide enhanced livability and connectivity within and surrounding the community. The Lake Hill property is across the street from the Dillion Reservoir Recreational Path and is also next to existing US Forest Service trails through the adjacent National Forest lands. The Lake Hill Master Plan anticipated including a pedestrian bridge over Dillon Dam Road from the Lake Hill community to the Dillon Recreational Path to provide a safe crossing route. The preliminary location of the pedestrian bridge has been identified just northeast of the south access roundabout to connect the proposed community center to the existing trail system. This location was determined to be within a quarter mile (approximately five-minute walk) from all the homes. The proposed roundabouts on Dillon Dam Road will also provide crosswalks for safe pedestrian crossing conditions for those that prefer to cross at-grade.



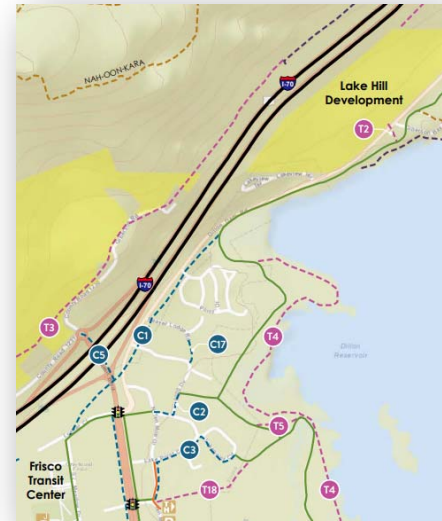
Source: Lake Hill Master Plan (July 2017)



Source: Lake Hill Master Plan (July 2017)

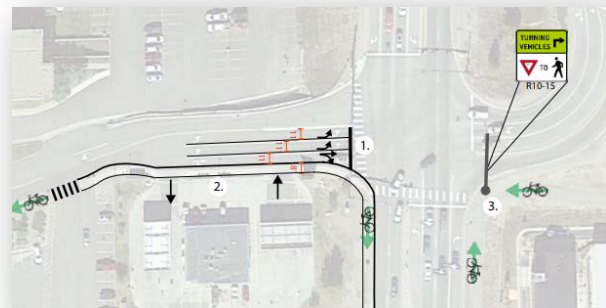
Within the Lake Hill neighborhood, it is proposed to provide a vast internal trail system linking the homes, community center, pedestrian bridge, and existing trails. Some of the trails will be paved pathways and others will be soft surface. Bike lanes will be considered on the internal roadways within the design process to provide safe connections for people biking.

The Frisco Trails Master Plan (March 2017) reviewed the existing trail system and made recommendations for future non-vehicular connectivity through and adjacent to the Town of Frisco. It was recommended that a trail connection be installed on the south side of Dillon Dam Road linking the existing Recreational Path to SH 9. The preliminary alignment shows the future trail connecting to the Recreational Path where it bends towards the reservoir and then crossing Dillon Dam Road and SH 9 to link to the Basecamp/Frisco Transit Center. The Frisco Trails Master Plan also proposed to install a paved path connecting Beaver Lodge Road to 9000 Divide and provide scenic walking trails along the waterfront. The Frisco Trails Master Plan recognizes the challenges of winter use on the Recreational Path related to plowing. Public comments indicated the desire for a maintained path during the winter for skiing, fat biking, and connection through Frisco.



Source: Frisco Trail Master Plan  
(March 2017)

The Frisco Trails Master Plan recommended that the intersection of Dillon Dam Road at SH 9 be reconstructed to accommodate an underpass in the long-term to provide a safe east-west connection for pedestrians and bicyclists between major activity centers of Frisco. The interim design included widening the sidewalk, limiting access, and providing a leading pedestrian interval at the signal. Residents of Lake Hill will benefit from each of the future trails and underpass by providing recreation and transportation opportunities directly outside their homes that connect into the Town of Frisco.



Source: Frisco Trail Master Plan (March 2017)

The listed recommendations are supported by this traffic study and will provide Lake Hill residents the opportunity to walk or bike to and from their home. Consider plowing the Recreational Path from the Lake Hill community into town to encourage non-vehicular travel in the winter season.

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The Lake Hill Master Plan determined that the best locations for the transit stops would be on the south side of the proposed roundabouts on Dillon Dam Road. Both locations would provide one bus stop per direction, for a total of four bus stops serving the Lake Hill community. Recently, Denver Water approved transit service across the dam which has led Summit Stage to review the existing transit routes and potential for rerouting to utilize Dillon Dam serve Lake Hill in the future. However, establishing a permanent transit route that will cross the dam and serve the Lake Hill community will be an ongoing challenge given that the Dillon Dam Road is closed regularly during the winter during snowstorms.

Ideally Summit Stage will one day provide transit access to the Lake Hill project and other residential developments along the Dillon Dam Road. However, this will require an adjustment to Summit Stage's typical operation of providing transit service that links communities rather than providing circulator or local access routes off the main connector roadways. One way that Lake Hill might be served is to provide a spur off of the "purple line" that connects between the Frisco Transfer Center and the Breckenridge Transfer Center. Another option might be a localized shuttle that links Lake Hill with the Frisco Transfer Center, and still another option may be some form of "Smart Transit" or demand responsive service as transit service technology evolves.

Given the uncertainty of future transit service to Lake Hill and other developments along the Dillon Dam Road, this study has taken a somewhat conservative alternative mode trip reduction of 10% that reduces automobile traffic to account for transit, bicycle, and pedestrian access or other forms of human powered transportation. Given that much of the proposed housing at Lake Hill will be deed restricted or "affordable" housing, the developer may not be able to aggressively subsidize new transit service. That said, the Lake Hill project is a worthy target for providing enhanced transit access.

## 11.0 CONCLUSIONS

The Lake Hill proposes to construct local workforce housing with 300 multi-family units, 85 townhomes, and 51 single-family detached homes for a total of 436 dwelling units. This traffic study also evaluated the scenario of adding another 100 homes (50 multi-family units and 50 townhomes) to Lake Hill to understand the traffic impacts related to a larger community. Access to the site is planned via two proposed driveways along Dillon Dam Road that are anticipated to be constructed as roundabouts. The accesses will lead to the internal roadway network to serve the Lake Hill community.

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Scenario 1 (436 units) of the project is estimated to generate approximately 2,462 weekday daily trips with 166 trips occurring in the AM peak hour and 207 trips occurring in the PM peak hour at build-out. Scenario 2 was assumed to add 100 homes and was estimated to add approximately 574 daily trips with 37 more trips in the AM peak hour and 45 more trips in the PM peak hour. **It was determined that the existing roadway and intersection network can serve the site added traffic volumes in the short-term and long-term regardless of the number of homes.**

The intersection of Dillon Dam Road and N. Ten Mile Road should be monitored in the future as traffic increases to determine if the traffic control needs to change to facilitate turning from the side-street. Based on this traffic impact study, the side-street stop-controlled at **N. Ten Mile Road is anticipated to meet the peak hour signal warrant in the PM peak hour with 332 dwelling units (37 single-family and 295 multi-family)**. It is recommended that the intersection of Dillon Dam Road at N. Ten Mile Road be included in the CDOT 203 Interchange Study to ensure the improvements at SH 9 and Dillon Dam Road provide benefits to the intersection at N. Ten Mile Road.

The study also determined that a closure of the dam will reduce the through volume on Dillon Dam Road resulting in all of the study intersections operating similarly or better than the existing conditions in both peak hours, both future horizon years, and both housing scenarios.

The accesses should be constructed with the following lane configuration:

- **Dillon Dam Road at North Access:** Construct as a single-lane roundabout.
- **Dillon Dam Road at South Access:** Construct as a single-lane roundabout.

The proposed site access and circulation will adequately serve the estimated vehicular trips and loading operations. The proposed internal trail system and pedestrian bridge over Dillon Dam Road will encourage residents to walk or bike to/from and through the Lake Hill community. The residents will be able to take advantage of the existing recreational path and hiking trails adjacent to the property. It is hoped that some form of transit will be provided on Dillon Dam Road and serve Lake Hill residents to connect to communities within Summit County. The Town, County, the developer and Summit Stage will need to work together to identify potential transit service options and funding sources. The implementation of non-auto amenities will achieve the Master Plan objectives of providing a livable, connected, and healthy community.

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# ***Tables and Figures:***

*Table 1 – Peak Hour Intersection Level-of-Service Summary*

*Table 2 – Peak Hour Queue Summary*

*Table 2A – Trip Generation Summary [Scenario 1 – 436 homes]*

*Table 2B – Trip Generation Summary [Scenario 2 – 536 homes]*

*Table 4: Summary of Trip Generation {IN REPORT}*

*Table 5: Distribution Calculations {IN REPORT}*

*Figure 1 – Vicinity Map*

*Figure 2 – Conceptual Site Plan*

*Figure 3 – Year 2019 Existing Traffic Volumes*

*Figure 4 – Year 2026 Background Traffic Volumes*

*Figure 5 – Year 2040 Background Traffic Volumes*

*Figure 6 – Site Trip Distribution*

*Figure 7 – Scenario 1 (436 units) - Site-Generated Traffic Volumes*

*Figure 8 – Scenario 2 (536 units) - Site-Generated Traffic Volumes*

*Figure 9 – Year 2026 Background + Scenario 1 Site-Generated Traffic Volumes*

*Figure 10 – Year 2026 Background + Scenario 2 Site-Generated Traffic Volumes*

*Figure 11 – Year 2040 Background + Scenario 1 Site-Generated Traffic Volumes*

*Figure 12 – Year 2040 Background + Scenario 2 Site-Generated Traffic Volumes*

*Figure 13 – Peak Hour Signal Warrant*

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Table 1 - Peak Hour Intersection Level of Service Summary																												
Intersection and Lanes Groups	Existing (Year 2019)				Year 2026 Background				Year 2026 Bkgrd + Project Scenario 1 (436 units)				Year 2026 Bkgrd + Project Scenario 2 (536 units)				Year 2040 Background				Year 2040 Bkgrd + Project Scenario 1 (436 units)				Year 2040 Bkgrd + Project Scenario 2 (536 units)			
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Signalized Control																												
Dillon Dam Road at State Highway 6	29	C	33	C	31	C	36	D	32	C	37	D	32	C	37	D	34	C	41	D	35	C	41	D	35	C	41	D
Eastbound Left	12	B	17	B	14	B	20	B	14	B	20	C	15	B	20	C	16	B	25	C	16	B	26	C	17	B	26	C
Eastbound Through	18	B	25	C	21	C	29	C	22	C	30	C	22	C	30	C	25	C	36	D	26	C	38	D	26	C	38	D
Eastbound Right	17	B	21	C	19	B	25	C	20	B	25	C	20	B	26	C	22	C	29	C	23	C	30	C	23	C	30	C
Westbound Left	12	B	17	B	14	B	20	B	15	B	21	C	15	B	21	C	18	B	26	C	19	B	26	C	19	B	27	C
Westbound Through	18	B	25	C	22	C	30	C	23	C	31	C	23	C	31	C	28	C	40	D	29	C	41	D	29	C	41	D
Westbound Right	17	B	23	C	20	B	27	C	21	C	28	C	21	C	28	C	25	C	34	C	26	C	34	C	26	C	34	C
Northbound Left	62	E	55	D	61	E	55	E	61	E	55	D	62	E	55	D	61	E	54	D	61	E	54	D	61	E	54	D
Northbound Left+Through	61	E	55	D	62	E	55	D	61	E	54	D	60	E	54	D	61	E	54	D	60	E	53	D	60	E	53	D
Northbound Right	51	D	46	D	49	D	46	D	49	D	45	D	49	D	45	D	48	D	45	D	48	D	45	D	47	D	45	D
Southbound Left	54	D	53	D	54	D	53	D	54	D	53	D	54	D	53	D	55	D	55	D	55	D	55	E	55	D	55	E
Southbound Left+Through	54	D	52	D	54	D	52	D	54	D	52	D	54	D	52	D	54	D	54	D	55	D	54	D	55	D	55	D
Southbound Right	49	D	40	D	48	D	38	D	48	D	38	D	48	D	38	D	47	D	36	D	47	D	36	D	47	D	36	D
Stop-Controlled																												
Dillon Dam Road at N. Ten Mile Road	3	A	4	A	4	A	4	A	4	A	5	A	4	A	5	A	4	A	6	A	5	A	9	A	5	A	10	A
Westbound Left	18	C	26	D	20	C	32	D	25	D	46	E	27	D	51	F	25	D	55	F	34	D	93	F	38	E	105	F
Westbound Right	10	A	13	B	10	A	13	B	10	B	15	B	10	B	15	C	10	B	15	B	11	B	17	C	11	B	17	C
Northbound Through+Right	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A
Southbound Left+Through	8	A	9	A	8	A	9	A	8	A	9	A	8	A	9	A	8	A	9	A	8	A	10	A	8	A	10	A
Dillon Dam Road at Beaver Lodge Road	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	1	A	0	A	1	A	0	A	1	A
Westbound Left+Right	13	B	17	C	14	B	19	C	15	C	23	C	16	C	24	C	14	B	21	C	16	C	26	D	17	C	27	D
Northbound Through+Right	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A
Southbound Left+Through	0	A	9	A	0	A	9	A	0	A	9	A	0	A	9	A	0	A	9	A	0	A	9	A	0	A	10	A
Dillon Dam Road at Prospect Point Drive	1	A	1	A	1	A	1	A	1	A	1	A	1	A	1	A	1	A	1	A	1	A	1	A	1	A	1	A
Westbound Left+Right	14	B	21	C	15	B	24	C	17	C	31	D	18	C	34	D	17	C	32	D	20	C	45	E	20	C	48	E
Northbound Through+Right	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A
Southbound Left+Through	8	A	9	A	8	A	10	A	8	A	10	A	8	A	10	B	8	A	10	A	8	A	11	B	8	A	11	B
Dillon Dam Road at Lake View Terrace	1	A	0	A	1	A	0	A	1	A	0	A	1	A	0	A	1	A	0	A	1	A	0	A	1	A	0	A
Eastbound Left+Right	12	B	11	B	12	B	11	B	14	B	11	B	14	B	12	B	14	B	11	B	16	C	12	B	16	C	12	B
Northbound Left+Through	8	A	8	A	8	A	8	A	8	A	8	A	8	A	8	A	8	A	0	A	9	A	0	A	9	A	9	A
Southbound Through+Right	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A	0	A
Roundabout																												
Dillon Dam Road at La Bonte Street	5	A	9	A	5	A	10	A	5	A	11	B	6	A	11	B	6	A	13	B	6	A	14	B	6	A	14	B
Westbound Left+Right	4	A	8	A	5	A	9	A	5	A	10	A	5	A	10	A	5	A	12	B	5	A	12	B	6	A	13	B
Northbound Through+Right	5	A	10	B	5	A	12	B	5	A	13	B	6	A	13	B	6	A	17	C	6	A	18	C	6	A	19	C
Southbound Left+Through	5	A	7	A	6	A	7	A	6	A	8	A	6	A	8	A	6	A	9	A	6	A	9	A	6	A	9	A
Dillon Dam Road at South Access									5	A	7	A	6	A	8	A					6	A	8	A	6	A	9	A
Eastbound Left+Right									5	A	5	A	5	A	5	A					6	A	5	A	6	A	5	A
Northbound Left+Through									5	A	8	A	5	A	9	A					6	A	10	A	6	A	10	A
Southbound Through+Right									6	A	6	A	6	A	7	A					6	A	7	A	6	A	7	A
Dillon Dam Road at North Access									5	A	7	A	5	A	7	A					6	A	8	A	6	A	8	A
Eastbound Left+Right									5	A	5	A	5	A	5	A					5	A	5	A	5	A	5	A
Northbound Left+Through									5	A	8	A	5	A	8	A					6	A	9	A	6	A	9	A
Southbound Through+Right									5	A	6	A	5	A	6	A					6	A	7	A	6	A	7	A

Note: Delay represented in average seconds per vehicle.

Table 2 - Peak Hour Queue Summary																															
Intersection and Lanes Groups		Storage or Dist. To Adj. Int	Existing (Year 2019)				Year 2026 Background				Year 2026 Bkgrd + Project Scenario 1 (436 units)				Year 2026 Bkgrd + Project Scenario 2 (536 units)				Year 2040 Background				Year 2040 Bkgrd + Project Scenario 1 (436 units)				Year 2040 Bkgrd + Project Scenario 2 (536 units)				
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		
			Avg.	95 <sup>th</sup>	Avg.	95 <sup>th</sup>	Avg.	95 <sup>th</sup>	Avg.	95 <sup>th</sup>	Avg.	95 <sup>th</sup>	Avg.	95 <sup>th</sup>	Avg.	95 <sup>th</sup>	Avg.	95 <sup>th</sup>	Avg.	95 <sup>th</sup>	Avg.	95 <sup>th</sup>	Avg.	95 <sup>th</sup>	Avg.	95 <sup>th</sup>	Avg.	95 <sup>th</sup>	Avg.	95 <sup>th</sup>	
Signalized Control																															
Dillon Dam Road at State Highway 6																															
Eastbound Left	500'	30'	90'	47'	109'	49'	128'	67'	134'	51'	131'	69'	135'	51'	132'	69'	136'	68'	163'	90'	175'	70'	167'	91'	183'	70'	168'	92'	187'		
Eastbound Through	5740'	106'	230'	149'	266'	126'	254'	181'	293'	128'	258'	187'	293'	129'	260'	188'	293'	162'	309'	243'	360'	165'	317'	250'	360'	166'	317'	251'	360'		
Eastbound Right	5740'	0'	57'	0'	55'	0'	61'	0'	57'	0'	62'	0'	59'	0'	62'	0'	60'	0'	68'	0'	61'	0'	70'	0'	63'	0'	71'	0'	63'		
Westbound Left	150'	34'	99'	44'	103'	40'	108'	54'	112'	42'	112'	60'	121'	43'	114'	61'	123'	50'	126'	72'	136'	53'	132'	78'	144'	54'	135'	80'	147'		
Westbound Through	2000'	118'	250'	157'	281'	143'	287'	196'	307'	146'	292'	201'	307'	147'	293'	201'	307'	194'	387'	271'	389'	197'	387'	274'	389'	198'	387'	274'	389'		
Westbound Right	420'	0'	59'	0'	79'	0'	69'	0'	85'	0'	71'	0'	85'	0'	71'	0'	85'	0'	81'	0'	94'	0'	81'	0'	94'	0'	81'	0'	94'		
Northbound Left	110'	115'	167'	116'	153'	131'	185'	130'	167'	142'	196'	135'	173'	146'	201'	137'	174'	152'	207'	149'	185'	162'	216'	156'	191'	167'	222'	158'	193'		
Northbound Left+Through	280'	118'	171'	123'	160'	137'	192'	134'	171'	149'	204'	141'	177'	149'	205'	141'	178'	160'	215'	154'	189'	171'	226'	161'	195'	171'	226'	163'	196'		
Northbound Right	70'	0'	36'	2'	40'	0'	42'	15'	53'	8'	52'	22'	59'	10'	53'	23'	60'	13'	56'	38'	76'	20'	64'	44'	82'	22'	67'	45'	84'		
Southbound Left	120'	106'	143'	173'	227'	121'	164'	208'	281'	121'	164'	212'	285'	121'	164'	212'	285'	140'	187'	244'	336'	140'	187'	246'	341'	140'	187'	246'	341'		
Southbound Left+Through	510'	109'	147'	181'	233'	123'	165'	214'	286'	126'	168'	218'	290'	126'	168'	220'	291'	144'	191'	251'	344'	146'	193'	255'	350'	146'	193'	256'	351'		
Southbound Right	510'	0'	48'	0'	40'	0'	52'	0'	47'	0'	52'	0'	47'	0'	52'	0'	47'	0'	56'	0'	50'	0'	56'	0'	50'	0'	56'	0'	50'		
Stop-Controlled																															
Dillon Dam Road at N. Ten Mile Road																															
Westbound Left	500'	-	23'	-	40'	-	28'	-	53'	-	38'	-	73'	-	40'	-	78'	-	43'	-	93'	-	60'	-	128'	-	65'	-	138'		
Westbound Right	100'	-	5'	-	15'	-	8'	-	18'	-	8'	-	23'	-	8'	-	25'	-	8'	-	25'	-	8'	-	30'	-	8'	-	33'		
Northbound Through+Right	350'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'		
Southbound Left+Through	810'	-	0'	-	5'	-	5'	-	5'	-	5'	-	8'	-	5'	-	8'	-	5'	-	8'	-	8'	-	10'	-	8'	-	0'		
Dillon Dam Road at Beaver Lodge Road																															
Westbound Left+Right	490'	-	3'	-	5'	-	3'	-	5'	-	5'	-	8'	-	5'	-	8'	-	5'	-	13'	-	5'	-	15'	-	5'	-	15'		
Northbound Through+Right	810'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'		
Southbound Left+Through	630'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'		
Dillon Dam Road at Prospect Point Drive																															
Westbound Left+Right	90'	-	5'	-	10'	-	5'	-	13'	-	8'	-	18'	-	8'	-	20'	-	8'	-	25'	-	10'	-	33'	-	10'	-	35'		
Northbound Through+Right	630'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'		
Southbound Left+Through	1870'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	3'	-	0'	-	3'	-	0'	-	3'	-	0'	-	3'		
Dillon Dam Road at Lake View Terrace																															
Eastbound Left+Right	300'	-	5'	-	0'	-	8'	-	0'	-	8'	-	0'	-	10'	-	0'	-	10'	-	3'	-	13'	-	3'	-	13'	-	3'		
Northbound Left+Through	1870'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'		
Southbound Through+Right	970'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'	-	0'		
Roundabout																															
Dillon Dam Road at La Bonte Street																															
Westbound Left+Right	570'	-	0'	-	25'	-	0'	-	50'	-	25'	-	50'	-	25'	-	50'	-	25'	-	75'	-	25'	-	75'	-	25'	-	75'		
Northbound Through+Right	180'	-	25'	-	100'	-	25'	-	125'	-	25'	-	125'	-	25'	-	125'	-	25'	-	175'	-	25'	-	200'	-	50'	-	225'		
Southbound Left+Through	280'	-	25'	-	50'	-	25'	-	50'	-	25'	-	50'	-	25'	-	75'	-	50'	-	75'	-	50'	-	75'	-	50'	-	75'		
Dillon Dam Road at South Access																															
Eastbound Left+Right	300'									-	0'	-	0'	-	0'	-	0'					-	0'	-	0'	-	0'	-	0'		
Northbound Left+Through	970'									-	25'	-	75'	-	25'	-	75'					-	25'	-	100'	-	25'	-	125'		
Southbound Through+Right	1430'									-	25'	-	50'	-	25'	-	50'					-	50'	-	50'	-	50'	-	50'		
Dillon Dam Road at North Access																															
Eastbound Left+Right	300'									-	0'	-	0'	-	0'	-	0'					-	0'	-	0'	-	0'	-	0'		
Northbound Left+Through	1430'									-	25'	-	75'	-	25'	-	75'					-	25'	-	100'	-	25'	-	100'		
Southbound Through+Right	350'									-	25'	-	50'	-	25'	-	50'					-	50'	-	50'	-	50'	-	50'		



**Lake Hill Development - Frisco, CO**  
**Traffic Impact Study**



**Table 3A - Trip Generation Summary [Scenario 1 - 436 homes]**

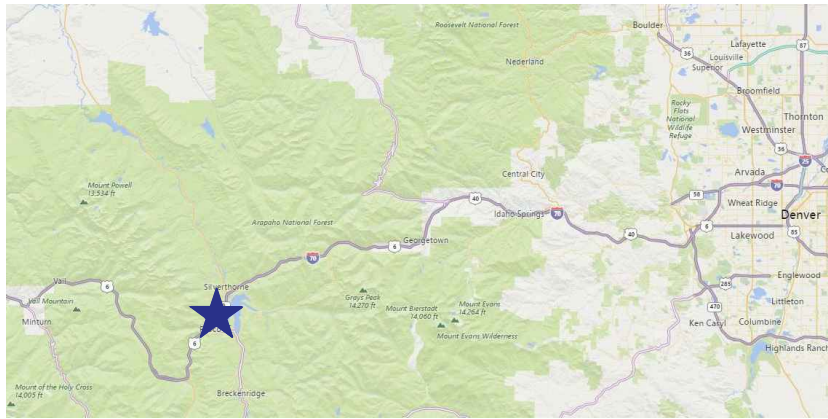
Land Use	Size	Unit	Non-Auto Factor	Average Daily Trips				AM Peak Hour Trips				PM Peak Hour Trips			
				Rate	Total	In	Out	Rate	Total	In	Out	Rate	Total	In	Out
Weekday															
ITE 210 - Single-Family Detached Housing	51	Dwelling Units	0.90	9.44	433	217	216	0.74	34	9	25	0.99	45	28	17
ITE 220 - Multi-Family Housing (Low-Rise)	85	Dwelling Units	0.90	7.32	560	280	280	0.46	35	8	27	0.56	43	27	16
ITE 221 - Multi-Family Housing (Mid-Rise)	300	Dwelling Units	0.90	5.44	1,469	735	734	0.36	97	25	72	0.44	119	73	46
Total Weekday New Trips:				2,462 1,232 1,230				AM > 166 42 124				PM > 207 128 79			

*Source: ITE Trip Generation 10th Edition, 2017.*

**Table 3B - Trip Generation Summary [Scenario 2 - 536 homes]**

Land Use	Size	Unit	Non-Auto Factor	Average Daily Trips				AM Peak Hour Trips				PM Peak Hour Trips			
				Rate	Total	In	Out	Rate	Total	In	Out	Rate	Total	In	Out
Weekday															
ITE 210 - Single-Family Detached Housing	51	Dwelling Units	0.90	9.44	433	217	216	0.74	34	9	25	0.99	45	28	17
ITE 220 - Multi-Family Housing (Low-Rise)	135	Dwelling Units	0.90	7.32	889	445	444	0.46	56	13	43	0.56	68	43	25
ITE 221 - Multi-Family Housing (Mid-Rise)	350	Dwelling Units	0.90	5.44	1,714	857	857	0.36	113	29	84	0.44	139	85	54
Total Weekday New Trips:				3,036	1,519	1,517	AM >	203	51	152	PM >	252	156	96	

*Source: ITE Trip Generation 10th Edition, 2017.*

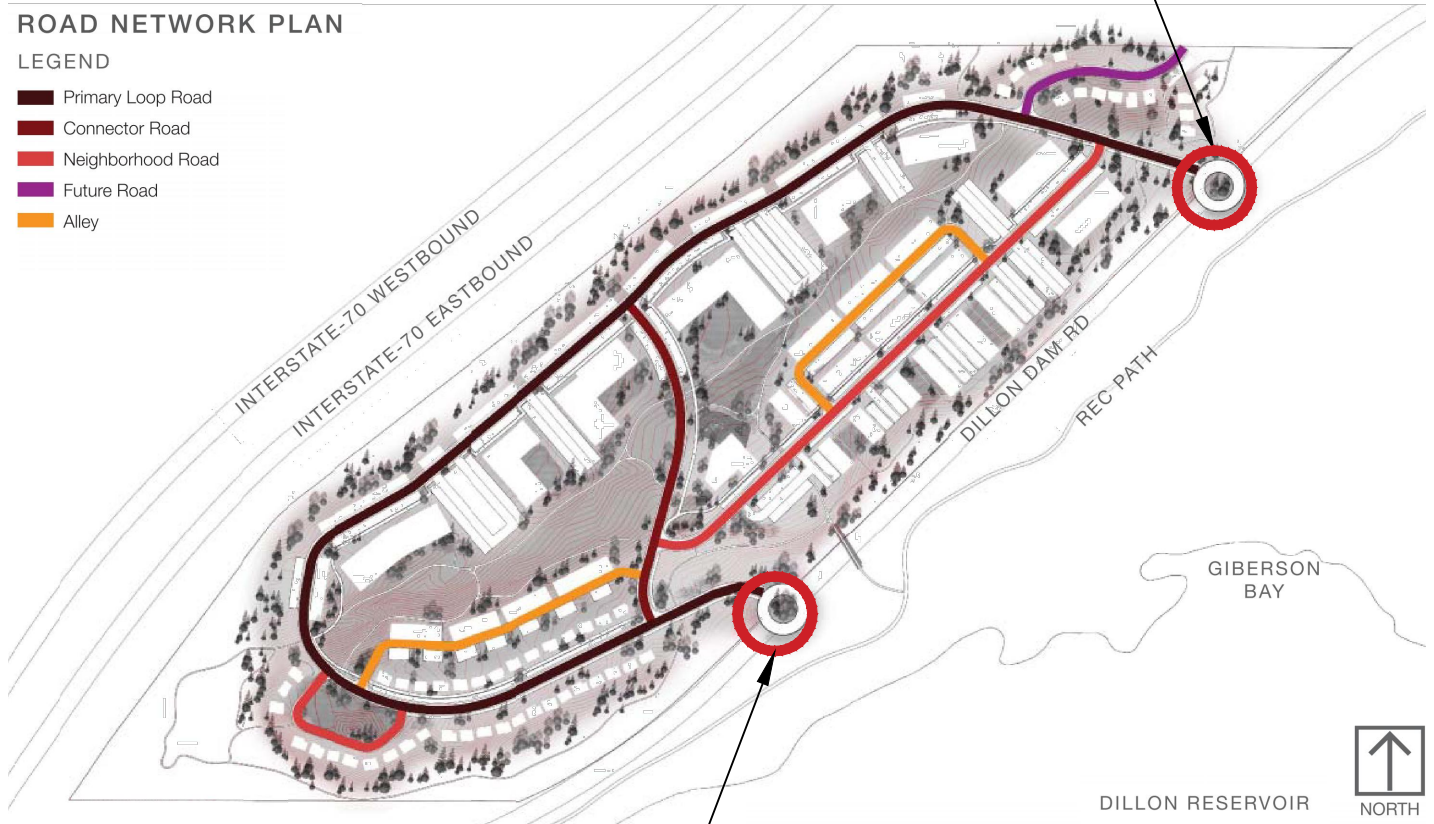


**Proposed Access 2 (North)**  
Full Movement  
Roundabout

## ROAD NETWORK PLAN

### LEGEND

- Primary Loop Road
- Connector Road
- Neighborhood Road
- Future Road
- Alley



**Proposed Access 1 (South)**  
Full Movement  
Roundabout

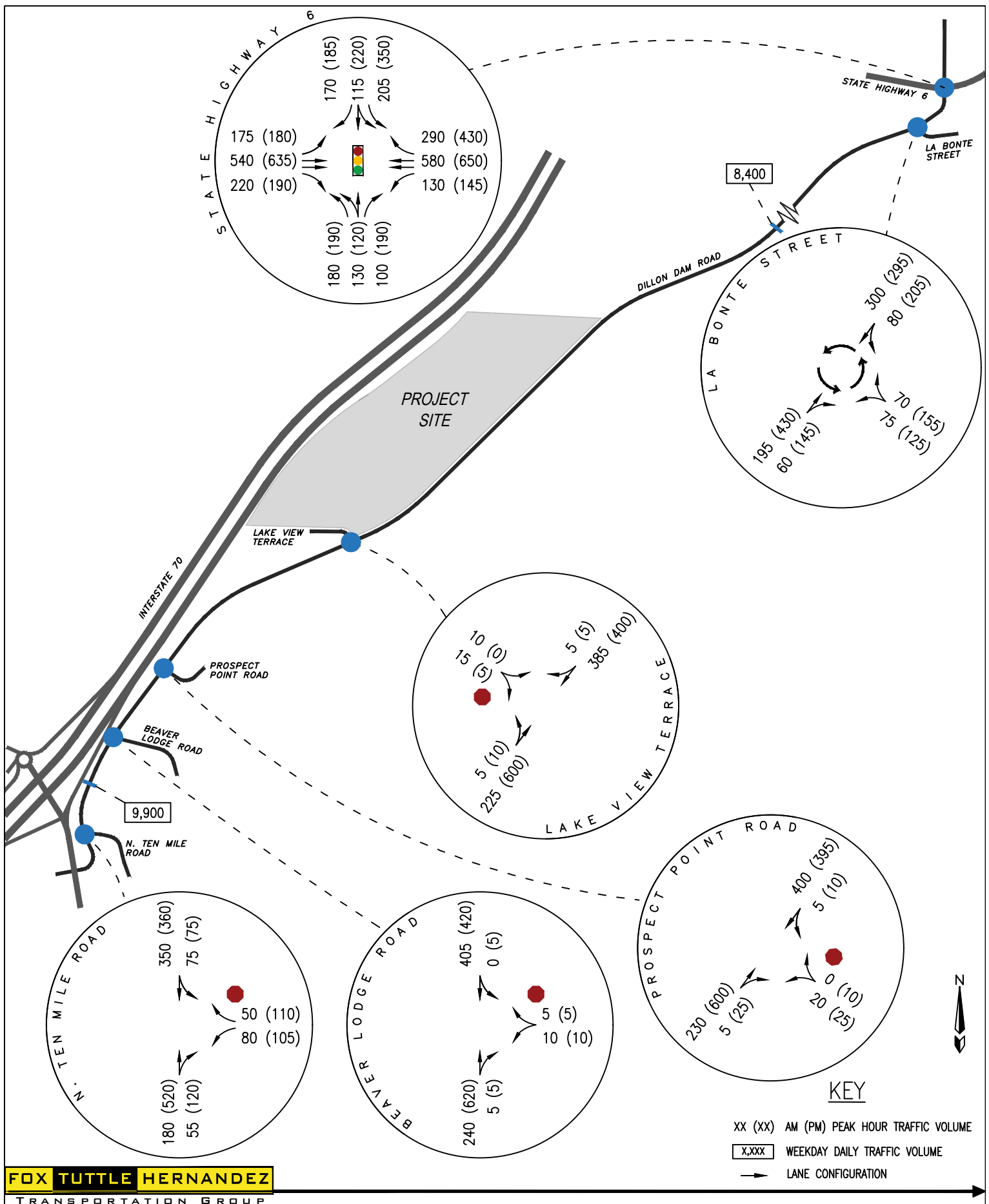




Project #	19004	Original Scale	NTS	Date	6/12/19	Drawn by	CRS	Figure #	3
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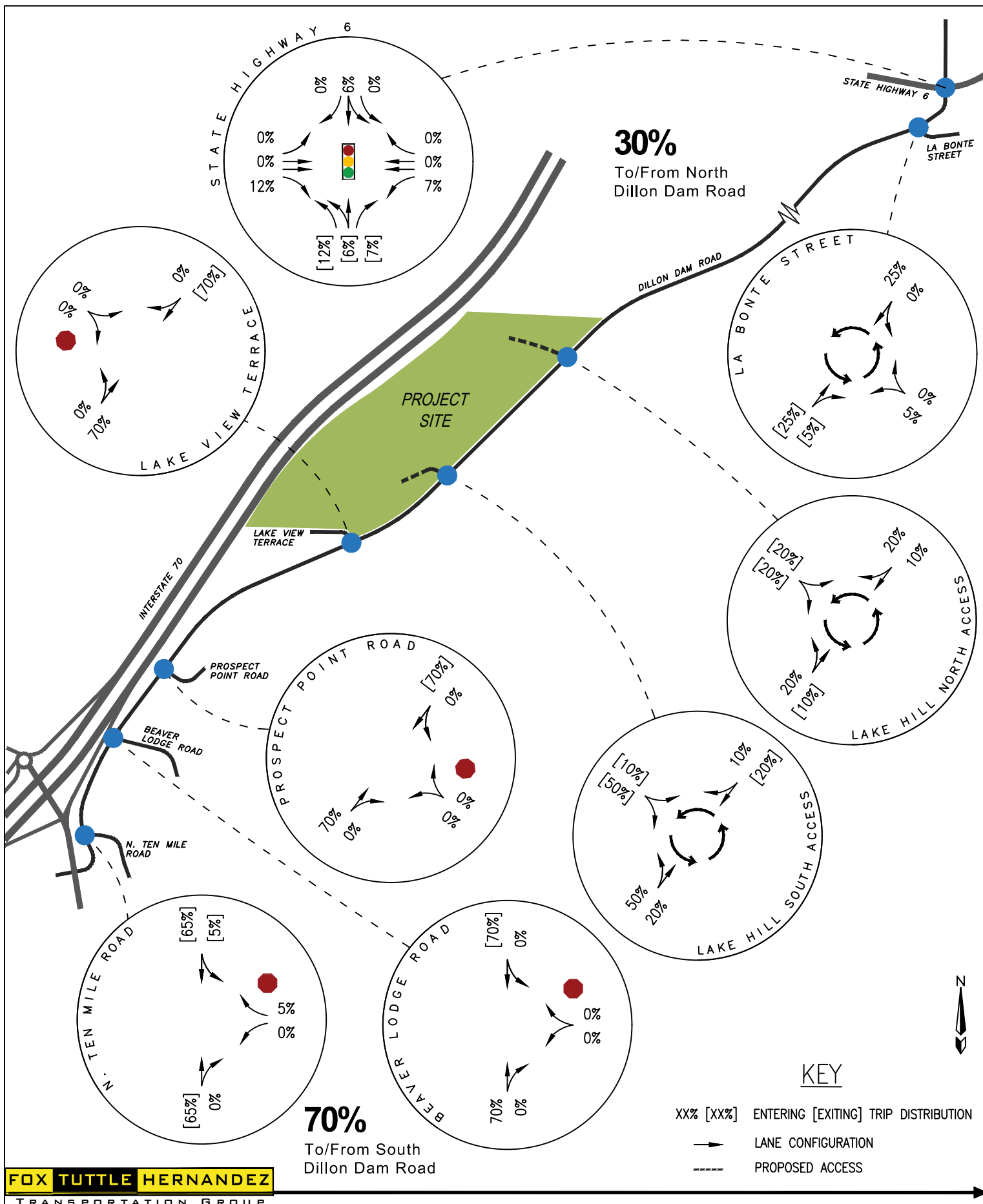


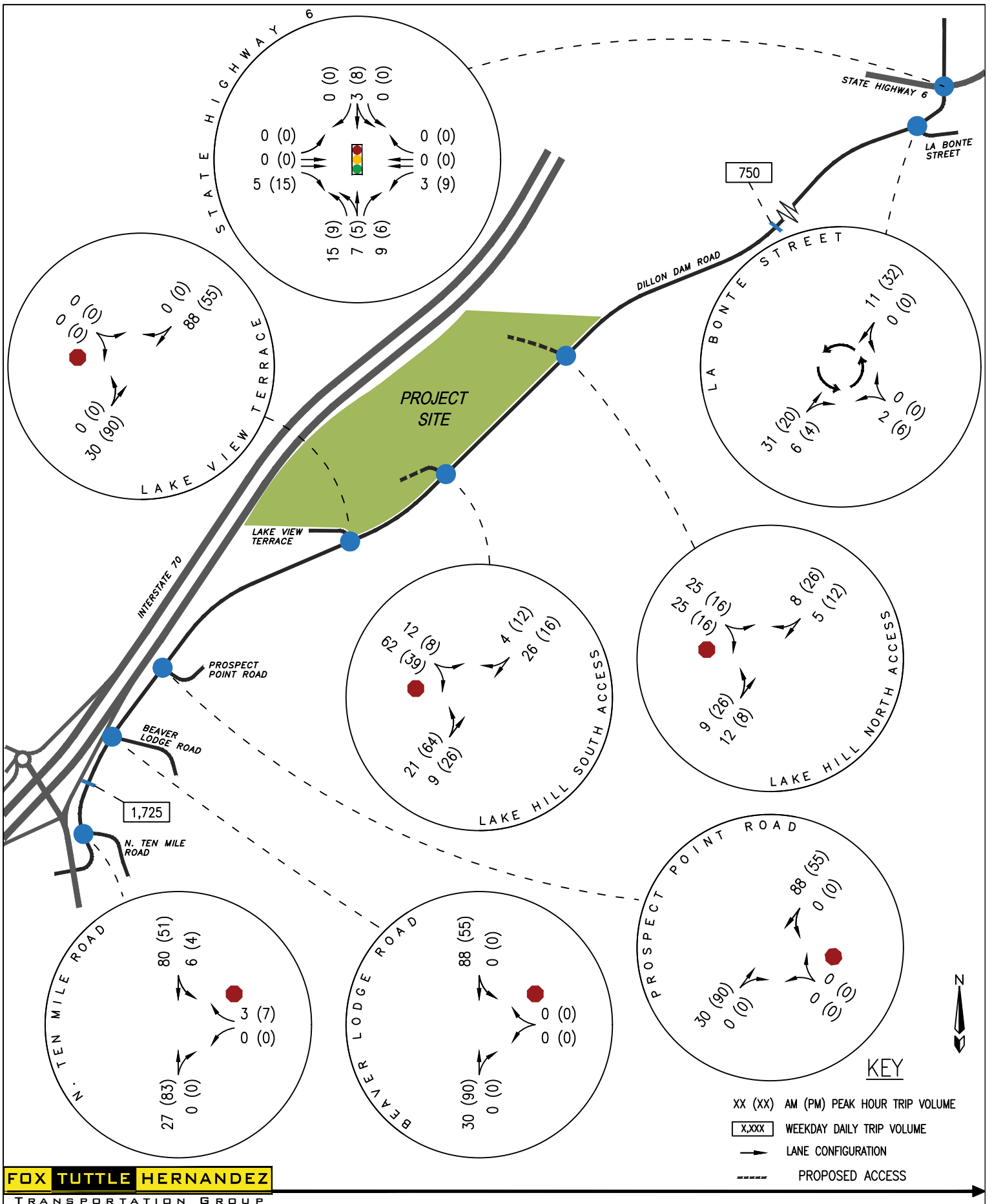
Project #	19004	Original Scale	NTS	Date	6/12/19	Drawn by	CRS	Figure #	4
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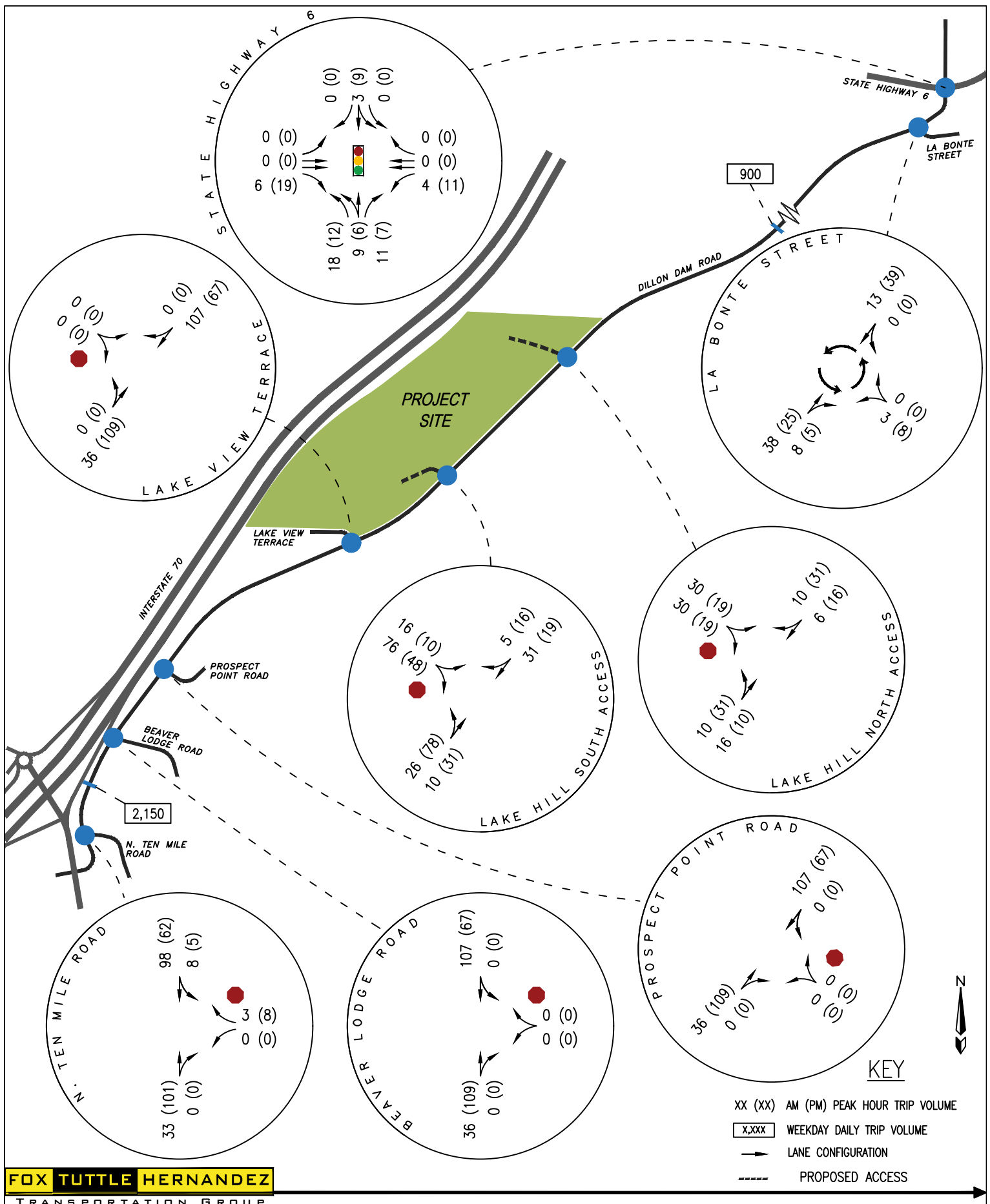
LAKE HILL DEVELOPMENT TRAFFIC IMPACT STUDY  
 YEAR 2040 BACKGROUND TRAFFIC VOLUMES

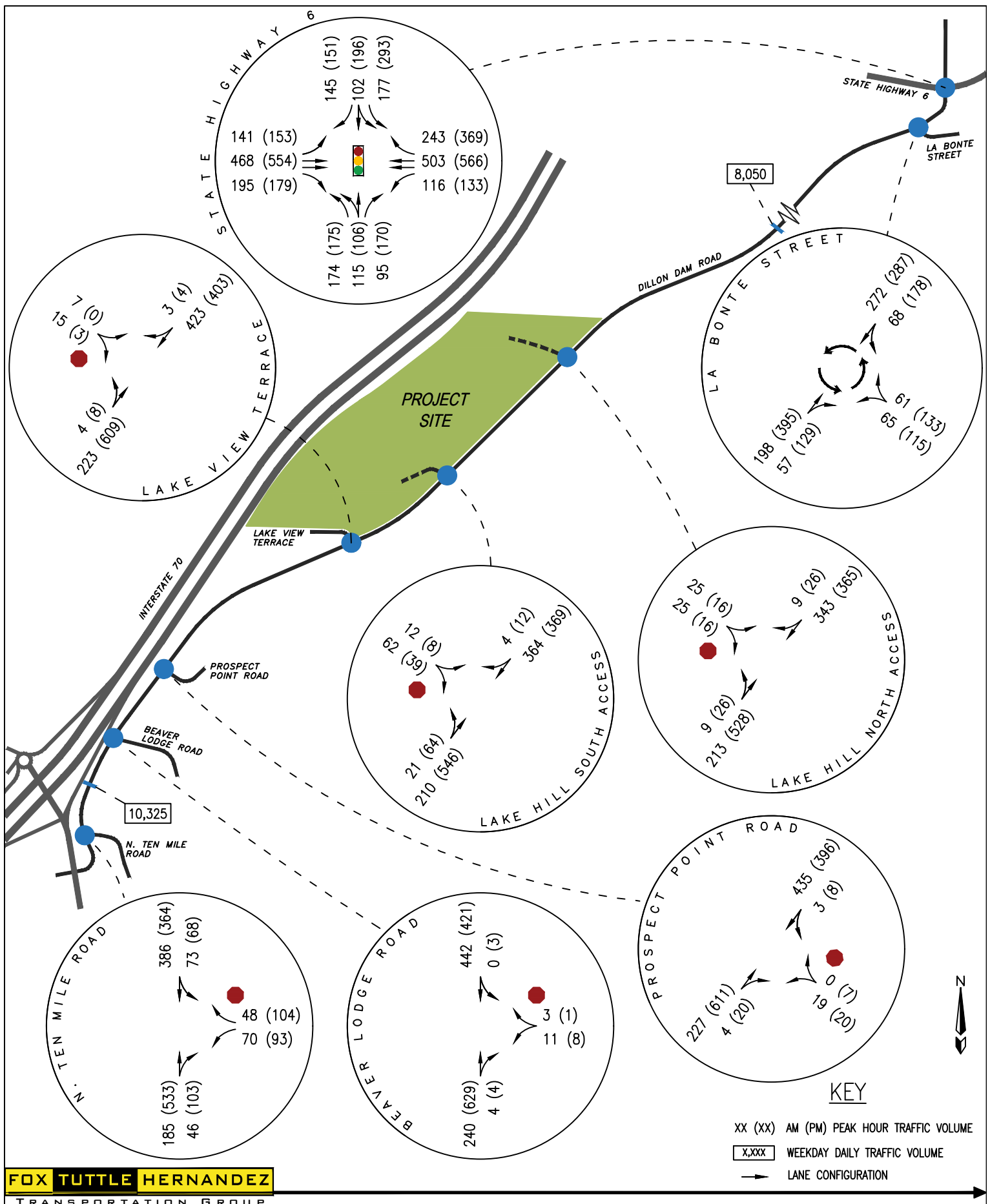
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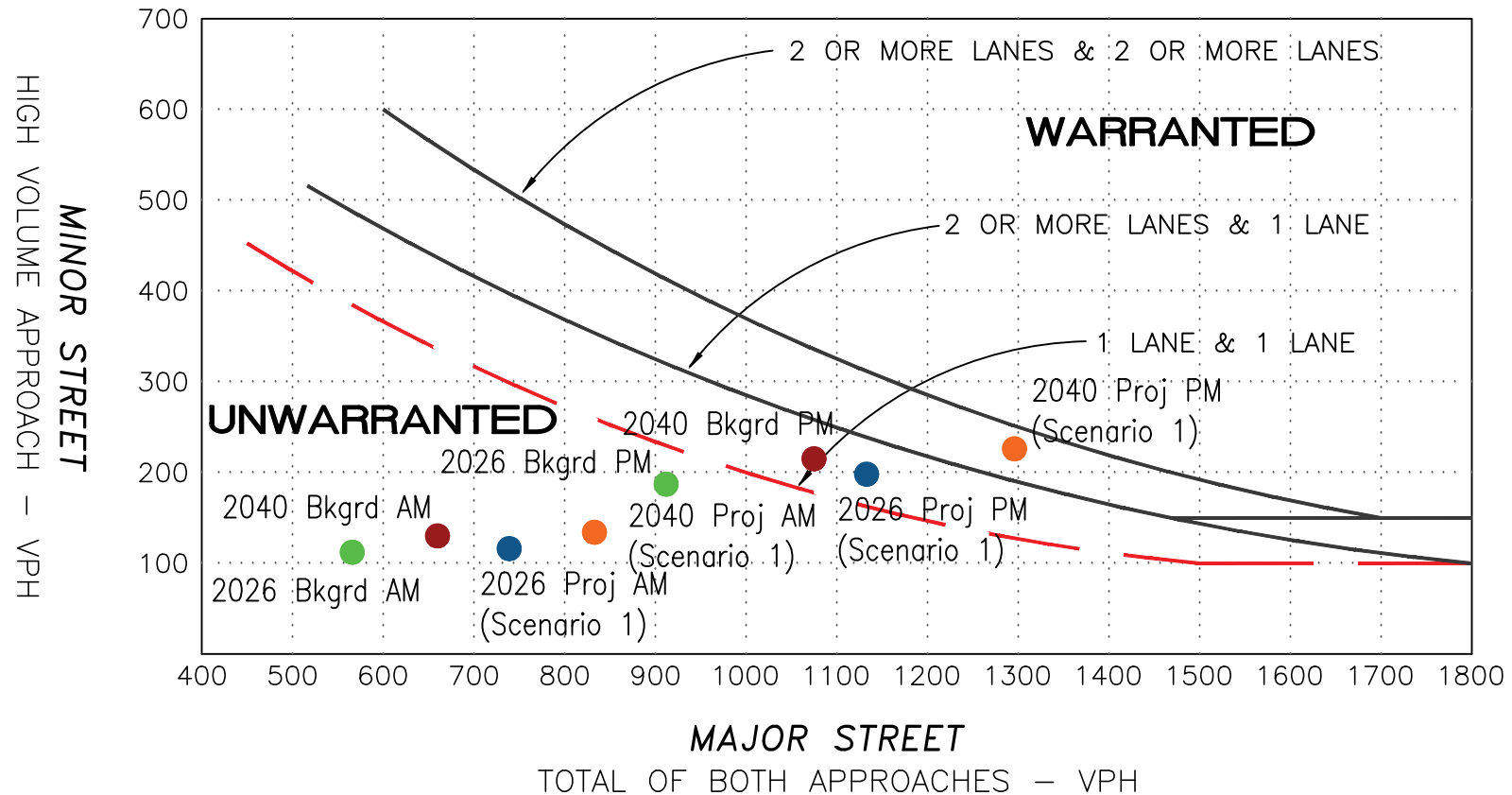


## YEAR 2040 BACKGROUND + SCENARIO 1 SITE-GENERATED TRAFFIC VOLUMES

Project #	19004	Original Scale	NTS	Date	6/12/19	Drawn by	CRS	Figure #	11
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# PEAK HOUR VOLUME WARRANT DILLON DAM ROAD / N. TEN MILE ROAD



NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

# ***Appendix:***

*Level-of-Service Definitions*

*Existing Traffic Data*

*Preliminary Forecasted Volumes (CDOT Interchange Study)*

*Intersection Capacity Worksheets*

## ***Level-of-Service Definitions***



### LEVEL OF SERVICE DEFINITIONS

In rating roadway and intersection operating conditions with existing or future traffic volumes, “Levels of Service” (LOS) A through F are used, with LOS A indicating very good operation and LOS F indicating poor operation. Levels of service at signalized and unsignalized intersections are closely associated with vehicle delays experienced in seconds per vehicle. More complete level of service definitions and delay data for signal and stop sign controlled intersections are contained in the following table for reference.

Level of Service Rating	Delay in seconds per vehicle (a)		Definition
	Signalized	Unsignalized	
A	0.0 to 10.0	0.0 to 10.0	Low vehicular traffic volumes; primarily free flow operations. Density is low and vehicles can freely maneuver within the traffic stream. Drivers are able to maintain their desired speeds with little or no delay.
B	10.1 to 20.0	10.1 to 15.0	Stable vehicular traffic volume flow with potential for some restriction of operating speeds due to traffic conditions. Vehicle maneuvering is only slightly restricted. The stopped delays are not bothersome and drivers are not subject to appreciable tension.
C	20.1 to 35.0	15.1 to 25.0	Stable traffic operations, however the ability for vehicles to maneuver is more restricted by the increase in traffic volumes. Relatively satisfactory operating speeds prevail, but adverse signal coordination or longer vehicle queues cause delays along the corridor.
D	35.1 to 55.0	25.1 to 35.0	Approaching unstable vehicular traffic flow where small increases in volume could cause substantial delays. Most drivers are restricted in ability to maneuver and selection of travel speeds due to congestion. Driver comfort and convenience are low, but tolerable.
E	55.1 to 80.0	35.1 to 50.0	Traffic operations characterized by significant approach delays and average travel speeds of one-half to one-third the free flow speed. Vehicular flow is unstable and there is potential for stoppages of brief duration. High signal density, extensive vehicle queuing, or corridor signal progression/timing are the typical causes of vehicle delays at signalized corridors.
F	> 80.0	> 50.0	Forced vehicular traffic flow and operations with high approach delays at critical intersections. Vehicle speeds are reduced substantially and stoppages may occur for short or long periods of time because of downstream congestion.

(a) Delay ranges based on 2010 Highway Capacity Manual criteria.



*Existing Traffic Data*



Dillon/Frisco, CO  
Lake Hill Impact Study  
AM Peak  
Dillon Dam Rd and Ten Mile Dr

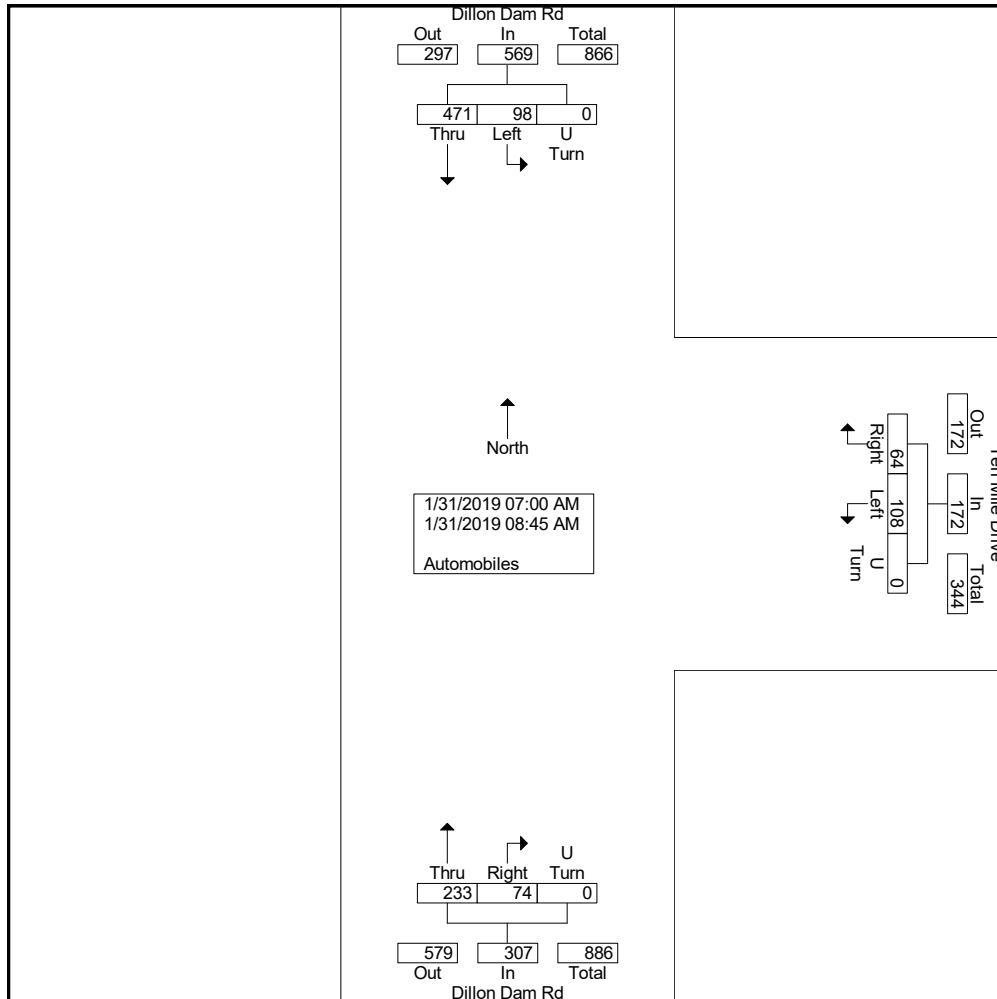
File Name : Dillon Dam Rd & Ten Mile AM  
Site Code : IPO 38  
Start Date : 1/31/2019  
Page No : 1

Groups Printed- Automobiles

Start Time	Ten Mile Drive Westbound				Dillon Dam Rd Northbound				Dillon Dam Rd Southbound				Int. Total
	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	
07:00 AM	7	4	0	11	12	6	0	18	7	39	0	46	75
07:15 AM	14	6	0	20	15	7	0	22	15	53	0	68	110
07:30 AM	12	1	0	13	29	8	0	37	9	83	0	92	142
07:45 AM	14	15	0	29	46	14	0	60	15	61	0	76	165
Total	47	26	0	73	102	35	0	137	46	236	0	282	492
08:00 AM	19	13	0	32	37	10	0	47	17	61	0	78	157
08:15 AM	14	12	0	26	19	8	0	27	8	47	0	55	108
08:30 AM	16	5	0	21	42	7	0	49	13	56	0	69	139
08:45 AM	12	8	0	20	33	14	0	47	14	71	0	85	152
Total	61	38	0	99	131	39	0	170	52	235	0	287	556
Grand Total	108	64	0	172	233	74	0	307	98	471	0	569	1048
Apprch %	62.8	37.2	0		75.9	24.1	0		17.2	82.8	0		
Total %	10.3	6.1	0	16.4	22.2	7.1	0	29.3	9.4	44.9	0	54.3	

Dillon/Frisco, CO  
Lake Hill Impact Study  
AM Peak  
Dillon Dam Rd and Ten Mile Dr

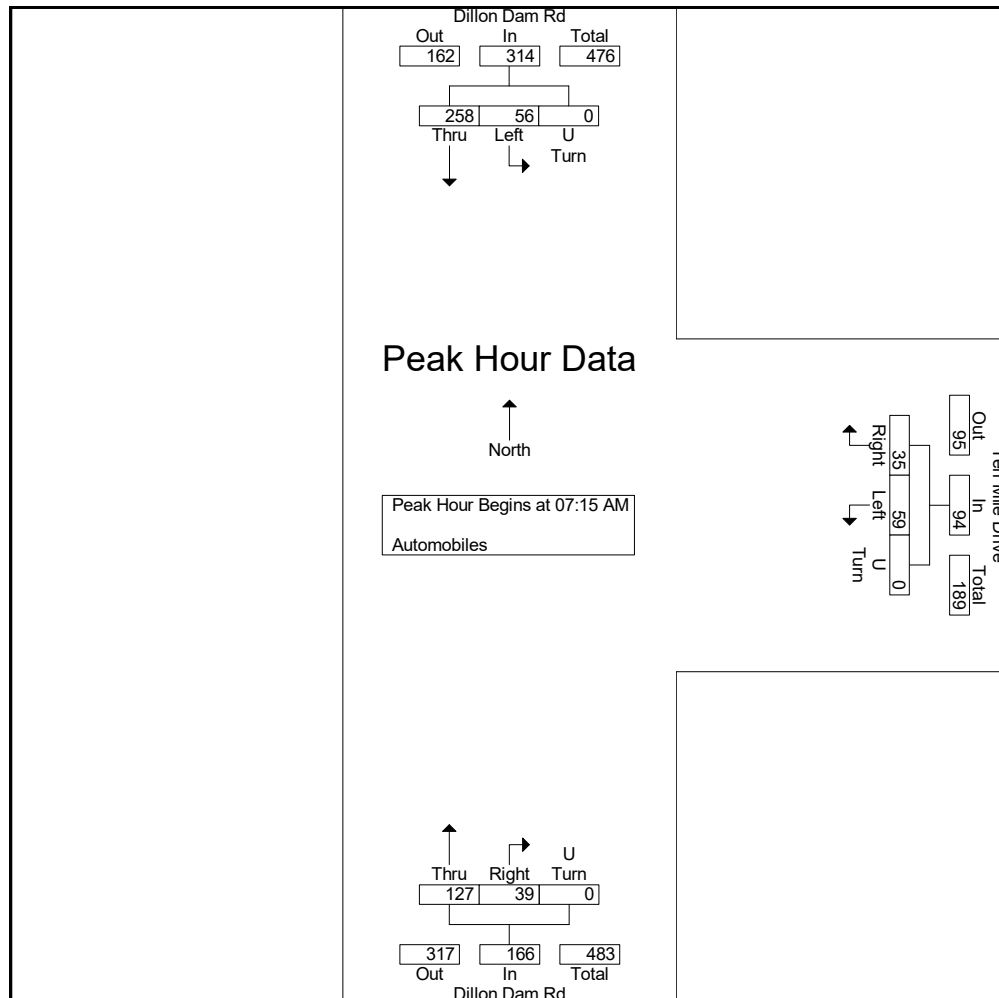
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Site Code : IPO 38  
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Dillon/Frisco, CO  
Lake Hill Impact Study  
AM Peak  
Dillon Dam Rd and Ten Mile Dr

File Name : Dillon Dam Rd & Ten Mile AM  
Site Code : IPO 38  
Start Date : 1/31/2019  
Page No : 3

	Ten Mile Drive Westbound				Dillon Dam Rd Northbound				Dillon Dam Rd Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	14	6	0	20	15	7	0	22	15	53	0	68	110
07:30 AM	12	1	0	13	29	8	0	37	9	83	0	92	142
07:45 AM	14	15	0	29	46	14	0	60	15	61	0	76	165
08:00 AM	19	13	0	32	37	10	0	47	17	61	0	78	157
Total Volume	59	35	0	94	127	39	0	166	56	258	0	314	574
% App. Total	62.8	37.2	0		76.5	23.5	0		17.8	82.2	0		
PHF	.776	.583	.000	.734	.690	.696	.000	.692	.824	.777	.000	.853	.870



Dillon/Frisco, CO  
Lake Hill Impact Study  
PM Peak  
Dillon Dam Rd and Ten Mile Dr

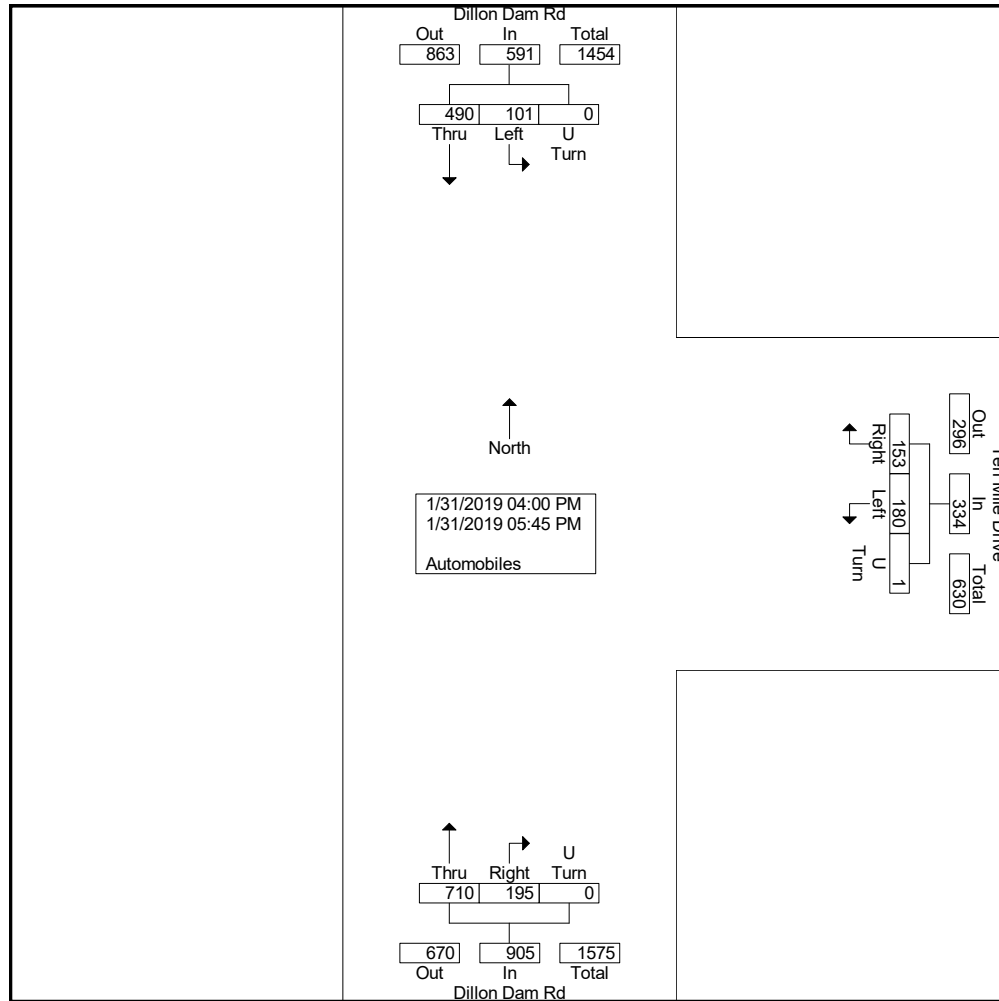
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Site Code : IPO 38  
Start Date : 1/31/2019  
Page No : 1

Groups Printed- Automobiles

Start Time	Ten Mile Drive Westbound				Dillon Dam Rd Northbound				Dillon Dam Rd Southbound				Int. Total
	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	
04:00 PM	28	25	0	53	80	27	0	107	15	56	0	71	231
04:15 PM	24	12	0	36	91	31	0	122	17	63	0	80	238
04:30 PM	10	22	0	32	103	24	0	127	11	52	0	63	222
04:45 PM	25	16	0	41	75	21	0	96	17	67	0	84	221
Total	87	75	0	162	349	103	0	452	60	238	0	298	912
05:00 PM	21	22	0	43	100	26	0	126	13	73	0	86	255
05:15 PM	23	21	0	44	102	16	0	118	11	67	0	78	240
05:30 PM	27	17	1	45	81	29	0	110	8	58	0	66	221
05:45 PM	22	18	0	40	78	21	0	99	9	54	0	63	202
Total	93	78	1	172	361	92	0	453	41	252	0	293	918
Grand Total	180	153	1	334	710	195	0	905	101	490	0	591	1830
Apprch %	53.9	45.8	0.3		78.5	21.5	0		17.1	82.9	0		
Total %	9.8	8.4	0.1	18.3	38.8	10.7	0	49.5	5.5	26.8	0	32.3	

Dillon/Frisco, CO  
Lake Hill Impact Study  
PM Peak  
Dillon Dam Rd and Ten Mile Dr

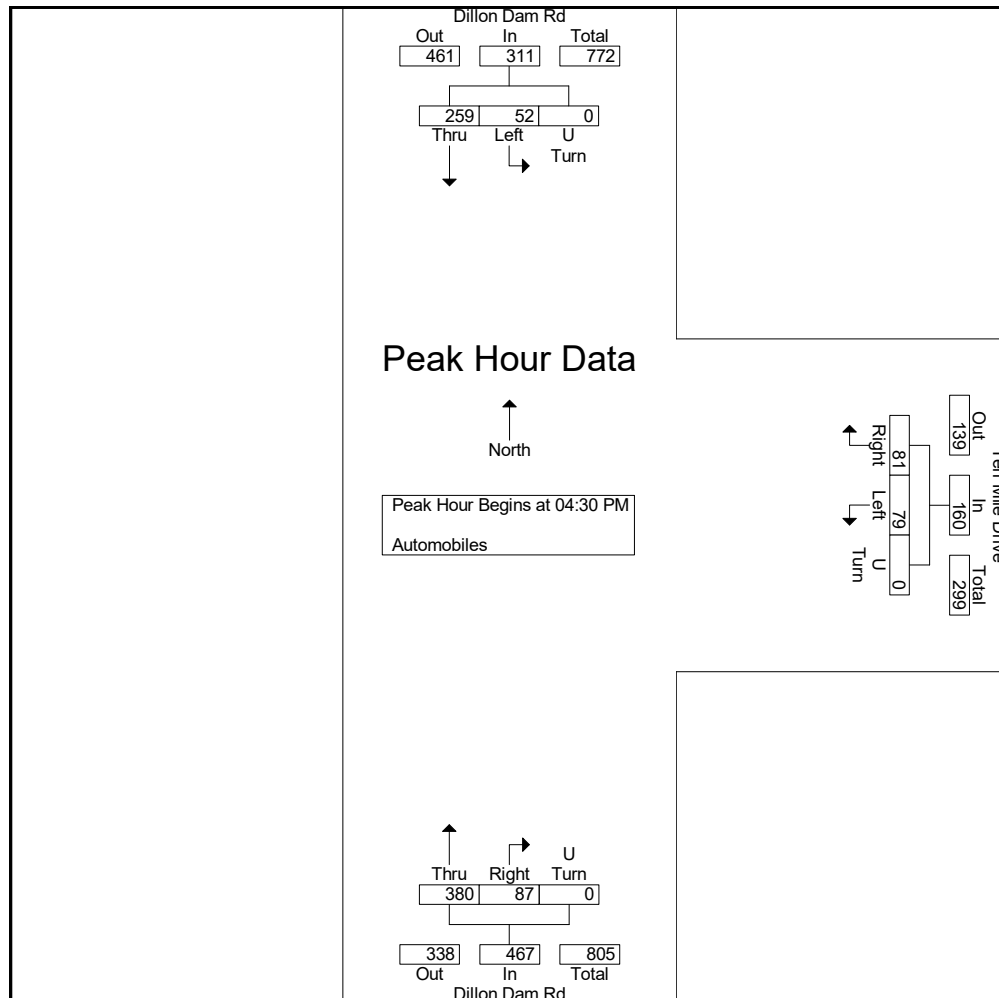
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Dillon/Frisco, CO  
Lake Hill Impact Study  
PM Peak  
Dillon Dam Rd and Ten Mile Dr

File Name : Dillon Dam Rd & Ten Mile PM  
Site Code : IPO 38  
Start Date : 1/31/2019  
Page No : 3

	Ten Mile Drive Westbound				Dillon Dam Rd Northbound				Dillon Dam Rd Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	10	<b>22</b>	0	32	<b>103</b>	24	0	<b>127</b>	11	52	0	63	222
04:45 PM	<b>25</b>	16	0	41	75	21	0	96	<b>17</b>	67	0	84	221
05:00 PM	21	22	0	43	100	<b>26</b>	0	126	13	<b>73</b>	0	<b>86</b>	<b>255</b>
05:15 PM	23	21	0	<b>44</b>	102	16	0	118	11	67	0	78	240
Total Volume	79	81	0	160	380	87	0	467	52	259	0	311	938
% App. Total	49.4	50.6	0		81.4	18.6	0		16.7	83.3	0		
PHF	.790	.920	.000	.909	.922	.837	.000	.919	.765	.887	.000	.904	.920





Dillon/Frisco, CO  
Lake Hill Impact Study  
AM Peak  
Dillon Dam Rd and Beaver Lodge Rd

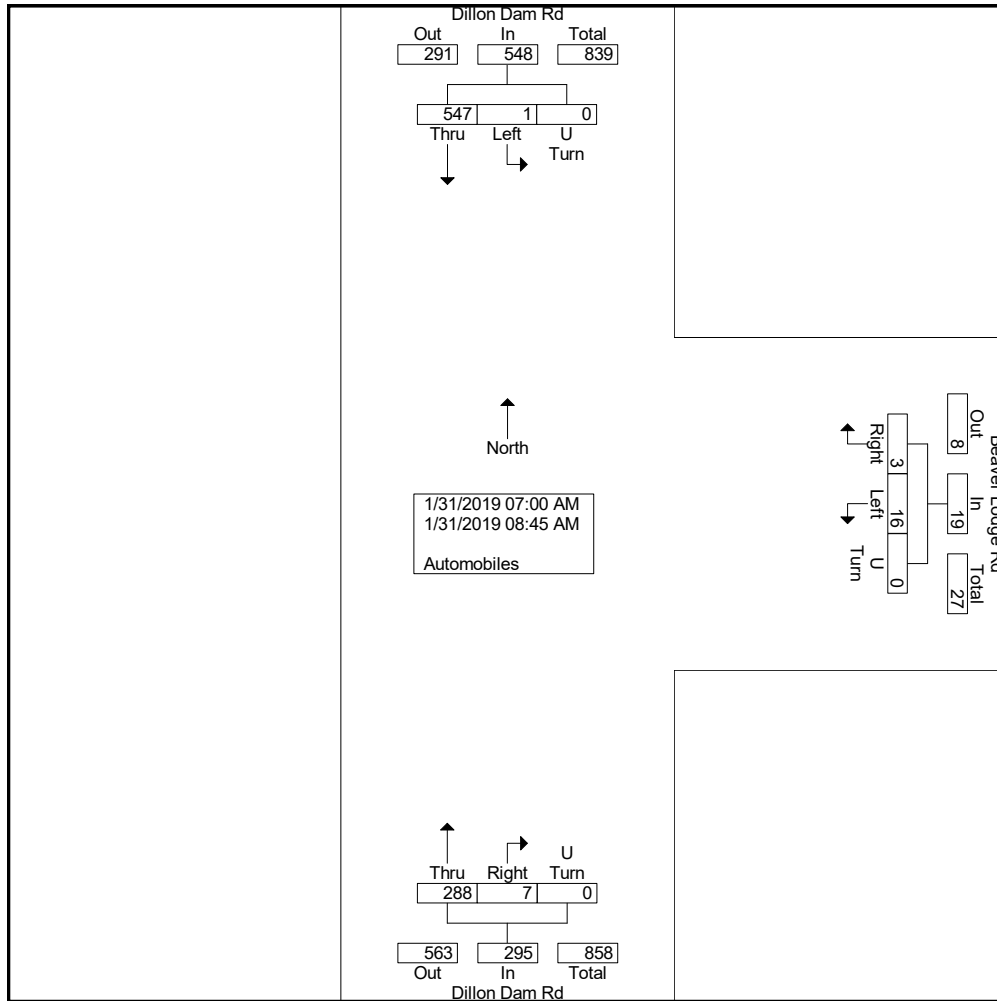
File Name : Dillon Dam Rd & Beaver AM  
Site Code : IPO 38  
Start Date : 1/31/2019  
Page No : 1

Groups Printed- Automobiles

Start Time	Beaver Lodge Rd Westbound				Dillon Dam Rd Northbound				Dillon Dam Rd Southbound				Int. Total
	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	
07:00 AM	1	0	0	1	14	0	0	14	0	41	0	41	56
07:15 AM	2	0	0	2	20	2	0	22	0	66	0	66	90
07:30 AM	2	0	0	2	29	0	0	29	0	88	0	88	119
07:45 AM	1	2	0	3	60	1	0	61	0	79	0	79	143
Total	6	2	0	8	123	3	0	126	0	274	0	274	408
08:00 AM	4	0	0	4	48	3	0	51	0	73	0	73	128
08:15 AM	2	0	0	2	32	0	0	32	0	57	0	57	91
08:30 AM	2	1	0	3	45	0	0	45	1	62	0	63	111
08:45 AM	2	0	0	2	40	1	0	41	0	81	0	81	124
Total	10	1	0	11	165	4	0	169	1	273	0	274	454
Grand Total	16	3	0	19	288	7	0	295	1	547	0	548	862
Apprch %	84.2	15.8	0		97.6	2.4	0		0.2	99.8	0		
Total %	1.9	0.3	0	2.2	33.4	0.8	0	34.2	0.1	63.5	0	63.6	

Dillon/Frisco, CO  
Lake Hill Impact Study  
AM Peak  
Dillon Dam Rd and Beaver Lodge Rd

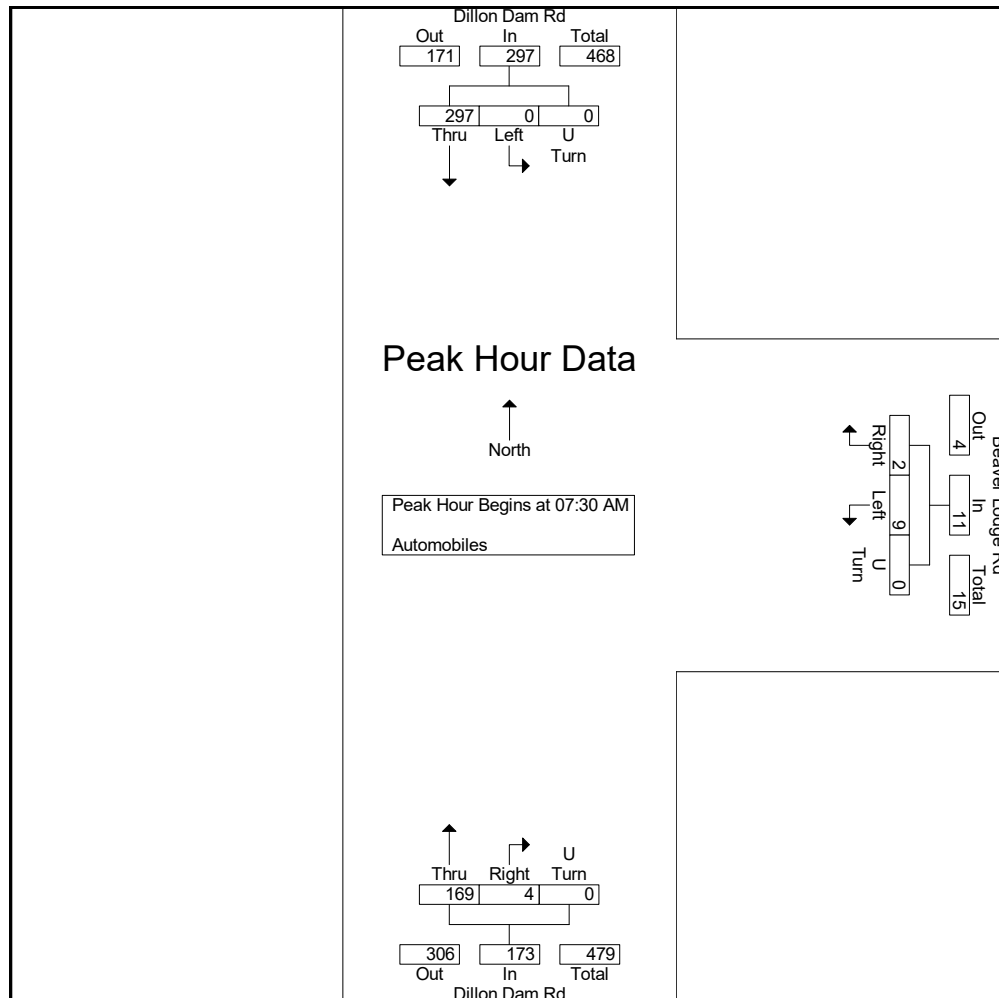
File Name : Dillon Dam Rd & Beaver AM  
Site Code : IPO 38  
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Dillon/Frisco, CO  
Lake Hill Impact Study  
AM Peak  
Dillon Dam Rd and Beaver Lodge Rd

File Name : Dillon Dam Rd & Beaver AM  
Site Code : IPO 38  
Start Date : 1/31/2019  
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	Beaver Lodge Rd Westbound				Dillon Dam Rd Northbound				Dillon Dam Rd Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	2	0	0	2	29	0	0	29	0	<b>88</b>	0	<b>88</b>	119
07:45 AM	1	<b>2</b>	0	3	<b>60</b>	1	0	<b>61</b>	0	79	0	79	<b>143</b>
08:00 AM	<b>4</b>	0	0	<b>4</b>	48	<b>3</b>	0	51	0	73	0	73	128
08:15 AM	2	0	0	2	32	0	0	32	0	57	0	57	91
Total Volume	9	2	0	11	169	4	0	173	0	297	0	297	481
% App. Total	81.8	18.2	0		97.7	2.3	0		0	100	0		
PHF	.563	.250	.000	.688	.704	.333	.000	.709	.000	.844	.000	.844	.841



Dillon/Frisco, CO  
Lake Hill Impact Study  
PM Peak  
Dillon Dam Rd and Beaver Lodge Rd

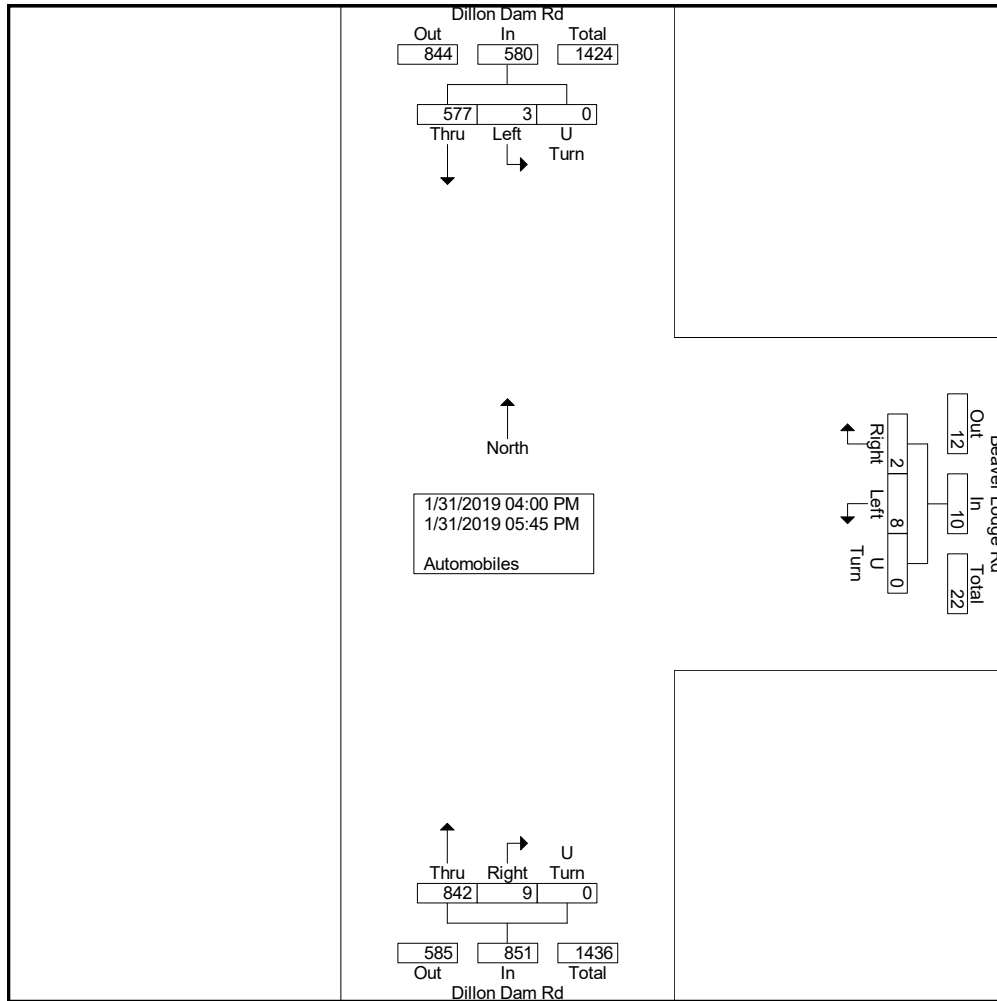
File Name : Dillon Dam Rd & Beaver PM  
Site Code : IPO 38  
Start Date : 1/31/2019  
Page No : 1

Groups Printed- Automobiles

Start Time	Beaver Lodge Rd Westbound				Dillon Dam Rd Northbound				Dillon Dam Rd Southbound				Int. Total
	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	
04:00 PM	1	0	0	1	103	2	0	105	1	69	0	70	176
04:15 PM	1	1	0	2	93	2	0	95	0	78	0	78	175
04:30 PM	1	0	0	1	120	3	0	123	0	62	0	62	186
04:45 PM	3	1	0	4	88	1	0	89	1	79	0	80	173
Total	6	2	0	8	404	8	0	412	2	288	0	290	710
05:00 PM	1	0	0	1	117	0	0	117	0	84	0	84	202
05:15 PM	1	0	0	1	129	0	0	129	0	77	0	77	207
05:30 PM	0	0	0	0	98	1	0	99	1	67	0	68	167
05:45 PM	0	0	0	0	94	0	0	94	0	61	0	61	155
Total	2	0	0	2	438	1	0	439	1	289	0	290	731
Grand Total	8	2	0	10	842	9	0	851	3	577	0	580	1441
Apprch %	80	20	0		98.9	1.1	0		0.5	99.5	0		
Total %	0.6	0.1	0	0.7	58.4	0.6	0	59.1	0.2	40	0	40.2	

Dillon/Frisco, CO  
Lake Hill Impact Study  
PM Peak  
Dillon Dam Rd and Beaver Lodge Rd

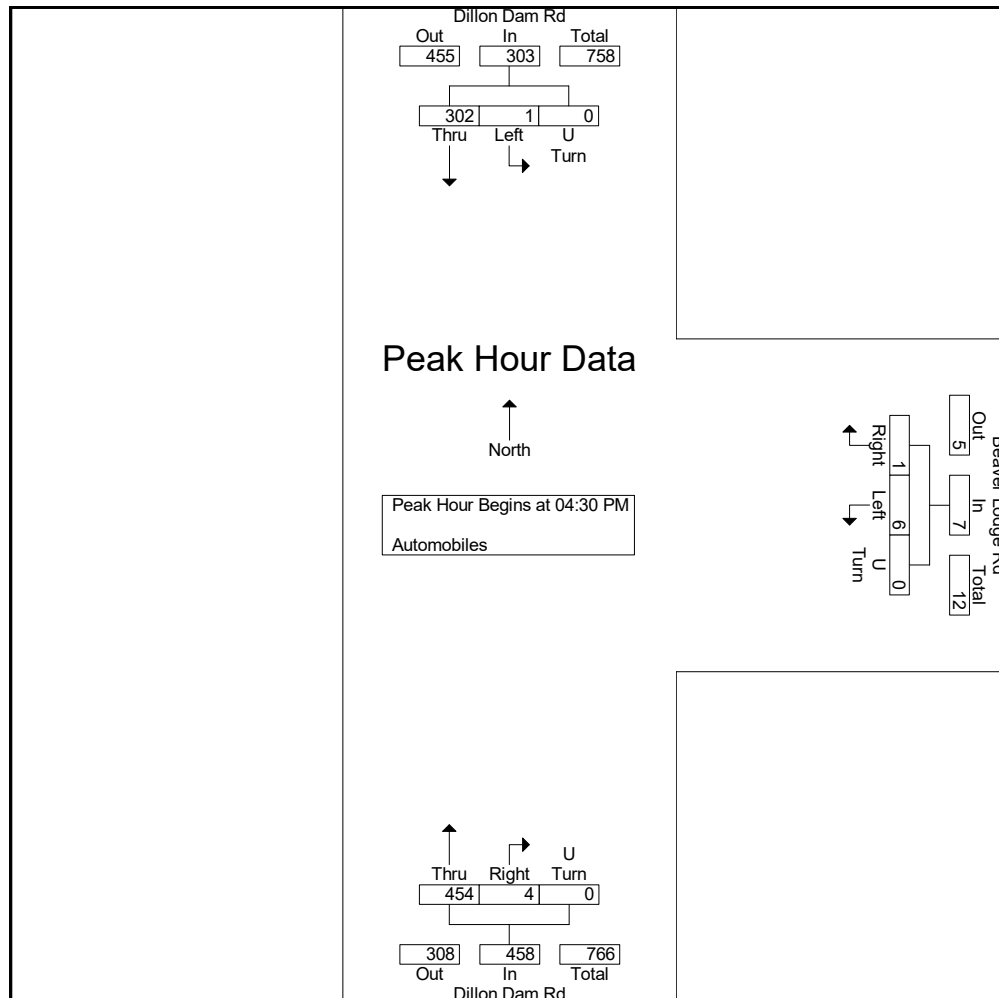
File Name : Dillon Dam Rd & Beaver PM  
Site Code : IPO 38  
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Dillon/Frisco, CO  
Lake Hill Impact Study  
PM Peak  
Dillon Dam Rd and Beaver Lodge Rd

File Name : Dillon Dam Rd & Beaver PM  
Site Code : IPO 38  
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	Beaver Lodge Rd Westbound				Dillon Dam Rd Northbound				Dillon Dam Rd Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	1	0	0	1	120	3	0	123	0	62	0	62	186
04:45 PM	3	1	0	4	88	1	0	89	1	79	0	80	173
05:00 PM	1	0	0	1	117	0	0	117	0	84	0	84	202
05:15 PM	1	0	0	1	129	0	0	129	0	77	0	77	207
Total Volume	6	1	0	7	454	4	0	458	1	302	0	303	768
% App. Total	85.7	14.3	0		99.1	0.9	0		0.3	99.7	0		
PHF	.500	.250	.000	.438	.880	.333	.000	.888	.250	.899	.000	.902	.928



Dillon/Frisco, CO  
Lake Hill Impact Study  
AM Peak  
Dillon Dam Rd and Prospect Point Rd

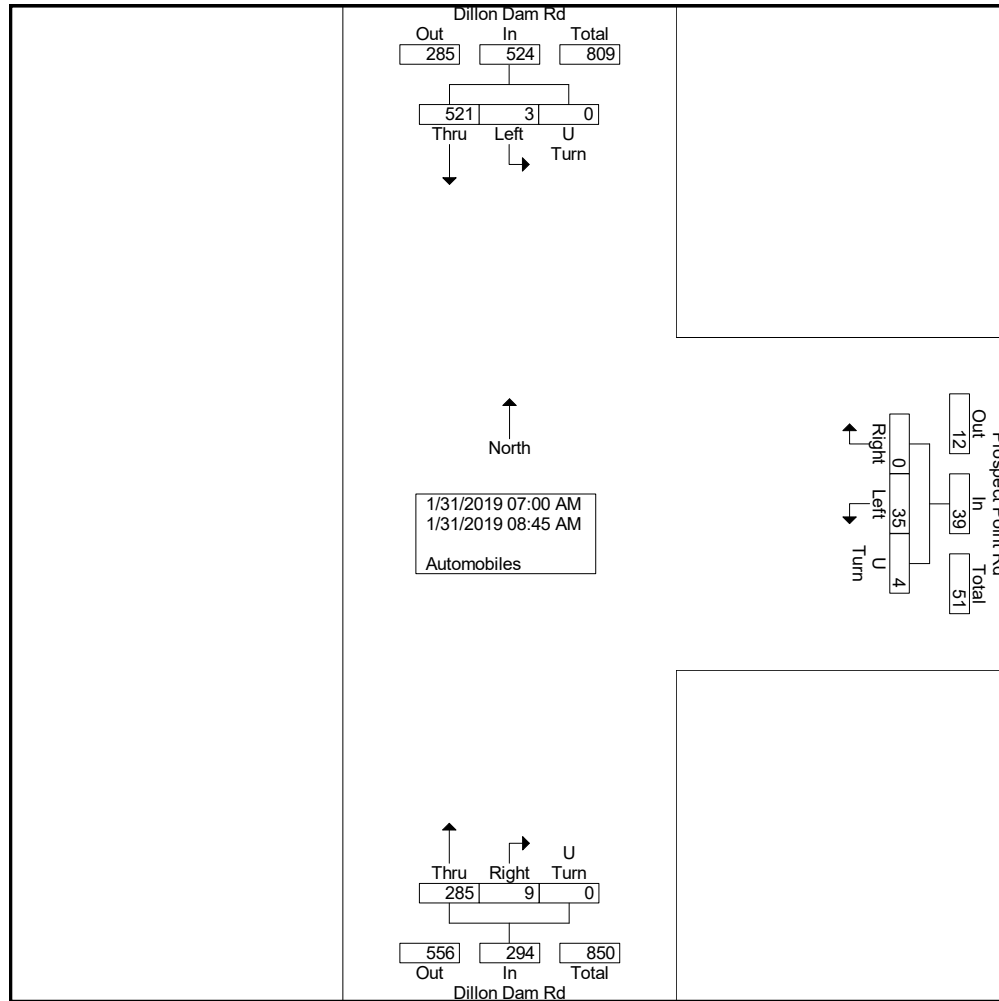
File Name : Dillon Dam Rd & Prospect AM  
Site Code : IPO 38  
Start Date : 1/31/2019  
Page No : 1

Groups Printed- Automobiles

Start Time	Prospect Point Rd Westbound				Dillon Dam Rd Northbound				Dillon Dam Rd Southbound				Int. Total
	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	
07:00 AM	3	0	1	4	16	1	0	17	0	37	0	37	58
07:15 AM	3	0	0	3	20	1	0	21	1	68	0	69	93
07:30 AM	5	0	2	7	29	1	0	30	1	85	0	86	123
07:45 AM	5	0	0	5	60	1	0	61	0	72	0	72	138
Total	16	0	3	19	125	4	0	129	2	262	0	264	412
08:00 AM	3	0	1	4	48	1	0	49	0	67	0	67	120
08:15 AM	7	0	0	7	28	1	0	29	0	53	0	53	89
08:30 AM	6	0	0	6	44	3	0	47	0	56	0	56	109
08:45 AM	3	0	0	3	40	0	0	40	1	83	0	84	127
Total	19	0	1	20	160	5	0	165	1	259	0	260	445
Grand Total	35	0	4	39	285	9	0	294	3	521	0	524	857
Apprch %	89.7	0	10.3		96.9	3.1	0		0.6	99.4	0		
Total %	4.1	0	0.5	4.6	33.3	1.1	0	34.3	0.4	60.8	0	61.1	

Dillon/Frisco, CO  
Lake Hill Impact Study  
AM Peak  
Dillon Dam Rd and Prospect Point Rd

File Name : Dillon Dam Rd & Prospect AM  
Site Code : IPO 38  
Start Date : 1/31/2019  
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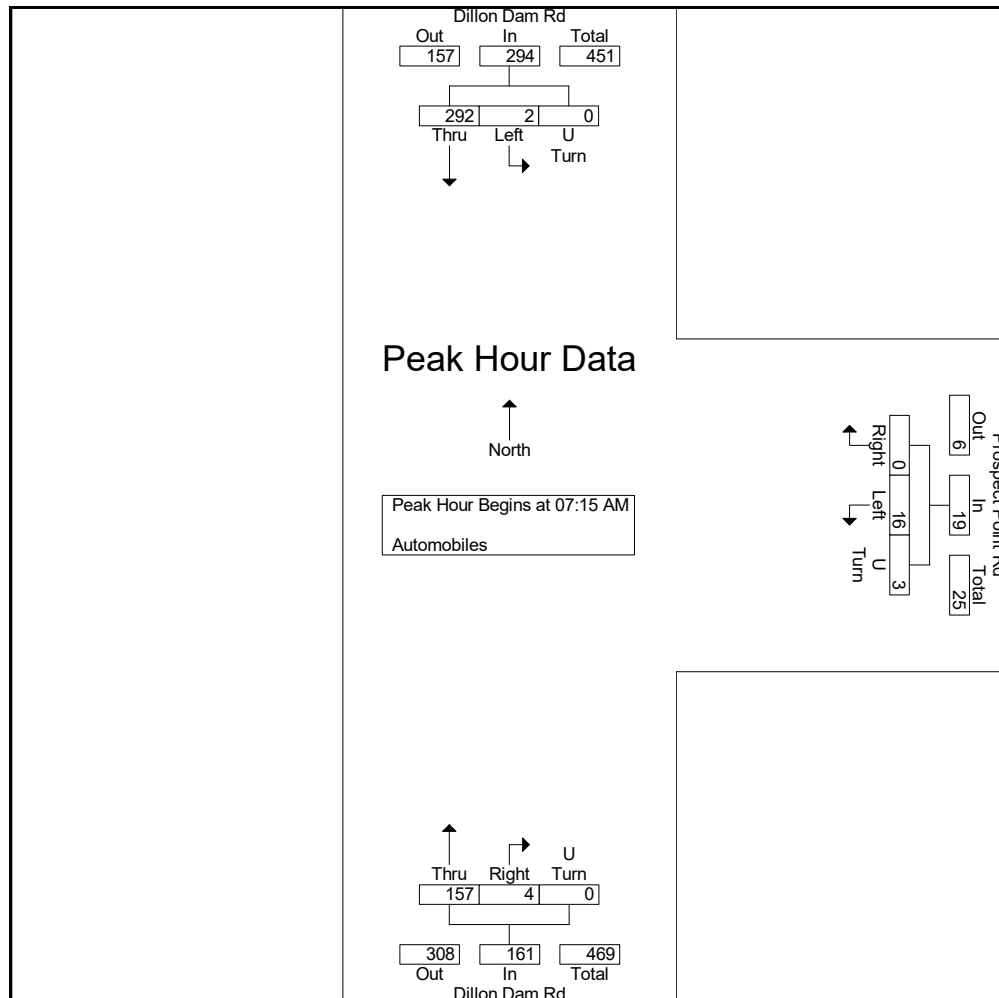




Dillon/Frisco, CO  
Lake Hill Impact Study  
AM Peak  
Dillon Dam Rd and Prospect Point Rd

File Name : Dillon Dam Rd & Prospect AM  
Site Code : IPO 38  
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	Prospect Point Rd Westbound				Dillon Dam Rd Northbound				Dillon Dam Rd Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	3	0	0	3	20	1	0	21	1	68	0	69	93
07:30 AM	5	0	2	7	29	1	0	30	1	85	0	86	123
07:45 AM	5	0	0	5	60	1	0	61	0	72	0	72	138
08:00 AM	3	0	1	4	48	1	0	49	0	67	0	67	120
Total Volume	16	0	3	19	157	4	0	161	2	292	0	294	474
% App. Total	84.2	0	15.8		97.5	2.5	0		0.7	99.3	0		
PHF	.800	.000	.375	.679	.654	1.00	.000	.660	.500	.859	.000	.855	.859



Dillon/Frisco, CO  
Lake Hill Impact Study  
PM Peak  
Dillon Dam Rd and Prospect Point Rd

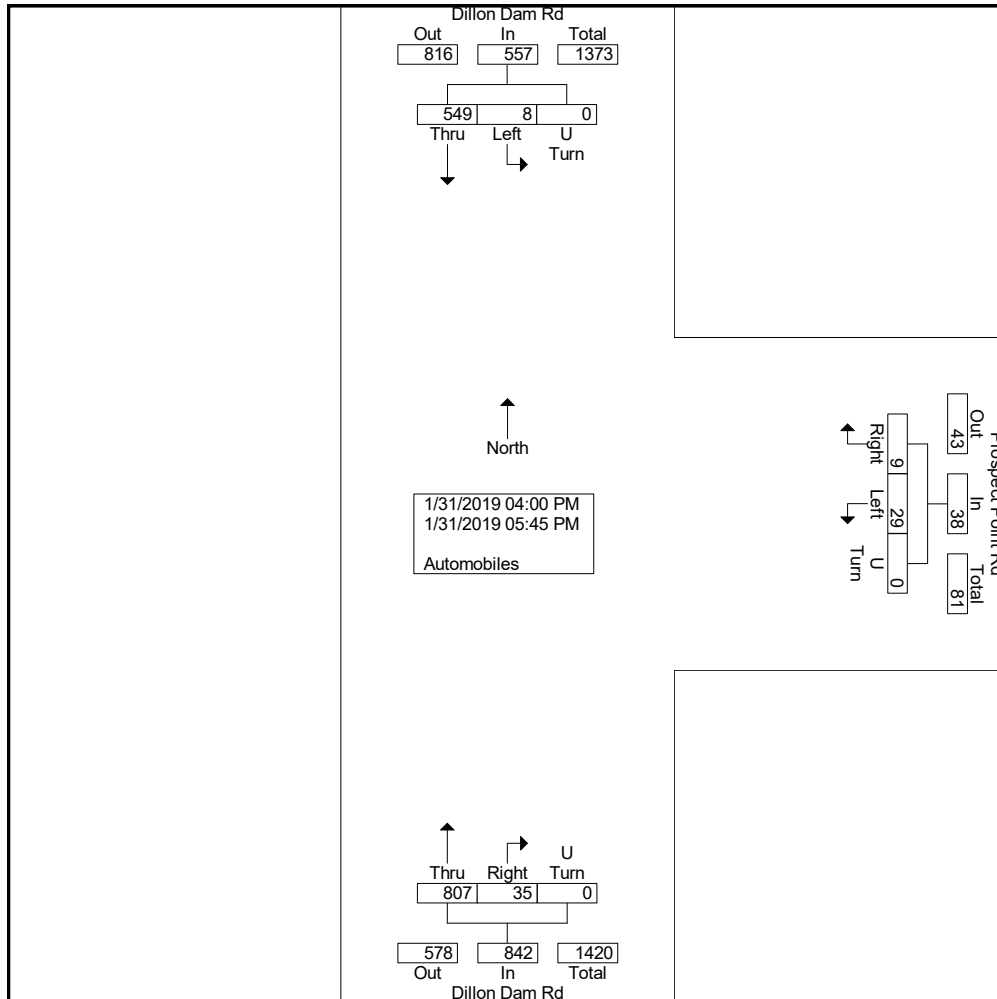
File Name : Dillon Dam Rd & Prospect PM  
Site Code : IPO 38  
Start Date : 1/31/2019  
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Groups Printed- Automobiles

Start Time	Prospect Point Rd Westbound				Dillon Dam Rd Northbound				Dillon Dam Rd Southbound				Int. Total
	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	
04:00 PM	2	0	0	2	99	1	0	100	1	68	0	69	171
04:15 PM	3	0	0	3	10	5	0	15	1	76	0	77	95
04:30 PM	3	1	0	4	203	0	0	203	0	56	0	56	263
04:45 PM	3	2	0	5	84	6	0	90	2	77	0	79	174
Total	11	3	0	14	396	12	0	408	4	277	0	281	703
05:00 PM	5	2	0	7	115	7	0	122	2	83	0	85	214
05:15 PM	6	0	0	6	116	4	0	120	1	63	0	64	190
05:30 PM	6	3	0	9	90	7	0	97	1	66	0	67	173
05:45 PM	1	1	0	2	90	5	0	95	0	60	0	60	157
Total	18	6	0	24	411	23	0	434	4	272	0	276	734
Grand Total	29	9	0	38	807	35	0	842	8	549	0	557	1437
Apprch %	76.3	23.7	0		95.8	4.2	0		1.4	98.6	0		
Total %	2	0.6	0	2.6	56.2	2.4	0	58.6	0.6	38.2	0	38.8	

Dillon/Frisco, CO  
Lake Hill Impact Study  
PM Peak  
Dillon Dam Rd and Prospect Point Rd

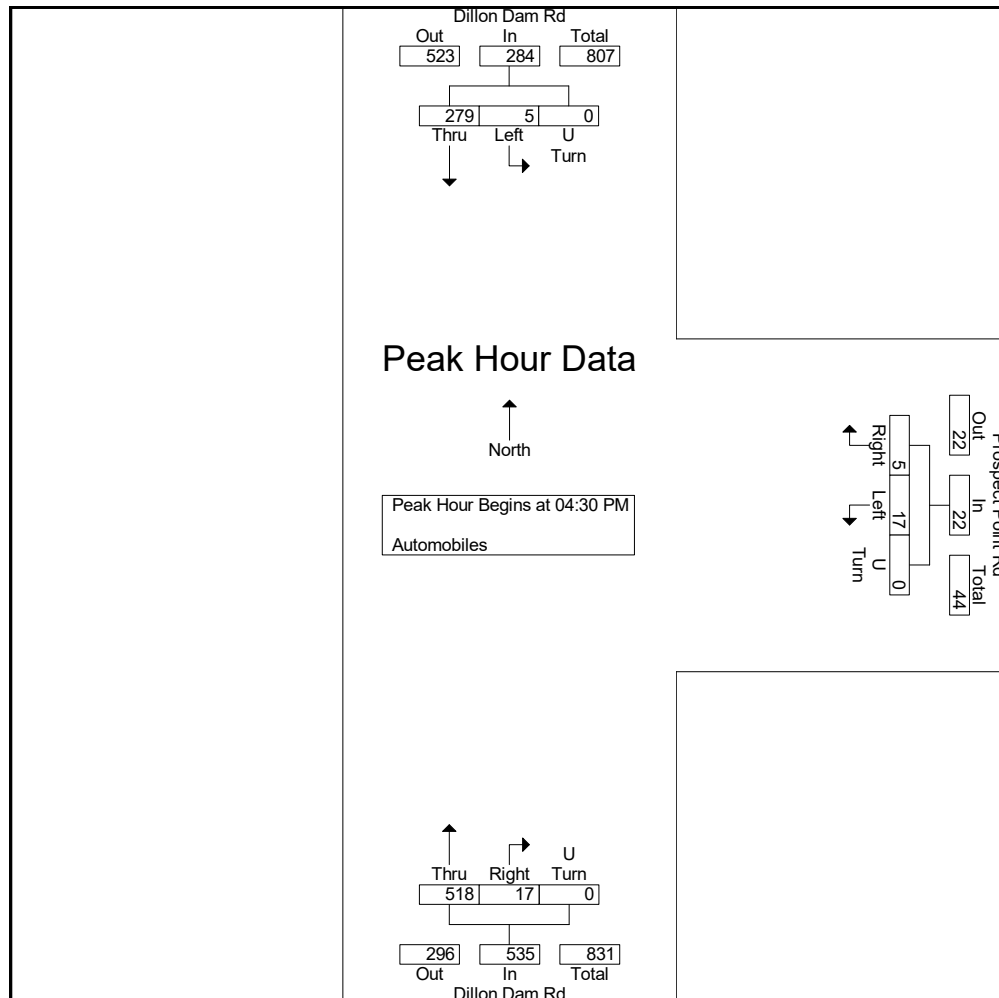
File Name : Dillon Dam Rd & Prospect PM  
Site Code : IPO 38  
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Dillon/Frisco, CO  
Lake Hill Impact Study  
PM Peak  
Dillon Dam Rd and Prospect Point Rd

File Name : Dillon Dam Rd & Prospect PM  
Site Code : IPO 38  
Start Date : 1/31/2019  
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	Prospect Point Rd Westbound				Dillon Dam Rd Northbound				Dillon Dam Rd Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	3	1	0	4	203	0	0	203	0	56	0	56	263
04:45 PM	3	2	0	5	84	6	0	90	2	77	0	79	174
05:00 PM	5	2	0	7	115	7	0	122	2	83	0	85	214
05:15 PM	6	0	0	6	116	4	0	120	1	63	0	64	190
Total Volume	17	5	0	22	518	17	0	535	5	279	0	284	841
% App. Total	77.3	22.7	0		96.8	3.2	0		1.8	98.2	0		
PHF	.708	.625	.000	.786	.638	.607	.000	.659	.625	.840	.000	.835	.799



Dillon/Frisco, CO  
Lake Hill Impact Study  
AM Peak  
Dillon Dam Rd and Lake View Terrace

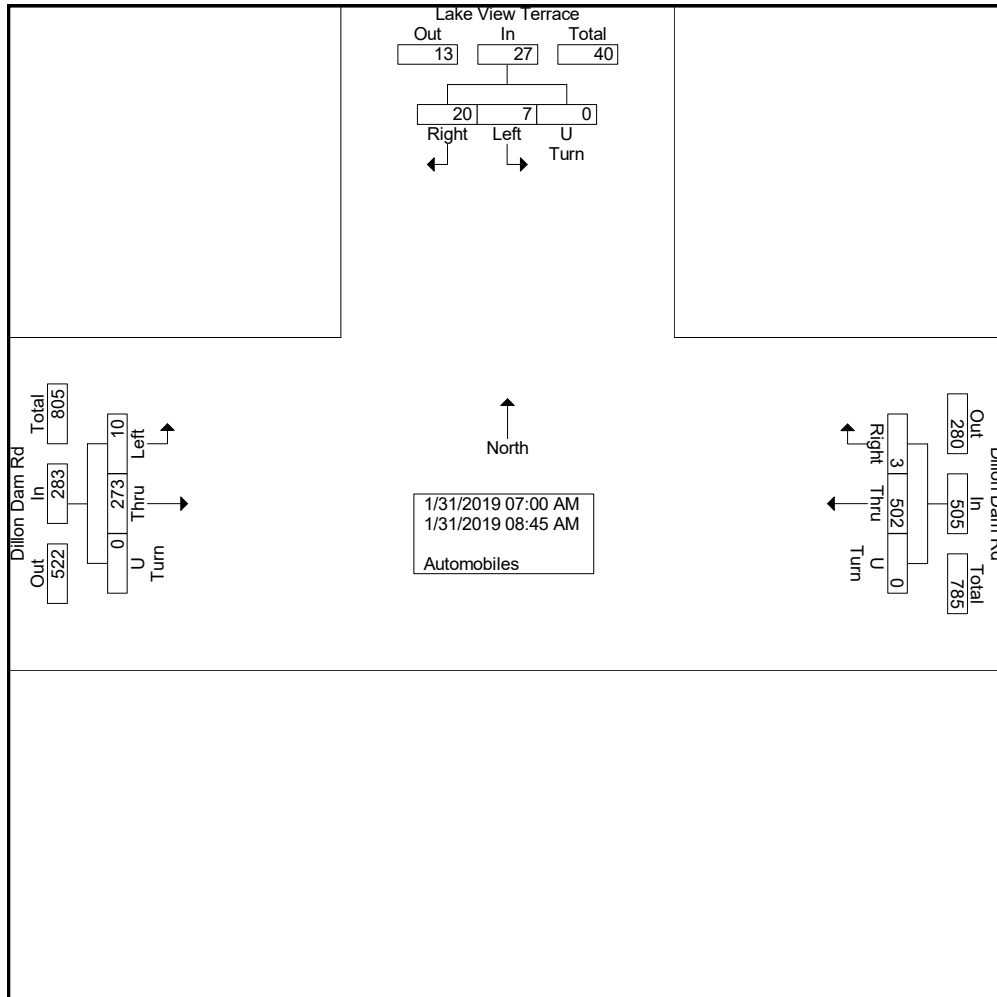
File Name : Dillon Dam Rd & Lake View AM  
Site Code : IPO 38  
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Groups Printed- Automobiles

Start Time	Dillon Dam Rd Eastbound				Dillon Dam Rd Westbound				Lake View Terrace Southbound				Int. Total
	Left	Thru	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Right	U Turn	App. Total	
07:00 AM	1	13	0	14	36	0	0	36	0	0	0	0	50
07:15 AM	0	18	0	18	65	0	0	65	0	2	0	2	85
07:30 AM	2	28	0	30	80	1	0	81	1	3	0	4	115
07:45 AM	1	60	0	61	70	1	0	71	0	2	0	2	134
Total	4	119	0	123	251	2	0	253	1	7	0	8	384
08:00 AM	1	47	0	48	66	0	0	66	4	6	0	10	124
08:15 AM	0	32	0	32	52	0	0	52	0	0	0	0	84
08:30 AM	2	38	0	40	57	0	0	57	1	2	0	3	100
08:45 AM	3	37	0	40	76	1	0	77	1	5	0	6	123
Total	6	154	0	160	251	1	0	252	6	13	0	19	431
Grand Total	10	273	0	283	502	3	0	505	7	20	0	27	815
Apprch %	3.5	96.5	0		99.4	0.6	0		25.9	74.1	0		
Total %	1.2	33.5	0	34.7	61.6	0.4	0	62	0.9	2.5	0	3.3	

Dillon/Frisco, CO  
Lake Hill Impact Study  
AM Peak  
Dillon Dam Rd and Lake View Terrace

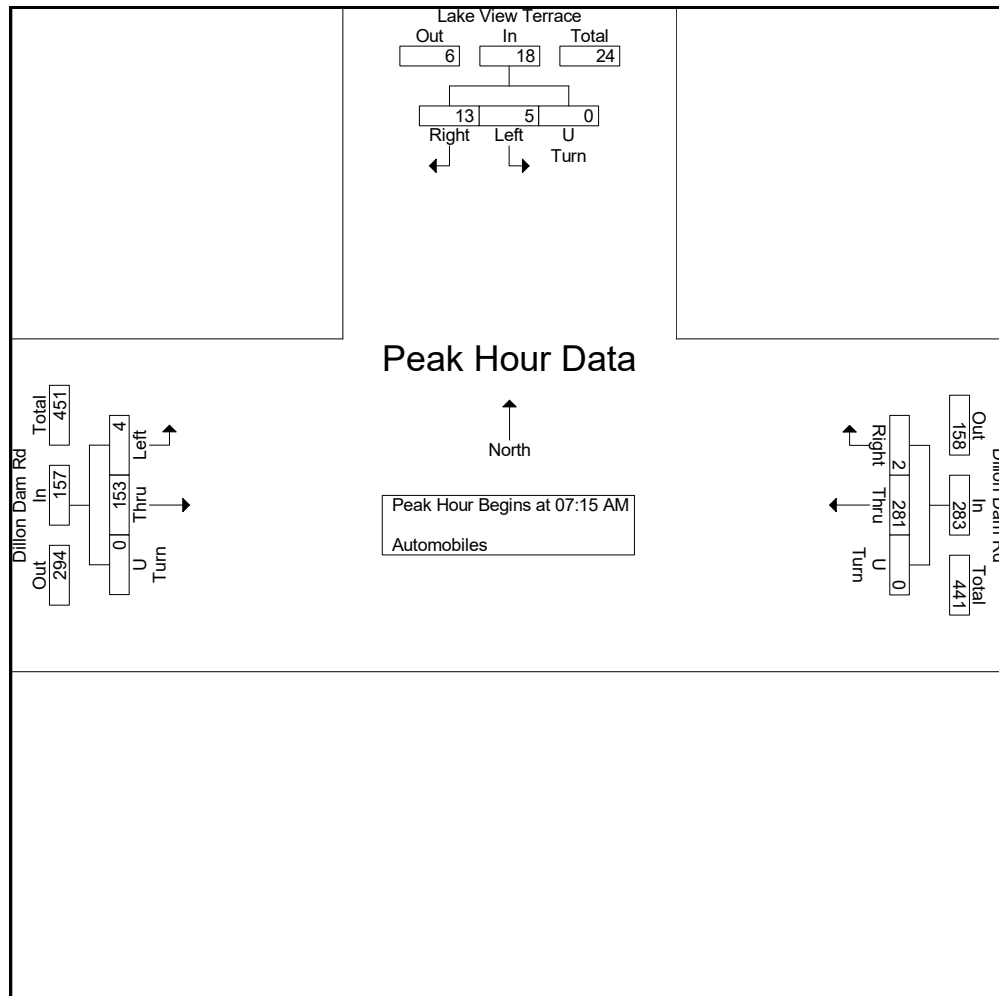
File Name : Dillon Dam Rd & Lake View AM  
Site Code : IPO 38  
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Dillon/Frisco, CO  
Lake Hill Impact Study  
AM Peak  
Dillon Dam Rd and Lake View Terrace

File Name : Dillon Dam Rd & Lake View AM  
Site Code : IPO 38  
Start Date : 1/31/2019  
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	Dillon Dam Rd Eastbound				Dillon Dam Rd Westbound				Lake View Terrace Southbound				
Start Time	Left	Thru	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	0	18	0	18	65	0	0	65	0	2	0	2	85
07:30 AM	2	28	0	30	80	1	0	81	1	3	0	4	115
07:45 AM	1	60	0	61	70	1	0	71	0	2	0	2	134
08:00 AM	1	47	0	48	66	0	0	66	4	6	0	10	124
Total Volume	4	153	0	157	281	2	0	283	5	13	0	18	458
% App. Total	2.5	97.5	0		99.3	0.7	0		27.8	72.2	0		
PHF	.500	.638	.000	.643	.878	.500	.000	.873	.313	.542	.000	.450	.854



Dillon/Frisco, CO  
Lake Hill Impact Study  
PM Peak  
Dillon Dam Rd and Lake View Terrace

File Name : Dillon Dam Rd & Lake View PM  
Site Code : IPO 38  
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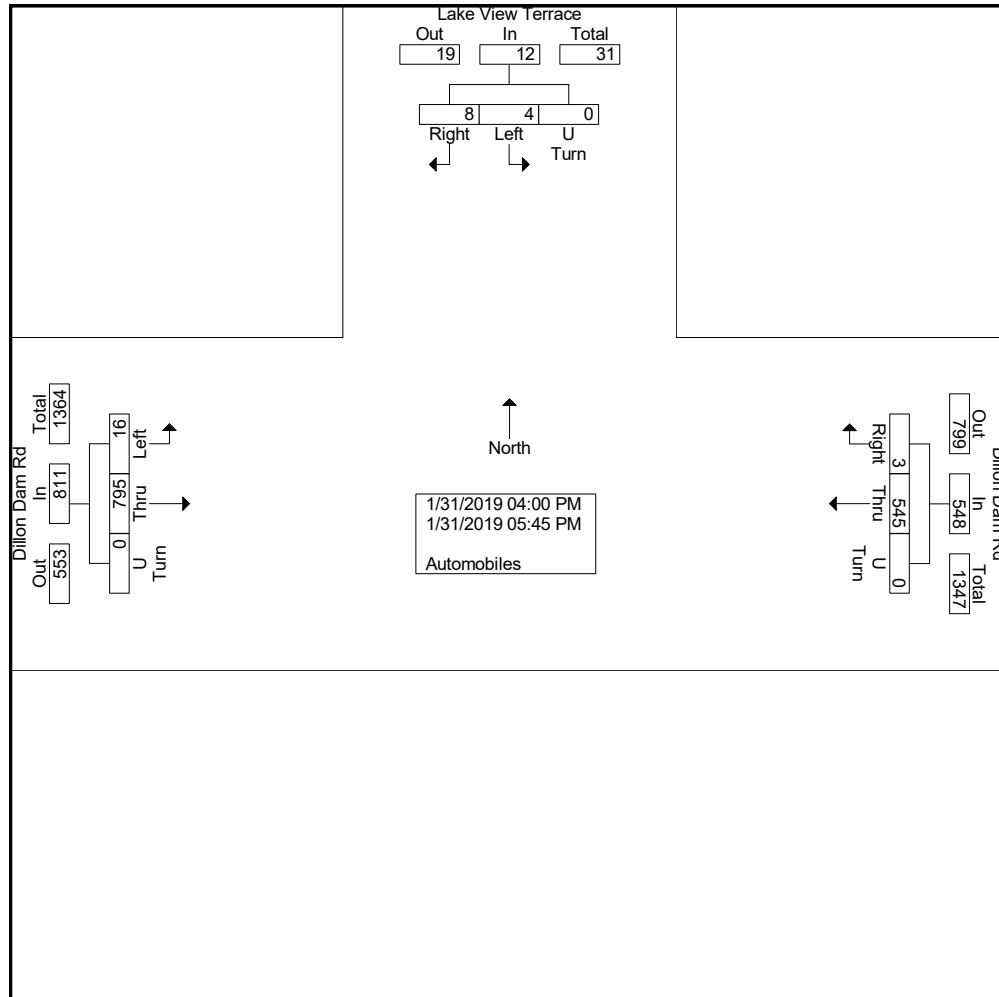
Groups Printed- Automobiles

Start Time	Dillon Dam Rd Eastbound				Dillon Dam Rd Westbound				Lake View Terrace Southbound				Int. Total
	Left	Thru	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Right	U Turn	App. Total	
04:00 PM	1	94	0	95	69	0	0	69	2	0	0	2	166
04:15 PM	4	89	0	93	69	1	0	70	1	3	0	4	167
04:30 PM	1	118	0	119	58	0	0	58	0	0	0	0	177
04:45 PM	1	88	0	89	78	0	0	78	0	1	0	1	168
Total	7	389	0	396	274	1	0	275	3	4	0	7	678
05:00 PM	4	100	0	104	83	2	0	85	0	0	0	0	189
05:15 PM	0	129	0	129	65	0	0	65	0	2	0	2	196
05:30 PM	2	86	0	88	68	0	0	68	0	0	0	0	156
05:45 PM	3	91	0	94	55	0	0	55	1	2	0	3	152
Total	9	406	0	415	271	2	0	273	1	4	0	5	693
Grand Total	16	795	0	811	545	3	0	548	4	8	0	12	1371
Apprch %	2	98	0		99.5	0.5	0		33.3	66.7	0		
Total %	1.2	58	0	59.2	39.8	0.2	0	40	0.3	0.6	0	0.9	



Dillon/Frisco, CO  
Lake Hill Impact Study  
PM Peak  
Dillon Dam Rd and Lake View Terrace

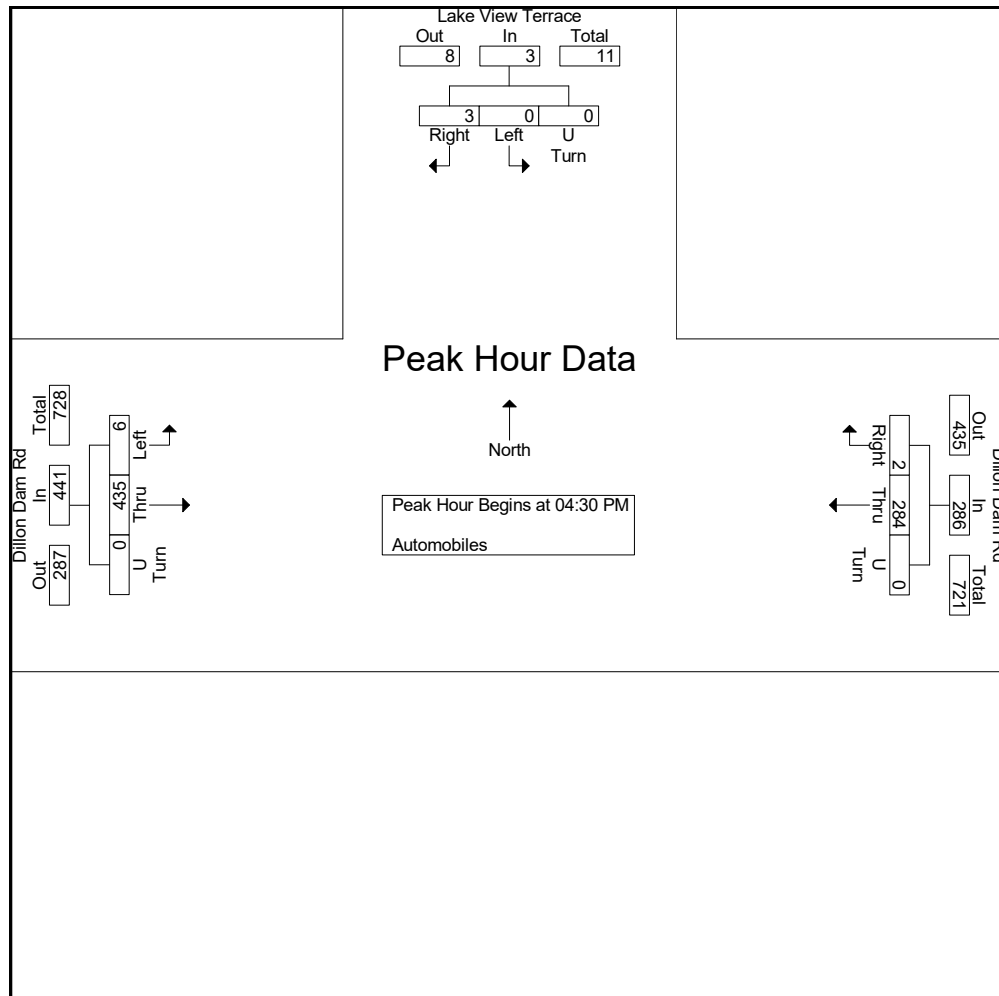
File Name : Dillon Dam Rd & Lake View PM  
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Dillon/Frisco, CO  
Lake Hill Impact Study  
PM Peak  
Dillon Dam Rd and Lake View Terrace

File Name : Dillon Dam Rd & Lake View PM  
Site Code : IPO 38  
Start Date : 1/31/2019  
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	Dillon Dam Rd Eastbound				Dillon Dam Rd Westbound				Lake View Terrace Southbound				
Start Time	Left	Thru	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	1	118	0	119	58	0	0	58	0	0	0	0	177
04:45 PM	1	88	0	89	78	0	0	78	0	1	0	1	168
05:00 PM	4	100	0	104	83	2	0	85	0	0	0	0	189
05:15 PM	0	129	0	129	65	0	0	65	0	2	0	2	196
Total Volume	6	435	0	441	284	2	0	286	0	3	0	3	730
% App. Total	1.4	98.6	0		99.3	0.7	0		0	100	0		
PHF	.375	.843	.000	.855	.855	.250	.000	.841	.000	.375	.000	.375	.931



Dillon/Frisco, CO  
Lake Hill Impact Study  
AM Peak  
Dillon Dam Rd and La Bonte St

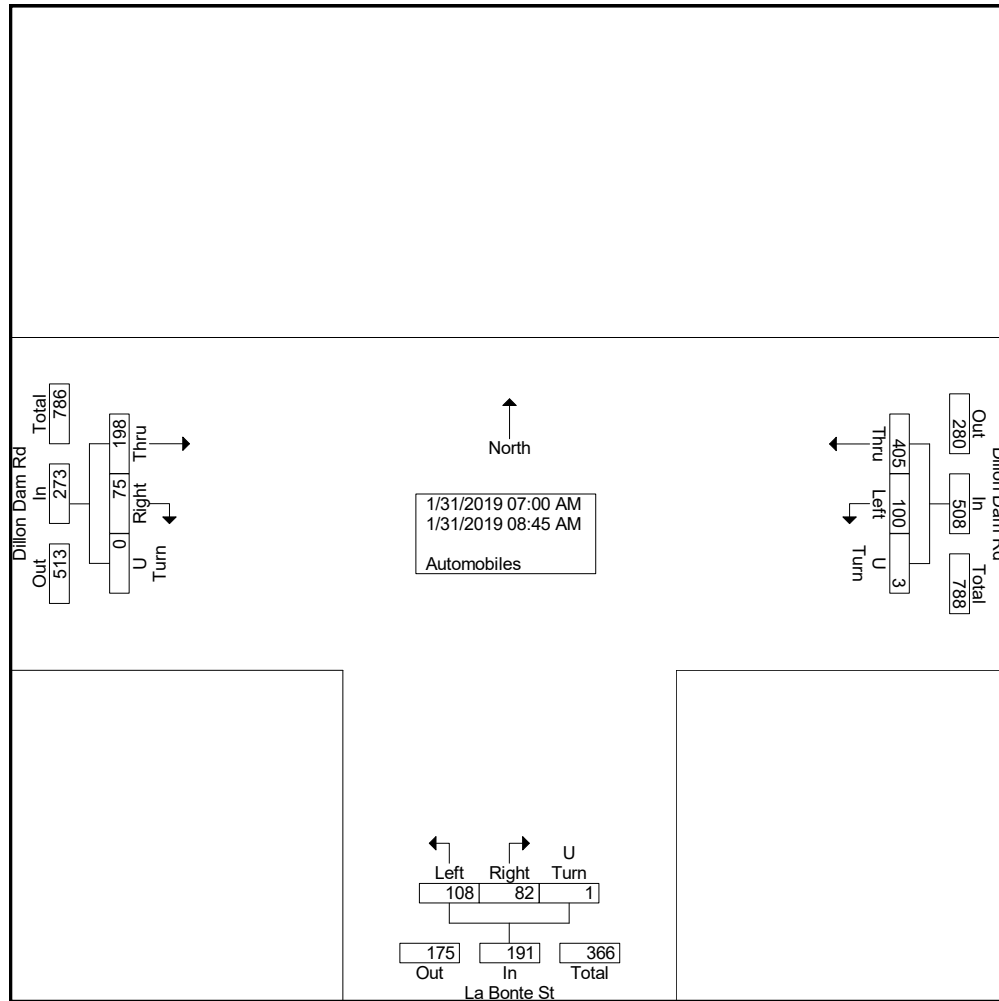
File Name : Dillon Dam Rd & La Bonte AM  
Site Code : IPO 38  
Start Date : 1/31/2019  
Page No : 1

Groups Printed- Automobiles

Start Time	Dillon Dam Rd Eastbound				Dillon Dam Rd Westbound				La Bonte St Northbound				Int. Total
	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Left	Right	U Turn	App. Total	
07:00 AM	8	0	0	8	7	36	0	43	9	10	0	19	70
07:15 AM	16	4	0	20	11	47	0	58	18	4	0	22	100
07:30 AM	23	6	0	29	12	66	1	79	10	11	0	21	129
07:45 AM	35	16	0	51	13	67	0	80	18	13	0	31	162
Total	82	26	0	108	43	216	1	260	55	38	0	93	461
08:00 AM	45	16	0	61	17	47	0	64	9	10	0	19	144
08:15 AM	27	6	0	33	14	37	0	51	17	13	0	30	114
08:30 AM	16	8	0	24	10	48	1	59	14	12	0	26	109
08:45 AM	28	19	0	47	16	57	1	74	13	9	1	23	144
Total	116	49	0	165	57	189	2	248	53	44	1	98	511
Grand Total	198	75	0	273	100	405	3	508	108	82	1	191	972
Apprch %	72.5	27.5	0		19.7	79.7	0.6		56.5	42.9	0.5		
Total %	20.4	7.7	0	28.1	10.3	41.7	0.3	52.3	11.1	8.4	0.1	19.7	

Dillon/Frisco, CO  
Lake Hill Impact Study  
AM Peak  
Dillon Dam Rd and La Bonte St

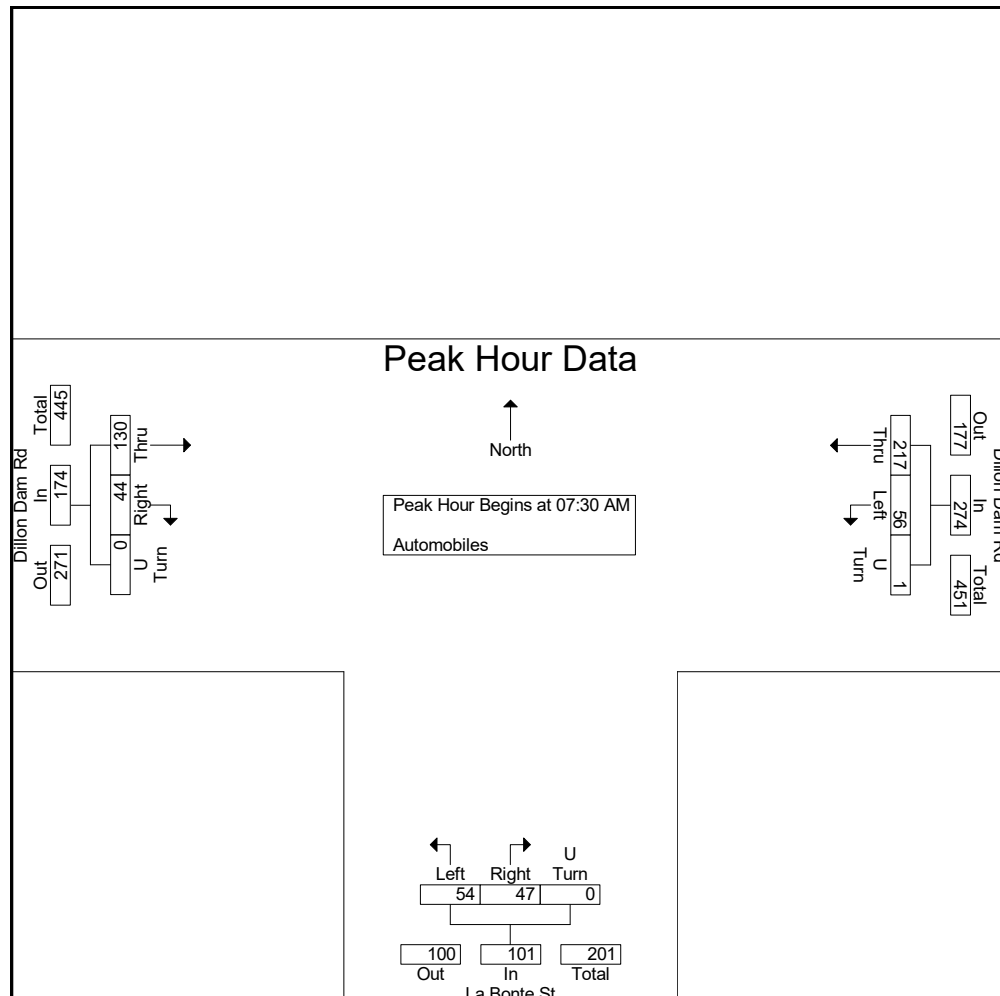
File Name : Dillon Dam Rd & La Bonte AM  
Site Code : IPO 38  
Start Date : 1/31/2019  
Page No : 2



Dillon/Frisco, CO  
Lake Hill Impact Study  
AM Peak  
Dillon Dam Rd and La Bonte St

File Name : Dillon Dam Rd & La Bonte AM  
Site Code : IPO 38  
Start Date : 1/31/2019  
Page No : 3

	Dillon Dam Rd Eastbound				Dillon Dam Rd Westbound				La Bonte St Northbound				
Start Time	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Left	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	23	6	0	29	12	66	1	79	10	11	0	21	129
07:45 AM	35	16	0	51	13	67	0	80	18	13	0	31	162
08:00 AM	45	16	0	61	17	47	0	64	9	10	0	19	144
08:15 AM	27	6	0	33	14	37	0	51	17	13	0	30	114
Total Volume	130	44	0	174	56	217	1	274	54	47	0	101	549
% App. Total	74.7	25.3	0		20.4	79.2	0.4		53.5	46.5	0		
PHF	.722	.688	.000	.713	.824	.810	.250	.856	.750	.904	.000	.815	.847



Dillon/Frisco, CO  
Lake Hill Impact Study  
PM Peak  
Dillon Dam Rd and La Bonte St

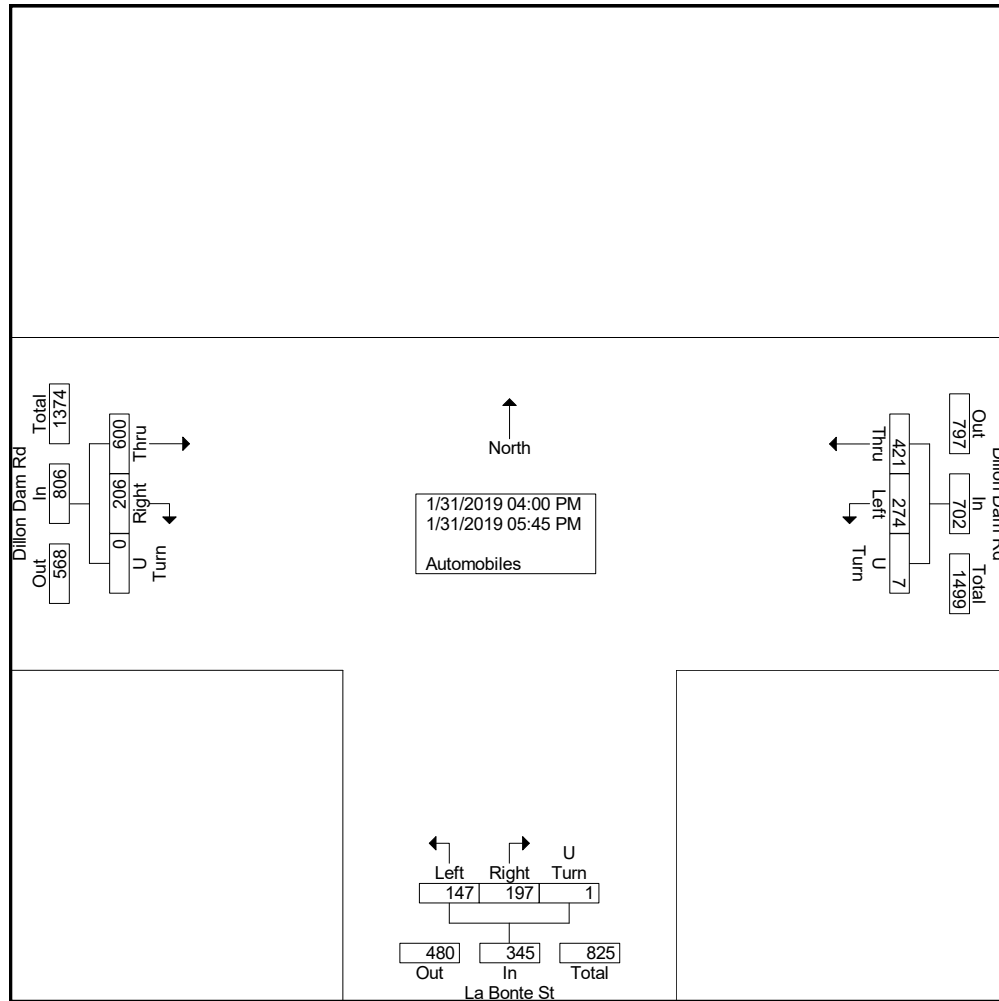
File Name : Dillon Dam Rd & La Bonte PM  
Site Code : IPO 38  
Start Date : 1/31/2019  
Page No : 1

Groups Printed- Automobiles

Start Time	Dillon Dam Rd Eastbound				Dillon Dam Rd Westbound				La Bonte St Northbound				Int. Total
	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Left	Right	U Turn	App. Total	
04:00 PM	62	16	0	78	27	64	1	92	12	23	0	35	205
04:15 PM	81	29	0	110	31	53	1	85	16	20	0	36	231
04:30 PM	78	23	0	101	42	47	2	91	18	24	0	42	234
04:45 PM	74	30	0	104	41	59	1	101	21	29	1	51	256
Total	295	98	0	393	141	223	5	369	67	96	1	164	926
05:00 PM	67	24	0	91	31	53	0	84	36	32	0	68	243
05:15 PM	93	29	0	122	32	44	0	76	18	26	0	44	242
05:30 PM	83	23	0	106	35	58	0	93	13	16	0	29	228
05:45 PM	62	32	0	94	35	43	2	80	13	27	0	40	214
Total	305	108	0	413	133	198	2	333	80	101	0	181	927
Grand Total	600	206	0	806	274	421	7	702	147	197	1	345	1853
Apprch %	74.4	25.6	0		39	60	1		42.6	57.1	0.3		
Total %	32.4	11.1	0	43.5	14.8	22.7	0.4	37.9	7.9	10.6	0.1	18.6	

Dillon/Frisco, CO  
Lake Hill Impact Study  
PM Peak  
Dillon Dam Rd and La Bonte St

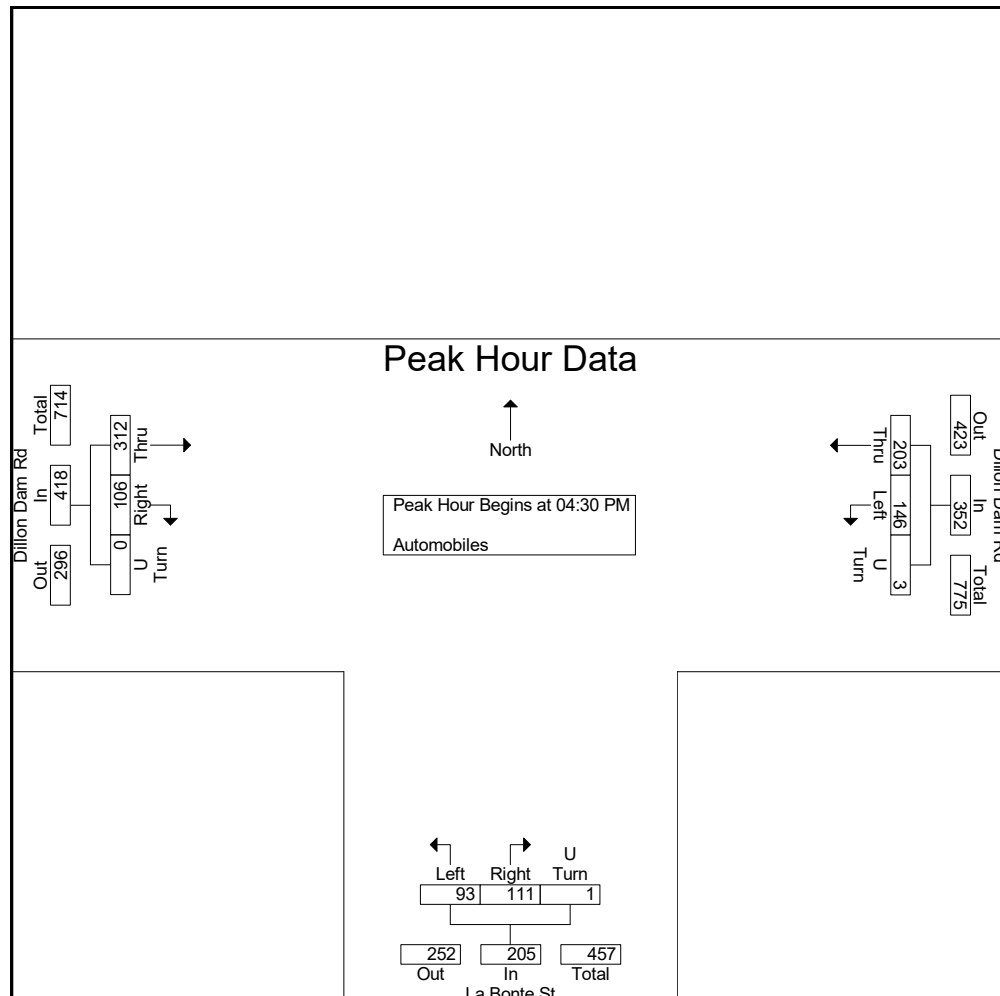
File Name : Dillon Dam Rd & La Bonte PM  
Site Code : IPO 38  
Start Date : 1/31/2019  
Page No : 2



Dillon/Frisco, CO  
Lake Hill Impact Study  
PM Peak  
Dillon Dam Rd and La Bonte St

File Name : Dillon Dam Rd & La Bonte PM  
Site Code : IPO 38  
Start Date : 1/31/2019  
Page No : 3

	Dillon Dam Rd Eastbound				Dillon Dam Rd Westbound				La Bonte St Northbound				
Start Time	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Left	Right	U Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	78	23	0	101	42	47	2	91	18	24	0	42	234
04:45 PM	74	30	0	104	41	59	1	101	21	29	1	51	256
05:00 PM	67	24	0	91	31	53	0	84	36	32	0	68	243
05:15 PM	93	29	0	122	32	44	0	76	18	26	0	44	242
Total Volume	312	106	0	418	146	203	3	352	93	111	1	205	975
% App. Total	74.6	25.4	0		41.5	57.7	0.9		45.4	54.1	0.5		
PHF	.839	.883	.000	.857	.869	.860	.375	.871	.646	.867	.250	.754	.952





Dillon/Frisco, CO  
Lake Hill Impact Study  
24 Hour Count  
Dillon Dam Rd North of Ten Mile Dr

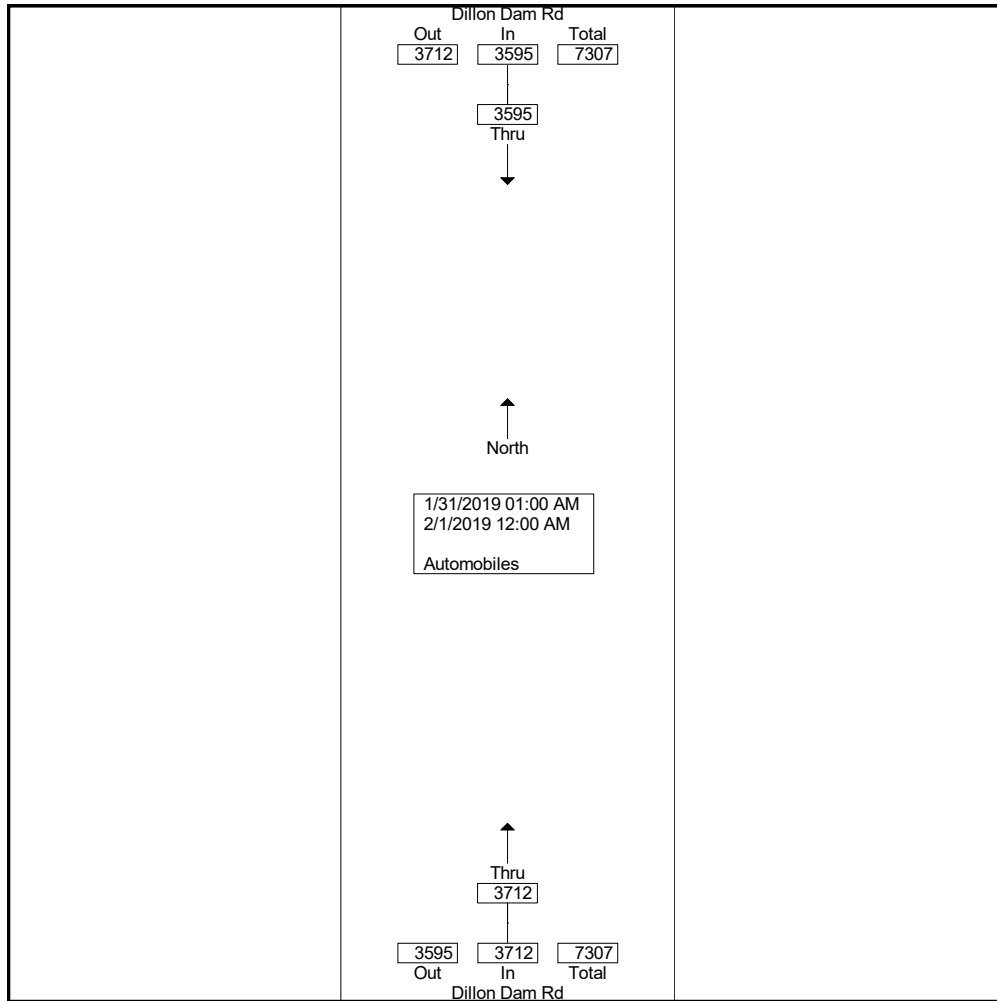
File Name : Dillon Dam Rd & Ten Mile 24 Hour  
Site Code : IPO 38  
Start Date : 1/31/2019  
Page No : 1

Groups Printed- Automobiles

Start Time	Dillon Dam Rd Northbound		Dillon Dam Rd Southbound		Int. Total
	Thru	App. Total	Thru	App. Total	
01:00 AM	2	2	4	4	6
02:00 AM	5	5	3	3	8
03:00 AM	4	4	5	5	9
04:00 AM	8	8	5	5	13
05:00 AM	5	5	33	33	38
06:00 AM	23	23	73	73	96
07:00 AM	128	128	282	282	410
08:00 AM	169	169	287	287	456
09:00 AM	160	160	199	199	359
10:00 AM	201	201	195	195	396
11:00 AM	207	207	215	215	422
12:00 PM	245	245	280	280	525
01:00 PM	285	285	281	281	566
02:00 PM	304	304	267	267	571
03:00 PM	371	371	302	302	673
04:00 PM	424	424	298	298	722
05:00 PM	439	439	293	293	732
06:00 PM	260	260	192	192	452
07:00 PM	165	165	150	150	315
08:00 PM	115	115	101	101	216
09:00 PM	91	91	62	62	153
10:00 PM	42	42	32	32	74
11:00 PM	39	39	22	22	61
12:00 AM	20	20	14	14	34
Grand Total	3712	3712	3595	3595	7307
Apprch %	100		100		
Total %	50.8	50.8	49.2	49.2	

Dillon/Frisco, CO  
Lake Hill Impact Study  
24 Hour Count  
Dillon Dam Rd North of Ten Mile Dr

File Name : Dillon Dam Rd & Ten Mile 24 Hour  
Site Code : IPO 38  
Start Date : 1/31/2019  
Page No : 2



Dillon/Frisco, CO  
Lake Hill Impact Study  
24 Hour Count  
Dillon Dam Rd North of Ten Mile Dr

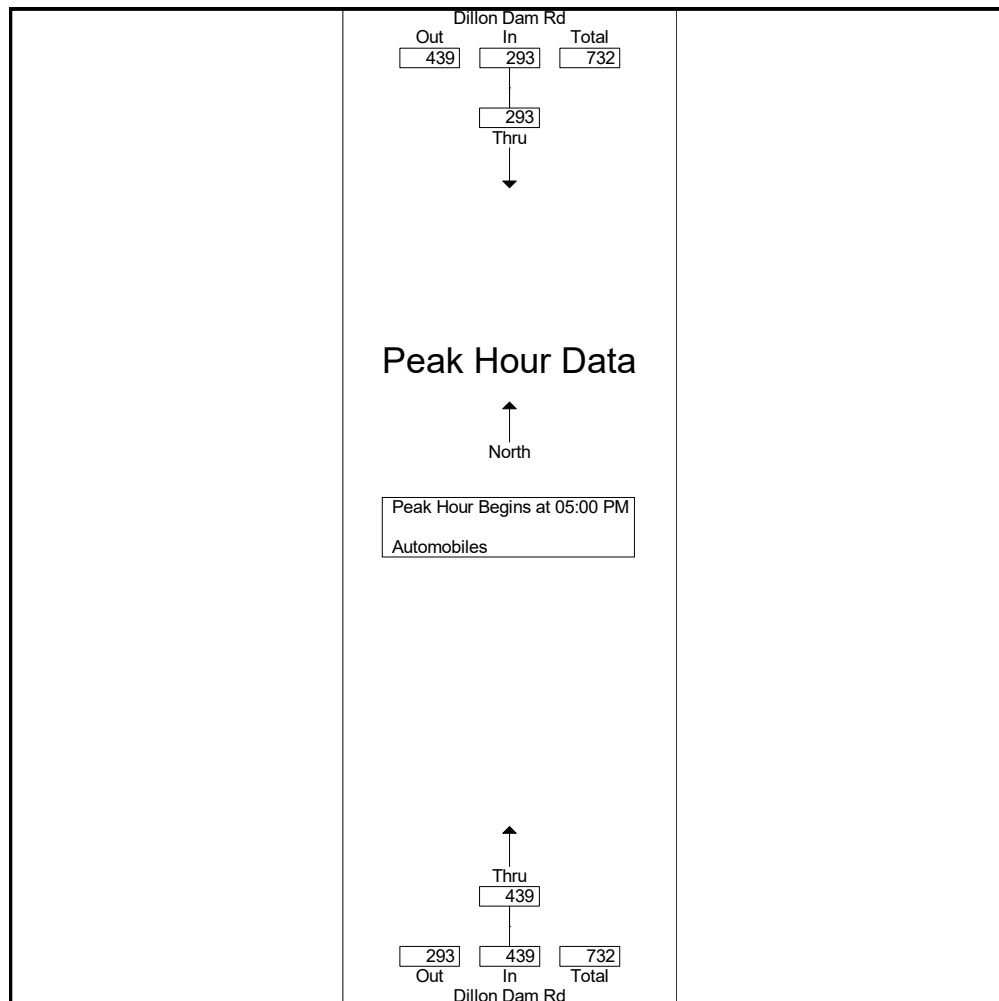
File Name : Dillon Dam Rd & Ten Mile 24 Hour  
Site Code : IPO 38  
Start Date : 1/31/2019  
Page No : 3

Start Time	Dillon Dam Rd Northbound		Dillon Dam Rd Southbound		Int. Total
	Thru	App. Total	Thru	App. Total	

Peak Hour Analysis From 01:00 AM to 12:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	<b>439</b>	<b>439</b>	<b>293</b>	<b>293</b>	<b>732</b>
Total Volume	439	439	293	293	732
% App. Total	100		100		
PHF	1.00	1.00	1.00	1.00	1.00



## Daily Vehicle Volume Report

Study Date: Thursday, 01/31/2019

Unit ID: RDC 0

Location: Dillon Dam Rd, Frisco, CO

Comments: Located South of Southern Security Gate

	Southbound Volume	Northbound Volume	Total Volume
00:00 - 00:59	7	7	14
01:00 - 01:59	2	3	5
02:00 - 02:59	1	4	5
03:00 - 03:59	2	2	4
04:00 - 04:59	4	4	8
05:00 - 05:59	20	5	25
06:00 - 06:59	39	20	59
07:00 - 07:59	159	110	269
08:00 - 08:59	210	159	369
09:00 - 09:59	144	147	291
10:00 - 10:59	155	182	337
11:00 - 11:59	196	199	395
12:00 - 12:59	250	228	478
13:00 - 13:59	242	253	495
14:00 - 14:59	226	273	499
15:00 - 15:59	254	328	582
16:00 - 16:59	262	383	645
17:00 - 17:59	250	394	644
18:00 - 18:59	160	242	402
19:00 - 19:59	123	141	264
20:00 - 20:59	69	105	174
21:00 - 21:59	46	81	127
22:00 - 22:59	25	34	59
23:00 - 23:59	13	32	45
<b>Totals</b>	<b>2859</b>	<b>3336</b>	<b>6195</b>
<b>AM Peak Time</b>	<b>07:58 - 08:57</b>	<b>10:52 - 11:51</b>	<b>10:49 - 11:48</b>
<b>AM Peak Volume</b>	<b>215</b>	<b>206</b>	<b>403</b>
<b>PM Peak Time</b>	<b>16:19 - 17:18</b>	<b>16:35 - 17:34</b>	<b>16:37 - 17:36</b>
<b>PM Peak Volume</b>	<b>281</b>	<b>434</b>	<b>700</b>

## Daily Southbound Classes Report

Study Date: Thursday, 01/31/2019

Unit ID: RDC 0

Location: Dillon Dam Rd, Frisco, CO

Comments: Located South of Southern Security Gate

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	Total
00:00 - 00:59	0	5	1	0	0	0	0	0	0	0	0	0	0	6
01:00 - 01:59	0	1	0	0	0	0	0	0	0	0	0	0	0	1
02:00 - 02:59	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:00 - 03:59	0	0	2	0	0	0	0	0	0	0	0	0	0	2
04:00 - 04:59	0	3	0	0	0	0	0	0	0	0	0	0	0	3
05:00 - 05:59	0	12	5	0	0	0	0	0	0	0	0	0	0	17
06:00 - 06:59	0	27	8	0	0	0	0	0	0	0	0	0	0	35
07:00 - 07:59	0	80	22	0	3	0	0	0	0	0	0	0	0	105
08:00 - 08:59	0	142	27	0	4	0	0	0	0	0	0	0	0	173
09:00 - 09:59	1	101	14	1	3	0	0	0	0	0	0	0	0	120
10:00 - 10:59	0	119	19	0	0	0	0	0	0	0	0	0	0	138
11:00 - 11:59	0	142	30	0	3	0	0	0	0	0	0	0	0	175
12:00 - 12:59	0	190	31	0	6	1	0	0	0	0	0	0	0	228
13:00 - 13:59	0	181	32	0	9	1	0	0	0	0	0	0	0	223
14:00 - 14:59	1	176	24	0	5	0	0	0	0	0	0	0	0	206
15:00 - 15:59	0	202	25	0	5	0	0	0	0	0	0	0	0	232
16:00 - 16:59	2	210	25	1	3	0	0	0	0	0	0	0	0	241
17:00 - 17:59	0	194	29	0	7	1	0	0	0	0	0	0	0	231
18:00 - 18:59	1	123	15	0	1	1	0	0	0	0	0	0	0	141
19:00 - 19:59	1	93	15	0	2	0	0	0	0	0	0	0	0	111
20:00 - 20:59	1	48	4	0	2	0	0	0	0	0	0	0	0	55
21:00 - 21:59	0	31	5	0	0	0	0	0	0	0	0	0	0	36
22:00 - 22:59	0	16	1	0	1	0	0	0	0	0	0	0	0	18
23:00 - 23:59	0	7	4	0	0	0	0	0	0	0	0	0	0	11
Totals	7	2104	338	2	54	4	0	0	0	0	0	0	0	2509
Percent of Total	0.3	83.9	13.5	0.1	2.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100
Percent of AM	0.1	81.6	16.5	0.1	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100
Percent of PM	0.3	84.9	12.1	0.1	2.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100

### Truck Summary:

Total Trucks: 60

% Trucks: 2.4

AM % Trucks: 1.8

PM % Trucks: 2.7

Classification Scheme: FHWA (ID: 1)

#1 Motorcycles - 2 Axles  
#2 Passenger Cars - 2 Axles  
#3 Pickup Trucks, Vans - 2 Axles  
#4 Buses  
#5 Single Unit - 2 Axles, 6 Tires

#6 Single Unit Truck - 3 Axles  
#7 Single Unit - 4 Axles  
#8 Single Unit - 4 Axles or Less  
#9 Double Unit - 5 Axles  
#10 Double Unit - 6 Axles or More

#11 Multi-Unit - 5 Axles or Less  
#12 Multi-Unit - 6 Axles  
#13 Multi-Unit - 7 Axles or More

## Daily Northbound Classes Report

Study Date: Thursday, 01/31/2019

Unit ID: RDC 0

Location: Dillon Dam Rd, Frisco, CO

Comments: Located South of Southern Security Gate

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	Total
00:00 - 00:59	0	5	0	0	1	0	0	0	0	0	0	0	0	6
01:00 - 01:59	0	2	1	0	0	0	0	0	0	0	0	0	0	3
02:00 - 02:59	0	4	0	0	0	0	0	0	0	0	0	0	0	4
03:00 - 03:59	0	1	1	0	0	0	0	0	0	0	0	0	0	2
04:00 - 04:59	0	2	1	0	1	0	0	0	0	0	0	0	0	4
05:00 - 05:59	0	3	0	0	2	0	0	0	0	0	0	0	0	5
06:00 - 06:59	0	6	8	0	6	0	0	0	0	0	0	0	0	20
07:00 - 07:59	0	45	37	0	26	0	0	0	0	0	0	0	0	108
08:00 - 08:59	0	75	55	0	27	0	0	0	0	0	0	0	0	157
09:00 - 09:59	0	60	59	2	22	0	0	1	0	0	0	0	0	144
10:00 - 10:59	0	89	61	0	28	0	0	0	0	0	0	0	0	178
11:00 - 11:59	0	89	61	0	43	1	0	0	0	0	0	0	0	194
12:00 - 12:59	0	121	68	0	36	0	0	0	0	0	0	0	0	225
13:00 - 13:59	0	110	92	0	48	0	0	0	0	0	0	0	0	250
14:00 - 14:59	0	170	57	0	43	0	0	0	0	0	0	0	0	270
15:00 - 15:59	0	188	91	0	45	0	0	0	0	0	0	0	0	324
16:00 - 16:59	1	213	102	0	54	0	0	0	0	0	0	0	0	370
17:00 - 17:59	0	217	106	0	68	0	0	0	0	0	0	0	0	391
18:00 - 18:59	0	141	63	0	35	0	0	0	0	0	0	0	0	239
19:00 - 19:59	0	80	45	0	15	0	0	0	0	0	0	0	0	140
20:00 - 20:59	0	59	29	0	16	0	0	0	0	0	0	0	0	104
21:00 - 21:59	0	54	15	0	12	0	0	0	0	0	0	0	0	81
22:00 - 22:59	0	19	10	0	5	0	0	0	0	0	0	0	0	34
23:00 - 23:59	0	16	9	0	7	0	0	0	0	0	0	0	0	32
Totals	1	1769	971	2	540	1	0	1	0	0	0	0	0	3285
Percent of Total	0.0	53.9	29.6	0.1	16.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100
Percent of AM	0.0	46.2	34.4	0.2	18.9	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	100
Percent of PM	0.0	56.4	27.9	0.0	15.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100

### Truck Summary:

Total Trucks: 544

% Trucks: 16.6

AM % Trucks: 19.4

PM % Trucks: 15.6

Classification Scheme: FHWA (ID: 1)

#1 Motorcycles - 2 Axles  
#2 Passenger Cars - 2 Axles  
#3 Pickup Trucks, Vans - 2 Axles  
#4 Buses  
#5 Single Unit - 2 Axles, 6 Tires

#6 Single Unit Truck - 3 Axles  
#7 Single Unit - 4 Axles  
#8 Single Unit - 4 Axles or Less  
#9 Double Unit - 5 Axles  
#10 Double Unit - 6 Axles or More

#11 Multi-Unit - 5 Axles or Less  
#12 Multi-Unit - 6 Axles  
#13 Multi-Unit - 7 Axles or More

## Daily Total Classes Report

Study Date: Thursday, 01/31/2019

Unit ID: RDC 0

Location: Dillon Dam Rd, Frisco, CO

Comments: Located South of Southern Security Gate

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	Total
00:00 - 00:59	0	10	1	0	1	0	0	0	0	0	0	0	0	12
01:00 - 01:59	0	3	1	0	0	0	0	0	0	0	0	0	0	4
02:00 - 02:59	0	5	0	0	0	0	0	0	0	0	0	0	0	5
03:00 - 03:59	0	1	3	0	0	0	0	0	0	0	0	0	0	4
04:00 - 04:59	0	5	1	0	1	0	0	0	0	0	0	0	0	7
05:00 - 05:59	0	15	5	0	2	0	0	0	0	0	0	0	0	22
06:00 - 06:59	0	33	16	0	6	0	0	0	0	0	0	0	0	55
07:00 - 07:59	0	125	59	0	29	0	0	0	0	0	0	0	0	213
08:00 - 08:59	0	217	82	0	31	0	0	0	0	0	0	0	0	330
09:00 - 09:59	1	161	73	3	25	0	0	1	0	0	0	0	0	264
10:00 - 10:59	0	208	80	0	28	0	0	0	0	0	0	0	0	316
11:00 - 11:59	0	231	91	0	46	1	0	0	0	0	0	0	0	369
12:00 - 12:59	0	311	99	0	42	1	0	0	0	0	0	0	0	453
13:00 - 13:59	0	291	124	0	57	1	0	0	0	0	0	0	0	473
14:00 - 14:59	1	346	81	0	48	0	0	0	0	0	0	0	0	476
15:00 - 15:59	0	390	116	0	50	0	0	0	0	0	0	0	0	556
16:00 - 16:59	3	423	127	1	57	0	0	0	0	0	0	0	0	611
17:00 - 17:59	0	411	135	0	75	1	0	0	0	0	0	0	0	622
18:00 - 18:59	1	264	78	0	36	1	0	0	0	0	0	0	0	380
19:00 - 19:59	1	173	60	0	17	0	0	0	0	0	0	0	0	251
20:00 - 20:59	1	107	33	0	18	0	0	0	0	0	0	0	0	159
21:00 - 21:59	0	85	20	0	12	0	0	0	0	0	0	0	0	117
22:00 - 22:59	0	35	11	0	6	0	0	0	0	0	0	0	0	52
23:00 - 23:59	0	23	13	0	7	0	0	0	0	0	0	0	0	43
<b>Totals</b>	<b>8</b>	<b>3873</b>	<b>1309</b>	<b>4</b>	<b>594</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5794</b>
<b>Percent of Total</b>	<b>0.1</b>	<b>66.8</b>	<b>22.6</b>	<b>0.1</b>	<b>10.3</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>100</b>
<b>Percent of AM</b>	<b>0.1</b>	<b>63.3</b>	<b>25.7</b>	<b>0.2</b>	<b>10.6</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>100</b>
<b>Percent of PM</b>	<b>0.2</b>	<b>68.2</b>	<b>21.4</b>	<b>0.0</b>	<b>10.1</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>100</b>

### Truck Summary:

Total Trucks: 604

% Trucks: 10.4

AM % Trucks: 10.9

PM % Trucks: 10.3

Classification Scheme: FHWA (ID: 1)

#1 Motorcycles - 2 Axles  
#2 Passenger Cars - 2 Axles  
#3 Pickup Trucks, Vans - 2 Axles  
#4 Buses  
#5 Single Unit - 2 Axles, 6 Tires

#6 Single Unit Truck - 3 Axles  
#7 Single Unit - 4 Axles  
#8 Single Unit - 4 Axles or Less  
#9 Double Unit - 5 Axles  
#10 Double Unit - 6 Axles or More

#11 Multi-Unit - 5 Axles or Less  
#12 Multi-Unit - 6 Axles  
#13 Multi-Unit - 7 Axles or More

## Daily Southbound Speeds (MPH)

Study Date: Thursday, 01/31/2019

Unit ID: RDC 0

Location: Dillon Dam Rd, Frisco, CO

Posted Speed: 25

Comments: Located South of Southern Security Gate

	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	1	2	2	1	0	0	0	0	0	0	0	0	6
01:00 - 01:59	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
02:00 - 02:59	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
03:00 - 03:59	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
04:00 - 04:59	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	3
05:00 - 05:59	0	0	0	0	0	11	5	1	0	0	0	0	0	0	0	17
06:00 - 06:59	0	0	0	1	9	18	7	0	0	0	0	0	0	0	0	35
07:00 - 07:59	0	0	0	0	36	54	15	0	0	0	0	0	0	0	0	105
08:00 - 08:59	0	0	0	2	15	109	46	1	0	0	0	0	0	0	0	173
09:00 - 09:59	0	1	2	6	29	57	24	1	0	0	0	0	0	0	0	120
10:00 - 10:59	0	0	1	2	33	82	20	0	0	0	0	0	0	0	0	138
11:00 - 11:59	0	0	0	4	29	94	45	3	0	0	0	0	0	0	0	175
12:00 - 12:59	0	0	1	5	27	122	65	6	1	1	0	0	0	0	0	228
13:00 - 13:59	0	0	3	6	19	115	75	5	0	0	0	0	0	0	0	223
14:00 - 14:59	0	0	1	1	27	124	52	1	0	0	0	0	0	0	0	206
15:00 - 15:59	0	0	0	5	15	129	76	6	1	0	0	0	0	0	0	232
16:00 - 16:59	1	0	1	1	38	151	44	4	0	0	0	0	0	0	0	240
17:00 - 17:59	0	0	0	2	42	139	42	5	0	0	0	1	0	0	0	231
18:00 - 18:59	1	0	0	4	44	81	10	1	0	0	0	0	0	0	0	141
19:00 - 19:59	0	0	0	1	38	65	5	1	0	0	0	0	1	0	0	111
20:00 - 20:59	0	0	0	0	12	32	9	2	0	0	0	0	0	0	0	55
21:00 - 21:59	0	0	0	4	6	16	9	1	0	0	0	0	0	0	0	36
22:00 - 22:59	0	0	0	1	5	9	3	0	0	0	0	0	0	0	0	18
23:00 - 23:59	0	0	0	1	1	9	0	0	0	0	0	0	0	0	0	11
<b>Totals</b>	<b>2</b>	<b>1</b>	<b>9</b>	<b>48</b>	<b>430</b>	<b>1419</b>	<b>556</b>	<b>38</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2508</b>
<b>Percent of Total</b>	<b>0.1</b>	<b>0.0</b>	<b>0.4</b>	<b>1.9</b>	<b>17.1</b>	<b>56.6</b>	<b>22.2</b>	<b>1.5</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>100</b>
<b>Percent of AM</b>	<b>0.0</b>	<b>0.1</b>	<b>0.4</b>	<b>2.2</b>	<b>20.1</b>	<b>55.0</b>	<b>21.4</b>	<b>0.8</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>100</b>
<b>Percent of PM</b>	<b>0.1</b>	<b>0.0</b>	<b>0.3</b>	<b>1.8</b>	<b>15.8</b>	<b>57.3</b>	<b>22.5</b>	<b>1.8</b>	<b>0.1</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>100</b>

Standard Deviation:	4.3 MPH	Ten Mile Pace:	35 to 44 MPH	85th Percentile:	42.0 MPH
Mean Speed:	37.7 MPH	Percent in Ten Mile Pace:	78.7%	15th Percentile:	33.7 MPH
Median Speed:	37.7 MPH			90th Percentile:	43.1 MPH
Modal Speed:	37.5 MPH			95th Percentile:	44.3 MPH



## Daily Northbound Speeds (MPH)

Study Date: Thursday, 01/31/2019

Unit ID: RDC 0

Location: Dillon Dam Rd, Frisco, CO

Posted Speed: 25

Comments: Located South of Southern Security Gate

	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	1	2	1	0	1	1	0	0	0	0	0	0	6
01:00 - 01:59	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	3
02:00 - 02:59	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	4
03:00 - 03:59	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
04:00 - 04:59	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	4
05:00 - 05:59	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	5
06:00 - 06:59	0	0	0	2	3	4	6	4	1	0	0	0	0	0	0	20
07:00 - 07:59	0	0	0	1	4	15	27	36	16	7	2	0	0	0	0	108
08:00 - 08:59	0	0	0	1	3	19	36	58	27	13	0	0	0	0	0	157
09:00 - 09:59	0	3	0	4	11	28	33	39	19	7	0	0	0	0	0	144
10:00 - 10:59	0	0	0	1	4	26	56	55	28	6	2	0	0	0	0	178
11:00 - 11:59	0	0	1	5	19	27	53	54	30	5	0	0	0	0	0	194
12:00 - 12:59	0	0	0	7	15	52	67	61	16	6	0	1	0	0	0	225
13:00 - 13:59	0	0	0	1	13	41	73	84	33	5	0	0	0	0	0	250
14:00 - 14:59	0	0	1	6	15	45	98	85	18	2	0	0	0	0	0	270
15:00 - 15:59	0	0	7	5	19	62	109	93	26	2	0	0	1	0	0	324
16:00 - 16:59	1	0	0	6	29	73	123	108	25	4	1	0	0	0	0	370
17:00 - 17:59	0	0	0	10	52	99	140	76	13	0	1	0	0	0	0	391
18:00 - 18:59	0	0	1	8	32	60	86	39	13	0	0	0	0	0	0	239
19:00 - 19:59	0	0	0	3	24	25	42	35	9	1	1	0	0	0	0	140
20:00 - 20:59	0	0	0	2	5	26	44	23	3	0	1	0	0	0	0	104
21:00 - 21:59	0	0	0	10	7	24	25	11	4	0	0	0	0	0	0	81
22:00 - 22:59	0	0	0	0	6	7	11	8	0	2	0	0	0	0	0	34
23:00 - 23:59	0	0	0	2	7	8	7	3	3	2	0	0	0	0	0	32
<b>Totals</b>	<b>1</b>	<b>3</b>	<b>10</b>	<b>75</b>	<b>270</b>	<b>650</b>	<b>1039</b>	<b>880</b>	<b>285</b>	<b>62</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>3285</b>
<b>Percent of Total</b>	<b>0.0</b>	<b>0.1</b>	<b>0.3</b>	<b>2.3</b>	<b>8.2</b>	<b>19.8</b>	<b>31.6</b>	<b>26.8</b>	<b>8.7</b>	<b>1.9</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>100</b>
<b>Percent of AM</b>	<b>0.0</b>	<b>0.4</b>	<b>0.1</b>	<b>1.8</b>	<b>5.6</b>	<b>15.5</b>	<b>25.9</b>	<b>30.8</b>	<b>14.8</b>	<b>4.6</b>	<b>0.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>100</b>
<b>Percent of PM</b>	<b>0.0</b>	<b>0.0</b>	<b>0.4</b>	<b>2.4</b>	<b>9.1</b>	<b>21.2</b>	<b>33.5</b>	<b>25.4</b>	<b>6.6</b>	<b>1.0</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>100</b>

Standard Deviation:	6.6 MPH	Ten Mile Pace:	40 to 49 MPH	85th Percentile:	49.2 MPH
Mean Speed:	42.8 MPH	Percent in Ten Mile Pace:	58.4%	15th Percentile:	36.0 MPH
Median Speed:	43.0 MPH			90th Percentile:	50.5 MPH
Modal Speed:	42.5 MPH			95th Percentile:	53.4 MPH

## Daily Total Speeds (MPH)

Study Date: Thursday, 01/31/2019

Unit ID: RDC 0

Location: Dillon Dam Rd, Frisco, CO

Posted Speed: 25

Comments: Located South of Southern Security Gate

	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	2	4	3	1	1	1	0	0	0	0	0	0	12
01:00 - 01:59	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	4
02:00 - 02:59	0	0	0	0	1	2	1	1	0	0	0	0	0	0	0	5
03:00 - 03:59	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	4
04:00 - 04:59	0	0	0	1	1	1	2	2	0	0	0	0	0	0	0	7
05:00 - 05:59	0	0	0	0	0	14	5	3	0	0	0	0	0	0	0	22
06:00 - 06:59	0	0	0	3	12	22	13	4	1	0	0	0	0	0	0	55
07:00 - 07:59	0	0	0	1	40	69	42	36	16	7	2	0	0	0	0	213
08:00 - 08:59	0	0	0	3	18	128	82	59	27	13	0	0	0	0	0	330
09:00 - 09:59	0	4	2	10	40	85	57	40	19	7	0	0	0	0	0	264
10:00 - 10:59	0	0	1	3	37	108	76	55	28	6	2	0	0	0	0	316
11:00 - 11:59	0	0	1	9	48	121	98	57	30	5	0	0	0	0	0	369
12:00 - 12:59	0	0	1	12	42	174	132	67	17	7	0	1	0	0	0	453
13:00 - 13:59	0	0	3	7	32	156	148	89	33	5	0	0	0	0	0	473
14:00 - 14:59	0	0	2	7	42	169	150	86	18	2	0	0	0	0	0	476
15:00 - 15:59	0	0	7	10	34	191	185	99	27	2	0	0	1	0	0	556
16:00 - 16:59	2	0	1	7	67	224	167	112	25	4	1	0	0	0	0	610
17:00 - 17:59	0	0	0	12	94	238	182	81	13	0	1	1	0	0	0	622
18:00 - 18:59	1	0	1	12	76	141	96	40	13	0	0	0	0	0	0	380
19:00 - 19:59	0	0	0	4	62	90	47	36	9	1	1	0	1	0	0	251
20:00 - 20:59	0	0	0	2	17	58	53	25	3	0	1	0	0	0	0	159
21:00 - 21:59	0	0	0	14	13	40	34	12	4	0	0	0	0	0	0	117
22:00 - 22:59	0	0	0	1	11	16	14	8	0	2	0	0	0	0	0	52
23:00 - 23:59	0	0	0	3	8	17	7	3	3	2	0	0	0	0	0	43
<b>Totals</b>	<b>3</b>	<b>4</b>	<b>19</b>	<b>123</b>	<b>700</b>	<b>2069</b>	<b>1595</b>	<b>918</b>	<b>287</b>	<b>63</b>	<b>8</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>5793</b>
<b>Percent of Total</b>	<b>0.1</b>	<b>0.1</b>	<b>0.3</b>	<b>2.1</b>	<b>12.1</b>	<b>35.7</b>	<b>27.5</b>	<b>15.8</b>	<b>5.0</b>	<b>1.1</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>100</b>
<b>Percent of AM</b>	<b>0.0</b>	<b>0.2</b>	<b>0.2</b>	<b>2.0</b>	<b>12.6</b>	<b>34.7</b>	<b>23.7</b>	<b>16.2</b>	<b>7.6</b>	<b>2.4</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>100</b>
<b>Percent of PM</b>	<b>0.1</b>	<b>0.0</b>	<b>0.4</b>	<b>2.2</b>	<b>11.9</b>	<b>36.1</b>	<b>29.0</b>	<b>15.7</b>	<b>3.9</b>	<b>0.6</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>100</b>

Standard Deviation: 6.2 MPH

Ten Mile Pace: 35 to 44 MPH

85th Percentile: 47.2 MPH

Mean Speed: 40.6 MPH

Percent in Ten Mile Pace: 63.2%

Median Speed: 39.9 MPH

15th Percentile: 35.0 MPH

Modal Speed: 37.5 MPH

90th Percentile: 48.8 MPH

95th Percentile: 51.3 MPH

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

Page 1

Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 1

## Report for 12/24/2018 10:00:00 AM to Midnight

Vehicles	Peak Periods			
2,356	AM		PM	
	Time	11:30	Time	11:45
	Count	311	Count	332
	PHF	0.836	PHF	0.892

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	462	903	759	195	32	5	0	0	0	0	0	0	0	0
Percent	19.6	38.3	32.2	8.3	1.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	1894	991	232	37	5	0	0	0	0	0	0	0	0	0
Percent	80.4	42.1	9.8	1.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	32	34	35	39	40	40	44	45	48

Average 40  
(Mean)

Pace Speed 35-44  
Number in 1708  
Pace  
Percent in 72.5  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

Page 2

Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 2

## Report for 12/24/2018 10:00:00 AM to Midnight

Vehicles	Peak Periods	
	AM	PM
2,032	Time 10:15	Time 11:45
	Count 255	Count 247
	PHF 0.797	PHF 0.823

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	382	762	652	200	30	5	1	0	0	0	0	0	0	0
Percent	18.8	37.5	32.1	9.8	1.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	1650	888	236	36	6	1	0	0	0	0	0	0	0	0
Percent	81.2	43.7	11.6	1.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	32	33	35	39	40	40	45	46	48

Average 40  
(Mean)

Pace Speed 36-45  
Number in 1414  
Pace  
Percent in 69.6  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

Page 3

Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

COMBINED - Direction 1, Direction 2

## Report for 12/24/2018 10:00:00 AM to Midnight

Vehicles	Peak Periods	
	AM	PM
4,388	Time 11:30	Time 11:45
	Count 552	Count 579
	PHF 0.821	PHF 0.862

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	844	1665	1411	395	62	10	1	0	0	0	0	0	0	0
Percent	19.2	37.9	32.2	9.0	1.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	3544	1879	468	73	11	1	0	0	0	0	0	0	0	0
Percent	80.8	42.8	10.7	1.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	32	33	35	39	40	40	44	46	48

Average 40  
(Mean)

Pace Speed 35-44  
Number in 3112  
Pace  
Percent in 70.9  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

Page 4

Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 1

## Report for Tuesday, December 25, 2018

Vehicles	Peak Periods			
	AM		PM	
	Time	11:30	Time	03:45
1,342	Count	112	Count	163
	PHF	0.800	PHF	0.832

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	87	233	499	389	111	19	4	0	0	0	0	0	0	0
Percent	6.5	17.4	37.2	29.0	8.3	1.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	1255	1022	523	134	23	4	0	0	0	0	0	0	0	0
Percent	93.5	76.2	39.0	10.0	1.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	34	37	39	43	44	45	49	50	52

Average 44  
(Mean)

Pace Speed 40-49  
Number in 911  
Pace  
Percent in 67.9  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

Page 5

Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 2

## Report for Tuesday, December 25, 2018

Vehicles	Peak Periods			
	AM		PM	
	Time	10:30	Time	03:30
1,379	Count	93	Count	141
	PHF	0.861	PHF	0.881

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	40	182	508	470	152	26	1	0	0	0	0	0	0	0
Percent	2.9	13.2	36.8	34.1	11.0	1.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	1339	1157	649	179	27	1	0	0	0	0	0	0	0	0
Percent	97.1	83.9	47.1	13.0	2.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	37	39	40	45	45	46	50	51	53

Average 45  
(Mean)

Pace Speed 40-49  
Number in 983  
Pace  
Percent in 71.3  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

COMBINED - Direction 1, Direction 2

## Report for Tuesday, December 25, 2018

Vehicles	Peak Periods			
	AM		PM	
	Time	11:30	Time	03:45
2,721	Count	204	Count	297
	PHF	0.864	PHF	0.940

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	127	415	1007	859	263	45	5	0	0	0	0	0	0	0
Percent	4.7	15.3	37.0	31.6	9.7	1.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	2594	2179	1172	313	50	5	0	0	0	0	0	0	0	0
Percent	95.3	80.1	43.1	11.5	1.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	36	38	39	44	45	45	50	51	53

Average 45  
(Mean)

Pace Speed 40-49  
Number in 1894  
Pace  
Percent in 69.6  
Pace



# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

Page 7

Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 1

## Report for Wednesday, December 26, 2018

Vehicles	Peak Periods			
3,199	AM		PM	
	Time	11:15	Time	04:45
	Count	253	Count	366
	PHF	0.855	PHF	0.897

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	121	427	1302	1053	269	25	2	0	0	0	0	0	0	0
Percent	3.8	13.3	40.7	32.9	8.4	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	3078	2651	1349	296	27	2	0	0	0	0	0	0	0	0
Percent	96.2	82.9	42.2	9.3	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	36	39	40	44	45	45	49	50	52

Average 44  
(Mean)

Pace Speed 41-50  
Number in 2355  
Pace  
Percent in 73.6  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 2

## Report for Wednesday, December 26, 2018

Vehicles	Peak Periods			
	AM		PM	
	Time	10:30	Time	04:15
3,265	Count	237	Count	318
	PHF	0.812	PHF	0.874

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	180	502	1091	1068	364	52	7	1	0	0	0	0	0	0
Percent	5.5	15.4	33.4	32.7	11.1	1.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	3085	2583	1492	424	60	8	1	0	0	0	0	0	0	0
Percent	94.5	79.1	45.7	13.0	1.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	35	38	39	44	45	46	50	51	53

Average 45  
(Mean)

Pace Speed 41-50  
Number in 2159  
Pace  
Percent in 66.1  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

COMBINED - Direction 1, Direction 2

## Report for Wednesday, December 26, 2018

Vehicles	Peak Periods			
6,464	AM		PM	
	Time	11:30	Time	04:00
	Count	487	Count	665
	PHF	0.863	PHF	0.875

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	301	929	2393	2121	633	77	9	1	0	0	0	0	0	0
Percent	4.7	14.4	37.0	32.8	9.8	1.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	6163	5234	2841	720	87	10	1	0	0	0	0	0	0	0
Percent	95.3	81.0	44.0	11.1	1.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	36	38	40	44	45	45	50	51	52

Average 45  
(Mean)

Pace Speed 41-50  
Number in 4514  
Pace  
Percent in 69.8  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 1

## Report for Thursday, December 27, 2018

Vehicles	Peak Periods			
3,650	AM		PM	
	Time	11:30	Time	04:30
	Count	248	Count	546
	PHF	0.912	PHF	0.904

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	74	343	1428	1423	322	56	3	1	0	0	0	0	0	0
Percent	2.0	9.4	39.1	39.0	8.8	1.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	3576	3233	1805	382	60	4	1	0	0	0	0	0	0	0
Percent	98.0	88.6	49.5	10.5	1.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	38	40	41	45	45	46	50	51	52

Average 45  
(Mean)

Pace Speed 41-50  
Number in 2851  
Pace  
Percent in 78.1  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 2

## Report for Thursday, December 27, 2018

Vehicles	Peak Periods			
	AM		PM	
	Time	11:30	Time	04:30
3,619	Count	254	Count	390
	PHF	0.836	PHF	0.886

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	102	425	1354	1308	386	41	2	1	0	0	0	0	0	0
Percent	2.8	11.7	37.4	36.1	10.7	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	3517	3092	1738	430	44	3	1	0	0	0	0	0	0	0
Percent	97.2	85.4	48.0	11.9	1.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	37	39	41	45	45	46	50	51	53

Average 45  
(Mean)

Pace Speed 41-50  
Number in 2662  
Pace  
Percent in 73.6  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

COMBINED - Direction 1, Direction 2

## Report for Thursday, December 27, 2018

Vehicles	Peak Periods			
	AM		PM	
	Time	11:30	Time	04:30
7,269	Count	502	Count	936
	PHF	0.896	PHF	0.967

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	176	768	2782	2731	708	97	5	2	0	0	0	0	0	0
Percent	2.4	10.6	38.3	37.6	9.7	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	7093	6325	3543	812	104	7	2	0	0	0	0	0	0	0
Percent	97.6	87.0	48.7	11.2	1.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	38	40	41	45	45	46	50	51	52

Average 45  
(Mean)

Pace Speed 41-50  
Number in 5513  
Pace  
Percent in 75.8  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 1

## Report for Friday, December 28, 2018

Vehicles	Peak Periods			
	AM		PM	
	Time	11:30	Time	04:15
4,091	Count	305	Count	598
	PHF	0.887	PHF	0.965

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	41	301	1609	1667	426	42	5	0	0	0	0	0	0	0
Percent	1.0	7.4	39.3	40.7	10.4	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	4050	3749	2140	473	47	5	0	0	0	0	0	0	0	0
Percent	99.0	91.6	52.3	11.6	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	39	41	42	45	46	46	50	51	52

Average 46  
(Mean)

Pace Speed 42-51  
Number in 3280  
Pace  
Percent in 80.2  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 2

## Report for Friday, December 28, 2018

Vehicles	Peak Periods			
3,971	AM		PM	
	Time	11:30	Time	04:15
	Count	298	Count	420
	PHF	0.856	PHF	0.875

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	69	387	1281	1634	547	44	7	2	0	0	0	0	0	0
Percent	1.7	9.7	32.3	41.1	13.8	1.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	3902	3515	2234	600	53	9	2	0	0	0	0	0	0	0
Percent	98.3	88.5	56.3	15.1	1.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	38	40	41	46	46	47	51	52	53

Average 46  
(Mean)

Pace Speed 42-51  
Number in 2944  
Pace  
Percent in 74.1  
Pace



# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

COMBINED - Direction 1, Direction 2

## Report for Friday, December 28, 2018

Vehicles	Peak Periods			
	AM		PM	
	Time	11:30	Time	04:15
8,062	Count	603	Count	1,018
	PHF	0.931	PHF	0.946

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	110	688	2890	3301	973	86	12	2	0	0	0	0	0	0
Percent	1.4	8.5	35.8	40.9	12.1	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	7952	7264	4374	1073	100	14	2	0	0	0	0	0	0	0
Percent	98.6	90.1	54.3	13.3	1.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	39	41	42	45	46	47	50	51	53

Average 46  
(Mean)

Pace Speed 42-51  
Number in 6224  
Pace  
Percent in 77.2  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 1

## Report for Saturday, December 29, 2018

Vehicles	Peak Periods			
	AM		PM	
3,647	Time	11:15	Time	04:00
	Count	295	Count	503
	PHF	0.878	PHF	0.861

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	51	386	1474	1378	314	36	6	2	0	0	0	0	0	0
Percent	1.4	10.6	40.4	37.8	8.6	1.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	3596	3210	1736	358	44	8	2	0	0	0	0	0	0	0
Percent	98.6	88.0	47.6	9.8	1.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	38	40	41	45	45	46	50	50	52

Average 45  
(Mean)

Pace Speed 41-50  
Number in 2852  
Pace  
Percent in 78.2  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 2

## Report for Saturday, December 29, 2018

Vehicles	Peak Periods			
	AM		PM	
	Time	11:15	Time	03:30
3,497	Count	297	Count	367
	PHF	0.863	PHF	0.936

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	117	381	1291	1308	367	32	1	0	0	0	0	0	0	0
Percent	3.3	10.9	36.9	37.4	10.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	3380	2999	1708	400	33	1	0	0	0	0	0	0	0	0
Percent	96.7	85.8	48.8	11.4	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	37	39	41	45	45	46	50	51	52

Average 45  
(Mean)

Pace Speed 41-50  
Number in 2599  
Pace  
Percent in 74.3  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

COMBINED - Direction 1, Direction 2

## Report for Saturday, December 29, 2018

Vehicles	Peak Periods			
	AM		PM	
	Time	11:15	Time	04:00
7,144	Count	592	Count	862
	PHF	0.871	PHF	0.933

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	168	767	2765	2686	681	68	7	2	0	0	0	0	0	0
Percent	2.4	10.7	38.7	37.6	9.5	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	6976	6209	3444	758	77	9	2	0	0	0	0	0	0	0
Percent	97.6	86.9	48.2	10.6	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	38	40	41	45	45	46	50	51	52

Average 45  
(Mean)

Pace Speed 41-50  
Number in 5451  
Pace  
Percent in 76.3  
Pace

# Summit County R&B

Dam Road CR 7  
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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 1

## Report for Sunday, December 30, 2018

Vehicles	Peak Periods			
	AM		PM	
	Time	11:30	Time	04:00
3,344	Count	232	Count	436
	PHF	0.879	PHF	0.908

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	29	305	1249	1341	366	51	3	0	0	0	0	0	0	0
Percent	0.9	9.1	37.4	40.1	10.9	1.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	3315	3010	1761	420	54	3	0	0	0	0	0	0	0	0
Percent	99.1	90.0	52.7	12.6	1.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	39	40	42	45	46	46	50	51	53

Average 46  
(Mean)

Pace Speed 42-51  
Number in 2609  
Pace  
Percent in 78.0  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 2

## Report for Sunday, December 30, 2018

Vehicles	Peak Periods			
3,034	AM		PM	
	Time	11:00	Time	03:45
	Count	227	Count	341
	PHF	0.860	PHF	0.947

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	46	203	989	1280	446	61	9	0	0	0	0	0	0	0
Percent	1.5	6.7	32.6	42.2	14.7	2.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	2988	2785	1796	516	70	9	0	0	0	0	0	0	0	0
Percent	98.5	91.8	59.2	17.0	2.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	39	41	42	46	46	47	51	52	54

Average 46  
(Mean)

Pace Speed 42-51  
Number in 2308  
Pace  
Percent in 76.1  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

COMBINED - Direction 1, Direction 2

## Report for Sunday, December 30, 2018

Vehicles	Peak Periods			
6,378	AM		PM	
	Time	11:30	Time	03:45
	Count	450	Count	772
	PHF	0.922	PHF	0.970

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	75	508	2238	2621	812	112	12	0	0	0	0	0	0	0
Percent	1.2	8.0	35.1	41.1	12.7	1.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	6303	5795	3557	936	124	12	0	0	0	0	0	0	0	0
Percent	98.8	90.9	55.8	14.7	1.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	39	41	42	46	46	47	50	52	53

Average 46  
(Mean)

Pace Speed 42-51  
Number in 4917  
Pace  
Percent in 77.1  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

Page 22

Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 1

## Report for Monday, December 31, 2018

Vehicles	Peak Periods			
3,232	AM		PM	
	Time	11:30	Time	01:00
	Count	295	Count	354
	PHF	0.910	PHF	0.868

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	49	361	1346	1175	268	28	4	1	0	0	0	0	0	0
Percent	1.5	11.2	41.6	36.4	8.3	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	3183	2822	1476	301	33	5	1	0	0	0	0	0	0	0
Percent	98.5	87.3	45.7	9.3	1.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	38	40	41	45	45	46	49	50	52

Average 45  
(Mean)

Pace Speed 41-50  
Number in 2521  
Pace  
Percent in 78.0  
Pace



# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

Page 23

Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 2

## Report for Monday, December 31, 2018

Vehicles	Peak Periods			
3,340	AM		PM	
	Time	11:30	Time	12:30
	Count	292	Count	334
	PHF	0.880	PHF	0.835

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	71	366	1244	1233	391	26	6	3	0	0	0	0	0	0
Percent	2.1	11.0	37.2	36.9	11.7	0.8	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	3269	2903	1659	426	35	9	3	0	0	0	0	0	0	0
Percent	97.9	86.9	49.7	12.8	1.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	38	40	41	45	45	46	50	51	53

Average 45  
(Mean)

Pace Speed 41-50  
Number in 2477  
Pace  
Percent in 74.2  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

Page 24

Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

COMBINED - Direction 1, Direction 2

## Report for Monday, December 31, 2018

Vehicles	Peak Periods			
	AM		PM	
	Time	11:30	Time	01:00
6,572	Count	587	Count	684
	PHF	0.998	PHF	0.929

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	120	727	2590	2408	659	54	10	4	0	0	0	0	0	0
Percent	1.8	11.1	39.4	36.6	10.0	0.8	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	6452	5725	3135	727	68	14	4	0	0	0	0	0	0	0
Percent	98.2	87.1	47.7	11.1	1.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	38	40	41	45	45	46	50	51	52

Average 45  
(Mean)

Pace Speed 41-50  
Number in 4998  
Pace  
Percent in 76.0  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

Page 25

Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 1

## Report for Tuesday, January 01, 2019

Vehicles	Peak Periods			
	AM		PM	
	Time	11:15	Time	04:15
2,656	Count	216	Count	338
	PHF	0.915	PHF	0.854

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	26	239	1008	1034	296	43	10	0	0	0	0	0	0	0
Percent	1.0	9.0	38.0	38.9	11.1	1.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	2630	2391	1383	349	53	10	0	0	0	0	0	0	0	0
Percent	99.0	90.0	52.1	13.1	2.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	39	41	41	45	46	46	50	51	53

Average 46  
(Mean)

Pace Speed 41-50  
Number in 2042  
Pace  
Percent in 76.9  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 2

## Report for Tuesday, January 01, 2019

Vehicles	Peak Periods			
	AM		PM	
	Time	11:15	Time	03:30
2,406	Count	181	Count	269
	PHF	0.887	PHF	0.885

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	28	184	679	1069	385	45	12	3	1	0	0	0	0	0
Percent	1.2	7.6	28.2	44.4	16.0	1.9	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	2378	2194	1515	446	61	16	4	1	0	0	0	0	0	0
Percent	98.8	91.2	63.0	18.5	2.5	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	39	41	42	46	47	47	51	52	54

Average 47  
(Mean)

Pace Speed 42-51  
Number in 1791  
Pace  
Percent in 74.4  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

COMBINED - Direction 1, Direction 2

## Report for Tuesday, January 01, 2019

Vehicles	Peak Periods			
5,062	AM		PM	
	Time	11:15	Time	03:45
	Count	397	Count	587
	PHF	0.993	PHF	0.965

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	54	423	1687	2103	681	88	22	3	1	0	0	0	0	0
Percent	1.1	8.4	33.3	41.5	13.5	1.7	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	5008	4585	2898	795	114	26	4	1	0	0	0	0	0	0
Percent	98.9	90.6	57.3	15.7	2.3	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	39	41	42	46	46	47	51	52	54

Average 46  
(Mean)

Pace Speed 42-51  
Number in 3817  
Pace  
Percent in 75.4  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

Page 28

Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 1

## Report for Wednesday, January 02, 2019

Vehicles	Peak Periods			
3,772	AM		PM	
	Time	11:30	Time	04:45
	Count	240	Count	574
	PHF	0.882	PHF	0.938

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	53	278	1366	1505	480	74	16	0	0	0	0	0	0	0
Percent	1.4	7.4	36.2	39.9	12.7	2.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	3719	3441	2075	570	90	16	0	0	0	0	0	0	0	0
Percent	98.6	91.2	55.0	15.1	2.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	39	41	42	45	46	47	51	52	53

Average 46  
(Mean)

Pace Speed 42-51  
Number in 2897  
Pace  
Percent in 76.8  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 2

## Report for Wednesday, January 02, 2019

Vehicles	Peak Periods			
3,606	AM		PM	
	Time	11:15	Time	03:45
	Count	274	Count	362
	PHF	0.890	PHF	0.896

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	30	190	994	1656	618	108	8	2	0	0	0	0	0	0
Percent	0.8	5.3	27.6	45.9	17.1	3.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	3576	3386	2392	736	118	10	2	0	0	0	0	0	0	0
Percent	99.2	93.9	66.3	20.4	3.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	40	42	43	47	47	48	51	53	54

Average 47  
(Mean)

Pace Speed 43-52  
Number in 2776  
Pace  
Percent in 77.0  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

COMBINED - Direction 1, Direction 2

## Report for Wednesday, January 02, 2019

Vehicles	Peak Periods			
	AM		PM	
	Time	11:30	Time	04:45
7,378	Count	503	Count	922
	PHF	0.867	PHF	0.922

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	83	468	2360	3161	1098	182	24	2	0	0	0	0	0	0
Percent	1.1	6.3	32.0	42.8	14.9	2.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	7295	6827	4467	1306	208	26	2	0	0	0	0	0	0	0
Percent	98.9	92.5	60.5	17.7	2.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	40	41	42	46	47	47	51	52	54

Average 47  
(Mean)

Pace Speed 42-51  
Number in 5661  
Pace  
Percent in 76.7  
Pace



# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 1

## Report for Thursday, January 03, 2019, Midnight to 07:59 AM

Vehicles	Peak Periods	
	AM	PM
	Time 07:00	Time -
176	Count 105	Count -
	PHF 0.610	PHF -

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	2	8	57	76	25	6	1	1	0	0	0	0	0	0
Percent	1.1	4.5	32.4	43.2	14.2	3.4	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	174	166	109	33	8	2	1	0	0	0	0	0	0	0
Percent	98.9	94.3	61.9	18.8	4.5	1.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	40	42	42	46	47	47	52	52	55

Average 47  
(Mean)

Pace Speed 41-50  
Number in 133  
Pace  
Percent in 75.6  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 2

## Report for Thursday, January 03, 2019, Midnight to 07:59 AM

Vehicles	Peak Periods	
	AM	PM
295	Time 07:00	Time -
	Count 180	Count -
	PHF 0.726	PHF -

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	1	13	85	114	69	9	4	0	0	0	0	0	0	0
Percent	0.3	4.4	28.8	38.6	23.4	3.1	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	294	281	196	82	13	4	0	0	0	0	0	0	0	0
Percent	99.7	95.3	66.4	27.8	4.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	41	42	43	47	48	48	53	54	55

Average 48  
(Mean)

Pace Speed 43-52  
Number in 215  
Pace  
Percent in 72.9  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

Page 33

Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

COMBINED - Direction 1, Direction 2

## Report for Thursday, January 03, 2019, Midnight to 07:59 AM

Vehicles	Peak Periods	
	AM	PM
	Time 07:00	Time -
471	Count 285	Count -
	PHF 0.679	PHF -

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	3	21	142	190	94	15	5	1	0	0	0	0	0	0
Percent	0.6	4.5	30.1	40.3	20.0	3.2	1.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	468	447	305	115	21	6	1	0	0	0	0	0	0	0
Percent	99.4	94.9	64.8	24.4	4.5	1.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	40	42	43	47	47	48	52	54	55

Average 47  
(Mean)

Pace Speed 43-52  
Number in 348  
Pace  
Percent in 73.9  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 1

Report for 12/24/2018 10:00:00 AM to 1/3/2019 7:59:59 AM

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	995	3784	12097	11236	2909	385	54	5	0	0	0	0	0	0
Percent	3.2	12.0	38.4	35.7	9.2	1.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	30470	26686	14589	3353	444	59	5	0	0	0	0	0	0	0
Percent	96.8	84.8	46.4	10.7	1.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	37	39	40	45	45	46	50	51	52

Average 45  
(Mean)

Pace Speed 41-50  
Number in 23333  
Pace  
Percent in 74.2  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

Direction 2

Report for 12/24/2018 10:00:00 AM to 1/3/2019 7:59:59 AM

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	1066	3595	10168	11340	3755	449	58	12	1	0	0	0	0	0
Percent	3.5	11.8	33.4	37.2	12.3	1.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	29378	25783	15615	4275	520	71	13	1	0	0	0	0	0	0
Percent	96.5	84.7	51.3	14.0	1.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	37	39	40	45	46	46	50	51	53

Average 45  
(Mean)

Pace Speed 41-50  
Number in 21508  
Pace  
Percent in 70.6  
Pace

# Summit County R&B

Dam Road CR 7  
12-24-2018 to 1-3-2019

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Site Code: 00000007  
Station ID:

Latitude: 0' 0.0000 South

COMBINED - Direction 1, Direction 2

Report for 12/24/2018 10:00:00 AM to 1/3/2019 7:59:59 AM

## SPEED STATISTICS - 35 to 95+ by 5 MPH

Speed in MPH	1 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 80	81 - 85	86 - 90	91 - 95	96 - 999
Count	2061	7379	22265	22576	6664	834	112	17	1	0	0	0	0	0
Percent	3.3	11.9	36.0	36.5	10.8	1.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	35	40	45	50	55	60	65	70	75	80	85	90	95	999
Count	59848	52469	30204	7628	964	130	18	1	0	0	0	0	0	0
Percent	96.7	84.8	48.8	12.3	1.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

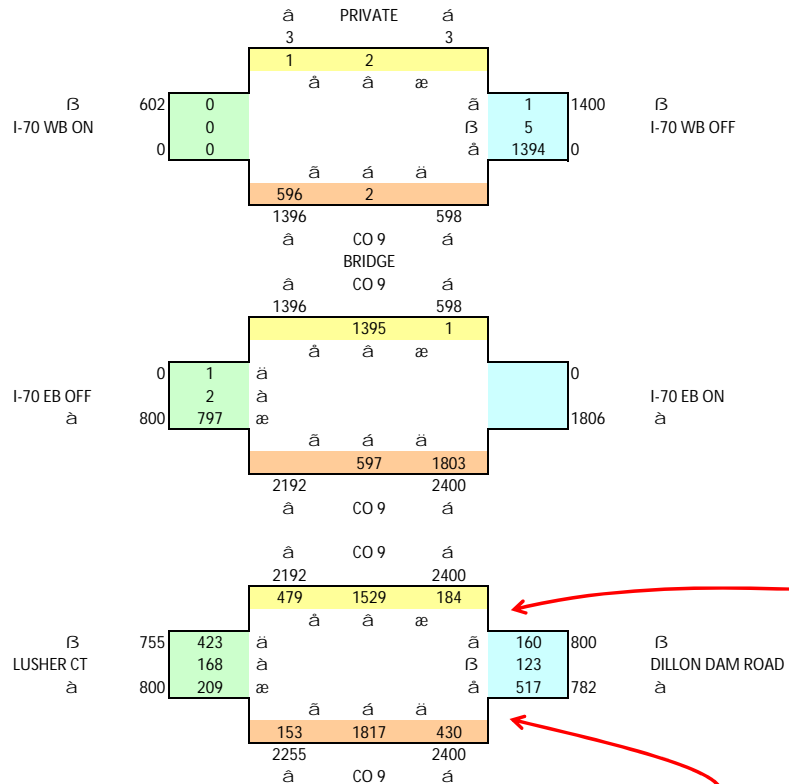
Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	37	39	40	45	45	46	50	51	53

Average 45  
(Mean)

Pace Speed 41-50  
Number in 44841  
Pace  
Percent in 72.4  
Pace

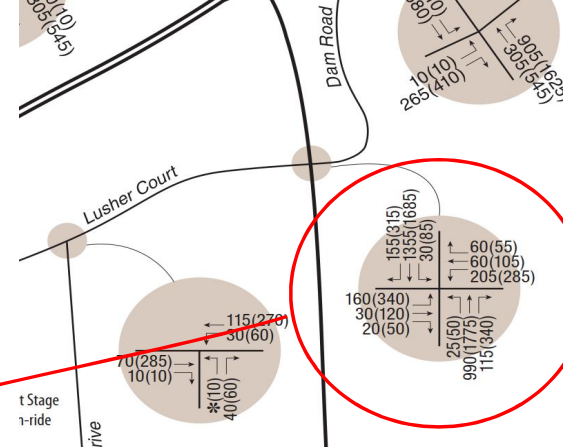
***Preliminary Forecasted Volumes  
(CDOT Interchange Study)***

### 2045 PM CO 9 CORRIDOR



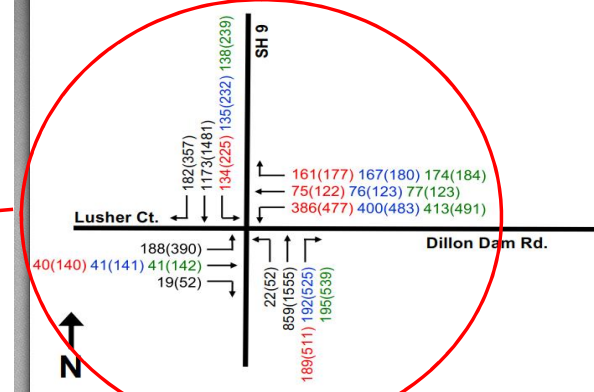
Verification against current known planning studies

Whole Foods Study - 2035 total traffic



NOTES  
no lake hill

Lake Hill Traffic study - 2037 total traffic



NOTES  
Red = scenario 1  
Blue = scenario 2  
Green = scenario 3







# Lake Hill Development Traffic Impact Study

## SH 9 at Dillon Dam Road Intersection Calculations for Dillon Dam Road Growth

Mvmt	Year 2045 (CDOT Study)	Lake Hill Max Trips (2015 Study)	Existing (Kum & Go Study, 2016)	Year 2045 - Trips - Existing
EBL	423	0	154	269
EBT	168	8	54	106
EBR	209	0	33	176
WBL	517	45	189	283
WBT	123	4	40	79
WBR	160	22	32	106
NBL	153	0	36	117
NBT	1817	0	747	1070
NBR	430	85	247	98
SBL	184	42	45	97
SBT	1529	0	482	1047
SBR	479	0	115	364
<i>Total</i>	<i>6192</i>	<i>206</i>	<i>2174</i>	<i>3812</i>
<b>Volumes on Dillon Dam Road east of SH 9</b>				
	1582	206	607	769
<b>Annual Growth Rate</b>				<b>0.82%</b>




***Intersection Capacity Worksheets:  
2019 Existing***




Intersection						
Int Delay, s/veh	3.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	65	39	140	43	62	284
Future Vol, veh/h	65	39	140	43	62	284
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	69	69	85	85
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	89	53	203	62	73	334

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	714	234	0	0	265	0
Stage 1	234	-	-	-	-	-
Stage 2	480	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	399	808	-	-	1305	-
Stage 1	807	-	-	-	-	-
Stage 2	624	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	371	808	-	-	1305	-
Mov Cap-2 Maneuver	371	-	-	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	581	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.7	0	1.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	- 371 808 1305	-	-
HCM Lane V/C Ratio	-	- 0.24 0.066 0.056	-	-
HCM Control Delay (s)	-	- 17.7 9.8 7.9	0	
HCM Lane LOS	-	- C A A	A	A
HCM 95th %tile Q(veh)	-	- 0.9 0.2 0.2	-	-




Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	2	186	4	0	327
Future Vol, veh/h	10	2	186	4	0	327
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	69	69	71	71	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	14	3	262	6	0	389
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	654	265	0	0	268	0
Stage 1	265	-	-	-	-	-
Stage 2	389	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	433	776	-	-	1302	-
Stage 1	782	-	-	-	-	-
Stage 2	687	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	433	776	-	-	1302	-
Mov Cap-2 Maneuver	433	-	-	-	-	-
Stage 1	782	-	-	-	-	-
Stage 2	687	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	13	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-		467	1302	-
HCM Lane V/C Ratio	-	-		0.037	-	-
HCM Control Delay (s)	-	-		13	0	-
HCM Lane LOS	-	-		B	A	-
HCM 95th %tile Q(veh)	-	-		0.1	0	-

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	0	173	4	2	321
Future Vol, veh/h	18	0	173	4	2	321
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	66	66	86	86
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	26	0	262	6	2	373

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	642	265	0	0	268
Stage 1	265	-	-	-	-
Stage 2	377	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11
Critical Hdwy Stg 1	5.41	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209
Pot Cap-1 Maneuver	440	776	-	-	1302
Stage 1	782	-	-	-	-
Stage 2	696	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	439	776	-	-	1302
Mov Cap-2 Maneuver	439	-	-	-	-
Stage 1	782	-	-	-	-
Stage 2	695	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	439	1302
HCM Lane V/C Ratio	-	-	0.06	0.002
HCM Control Delay (s)	-	-	13.7	7.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0













Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	14	4	168	309	2
Future Vol, veh/h	6	14	4	168	309	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	45	45	64	64	87	87
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	13	31	6	263	355	2

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	631	356	357	0	-	0
Stage 1	356	-	-	-	-	-
Stage 2	275	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	447	690	1207	-	-	-
Stage 1	711	-	-	-	-	-
Stage 2	774	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	444	690	1207	-	-	-
Mov Cap-2 Maneuver	444	-	-	-	-	-
Stage 1	707	-	-	-	-	-
Stage 2	774	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.6	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1207	-	592	-	-
HCM Lane V/C Ratio	0.005	-	0.075	-	-
HCM Control Delay (s)	8	0	11.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection			
Intersection Delay, s/veh	4.9		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	135	269	350
Demand Flow Rate, veh/h	137	269	351
Vehicles Circulating, veh/h	201	73	73
Vehicles Exiting, veh/h	141	351	265
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.3	4.6	5.2
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	137	269	351
Cap Entry Lane, veh/h	1124	1281	1281
Entry HV Adj Factor	0.985	1.000	0.997
Flow Entry, veh/h	135	269	350
Cap Entry, veh/h	1108	1281	1277
V/C Ratio	0.122	0.210	0.274
Control Delay, s/veh	4.3	4.6	5.2
LOS	A	A	A
95th %tile Queue, veh	0	1	1

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	105	475	192	117	521	216	134	138	94	123	127	128
v/c Ratio	0.19	0.27	0.22	0.21	0.29	0.23	0.65	0.65	0.33	0.53	0.52	0.39
Control Delay	13.9	22.0	4.7	13.8	22.0	4.5	68.5	67.7	10.9	57.7	57.3	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.9	22.0	4.7	13.8	22.0	4.5	68.5	67.7	10.9	57.7	57.3	10.2
Queue Length 50th (ft)	30	106	0	34	118	0	115	118	0	106	109	0
Queue Length 95th (ft)	90	230	57	99	250	59	167	171	36	143	147	48
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	563	1761	886	581	1771	920	465	483	511	478	496	532
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.27	0.22	0.20	0.29	0.23	0.29	0.29	0.18	0.26	0.26	0.24
Intersection Summary												































# HCM Signalized Intersection Capacity Analysis




06/12/2019

## 7: Dillon Dam Road & State Highway 6

2019 Existing - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	97	437	177	105	469	194	148	83	80	154	86	123
Future Volume (vph)	97	437	177	105	469	194	148	83	80	154	86	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1770	3438	1548	1769	3438	1583	1681	1744	1583	1681	1744	1549
Flt Permitted	0.43	1.00	1.00	0.45	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (perm)	792	3438	1548	832	3438	1583	1681	1744	1583	1681	1744	1549
Peak-hour factor, PHF	0.92	0.92	0.92	0.90	0.90	0.90	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	105	475	192	117	521	216	174	98	94	160	90	128
RTOR Reduction (vph)	0	0	94	0	0	105	0	0	83	0	0	110
Lane Group Flow (vph)	105	475	98	117	521	111	134	138	11	123	127	18
Confl. Peds. (#/hr)			1	1			9					9
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	75.5	66.6	66.6	76.3	67.0	67.0	15.9	15.9	15.9	18.2	18.2	18.2
Effective Green, g (s)	75.5	66.6	66.6	76.3	67.0	67.0	15.9	15.9	15.9	18.2	18.2	18.2
Actuated g/C Ratio	0.58	0.51	0.51	0.59	0.52	0.52	0.12	0.12	0.12	0.14	0.14	0.14
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	526	1761	793	555	1771	815	205	213	193	235	244	216
v/s Ratio Prot	0.01	0.14		c0.02	c0.15		c0.08	0.08		c0.07	0.07	
v/s Ratio Perm	0.10		0.06	0.11		0.07			0.01			0.01
v/c Ratio	0.20	0.27	0.12	0.21	0.29	0.14	0.65	0.65	0.06	0.52	0.52	0.08
Uniform Delay, d1	12.3	17.9	16.5	12.0	18.0	16.4	54.4	54.4	50.4	51.9	51.9	48.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.4	0.3	0.2	0.4	0.3	7.3	6.6	0.1	2.1	2.0	0.2
Delay (s)	12.4	18.3	16.8	12.2	18.4	16.8	61.7	61.0	50.6	54.0	53.9	48.8
Level of Service	B	B	B	B	B	B	E	E	D	D	D	D
Approach Delay (s)		17.1			17.1			58.6			52.2	
Approach LOS		B			B			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			29.1				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.38									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			59.2%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												




Intersection						
Int Delay, s/veh	3.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	87	89	418	96	57	285
Future Vol, veh/h	87	89	418	96	57	285
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	92	92	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	96	98	454	104	63	317
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	950	507	0	0	559	0
Stage 1	507	-	-	-	-	-
Stage 2	443	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	290	568	-	-	1017	-
Stage 1	607	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	268	567	-	-	1016	-
Mov Cap-2 Maneuver	268	-	-	-	-	-
Stage 1	606	-	-	-	-	-
Stage 2	600	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	19.1	0	1.5			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 268 567 1016	-	-		
HCM Lane V/C Ratio	-	- 0.357 0.172 0.062	-	-		
HCM Control Delay (s)	-	- 25.7 12.7 8.8	-	0		
HCM Lane LOS	-	- D B A A	-	-		
HCM 95th %tile Q(veh)	-	- 1.6 0.6 0.2	-	-		

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	1	499	4	1	332
Future Vol, veh/h	7	1	499	4	1	332
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	44	44	89	89	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	16	2	561	4	1	369

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	934	563	0
Stage 1	563	-	-
Stage 2	371	-	-
Critical Hdwy	6.41	6.21	4.11
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	2.209
Pot Cap-1 Maneuver	296	528	1012
Stage 1	572	-	-
Stage 2	700	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	296	528	1012
Mov Cap-2 Maneuver	296	-	-
Stage 1	572	-	-
Stage 2	699	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	313	1012
HCM Lane V/C Ratio	-	-	0.058	0.001
HCM Control Delay (s)	-	-	17.2	8.6
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	6	481	19	6	307
Future Vol, veh/h	19	6	481	19	6	307
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	66	66	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	24	8	729	29	7	365

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1123	744	0	0	758
Stage 1	744	-	-	-	-
Stage 2	379	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11
Critical Hdwy Stg 1	5.41	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209
Pot Cap-1 Maneuver	229	416	-	-	858
Stage 1	472	-	-	-	-
Stage 2	694	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	227	416	-	-	858
Mov Cap-2 Maneuver	227	-	-	-	-
Stage 1	472	-	-	-	-
Stage 2	687	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.1	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	255	858
HCM Lane V/C Ratio	-	-	0.124	0.008
HCM Control Delay (s)	-	-	21.1	9.2
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.4	0













Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			4	4	
Traffic Vol, veh/h	0	3	7	479	312	2
Future Vol, veh/h	0	3	7	479	312	2
Conflicting Peds, #/hr	1	7	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	38	38	86	86	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	8	8	557	371	2

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	946	379	373	0	-	0
Stage 1	372	-	-	-	-	-
Stage 2	574	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	291	670	1191	-	-	-
Stage 1	699	-	-	-	-	-
Stage 2	565	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	288	666	1191	-	-	-
Mov Cap-2 Maneuver	288	-	-	-	-	-
Stage 1	692	-	-	-	-	-
Stage 2	565	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1191	-	666	-	-
HCM Lane V/C Ratio	0.007	-	0.012	-	-
HCM Control Delay (s)	8	0	10.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection			
Intersection Delay, s/veh	8.6		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	273	648	446
Demand Flow Rate, veh/h	278	648	450
Vehicles Circulating, veh/h	483	191	126
Vehicles Exiting, veh/h	356	385	635
Ped Vol Crossing Leg, #/h	1	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	8.1	10.1	6.6
Approach LOS	A	B	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	278	648	450
Cap Entry Lane, veh/h	843	1136	1213
Entry HV Adj Factor	0.982	1.000	0.991
Flow Entry, veh/h	273	648	446
Cap Entry, veh/h	828	1136	1203
V/C Ratio	0.330	0.571	0.371
Control Delay, s/veh	8.1	10.1	6.6
LOS	A	B	A
95th %tile Queue, veh	1	4	2

























												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	135	556	165	127	580	360	149	156	194	224	233	120
v/c Ratio	0.30	0.38	0.22	0.28	0.40	0.42	0.64	0.65	0.51	0.71	0.71	0.31
Control Delay	17.7	28.1	5.8	17.4	28.6	5.1	60.8	60.8	11.1	56.9	56.4	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.7	28.1	5.8	17.4	28.6	5.1	60.8	60.8	11.1	56.9	56.4	8.3
Queue Length 50th (ft)	47	149	0	44	157	0	116	123	2	173	181	0
Queue Length 95th (ft)	109	266	55	103	281	79	153	160	40	227	233	40
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	456	1454	750	467	1445	864	434	450	550	448	466	504
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.38	0.22	0.27	0.40	0.42	0.34	0.35	0.35	0.50	0.50	0.24
Intersection Summary												

# HCM Signalized Intersection Capacity Analysis

06/12/2019





## 7: Dillon Dam Road & State Highway 6




2019 Existing - PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	517	153	116	528	328	155	86	153	237	156	103
Future Volume (vph)	126	517	153	116	528	328	155	86	153	237	156	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1769	3438	1548	1769	3438	1560	1681	1743	1583	1681	1750	1563
Flt Permitted	0.36	1.00	1.00	0.38	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (perm)	672	3438	1548	709	3438	1560	1681	1743	1583	1681	1750	1563
Peak-hour factor, PHF	0.93	0.93	0.93	0.91	0.91	0.91	0.79	0.79	0.79	0.86	0.86	0.86
Adj. Flow (vph)	135	556	165	127	580	360	196	109	194	276	181	120
RTOR Reduction (vph)	0	0	95	0	0	209	0	0	165	0	0	97
Lane Group Flow (vph)	135	556	70	127	580	151	149	156	29	224	233	23
Confl. Peds. (#/hr)	2		1	1		2	1					1
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	61.0	50.7	50.7	60.4	50.4	50.4	16.6	16.6	16.6	22.7	22.7	22.7
Effective Green, g (s)	61.0	50.7	50.7	60.4	50.4	50.4	16.6	16.6	16.6	22.7	22.7	22.7
Actuated g/C Ratio	0.51	0.42	0.42	0.50	0.42	0.42	0.14	0.14	0.14	0.19	0.19	0.19
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	435	1452	654	445	1443	655	232	241	218	317	331	295
v/s Ratio Prot	c0.03	0.16		0.02	c0.17		0.09	c0.09		c0.13	0.13	
v/s Ratio Perm	0.13		0.05	0.12		0.10			0.02			0.01
v/c Ratio	0.31	0.38	0.11	0.29	0.40	0.23	0.64	0.65	0.13	0.71	0.70	0.08
Uniform Delay, d1	16.1	23.9	21.0	16.2	24.3	22.4	48.9	48.9	45.4	45.5	45.5	40.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.8	0.3	0.4	0.8	0.8	6.0	5.9	0.3	7.0	6.6	0.1
Delay (s)	16.5	24.6	21.3	16.6	25.1	23.2	54.9	54.8	45.7	52.5	52.2	40.1
Level of Service	B	C	C	B	C	C	D	D	D	D	D	D
Approach Delay (s)		22.7			23.4			51.3			49.8	
Approach LOS		C			C			D			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			32.9				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.50									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			64.8%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												



## ***Intersection Capacity Worksheets: 2026 Background***




Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	45	158	46	67	306
Future Vol, veh/h	70	45	158	46	67	306
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	69	69	85	85
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	96	62	229	67	79	360
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	781	263	0	0	296	0
Stage 1	263	-	-	-	-	-
Stage 2	518	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	365	778	-	-	1271	-
Stage 1	783	-	-	-	-	-
Stage 2	600	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	337	778	-	-	1271	-
Mov Cap-2 Maneuver	337	-	-	-	-	-
Stage 1	783	-	-	-	-	-
Stage 2	553	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	16	0	1.4			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 337 778 1271	-	-		
HCM Lane V/C Ratio	-	- 0.285 0.079 0.062	-	-		
HCM Control Delay (s)	-	- 19.9 10 8	-	0		
HCM Lane LOS	-	- C B A	-	A		
HCM 95th %tile Q(veh)	-	- 1.1 0.3 0.2	-	-		

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	3	210	4	0	354
Future Vol, veh/h	11	3	210	4	0	354
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	69	69	71	71	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	16	4	296	6	0	421

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	720	299	0	0	302
Stage 1	299	-	-	-	-
Stage 2	421	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11
Critical Hdwy Stg 1	5.41	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209
Pot Cap-1 Maneuver	396	743	-	-	1265
Stage 1	755	-	-	-	-
Stage 2	664	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	396	743	-	-	1265
Mov Cap-2 Maneuver	396	-	-	-	-
Stage 1	755	-	-	-	-
Stage 2	664	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.6	0	0
HCM LOS	B		




Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	440	1265
HCM Lane V/C Ratio	-	-	0.046	-
HCM Control Delay (s)	-	-	13.6	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	0	197	4	3	347
Future Vol, veh/h	19	0	197	4	3	347
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	66	66	86	86
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	28	0	298	6	3	403

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	710	301	0
Stage 1	301	-	-
Stage 2	409	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	402	741	-
Stage 1	753	-	-
Stage 2	673	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	401	741	-
Mov Cap-2 Maneuver	401	-	-
Stage 1	753	-	-
Stage 2	671	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.6	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	401	1263
HCM Lane V/C Ratio	-	-	0.07	0.003
HCM Control Delay (s)	-	-	14.6	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0













Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	15	4	193	335	3
Future Vol, veh/h	7	15	4	193	335	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	45	45	64	64	87	87
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	16	33	6	302	385	3

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	701	387	388	0	-	0
Stage 1	387	-	-	-	-	-
Stage 2	314	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	406	663	1176	-	-	-
Stage 1	688	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	404	663	1176	-	-	-
Mov Cap-2 Maneuver	404	-	-	-	-	-
Stage 1	684	-	-	-	-	-
Stage 2	743	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.2	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1176	-	551	-	-
HCM Lane V/C Ratio	0.005	-	0.089	-	-
HCM Control Delay (s)	8.1	0	12.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection			
Intersection Delay, s/veh	5.2		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	151	307	382
Demand Flow Rate, veh/h	154	307	384
Vehicles Circulating, veh/h	235	81	79
Vehicles Exiting, veh/h	153	382	310
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.6	4.9	5.6
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	154	307	384
Cap Entry Lane, veh/h	1086	1270	1273
Entry HV Adj Factor	0.981	1.000	0.995
Flow Entry, veh/h	151	307	382
Cap Entry, veh/h	1065	1270	1266
V/C Ratio	0.142	0.242	0.302
Control Delay, s/veh	4.6	4.9	5.6
LOS	A	A	A
95th %tile Queue, veh	0	1	1

























												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	153	509	207	126	559	270	153	161	101	142	145	151
v/c Ratio	0.30	0.30	0.24	0.24	0.34	0.30	0.68	0.69	0.34	0.57	0.56	0.42
Control Delay	15.8	24.4	5.0	15.4	25.8	4.8	68.0	67.8	11.7	58.3	57.6	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	24.4	5.0	15.4	25.8	4.8	68.0	67.8	11.7	58.3	57.6	9.7
Queue Length 50th (ft)	49	126	0	40	143	0	131	137	0	121	123	0
Queue Length 95th (ft)	128	254	61	108	287	69	185	192	42	164	165	52
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	520	1673	859	538	1641	897	465	485	511	478	496	548
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.30	0.24	0.23	0.34	0.30	0.33	0.33	0.20	0.30	0.29	0.28
Intersection Summary												

# HCM Signalized Intersection Capacity Analysis





06/12/2019




# 7: Dillon Dam Road & State Highway 6

2026 Background - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	468	190	113	503	243	159	108	86	177	99	145
Future Volume (vph)	141	468	190	113	503	243	159	108	86	177	99	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1770	3438	1548	1769	3438	1583	1681	1751	1583	1681	1744	1549
Flt Permitted	0.38	1.00	1.00	0.43	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (perm)	715	3438	1548	801	3438	1583	1681	1751	1583	1681	1744	1549
Peak-hour factor, PHF	0.92	0.92	0.92	0.90	0.90	0.90	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	153	509	207	126	559	270	187	127	101	184	103	151
RTOR Reduction (vph)	0	0	106	0	0	141	0	0	87	0	0	128
Lane Group Flow (vph)	153	509	101	126	559	129	153	161	14	142	145	23
Confl. Peds. (#/hr)			1	1			9					9
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	74.2	63.2	63.2	72.0	62.1	62.1	17.5	17.5	17.5	19.4	19.4	19.4
Effective Green, g (s)	74.2	63.2	63.2	72.0	62.1	62.1	17.5	17.5	17.5	19.4	19.4	19.4
Actuated g/C Ratio	0.57	0.49	0.49	0.55	0.48	0.48	0.13	0.13	0.13	0.15	0.15	0.15
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	497	1671	752	517	1642	756	226	235	213	250	260	231
v/s Ratio Prot	c0.03	0.15		0.02	c0.16		0.09	c0.09		c0.08	0.08	
v/s Ratio Perm	0.15		0.07	0.12		0.08			0.01			0.01
v/c Ratio	0.31	0.30	0.13	0.24	0.34	0.17	0.68	0.69	0.06	0.57	0.56	0.10
Uniform Delay, d1	13.4	20.1	18.4	14.0	21.2	19.3	53.6	53.6	49.1	51.4	51.3	47.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.5	0.4	0.2	0.6	0.5	7.8	8.0	0.1	2.9	2.6	0.2
Delay (s)	13.8	20.6	18.7	14.3	21.7	19.8	61.4	61.6	49.2	54.4	53.9	47.9
Level of Service	B	C	B	B	C	B	E	E	D	D	D	D
Approach Delay (s)		19.0			20.2			58.5			52.0	
Approach LOS		B			C			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			30.9				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.43									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			60.4%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												






Intersection						
Int Delay, s/veh	4.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	93	97	450	103	64	313
Future Vol, veh/h	93	97	450	103	64	313
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	92	92	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	102	107	489	112	71	348
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1036	546	0	0	602	0
Stage 1	546	-	-	-	-	-
Stage 2	490	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	258	540	-	-	980	-
Stage 1	582	-	-	-	-	-
Stage 2	618	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	235	539	-	-	979	-
Mov Cap-2 Maneuver	235	-	-	-	-	-
Stage 1	581	-	-	-	-	-
Stage 2	562	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	22.3	0	1.5			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 235 539	979	-		
HCM Lane V/C Ratio	-	- 0.435 0.198	0.073	-		
HCM Control Delay (s)	-	- 31.6 13.3	9	0		
HCM Lane LOS	-	- D B	A	A		
HCM 95th %tile Q(veh)	-	- 2.1 0.7	0.2	-		

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	1	539	4	3	366
Future Vol, veh/h	8	1	539	4	3	366
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	44	44	89	89	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	18	2	606	4	3	407

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1021	608	0
Stage 1	608	-	-
Stage 2	413	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	263	498	-
Stage 1	545	-	-
Stage 2	670	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	262	498	-
Mov Cap-2 Maneuver	262	-	-
Stage 1	545	-	-
Stage 2	667	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19	0	0.1
HCM LOS	C		




Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	277	974
HCM Lane V/C Ratio	-	-	0.074	0.003
HCM Control Delay (s)	-	-	19	8.7
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	7	521	20	8	341
Future Vol, veh/h	20	7	521	20	8	341
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	66	66	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	25	9	789	30	10	406

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1230	804	0	0	819
Stage 1	804	-	-	-	-
Stage 2	426	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11
Critical Hdwy Stg 1	5.41	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209
Pot Cap-1 Maneuver	197	385	-	-	814
Stage 1	442	-	-	-	-
Stage 2	661	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	194	385	-	-	814
Mov Cap-2 Maneuver	194	-	-	-	-
Stage 1	442	-	-	-	-
Stage 2	650	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	223	814
HCM Lane V/C Ratio	-	-	0.153	0.012
HCM Control Delay (s)	-	-	24	9.5
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.5	0













Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	8	519	348	4
Future Vol, veh/h	0	3	8	519	348	4
Conflicting Peds, #/hr	1	7	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	38	38	86	86	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	8	9	603	414	5

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1039	424	419
Stage 1	417	-	-
Stage 2	622	-	-
Critical Hdwy	6.41	6.21	4.11
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	2.209
Pot Cap-1 Maneuver	257	632	1145
Stage 1	667	-	-
Stage 2	537	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	254	628	1145
Mov Cap-2 Maneuver	254	-	-
Stage 1	659	-	-
Stage 2	537	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.8	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1145	-	628	-	-
HCM Lane V/C Ratio	0.008	-	0.013	-	-
HCM Control Delay (s)	8.2	0	10.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection			
Intersection Delay, s/veh	9.8		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	295	704	504
Demand Flow Rate, veh/h	301	704	508
Vehicles Circulating, veh/h	528	211	136
Vehicles Exiting, veh/h	387	433	693
Ped Vol Crossing Leg, #/h	1	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	9.1	11.8	7.3
Approach LOS	A	B	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	301	704	508
Cap Entry Lane, veh/h	805	1113	1201
Entry HV Adj Factor	0.980	1.000	0.992
Flow Entry, veh/h	295	704	504
Cap Entry, veh/h	789	1113	1192
V/C Ratio	0.374	0.633	0.423
Control Delay, s/veh	9.1	11.8	7.3
LOS	A	B	A
95th %tile Queue, veh	2	5	2

























												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	165	596	176	136	622	405	166	172	208	276	284	176
v/c Ratio	0.41	0.46	0.25	0.34	0.49	0.49	0.67	0.67	0.53	0.75	0.75	0.37
Control Delay	21.5	32.6	6.2	20.6	33.9	5.8	61.0	60.3	13.5	56.7	55.6	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.5	32.6	6.2	20.6	33.9	5.8	61.0	60.3	13.5	56.7	55.6	7.3
Queue Length 50th (ft)	67	181	0	54	196	0	130	134	15	208	214	0
Queue Length 95th (ft)	134	293	57	112	307	85	167	171	53	281	286	47
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	404	1305	696	411	1270	831	434	451	546	448	466	545
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.46	0.25	0.33	0.49	0.49	0.38	0.38	0.38	0.62	0.61	0.32
Intersection Summary												

# HCM Signalized Intersection Capacity Analysis

06/12/2019





## 7: Dillon Dam Road & State Highway 6




2026 Background - PM Peak Hour




												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	153	554	164	124	566	369	166	101	164	293	188	151
Future Volume (vph)	153	554	164	124	566	369	166	101	164	293	188	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1769	3438	1548	1769	3438	1560	1681	1747	1583	1681	1750	1563
Flt Permitted	0.31	1.00	1.00	0.35	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (perm)	571	3438	1548	643	3438	1560	1681	1747	1583	1681	1750	1563
Peak-hour factor, PHF	0.93	0.93	0.93	0.91	0.91	0.91	0.79	0.79	0.79	0.86	0.86	0.86
Adj. Flow (vph)	165	596	176	136	622	405	210	128	208	341	219	176
RTOR Reduction (vph)	0	0	109	0	0	255	0	0	159	0	0	138
Lane Group Flow (vph)	165	596	67	136	622	150	166	172	49	276	284	38
Confl. Peds. (#/hr)	2		1	1		2	1					1
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	57.4	45.6	45.6	55.0	44.4	44.4	17.7	17.7	17.7	26.1	26.1	26.1
Effective Green, g (s)	57.4	45.6	45.6	55.0	44.4	44.4	17.7	17.7	17.7	26.1	26.1	26.1
Actuated g/C Ratio	0.48	0.38	0.38	0.46	0.37	0.37	0.15	0.15	0.15	0.22	0.22	0.22
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	390	1306	588	394	1272	577	247	257	233	365	380	339
v/s Ratio Prot	c0.04	0.17		0.03	c0.18		c0.10	0.10		c0.16	0.16	
v/s Ratio Perm	0.16		0.04	0.13		0.10			0.03			0.02
v/c Ratio	0.42	0.46	0.11	0.35	0.49	0.26	0.67	0.67	0.21	0.76	0.75	0.11
Uniform Delay, d1	18.8	27.9	24.1	19.4	29.1	26.3	48.4	48.4	45.0	44.0	43.9	37.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	1.2	0.4	0.5	1.3	1.1	7.0	6.5	0.5	8.6	7.8	0.1
Delay (s)	19.5	29.1	24.5	20.0	30.4	27.4	55.4	54.8	45.5	52.6	51.7	37.8
Level of Service	B	C	C	B	C	C	E	D	D	D	D	D
Approach Delay (s)		26.5			28.2			51.4			48.7	
Approach LOS		C			C			D			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			35.9				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			69.3%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

## ***Intersection Capacity Worksheets: 2040 Background***



Intersection						
Int Delay, s/veh	4.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	80	50	180	55	75	350
Future Vol, veh/h	80	50	180	55	75	350
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	69	69	85	85
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	110	68	261	80	88	412
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	889	301	0	0	341	0
Stage 1	301	-	-	-	-	-
Stage 2	588	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	315	741	-	-	1224	-
Stage 1	753	-	-	-	-	-
Stage 2	557	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	286	741	-	-	1224	-
Mov Cap-2 Maneuver	286	-	-	-	-	-
Stage 1	753	-	-	-	-	-
Stage 2	505	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	19.5	0	1.4			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 286 741 1224	-	-		
HCM Lane V/C Ratio	-	- 0.383 0.092 0.072	-	-		
HCM Control Delay (s)	-	- 25.2 10.4 8.2	0			
HCM Lane LOS	-	- D B A A				
HCM 95th %tile Q(veh)	-	- 1.7 0.3 0.2	-	-		




Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	5	240	5	0	405
Future Vol, veh/h	10	5	240	5	0	405
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	69	69	71	71	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	14	7	338	7	0	482
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	824	342	0	0	345	0
Stage 1	342	-	-	-	-	-
Stage 2	482	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	344	703	-	-	1220	-
Stage 1	722	-	-	-	-	-
Stage 2	623	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	344	703	-	-	1220	-
Mov Cap-2 Maneuver	344	-	-	-	-	-
Stage 1	722	-	-	-	-	-
Stage 2	623	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	14.2	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 415		1220	-	
HCM Lane V/C Ratio	-	- 0.052		-	-	
HCM Control Delay (s)	-	- 14.2		0	-	
HCM Lane LOS	-	- B		A	-	
HCM 95th %tile Q(veh)	-	- 0.2		0	-	

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	0	230	5	5	400
Future Vol, veh/h	20	0	230	5	5	400
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	66	66	86	86
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	29	0	348	8	6	465













Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	829	352	0	0	356
Stage 1	352	-	-	-	-
Stage 2	477	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11
Critical Hdwy Stg 1	5.41	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209
Pot Cap-1 Maneuver	342	694	-	-	1208
Stage 1	714	-	-	-	-
Stage 2	626	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	340	694	-	-	1208
Mov Cap-2 Maneuver	340	-	-	-	-
Stage 1	714	-	-	-	-
Stage 2	622	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.6	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	340	1208
HCM Lane V/C Ratio	-	-	0.087	0.005
HCM Control Delay (s)	-	-	16.6	8
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.3	0

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	15	5	225	385	5
Future Vol, veh/h	10	15	5	225	385	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	45	45	64	64	87	87
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	22	33	8	352	443	6
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	814	446	449	0	-	0
Stage 1	446	-	-	-	-	-
Stage 2	368	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	349	614	1117	-	-	-
Stage 1	647	-	-	-	-	-
Stage 2	702	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	346	614	1117	-	-	-
Mov Cap-2 Maneuver	346	-	-	-	-	-
Stage 1	641	-	-	-	-	-
Stage 2	702	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	13.7		0.2		0	
HCM LOS	B					
Minor Lane/Major Mvmt	NBL		NBT EBLn1		SBT	SBR
Capacity (veh/h)	1117		-		469	-
HCM Lane V/C Ratio	0.007		-		0.118	-
HCM Control Delay (s)	8.2		0		13.7	-
HCM Lane LOS	A		A		B	-
HCM 95th %tile Q(veh)	0		-		0.4	-

Intersection			
Intersection Delay, s/veh	5.7		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	176	360	442
Demand Flow Rate, veh/h	180	360	444
Vehicles Circulating, veh/h	275	95	93
Vehicles Exiting, veh/h	180	442	362
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.1	5.5	6.2
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	180	360	444
Cap Entry Lane, veh/h	1042	1252	1255
Entry HV Adj Factor	0.978	1.000	0.995
Flow Entry, veh/h	176	360	442
Cap Entry, veh/h	1019	1252	1249
V/C Ratio	0.173	0.287	0.354
Control Delay, s/veh	5.1	5.5	6.2
LOS	A	A	A
95th %tile Queue, veh	1	1	2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	190	587	239	144	644	322	178	187	118	165	169	177
v/c Ratio	0.41	0.38	0.29	0.31	0.45	0.38	0.70	0.71	0.37	0.61	0.60	0.45
Control Delay	18.8	28.5	5.3	18.0	32.2	5.5	66.8	66.6	14.8	58.9	58.1	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.8	28.5	5.3	18.0	32.2	5.5	66.8	66.6	14.8	58.9	58.1	9.2
Queue Length 50th (ft)	68	162	0	50	194	0	152	160	13	140	144	0
Queue Length 95th (ft)	163	309	68	126	#387	81	207	215	56	187	191	56
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	466	1545	827	473	1426	845	465	485	511	478	496	567
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.38	0.29	0.30	0.45	0.38	0.38	0.39	0.23	0.35	0.34	0.31

#### Intersection Summary

























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





# HCM Signalized Intersection Capacity Analysis

06/12/2019




## 7: Dillon Dam Road & State Highway 6

2040 Background - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	540	220	130	580	290	180	130	100	205	115	170
Future Volume (vph)	175	540	220	130	580	290	180	130	100	205	115	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1770	3438	1548	1769	3438	1583	1681	1754	1583	1681	1744	1549
Flt Permitted	0.30	1.00	1.00	0.40	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (perm)	553	3438	1548	737	3438	1583	1681	1754	1583	1681	1744	1549
Peak-hour factor, PHF	0.92	0.92	0.92	0.90	0.90	0.90	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	190	587	239	144	644	322	212	153	118	214	120	177
RTOR Reduction (vph)	0	0	132	0	0	188	0	0	86	0	0	149
Lane Group Flow (vph)	190	587	107	144	644	134	178	187	32	165	169	28
Confl. Peds. (#/hr)			1	1			9					9
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	73.5	58.4	58.4	65.0	53.9	53.9	19.6	19.6	19.6	20.9	20.9	20.9
Effective Green, g (s)	73.5	58.4	58.4	65.0	53.9	53.9	19.6	19.6	19.6	20.9	20.9	20.9
Actuated g/C Ratio	0.57	0.45	0.45	0.50	0.41	0.41	0.15	0.15	0.15	0.16	0.16	0.16
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	458	1544	695	456	1425	656	253	264	238	270	280	249
v/s Ratio Prot	c0.05	0.17		0.03	c0.19		0.11	c0.11		c0.10	0.10	
v/s Ratio Perm	0.18		0.07	0.13		0.08			0.02			0.02
v/c Ratio	0.41	0.38	0.15	0.32	0.45	0.20	0.70	0.71	0.14	0.61	0.60	0.11
Uniform Delay, d1	15.0	23.8	21.2	17.8	27.4	24.3	52.4	52.5	47.9	50.8	50.7	46.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.7	0.5	0.4	1.0	0.7	8.6	8.4	0.3	4.1	3.6	0.2
Delay (s)	15.6	24.5	21.7	18.2	28.4	25.0	61.0	60.9	48.1	54.8	54.3	46.8
Level of Service	B	C	C	B	C	C	E	E	D	D	D	D
Approach Delay (s)		22.2			26.1			57.8			51.9	
Approach LOS		C			C			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			34.0				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.52									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			69.8%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection						
Int Delay, s/veh	6.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	105	110	520	120	75	360
Future Vol, veh/h	105	110	520	120	75	360
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	92	92	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	115	121	565	130	83	400
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1197	631	0	0	696	0
Stage 1	631	-	-	-	-	-
Stage 2	566	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	206	483	-	-	905	-
Stage 1	532	-	-	-	-	-
Stage 2	570	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	181	483	-	-	904	-
Mov Cap-2 Maneuver	181	-	-	-	-	-
Stage 1	531	-	-	-	-	-
Stage 2	503	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	34.2	0	1.6			
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 181 483	904	-		
HCM Lane V/C Ratio	-	- 0.637 0.25	0.092	-		
HCM Control Delay (s)	-	- 54.5 14.9	9.4	0		
HCM Lane LOS	-	- F B	A	A		
HCM 95th %tile Q(veh)	-	- 3.7 1	0.3	-		






Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	5	620	5	5	420
Future Vol, veh/h	10	5	620	5	5	420
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	44	44	89	89	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	23	11	697	6	6	467

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1179	700	0	0	703
Stage 1	700	-	-	-	-
Stage 2	479	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11
Critical Hdwy Stg 1	5.41	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209
Pot Cap-1 Maneuver	212	441	-	-	899
Stage 1	494	-	-	-	-
Stage 2	625	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	210	441	-	-	899
Mov Cap-2 Maneuver	210	-	-	-	-
Stage 1	494	-	-	-	-
Stage 2	619	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.4	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	254	899
HCM Lane V/C Ratio	-	-	0.134	0.006
HCM Control Delay (s)	-	-	21.4	9
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.5	0

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	10	600	25	10	395
Future Vol, veh/h	25	10	600	25	10	395
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	66	66	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	32	13	909	38	12	470
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1422	928	0	0	947	0
Stage 1	928	-	-	-	-	-
Stage 2	494	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	151	326	-	-	729	-
Stage 1	387	-	-	-	-	-
Stage 2	615	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	148	326	-	-	729	-
Mov Cap-2 Maneuver	148	-	-	-	-	-
Stage 1	387	-	-	-	-	-
Stage 2	601	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	32.4	0	0.2			
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	175	729	-	
HCM Lane V/C Ratio	-	-	0.253	0.016	-	
HCM Control Delay (s)	-	-	32.4	10	0	
HCM Lane LOS	-	-	D	B	A	
HCM 95th %tile Q(veh)	-	-	1	0.1	-	













Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			4	4	
Traffic Vol, veh/h	0	5	10	600	400	5
Future Vol, veh/h	0	5	10	600	400	5
Conflicting Peds, #/hr	1	7	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	38	38	86	86	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	13	12	698	476	6

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1202	486	482	0	-	0
Stage 1	479	-	-	-	-	-
Stage 2	723	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	205	583	1086	-	-	-
Stage 1	625	-	-	-	-	-
Stage 2	482	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	201	579	1086	-	-	-
Mov Cap-2 Maneuver	201	-	-	-	-	-
Stage 1	614	-	-	-	-	-
Stage 2	482	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.4	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1086	-	579	-	-
HCM Lane V/C Ratio	0.011	-	0.023	-	-
HCM Control Delay (s)	8.4	0	11.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection			
Intersection Delay, s/veh	12.9		
Intersection LOS	B		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	341	810	581
Demand Flow Rate, veh/h	348	810	586
Vehicles Circulating, veh/h	606	243	155
Vehicles Exiting, veh/h	447	498	799
Ped Vol Crossing Leg, #/h	1	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	11.5	16.5	8.6
Approach LOS	B	C	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	348	810	586
Cap Entry Lane, veh/h	744	1077	1178
Entry HV Adj Factor	0.980	1.000	0.991
Flow Entry, veh/h	341	810	581
Cap Entry, veh/h	729	1077	1168
V/C Ratio	0.468	0.752	0.497
Control Delay, s/veh	11.5	16.5	8.6
LOS	B	C	A
95th %tile Queue, veh	3	7	3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	194	683	204	159	714	473	193	200	241	326	337	215
v/c Ratio	0.57	0.60	0.32	0.47	0.68	0.59	0.69	0.68	0.58	0.81	0.81	0.40
Control Delay	29.2	39.0	6.4	26.1	42.9	6.8	58.7	58.1	17.0	59.2	58.3	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	39.0	6.4	26.1	42.9	6.8	58.7	58.1	17.0	59.2	58.3	6.9
Queue Length 50th (ft)	90	243	0	72	271	0	149	154	38	244	251	0
Queue Length 95th (ft)	#175	#360	61	136	#389	94	185	189	76	336	344	50
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	343	1135	647	337	1043	802	434	451	546	448	466	574
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.60	0.32	0.47	0.68	0.59	0.44	0.44	0.44	0.73	0.72	0.37

#### Intersection Summary

























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

# HCM Signalized Intersection Capacity Analysis





06/12/2019

## 7: Dillon Dam Road & State Highway 6




2040 Background - PM Peak Hour




												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	635	190	145	650	430	190	120	190	350	220	185
Future Volume (vph)	180	635	190	145	650	430	190	120	190	350	220	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1769	3438	1548	1769	3438	1560	1681	1749	1583	1681	1749	1563
Flt Permitted	0.20	1.00	1.00	0.27	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (perm)	364	3438	1548	512	3438	1560	1681	1749	1583	1681	1749	1563
Peak-hour factor, PHF	0.93	0.93	0.93	0.91	0.91	0.91	0.79	0.79	0.79	0.86	0.86	0.86
Adj. Flow (vph)	194	683	204	159	714	473	241	152	241	407	256	215
RTOR Reduction (vph)	0	0	137	0	0	330	0	0	154	0	0	164
Lane Group Flow (vph)	194	683	67	159	714	143	193	200	87	326	337	51
Confl. Peds. (#/hr)	2		1	1		2	1					1
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	54.4	39.6	39.6	48.0	36.4	36.4	20.1	20.1	20.1	28.7	28.7	28.7
Effective Green, g (s)	54.4	39.6	39.6	48.0	36.4	36.4	20.1	20.1	20.1	28.7	28.7	28.7
Actuated g/C Ratio	0.45	0.33	0.33	0.40	0.30	0.30	0.17	0.17	0.17	0.24	0.24	0.24
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	338	1134	510	326	1042	473	281	292	265	402	418	373
v/s Ratio Prot	c0.07	0.20		0.05	c0.21		c0.11	0.11		c0.19	0.19	
v/s Ratio Perm	0.19		0.04	0.15		0.09			0.05			0.03
v/c Ratio	0.57	0.60	0.13	0.49	0.69	0.30	0.69	0.68	0.33	0.81	0.81	0.14
Uniform Delay, d1	22.3	33.6	28.2	24.4	36.8	32.1	47.0	47.0	44.0	43.1	43.0	35.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.4	2.4	0.5	1.2	3.7	1.6	6.8	6.5	0.7	11.7	10.8	0.2
Delay (s)	24.6	36.0	28.7	25.5	40.4	33.7	53.8	53.5	44.7	54.8	53.9	36.1
Level of Service	C	D	C	C	D	C	D	D	D	D	D	D
Approach Delay (s)		32.6			36.3			50.3			49.9	
Approach LOS		C			D			D			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			40.6				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			74.3%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

***Intersection Capacity Worksheets:  
2026 Background + Project  
(Scenario 1 - 436 units)***

Intersection						
Int Delay, s/veh	3.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	48	185	46	73	386
Future Vol, veh/h	70	48	185	46	73	386
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	69	69	85	85
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	96	66	268	67	86	454
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	928	302	0	0	335	0
Stage 1	302	-	-	-	-	-
Stage 2	626	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	299	740	-	-	1230	-
Stage 1	752	-	-	-	-	-
Stage 2	535	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	271	740	-	-	1230	-
Mov Cap-2 Maneuver	271	-	-	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	485	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	19.3	0	1.3			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 271 740	1230	-		
HCM Lane V/C Ratio	-	- 0.354 0.089	0.07	-		
HCM Control Delay (s)	-	- 25.4 10.3	8.1	0		
HCM Lane LOS	-	- D B	A	A		
HCM 95th %tile Q(veh)	-	- 1.5 0.3	0.2	-		






Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	3	240	4	0	442
Future Vol, veh/h	11	3	240	4	0	442
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	69	69	71	71	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	16	4	338	6	0	526
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	867	341	0	0	344	0
Stage 1	341	-	-	-	-	-
Stage 2	526	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	325	704	-	-	1221	-
Stage 1	722	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	325	704	-	-	1221	-
Mov Cap-2 Maneuver	325	-	-	-	-	-
Stage 1	722	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	15.4	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	367	1221	-	
HCM Lane V/C Ratio	-	-	0.055	-	-	
HCM Control Delay (s)	-	-	15.4	0	-	
HCM Lane LOS	-	-	C	A	-	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	0	227	4	3	435
Future Vol, veh/h	19	0	227	4	3	435
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	66	66	86	86
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	28	0	344	6	3	506

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	859	347	0	0	350
Stage 1	347	-	-	-	-
Stage 2	512	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11
Critical Hdwy Stg 1	5.41	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209
Pot Cap-1 Maneuver	328	698	-	-	1214
Stage 1	718	-	-	-	-
Stage 2	604	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	327	698	-	-	1214
Mov Cap-2 Maneuver	327	-	-	-	-
Stage 1	718	-	-	-	-
Stage 2	602	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	327	1214
HCM Lane V/C Ratio	-	-	0.085	0.003
HCM Control Delay (s)	-	-	17	8
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.3	0













Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	15	4	223	423	3
Future Vol, veh/h	7	15	4	223	423	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	45	45	64	64	87	87
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	16	33	6	348	486	3

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	848	488	489	0	-	0
Stage 1	488	-	-	-	-	-
Stage 2	360	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	333	582	1079	-	-	-
Stage 1	619	-	-	-	-	-
Stage 2	708	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	331	582	1079	-	-	-
Mov Cap-2 Maneuver	331	-	-	-	-	-
Stage 1	615	-	-	-	-	-
Stage 2	708	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.6	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1079	-	469	-	-
HCM Lane V/C Ratio	0.006	-	0.104	-	-
HCM Control Delay (s)	8.4	0	13.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection			
Intersection Delay, s/veh	5.4		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	153	359	395
Demand Flow Rate, veh/h	156	359	397
Vehicles Circulating, veh/h	279	81	81
Vehicles Exiting, veh/h	161	397	354
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.9	5.4	5.7
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	156	359	397
Cap Entry Lane, veh/h	1038	1270	1270
Entry HV Adj Factor	0.981	1.000	0.995
Flow Entry, veh/h	153	359	395
Cap Entry, veh/h	1018	1270	1264
V/C Ratio	0.150	0.283	0.312
Control Delay, s/veh	4.9	5.4	5.7
LOS	A	A	A
95th %tile Queue, veh	1	1	1

























												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	153	509	212	129	559	270	166	174	112	142	148	151
v/c Ratio	0.31	0.31	0.25	0.25	0.35	0.31	0.69	0.69	0.36	0.57	0.57	0.42
Control Delay	16.5	25.4	5.1	16.1	26.8	5.0	66.9	66.7	13.9	58.2	58.0	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.5	25.4	5.1	16.1	26.8	5.0	66.9	66.7	13.9	58.2	58.0	9.7
Queue Length 50th (ft)	51	128	0	42	146	0	142	149	8	121	126	0
Queue Length 95th (ft)	131	258	62	112	292	71	196	204	52	164	168	52
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	510	1635	847	530	1605	883	465	484	511	478	496	548
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.31	0.25	0.24	0.35	0.31	0.36	0.36	0.22	0.30	0.30	0.28
Intersection Summary												

# HCM Signalized Intersection Capacity Analysis

06/12/2019

## 7: Dillon Dam Road & State Highway 6





2026 Background + Project (Scenario 1 - 436 units) - AM Peak Hour




												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	468	195	116	503	243	174	115	95	177	102	145
Future Volume (vph)	141	468	195	116	503	243	174	115	95	177	102	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1770	3438	1548	1769	3438	1583	1681	1750	1583	1681	1745	1549
Flt Permitted	0.38	1.00	1.00	0.43	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (perm)	707	3438	1548	798	3438	1583	1681	1750	1583	1681	1745	1549
Peak-hour factor, PHF	0.92	0.92	0.92	0.90	0.90	0.90	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	153	509	212	129	559	270	205	135	112	184	106	151
RTOR Reduction (vph)	0	0	111	0	0	144	0	0	86	0	0	128
Lane Group Flow (vph)	153	509	101	129	559	126	166	174	26	142	148	23
Confl. Peds. (#/hr)			1	1			9					9
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	73.0	61.8	61.8	70.6	60.6	60.6	18.7	18.7	18.7	19.5	19.5	19.5
Effective Green, g (s)	73.0	61.8	61.8	70.6	60.6	60.6	18.7	18.7	18.7	19.5	19.5	19.5
Actuated g/C Ratio	0.56	0.48	0.48	0.54	0.47	0.47	0.14	0.14	0.14	0.15	0.15	0.15
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	488	1634	735	508	1602	737	241	251	227	252	261	232
v/s Ratio Prot	c0.03	0.15		0.02	c0.16		0.10	c0.10		0.08	c0.08	
v/s Ratio Perm	0.15		0.07	0.12		0.08			0.02			0.01
v/c Ratio	0.31	0.31	0.14	0.25	0.35	0.17	0.69	0.69	0.11	0.56	0.57	0.10
Uniform Delay, d1	14.0	21.0	19.1	14.7	22.1	20.1	52.9	52.9	48.4	51.3	51.3	47.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.5	0.4	0.3	0.6	0.5	7.9	8.0	0.2	2.9	2.8	0.2
Delay (s)	14.4	21.5	19.5	15.0	22.7	20.6	60.8	60.9	48.6	54.2	54.1	47.8
Level of Service	B	C	B	B	C	C	E	E	D	D	D	D
Approach Delay (s)		19.8			21.1			57.9			52.0	
Approach LOS		B			C			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			31.8				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.44									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			60.6%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												




Intersection			
Intersection Delay, s/veh	5.4		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	91	361	423
Demand Flow Rate, veh/h	93	369	431
Vehicles Circulating, veh/h	426	15	34
Vehicles Exiting, veh/h	39	504	350
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.1	5.1	5.7
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	93	369	431
Cap Entry Lane, veh/h	894	1359	1333
Entry HV Adj Factor	0.978	0.979	0.981
Flow Entry, veh/h	91	361	423
Cap Entry, veh/h	874	1331	1307
V/C Ratio	0.104	0.272	0.323
Control Delay, s/veh	5.1	5.1	5.7
LOS	A	A	A
95th %tile Queue, veh	0	1	1




Intersection			
Intersection Delay, s/veh	5.2		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	60	347	403
Demand Flow Rate, veh/h	62	354	411
Vehicles Circulating, veh/h	402	31	14
Vehicles Exiting, veh/h	23	433	371
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.7	5.1	5.4
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	62	354	411
Cap Entry Lane, veh/h	916	1337	1360
Entry HV Adj Factor	0.968	0.981	0.981
Flow Entry, veh/h	60	347	403
Cap Entry, veh/h	886	1312	1334
V/C Ratio	0.068	0.265	0.302
Control Delay, s/veh	4.7	5.1	5.4
LOS	A	A	A
95th %tile Queue, veh	0	1	1















Intersection						
Int Delay, s/veh	5.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	93	104	533	103	68	364
Future Vol, veh/h	93	104	533	103	68	364
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	92	92	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	102	114	579	112	76	404
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1192	636	0	0	692	0
Stage 1	636	-	-	-	-	-
Stage 2	556	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	208	480	-	-	908	-
Stage 1	529	-	-	-	-	-
Stage 2	576	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	185	480	-	-	907	-
Mov Cap-2 Maneuver	185	-	-	-	-	-
Stage 1	528	-	-	-	-	-
Stage 2	514	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	29.6	0	1.5			
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 185 480	907	-		
HCM Lane V/C Ratio	-	- 0.552 0.238	0.083	-		
HCM Control Delay (s)	-	- 46.1 14.8	9.3	0		
HCM Lane LOS	-	- E B	A	A		
HCM 95th %tile Q(veh)	-	- 2.9 0.9	0.3	-		

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	1	629	4	3	421
Future Vol, veh/h	8	1	629	4	3	421
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	44	44	89	89	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	18	2	707	4	3	468
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1183	709	0	0	711	0
Stage 1	709	-	-	-	-	-
Stage 2	474	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	210	436	-	-	893	-
Stage 1	490	-	-	-	-	-
Stage 2	628	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	209	436	-	-	893	-
Mov Cap-2 Maneuver	209	-	-	-	-	-
Stage 1	490	-	-	-	-	-
Stage 2	625	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	22.9	0		0.1		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	222	893	-	
HCM Lane V/C Ratio	-	-	0.092	0.004	-	
HCM Control Delay (s)	-	-	22.9	9	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.3	0	-	

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	7	611	20	8	396
Future Vol, veh/h	20	7	611	20	8	396
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	66	66	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	25	9	926	30	10	471
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1432	941	0	0	956	0
Stage 1	941	-	-	-	-	-
Stage 2	491	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	149	321	-	-	723	-
Stage 1	381	-	-	-	-	-
Stage 2	617	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	146	321	-	-	723	-
Mov Cap-2 Maneuver	146	-	-	-	-	-
Stage 1	381	-	-	-	-	-
Stage 2	605	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	31.4	0		0.2		
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 170		723	-	
HCM Lane V/C Ratio	-	- 0.201		0.013	-	
HCM Control Delay (s)	-	- 31.4		10	0	
HCM Lane LOS	-	- D		B	A	
HCM 95th %tile Q(veh)	-	- 0.7		0	-	

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	8	609	403	4
Future Vol, veh/h	0	3	8	609	403	4
Conflicting Peds, #/hr	1	7	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	38	38	86	86	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	8	9	708	480	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1210	490	485	0	-	0
Stage 1	483	-	-	-	-	-
Stage 2	727	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	203	580	1083	-	-	-
Stage 1	622	-	-	-	-	-
Stage 2	480	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	200	576	1083	-	-	-
Mov Cap-2 Maneuver	200	-	-	-	-	-
Stage 1	613	-	-	-	-	-
Stage 2	480	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.3	0.1		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1083	-	576	-	-	
HCM Lane V/C Ratio	0.009	-	0.014	-	-	
HCM Control Delay (s)	8.4	0	11.3	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection			
Intersection Delay, s/veh	10.5		
Intersection LOS	B		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	302	738	541
Demand Flow Rate, veh/h	308	738	545
Vehicles Circulating, veh/h	556	211	143
Vehicles Exiting, veh/h	393	477	721
Ped Vol Crossing Leg, #/h	1	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	9.7	12.7	7.9
Approach LOS	A	B	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	308	738	545
Cap Entry Lane, veh/h	783	1113	1193
Entry HV Adj Factor	0.981	1.000	0.993
Flow Entry, veh/h	302	738	541
Cap Entry, veh/h	767	1113	1184
V/C Ratio	0.394	0.663	0.457
Control Delay, s/veh	9.7	12.7	7.9
LOS	A	B	A
95th %tile Queue, veh	2	5	2

























												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	165	596	192	146	622	405	175	181	215	280	289	176
v/c Ratio	0.42	0.47	0.28	0.37	0.50	0.49	0.68	0.67	0.54	0.76	0.75	0.37
Control Delay	22.3	33.5	6.2	21.6	34.7	5.9	60.3	59.6	14.5	56.8	55.8	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.3	33.5	6.2	21.6	34.7	5.9	60.3	59.6	14.5	56.8	55.8	7.3
Queue Length 50th (ft)	69	187	0	60	201	0	135	141	22	212	218	0
Queue Length 95th (ft)	135	293	59	121	307	85	173	177	59	285	290	47
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	396	1271	693	403	1243	822	434	451	544	448	467	545
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.47	0.28	0.36	0.50	0.49	0.40	0.40	0.40	0.63	0.62	0.32
Intersection Summary												

# HCM Signalized Intersection Capacity Analysis

06/12/2019

## 7: Dillon Dam Road & State Highway 6

2026 Background + Project (Scenario 1 - 436 units) - PM Peak Hour





												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	153	554	179	133	566	369	175	106	170	293	196	151
Future Volume (vph)	153	554	179	133	566	369	175	106	170	293	196	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1769	3438	1548	1769	3438	1560	1681	1747	1583	1681	1751	1563
Flt Permitted	0.30	1.00	1.00	0.34	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (perm)	567	3438	1548	629	3438	1560	1681	1747	1583	1681	1751	1563
Peak-hour factor, PHF	0.93	0.93	0.93	0.91	0.91	0.91	0.79	0.79	0.79	0.86	0.86	0.86
Adj. Flow (vph)	165	596	192	146	622	405	222	134	215	341	228	176
RTOR Reduction (vph)	0	0	121	0	0	258	0	0	155	0	0	137
Lane Group Flow (vph)	165	596	71	146	622	147	175	181	60	280	289	39
Confl. Peds. (#/hr)	2		1	1		2	1					1
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	56.1	44.4	44.4	54.3	43.5	43.5	18.5	18.5	18.5	26.3	26.3	26.3
Effective Green, g (s)	56.1	44.4	44.4	54.3	43.5	43.5	18.5	18.5	18.5	26.3	26.3	26.3
Actuated g/C Ratio	0.47	0.37	0.37	0.45	0.36	0.36	0.15	0.15	0.15	0.22	0.22	0.22
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	382	1272	572	387	1246	565	259	269	244	368	383	342
v/s Ratio Prot	c0.04	0.17		0.03	c0.18		c0.10	0.10		c0.17	0.17	
v/s Ratio Perm	0.16		0.05	0.14		0.09			0.04			0.02
v/c Ratio	0.43	0.47	0.12	0.38	0.50	0.26	0.68	0.67	0.25	0.76	0.75	0.11
Uniform Delay, d1	19.5	28.8	25.0	20.0	29.8	26.9	47.9	47.9	44.6	43.9	43.8	37.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	1.2	0.4	0.6	1.4	1.1	6.8	6.5	0.5	9.0	8.2	0.1
Delay (s)	20.3	30.0	25.4	20.6	31.2	28.0	54.7	54.4	45.2	52.9	52.0	37.7
Level of Service	C	C	C	C	C	C	D	D	D	D	D	D
Approach Delay (s)		27.4			28.8			51.0			49.0	
Approach LOS		C			C			D			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			36.5				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.59									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			69.9%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												




Intersection			
Intersection Delay, s/veh	7.4		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	58	709	453
Demand Flow Rate, veh/h	59	723	462
Vehicles Circulating, veh/h	448	10	75
Vehicles Exiting, veh/h	89	497	658
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.8	8.3	6.3
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	59	723	462
Cap Entry Lane, veh/h	874	1366	1278
Entry HV Adj Factor	0.983	0.981	0.981
Flow Entry, veh/h	58	709	453
Cap Entry, veh/h	859	1340	1254
V/C Ratio	0.068	0.529	0.361
Control Delay, s/veh	4.8	8.3	6.3
LOS	A	A	A
95th %tile Queue, veh	0	3	2



Intersection			
Intersection Delay, s/veh 6.9			
Intersection LOS A			
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	40	644	466
Demand Flow Rate, veh/h	40	657	476
Vehicles Circulating, veh/h	444	20	31
Vehicles Exiting, veh/h	63	464	646
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.5	7.7	6.0
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	40	657	476
Cap Entry Lane, veh/h	877	1352	1337
Entry HV Adj Factor	1.000	0.980	0.980
Flow Entry, veh/h	40	644	466
Cap Entry, veh/h	877	1325	1310
V/C Ratio	0.046	0.486	0.356
Control Delay, s/veh	4.5	7.7	6.0
LOS	A	A	A
95th %tile Queue, veh	0	3	2

***Intersection Capacity Worksheets:  
2026 Background + Project  
(Scenario 2 - 536 units)***




Intersection						
Int Delay, s/veh	3.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	48	191	46	75	404
Future Vol, veh/h	70	48	191	46	75	404
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	69	69	85	85
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	96	66	277	67	88	475
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	962	311	0	0	344	0
Stage 1	311	-	-	-	-	-
Stage 2	651	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	285	731	-	-	1221	-
Stage 1	745	-	-	-	-	-
Stage 2	521	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	257	731	-	-	1221	-
Mov Cap-2 Maneuver	257	-	-	-	-	-
Stage 1	745	-	-	-	-	-
Stage 2	470	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	20.3	0	1.3			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 257 731 1221	-	-		
HCM Lane V/C Ratio	-	- 0.373 0.09 0.072	-	-		
HCM Control Delay (s)	-	- 27.1 10.4 8.2	-	0		
HCM Lane LOS	-	- D B A A	-	-		
HCM 95th %tile Q(veh)	-	- 1.6 0.3 0.2	-	-		

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	3	246	4	0	461
Future Vol, veh/h	11	3	246	4	0	461
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	69	69	71	71	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	16	4	346	6	0	549

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	898	349	0	0	352
Stage 1	349	-	-	-	-
Stage 2	549	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11
Critical Hdwy Stg 1	5.41	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209
Pot Cap-1 Maneuver	311	697	-	-	1212
Stage 1	716	-	-	-	-
Stage 2	581	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	311	697	-	-	1212
Mov Cap-2 Maneuver	311	-	-	-	-
Stage 1	716	-	-	-	-
Stage 2	581	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.8	0	0
HCM LOS	C		




Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	353	1212
HCM Lane V/C Ratio	-	-	0.057	-
HCM Control Delay (s)	-	-	15.8	0
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	0	233	4	3	454
Future Vol, veh/h	19	0	233	4	3	454
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	66	66	86	86
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	28	0	353	6	3	528

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	890	356	0	0	359
Stage 1	356	-	-	-	-
Stage 2	534	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11
Critical Hdwy Stg 1	5.41	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209
Pot Cap-1 Maneuver	315	690	-	-	1205
Stage 1	711	-	-	-	-
Stage 2	590	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	314	690	-	-	1205
Mov Cap-2 Maneuver	314	-	-	-	-
Stage 1	711	-	-	-	-
Stage 2	588	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.6	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	314	1205
HCM Lane V/C Ratio	-	-	0.089	0.003
HCM Control Delay (s)	-	-	17.6	8
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.3	0













Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	15	4	229	442	3
Future Vol, veh/h	7	15	4	229	442	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	45	45	64	64	87	87
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	16	33	6	358	508	3

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	880	510	511	0	-	0
Stage 1	510	-	-	-	-	-
Stage 2	370	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	319	565	1059	-	-	-
Stage 1	605	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	317	565	1059	-	-	-
Mov Cap-2 Maneuver	317	-	-	-	-	-
Stage 1	601	-	-	-	-	-
Stage 2	701	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.9	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1059	-	452	-	-
HCM Lane V/C Ratio	0.006	-	0.108	-	-
HCM Control Delay (s)	8.4	0	13.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection			
Intersection Delay, s/veh	5.5		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	154	372	398
Demand Flow Rate, veh/h	157	372	400
Vehicles Circulating, veh/h	289	81	82
Vehicles Exiting, veh/h	164	401	364
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.0	5.5	5.7
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	157	372	400
Cap Entry Lane, veh/h	1028	1270	1269
Entry HV Adj Factor	0.981	1.000	0.995
Flow Entry, veh/h	154	372	398
Cap Entry, veh/h	1008	1270	1263
V/C Ratio	0.153	0.293	0.315
Control Delay, s/veh	5.0	5.5	5.7
LOS	A	A	A
95th %tile Queue, veh	1	1	1

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	153	509	213	130	559	270	171	175	114	142	148	151
v/c Ratio	0.31	0.31	0.25	0.25	0.35	0.31	0.70	0.69	0.36	0.57	0.57	0.42
Control Delay	16.7	25.7	5.2	16.3	27.0	5.0	67.3	65.9	14.2	58.2	58.0	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.7	25.7	5.2	16.3	27.0	5.0	67.3	65.9	14.2	58.2	58.0	9.7
Queue Length 50th (ft)	51	129	0	43	147	0	146	149	10	121	126	0
Queue Length 95th (ft)	132	260	62	114	293	71	201	205	53	164	168	52
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	508	1626	844	528	1598	880	465	485	511	478	496	548
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.31	0.25	0.25	0.35	0.31	0.37	0.36	0.22	0.30	0.30	0.28
Intersection Summary												



























# HCM Signalized Intersection Capacity Analysis

06/12/2019





## 7: Dillon Dam Road & State Highway 6




2026 Background + Project (Scenario 2 - 536 units) - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	468	196	117	503	243	177	117	97	177	102	145
Future Volume (vph)	141	468	196	117	503	243	177	117	97	177	102	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1770	3438	1548	1769	3438	1583	1681	1751	1583	1681	1745	1549
Flt Permitted	0.38	1.00	1.00	0.43	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (perm)	708	3438	1548	795	3438	1583	1681	1751	1583	1681	1745	1549
Peak-hour factor, PHF	0.92	0.92	0.92	0.90	0.90	0.90	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	153	509	213	130	559	270	208	138	114	184	106	151
RTOR Reduction (vph)	0	0	112	0	0	145	0	0	86	0	0	128
Lane Group Flow (vph)	153	509	101	130	559	125	171	175	28	142	148	23
Confl. Peds. (#/hr)			1	1			9					9
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	72.7	61.5	61.5	70.5	60.4	60.4	18.9	18.9	18.9	19.5	19.5	19.5
Effective Green, g (s)	72.7	61.5	61.5	70.5	60.4	60.4	18.9	18.9	18.9	19.5	19.5	19.5
Actuated g/C Ratio	0.56	0.47	0.47	0.54	0.46	0.46	0.15	0.15	0.15	0.15	0.15	0.15
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	487	1626	732	506	1597	735	244	254	230	252	261	232
v/s Ratio Prot	c0.03	0.15		0.02	c0.16		c0.10	0.10		0.08	c0.08	
v/s Ratio Perm	0.15		0.07	0.12		0.08			0.02			0.01
v/c Ratio	0.31	0.31	0.14	0.26	0.35	0.17	0.70	0.69	0.12	0.56	0.57	0.10
Uniform Delay, d1	14.2	21.2	19.3	14.8	22.2	20.2	52.9	52.8	48.3	51.3	51.3	47.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.5	0.4	0.3	0.6	0.5	8.8	7.6	0.2	2.9	2.8	0.2
Delay (s)	14.6	21.7	19.7	15.1	22.9	20.7	61.6	60.3	48.6	54.2	54.1	47.8
Level of Service	B	C	B	B	C	C	E	E	D	D	D	D
Approach Delay (s)		20.0			21.2			57.9			52.0	
Approach LOS		B			C			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			31.9				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.44									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			60.6%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection			
Intersection Delay, s/veh	5.5		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	113	371	430
Demand Flow Rate, veh/h	115	379	438
Vehicles Circulating, veh/h	432	20	42
Vehicles Exiting, veh/h	48	527	357
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.4	5.2	5.8
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	115	379	438
Cap Entry Lane, veh/h	888	1352	1322
Entry HV Adj Factor	0.983	0.980	0.981
Flow Entry, veh/h	113	371	430
Cap Entry, veh/h	873	1325	1296
V/C Ratio	0.129	0.280	0.331
Control Delay, s/veh	5.4	5.2	5.8
LOS	A	A	A
95th %tile Queue, veh	0	1	1

Intersection			
Intersection Delay, s/veh	5.3		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	74	355	406
Demand Flow Rate, veh/h	76	362	414
Vehicles Circulating, veh/h	403	38	16
Vehicles Exiting, veh/h	27	441	384
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.8	5.2	5.4
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	76	362	414
Cap Entry Lane, veh/h	915	1327	1358
Entry HV Adj Factor	0.974	0.981	0.981
Flow Entry, veh/h	74	355	406
Cap Entry, veh/h	891	1303	1332
V/C Ratio	0.083	0.273	0.305
Control Delay, s/veh	4.8	5.2	5.4
LOS	A	A	A
95th %tile Queue, veh	0	1	1




Intersection						
Int Delay, s/veh	5.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	93	105	551	103	69	375
Future Vol, veh/h	93	105	551	103	69	375
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	92	92	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	102	115	599	112	77	417
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1227	656	0	0	712	0
Stage 1	656	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	198	467	-	-	892	-
Stage 1	518	-	-	-	-	-
Stage 2	567	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	176	467	-	-	891	-
Mov Cap-2 Maneuver	176	-	-	-	-	-
Stage 1	517	-	-	-	-	-
Stage 2	503	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	31.8	0	1.5			
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 176 467	891	-		
HCM Lane V/C Ratio	-	- 0.581 0.247	0.086	-		
HCM Control Delay (s)	-	- 50.5 15.2	9.4	0		
HCM Lane LOS	-	- F C	A	A		
HCM 95th %tile Q(veh)	-	- 3.1 1	0.3	-		




Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	1	648	4	3	433
Future Vol, veh/h	8	1	648	4	3	433
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	44	44	89	89	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	18	2	728	4	3	481

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1217	730	0	0	732
Stage 1	730	-	-	-	-
Stage 2	487	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11
Critical Hdwy Stg 1	5.41	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209
Pot Cap-1 Maneuver	201	424	-	-	877
Stage 1	479	-	-	-	-
Stage 2	620	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	200	424	-	-	877
Mov Cap-2 Maneuver	200	-	-	-	-
Stage 1	479	-	-	-	-
Stage 2	617	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.8	0	0.1
HCM LOS	C		













Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	212	877
HCM Lane V/C Ratio	-	-	0.096	0.004
HCM Control Delay (s)	-	-	23.8	9.1
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.3	0

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	7	630	20	8	408
Future Vol, veh/h	20	7	630	20	8	408
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	66	66	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	25	9	955	30	10	486
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1476	970	0	0	985	0
Stage 1	970	-	-	-	-	-
Stage 2	506	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	140	308	-	-	705	-
Stage 1	369	-	-	-	-	-
Stage 2	608	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	137	308	-	-	705	-
Mov Cap-2 Maneuver	137	-	-	-	-	-
Stage 1	369	-	-	-	-	-
Stage 2	596	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	33.5	0	0.2			
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	160	705	-	
HCM Lane V/C Ratio	-	-	0.214	0.014	-	
HCM Control Delay (s)	-	-	33.5	10.2	0	
HCM Lane LOS	-	-	D	B	A	
HCM 95th %tile Q(veh)	-	-	0.8	0	-	

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	8	628	415	4
Future Vol, veh/h	0	3	8	628	415	4
Conflicting Peds, #/hr	1	7	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	38	38	86	86	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	8	9	730	494	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1246	504	499	0	-	0
Stage 1	497	-	-	-	-	-
Stage 2	749	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	193	570	1070	-	-	-
Stage 1	613	-	-	-	-	-
Stage 2	469	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	190	566	1070	-	-	-
Mov Cap-2 Maneuver	190	-	-	-	-	-
Stage 1	604	-	-	-	-	-
Stage 2	469	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.5	0.1		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1070	-	566	-	-	
HCM Lane V/C Ratio	0.009	-	0.014	-	-	
HCM Control Delay (s)	8.4	0	11.5	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection			
Intersection Delay, s/veh	10.6		
Intersection LOS	B		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	305	746	549
Demand Flow Rate, veh/h	311	746	553
Vehicles Circulating, veh/h	563	211	146
Vehicles Exiting, veh/h	394	488	728
Ped Vol Crossing Leg, #/h	1	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	9.8	12.9	8.0
Approach LOS	A	B	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	311	746	553
Cap Entry Lane, veh/h	777	1113	1189
Entry HV Adj Factor	0.981	1.000	0.993
Flow Entry, veh/h	305	746	549
Cap Entry, veh/h	762	1113	1180
V/C Ratio	0.400	0.670	0.465
Control Delay, s/veh	9.8	12.9	8.0
LOS	A	B	A
95th %tile Queue, veh	2	5	3



























												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	165	596	197	148	622	405	178	182	216	280	290	176
v/c Ratio	0.42	0.47	0.28	0.37	0.50	0.49	0.68	0.67	0.54	0.76	0.76	0.37
Control Delay	22.5	33.7	6.1	21.8	34.8	5.9	60.2	59.1	14.7	56.8	56.0	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	33.7	6.1	21.8	34.8	5.9	60.2	59.1	14.7	56.8	56.0	7.3
Queue Length 50th (ft)	69	188	0	61	201	0	137	141	23	212	220	0
Queue Length 95th (ft)	136	293	60	123	307	85	174	178	60	285	291	47
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	393	1265	694	401	1240	821	434	451	543	448	467	545
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.47	0.28	0.37	0.50	0.49	0.41	0.40	0.40	0.63	0.62	0.32
Intersection Summary												

# HCM Signalized Intersection Capacity Analysis

06/12/2019

## 7: Dillon Dam Road & State Highway 6





2026 Background + Project (Scenario 2 - 536 units) - PM Peak Hour




												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	153	554	183	135	566	369	178	107	171	293	197	151
Future Volume (vph)	153	554	183	135	566	369	178	107	171	293	197	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1769	3438	1548	1769	3438	1560	1681	1747	1583	1681	1751	1563
Flt Permitted	0.30	1.00	1.00	0.34	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (perm)	565	3438	1548	628	3438	1560	1681	1747	1583	1681	1751	1563
Peak-hour factor, PHF	0.93	0.93	0.93	0.91	0.91	0.91	0.79	0.79	0.79	0.86	0.86	0.86
Adj. Flow (vph)	165	596	197	148	622	405	225	135	216	341	229	176
RTOR Reduction (vph)	0	0	124	0	0	259	0	0	154	0	0	137
Lane Group Flow (vph)	165	596	73	148	622	146	178	182	62	280	290	39
Confl. Peds. (#/hr)	2		1	1		2	1					1
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	55.9	44.2	44.2	54.1	43.3	43.3	18.7	18.7	18.7	26.3	26.3	26.3
Effective Green, g (s)	55.9	44.2	44.2	54.1	43.3	43.3	18.7	18.7	18.7	26.3	26.3	26.3
Actuated g/C Ratio	0.47	0.37	0.37	0.45	0.36	0.36	0.16	0.16	0.16	0.22	0.22	0.22
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	380	1266	570	385	1240	562	261	272	246	368	383	342
v/s Ratio Prot	c0.04	0.17		0.03	c0.18		c0.11	0.10		c0.17	0.17	
v/s Ratio Perm	0.16		0.05	0.14		0.09			0.04			0.02
v/c Ratio	0.43	0.47	0.13	0.38	0.50	0.26	0.68	0.67	0.25	0.76	0.76	0.11
Uniform Delay, d1	19.6	29.0	25.1	20.2	29.9	27.1	47.8	47.7	44.5	43.9	43.9	37.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	1.3	0.5	0.6	1.5	1.1	7.2	6.1	0.5	9.0	8.3	0.1
Delay (s)	20.4	30.2	25.6	20.8	31.4	28.2	55.0	53.9	45.1	52.9	52.2	37.7
Level of Service	C	C	C	C	C	C	D	D	D	D	D	D
Approach Delay (s)		27.6			28.9			50.9			49.0	
Approach LOS		C			C			D			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			36.6				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.59									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			70.1%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												




Intersection			
Intersection Delay, s/veh 7.7			
Intersection LOS A			
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	71	732	462
Demand Flow Rate, veh/h	72	747	471
Vehicles Circulating, veh/h	452	12	93
Vehicles Exiting, veh/h	112	512	666
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.0	8.7	6.5
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	72	747	471
Cap Entry Lane, veh/h	870	1363	1255
Entry HV Adj Factor	0.986	0.980	0.981
Flow Entry, veh/h	71	732	462
Cap Entry, veh/h	858	1336	1231
V/C Ratio	0.083	0.548	0.375
Control Delay, s/veh	5.0	8.7	6.5
LOS	A	A	A
95th %tile Queue, veh	0	3	2

Intersection			
Intersection Delay, s/veh 7.0			
Intersection LOS A			
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	46	652	476
Demand Flow Rate, veh/h	46	665	486
Vehicles Circulating, veh/h	448	23	37
Vehicles Exiting, veh/h	75	471	651
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.6	7.8	6.2
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	46	665	486
Cap Entry Lane, veh/h	874	1348	1329
Entry HV Adj Factor	1.000	0.980	0.980
Flow Entry, veh/h	46	652	476
Cap Entry, veh/h	874	1321	1302
V/C Ratio	0.053	0.493	0.366
Control Delay, s/veh	4.6	7.8	6.2
LOS	A	A	A
95th %tile Queue, veh	0	3	2

***Intersection Capacity Worksheets:  
2040 Background + Project  
(Scenario 1 - 436 units)***

Intersection						
Int Delay, s/veh	4.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	80	53	207	55	81	430
Future Vol, veh/h	80	53	207	55	81	430
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	69	69	85	85
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	110	73	300	80	95	506
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1036	340	0	0	380	0
Stage 1	340	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	258	705	-	-	1184	-
Stage 1	723	-	-	-	-	-
Stage 2	496	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	229	705	-	-	1184	-
Mov Cap-2 Maneuver	229	-	-	-	-	-
Stage 1	723	-	-	-	-	-
Stage 2	440	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	25	0	1.3			
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 229 705 1184	-	-		
HCM Lane V/C Ratio	-	- 0.479 0.103 0.08	-	-		
HCM Control Delay (s)	-	- 34.4 10.7 8.3	-	0		
HCM Lane LOS	-	- D B A A	-	-		
HCM 95th %tile Q(veh)	-	- 2.4 0.3 0.3	-	-		

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	5	270	5	0	493
Future Vol, veh/h	10	5	270	5	0	493
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	69	69	71	71	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	14	7	380	7	0	587
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	971	384	0	0	387	0
Stage 1	384	-	-	-	-	-
Stage 2	587	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	282	666	-	-	1177	-
Stage 1	691	-	-	-	-	-
Stage 2	558	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	282	666	-	-	1177	-
Mov Cap-2 Maneuver	282	-	-	-	-	-
Stage 1	691	-	-	-	-	-
Stage 2	558	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	16	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 349		1177	-	
HCM Lane V/C Ratio	-	- 0.062		-	-	
HCM Control Delay (s)	-	- 16		0	-	
HCM Lane LOS	-	- C		A	-	
HCM 95th %tile Q(veh)	-	- 0.2		0	-	




Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	0	260	5	5	488
Future Vol, veh/h	20	0	260	5	5	488
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	66	66	86	86
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	29	0	394	8	6	567

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	977	398	0
Stage 1	398	-	-
Stage 2	579	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	279	654	-
Stage 1	681	-	-
Stage 2	562	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	277	654	-
Mov Cap-2 Maneuver	277	-	-
Stage 1	681	-	-
Stage 2	558	-	-













Approach	WB	NB	SB
HCM Control Delay, s	19.5	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	277	1162
HCM Lane V/C Ratio	-	-	0.106	0.005
HCM Control Delay (s)	-	-	19.5	8.1
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.4	0



Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	15	5	255	473	5
Future Vol, veh/h	10	15	5	255	473	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	45	45	64	64	87	87
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	22	33	8	398	544	6
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	961	547	550	0	-	0
Stage 1	547	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	286	539	1025	-	-	-
Stage 1	582	-	-	-	-	-
Stage 2	669	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	283	539	1025	-	-	-
Mov Cap-2 Maneuver	283	-	-	-	-	-
Stage 1	576	-	-	-	-	-
Stage 2	669	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	15.6	0.2		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1025	-	396	-	-	
HCM Lane V/C Ratio	0.008	-	0.14	-	-	
HCM Control Delay (s)	8.5	0	15.6	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	0.5	-	-	

Intersection			
Intersection Delay, s/veh	6.0		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	179	411	455
Demand Flow Rate, veh/h	183	411	457
Vehicles Circulating, veh/h	318	95	96
Vehicles Exiting, veh/h	188	458	405
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.4	5.9	6.4
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	183	411	457
Cap Entry Lane, veh/h	998	1252	1251
Entry HV Adj Factor	0.978	1.000	0.996
Flow Entry, veh/h	179	411	455
Cap Entry, veh/h	976	1252	1246
V/C Ratio	0.183	0.328	0.365
Control Delay, s/veh	5.4	5.9	6.4
LOS	A	A	A
95th %tile Queue, veh	1	1	2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	190	587	245	148	644	322	190	200	128	165	172	177
v/c Ratio	0.42	0.39	0.30	0.32	0.46	0.39	0.71	0.72	0.38	0.61	0.61	0.44
Control Delay	19.7	29.9	5.6	18.8	32.9	5.6	65.7	65.6	16.1	58.7	58.5	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.7	29.9	5.6	18.8	32.9	5.6	65.7	65.6	16.1	58.7	58.5	9.2
Queue Length 50th (ft)	70	165	0	53	197	0	162	171	20	140	146	0
Queue Length 95th (ft)	167	317	70	132	#387	81	216	226	64	187	193	56
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	455	1503	814	465	1402	836	465	485	511	478	496	567
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.39	0.30	0.32	0.46	0.39	0.41	0.41	0.25	0.35	0.35	0.31

#### Intersection Summary

























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

# HCM Signalized Intersection Capacity Analysis

06/12/2019





## 7: Dillon Dam Road & State Highway 6




2040 Background + Project (Scenario 1 - 436 units) - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	540	225	133	580	290	195	137	109	205	118	170
Future Volume (vph)	175	540	225	133	580	290	195	137	109	205	118	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1770	3438	1548	1769	3438	1583	1681	1753	1583	1681	1745	1549
Flt Permitted	0.29	1.00	1.00	0.39	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (perm)	549	3438	1548	721	3438	1583	1681	1753	1583	1681	1745	1549
Peak-hour factor, PHF	0.92	0.92	0.92	0.90	0.90	0.90	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	190	587	245	148	644	322	229	161	128	214	123	177
RTOR Reduction (vph)	0	0	138	0	0	191	0	0	85	0	0	148
Lane Group Flow (vph)	190	587	107	148	644	131	190	200	43	165	172	29
Confl. Peds. (#/hr)			1	1			9					9
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	72.1	56.8	56.8	64.5	53.0	53.0	20.7	20.7	20.7	21.0	21.0	21.0
Effective Green, g (s)	72.1	56.8	56.8	64.5	53.0	53.0	20.7	20.7	20.7	21.0	21.0	21.0
Actuated g/C Ratio	0.55	0.44	0.44	0.50	0.41	0.41	0.16	0.16	0.16	0.16	0.16	0.16
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	448	1502	676	450	1401	645	267	279	252	271	281	250
v/s Ratio Prot	c0.05	0.17		0.03	c0.19		0.11	c0.11		0.10	c0.10	
v/s Ratio Perm	0.19		0.07	0.13		0.08			0.03			0.02
v/c Ratio	0.42	0.39	0.16	0.33	0.46	0.20	0.71	0.72	0.17	0.61	0.61	0.11
Uniform Delay, d1	15.7	24.9	22.1	18.1	28.1	24.9	51.8	51.9	47.2	50.7	50.7	46.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.8	0.5	0.4	1.1	0.7	8.6	8.5	0.3	3.8	3.9	0.2
Delay (s)	16.4	25.6	22.6	18.6	29.2	25.6	60.5	60.4	47.6	54.5	54.6	46.8
Level of Service	B	C	C	B	C	C	E	E	D	D	D	D
Approach Delay (s)		23.2			26.7			57.2			51.9	
Approach LOS		C			C			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			34.6				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			70.6%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection			
Intersection Delay, s/veh	5.8		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	91	414	483
Demand Flow Rate, veh/h	93	423	493
Vehicles Circulating, veh/h	488	15	34
Vehicles Exiting, veh/h	39	566	404
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.5	5.5	6.2
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	93	423	493
Cap Entry Lane, veh/h	839	1359	1333
Entry HV Adj Factor	0.978	0.980	0.981
Flow Entry, veh/h	91	414	483
Cap Entry, veh/h	821	1331	1307
V/C Ratio	0.111	0.311	0.370
Control Delay, s/veh	5.5	5.5	6.2
LOS	A	A	A
95th %tile Queue, veh	0	1	2

Intersection			
Intersection Delay, s/veh	5.6		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	60	400	463
Demand Flow Rate, veh/h	62	408	472
Vehicles Circulating, veh/h	463	31	14
Vehicles Exiting, veh/h	23	494	425
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.0	5.5	5.9
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	62	408	472
Cap Entry Lane, veh/h	861	1337	1360
Entry HV Adj Factor	0.968	0.981	0.981
Flow Entry, veh/h	60	400	463
Cap Entry, veh/h	833	1312	1334
V/C Ratio	0.072	0.305	0.347
Control Delay, s/veh	5.0	5.5	5.9
LOS	A	A	A
95th %tile Queue, veh	0	1	2

Intersection						
Int Delay, s/veh	8.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	105	117	603	120	79	411
Future Vol, veh/h	105	117	603	120	79	411
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	92	92	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	115	129	655	130	88	457
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1354	721	0	0	786	0
Stage 1	721	-	-	-	-	-
Stage 2	633	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	166	429	-	-	837	-
Stage 1	483	-	-	-	-	-
Stage 2	531	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	142	429	-	-	836	-
Mov Cap-2 Maneuver	142	-	-	-	-	-
Stage 1	483	-	-	-	-	-
Stage 2	456	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	53	0	1.6			
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 142 429	836	-		
HCM Lane V/C Ratio	-	- 0.813 0.3	0.105	-		
HCM Control Delay (s)	-	- 93.3 16.9	9.8	0		
HCM Lane LOS	-	- F C	A	A		
HCM 95th %tile Q(veh)	-	- 5.1 1.2	0.4	-		




Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	5	710	5	5	475
Future Vol, veh/h	10	5	710	5	5	475
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	44	44	89	89	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	23	11	798	6	6	528




Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1341	801	0	0	804
Stage 1	801	-	-	-	-
Stage 2	540	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11
Critical Hdwy Stg 1	5.41	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209
Pot Cap-1 Maneuver	169	386	-	-	825
Stage 1	444	-	-	-	-
Stage 2	586	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	167	386	-	-	825
Mov Cap-2 Maneuver	167	-	-	-	-
Stage 1	444	-	-	-	-
Stage 2	580	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.9	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	206	825
HCM Lane V/C Ratio	-	-	0.165	0.007
HCM Control Delay (s)	-	-	25.9	9.4
HCM Lane LOS	-	-	D	A
HCM 95th %tile Q(veh)	-	-	0.6	0



Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	10	690	25	10	450
Future Vol, veh/h	25	10	690	25	10	450
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	66	66	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	32	13	1045	38	12	536
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1624	1064	0	0	1083	0
Stage 1	1064	-	-	-	-	-
Stage 2	560	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	113	272	-	-	648	-
Stage 1	333	-	-	-	-	-
Stage 2	574	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	110	272	-	-	648	-
Mov Cap-2 Maneuver	110	-	-	-	-	-
Stage 1	333	-	-	-	-	-
Stage 2	559	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	45	0	0.2			
HCM LOS	E					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	133	648	-	
HCM Lane V/C Ratio	-	-	0.333	0.018	-	
HCM Control Delay (s)	-	-	45	10.7	0	
HCM Lane LOS	-	-	E	B	A	
HCM 95th %tile Q(veh)	-	-	1.3	0.1	-	













Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	5	10	690	455	5
Future Vol, veh/h	0	5	10	690	455	5
Conflicting Peds, #/hr	1	7	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	38	38	86	86	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	13	12	802	542	6

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1372	552	548	0	-	0
Stage 1	545	-	-	-	-	-
Stage 2	827	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	162	535	1027	-	-	-
Stage 1	583	-	-	-	-	-
Stage 2	431	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	159	531	1027	-	-	-
Mov Cap-2 Maneuver	159	-	-	-	-	-
Stage 1	571	-	-	-	-	-
Stage 2	431	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1027	-	531	-	-
HCM Lane V/C Ratio	0.011	-	0.025	-	-
HCM Control Delay (s)	8.5	0	12	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection			
Intersection Delay, s/veh	14.0		
Intersection LOS	B		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	349	844	618
Demand Flow Rate, veh/h	356	844	623
Vehicles Circulating, veh/h	634	243	163
Vehicles Exiting, veh/h	453	543	827
Ped Vol Crossing Leg, #/h	1	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	12.4	18.2	9.3
Approach LOS	B	C	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	356	844	623
Cap Entry Lane, veh/h	723	1077	1169
Entry HV Adj Factor	0.980	1.000	0.992
Flow Entry, veh/h	349	844	618
Cap Entry, veh/h	708	1077	1159
V/C Ratio	0.493	0.784	0.533
Control Delay, s/veh	12.4	18.2	9.3
LOS	B	C	A
95th %tile Queue, veh	3	8	3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	194	683	220	169	714	473	202	208	248	330	342	215
v/c Ratio	0.58	0.62	0.34	0.51	0.70	0.59	0.70	0.69	0.58	0.82	0.81	0.40
Control Delay	30.4	40.4	6.5	27.6	43.6	6.9	58.8	57.9	18.1	59.4	58.6	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.4	40.4	6.5	27.6	43.6	6.9	58.8	57.9	18.1	59.4	58.6	6.8
Queue Length 50th (ft)	91	250	0	78	274	0	156	161	44	246	255	0
Queue Length 95th (ft)	#183	#360	63	144	#389	94	191	195	82	341	350	50
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	336	1095	642	332	1027	797	434	451	544	448	466	574
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.62	0.34	0.51	0.70	0.59	0.47	0.46	0.46	0.74	0.73	0.37

#### Intersection Summary

























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

# HCM Signalized Intersection Capacity Analysis

06/12/2019

## 7: Dillon Dam Road & State Highway 6

2040 Background + Project (Scenario 1 - 436 units) - PM Peak Hour





												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	635	205	154	650	430	199	125	196	350	228	185
Future Volume (vph)	180	635	205	154	650	430	199	125	196	350	228	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1769	3438	1548	1769	3438	1560	1681	1749	1583	1681	1750	1563
Flt Permitted	0.19	1.00	1.00	0.26	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (perm)	363	3438	1548	485	3438	1560	1681	1749	1583	1681	1750	1563
Peak-hour factor, PHF	0.93	0.93	0.93	0.91	0.91	0.91	0.79	0.79	0.79	0.86	0.86	0.86
Adj. Flow (vph)	194	683	220	169	714	473	252	158	248	407	265	215
RTOR Reduction (vph)	0	0	150	0	0	332	0	0	151	0	0	163
Lane Group Flow (vph)	194	683	70	169	714	141	202	208	97	330	342	52
Confl. Peds. (#/hr)	2		1	1		2	1					1
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	52.8	38.2	38.2	48.0	35.8	35.8	20.7	20.7	20.7	28.9	28.9	28.9
Effective Green, g (s)	52.8	38.2	38.2	48.0	35.8	35.8	20.7	20.7	20.7	28.9	28.9	28.9
Actuated g/C Ratio	0.44	0.32	0.32	0.40	0.30	0.30	0.17	0.17	0.17	0.24	0.24	0.24
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	330	1094	492	324	1025	465	289	301	273	404	421	376
v/s Ratio Prot	c0.07	0.20		0.05	c0.21		c0.12	0.12		c0.20	0.20	
v/s Ratio Perm	0.19		0.05	0.16		0.09			0.06			0.03
v/c Ratio	0.59	0.62	0.14	0.52	0.70	0.30	0.70	0.69	0.35	0.82	0.81	0.14
Uniform Delay, d1	23.1	34.8	29.2	24.7	37.3	32.5	46.7	46.6	43.8	43.0	43.0	35.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.7	2.7	0.6	1.5	3.9	1.7	7.2	6.7	0.8	12.1	11.4	0.2
Delay (s)	25.8	37.5	29.8	26.2	41.2	34.2	53.9	53.3	44.5	55.1	54.3	35.9
Level of Service	C	D	C	C	D	C	D	D	D	E	D	D
Approach Delay (s)		33.9			36.9			50.2			50.2	
Approach LOS		C			D			D			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			41.2				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			74.9%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												




Intersection			
Intersection Delay, s/veh	8.4		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	58	802	521
Demand Flow Rate, veh/h	59	818	531
Vehicles Circulating, veh/h	517	10	75
Vehicles Exiting, veh/h	89	566	753
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.2	9.6	7.0
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	59	818	531
Cap Entry Lane, veh/h	814	1366	1278
Entry HV Adj Factor	0.983	0.981	0.981
Flow Entry, veh/h	58	802	521
Cap Entry, veh/h	801	1340	1254
V/C Ratio	0.072	0.599	0.415
Control Delay, s/veh	5.2	9.6	7.0
LOS	A	A	A
95th %tile Queue, veh	0	4	2

Intersection			
Intersection Delay, s/veh 7.8			
Intersection LOS A			
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	40	737	533
Demand Flow Rate, veh/h	40	752	544
Vehicles Circulating, veh/h	512	20	31
Vehicles Exiting, veh/h	63	532	741
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.9	8.8	6.7
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	40	752	544
Cap Entry Lane, veh/h	819	1352	1337
Entry HV Adj Factor	1.000	0.980	0.980
Flow Entry, veh/h	40	737	533
Cap Entry, veh/h	819	1325	1310
V/C Ratio	0.049	0.556	0.407
Control Delay, s/veh	4.9	8.8	6.7
LOS	A	A	A
95th %tile Queue, veh	0	4	2

***Intersection Capacity Worksheets:  
2040 Background + Project  
(Scenario 2 - 536 units)***






Intersection						
Int Delay, s/veh	4.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	80	53	213	55	83	448
Future Vol, veh/h	80	53	213	55	83	448
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	69	69	85	85
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	110	73	309	80	98	527
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1072	349	0	0	389	0
Stage 1	349	-	-	-	-	-
Stage 2	723	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	245	697	-	-	1175	-
Stage 1	716	-	-	-	-	-
Stage 2	482	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	216	697	-	-	1175	-
Mov Cap-2 Maneuver	216	-	-	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	425	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	27	0	1.3			
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 216 697 1175	-	-		
HCM Lane V/C Ratio	-	- 0.507 0.104 0.083	-	-		
HCM Control Delay (s)	-	- 37.7 10.8 8.3	0			
HCM Lane LOS	-	- E B A A				
HCM 95th %tile Q(veh)	-	- 2.6 0.3 0.3	-	-		

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	5	276	5	0	512
Future Vol, veh/h	10	5	276	5	0	512
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	69	69	71	71	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	14	7	389	7	0	610

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1003	393	0
Stage 1	393	-	-
Stage 2	610	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	270	658	-
Stage 1	684	-	-
Stage 2	544	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	270	658	-
Mov Cap-2 Maneuver	270	-	-
Stage 1	684	-	-
Stage 2	544	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	336	1168
HCM Lane V/C Ratio	-	-	0.065	-
HCM Control Delay (s)	-	-	16.5	0
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	0	266	5	5	507
Future Vol, veh/h	20	0	266	5	5	507
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	66	66	86	86
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	29	0	403	8	6	590
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1009	407	0	0	411	0
Stage 1	407	-	-	-	-	-
Stage 2	602	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	267	646	-	-	1153	-
Stage 1	674	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	265	646	-	-	1153	-
Mov Cap-2 Maneuver	265	-	-	-	-	-
Stage 1	674	-	-	-	-	-
Stage 2	545	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	20.3	0		0.1		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	265	1153	-	
HCM Lane V/C Ratio	-	-	0.111	0.005	-	
HCM Control Delay (s)	-	-	20.3	8.1	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.4	0	-	













Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			4	4	
Traffic Vol, veh/h	10	15	5	261	492	5
Future Vol, veh/h	10	15	5	261	492	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	45	45	64	64	87	87
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	22	33	8	408	566	6

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	993	569	572	0	-	0
Stage 1	569	-	-	-	-	-
Stage 2	424	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	273	524	1006	-	-	-
Stage 1	568	-	-	-	-	-
Stage 2	662	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	270	524	1006	-	-	-
Mov Cap-2 Maneuver	270	-	-	-	-	-
Stage 1	562	-	-	-	-	-
Stage 2	662	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.1	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1006	-	381	-	-
HCM Lane V/C Ratio	0.008	-	0.146	-	-
HCM Control Delay (s)	8.6	0	16.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

Intersection			
Intersection Delay, s/veh	6.1		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	180	424	457
Demand Flow Rate, veh/h	184	424	459
Vehicles Circulating, veh/h	328	95	97
Vehicles Exiting, veh/h	191	461	415
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.5	6.0	6.4
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	184	424	459
Cap Entry Lane, veh/h	988	1252	1250
Entry HV Adj Factor	0.978	1.000	0.996
Flow Entry, veh/h	180	424	457
Cap Entry, veh/h	966	1252	1244
V/C Ratio	0.186	0.339	0.367
Control Delay, s/veh	5.5	6.0	6.4
LOS	A	A	A
95th %tile Queue, veh	1	2	2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	190	587	246	149	644	322	196	201	131	165	172	177
v/c Ratio	0.42	0.39	0.30	0.33	0.46	0.39	0.72	0.71	0.39	0.61	0.61	0.44
Control Delay	20.0	30.0	5.6	19.1	33.0	5.6	66.2	64.7	16.5	58.7	58.5	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.0	30.0	5.6	19.1	33.0	5.6	66.2	64.7	16.5	58.7	58.5	9.2
Queue Length 50th (ft)	70	166	0	54	198	0	167	171	22	140	146	0
Queue Length 95th (ft)	168	317	71	135	#387	81	222	226	67	187	193	56
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	452	1496	812	462	1396	834	465	485	511	478	496	567
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.39	0.30	0.32	0.46	0.39	0.42	0.41	0.26	0.35	0.35	0.31

#### Intersection Summary

























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

# HCM Signalized Intersection Capacity Analysis

06/12/2019

## 7: Dillon Dam Road & State Highway 6

2040 Background + Project (Scenario 2 - 536 units) - AM Peak Hour





												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	540	226	134	580	290	198	139	111	205	118	170
Future Volume (vph)	175	540	226	134	580	290	198	139	111	205	118	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1770	3438	1548	1769	3438	1583	1681	1753	1583	1681	1745	1549
Flt Permitted	0.29	1.00	1.00	0.39	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (perm)	548	3438	1548	720	3438	1583	1681	1753	1583	1681	1745	1549
Peak-hour factor, PHF	0.92	0.92	0.92	0.90	0.90	0.90	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	190	587	246	149	644	322	233	164	131	214	123	177
RTOR Reduction (vph)	0	0	139	0	0	191	0	0	85	0	0	148
Lane Group Flow (vph)	190	587	107	149	644	131	196	201	46	165	172	29
Confl. Peds. (#/hr)			1	1			9					9
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	71.8	56.6	56.6	64.2	52.8	52.8	21.0	21.0	21.0	21.0	21.0	21.0
Effective Green, g (s)	71.8	56.6	56.6	64.2	52.8	52.8	21.0	21.0	21.0	21.0	21.0	21.0
Actuated g/C Ratio	0.55	0.44	0.44	0.49	0.41	0.41	0.16	0.16	0.16	0.16	0.16	0.16
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	445	1496	673	447	1396	642	271	283	255	271	281	250
v/s Ratio Prot	c0.05	0.17		0.03	c0.19		c0.12	0.11		0.10	c0.10	
v/s Ratio Perm	0.19		0.07	0.14		0.08			0.03			0.02
v/c Ratio	0.43	0.39	0.16	0.33	0.46	0.20	0.72	0.71	0.18	0.61	0.61	0.11
Uniform Delay, d1	15.9	25.0	22.3	18.3	28.2	25.0	51.7	51.6	47.1	50.7	50.7	46.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.8	0.5	0.4	1.1	0.7	9.2	8.1	0.3	3.8	3.9	0.2
Delay (s)	16.5	25.8	22.8	18.8	29.3	25.7	60.9	59.7	47.4	54.5	54.6	46.8
Level of Service	B	C	C	B	C	C	E	E	D	D	D	D
Approach Delay (s)		23.3			26.9			57.1			51.9	
Approach LOS		C			C			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			34.8				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.54									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			70.8%				ICU Level of Service			C		
Analysis Period (min)			15									




c Critical Lane Group

Intersection			
Intersection Delay, s/veh 6.0			
Intersection LOS A			
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	113	424	490
Demand Flow Rate, veh/h	115	433	500
Vehicles Circulating, veh/h	494	20	42
Vehicles Exiting, veh/h	48	589	411
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.8	5.6	6.3
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	115	433	500
Cap Entry Lane, veh/h	834	1352	1322
Entry HV Adj Factor	0.983	0.980	0.981
Flow Entry, veh/h	113	424	490
Cap Entry, veh/h	819	1325	1296
V/C Ratio	0.138	0.320	0.378
Control Delay, s/veh	5.8	5.6	6.3
LOS	A	A	A
95th %tile Queue, veh	0	1	2



Intersection			
Intersection Delay, s/veh	5.7		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	74	408	466
Demand Flow Rate, veh/h	76	416	475
Vehicles Circulating, veh/h	464	38	16
Vehicles Exiting, veh/h	27	502	438
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.2	5.6	5.9
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	76	416	475
Cap Entry Lane, veh/h	860	1327	1358
Entry HV Adj Factor	0.974	0.981	0.981
Flow Entry, veh/h	74	408	466
Cap Entry, veh/h	837	1302	1332
V/C Ratio	0.088	0.313	0.350
Control Delay, s/veh	5.2	5.6	5.9
LOS	A	A	A
95th %tile Queue, veh	0	1	2




Intersection						
Int Delay, s/veh	9.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	105	118	621	120	80	422
Future Vol, veh/h	105	118	621	120	80	422
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	92	92	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	115	130	675	130	89	469
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1388	741	0	0	806	0
Stage 1	741	-	-	-	-	-
Stage 2	647	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	158	418	-	-	823	-
Stage 1	473	-	-	-	-	-
Stage 2	523	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	135	418	-	-	822	-
Mov Cap-2 Maneuver	135	-	-	-	-	-
Stage 1	473	-	-	-	-	-
Stage 2	447	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	58.8	0	1.6			
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT	
Capacity (veh/h)	-	-	135	418	822	-
HCM Lane V/C Ratio	-	-	0.855	0.31	0.108	-
HCM Control Delay (s)	-	-	105.4	17.4	9.9	0
HCM Lane LOS	-	-	F	C	A	A
HCM 95th %tile Q(veh)	-	-	5.5	1.3	0.4	-




Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	5	729	5	5	487
Future Vol, veh/h	10	5	729	5	5	487
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	44	44	89	89	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	23	11	819	6	6	541

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1375	822	0	0	825
Stage 1	822	-	-	-	-
Stage 2	553	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11
Critical Hdwy Stg 1	5.41	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209
Pot Cap-1 Maneuver	161	375	-	-	810
Stage 1	434	-	-	-	-
Stage 2	578	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	159	375	-	-	810
Mov Cap-2 Maneuver	159	-	-	-	-
Stage 1	434	-	-	-	-
Stage 2	572	-	-	-	-













Approach	WB	NB	SB
HCM Control Delay, s	27.1	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	197	810
HCM Lane V/C Ratio	-	-	0.173	0.007
HCM Control Delay (s)	-	-	27.1	9.5
HCM Lane LOS	-	-	D	A
HCM 95th %tile Q(veh)	-	-	0.6	0

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	10	709	25	10	462
Future Vol, veh/h	25	10	709	25	10	462
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	66	66	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	32	13	1074	38	12	550
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1667	1093	0	0	1112	0
Stage 1	1093	-	-	-	-	-
Stage 2	574	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	107	262	-	-	632	-
Stage 1	323	-	-	-	-	-
Stage 2	565	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	104	262	-	-	632	-
Mov Cap-2 Maneuver	104	-	-	-	-	-
Stage 1	323	-	-	-	-	-
Stage 2	550	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	48.3	0	0.2			
HCM LOS	E					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	126	632	-	
HCM Lane V/C Ratio	-	-	0.352	0.019	-	
HCM Control Delay (s)	-	-	48.3	10.8	0	
HCM Lane LOS	-	-	E	B	A	
HCM 95th %tile Q(veh)	-	-	1.4	0.1	-	

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	5	10	709	467	5
Future Vol, veh/h	0	5	10	709	467	5
Conflicting Peds, #/hr	1	7	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	38	38	86	86	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	13	12	824	556	6
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1408	566	562	0	-	0
Stage 1	559	-	-	-	-	-
Stage 2	849	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	154	526	1014	-	-	-
Stage 1	574	-	-	-	-	-
Stage 2	421	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	151	522	1014	-	-	-
Mov Cap-2 Maneuver	151	-	-	-	-	-
Stage 1	561	-	-	-	-	-
Stage 2	421	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	12.1	0.1		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1014	-	522	-	-	
HCM Lane V/C Ratio	0.011	-	0.025	-	-	
HCM Control Delay (s)	8.6	0	12.1	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection			
Intersection Delay, s/veh	14.3		
Intersection LOS	B		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	351	852	626
Demand Flow Rate, veh/h	358	852	631
Vehicles Circulating, veh/h	641	243	165
Vehicles Exiting, veh/h	454	553	834
Ped Vol Crossing Leg, #/h	1	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	12.6	18.6	9.4
Approach LOS	B	C	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	358	852	631
Cap Entry Lane, veh/h	718	1077	1166
Entry HV Adj Factor	0.980	1.000	0.992
Flow Entry, veh/h	351	852	626
Cap Entry, veh/h	704	1077	1157
V/C Ratio	0.499	0.791	0.541
Control Delay, s/veh	12.6	18.6	9.4
LOS	B	C	A
95th %tile Queue, veh	3	9	3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	194	683	225	171	714	473	205	210	249	330	343	215
v/c Ratio	0.58	0.63	0.35	0.52	0.70	0.59	0.70	0.69	0.59	0.82	0.82	0.40
Control Delay	30.9	40.6	6.5	28.2	43.7	6.9	58.7	57.7	18.2	59.4	58.8	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.9	40.6	6.5	28.2	43.7	6.9	58.7	57.7	18.2	59.4	58.8	6.8
Queue Length 50th (ft)	92	251	0	80	274	0	158	163	45	246	256	0
Queue Length 95th (ft)	#187	#360	63	147	#389	94	193	196	84	341	351	50
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	334	1089	644	331	1024	796	434	451	543	448	466	574
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.63	0.35	0.52	0.70	0.59	0.47	0.47	0.46	0.74	0.74	0.37

#### Intersection Summary

























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

# HCM Signalized Intersection Capacity Analysis

06/12/2019

## 7: Dillon Dam Road & State Highway 6

2040 Background + Project (Scenario 2 - 536 units) - PM Peak Hour





												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	635	209	156	650	430	202	126	197	350	229	185
Future Volume (vph)	180	635	209	156	650	430	202	126	197	350	229	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1769	3438	1548	1769	3438	1560	1681	1748	1583	1681	1750	1563
Flt Permitted	0.19	1.00	1.00	0.26	1.00	1.00	0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (perm)	363	3438	1548	481	3438	1560	1681	1748	1583	1681	1750	1563
Peak-hour factor, PHF	0.93	0.93	0.93	0.91	0.91	0.91	0.79	0.79	0.79	0.86	0.86	0.86
Adj. Flow (vph)	194	683	225	171	714	473	256	159	249	407	266	215
RTOR Reduction (vph)	0	0	154	0	0	332	0	0	150	0	0	163
Lane Group Flow (vph)	194	683	71	171	714	141	205	210	99	330	343	52
Confl. Peds. (#/hr)	2		1	1		2	1					1
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	52.5	38.0	38.0	47.9	35.7	35.7	20.9	20.9	20.9	28.9	28.9	28.9
Effective Green, g (s)	52.5	38.0	38.0	47.9	35.7	35.7	20.9	20.9	20.9	28.9	28.9	28.9
Actuated g/C Ratio	0.44	0.32	0.32	0.40	0.30	0.30	0.17	0.17	0.17	0.24	0.24	0.24
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	328	1088	490	322	1022	464	292	304	275	404	421	376
v/s Ratio Prot	c0.07	0.20		0.05	c0.21		c0.12	0.12		c0.20	0.20	
v/s Ratio Perm	0.19		0.05	0.16		0.09			0.06			0.03
v/c Ratio	0.59	0.63	0.15	0.53	0.70	0.30	0.70	0.69	0.36	0.82	0.81	0.14
Uniform Delay, d1	23.3	35.0	29.4	24.8	37.4	32.5	46.6	46.5	43.6	43.0	43.0	35.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.8	2.7	0.6	1.7	4.0	1.7	7.4	6.6	0.8	12.1	11.5	0.2
Delay (s)	26.1	37.7	30.0	26.5	41.3	34.2	54.1	53.1	44.5	55.1	54.5	35.9
Level of Service	C	D	C	C	D	C	D	D	D	E	D	D
Approach Delay (s)		34.1			37.0			50.2			50.2	
Approach LOS		C			D			D			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			41.3				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			75.1%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												






Intersection			
Intersection Delay, s/veh	8.8		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	71	825	530
Demand Flow Rate, veh/h	72	842	540
Vehicles Circulating, veh/h	521	12	93
Vehicles Exiting, veh/h	112	581	761
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.4	10.0	7.3
Approach LOS	A	B	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	72	842	540
Cap Entry Lane, veh/h	811	1363	1255
Entry HV Adj Factor	0.986	0.980	0.981
Flow Entry, veh/h	71	825	530
Cap Entry, veh/h	800	1336	1231
V/C Ratio	0.089	0.618	0.430
Control Delay, s/veh	5.4	10.0	7.3
LOS	A	B	A
95th %tile Queue, veh	0	5	2

Intersection			
Intersection Delay, s/veh 8.0			
Intersection LOS A			
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	46	745	544
Demand Flow Rate, veh/h	46	760	555
Vehicles Circulating, veh/h	517	23	37
Vehicles Exiting, veh/h	75	540	746
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.0	9.0	6.8
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	46	760	555
Cap Entry Lane, veh/h	814	1348	1329
Entry HV Adj Factor	1.000	0.980	0.980
Flow Entry, veh/h	46	745	544
Cap Entry, veh/h	814	1321	1302
V/C Ratio	0.056	0.564	0.418
Control Delay, s/veh	5.0	9.0	6.8
LOS	A	A	A
95th %tile Queue, veh	0	4	2

***Intersection Capacity Worksheets:  
Dam Closure***




Intersection						
Int Delay, s/veh	3.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	110	8	62	113	11	177
Future Vol, veh/h	110	8	62	113	11	177
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	69	69	85	85
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	151	11	90	164	13	208
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	406	172	0	0	254	0
Stage 1	172	-	-	-	-	-
Stage 2	234	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	603	874	-	-	1317	-
Stage 1	861	-	-	-	-	-
Stage 2	807	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	596	874	-	-	1317	-
Mov Cap-2 Maneuver	596	-	-	-	-	-
Stage 1	861	-	-	-	-	-
Stage 2	798	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	12.8	0	0.5			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 596 874	1317	-		
HCM Lane V/C Ratio	-	- 0.253 0.013	0.01	-		
HCM Control Delay (s)	-	- 13.1 9.2	7.8	0		
HCM Lane LOS	-	- B A	A	A		
HCM 95th %tile Q(veh)	-	- 1 0	0	-		

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	0	61	4	0	170
Future Vol, veh/h	14	0	61	4	0	170
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	69	69	71	71	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	20	0	86	6	0	202

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	291	89	0
Stage 1	89	-	-
Stage 2	202	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	702	972	-
Stage 1	937	-	-
Stage 2	834	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	702	972	-
Mov Cap-2 Maneuver	702	-	-
Stage 1	937	-	-
Stage 2	834	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	0
HCM LOS	B		




Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	702	1509
HCM Lane V/C Ratio	-	-	0.029	-
HCM Control Delay (s)	-	-	10.3	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	0	54	7	0	151
Future Vol, veh/h	19	0	54	7	0	151
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	66	66	86	86
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	28	0	82	11	0	176

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	264	88	0
Stage 1	88	-	-
Stage 2	176	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	727	973	-
Stage 1	938	-	-
Stage 2	857	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	727	973	-
Mov Cap-2 Maneuver	727	-	-
Stage 1	938	-	-
Stage 2	857	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	727	1508
HCM Lane V/C Ratio	-	-	0.038	-
HCM Control Delay (s)	-	-	10.2	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	22	7	47	129	0
Future Vol, veh/h	0	22	7	47	129	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	45	45	64	64	87	87
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	49	11	73	148	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	243	148	148	0	-	0
Stage 1	148	-	-	-	-	-
Stage 2	95	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	748	901	1440	-	-	-
Stage 1	882	-	-	-	-	-
Stage 2	931	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	742	901	1440	-	-	-
Mov Cap-2 Maneuver	742	-	-	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	931	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	1	0
HCM LOS	A		













Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1440	-	901	-	-
HCM Lane V/C Ratio	0.008	-	0.054	-	-
HCM Control Delay (s)	7.5	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection			
Intersection Delay, s/veh	3.5		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	151	0	138
Demand Flow Rate, veh/h	154	0	141
Vehicles Circulating, veh/h	0	141	0
Vehicles Exiting, veh/h	141	0	154
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.6	0.0	3.5
Approach LOS	A	-	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	154	0	141
Cap Entry Lane, veh/h	1380	1195	1380
Entry HV Adj Factor	0.981	1.000	0.979
Flow Entry, veh/h	151	0	138
Cap Entry, veh/h	1353	1195	1350
V/C Ratio	0.112	0.000	0.102
Control Delay, s/veh	3.6	3.0	3.5
LOS	A	A	A
95th %tile Queue, veh	0	0	0



Queues  
06/12/2019

7: Dillon Dam Road & State Highway 6  
2026 Background + Project (Scenario 1 - 436 units) [Dam Closed] - AM Peak Hour

























												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	153	509	83	46	559	270	83	86	55	109	111	151
v/c Ratio	0.27	0.25	0.09	0.08	0.30	0.27	0.55	0.54	0.23	0.49	0.49	0.45
Control Delay	11.8	16.8	4.0	11.8	20.0	3.9	69.0	68.4	3.0	57.0	56.9	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.8	16.8	4.0	11.8	20.0	3.9	69.0	68.4	3.0	57.0	56.9	10.5
Queue Length 50th (ft)	39	100	0	11	120	0	71	74	0	93	95	0
Queue Length 95th (ft)	113	214	29	42	258	62	117	121	0	128	130	52
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	570	2006	942	605	1865	982	465	484	511	478	486	548
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.25	0.09	0.08	0.30	0.27	0.18	0.18	0.11	0.23	0.23	0.28
Intersection Summary												

# HCM Signalized Intersection Capacity Analysis

# 7: Dillon Dam Road & State Highway 6





06/12/2019




2026 Background + Project (Scenario 1 - 436 units) [Dam Closed] - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	468	76	41	503	243	87	57	47	177	35	145
Future Volume (vph)	141	468	76	41	503	243	87	57	47	177	35	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1770	3438	1548	1769	3438	1583	1681	1750	1583	1681	1712	1549
Flt Permitted	0.39	1.00	1.00	0.46	1.00	1.00	0.95	0.99	1.00	0.95	0.97	1.00
Satd. Flow (perm)	718	3438	1548	865	3438	1583	1681	1750	1583	1681	1712	1549
Peak-hour factor, PHF	0.92	0.92	0.92	0.90	0.90	0.90	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	153	509	83	46	559	270	102	67	55	184	36	151
RTOR Reduction (vph)	0	0	35	0	0	124	0	0	50	0	0	131
Lane Group Flow (vph)	153	509	48	46	559	146	83	86	5	109	111	20
Confl. Peds. (#/hr)			1	1			9					9
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	84.8	75.0	75.0	76.3	70.5	70.5	11.8	11.8	11.8	17.4	17.4	17.4
Effective Green, g (s)	84.8	75.0	75.0	76.3	70.5	70.5	11.8	11.8	11.8	17.4	17.4	17.4
Actuated g/C Ratio	0.65	0.58	0.58	0.59	0.54	0.54	0.09	0.09	0.09	0.13	0.13	0.13
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	551	1983	893	548	1864	858	152	158	143	224	229	207
v/s Ratio Prot	c0.02	0.15		0.00	c0.16		c0.05	0.05		c0.06	0.06	
v/s Ratio Perm	0.16		0.03	0.05		0.09			0.00			0.01
v/c Ratio	0.28	0.26	0.05	0.08	0.30	0.17	0.55	0.54	0.03	0.49	0.48	0.10
Uniform Delay, d1	9.0	13.7	12.0	11.4	16.3	15.0	56.5	56.5	53.9	52.2	52.1	49.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.3	0.1	0.1	0.4	0.4	4.0	3.8	0.1	1.7	1.6	0.2
Delay (s)	9.3	14.0	12.1	11.5	16.7	15.4	60.5	60.3	54.0	53.8	53.8	49.6
Level of Service	A	B	B	B	B	B	E	E	D	D	D	D
Approach Delay (s)		12.8			16.0			58.8			52.1	
Approach LOS		B			B			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			25.3				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.35									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			56.2%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection			
Intersection Delay, s/veh	3.2		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	90	74	63
Demand Flow Rate, veh/h	92	76	64
Vehicles Circulating, veh/h	64	0	42
Vehicles Exiting, veh/h	42	156	34
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.4	3.1	3.2
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	92	76	64
Cap Entry Lane, veh/h	1293	1380	1322
Entry HV Adj Factor	0.978	0.978	0.980
Flow Entry, veh/h	90	74	63
Cap Entry, veh/h	1265	1350	1296
V/C Ratio	0.071	0.055	0.048
Control Delay, s/veh	3.4	3.1	3.2
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Intersection			
Intersection Delay, s/veh	3.0		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	61	33	6
Demand Flow Rate, veh/h	62	34	6
Vehicles Circulating, veh/h	6	0	25
Vehicles Exiting, veh/h	25	68	8
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.0	2.9	2.8
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	62	34	6
Cap Entry Lane, veh/h	1371	1380	1345
Entry HV Adj Factor	0.984	0.966	0.980
Flow Entry, veh/h	61	33	6
Cap Entry, veh/h	1349	1333	1319
V/C Ratio	0.045	0.025	0.004
Control Delay, s/veh	3.0	2.9	2.8
LOS	A	A	A
95th %tile Queue, veh	0	0	0




Intersection						
Int Delay, s/veh	4.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	185	12	173	167	9	119
Future Vol, veh/h	185	12	173	167	9	119
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	92	92	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	203	13	188	182	10	132
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	432	280	0	0	371	0
Stage 1	280	-	-	-	-	-
Stage 2	152	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	582	761	-	-	1193	-
Stage 1	770	-	-	-	-	-
Stage 2	878	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	576	760	-	-	1192	-
Mov Cap-2 Maneuver	576	-	-	-	-	-
Stage 1	769	-	-	-	-	-
Stage 2	870	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	14.3	0	0.6			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 576 760 1192	-	-		
HCM Lane V/C Ratio	-	- 0.353 0.017 0.008	-	-		
HCM Control Delay (s)	-	- 14.6 9.8 8	0			
HCM Lane LOS	-	- B A A	A			
HCM 95th %tile Q(veh)	-	- 1.6 0.1 0	-			

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	0	173	7	0	114
Future Vol, veh/h	9	0	173	7	0	114
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	44	44	89	89	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	20	0	194	8	0	127

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	325	198	0
Stage 1	198	-	-
Stage 2	127	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	671	846	-
Stage 1	838	-	-
Stage 2	901	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	671	846	-
Mov Cap-2 Maneuver	671	-	-
Stage 1	838	-	-
Stage 2	901	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0
HCM LOS	B		




Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	671	1376
HCM Lane V/C Ratio	-	-	0.03	-
HCM Control Delay (s)	-	-	10.5	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	0	145	28	0	87
Future Vol, veh/h	27	0	145	28	0	87
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	66	66	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	34	0	220	42	0	104

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	345	241	0
Stage 1	241	-	-
Stage 2	104	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	654	800	-
Stage 1	801	-	-
Stage 2	923	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	654	800	-
Mov Cap-2 Maneuver	654	-	-
Stage 1	801	-	-
Stage 2	923	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	654	1308
HCM Lane V/C Ratio	-	-	0.052	-
HCM Control Delay (s)	-	-	10.8	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	12	133	84	0
Future Vol, veh/h	0	3	12	133	84	0
Conflicting Peds, #/hr	1	7	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	38	38	86	86	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	8	14	155	100	0













Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	284	107	100	0	-	0
Stage 1	100	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	708	950	1499	-	-	-
Stage 1	927	-	-	-	-	-
Stage 2	850	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	701	944	1499	-	-	-
Mov Cap-2 Maneuver	701	-	-	-	-	-
Stage 1	918	-	-	-	-	-
Stage 2	850	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	0.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1499	-	944	-	-
HCM Lane V/C Ratio	0.009	-	0.008	-	-
HCM Control Delay (s)	7.4	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Intersection			
Intersection Delay, s/veh	4.7		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	295	0	352
Demand Flow Rate, veh/h	301	0	359
Vehicles Circulating, veh/h	0	359	0
Vehicles Exiting, veh/h	359	0	301
Ped Vol Crossing Leg, #/h	1	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.5	0.0	4.9
Approach LOS	A	-	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	301	0	359
Cap Entry Lane, veh/h	1380	957	1380
Entry HV Adj Factor	0.980	1.000	0.981
Flow Entry, veh/h	295	0	352
Cap Entry, veh/h	1352	957	1353
V/C Ratio	0.218	0.000	0.260
Control Delay, s/veh	4.5	3.8	4.9
LOS	A	A	A
95th %tile Queue, veh	1	0	1

























												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	165	596	89	65	622	405	29	30	30	218	225	176
v/c Ratio	0.32	0.31	0.10	0.13	0.36	0.41	0.27	0.27	0.15	0.69	0.69	0.40
Control Delay	12.2	18.2	3.6	11.5	21.3	3.8	59.2	58.9	1.5	55.5	55.6	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.2	18.2	3.6	11.5	21.3	3.8	59.2	58.9	1.5	55.5	55.6	8.0
Queue Length 50th (ft)	48	135	0	18	152	0	23	24	0	167	172	0
Queue Length 95th (ft)	103	224	27	47	254	66	48	48	0	221	226	47
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	516	1899	900	543	1747	992	434	451	489	448	459	545
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.31	0.10	0.12	0.36	0.41	0.07	0.07	0.06	0.49	0.49	0.32
Intersection Summary												

# HCM Signalized Intersection Capacity Analysis

# 7: Dillon Dam Road & State Highway 6

06/12/2019





2026 Background + Project (Scenario 1 - 436 units) [Dam Closed] - PM Peak Hour




												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	153	554	83	59	566	369	29	17	24	293	88	151
Future Volume (vph)	153	554	83	59	566	369	29	17	24	293	88	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1769	3438	1548	1769	3438	1560	1681	1746	1583	1681	1723	1563
Flt Permitted	0.34	1.00	1.00	0.42	1.00	1.00	0.95	0.99	1.00	0.95	0.97	1.00
Satd. Flow (perm)	638	3438	1548	779	3438	1560	1681	1746	1583	1681	1723	1563
Peak-hour factor, PHF	0.93	0.93	0.93	0.91	0.91	0.91	0.79	0.79	0.79	0.86	0.86	0.86
Adj. Flow (vph)	165	596	89	65	622	405	37	22	30	341	102	176
RTOR Reduction (vph)	0	0	41	0	0	202	0	0	28	0	0	143
Lane Group Flow (vph)	165	596	48	65	622	203	29	30	2	218	225	33
Confl. Peds. (#/hr)	2		1	1		2	1					1
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	74.8	64.6	64.6	66.3	60.1	60.1	6.5	6.5	6.5	22.7	22.7	22.7
Effective Green, g (s)	74.8	64.6	64.6	66.3	60.1	60.1	6.5	6.5	6.5	22.7	22.7	22.7
Actuated g/C Ratio	0.62	0.54	0.54	0.55	0.50	0.50	0.05	0.05	0.05	0.19	0.19	0.19
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	498	1850	833	481	1721	781	91	94	85	317	325	295
v/s Ratio Prot	c0.03	0.17		0.01	c0.18		c0.02	0.02		0.13	c0.13	
v/s Ratio Perm	0.18		0.03	0.07		0.13			0.00			0.02
v/c Ratio	0.33	0.32	0.06	0.14	0.36	0.26	0.32	0.32	0.02	0.69	0.69	0.11
Uniform Delay, d1	10.1	15.5	13.2	12.5	18.3	17.2	54.6	54.6	53.7	45.3	45.4	40.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.5	0.1	0.1	0.6	0.8	2.0	2.0	0.1	6.1	6.2	0.2
Delay (s)	10.5	15.9	13.3	12.6	18.8	18.0	56.6	56.6	53.8	51.4	51.6	40.5
Level of Service	B	B	B	B	B	B	E	E	D	D	D	D
Approach Delay (s)		14.6			18.2			55.7			48.4	
Approach LOS		B			B			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			25.3				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.43									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			61.8%				ICU Level of Service			B		
Analysis Period (min)			15									

c Critical Lane Group

Intersection			
Intersection Delay, s/veh	3.4		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	57	155	44
Demand Flow Rate, veh/h	58	158	45
Vehicles Circulating, veh/h	45	0	92
Vehicles Exiting, veh/h	92	103	66
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.1	3.6	3.2
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	58	158	45
Cap Entry Lane, veh/h	1318	1380	1256
Entry HV Adj Factor	0.983	0.979	0.980
Flow Entry, veh/h	57	155	44
Cap Entry, veh/h	1295	1351	1232
V/C Ratio	0.044	0.115	0.036
Control Delay, s/veh	3.1	3.6	3.2
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Intersection			
Intersection Delay, s/veh	3.0		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	39	65	6
Demand Flow Rate, veh/h	40	66	6
Vehicles Circulating, veh/h	6	0	60
Vehicles Exiting, veh/h	60	46	6
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	2.9	3.0	2.9
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	40	66	6
Cap Entry Lane, veh/h	1371	1380	1298
Entry HV Adj Factor	0.975	0.983	0.980
Flow Entry, veh/h	39	65	6
Cap Entry, veh/h	1337	1356	1272
V/C Ratio	0.029	0.048	0.005
Control Delay, s/veh	2.9	3.0	2.9
LOS	A	A	A
95th %tile Queue, veh	0	0	0




Intersection						
Int Delay, s/veh	3.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	110	8	71	113	13	204
Future Vol, veh/h	110	8	71	113	13	204
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	69	69	85	85
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	151	11	103	164	15	240
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	455	185	0	0	267	0
Stage 1	185	-	-	-	-	-
Stage 2	270	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	565	860	-	-	1303	-
Stage 1	849	-	-	-	-	-
Stage 2	778	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	558	860	-	-	1303	-
Mov Cap-2 Maneuver	558	-	-	-	-	-
Stage 1	849	-	-	-	-	-
Stage 2	768	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	13.5	0	0.5			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 558 860	1303	-		
HCM Lane V/C Ratio	-	- 0.27 0.013	0.012	-		
HCM Control Delay (s)	-	- 13.8 9.2	7.8	0		
HCM Lane LOS	-	- B A	A	A		
HCM 95th %tile Q(veh)	-	- 1.1 0	0	-		

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	0	70	4	0	198
Future Vol, veh/h	14	0	70	4	0	198
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	69	69	71	71	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	20	0	99	6	0	236

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	338	102	0
Stage 1	102	-	-
Stage 2	236	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	660	956	-
Stage 1	925	-	-
Stage 2	806	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	660	956	-
Mov Cap-2 Maneuver	660	-	-
Stage 1	925	-	-
Stage 2	806	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	660	1493
HCM Lane V/C Ratio	-	-	0.031	-
HCM Control Delay (s)	-	-	10.6	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0




Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	0	63	7	0	179
Future Vol, veh/h	19	0	63	7	0	179
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	66	66	86	86
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	28	0	95	11	0	208

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	309	101	0
Stage 1	101	-	-
Stage 2	208	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	685	957	-
Stage 1	926	-	-
Stage 2	829	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	685	957	-
Mov Cap-2 Maneuver	685	-	-
Stage 1	926	-	-
Stage 2	829	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	685	1491
HCM Lane V/C Ratio	-	-	0.041	-
HCM Control Delay (s)	-	-	10.5	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0















Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	22	7	56	157	0
Future Vol, veh/h	0	22	7	56	157	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	45	45	64	64	87	87
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	49	11	88	180	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	290	180	180	0	-	0
Stage 1	180	-	-	-	-	-
Stage 2	110	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	703	865	1402	-	-	-
Stage 1	853	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	697	865	1402	-	-	-
Mov Cap-2 Maneuver	697	-	-	-	-	-
Stage 1	846	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.4	0.8		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1402	-	865	-	-	
HCM Lane V/C Ratio	0.008	-	0.057	-	-	
HCM Control Delay (s)	7.6	0	9.4	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

Intersection			
Intersection Delay, s/veh	3.5		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	151	0	138
Demand Flow Rate, veh/h	154	0	141
Vehicles Circulating, veh/h	0	141	0
Vehicles Exiting, veh/h	141	0	154
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.6	0.0	3.5
Approach LOS	A	-	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	154	0	141
Cap Entry Lane, veh/h	1380	1195	1380
Entry HV Adj Factor	0.981	1.000	0.979
Flow Entry, veh/h	151	0	138
Cap Entry, veh/h	1353	1195	1350
V/C Ratio	0.112	0.000	0.102
Control Delay, s/veh	3.6	3.0	3.5
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Queues  
06/12/2019

7: Dillon Dam Road & State Highway 6  
2026 Background + Project (Scenario 2 - 536 units) [Dam Closed] - AM Peak Hour

























												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	153	509	85	46	559	270	84	87	55	109	111	151
v/c Ratio	0.27	0.25	0.09	0.08	0.30	0.28	0.55	0.54	0.23	0.49	0.49	0.45
Control Delay	11.9	16.9	4.2	11.9	20.1	3.9	69.0	68.4	3.0	57.0	56.9	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.9	16.9	4.2	11.9	20.1	3.9	69.0	68.4	3.0	57.0	56.9	10.5
Queue Length 50th (ft)	39	101	0	11	120	0	72	74	0	93	95	0
Queue Length 95th (ft)	114	215	31	42	258	62	118	122	0	128	130	52
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	569	2004	940	605	1863	981	465	484	511	478	486	548
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.25	0.09	0.08	0.30	0.28	0.18	0.18	0.11	0.23	0.23	0.28
Intersection Summary												

# HCM Signalized Intersection Capacity Analysis

# 7: Dillon Dam Road & State Highway 6





06/12/2019




2026 Background + Project (Scenario 2 - 536 units) [Dam Closed] - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	468	78	41	503	243	88	57	47	177	35	145
Future Volume (vph)	141	468	78	41	503	243	88	57	47	177	35	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1770	3438	1548	1769	3438	1583	1681	1749	1583	1681	1712	1549
Flt Permitted	0.39	1.00	1.00	0.46	1.00	1.00	0.95	0.99	1.00	0.95	0.97	1.00
Satd. Flow (perm)	717	3438	1548	865	3438	1583	1681	1749	1583	1681	1712	1549
Peak-hour factor, PHF	0.92	0.92	0.92	0.90	0.90	0.90	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	153	509	85	46	559	270	104	67	55	184	36	151
RTOR Reduction (vph)	0	0	36	0	0	124	0	0	50	0	0	131
Lane Group Flow (vph)	153	509	49	46	559	146	84	87	5	109	111	20
Confl. Peds. (#/hr)			1	1			9					9
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	84.7	74.9	74.9	76.2	70.4	70.4	11.9	11.9	11.9	17.4	17.4	17.4
Effective Green, g (s)	84.7	74.9	74.9	76.2	70.4	70.4	11.9	11.9	11.9	17.4	17.4	17.4
Actuated g/C Ratio	0.65	0.58	0.58	0.59	0.54	0.54	0.09	0.09	0.09	0.13	0.13	0.13
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	550	1980	891	547	1861	857	153	160	144	224	229	207
v/s Ratio Prot	c0.02	0.15		0.00	c0.16		c0.05	0.05		c0.06	0.06	
v/s Ratio Perm	0.16		0.03	0.05		0.09			0.00			0.01
v/c Ratio	0.28	0.26	0.05	0.08	0.30	0.17	0.55	0.54	0.03	0.49	0.48	0.10
Uniform Delay, d1	9.1	13.7	12.1	11.4	16.3	15.1	56.5	56.5	53.8	52.2	52.1	49.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.3	0.1	0.1	0.4	0.4	4.0	3.7	0.1	1.7	1.6	0.2
Delay (s)	9.4	14.0	12.2	11.5	16.7	15.5	60.5	60.2	53.9	53.8	53.8	49.6
Level of Service	A	B	B	B	B	B	E	E	D	D	D	D
Approach Delay (s)		12.9			16.1			58.8			52.1	
Approach LOS		B			B			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			25.4				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.36									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			56.2%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection			
Intersection Delay, s/veh	3.4		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	111	87	76
Demand Flow Rate, veh/h	113	89	78
Vehicles Circulating, veh/h	78	0	49
Vehicles Exiting, veh/h	49	191	40
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.6	3.2	3.3
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	113	89	78
Cap Entry Lane, veh/h	1274	1380	1313
Entry HV Adj Factor	0.982	0.980	0.980
Flow Entry, veh/h	111	87	76
Cap Entry, veh/h	1252	1352	1287
V/C Ratio	0.089	0.065	0.059
Control Delay, s/veh	3.6	3.2	3.3
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Intersection			
Intersection Delay, s/veh	3.0		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	74	39	6
Demand Flow Rate, veh/h	75	40	6
Vehicles Circulating, veh/h	6	0	32
Vehicles Exiting, veh/h	32	81	8
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.1	2.9	2.8
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	75	40	6
Cap Entry Lane, veh/h	1371	1380	1336
Entry HV Adj Factor	0.987	0.971	0.980
Flow Entry, veh/h	74	39	6
Cap Entry, veh/h	1353	1340	1309
V/C Ratio	0.055	0.029	0.004
Control Delay, s/veh	3.1	2.9	2.8
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Intersection						
Int Delay, s/veh	4.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	185	13	200	167	10	135
Future Vol, veh/h	185	13	200	167	10	135
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	92	92	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	203	14	217	182	11	150
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	481	309	0	0	400	0
Stage 1	309	-	-	-	-	-
Stage 2	172	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	546	733	-	-	1164	-
Stage 1	747	-	-	-	-	-
Stage 2	861	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	540	732	-	-	1163	-
Mov Cap-2 Maneuver	540	-	-	-	-	-
Stage 1	746	-	-	-	-	-
Stage 2	852	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	15.2	0	0.6			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 540 732	1163	-		
HCM Lane V/C Ratio	-	- 0.376 0.02	0.01	-		
HCM Control Delay (s)	-	- 15.6 10	8.1	0		
HCM Lane LOS	-	- C B	A	A		
HCM 95th %tile Q(veh)	-	- 1.7 0.1	0	-		




Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	0	201	7	0	131
Future Vol, veh/h	9	0	201	7	0	131
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	44	44	89	89	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	20	0	226	8	0	146

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	376	230	0
Stage 1	230	-	-
Stage 2	146	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	627	812	-
Stage 1	811	-	-
Stage 2	884	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	627	812	-
Mov Cap-2 Maneuver	627	-	-
Stage 1	811	-	-
Stage 2	884	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	627	1339
HCM Lane V/C Ratio	-	-	0.033	-
HCM Control Delay (s)	-	-	10.9	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0






Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	0	173	28	0	104
Future Vol, veh/h	27	0	173	28	0	104
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	66	66	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	34	0	262	42	0	124

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	407	283	0
Stage 1	283	-	-
Stage 2	124	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	602	758	-
Stage 1	767	-	-
Stage 2	904	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	602	758	-
Mov Cap-2 Maneuver	602	-	-
Stage 1	767	-	-
Stage 2	904	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	602	1263
HCM Lane V/C Ratio	-	-	0.057	-
HCM Control Delay (s)	-	-	11.3	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0













Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	12	161	101	0
Future Vol, veh/h	0	3	12	161	101	0
Conflicting Peds, #/hr	1	7	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	38	38	86	86	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	8	14	187	120	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	336	127	120	0	-	0
Stage 1	120	-	-	-	-	-
Stage 2	216	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	661	926	1474	-	-	-
Stage 1	908	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	654	920	1474	-	-	-
Mov Cap-2 Maneuver	654	-	-	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	822	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1474	-	920	-	-
HCM Lane V/C Ratio	0.009	-	0.009	-	-
HCM Control Delay (s)	7.5	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection			
Intersection Delay, s/veh	4.7		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	295	0	352
Demand Flow Rate, veh/h	301	0	359
Vehicles Circulating, veh/h	0	359	0
Vehicles Exiting, veh/h	359	0	301
Ped Vol Crossing Leg, #/h	1	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.5	0.0	4.9
Approach LOS	A	-	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	301	0	359
Cap Entry Lane, veh/h	1380	957	1380
Entry HV Adj Factor	0.980	1.000	0.981
Flow Entry, veh/h	295	0	352
Cap Entry, veh/h	1352	957	1353
V/C Ratio	0.218	0.000	0.260
Control Delay, s/veh	4.5	3.8	4.9
LOS	A	A	A
95th %tile Queue, veh	1	0	1

























												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	165	596	90	65	622	405	30	31	30	218	225	176
v/c Ratio	0.32	0.31	0.10	0.13	0.36	0.41	0.28	0.28	0.15	0.69	0.69	0.40
Control Delay	12.3	18.2	3.7	11.6	21.3	3.8	59.3	59.1	1.5	55.5	55.6	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.3	18.2	3.7	11.6	21.3	3.8	59.3	59.1	1.5	55.5	55.6	8.0
Queue Length 50th (ft)	48	135	0	18	152	0	24	24	0	167	172	0
Queue Length 95th (ft)	103	224	28	47	254	66	48	50	0	221	226	47
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	515	1898	899	543	1745	991	434	450	489	448	459	545
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.31	0.10	0.12	0.36	0.41	0.07	0.07	0.06	0.49	0.49	0.32
Intersection Summary												

# HCM Signalized Intersection Capacity Analysis

# 7: Dillon Dam Road & State Highway 6





06/12/2019

2026 Background + Project (Scenario 2 - 536 units) [Dam Closed] - PM Peak Hour




												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	153	554	84	59	566	369	31	17	24	293	88	151
Future Volume (vph)	153	554	84	59	566	369	31	17	24	293	88	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1769	3438	1548	1769	3438	1560	1681	1744	1583	1681	1723	1563
Flt Permitted	0.34	1.00	1.00	0.42	1.00	1.00	0.95	0.99	1.00	0.95	0.97	1.00
Satd. Flow (perm)	637	3438	1548	780	3438	1560	1681	1744	1583	1681	1723	1563
Peak-hour factor, PHF	0.93	0.93	0.93	0.91	0.91	0.91	0.79	0.79	0.79	0.86	0.86	0.86
Adj. Flow (vph)	165	596	90	65	622	405	39	22	30	341	102	176
RTOR Reduction (vph)	0	0	42	0	0	203	0	0	28	0	0	143
Lane Group Flow (vph)	165	596	48	65	622	202	30	31	2	218	225	33
Confl. Peds. (#/hr)	2		1	1		2	1					1
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	74.7	64.5	64.5	66.1	59.9	59.9	6.6	6.6	6.6	22.7	22.7	22.7
Effective Green, g (s)	74.7	64.5	64.5	66.1	59.9	59.9	6.6	6.6	6.6	22.7	22.7	22.7
Actuated g/C Ratio	0.62	0.54	0.54	0.55	0.50	0.50	0.05	0.05	0.05	0.19	0.19	0.19
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	498	1847	832	480	1716	778	92	95	87	317	325	295
v/s Ratio Prot	c0.03	0.17		0.01	c0.18		c0.02	0.02		0.13	c0.13	
v/s Ratio Perm	0.18		0.03	0.07		0.13			0.00			0.02
v/c Ratio	0.33	0.32	0.06	0.14	0.36	0.26	0.33	0.33	0.02	0.69	0.69	0.11
Uniform Delay, d1	10.1	15.5	13.2	12.6	18.4	17.3	54.6	54.6	53.6	45.3	45.4	40.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.5	0.1	0.1	0.6	0.8	2.1	2.0	0.1	6.1	6.2	0.2
Delay (s)	10.5	16.0	13.4	12.7	19.0	18.1	56.6	56.6	53.7	51.4	51.6	40.5
Level of Service	B	B	B	B	B	B	E	E	D	D	D	D
Approach Delay (s)		14.7			18.3			55.7			48.4	
Approach LOS		B			B			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			25.4				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.43									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			61.8%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection			
Intersection Delay, s/veh	3.6		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	70	187	52
Demand Flow Rate, veh/h	71	191	53
Vehicles Circulating, veh/h	53	0	111
Vehicles Exiting, veh/h	111	124	80
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.2	3.8	3.3
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	71	191	53
Cap Entry Lane, veh/h	1307	1380	1232
Entry HV Adj Factor	0.986	0.981	0.980
Flow Entry, veh/h	70	187	52
Cap Entry, veh/h	1289	1354	1208
V/C Ratio	0.054	0.138	0.043
Control Delay, s/veh	3.2	3.8	3.3
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Intersection			
Intersection Delay, s/veh	3.0		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	48	78	6
Demand Flow Rate, veh/h	49	79	6
Vehicles Circulating, veh/h	6	0	73
Vehicles Exiting, veh/h	73	55	6
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.0	3.1	2.9
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	49	79	6
Cap Entry Lane, veh/h	1371	1380	1281
Entry HV Adj Factor	0.980	0.986	0.980
Flow Entry, veh/h	48	78	6
Cap Entry, veh/h	1343	1360	1256
V/C Ratio	0.036	0.057	0.005
Control Delay, s/veh	3.0	3.1	2.9
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Intersection						
Int Delay, s/veh	3.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	125	8	62	130	11	177
Future Vol, veh/h	125	8	62	130	11	177
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	69	69	85	85
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	171	11	90	188	13	208
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	418	184	0	0	278	0
Stage 1	184	-	-	-	-	-
Stage 2	234	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	593	861	-	-	1291	-
Stage 1	850	-	-	-	-	-
Stage 2	807	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	586	861	-	-	1291	-
Mov Cap-2 Maneuver	586	-	-	-	-	-
Stage 1	850	-	-	-	-	-
Stage 2	798	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	13.4	0	0.5			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 586 861	1291	-		
HCM Lane V/C Ratio	-	- 0.292 0.013	0.01	-		
HCM Control Delay (s)	-	- 13.7 9.2	7.8	0		
HCM Lane LOS	-	- B A	A	A		
HCM 95th %tile Q(veh)	-	- 1.2 0	0	-		






Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	0	61	5	0	170
Future Vol, veh/h	15	0	61	5	0	170
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	69	69	71	71	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	22	0	86	7	0	202

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	292	90	0
Stage 1	90	-	-
Stage 2	202	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	701	971	-
Stage 1	936	-	-
Stage 2	834	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	701	971	-
Mov Cap-2 Maneuver	701	-	-
Stage 1	936	-	-
Stage 2	834	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	0
HCM LOS	B		




Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	701	1508
HCM Lane V/C Ratio	-	-	0.031	-
HCM Control Delay (s)	-	-	10.3	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	0	54	10	0	151
Future Vol, veh/h	20	0	54	10	0	151
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	66	66	86	86
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	29	0	82	15	0	176













Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	266	90	0
Stage 1	90	-	-
Stage 2	176	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	725	971	-
Stage 1	936	-	-
Stage 2	857	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	725	971	-
Mov Cap-2 Maneuver	725	-	-
Stage 1	936	-	-
Stage 2	857	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	725	1503
HCM Lane V/C Ratio	-	-	0.041	-
HCM Control Delay (s)	-	-	10.2	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	2.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	25	10	47	129	0
Future Vol, veh/h	0	25	10	47	129	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	45	45	64	64	87	87
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	56	16	73	148	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	253	148	148	0	-	0
Stage 1	148	-	-	-	-	-
Stage 2	105	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	738	901	1440	-	-	-
Stage 1	882	-	-	-	-	-
Stage 2	922	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	729	901	1440	-	-	-
Mov Cap-2 Maneuver	729	-	-	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	922	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.3	1.3		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1440	-	901	-	-	
HCM Lane V/C Ratio	0.011	-	0.062	-	-	
HCM Control Delay (s)	7.5	0	9.3	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

Intersection			
Intersection Delay, s/veh	3.7		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	177	0	163
Demand Flow Rate, veh/h	181	0	166
Vehicles Circulating, veh/h	0	166	0
Vehicles Exiting, veh/h	166	0	181
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.7	0.0	3.6
Approach LOS	A	-	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	181	0	166
Cap Entry Lane, veh/h	1380	1165	1380
Entry HV Adj Factor	0.978	1.000	0.982
Flow Entry, veh/h	177	0	163
Cap Entry, veh/h	1349	1165	1355
V/C Ratio	0.131	0.000	0.120
Control Delay, s/veh	3.7	3.1	3.6
LOS	A	A	A
95th %tile Queue, veh	0	0	0

























												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	190	587	115	64	644	322	95	98	62	126	130	177
v/c Ratio	0.36	0.30	0.12	0.13	0.38	0.34	0.58	0.57	0.25	0.53	0.54	0.48
Control Delay	13.4	18.7	4.6	12.7	24.4	4.3	69.2	68.4	4.7	57.7	57.9	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.4	18.7	4.6	12.7	24.4	4.3	69.2	68.4	4.7	57.7	57.9	10.1
Queue Length 50th (ft)	53	126	0	17	161	0	82	84	0	108	111	0
Queue Length 95th (ft)	142	258	41	55	318	70	129	132	7	147	150	56
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	529	1939	923	535	1702	946	465	485	511	478	486	567
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.30	0.12	0.12	0.38	0.34	0.20	0.20	0.12	0.26	0.27	0.31
Intersection Summary												

# HCM Signalized Intersection Capacity Analysis

# 7: Dillon Dam Road & State Highway 6

06/12/2019

2040 Background + Project (Scenario 1 - 436 units) [Dam Closed] - AM Peak Hour





												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	540	106	58	580	290	96	68	53	205	40	170
Future Volume (vph)	175	540	106	58	580	290	96	68	53	205	40	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1770	3438	1548	1769	3438	1583	1681	1754	1583	1681	1712	1549
Flt Permitted	0.33	1.00	1.00	0.43	1.00	1.00	0.95	0.99	1.00	0.95	0.97	1.00
Satd. Flow (perm)	612	3438	1548	802	3438	1583	1681	1754	1583	1681	1712	1549
Peak-hour factor, PHF	0.92	0.92	0.92	0.90	0.90	0.90	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	190	587	115	64	644	322	113	80	62	214	42	177
RTOR Reduction (vph)	0	0	51	0	0	162	0	0	56	0	0	152
Lane Group Flow (vph)	190	587	64	64	644	160	95	98	6	126	130	25
Confl. Peds. (#/hr)			1	1			9					9
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	82.9	72.6	72.6	70.7	64.4	64.4	12.7	12.7	12.7	18.4	18.4	18.4
Effective Green, g (s)	82.9	72.6	72.6	70.7	64.4	64.4	12.7	12.7	12.7	18.4	18.4	18.4
Actuated g/C Ratio	0.64	0.56	0.56	0.54	0.50	0.50	0.10	0.10	0.10	0.14	0.14	0.14
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	519	1919	864	483	1703	784	164	171	154	237	242	219
v/s Ratio Prot	c0.04	0.17		0.01	0.19		c0.06	0.06		0.07	c0.08	
v/s Ratio Perm	c0.19		0.04	0.07		0.10			0.00			0.02
v/c Ratio	0.37	0.31	0.07	0.13	0.38	0.20	0.58	0.57	0.04	0.53	0.54	0.11
Uniform Delay, d1	10.5	15.3	13.2	14.0	20.4	18.4	56.1	56.1	53.1	51.8	51.8	48.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.4	0.2	0.1	0.6	0.6	4.9	4.6	0.1	2.3	2.3	0.2
Delay (s)	10.9	15.7	13.4	14.2	21.0	19.0	61.0	60.6	53.2	54.1	54.1	48.9
Level of Service	B	B	B	B	C	B	E	E	D	D	D	D
Approach Delay (s)		14.4			20.0			59.0			52.0	
Approach LOS		B			B			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			27.2				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.43									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			56.9%				ICU Level of Service			B		
Analysis Period (min)			15									




c Critical Lane Group

Intersection			
Intersection Delay, s/veh	3.2		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	90	74	63
Demand Flow Rate, veh/h	92	76	64
Vehicles Circulating, veh/h	64	0	42
Vehicles Exiting, veh/h	42	156	34
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.4	3.1	3.2
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	92	76	64
Cap Entry Lane, veh/h	1293	1380	1322
Entry HV Adj Factor	0.978	0.978	0.980
Flow Entry, veh/h	90	74	63
Cap Entry, veh/h	1265	1350	1296
V/C Ratio	0.071	0.055	0.048
Control Delay, s/veh	3.4	3.1	3.2
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Intersection			
Intersection Delay, s/veh	3.0		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	61	33	6
Demand Flow Rate, veh/h	62	34	6
Vehicles Circulating, veh/h	6	0	25
Vehicles Exiting, veh/h	25	68	8
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.0	2.9	2.8
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	62	34	6
Cap Entry Lane, veh/h	1371	1380	1345
Entry HV Adj Factor	0.984	0.966	0.980
Flow Entry, veh/h	61	33	6
Cap Entry, veh/h	1349	1333	1319
V/C Ratio	0.045	0.025	0.004
Control Delay, s/veh	3.0	2.9	2.8
LOS	A	A	A
95th %tile Queue, veh	0	0	0






Intersection						
Int Delay, s/veh	4.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	210	12	173	195	9	119
Future Vol, veh/h	210	12	173	195	9	119
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	92	92	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	231	13	188	212	10	132
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	447	295	0	0	401	0
Stage 1	295	-	-	-	-	-
Stage 2	152	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	571	747	-	-	1163	-
Stage 1	758	-	-	-	-	-
Stage 2	878	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	565	746	-	-	1162	-
Mov Cap-2 Maneuver	565	-	-	-	-	-
Stage 1	757	-	-	-	-	-
Stage 2	870	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	15.4	0	0.6			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 565 746 1162	-	-		
HCM Lane V/C Ratio	-	- 0.408 0.018 0.009	-	-		
HCM Control Delay (s)	-	- 15.7 9.9 8.1	0			
HCM Lane LOS	-	- C A A	A	A		
HCM 95th %tile Q(veh)	-	- 2 0.1 0	-	-		

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	0	173	10	0	114
Future Vol, veh/h	15	0	173	10	0	114
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	44	44	89	89	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	34	0	194	11	0	127

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	327	200	0
Stage 1	200	-	-
Stage 2	127	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	669	843	-
Stage 1	836	-	-
Stage 2	901	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	669	843	-
Mov Cap-2 Maneuver	669	-	-
Stage 1	836	-	-
Stage 2	901	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0
HCM LOS	B		




Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	669	1372
HCM Lane V/C Ratio	-	-	0.051	-
HCM Control Delay (s)	-	-	10.7	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	35	0	145	35	0	87
Future Vol, veh/h	35	0	145	35	0	87
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	66	66	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	44	0	220	53	0	104

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	351	247	0
Stage 1	247	-	-
Stage 2	104	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	648	794	-
Stage 1	796	-	-
Stage 2	923	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	648	794	-
Mov Cap-2 Maneuver	648	-	-
Stage 1	796	-	-
Stage 2	923	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	648	1296
HCM Lane V/C Ratio	-	-	0.068	-
HCM Control Delay (s)	-	-	11	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0













Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	5	15	133	84	0
Future Vol, veh/h	0	5	15	133	84	0
Conflicting Peds, #/hr	1	7	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	38	38	86	86	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	13	17	155	100	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	290	107	100
Stage 1	100	-	-
Stage 2	190	-	-
Critical Hdwy	6.41	6.21	4.11
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	2.209
Pot Cap-1 Maneuver	703	950	1499
Stage 1	927	-	-
Stage 2	845	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	695	944	1499
Mov Cap-2 Maneuver	695	-	-
Stage 1	916	-	-
Stage 2	845	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	0.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1499	-	944	-	-
HCM Lane V/C Ratio	0.012	-	0.014	-	-
HCM Control Delay (s)	7.4	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection			
Intersection Delay, s/veh	5.1		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	341	0	407
Demand Flow Rate, veh/h	348	0	415
Vehicles Circulating, veh/h	0	415	0
Vehicles Exiting, veh/h	415	0	348
Ped Vol Crossing Leg, #/h	1	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.8	0.0	5.3
Approach LOS	A	-	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	348	0	415
Cap Entry Lane, veh/h	1380	904	1380
Entry HV Adj Factor	0.980	1.000	0.981
Flow Entry, veh/h	341	0	407
Cap Entry, veh/h	1352	904	1353
V/C Ratio	0.252	0.000	0.301
Control Delay, s/veh	4.8	4.0	5.3
LOS	A	A	A
95th %tile Queue, veh	1	0	1

























												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	194	683	101	75	714	473	31	33	33	260	266	215
v/c Ratio	0.41	0.38	0.12	0.17	0.46	0.49	0.28	0.29	0.16	0.73	0.73	0.43
Control Delay	14.3	20.7	4.6	13.0	26.6	4.4	59.3	59.4	1.7	56.0	55.7	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.3	20.7	4.6	13.0	26.6	4.4	59.3	59.4	1.7	56.0	55.7	7.4
Queue Length 50th (ft)	64	173	0	23	205	0	24	26	0	196	202	0
Queue Length 95th (ft)	120	264	35	52	309	76	50	52	0	263	268	50
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	476	1810	863	475	1553	964	434	449	489	448	459	574
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.38	0.12	0.16	0.46	0.49	0.07	0.07	0.07	0.58	0.58	0.37
Intersection Summary												

# HCM Signalized Intersection Capacity Analysis

# 7: Dillon Dam Road & State Highway 6

06/12/2019





2040 Background + Project (Scenario 1 - 436 units) [Dam Closed] - PM Peak Hour




												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	635	94	68	650	430	33	17	26	350	102	185
Future Volume (vph)	180	635	94	68	650	430	33	17	26	350	102	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1769	3438	1548	1769	3438	1560	1681	1741	1583	1681	1722	1563
Flt Permitted	0.28	1.00	1.00	0.39	1.00	1.00	0.95	0.98	1.00	0.95	0.97	1.00
Satd. Flow (perm)	515	3438	1548	724	3438	1560	1681	1741	1583	1681	1722	1563
Peak-hour factor, PHF	0.93	0.93	0.93	0.91	0.91	0.91	0.79	0.79	0.79	0.86	0.86	0.86
Adj. Flow (vph)	194	683	101	75	714	473	42	22	33	407	119	215
RTOR Reduction (vph)	0	0	49	0	0	263	0	0	31	0	0	170
Lane Group Flow (vph)	194	683	52	75	714	210	31	33	2	260	266	45
Confl. Peds. (#/hr)	2		1	1		2	1					1
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	72.0	61.4	61.4	59.8	53.2	53.2	6.7	6.7	6.7	25.3	25.3	25.3
Effective Green, g (s)	72.0	61.4	61.4	59.8	53.2	53.2	6.7	6.7	6.7	25.3	25.3	25.3
Actuated g/C Ratio	0.60	0.51	0.51	0.50	0.44	0.44	0.06	0.06	0.06	0.21	0.21	0.21
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	463	1759	792	418	1524	691	93	97	88	354	363	329
v/s Ratio Prot	c0.05	0.20		0.01	c0.21		0.02	c0.02		c0.15	0.15	
v/s Ratio Perm	0.20		0.03	0.08		0.13			0.00			0.03
v/c Ratio	0.42	0.39	0.07	0.18	0.47	0.30	0.33	0.34	0.02	0.73	0.73	0.14
Uniform Delay, d1	12.2	17.9	14.8	15.8	23.5	21.5	54.5	54.5	53.5	44.2	44.2	38.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.6	0.2	0.2	1.0	1.1	2.1	2.1	0.1	7.7	7.5	0.2
Delay (s)	12.8	18.5	15.0	16.0	24.5	22.6	56.6	56.6	53.6	51.9	51.6	38.7
Level of Service	B	B	B	B	C	C	E	E	D	D	D	D
Approach Delay (s)		17.0			23.3			55.6			48.0	
Approach LOS		B			C			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			28.3				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.52									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			65.2%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection			
Intersection Delay, s/veh	3.4		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	57	155	44
Demand Flow Rate, veh/h	58	158	45
Vehicles Circulating, veh/h	45	0	92
Vehicles Exiting, veh/h	92	103	66
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.1	3.6	3.2
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	58	158	45
Cap Entry Lane, veh/h	1318	1380	1256
Entry HV Adj Factor	0.983	0.979	0.980
Flow Entry, veh/h	57	155	44
Cap Entry, veh/h	1295	1351	1232
V/C Ratio	0.044	0.115	0.036
Control Delay, s/veh	3.1	3.6	3.2
LOS	A	A	A
95th %tile Queue, veh	0	0	0



Intersection			
Intersection Delay, s/veh	3.0		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	39	65	6
Demand Flow Rate, veh/h	40	66	6
Vehicles Circulating, veh/h	6	0	60
Vehicles Exiting, veh/h	60	46	6
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	2.9	3.0	2.9
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	40	66	6
Cap Entry Lane, veh/h	1371	1380	1298
Entry HV Adj Factor	0.975	0.983	0.980
Flow Entry, veh/h	39	65	6
Cap Entry, veh/h	1337	1356	1272
V/C Ratio	0.029	0.048	0.005
Control Delay, s/veh	2.9	3.0	2.9
LOS	A	A	A
95th %tile Queue, veh	0	0	0




Intersection						
Int Delay, s/veh	3.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	125	8	71	130	13	204
Future Vol, veh/h	125	8	71	130	13	204
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	69	69	85	85
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	171	11	103	188	15	240
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	467	197	0	0	291	0
Stage 1	197	-	-	-	-	-
Stage 2	270	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	556	847	-	-	1276	-
Stage 1	839	-	-	-	-	-
Stage 2	778	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	548	847	-	-	1276	-
Mov Cap-2 Maneuver	548	-	-	-	-	-
Stage 1	839	-	-	-	-	-
Stage 2	767	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	14.2	0	0.5			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 548 847 1276	-	-		
HCM Lane V/C Ratio	-	- 0.312 0.013 0.012	-	-		
HCM Control Delay (s)	-	- 14.5 9.3 7.9	0			
HCM Lane LOS	-	- B A A	A			
HCM 95th %tile Q(veh)	-	- 1.3 0 0	-			

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	0	70	5	0	198
Future Vol, veh/h	15	0	70	5	0	198
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	69	69	71	71	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	22	0	99	7	0	236

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	339	103	0
Stage 1	103	-	-
Stage 2	236	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	659	955	-
Stage 1	924	-	-
Stage 2	806	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	659	955	-
Mov Cap-2 Maneuver	659	-	-
Stage 1	924	-	-
Stage 2	806	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	0
HCM LOS	B		




Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	659	1491
HCM Lane V/C Ratio	-	-	0.033	-
HCM Control Delay (s)	-	-	10.6	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	0	63	10	0	179
Future Vol, veh/h	20	0	63	10	0	179
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	66	66	86	86
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	29	0	95	15	0	208

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	311	103	0
Stage 1	103	-	-
Stage 2	208	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	684	955	-
Stage 1	924	-	-
Stage 2	829	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	684	955	-
Mov Cap-2 Maneuver	684	-	-
Stage 1	924	-	-
Stage 2	829	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0
HCM LOS	B		













Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	684	1486
HCM Lane V/C Ratio	-	-	0.043	-
HCM Control Delay (s)	-	-	10.5	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	25	10	56	157	0
Future Vol, veh/h	0	25	10	56	157	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	45	45	64	64	87	87
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	56	16	88	180	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	300	180	180	0	-	0
Stage 1	180	-	-	-	-	-
Stage 2	120	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	694	865	1402	-	-	-
Stage 1	853	-	-	-	-	-
Stage 2	908	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	686	865	1402	-	-	-
Mov Cap-2 Maneuver	686	-	-	-	-	-
Stage 1	843	-	-	-	-	-
Stage 2	908	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.4	1.2		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1402	-	865	-	-	
HCM Lane V/C Ratio	0.011	-	0.064	-	-	
HCM Control Delay (s)	7.6	0	9.4	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

Intersection			
Intersection Delay, s/veh	3.7		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	177	0	163
Demand Flow Rate, veh/h	181	0	166
Vehicles Circulating, veh/h	0	166	0
Vehicles Exiting, veh/h	166	0	181
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.7	0.0	3.6
Approach LOS	A	-	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	181	0	166
Cap Entry Lane, veh/h	1380	1165	1380
Entry HV Adj Factor	0.978	1.000	0.982
Flow Entry, veh/h	177	0	163
Cap Entry, veh/h	1349	1165	1355
V/C Ratio	0.131	0.000	0.120
Control Delay, s/veh	3.7	3.1	3.6
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Queues  
06/12/2019

7: Dillon Dam Road & State Highway 6  
2040 Background + Project (Scenario 2 - 536 units) [Dam Closed] - AM Peak Hour

























												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	190	587	117	64	644	322	95	99	62	126	130	177
v/c Ratio	0.36	0.30	0.13	0.13	0.38	0.34	0.58	0.58	0.25	0.53	0.54	0.48
Control Delay	13.4	18.8	4.6	12.7	24.4	4.3	69.1	68.6	4.7	57.7	57.9	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.4	18.8	4.6	12.7	24.4	4.3	69.1	68.6	4.7	57.7	57.9	10.1
Queue Length 50th (ft)	53	126	0	17	161	0	82	85	0	108	111	0
Queue Length 95th (ft)	142	258	42	55	318	70	129	133	7	147	150	56
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	527	1938	923	535	1701	945	465	485	511	478	486	567
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.30	0.13	0.12	0.38	0.34	0.20	0.20	0.12	0.26	0.27	0.31
Intersection Summary												

# HCM Signalized Intersection Capacity Analysis

# 7: Dillon Dam Road & State Highway 6

06/12/2019





2040 Background + Project (Scenario 2 - 536 units) [Dam Closed] - AM Peak Hour




												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	540	108	58	580	290	97	68	53	205	40	170
Future Volume (vph)	175	540	108	58	580	290	97	68	53	205	40	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1770	3438	1548	1769	3438	1583	1681	1753	1583	1681	1712	1549
Flt Permitted	0.33	1.00	1.00	0.43	1.00	1.00	0.95	0.99	1.00	0.95	0.97	1.00
Satd. Flow (perm)	611	3438	1548	802	3438	1583	1681	1753	1583	1681	1712	1549
Peak-hour factor, PHF	0.92	0.92	0.92	0.90	0.90	0.90	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	190	587	117	64	644	322	114	80	62	214	42	177
RTOR Reduction (vph)	0	0	52	0	0	163	0	0	56	0	0	152
Lane Group Flow (vph)	190	587	65	64	644	159	95	99	6	126	130	25
Confl. Peds. (#/hr)			1	1			9					9
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	82.8	72.5	72.5	70.6	64.3	64.3	12.8	12.8	12.8	18.4	18.4	18.4
Effective Green, g (s)	82.8	72.5	72.5	70.6	64.3	64.3	12.8	12.8	12.8	18.4	18.4	18.4
Actuated g/C Ratio	0.64	0.56	0.56	0.54	0.49	0.49	0.10	0.10	0.10	0.14	0.14	0.14
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	518	1917	863	482	1700	782	165	172	155	237	242	219
v/s Ratio Prot	c0.04	0.17		0.01	0.19		c0.06	0.06		0.07	c0.08	
v/s Ratio Perm	c0.19		0.04	0.07		0.10			0.00			0.02
v/c Ratio	0.37	0.31	0.08	0.13	0.38	0.20	0.58	0.58	0.04	0.53	0.54	0.11
Uniform Delay, d1	10.5	15.3	13.3	14.1	20.4	18.5	56.0	56.0	53.0	51.8	51.8	48.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.4	0.2	0.1	0.6	0.6	4.8	4.6	0.1	2.3	2.3	0.2
Delay (s)	10.9	15.7	13.4	14.2	21.1	19.0	60.8	60.6	53.1	54.1	54.1	48.9
Level of Service	B	B	B	B	C	B	E	E	D	D	D	D
Approach Delay (s)		14.4			20.0			58.9			52.0	
Approach LOS		B			C			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			27.2				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.43									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			56.9%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												






Intersection			
Intersection Delay, s/veh	3.4		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	111	87	76
Demand Flow Rate, veh/h	113	89	78
Vehicles Circulating, veh/h	78	0	49
Vehicles Exiting, veh/h	49	191	40
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.6	3.2	3.3
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	113	89	78
Cap Entry Lane, veh/h	1274	1380	1313
Entry HV Adj Factor	0.982	0.980	0.980
Flow Entry, veh/h	111	87	76
Cap Entry, veh/h	1252	1352	1287
V/C Ratio	0.089	0.065	0.059
Control Delay, s/veh	3.6	3.2	3.3
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Intersection			
Intersection Delay, s/veh	3.0		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	74	39	6
Demand Flow Rate, veh/h	75	40	6
Vehicles Circulating, veh/h	6	0	32
Vehicles Exiting, veh/h	32	81	8
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.1	2.9	2.8
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	75	40	6
Cap Entry Lane, veh/h	1371	1380	1336
Entry HV Adj Factor	0.987	0.971	0.980
Flow Entry, veh/h	74	39	6
Cap Entry, veh/h	1353	1340	1309
V/C Ratio	0.055	0.029	0.004
Control Delay, s/veh	3.1	2.9	2.8
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Intersection						
Int Delay, s/veh	5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	210	13	200	195	10	135
Future Vol, veh/h	210	13	200	195	10	135
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	92	92	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	231	14	217	212	11	150
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	496	324	0	0	430	0
Stage 1	324	-	-	-	-	-
Stage 2	172	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	535	719	-	-	1135	-
Stage 1	735	-	-	-	-	-
Stage 2	861	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	529	718	-	-	1134	-
Mov Cap-2 Maneuver	529	-	-	-	-	-
Stage 1	734	-	-	-	-	-
Stage 2	852	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	16.6	0	0.6			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 529 718	1134	-		
HCM Lane V/C Ratio	-	- 0.436 0.02	0.01	-		
HCM Control Delay (s)	-	- 17 10.1	8.2	0		
HCM Lane LOS	-	- C B	A	A		
HCM 95th %tile Q(veh)	-	- 2.2 0.1	0	-		




Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	0	201	10	0	131
Future Vol, veh/h	15	0	201	10	0	131
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	44	44	89	89	90	90
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	34	0	226	11	0	146
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	378	232	0	0	237	0
Stage 1	232	-	-	-	-	-
Stage 2	146	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	626	810	-	-	1336	-
Stage 1	809	-	-	-	-	-
Stage 2	884	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	626	810	-	-	1336	-
Mov Cap-2 Maneuver	626	-	-	-	-	-
Stage 1	809	-	-	-	-	-
Stage 2	884	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	11.1	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	626	1336	-	
HCM Lane V/C Ratio	-	-	0.054	-	-	
HCM Control Delay (s)	-	-	11.1	0	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	35	0	173	35	0	104
Future Vol, veh/h	35	0	173	35	0	104
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	66	66	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	44	0	262	53	0	124













Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	413	289	0
Stage 1	289	-	-
Stage 2	124	-	-
Critical Hdwy	6.41	6.21	-
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	597	752	-
Stage 1	762	-	-
Stage 2	904	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	597	752	-
Mov Cap-2 Maneuver	597	-	-
Stage 1	762	-	-
Stage 2	904	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	597	1251
HCM Lane V/C Ratio	-	-	0.074	-
HCM Control Delay (s)	-	-	11.5	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	5	15	161	101	0
Future Vol, veh/h	0	5	15	161	101	0
Conflicting Peds, #/hr	1	7	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	38	38	86	86	84	84
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	13	17	187	120	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	342	127	120	0	-	0
Stage 1	120	-	-	-	-	-
Stage 2	222	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	656	926	1474	-	-	-
Stage 1	908	-	-	-	-	-
Stage 2	817	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	647	920	1474	-	-	-
Mov Cap-2 Maneuver	647	-	-	-	-	-
Stage 1	896	-	-	-	-	-
Stage 2	817	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9	0.6		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1474	-	920	-	-	
HCM Lane V/C Ratio	0.012	-	0.014	-	-	
HCM Control Delay (s)	7.5	0	9	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection			
Intersection Delay, s/veh	5.1		
Intersection LOS	A		
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	341	0	407
Demand Flow Rate, veh/h	348	0	415
Vehicles Circulating, veh/h	0	415	0
Vehicles Exiting, veh/h	415	0	348
Ped Vol Crossing Leg, #/h	1	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.8	0.0	5.3
Approach LOS	A	-	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	348	0	415
Cap Entry Lane, veh/h	1380	904	1380
Entry HV Adj Factor	0.980	1.000	0.981
Flow Entry, veh/h	341	0	407
Cap Entry, veh/h	1352	904	1353
V/C Ratio	0.252	0.000	0.301
Control Delay, s/veh	4.8	4.0	5.3
LOS	A	A	A
95th %tile Queue, veh	1	0	1

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	194	683	102	75	714	473	33	33	33	260	266	215
v/c Ratio	0.41	0.38	0.12	0.17	0.46	0.49	0.30	0.29	0.16	0.73	0.73	0.43
Control Delay	14.4	20.8	4.6	13.1	26.7	4.5	59.6	59.0	1.7	56.0	55.7	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.4	20.8	4.6	13.1	26.7	4.5	59.6	59.0	1.7	56.0	55.7	7.4
Queue Length 50th (ft)	64	173	0	23	206	0	26	26	0	196	202	0
Queue Length 95th (ft)	120	265	35	53	310	76	52	52	0	263	268	50
Internal Link Dist (ft)		817			836			345			494	
Turn Bay Length (ft)	500			150		420	110		70	120		
Base Capacity (vph)	475	1806	861	474	1549	962	434	449	489	448	459	574
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.38	0.12	0.16	0.46	0.49	0.08	0.07	0.07	0.58	0.58	0.37
Intersection Summary												



























# HCM Signalized Intersection Capacity Analysis

# 7: Dillon Dam Road & State Highway 6

06/12/2019

2040 Background + Project (Scenario 2 - 536 units) [Dam Closed] - PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	635	95	68	650	430	35	17	26	350	102	185
Future Volume (vph)	180	635	95	68	650	430	35	17	26	350	102	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1769	3438	1548	1769	3438	1560	1681	1741	1583	1681	1722	1563
Flt Permitted	0.28	1.00	1.00	0.39	1.00	1.00	0.95	0.98	1.00	0.95	0.97	1.00
Satd. Flow (perm)	514	3438	1548	724	3438	1560	1681	1741	1583	1681	1722	1563
Peak-hour factor, PHF	0.93	0.93	0.93	0.91	0.91	0.91	0.79	0.79	0.79	0.86	0.86	0.86
Adj. Flow (vph)	194	683	102	75	714	473	44	22	33	407	119	215
RTOR Reduction (vph)	0	0	50	0	0	264	0	0	31	0	0	170
Lane Group Flow (vph)	194	683	52	75	714	209	33	33	2	260	266	45
Confl. Peds. (#/hr)	2		1	1		2	1					1
Heavy Vehicles (%)	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			4
Actuated Green, G (s)	71.9	61.3	61.3	59.7	53.1	53.1	6.8	6.8	6.8	25.3	25.3	25.3
Effective Green, g (s)	71.9	61.3	61.3	59.7	53.1	53.1	6.8	6.8	6.8	25.3	25.3	25.3
Actuated g/C Ratio	0.60	0.51	0.51	0.50	0.44	0.44	0.06	0.06	0.06	0.21	0.21	0.21
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	462	1756	790	417	1521	690	95	98	89	354	363	329
v/s Ratio Prot	c0.05	0.20		0.01	c0.21		c0.02	0.02		c0.15	0.15	
v/s Ratio Perm	0.20		0.03	0.08		0.13			0.00			0.03
v/c Ratio	0.42	0.39	0.07	0.18	0.47	0.30	0.35	0.34	0.02	0.73	0.73	0.14
Uniform Delay, d1	12.2	17.9	14.9	15.8	23.5	21.5	54.5	54.4	53.5	44.2	44.2	38.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.7	0.2	0.2	1.0	1.1	2.2	2.0	0.1	7.7	7.5	0.2
Delay (s)	12.9	18.6	15.0	16.0	24.6	22.7	56.7	56.5	53.6	51.9	51.6	38.7
Level of Service	B	B	B	B	C	C	E	E	D	D	D	D
Approach Delay (s)		17.1			23.4			55.6			48.0	
Approach LOS		B			C			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			28.3									
HCM 2000 Volume to Capacity ratio			0.52									
Actuated Cycle Length (s)			120.0									
Intersection Capacity Utilization			65.2%									
Analysis Period (min)			15									
c Critical Lane Group												

Intersection			
Intersection Delay, s/veh	3.6		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	70	187	52
Demand Flow Rate, veh/h	71	191	53
Vehicles Circulating, veh/h	53	0	111
Vehicles Exiting, veh/h	111	124	80
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.2	3.8	3.3
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	71	191	53
Cap Entry Lane, veh/h	1307	1380	1232
Entry HV Adj Factor	0.986	0.981	0.980
Flow Entry, veh/h	70	187	52
Cap Entry, veh/h	1289	1354	1208
V/C Ratio	0.054	0.138	0.043
Control Delay, s/veh	3.2	3.8	3.3
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Intersection			
Intersection Delay, s/veh	3.0		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	48	78	6
Demand Flow Rate, veh/h	49	79	6
Vehicles Circulating, veh/h	6	0	73
Vehicles Exiting, veh/h	73	55	6
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.0	3.1	2.9
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	49	79	6
Cap Entry Lane, veh/h	1371	1380	1281
Entry HV Adj Factor	0.980	0.986	0.980
Flow Entry, veh/h	48	78	6
Cap Entry, veh/h	1343	1360	1256
V/C Ratio	0.036	0.057	0.005
Control Delay, s/veh	3.0	3.1	2.9
LOS	A	A	A
95th %tile Queue, veh	0	0	0